

AN INTERVIEW WITH RUE CROMWELL

Interviewer: Alan Newton

Oral History Project

Endacott Society

University of Kansas

RUE CROIMWELL

B.A., Psychology, Indiana University, 1950

M.A. Clinical Psychology, The Ