

INTERVIEW WITH CORA DOWNS

Interviewed by Mrs. Phyllis Lewin

Oral History Project
of The K.U. Retirees' Club
September, 1984

CORA M. DOWNS

A.B., Kansas, 1915
A.M., Kansas, 1920
Ph.D., Kansas, 1924

Services at The University of Kansas

Instructor in Bacteriology, 1917-21
Assistant Professor of Bacteriology, 1921-25
Associate Professor of Bacteriology, 1925-35
Professor of Bacteriology, 1935-62
Summerfield Professor of Bacteriology, 1962-63
Professor Emerita, 1963

INTERVIEW WITH CORA DOWNS

Q. Why don't we start with your childhood. Tell me as much as you remember about your childhood and the things that stand out in your mind when you think about it.

A. Well, I grew up in Kansas City, Kansas. My father was a practicing physician there. He had graduated from the University of Michigan at Ann Arbor, and in that day there were very few good Medical Schools; there were Rush, John Hopkins, Harvard, and Michigan. My mother was born and brought up in Monroe, Michigan, and also went to the University of Michigan. Then my father came as physician to the Mackey Mines in Stillwell, Kansas. They stayed there for awhile and then about the time I was born they moved to Kansas City, Kansas. He practiced there until he died as a very young man at 42. My grandmother Downs and paternal grandparents lived in Kansas City, Kansas, too, and that is where I grew up. I went to high school in Kansas City, Kansas, and then came to the University of Kansas to finish my A.B. degree. I had a happy childhood; my mother used to give parties for me, and all together I had a very nice childhood.

Q. What made you select the University of Kansas?

A. Well, partly because a good many of my friends were coming here. It was close to home and it seemed the best thing to do rather than go out of town, although some of my friends did go elsewhere.

Q. What do you remember about your undergraduate days at the University of Kansas?

A. Well, I remember one thing that I liked very much. We had always read a great deal at home. My mother read aloud to us and we read books, and my grandmother who was at one time a Regent, the first

woman to be appointed Regent at the University of Kansas. It seemed natural for me to come up to K.U., and one of the things that I remembered liking very much was being allowed to go into the stacks at the old Library and sit in the deep window sills and read any book I wanted to put my hands on. That was kind of a high point for me. And then I belonged to an organization called Alemannia. We spoke German at the table and that has always stayed with me, more or less. I found years later when I went to Germany the words would come back to me that I learned years ago. So that was a plus. Altogether I enjoyed my years here. We had dances; I don't remember that we played cards; I did belong to a card club in Kansas City, Kansas, but I don't remember that as a student we played cards.

Q. If I asked you to describe the University of Kansas as you remember it compared to your other experiences there, how would you describe it? For example, what was the general climate there, what were the feelings of higher education - was the legislature supportive, that sort of thing.

A. I don't know whether the legislature was supportive or not. The student body was in the neighborhood of 3,000, and it seemed to me that we had some very good instructors. Later when I came back here to teach in 1918 - I graduated in 1915 and then came back in 1918 - I realized then more than I did as an undergraduate that we had some very outstanding professors, which we have continued to have, so that all together my years at the University were very productive and very happy in every way, really. We danced a good deal, and, as I say, we didn't seem to play cards except that I continued to belong to this club in

Kansas City, and we gradually changed from Whist to bridge and so forth. I'm not much of a card player; I can play but it's not one of my favorite amusements.

Q. What kinds of career plans did you have in mind when you entered the University of Kansas?

A. I wanted very much to become a doctor. My father was a person whom I was very very fond of and I thought if I could become a doctor it would be just what I wanted to do. But it was expensive then, as it is now, and I simply couldn't afford it, and that is the reason I didn't finish in medicine.

Q. Do you remember as a young child talking to your father a lot about medicine?

A. No. I remember much more, later, talking to my mother who had also gone to the University of Michigan and who spent many years in Germany where her uncle was an American Consul General, appointed by President Lincoln; she always spoke German very well and I learned a lot of German from her. They spoke French at the table and so she also spoke French; she was very literate and knew a great deal about the museums and galleries in Europe. I profited by that because she spoke well and told lots of stories about her life in Germany; that was the sort of thing that certainly affected what I wanted to do.

Q. So your recollections are more of the influence that your mother had upon you.

A. Well yes, I was only nine years old when my father died.

Q. So you entered with idea of studying medicine and then realized

that that was not possible?

A. Yes, and so the next thing was to take some chemistry to go into the Department of Microbiology and become a Laboratory Technician, which I did. Immediately after graduation I went to the hospital in Atchison and became a Laboratory Technician there, and I was there for possibly three years and then came back to be an assistant in the department here, and take graduate work.

Q. What made you come back and pursue your studies on the Graduate level?

A. Because the Head of the Department asked me to; I thought that was a very good idea.

Q. And was it in fact a good idea for you?

A. Yes, it was, and that was just the beginning in training of Laboratory Tech's; it became one of the things that the department has been noted for right along. It's developed very well so that was really the very beginning; many hospitals had no laboratory facilities at all. So, it was a forward looking thing.

Q. So at this point we've talked a little about your undergraduate days, now we're on your graduate days, how would you compare your time at the University between the two experiences?

A. I don't quite understand.

Q. What do you remember about the University as a graduate student as being different from that as an undergraduate, or similar?

A. Well, that's rather hard to answer because as an undergraduate I was concerned principally with going to class, and as a graduate student

I was a Laboratory Assistant and had to work in the lab and teach somewhat and also take courses which I needed to get an advanced degree.

Q. Did you have different feelings about the University of Kansas as an institution in your graduate days than you did as an undergrad?

A. No, I don't think so. It was an easy transition; I think the first time I realized that there was a considerable difference in graduate work at other universities was when I went to the University of Chicago in the summer to take a full quarters work in summer. We had more freedom of going to the libraries, they had a much better library at Chicago than they did at K.U. And well again, you see, there was a great interest in books so that is one of the outstanding things. There was also a man at pathology at Chicago, Dr. H. G. Wells, who was a magnificent teacher, and I was very much interested in the courses that he gave and enjoyed them very much, although living in Chicago was not the best thing in the world. The University of Chicago had no supervision over the students at all. You just found a place to live and hoped it would be all right; there wasn't any of this looking after them.

Q. What made you go there for the summer?

A. Because of Dr. Wells who was an outstanding pathologist; if I had finished in medicine I would have become a pathologist.

Q. Were there other female graduates that were studying when you were?

A. Very few.

Q. Do you feel as a woman that you had other battles to fight aside from proving yourself?

A. No, I didn't at that time; it wasn't until I began to teach here at the University of Kansas that there was a considerable gap between the treatment of men and women on the faculty. There was only one women

when I came back in 1918 who was head of a department, that was Madame Galloo, head of the French Department. And generally the faculty was all men except assistants or the lowly ranks, and that discrimination continued for a great many years. I was very well treated, but that was because the head of our department was not biased against women.

Q. There were many who were?

A. Oh yes.

Q. How does that manifest itself?

A. By lower salaries and lower rank. You see, when I say there was only one woman who was head of a department, that in itself says something.

Q. I see. Now do you know if that was just typical of the University at that time or would you say it was widespread?

A. No, it was all over the country and it continued into the 20th century because I can remember going with a friend of mine to Harvard where women would have lunch by themselves if they wished, but they had to go by way of the back stairs. And that wasn't too long ago; it was after 1918 anyway.

Q. You became aware of the discrimination when you were first appointed to the faculty?

A. Soon after.

Q. But you never had that awareness as a graduate student?

A. No.

Q. How had your career interests become further defined in your graduate studies? Did you select a specific area of microbiology at that time?

A. Well, that's hard to answer. As you may know I became a specialist in Tularemia; that was a kind of a turning point because I saw a case of Tularemia and suspected that that's what it was. That was in the 30's and that was when there were a great many people who were out of jobs. A man had gone out to shoot rabbits for food; he became infected and had a very bad infection, and it was rare enough so that it wasn't generally recognized. I sent a sample of material from his infection to a man in Washington who had studied Tularemia, and the word came back -- "yes," he does have Tularemia and be careful because it was very easy to get infected. The man got well because it's not ordinarily a fatal infection; that caught my interest very much so I continued to work with Tularemia until I graduated.

Q. What were your interests prior to your interest in Tularemia?

A. Principally in medical microbiology and in medical courses generally. I finished what was then required for the first two years of medicine; students then went to the Kansas City Center. Well, I took anatomy and chemistry and other courses that were required, and finished the first two years in medicine. But I never took what was called the clinical years.

Q. And what did you do after the first two years?

A. I continued to teach in the department.

Q. You said the case of Tularemia had been a turning point for you.

A. Yes, because it was newly described and I had heard a man who was a specialist in it speak at one of the meetings and it seemed to me that his description fit the two people we saw; so I continued to be interested in it; it is indeed a very interesting disease. It's

transmitted by ticks and that in itself is interesting, so it simply attracted my interest.

Q. Would you say that was the significant interest of your career, or had you developed other interests?

A. Oh, other interests of course. During the war I had a former student who was influential in setting up the biological warfare laboratories. He asked me to come back to Frederick, Maryland, where I took a part in the work that was done there during World War II.

Q. What do you remember about Lawrence up until then in terms of a community, in terms of its relationship to the University, recollections about the Chancellors, the economy, Kansas before World War II?

A. I think I was pretty oblivious to world affairs, as many students are now. Although I would say they are probably better informed about world affairs than your average student was when I was in school. In Kansas women could vote, and at one time the woman who was head of the French department started an organization of women who were interested in politics. I was president of that for about a school year and there was a good deal of interest in that. I belonged to a family that was always interested in politics but you couldn't say they were political because they didn't hold any office. As you know, my grandmother was appointed by the populists governor Governor, John P. St. John; she was the first woman ever to be appointed a Regent. Well, since that time there have been several women on the Board of Regents. I heard just today, and was very glad to hear it, that the State now does pay something, (a pension) but for a long time a widow whose husband may have served 20 or 25 years on the faculty received nothing after his death. And change came up through the good offices of some of women faculty members.

That was a step in advance, but a very long time in coming.

Q. You talked about your grandmother, were you particularly close to her?

A. Yes, I was and she lived just down the street most of my growing up days; she loved to have me with her and she was a very literate person; she talked about books, read books, and loved the theatre, took me to the theatre whenever possible; K.C. at that time was a good live theatre town, so that this always struck me as funny that during Holy Week the New York cast always came and put on a week of good plays. When I say a good cast I mean Julia Marlowe and E.H. Sothorn and other really good actors. I've always loved the theatre and I think it was her interest that introduced me to it. I would go to London any day now to see live theatre.

Q. When you first became aware of the discrimination against women as a faculty member were any steps taken at that time, were there any activities among the few women that were here to correct that?

A. I suppose there must have been but I don't remember any particular organization or anything of that sort. Whatever was done was an individual thing.

Q. Did it affect you in any way, the fact that you were a woman faculty member?

A. Very little; I always thought that I was very fortunate because the head of microbiology didn't discriminate against me, except in one or two instances which I would rather not go into. And I had the same salary and the same treatment as men in the department. It was a small department but still I kept well ahead of the man who was on my level so I didn't feel any discrimination. I knew there was discrimination and I was glad that the head of my department himself didn't feel there

should be.

Q. How did you know there was discrimination?

A. I was sufficiently interested in the political movement to realize there was discrimination, also the mere fact that there was only one woman in an academic position who was Head of a department made it obvious because there were other women who would qualify. There were two women, one was Madame Galloo who was Head of the French Department and the other who was head of Home Economics, but that was natural so you couldn't talk about discrimination in that particular instance. And of course they later abolished Home Economics which was all right; after all the University of Kansas was an independent institution; there was a very good Home Economics program at Kansas State and that seemed to be the logical place to have it.

Q. You said earlier that the reason that medicine was not a possibility for you as a career was financial reasons. How did you afford your career as a graduate student? Were you funded?

A. No. Only that I was assistant in the lab and was paid.

Q. Could you support yourself on that?

A. No, I had help from my mother and brother.

Q. Your brother was older than you?

A. Yes, eight years older and always a very good companion; he never married, he was good to the family, we spent a great deal of time later travelling together and he was always supportive of whatever I wanted to do.

Q. Was he your only sibling?

A. Yes.

Q. Now, can we go to that invitation you received from a student to go to Maryland.

A. He was a student in the department of microbiology who went to Harvard to finish his graduate studies; then from Harvard to the Rockville Institute, and eventually he had a hand at organization of biological warfare at Fort Dietrick, Maryland. He asked me to come to the Rockefeller Institute also for a year before the war; when the war broke out he was in charge at the laboratories in Dietrick, and I was there until the end of the war.

Q. What can you tell me about your experiences there?

A. Well, it was an interesting experience; the laboratories were in a temporary building. We were instructed to be interested in defensive warfare, not in offensive. Tularemia was a disease which it seemed possible could be used as a defensive weapon. As far as I know it never was, but we studied the various ways in which the organism could be used as an aerosol, or various ways of dissimilating the organism. It is a very interesting experience because microbiologists were gathered from all around, a great many from the Universities of Ohio and Wisconsin; we also had a corps of WACS and WAVES. Generally speaking they had been either chemistry or biology students, so it was a way of meeting a great many people in your field. I had one letter after the war, when they ceased to be so secret, a letter of protest against biological warfare being such a terrible thing. To me it didn't seem to be any worse than any of the other terrible weapons. So I had no feeling of guilt from working.

Q. So there didn't seem to be any conflicts for you?

A. Not from me, but of course biological warfare was banned after the war, but there's no doubt that the Anthrax breakout in Russia meant

that they were still working and we have quite good evidence that the Germans were starting to work on biological warfare, during the war.

Q. So your role was developing Tularemia as an aerosol for the use of biological warfare; what exactly happened, was that developed?

A. Tularemia and several other diseases were studied from the standpoint of disseminating the disease, preventing it in a susceptible population, and curing it; antibiotics were just coming in to cure these diseases so that it seemed to me a great deal of worthwhile work came out of these studies. They were expensive and they could hardly have been done under ordinary civilian conditions.

Q. You felt very comfortable then?

A. I did.

Q. How did you feel when you received that letter?

A. Well, I thought he just didn't know what he was talking about.

Q. The colleagues you worked with at that time, did they experience any conflicts that you knew of?

A. I don't remember that anyone did. We had some very fine microbiologists, especially from the University of Wisconsin, and they were very dedicated and felt this must be studied or else the U.S. would be so far behind that it could be used against us. So, it was a pretty high-powered, dedicated group.

Q. Of course feelings of patriotism, I would imagine, may have been different then from the way people think now.

A. That's always true during a war; of course, there were dissidents but they didn't make much fuss.

Q. Did you meet any high level government officials at this time?

A. We had a stream of visitors, including anybody who would qualify to be cleared for secret work. It was very secret, so there were a great many visitors from the government who came to the camp and looked at the facilities. Eventually those temporary quarters were made into very fine permanent laboratories, and they're still operating.

Q. What kinds of things are they doing now?

A. Well, they're working on infectious disease and also on cancer.

Q. Do you have any relationship to them anymore?

A. Not anymore. I used to correspond with some of the people who were there. But officially I continued to be a consultant for about ten years after the end of the war. I would go back twice a year and look over one thing or another.

Q. So officially when you were there you were on leave from the University?

A. Yes, I was.

Q. What did the faculty think you were working on, if this was so much of a secret?

A. I don't know what they thought, but I remember one faculty woman saying to me, "What are you working on?" and I said "I can't tell you, it's secret." She said "I suppose I'll see it in the paper in the next few days." I think that was the attitude of a good many people. This secrecy was all nonsense.

Q. Really?

A. But it wasn't.

TAPE 2 - INTERVIEW 1

Q. We were talking about the notion of secrecy surrounding your work.

A. Yes. We knew through our intelligence that the Germans were working on biological warfare on an island on the Baltic, and I'm sure the Russians were working on it, too. This outbreak of Anthrax that was mentioned in the paper two or three years ago, I feel quite sure that they were working on biological warfare. And of course, as I said, it still goes on because there's so much that can be done in the way of preventive medicine, and from that standpoint, you see, it's a very good thing.

A. But you said people kind of laughed at the notion of secrecy.

Q. Well, they didn't believe that it was so secret, but it really was, and as far as I know no one that I knew violated the secrecy, and I was quite convinced that it must be. It's a very difficult thing to explain without going into technical details. It's not an easy thing to disseminate disease, although when we have a big epidemic it looks like it ought to be pretty easy, but it isn't.

Q. I can understand that. How long were you in Maryland? How long did you spend working at Fort Dietrick?

A. Well, I went to Fort Dietrick in 1943, and stayed there until the war was over. I came back from time to time and taught a class for a semester. But essentially I was actively involved in the years between 1943 and 1945.

Q. Is there anything else about those years that you feel were significant to you?

A. Well, I think I was fortunate because Mr. Malott, who was then Chancellor, was very supportive, and he knew what was going on. Some of the people at the top of the organization cleared him, and many knew what was going on, so there was no question as to that I could stay there and work. We got various substitutes in classes that I had already taught.

Q. Was he the only one from the University who knew basically what you were doing and why?

A. Yes, I think so.

Q. Do you think that would have made a difference if he hadn't known?

A. Yes, because there was some feeling that I ought to come back and teach my classes. Then the agency cleared Mr. Malott and told him what was going on, and then there was no question of what I could be on.

Q. Did your colleagues in any way resent the fact that you were gone for so long?

A. Yes, I think there was some resentment, although not much.

Q. Was it difficult that you couldn't explain to them what you were doing?

A. Well, yes. And I was always a little afraid that by some chance I would drop a word or two that would reveal some of the things that I was supposed not to say. But I don't know, as far as I know I didn't. But it was difficult because ordinarily you talk about your work very openly, and I couldn't under the circumstances.

Q. I could imagine that as being somewhat stressful for you.

A. Yes, it was to a certain extent. After the war when I flew

back and stayed over the weekend and looked at the work that was going on there, that to me was the most difficult part. When the war was going on and I was permanently at Fort Dietrick, that was all right, I wasn't very well housed, but we got along all right and I wondered at times whether sleeping on an army cot and going down the hall to the bathroom and the showers, I wondered how I would take that. But I got along. Everybody else did too.

Q. What was the most difficult for you, you said something about when you flew back for the weekend?

A. Oh, yes. That was difficult in a way because I had to get ready and go on a two-engine plane and change planes in Pittsburgh and wait there and finally get transportation. It was difficult. I definitely feel a two-engine plane today is not too safe, but I didn't think about it at the time.

Q. So, you really were doing in a way an all-out effort for your country when your living conditions were not excellent.

A. No, they weren't luxurious.

Q. And you were very limited certainly, in what you could and could not say which caused some difficulty for you here at the University, yet you were really dedicated to work that was going on.

A. Well, the work itself was interesting and I felt that the idea that we in this country should know at least as much as the enemy did and that was worthwhile, so I don't know that I consciously thought it was a patriotic effort; it was something to me that seemed interesting and worthwhile, so I don't know that I can claim to be very patriotic. That was about it.

A. Okay. Did your work take any different direction as a result of your experiences there?

Q. Yes, I think it did because after the war I had various government contracts to do research and I became particularly interested in the epidemiology of Tularemia and the tick transmission of Tularemia which opens up a very complicated cycle, from infecting animals, to ticks, to man, and so forth. I think that I would say that it extended my idea of the disease transmission specifically.

Q. Was that where you concentrated your efforts?

A. Yes, for several years after the war. That was an interesting aspect of the research.

Q. Would you like to talk a little bit about that?

A. Well, I don't know, it's sort of a technical thing and I suppose that a great many more people know about it now than they did. There were some very good students in entomology, one in particular that I still correspond with who was intensely interested in the transmission of Tularemia and other diseases from animals to ticks to man. And sometimes back again, which usually was the route that it took. A group, one or two of whom had been at Dietrick, went to Alaska because we thought, and I think it was true, that the Russians realized that Tularemia was a disease that might be used in biological warfare. They also developed a live vaccine which we had not produced or used, and so after the war quite a lot was done in that respect. I went to Alaska with two other members who had been at Dietrick and we worked there trying to find out by means of a skin test, how many natives there had had Tularemia; we found quite a considerable lot of people. And they had gotten it as

was disseminated in that country from sick rabbits to ticks, or sometimes other insects, and then to man. Yet rarely from man to man.

Q. Now you have said earlier that your very first experience with Tularemia came from an experience with a man who had shot a rabbit, is that correct?

A. That's right.

Q. But you said he was not that terribly ill.

A. No, as a rule Tularemia does not have high mortality but it's disabling, sort of chronic, it may become a chronic disease.

Q. Now how is that kind of a disease used in biological warfare?

A. If the organism was disseminated into larger amounts you would get a great number of cases of Tularemia pneumonia which may be fatal. So from that standpoint it's not only disabling but it's a real menace.

Q. Is it still a menace today?

A. I don't know. It's been very well publicized and I think that if you took a census among the farmers around here, for instance, or in other places where it's endemic, you would find that they knew a good deal about it and would not have anything to do with sick rabbits. Now with a rabbit that runs actively, chances are it isn't sick, but at the depths of the depression when I first saw patients, people wanted rabbits for food and weren't very discriminating about it.

Q. I see. You went to Alaska following the war and continued your research in Tularemia; how long were you there?

A. Well, I was there only two or three weeks, and afterwards I kept in touch with the Navy Biological Laboratory at Anchorage. They did a lot of work showing that the natives had been infected with apparently

a mild organism. A great many of them were immune; that can be shown by skin tests; we did a lot of skin testing on Alaskan Indians.

Q. Did you select Alaska because of the natives?

A. Well, yes, and because Alaska is very close to Russia and so we suspected that the rabbits in Russian dnt eh rabbits in Alaska might have the same kind of strain.

Q. I see. Now when did you attend the Rockefeller Institute?

A. That was in 1939 just at the beginning of the war.

Q. So it was before you went to Dietrick. And what was your work there about?

A. Well, it gets a little technical but perhaps I could say that the organism that causes Tularemia, was an organism that doesn't like to grow on the surface of a medium. I was trying to develop a way of growing the organism on a surface of a medium so that we could enumerate the number of organisms in a certain sample. That developed very well at Dietrick. I didn't get much of anywhere on it while I was a year at Rockefeller.

Q. Well, you certainly had a very, very fascinating experience.

A. Yes, I have had, and I have enjoyed it very much. I've enjoyed knowing these other people, these good microbiologists from various places, from this country and also from England in particular, and it's been worthwhile as far as I'm concerned. I don't do anything professionally now and I don't regret it because I'm interested in other things.

Q. Did you ever feel frustration that you had not been able to go through with your hopes to become a physician?

A. Oh, yes, of course I did. Because I wanted very much to become

a physician which probably would have meant a very different professional life, but it isn't the sort of thing that you just mourn over. You've got to go on. My mother and my brother were very supportive of whatever I wanted to do so I didn't have any opposition.

Q. You've had experience at the University of Kansas for many years. What changes have you seen?

A. On the whole I'd say that always it's been uphill. It's much more sophisticated, a better University, certainly than it was when I entered as a freshman. There were some outstanding faculty members at that time, as there are now, but still it is better than it was.

Q. What about the way the legislature and the University, or the Regents and the Legislature, interact, do you see any changes there from your own experiences?

A. Well, I don't know; you see, I was never in any administrative position but they used to say, and I think there was some truth in it, that the legislature was largely composed of people who were farmers or in some connection with farms and that they tended to favor Manhattan over Lawrence.

Q. When were those kinds of comments?

A. All along. That has gradually diminished, I think; there are some remnants of it. There are a great number of good universities in this country, but there are relatively few good veterinary schools such as at Manhattan.

Q. How did the depression affect life at the University?

A. Oh, that was very bad, very bad indeed. I was among the many others and unfortunately at the point where I got the maximum cut in

my salary which was 25 percent; that was hard to take because salaries weren't any too good. The salaries have increased markedly. The amount of money that goes for support has increased. I don't want to sound as if everything is wonderful, because it isn't. But after the war certainly there was a great upsurge in the amount of money that the government and other institutions allocated to research so that it wasn't as difficult to get a government contract for research as it used to be before the war. And to a certain extent that has continued except that it isn't as easy now as it was say 10 years ago. And right after the war I had very generous research contracts so that I had money to buy necessary apparatus, necessary chemicals and that type of thing, you see.

Q. And how long did that continue?

A. That continued up to perhaps 10 years ago. It was getting to be not as good 10 years ago, as it was before.

Q. After the war you came back to the University and stayed here?

A. Yes, more or less. I had several research contracts, and they were very generous; I had good contracts. I had a Navy contract and I had an Army contract. And it was much more satisfactory from my standpoint because I could have technical help which simply wasn't available until it was possible to have a contract. The state didn't encourage anything of that sort. Student assistance and graduate assistance has also grown and it has helped a great deal, in teaching and in research.

Q. From after the war until about early 1970s would you say that was the time when there was the greatest financial support?

A. Well, I believe so.

Q. How did the University reflect this? Was there a different

feeling you could characterize, at the University in terms of research and higher learning that made the difference?

A. I think that is impossible for me to answer. I just don't know. I think that we could keep a good many excellent graduate students here if we could subsidize them. Whereas, some of the eastern universities had big endowment funds which they could use for that purpose, naturally a good graduate student would go to these other universities and be subsidized. We would be glad, of course, to keep them here, but didn't have any means to support them. To a certain extent that's still true, I think. Although to a much, much lesser degree than it was in earlier years.

Q. You also mentioned earlier your relationship with Chancellor Malott at the time you were at Fort Dietrick.

A. He was very supportive, I'm sure, of other research that went on and as far as I was concerned he supported me very generously, not only by money, but by moral support.

Q. What other relationships with other Chancellors did you have and what did other faculty have with any other Chancellors?

A. As I told you I had no administrative jobs, and so I was confined to teaching and research. What research I could do with practically no money, that was about the way it was. After the war, when I had good research contracts I could have help, and I could have whatever supplies I needed. So in a way it was a release because I always wanted to do research, but when I had a heavy teaching load and no money I did the best I could. It wasn't easy.

Q. So most of your time after that was in research?

A. No. I still taught a full schedule. But it was eased to a certain extent. I didn't teach as heavy a schedule as I did before the war. In other words, I had more time for research.

Q. What was the year of your retirement?

A. I think it was 1963.

Q. When we talked about support falling off, was that 10 years ago?

A. Yes, money was tighter.

Q. Okay, that was after your retirement though? So you still kept in touch and knew pretty much what was going on in the department?

A. To a certain extent, a limited extent, I would say. Doctor Poretsky comes to see me quite frequently, he tells me all that's going on and of course, I'm interested. After I returned to K.U. following the war my professional journals simply kept on coming to me and I would give them to Dr. Poretsky to keep up in our Library Department. When I was in New York I became a member of the Harvey Society, which is made up of research people from all kinds of fields, and they still send me their annual board report. And I'm glad of that, although I must say I am far enough behind that much of it is beyond me now.

Q. Okay, you had just gone up to New York. Were you there as a researcher or a visitor?

A. I was a visiting research person at the Rockefeller Institute.

Q. That was in 1939?

A. Yes, 1939. And the Rockefeller Institute has since become the Rockefeller University.

Q. Were you ever at Rockefeller University after the war?

A. No.

Q. When you reflect back on all your interesting experiences is there anything else that stands out in your mind?

A. I don't know.

Q. Okay, we talked about how the depression affected you and that things were very, very bad, that you had to take a large cut in your salary.

A. There was no money, not only for salaries, there was no money for equipment; during the war there was a great increase in necessary, sophisticated equipment, but it was simply too expensive to be available. Some of the large universities such as Johns Hopkins, Chicago, and Harvard, had some foundation money which could be spent for those things, you see. It was kind of tough going for the University of Kansas; it was tough going for a lot of universities, too. In the Midwest one man said to me, "Oh, there's a large territory of unscientific work in the Midwest." So that's the way they characterized the Midwest. We were out of the active zone.

Q. Now that changed, you said, after the war?

A. It changed very much, yes. There were chemical studies that were subsidized and there were biological studies that were subsidized by grants, from the Army, from the Navy and sometimes from some of the big biological supply houses, such as Eli Lilly, that kind of thing.

Q. What about the treatment of women at the University following the war years, for example?

A. I don't think I know enough to comment on it intelligently.

Q. You never felt anything personally then?

A. Oh, yes I did, of course I did, but never enough to be crippling.

Q. Could you talk a little bit about your experiences then, when you said "Oh, yes", that you felt something?

A. Well, I would rather not cite the specific instances. They were real and I recognized them as such, but on the whole I personally was treated very well.

Q. What other kinds of changes have you witnessed at the University? You talked a little about changes in the legislature in terms of the University.

A. Yes, I think there was less discrimination against the University in favor of Manhattan than there is now and I rather think that grants that were given after the war and during the war have diminished and are harder to get. They still continue, so that that was one good thing that came out of the war.

Q. What about relationships between the University of Kansas and the community of Lawrence, did you see any changes there?

A. I don't know.

Q. Any Chancellors stand out in your mind as having very significant relationships with the Governor or anything of that nature during your career here?

A. Well, in some ways I think that when Mr. Malott came, and since his regime, the Chancellors have been perhaps a little more aggressive in getting money for the University, but I don't know that; I really would not want to have that quoted because I know so little about it. It's a very controversial thing, you see.

Q. What do you mean?

A. Well, it's controversial in the sense that some people would agree with me, others would disagree and think that the University's been very well treated. and so forth. Others think it hasn't been well treated.

Q. Okay. Why don't we stop here for now and say this will conclude our first meeting and perhaps we can get together again.

INTERVIEW 2 - TAPE 1

Today is January 14, 1984. We're experiencing a much colder, more wintery-like day than we did at our last meeting. This is my second meeting with Dr. Downs. We are sitting in a beautiful livingroom in her home on Alabama Street in Lawrence, Kansas. She's got a fire going in the fireplace and we're here to continue talking about her very interesting life experiences.

A. We concluded our session last week with the comment that we did not have any opportunity at all to talk about your non-professional activities and your interests, your hobbies, when you ever had free time, what kinds of things you like to do. Would you like to talk about some of those things now?

A. Yes, I suppose so. My mother and I lived together until she died in 1924. My brother, who never married, lived in Kansas City; he had a real estate business, and we travelled together. After my mother's death we went to Europe several times and were very companionable; I enjoyed travelling and I suppose that travelling and gardening might be called my hobbies. I tried to establish a perennial garden as much like an English garden as possible in Kansas, and that is a continuing hobby. I have not been a person who had many hobbies. I would say perhaps because I spent so many hours in the laboratory, I really didn't have much time; I found that gardening was very relaxing and I enjoyed it very much so that I

suppose you could say that gardening was my only hobby. I've always kept house, ever since I can remember, sometimes with help in the kitchen and the house, sometimes not.

Q. What about the kitchen, is that something you enjoyed?

A. Cooking? Yes, I do particularly if I have guests, I'm not much of a fancy cook, mostly just ordinary and plain cooking. I have enjoyed belonging to a gourmet club from a University and town group, but that broke up last spring and didn't reform. It was one of the University women's activities. That's about it as far as outside activities go.

Q. When you were a member of the gourmet group did you have the opportunity to cook a gourmet meal in your own home?

A. Yes, what we did was to meet once or twice a month; we would bring in various things so that it made a complete menu, made up by the one who acted as secretary; we tried various things. We at one time tried foreign cooking and decided that American cooking was as good or better than any foreign cooking. That was a very enjoyable group. I was rather sorry when it broke up.

Q. Did you have a favorite dish, or any particular specialty that you could describe?

A. No, I don't think so. Really, I wasn't a fancy cook at all, nor were we at home. We had good food but not fancy.

Q. What other kinds of social clubs were you a member of?

A. Well, there is a group here which has been going on for a great many years. It started to read novels, and that group is still going. We read all of the Forsyth saga, and that was very enjoyable. We met for a simple supper and then each one in the group read a chapter, and then passed

the book on to somebody else who also read a chapter and in that way we read all the books in the Forsyth saga. Then we started reading Vanity Fair; that didn't read aloud as well as some others and, because the group had changed, we went back to Trollope. It reads very well aloud so that again we read all of the so-called Barchester series and now we're reading a series of short stories, and that's very interesting. Trollope was very interested in inheritance laws in England and you get a good idea of the so-called entailing of wealth and property. We read the Barchester series, we read a series of Trollope novels on Ireland and all together you get a pretty good idea of what was current in approximately the 1860's on. 1850's maybe. And in fact one of the professors on the Hill used one of Trollope's novels as an example of a court procedure in inheritance.

Q. Do you recall anything you enjoy reading for leisure reading?

A. Aside from professional reading?

Q. Yes.

A. Well, that's a little hard to answer. I think I've enjoyed reading all the great novelists, some of them of course, read very much easier than others. In my library, it's really my grandmother's library, I have Thackeray (the Dickens series went to somebody else in the family) but I have Thackeray and Whittier so that gives you some idea of the range of that period of reading. I've read a lot of short modern novels, being particularly impressed with them except that I must say that I enjoyed the Forsyth series very much. That was a good series.

Q. Did you see that on television as well?

A. Yes, we did. As a matter of fact there was a small group of about four or five families, Mrs. Greaves and her husband were two of those in the

group, and we met for a light supper and then read and talked afterwards and that was very enjoyable. I belong to the Twentieth Century Club and have been an officer there and I was very, very active. I enjoyed being with a group of women, and wanted to keep in touch with what's going on.

Q. Would you describe yourself as having many "friends" - one very close friend?

A. Not many close friends, but always a few, and that continues in this group that is reading now.

Q. The people with whom you meet - you would consider them to be your close friends?

A. Yes, I think so.

Q. Would you be willing to tell me who they are?

A. Yes, I'm not unwilling. I don't want to mention names to be published.

Q. I was just thinking the more we know about you, the person that is not professional, makes us know you better.

A. Yes, well for instance, in this group Mrs. Lawson now belongs, and as you probably know, before she married Dean Lawson she was long-time secretary to the Chancellor. She's a very fine person. Mrs. Stutz, who used to live here, now lives in Topeka; we have two Topeka members, a Mrs. Dickenson and Mrs. Stutz. And Mrs. Genevieve Lupton and Mrs. George Baxter Smith belong to that group. We meet every Monday afternoon.

Q. How did you each learn of each other's interest, are these people who have been friends of yours for many, many years?

A. This group that reads has been going on for, I suppose twenty years. Mrs. Carl Nelson was one of the original members. The group has changed

because some have moved away and so it's in a way a fluid group. Now Mrs. Dickenson and Mrs. Lupton are relatively recent members and I am too. I think I must have joined ten years ago.

Q. You would consider that a recent member?

A. Yes. Well, Mrs. Nelson has been dead for years; she was a member of the original group, I think. That must go back to 1940, something like that.

Q. Now I see on your resume that you were a member of Delta Delta Delta.

A. Yes, I was. It came on the campus about 1930 and I was a member of the original group that colonized it here. When I was in school I was not a sorority member.

Q. You mean as an undergraduate?

A. Yes.

Q. But you organized this then when you were a graduate student, or as a faculty member?

A. As a faculty member.

Q. And was that just mainly for social reasons that you got together?

A. Yes, in a way. I liked and knew the women who belonged, the original members of the group here and one of the members, Mrs. Falkenburg who in Kansas City was very influential in establishing the group. Her husband had designed the house that my brother and I had build here, so that's the way I was acquainted with her; it's been a very nice group. It's been a changing group because of faculty wives moving in and out, and that kind of thing. But all together I think it's been a very, very close-knit group. You have to enjoy reading aloud and you have to enjoy rather classical stuff. I don't think we read anything in the way of current literature. The Forsyth saga

was about as current as it gets.

Q. So the group that you spoke of earlier, the reading group, were these people also Tri Deltas?

A. No.

Q. That was more social?

A. Yes. As you may know, there was a Tri Delt Chapter at Manhattan and a Tri Delt chapter in Baker, and Mrs. Geltsch, who was at one time Dean of Women here, was a Tri Delt at Baker, and was very enthusiastic about having a chapter here; and it got together in that sort of way.

Q. Do you have any relationship with Tri Delt's currently?

A. No, not really. I occasionally go to their meetings and they always keep in touch with me, but I'm not active in any way.

Q. Were you as a faculty member?

A. Yes, I was, and I was on the membership board and used to go to the alumni meetings and played some part in that. There was a feeling in the 30s and 40s that sororities really played an active role and it was about that time that they changed the pledging system, very much for the better I thought, because now any girl who wants to belong to a sorority goes through rush and puts down her preference or preferences and then the Dean of Women's Office matches up the girls' preference and the sorority's preference so that really every girl has a chance. And it's pretty good, I think. Before we had that there were girls who were simply crushed by not getting bids, and many of them went home; this way I think almost everybody has a chance, and that's good. No use breaking your heart over a sorority!

A. I quite agree. I think that when we reflect back on some of our experiences, each of us would have several people that might stand out as

being people who influenced us in some way. Who do you think of that influenced you and how?

A. Well, I wanted very much to enter Medical School - I think we went into that somewhat. And some of the professors in pre-medical and medical work certainly influenced my choice of being a microbiologist instead of something else. There were opportunities in microbiology that came up in the Thirties, I think. Maybe a little before that, maybe just before the turn of the Twenties to the Thirties, and I didn't have any desire to teach, I wanted to do laboratory work.

Q. You didn't have a desire to teach?

A. No, I didn't. You see I graduated in 1915, and that was an era in which there weren't a great many opportunities for a woman except teaching. I didn't think I wanted to teach in high school, which was the usual route, so I went on and did hospital laboratory work, as you can see from my resume. From that I went into microbiology. It has been a growing field, I think still it is. Dr. Sherwood, who was head of the department, had really developed the idea of a laboratory technician, and it was under his regime that the field developed. It has turned out to be very fruitful, we've turned out a great many students from the department who are well qualified, they've done well in public health work and in laboratory work in general. I was caught, at a time when it was just developing into a profession.

Q. Was he your first Chairperson then, Chairman, when you were on the faculty, or was Dr. Sherwood the Chairman of the Department when you were a student?

A. No, he became Chairman of the Department about the time I came back as a graduate student; he was very enthusiastic in developing the idea of

hospital technicians, and it was a very attractive and fertile field; the University, in the Department of Microbiology, has turned out a lot of very good public health laboratory people.

Q. Did he have any particular influence on your work? Upon you in any of the directions that you chose?

A. Why, yes, I should think so, although it would be hard for me to put a finger on it. He was very dynamic and a good teacher himself, so that as a matter of fact he became Head of the Department because of the departure of Dr. Billings, who preceded him. Dr. Billings was also a very fine teacher; he went to the University of California.

Q. You said earlier that you lived with your mother here in Lawrence, and that you spent also a good deal of time with your brother.

A. Yes, he was in the real estate business in Kansas City and was fond of travelling; after my mother's death we went to Europe and made various journeys of that sort and enjoyed it very much. He, in fact, died in France in 1960, when we were travelling; he had a heart attack and died.

Q. That must have been very difficult for you.

Yes it was. I was there, he came over and joined me in the early summer; I had spent that academic year from fall to early summer at Oxford where I had a fellowship; I had more or less wound up my work at Oxford and we were travelling in Europe. Of course I came home right away.

Q. May I ask you if romance ever played a part in your life?

A. Well, I suppose you could say it did. I don't know exactly why I never married. I had several opportunities to marry and enjoyed companionship with men. I always have, and because of the medical interest and the make up of the departments here I've always had some connections with men, men on the

faculty, married and unmarried, and I even felt isolated. Because the norm is to marry.

Q. Did you really feel that sort of distinction then, between being married and not being married?

A. Oh yes, it still exists. Not as much as it did years ago, I think because there's so many more married women who are working, whereas in the early part of the century it was very unusual for a married woman to work. A woman married and she kept house and had children.

Q Do you feel though that the norm, so to speak, influenced you in that you felt you could choose one path or the other, but not necessarily both?

A. Yes, I think so. It seemed hardly possible, I think in the early 1900s, to pursue a profession and yet also have children, yet it's so common now that the whole thing has changed very much.

Q. How do you feel about the changes?

A. Well, Frankly I feel sometimes that children are neglected. Women, well, I don't want to be quoted on this but I would say that it's as if women are somewhat greedy, they want a profession and all the things that go with it, they want children, a husband and a household, and it's very hard to have all three or four and do it all very well. So that I think sometimes it doesn't work out very well. It takes a woman with a great deal of energy to encompass all those things. I think sometimes, inevitably some of it gets short-changed. As I say, professionally and non-professionally, I knew a number of men and could have married, but my mother was a semi-invalid and, if you remember, those were depression years in the Thirties, and it just didn't seem reasonable for me to marry. I think I should say that I was never engaged emotionally

very deeply.

Q. If you had the opportunity to advise women of today. . . .

A. What would I do? Well, I would have to say that I think it depends very largely on your level of energy. If you are well enough organized and have good health and lots of energy, you can have everything. You can have a profession, you can have children, a household; unless you do have a very active level of energy, I don't think it's possible to have everything without neglecting something, and it just depends what is neglected. Your husband neglected, your children in a day nursery, and so forth.

Q. Yes, I understand. When you think back on holiday times and those kinds of things, how would we find you spending your holidays for example?

A. Frequently going some place or spending it with friends; my brother and I spent two or three Christmases in New York City, going to the theater; we always had a family Christmas, too, so that you see with only an unmarried brother, there wasn't much family. We did keep in touch with cousins but not any big family gatherings, there weren't any people in the immediate vicinity of Lawrence that were family so it was mostly a question of getting together with friends rather than family connections. The family connections were and still are, on the east coast mostly. Another thing that I should mention was that the microbiology society always met during the holidays and that meant either going to the society meetings just before Christmas or leaving for the society meetings immediately after Christmas, so that pretty well took care of the holidays.

Q. Is that something you find yourself looking forward to?

A. Oh yes, I always enjoyed the meetings, and from the time I went to my first meeting in 1921 I almost always went to the national meetings.

Q. I would imagine that you made presentations many times at those?

A. Yes, I often presented a paper.

Q. How did you feel about making presentations - was that easy for you?

A. It became easier as time went on. I can remember the first paper I presented at the University of Chicago; I was simply terrified, but I got used to it.

Q. As we're sitting in your living room I look around and I see many treasures. Could you talk about some of them?

A. Mostly inherited. I was amused at a visitor when I said something about the girl in white behind the cart being my grandmother, and this lady said "You mean those are real people?" I said yes. That was painted in 1828 in New York City when they were living in Ovid, New York. The boy in the picture - when he grew up was appointed by Lincoln to be Consul General at Frankfort, so my grandmother and the little girl in the cart all went to Europe together, and they lived at Frankfort for anywhere from five to seven years. And, of course, that was an experience rather different from the usual experience. My mother spoke German and French all her life because she learned it at the time that when you pick up a language and use it every day it sticks with you. And so that is the origin of that picture. Do you recognize the horses, those porcelain horses? Those are the Lipizzaner horses from Austria, from Vienna, the riding school there. And those my brother and I bought. The things in this room are mostly inherited either from my mother or grandmother; some of them we bought. One branch of the family were called United Empire Loyalists rather than the Revolutionary people and they went from New York State, where they'd been granted land, into Canada; some of the members of the family continue to live in Canada. I have visited them but I have lost track of them. That little wash stand over there in the corner

belonged to that branch of the family; we had some silver spoons that belonged to that branch. So that all these things in this room have more or less connections with family. The girl in that picture was the little girl in the cart, she was about 16 when the picture was painted; it was painted by a man named Duncanson who has recently been sort of revived. Not exactly a primitive painting, because he was better than that, but I have had correspondence with some people in the East who were interested in Duncanson's paintings.

Q. Now that is the girl who travelled with your grandmother, is that correct?

A. Yes. These children, my grandmother's, the girl in the white and the little girl in the cart who grew up and married a musician. There are various rather interesting family stories which I have written up and scattered around the family. Interesting because the doctor whom that girl married was educated at Trinity College, Dublin; they decided to immigrate to this country as so many Irish did. They were shipwrecked and were rescued but lost absolutely everything that they ever had. But I think that's very attractive. I have a picture, a companion picture really, of my grandmother, but that went to other cousins; I got that one and this one and both of them have been restored by a man who lived near Boston and was very good. He didn't spoil them. Some restorations do.

Q. What was her name?

A. Her name was Sarah Murphy Cooper.

Q. Cooper was her married name?

A. Yes. And that is a picture of my grandmother, that oval one. For an early photograph it's pretty good. She's in a riding costume; she went

to a young lady's academy which later became Vassar.

Q. You said last week that you remember spending a lot of time with your grandmother.

A. Yes, my mother was very frail. She was not in good health for a good many years. Not really ill, but not very well either. Whereas, my grandmother was very well, very energetic, loved theater, and Kansas City at that was a good theater town, so we went to the theater a good deal together and went shopping, went to Emery Bord's Tea Room, which was a great treat and very good.

INTERVIEW 2 - TAPE 2

Q. So you have many fond memories of outings with your grandmother?

A. Oh, yes. At that time, around the turn of the century, Kansas City was a good theater town and I think that every year during Holy Week, New York companies came out and played in Kansas City. There was really good theater. I think that London now is probably the only place where you see as much good theater as you did then in Kansas City. People like Marlow and Sothorn, good actors and their fellow actors came out and played in Kansas City because at that time the New York theaters were closed during Holy Week.

Q. Do you remember your grandmother influencing you in any particular way?

A. I suppose as far as developing my love of the theater and reading and of language in general. She and her second husband were very fond of playing anagrams, and if you have ever played anagrams you have a pretty good developing vocabulary.

Q. Exactly.

A. Or you get beaten. She was always interested in what I was reading. She bought me and my brother a great many fine children's books. We had them until my brother and I moved into this house, we just decided we had too many books, so we gave all the children's books to the City Library. And from time to time I have written notes to see what happened to them, and the Librarian said "Oh, they just got worn out to the point where we had them rebound as many times as they could be rebound," they constituted the foundation for the children's library down there. I was glad of that. We had up to past the 1960s a series of Harper's Weekly and Harper's Monthly. You may remember they had the Brady photographs, so we gave those to the library, too. We've always had a great interest in reading. My mother did as well as my grandmother.

Q. Can you recall any favorite books from your childhood?

A. I don't know, I read all the so-called "children's" book: Little Women series, that kind of thing, and later Dickens. My mother was very fond of Dickens, more than my grandmother, I think. I don't remember if she ever read Dickens to me aloud, whereas my mother did. And my mother had a very good speaking voice, a pleasant voice, and she read well so that it was very customary for my brother and me to listen to my mother's reading. She read all sorts of things - magazines, newspapers, books.

Q. Do you recall playing with your brother as a child?

A. Not very much. Although we were always good companions he was eight years older than I so that he had a different group of friends from me. When I was outside the university we travelled together and were very companionable. He was also a great reader and especially enjoyed travelling in

England.

Q. You mentioned briefly that when you and your brother moved into this home. Was this your first home in Lawrence?

A. Oh, no. We built a cape cod cottage at the foot of The Hill. It's just south of where Mr. Nichols lives; he lives in the last house on a dead end street adjacent to it. We bought the couple of lots just south of the Nichols', and built our house. We had owned a place in the country, about 50 acres, and had lived in various places around town.

Q. Your relationship with Mr. Nichols, is that through this club that you're both a member of, or does that go back?

A. Mr. Nichols? I don't know. Mrs. Nichols belonged to this Trollope Club, and we were neighbors and friends and that's about all I can say, we watched their son grow up from a baby, and of course now he's also a Distinguished Professor.

Q. Now you and he are both a member of a club, is that correct?

A. No, just close friends. Mrs. Nichols belonged to a club that I belonged to. She belonged to the reading club that I mentioned. I belonged to Twentieth Century and she belonged to the Friends in Council, so we didn't belong to the same literary club.

Q. Okay. Can we talk for a minute about the procedure that you are famous for, that we did not talk about last time in the laboratory, the procedure that you invented, I guess.

A. Well, no, I don't think that you could say that it was an invention. It was a different use of a laboratory procedure which was fairly well known and it came about when I needed help from chemistry; a graduate student, who now is head of a department at the University of New Hampshire, and I would

help Dr. Brickell develop this method. It is a very good method, it's still used. As Dr. Paretzky would tell you, he didn't think much of having our idea published in the American Journal of Pathology, but as a matter of fact it was accepted at once. That's a good journal, by the way, and the method was at once recognized as a rather simple and easy way to make diagnosis. What I did was to label the antibody with a fluorescent dye so that when you looked at it under the microscope the labeled bacteria stood out because they were fluorescent. That was the basis, it really wasn't anything new except application. The dyes we found the formula were for stable dyes, generally they're pretty unstable. But the student helped us to find those in some of the old German publications; the dyes were not particularly unusual in the sense that they could be made here. So, we had the dyes, we had the bacteria, we obtained a microscope which used not ordinary daylight but fluorescent light; that made it a field where with a great many bacteria, only the ones that had absorbed the antibody that was labeled with the fluorescent dye, were the only ones that stood out. So it was a way of recognizing certain bacteria, you see. That was what was new about it.

Q. Now this came after your work on Tularemia?

A. Yes, quite a few years after. I suppose, let's see, I went to Fort Dietrick in 1943, and this was in the preceding seven to ten years.

Q. In reading that article we see quite a bit of publicity.

A. Yes, it caught hold because it was received very eagerly, really. I think that laboratory people recognized it as a relatively simple and easy way to recognize bacteria. And of course anything that enables you to recognize the cause of an infection is worthwhile. So that's the way it happened. The American Society of Pathologists is a very powerful society and the

method was published in their journal. Reprints went out in an amazing manner; I was very surprised and I know Dr. Paretsky was too. He thought that when I wanted to publish in the American Journal of Pathology that maybe we wouldn't get much response. Instead we did get a lot and had to order a lot of new reprints, and that kind of thing.

Q. That must have been very exciting.

A. Yes, it was. It was very interesting and a pleasureable experience. But as you see, as in so many scientific methods, there's nothing essentially new, it's a question of putting well known things together in a somewhat different way. This is about what it amounts to.

Q. But that's a very significant achievement in itself.

A. Not really, because so much of it was already known. The making of the flourescent dye went back to the great era of microbiology and chemistry in Germany. This took place from the 1860's and on into the 20th century; those dyes were known, and this is a new use of an old dye. And as a matter of fact it took the American chemist a good while to duplicate the work that the early German chemist had done. For a long time we had a dye that was used in the medium, but the American dyes wouldn't do what the German dye did at all. I still don't know what it was, but eventually the Americans were able to duplicate that dye; at first when there was imperfection in the dye, something that we didn't put into ours, or what it was, I don't know; that was true in a good many cases that we built upon others.

Q. Now, was it your thoughts that connected this dye to the antibody?

A. Yes. I didn't know whether it was or not, and then we did find a German publication in which they had attached dyes to antibodies, so that was the beginning of that.

Q. Very interesting. I also read in that article that people remarked that often remembered you saying, "where are my keys", that they talked about Dr. Cora Downs never carrying a handbag or a purse but you had a satchel in which you kept your essentials for the day, but somehow your keys seemed to leave you.

A. Well, that's true.

Q. So you would agree that that was something that was characteristic of you?

A. Yes, I suppose so. I was always looking for my keys. You see, we couldn't use the elevator unless we had the key to it and, of course, my office was closed, the laboratory was closed; it was very vital to have keys.

Q. Do you recall any other anecdotes or instances that you would say are somewhat characteristic of yourself?

A. It seems to me in looking back, I was always in a hurry because I was teaching full time, and at that time that meant anywhere from 5 to 15 hours a semester. Although classes were relatively small in microbiology, still that was quite a load. And I was an advisor also, so I saw students who were not necessarily microbiologists; I was busy.

Q. Earlier when we were talking you said that in the earlier days of your career teaching was not something that was interesting to you, or that you had thought about.

A. Well, a great many of the women who graduated around 1910 - 1915 took courses in education and went from the University into high school teaching. You didn't have any very sophisticated microbiology in high school teaching, not much that was medical. I was always interested in the medical side and didn't want to just teach general biology in high school. I wanted to go as close as I could to Medical School, and so that influenced what I did.

Q. But now teaching on the graduate level, for example, would be a whole different experience.

A. It was very enjoyable; all my classes were at the junior level or above, so I had always in my classes a group who were taking microbiology because they wanted to, and that makes a great difference. You don't have the reluctant students that you do in a great many required courses, so I enjoyed teaching very much. As an undergraduate I decided I didn't want to teach high school where you had sort of a captive audience.

Q. Could you characterize for me what you consider that makes a good teacher?

A. Well, in the first place I think you ought to have a very wide and deep knowledge of your subject, and you ought to have enthusiasm. I must say that I ought to put in a plug for teaching, it's hard work. Many people think it isn't, but it is.

Q. You're right about that.

A. Hard work doesn't hurt people, it ought to be acknowledged as such.

Q. But you think the keys are a thorough knowledge of your subject and enthusiasm?

A. Oh, that's absolutely necessary, and the desire to communicate enthusiasm for the subject to the group.

Q. Takes a tremendous amount of energy.

A. Takes a great deal of energy; you have to like what you do.

Q. Yes, you do have to like what you do because you can't be enthusiastic about it if you don't.

A. No, that's quite true. And in general, I found the University teachers that I had were very good. Looking back on it, I have no complaints about them at all.

Q. Do any particulars stand out?

A. Well, yes. For instance this Dr. Billings who had left shortly after I came back as a graduate student was a very shy man; he read his lectures, he looked down at his cards -- that sounds absolutely uninspiring -- as a matter of fact he was an inspiring teacher because his lectures were always so well organized. He was so knowledgeable that I look back on him as a very good teacher; I describe him as a shy man who read his lectures. You would think, "Well, what's inspiring about that"? Dr. Sherwood was also very dynamic, very forward looking, because he realized that the time was coming when every laboratory, every hospital laboratory, would need to have a laboratory technician, and he built the department on that.

Q. Did you ever feel that any of your professors stereotyped you in any way because you were a woman?

A. No, I don't think so.

Q. They believed that your potential was as great as anyone else's potential perhaps?

A. Well, I don't know about that because there was very few women, almost none, in medicine, and there were only a few women in the scientific courses. I never felt that the professors discriminated against women. You were just kind of an odd ball.

Q. Did you ever feel that you had to prove yourself by being better?

A. Oh, yes. There's no doubt that you had to be better in order to gain the same recognition; that was true pretty much through WWII I guess. You see we mentioned before that there was only one administrative head of a department, and in a way that tells the story.

Q. Do you recall personally feeling not necessarily being discriminated against, but that you had more stress on you in achieving your career goals because you were a woman?

A. Yes, I think so; it's hard to pin down but there was a certain amount

of discrimination on the part of some of the administrative officers of the University. Against women as administrators. That, I suppose, has largely disappeared, I really think it disappeared after the war.

Q. What do you think made that happen?

A. Well, the women were needed so much; the men were gone so they found out that women could do these things and gradually they just forgot about it.

Q. Did you ever have an interest in being an administrator?

A. No. Never wanted to be.

Q. The fact that the opportunity might not have been available to you because you were a woman really didn't bother you that much?

A. Yes, it did when I came to think about it, and that was very late. I suppose, in my career but when I think about it I think there's still a good deal of prejudice and that's a pity; it's a thing that perhaps is inevitable because men get together; they enjoy each other's company, and they're not inhibited as they are if a woman is present, and that has an influence.

Q. So even when you thought about it later it still is very bothersome to you?

A. Somewhat, certainly.

Q. Were you ever a participant in any efforts to get some of those things changed?

A. No, I don't know that I did. That goes back so far. There was some sort of an organization that was headed by Miss Galloo, who was a woman of great strength, a scholar, and a high-bred French woman; we were really lucky to have her. She was one that we mentioned earlier that was head of a department. I became president of what was an early kind of organization of women who were interested in getting the vote for women, that was pretty early,

about 1918 or somewhere along that time. Kansas already had given the vote to women by that time, but the country in general had not, and Madame Galloo was very interested in spreading the word that they should have the vote. I was influenced by her and realized that that was the greatest discrimination. Later more of the chancellors, I'd rather not mention names, but one of the chancellors after Dr. Sherwood's retirement, wanted to consider me as head of the department and I'm sorry to say that Dr. Sherwood said "No, it wouldn't do at all; the men in the department wouldn't want it". Not anything against me personally, but against me as a woman, as head.

Q. You knew about that at the time.

A. No, I didn't, not clearly; it wasn't until later that I heard the whole story. In some ways it didn't matter, I was deeply engaged in my research, I liked it, I didn't have any experience actually in administration and didn't particularly want it but I thought that that was an unfair situation. But as far as I was concerned, I didn't care much.

Q. Did it make you feel in any way different about your colleagues once you learned that, once you heard that story?

A. Well, I thought they were stupid.

Q. In working with them would you have predicted they would have mixed feelings, or was that something that was a surprise?

A. No it wasn't a surprise. The department was small and I knew the members pretty well, I had a pretty good idea about what their feeling was, and in general it was women sort of encoaching on their territory.

Q. Did any of them ever talk to you about this directly or was it something that was skirted around?

A. No I never talked, as far as I can remember, I never talked about it directly.

Q. Did you have situations where your male colleagues would ask your opinion of the lab work that was going on, would they regard your opinion equally as they would another male colleague for example?

A. No, I think in the early days they didn't, I think the general feeling was that the women were fairly inferior; that was reflected in some of the cases where I knew that the men had a higher level of salary. It was shown that discrimination was there, in salary as well as in rank.

Q. That would be on the so-called "institutional" level?

A. Yes.

Q. I'm thinking more on the personal or day-to-day level. For example, if someone was working on something that you knew something about, would he seek you out for assistance.

A. You know, I don't think until the war years that they would. The whole thing was so dominated by the male contingents. That was true of the society of microbiologists and in Kansas University as a whole; Kansas institutions as a whole were discriminated against because, I may have told you that one man said that there were a great many miles of unscientific territory?

Q. No?

A. Well, in talking to me about our department, and we had quite a number of graduates who were getting into good labs and doing good work, he said "Well, of course Kansas is in the middle of greatly unscientific territory." And so it was. It was harder to get money grants, much harder, than if you were connected with Harvard or Johns Hopkins, or some of the good Eastern schools; that's where the money went until WWI. That is discrimination, not so much individual, but the whole University.

Q. What do you think that discrimination was really based on?

A. Based on the woman's role as a homemaker.

Q. No, I mean against Kansas University as an institution. We're talking about two kinds of discrimination. One against women and one against Kansas as opposed to Johns Hopkins or Harvard.

A. Well, of course their whole administration of the big Eastern schools was so well established that I think the people that give grants simply didn't know what was going on in the West, in the middle West, and in some ways they weren't very interested in finding out until the war; that made a great difference because then a large group of people from Ohio and Wisconsin got into active work in the war and it did change things considerably.

INTERVIEW 3 - TAPE 1

Q. Last week we talked a little about the philosophical thoughts on having one's biography written or described. We talked a little bit about the pros and cons, I certainly understand some of your feelings about what we said. You did mention that you experienced some ups and downs. Maybe we could start on that note today since we've talked a lot about your professional career and things you've accomplished, we've talked a little bit about your personal life, but when you mentioned the word ups and downs I was very curious about exactly what you meant.

A. Well, that is hard to say. There were times after I came back to the University when there was a question, partly about salary, partly about rank, whether I was receiving the same salary and the same rank as the men in the department. Generally that was resolved very much to my satisfaction because they did give me the same rank and in some cases more salary than

some of the men in the department, so that generally I think that I was treated very fairly, but there was a question about sex there. In general I don't know what the faculty is now, but in general the faculty then was more male than female. To a certain extent I think that many of the women on the faculty were somewhat discriminated against. Now that's of course a very touchy subject because you don't know whether the discrimination is just on the surface or whether there were real things in back of it.

Q. What was your feeling about that, did you feel it was more on the surface or through instances you might have had, that it was really deeper?

A. I think on the whole it was the prejudice. Not all of it, but sometimes.

Q. Can you cite any examples or instances?

A. No, I don't think I can, the only thing that I said the last time we talked was that only one woman was head of a department. Of course we now have two Vice Chancellors who are women; that would have been almost unthinkable in 1920.

Q. Now you said when you came back after the war . . .

A. I came back in 1945.

Q. What exactly happened that there was some questions as to your salary and your rank? What were you thinking about when you said there was a question in your salary?

A. There was a question of salary rather early on but when the department had to fill Dr. Sherwood's place after he reached the retirement age. It was a question of whether people nominated as being logical to be the administrative head should receive a large salary. I don't know that things have changed since I was active, but at any rate there were people in the department who thought that a woman was hardly qualified to be administrative head of the department. That was immaterial as far as I was concerned because I never

wanted to do administrative work, and of course that maybe entered into it, I don't know.

Q. Now you said that there were people who thought that women were not suited for an administrative position, how did they let those feelings be known, did they come right out and say it?

A. Oh, I don't think so, I think it was one of those things, covert, would you say?

Q. So you felt that on the question of you possibly being an administrator, you say you weren't really interested in it anyway. What about on the level of your work, in terms of your opinions, your findings, your techniques, how would you say you were treated along those lines by your male colleagues?

A. Very well, there wasn't any question about that; it must have been about the end of the war that we got several new members in the department and they were very supportive of my work. Very supportive. And of course it was during Murphy's Chancellorship that I was appointed to the Distinguished Professorship, and I was very much surprised. I didn't know that my name was being considered and I was greatly surprised that they appointed me. I don't know whether there was any particular discussion about that; there must have been, but I don't know about it and I can't tell you now whether there are any more Distinguished Professorships given to women or not. Deanell Tacha is in a top administrative job, of course.

Q. There are other women there as well. Didn't you once mention that Frances Horowitz was in touch with you?

A. Oh yes.

Q. She's head of research and graduate studies, I don't really know her title. That's two women that are in high positions right now.

A. There may be others, I don't know.

Q. That has definitely changed. But it's interesting to me in terms of what your own personal experiences were from two standpoints. One is, we talked about different times, different eras whose thoughts were very different about women, and two, because you were so distinguished in your work that I was wondering if your experiences as a woman would be somewhat typical of how professional women would have been treated in those times?

A. That's hard to say because if I were to fight for distribution of women in microbiology I would have to say they were distinctly minority and why they are I don't know exactly except that it's somewhat as it was in medicine at the turn of the century; there were relatively few doctors of medicine who were women, whereas now there are a great many; I should judge that they probably find it less difficult to get into Medical School.

Q. Personally, in your day-to-day life in your department, was it something that you were always aware of, the fact that you were a woman, that you were different?

A. No, I don't think so. There weren't many feelings of that sort. It was a question of you did your job, and I was always very interested in research so that I tried not to neglect my teaching. I was very interested in research and I tried to take time out for that, so it left very little time for anything else.

Q. When you mentioned the so-called ups and downs does anything else come to mind?

A. No, I can't put my finger on it exactly.

Q. Sort of the personal triumphs and disappointments, there must have been some.

A. Yes, there were, of course. Really part of it was financial because

it wasn't until after WWII that there were available large grants of money, and certainly the kind of work that I did required expensive equipment and a good deal of just what you might call household help, a question of washing dishes and keeping things clean, that kind of help was needed but it was almost nonexistent when I went back to the department in 1918. Money was not available. After WWII the grants were easier to obtain, they were very generous and you could get manual help and technical help because you could specify that you wanted scholarships, assistantships for individuals, so that it all together was an easier picture than it was before WWII. I understand now that because of the current financial squeeze it's more difficult to replace expensive equipment and that type of thing. When I came back after the war I had to have a great deal of special glassware and special equipment which was expensive, but the grants were given to me; the state never would have provided these items.

Q. So it was a federal thing then?

A. Yes, federal, national institutes that helped, and maybe research grants, too, to investigate some things in Alaska. Money was much easier to get than it had been before; I understand it's tightened up again and it's now difficult to get it.

Q. How long did that sort of prosperity last, after the war, until about when would you say money was real easy to get?

A. I think it lasted up until the time I retired in 1967. Well, you see I worked after that for about four years; the grant was handled by the Endowment Association and there was no difficulty at all as long as we still had approved what I asked for, I could go right on and hire a technician, hire whoever was necessary, buy glassware, buy equipment and so forth. There were no strings attached to the money at all except, of course, the overhead

from those grants went to the University, and just off the record I sometimes felt that was a good deal out of my grant.

Q. You said you worked for four years after your retirement, what were you doing then?

A. I was just finishing research with fluorescent antibodies.

Q. So even though you retired from teaching you were still active in your research?

A. I should say that I was grateful to the department and to Dr. Paretsky for just allowing me to go on with my research laboratory just as I had just before I retired. Now there have been instances when a professor who retired had no place in the way of an office, I don't know about the laboratory people but there have been cases where there was no place for a retired faculty member to have an office.

Q. Have you missed your research?

A. No, I don't think so. It wasn't the kind of thing that I could do on a part time basis and I was ready to leave it. My scientific journals came to me and I gave those to the department. I didn't even try to keep up with the literature after I retired. I have a lot of other things to do, volunteer work and recreation things which I have never been able to do, so I keep busy unlike some of the faculty who were very unhappy about not going on with their work. I've come to a stopping point; it's time to stop.

Q. What else?

A. I was thinking last night how desirable it would be if there was a place where rather detailed interviews or write-ups could be had for past faculty members; we've had a good many distinguished people on the faculty and I don't know whether there is any record of them. About two or three years ago someone came and interviewed me about Dr. Ida Hyde; she must have

retired somewhere along about the time when I graduated in 1915. They were writing a biography of her, she was quite a distinguished physiologist. There are others on the faculty now and others who have retired who really ought to have some kind of a biography written about them so that it would be on record. We've had a number of distinguished faculty and it really would be desirable to have a record.

Q. I couldn't agree with you more.

A. Whether it would be used or not doesn't matter, really.

Q. What kinds of things would you think would be important in interviewing the retired faculty, not necessarily format but basically their careers?

A. Well, yes I should think that the main record would be a record of the work in their specialty. It comes to mind to me, Dr. E.H. Taylor was a very distinguished internationally known man in his field which was essentially reptiles. That seems a very narrow field, but it wasn't really, he also was concerned in secret work. He was very, very deeply involved in that and I don't suppose that there's any record of it at all. I know that I said to him once when my work was declassified, "Dr. Taylor, when is your work going to be declassified?" He said, "Never". And apparently it never has been. Still secret, you see, but it was very important work.

Q. I definitely agree that this would be important to get these records.

A. Certainly it would and I hope that maybe you could do it.

Q. I could do some of it, I would certainly enjoy it.

A. Well, you see someone has to see the need and start it going, and I think it would go on.

Q. I think you're right and I'll do what I can. You have the most engaging smile, your whole face, your eyes, everything just lights up when you smile.

A. Well, I enjoyed my work and I enjoyed outside interests that I had; we were a family of readers, so that's always a resource you know. I'm always a little sorry for the people who don't have enough outside interests to be happy after they retire; there are a great many of them.

Q. Have you ever thought about having your biography written?

A. No, I haven't, really. I know that Dr. Fritz Heider has just finished an autobiography. Have you heard of Him? He's a retired professor of psychology. He's an Austrian who came to this country during the Hitler days, but I don't know of anyone else who has either written an autobiography or had one written. I understand that Leona Baumgartner, who has been commissioner of the City of New York, now retired. I understand somebody is writing her biography.

INTERVIEW 3 - TAPE 2

Q. What feelings do you have about student evaluation of faculty?

A. They used to send a questionnaire around to students to evaluate professors. I think students have a right to evaluate professors, but the trouble comes not with the evaluation that the students make but in assessing the validity of their remarks; that would be up to some of the administrators who look over the reports.

Q. How else can you . . .

A. How can you get at that information?

Q. Yes, and how can you evaluate someone's teaching performance or abilities? For example, professors now are evaluated on three areas, research, teaching and service to the university. Were those the criteria for your evaluation, for tenure, advancement, rank?

A. I don't really think that the students would know anything about the service that the professors did.

Q. No, they wouldn't know about the service and they probably wouldn't know much about the research.

A. No, probably not, but some of them would. I don't see any reason why the students should know anything about salaries. That's taken care of in the organization such as the American Association of University Professors. Of course, I always belonged to that and I think they've done some very good things. But there are some curious injustices in the way the state pays teachers. I don't know whether you've run across that or not but for quite awhile a few of us were interested in trying to do something about it but never got anywhere. And the state for a long time didn't have any pensions. Finally a pension system for faculty was set up but the pensions were cut off just as soon as a faculty member died, so that nothing was left for the family. Very poor pension system that would do that. Now the pension system is better than it used to be because the faculty pay in some and the state pays in some; it is real regular, insurance. When I was teaching and then after I retired none of the faculty paid in anything toward their pension. They got half of their final salary; it was completely inadequate. For instance, a faculty member might retire with a salary of \$2500 a year, but then as long as she lived, she got half of that, but when that faculty member died, the pension was completely cut off. Faculty now have social security plus a state pension. The amount of the pension now depends upon the number of years paid in and how much; this is a regular pension system of course and that's all right. Well that's neither here nor there as far as I'm concerned of course, but I thought the old plan was very inequitable.

Q. What were some of the other feelings you remember on the part of the faculty about the state, the state employees?

A. It was always a question of whether Manhattan would get more than we did. That's perennial I guess; it still goes on. And of course in some ways exasperating as it is it was understandable because after all Kansas is an agricultural state. Manhattan naturally would get more money and still does.

Q. Was there ever any talk of the union when you were teaching?

A. Not that I know of.

Q. How would you have felt about that?

A. Well, I would hope that it wasn't necessary to unionize the faculty but I recognized that the unions, are simply indispensable in our civilization, if they're properly managed they are a very good thing; on the whole I would hope that they would be free of crime and if they are free of crime and do what they should I think they're indispensable.

Q. Can you think the faculty of the University of Kansas would benefit from that type of an organization or not, or would they lose ground?

A. I don't know, I just don't know whether they would gain or lose.

Q. Do you recall any of the days of student activism when you were teaching? For example in the 60s when the students were demanding different kinds of programs and so forth? What are your recollections of those times?

A. I knew what was going on because, of course, it was much publicized, but within our department and my classes I didn't have any reactions at all to it. It was rather a unique situation because our students had all chosen a profession, they were either going into medicine or they were going into laboratory work in microbiology and that we didn't have any students below the level of a junior made a great difference. They had chosen what they wanted to do, they were as a whole professionally oriented and not very much

concerned with the student movement and I think that made a great difference. We were sort of outside that and glad to be of course, at least I was.

Q. Were any of your friends involved or did you have any connections with it in any way at all?

A. No, I don't think so. I don't remember, all I know is that I read the papers and that was about it. Of course when I thought about some of it, I thought some of the faculty were very mistaken in the way they egged on the students, really fostered student unrest.

Q. In what sense?

A. Oh, I don't know; there were some people who were always kind of stirring up trouble. There were quite a number of them, many of them have left the university as far as I know. Another thing is that we had a pretty stable student body, I think, when you consider some of the eastern schools and how much turmoil is there all the time; we don't have to deal with that kind of thing and of course that's lucky and a good thing in my mind. I think the students ought to be concerned about the world affairs but in lots of ways they haven't reached the point where they can have a balanced judgement about it.

Q. Did you ever in any of those days have any fear about your personal safety in terms of walking at night or any of those kinds of things?

A. Oh yes, I think that's a real question that has grown worse in the last 15 years probably. I think there's a real difficulty, and it's too bad but I don't know what can be done about it except put more police on patrol, but of course you can't be all over the place all the time. I don't know really but it seems to me that probably crime on the campus has not risen anymore than it has in the community at large. At one time, we used to go out and leave the doors unlocked. We don't do that anymore, there's been too much of burglaries, there's a paragraph in the Journal World every night

about break-ins, minor crimes, and so forth so that that has increased but on the other hand, the student population has increased so much that it's hard to separate them. I suppose that the people in sociology are qualified to evaluate those things. I suspect they keep records and try to figure why.

Q. I was wondering too though at the times of the student activists period if there was even more of it than there is now?

A. Yes, I think so.

Q. I came to Lawrence after that but I have heard about that time and it sounded like it was very very de isive.

A. Well, it was. Some of the faculty members that I mentioned, because they entered into it with the students, inadvisedly I thought in some cases, really didn't help to end it. Of course that's an opinion of my own about which people would say, "Well, she's old, she's conservative, and that's what you'd expect." The others are liberals and they want change, but of course sometimes the changes were for the better, sometimes they weren't.

Q. Do you consider yourself to be conservative?

A. Yes. I'd say I was a republican conservative.

Q. Were you an Alf Landon fan?

A. Not particularly, no.

Q. Wasn't he a republican?

A. Yes. It's been interesting to me to see the increase in the democrats in Kansas because it used to be that they were not the dominant party. We used to say that Lawrence was protestant, republican and conservative. There were very few blacks, very few foreigners. There were protestants, there were republicans, and they were conservative.

Q. When do you think it started to change.

A. During the troubles in the 60s. It came to a head at that time and I don't know what the mixture of races is now but we have many more foreign students on the Hill than we did have and generally I think that's good because our population in Kansas tended to be provincial; it was a good thing for them to see others who were different. It's not always pleasant, I've heard terrible stories about foreigners keeping house. But that's a big change from a small inland, conservative town. We had very little crime. And I haven't ever made up my mind whether it's a good thing to have men and women together in one dormitory. What do you feel about that?

Q. It started just when I left school, so I never really experienced it. I think it could be a positive thing if it's organized right and handled well.

A. Well, of course members in the same family certainly get along all right. I don't see much opposition to it but then whenever you have a lot of young people together there's bound to be trouble. And it costs money to police our campus situation, too.

Q. I think too that a lot of students over 18 are immature. But I think for a mature student who's interested in his studies and in making good relations with good friends, then I think its okay.

A. It's hard to handle.

Q. But I think it's also hard to handle when you have groups of the same sex together, sometimes that is a problem.

A. That's a continuing problem in the sorority. Well, I'll tell you as far as that goes that was a lot easier to handle when you didn't have money. In a sorority house with 75 girls in it, you're bound to have trouble of various kinds, and they've all grown to be so big and so fancy.

Q. And somewhat influential in university life.

A. Yes. Some things in the sorority system I think have been improved very greatly. I don't believe that there's so many girls who are heartbroken because they don't receive a bid, because as I believe it is now you put down your preference, and your preference is matched with the list the sorority turns in so that practically anyone who wants a bid gets one, maybe not in the sorority she wants, but in one of them anyway. You see that's a lot better than it was when the girls went through rush, very expensively dressed - now that's a change too, they don't have to have such elegant clothes as they used to. If they didn't get a bid that was just too bad.

Q. I remember we talked about this last week and you told me about your experiences with Tri Delt.

A. Yes, and now they're putting an extension on the house so I don't know how many they're going to have in it but it's just like running a hotel.

Q. Well, I've enjoyed our conversation today, we've talked a little bit more about issues, I think.

A. Yes, we did.

Q. Is there anything else you would like to say for the record, your feelings about anything, your thoughts, your triumphs, your career?

A. I don't know. Well, about my family, my mother and father were both educated people, my father a medical man, my grandmother was a writer, she had a lot of publications, you may have read something about her because she was the first woman to be appointed Regent. So she was very lively and intellectual, and so was my mother. My father died when he was 42; he graduated from the University of Michigan Medical School. I've been thankful that I had access to people in the family who were educated, and I think they have benefited me very much. When Mrs. Horowitz came down to interview me, but

didn't finish the interview, she asked me if I had any oppositions in my desire to go to K.U. and I said "Well, no, not at all," it was an accepted thing for me to do. We were all readers. There is only a relatively small number of books in my study, all that's left of a very good library. My grandmother on my father's side had a library, my mother's family had a library and we had a lot of books. When we moved into this house my brother and I gave them to the City Library. And I was so glad that they were used.

Q. So you think a lot about the marvelous influence on your life from your family, from your very unusual family, I might add.

A. Why yes, I suppose in some ways it was unusual and it certainly made a great difference in the way I thought about things and where I lived. I was thankful to have such a normal, caring family and anybody who does ought to be thankful.

Q. Well, I thank you for that information.

A. It's a little hard to talk about oneself. I was very much wrapped up in teaching. I thought I wouldn't be, but once I got into it I liked it very much. I really enjoyed the world of teaching.

Q. It sounds like you did and it sounds like you kept a relationship with many of your students.

A. Yes, I did, and I do. Every Christmas I get many cards and I try to answer them, but I don't always get them done. I do have a rather close relationship with many of them and that's been very rewarding.

INTERVIEW 3 - TAPE 3

Q. We were talking combining marriage with career?

A. Yes, I have a feeling that somebody loses out, I don't know quite

who it is, but sometimes it's the children and sometimes it must be because you obviously can't do everything. I don't know whether it's all together a good thing to try to combine marriage, children and a career, but that will have to be worked out by the generation that does it.

Q. I think it's a real challenge.

A. I have kept house all my life, I always had a home and cooked and made meals and that kind of thing, but of course marriage and children didn't enter into it and by that token it was easier than it would have been otherwise.

Q. Do you have any regrets along those lines?

A. Oh, sometimes, yes. But I put those behind me, after all you can't live over what's past and I think as a whole I've had a satisfactory life.

Q. Certainly rewarding.

A. Yes. I'm glad that I could have a home and not just an institutional life, I should not have wanted to live in a room all my life because one of my great interests has been in gardening. I've always had a garden, I've always been able to enjoy taking care of a garden and I would have missed that very much if I hadn't had it. But when you look around my room here for instance, you see a great many family things that have come down to me from one ancestor or another. I treasure them and take pleasure in them.

Q. I certainly can see why you would, I know that we spent some time last week talking about them, the pictures and the corner piece over there.

A. These tables and other card tables that date back, oh, from the 1830's somewhere around there.

Q. Well you have had, from my perspective anyway, very interesting experiences.

A. Yes, I've had my share.

Q. And I don't think it's over with yet, I'm glad to see you enjoying so many things you're doing now.

A. Yes.

Q. I do thank you for sharing some of your life.

A. I'm glad I could and when you go over this, if there's anything I can add I'll be glad to.

Q. Yes.

A. If there's any list of people that you would like to have that I think would be worth recording don't hesitate to ask me.

Q. I would like to.

A. There have been some very distinguished people, very unusual people. Now of course you know that our biology building is called Snow Hall. I suppose Snow was one of the early and very distinguished entomologists, not only of this country, but internationally. So that all of that goes into the history of the University and I think some students don't pay any attention to it and to others; it would enlarge their ideas of the University.

Q. Yes, to understand the institution you need to know something about the people. I would like for you to think about that and I can't promise that something will be done with that but it would be interesting to read it and do it.

A. People ask me about Dr. Ida Hyde and I was surprised that anyone knew that I would know her, but there was a record somewhere they had found that I was an assistant in the laboratory. So they came to me, it was somebody doing a master's degree on her life who wanted to know what I knew about her and what I remembered about her and that kind of thing; I think is very worthwhile. I don't know what other universities have in that regard, but pro-

bably a good deal of the older universities have a pretty good record.
Distinguished graduates, faculty, and so forth.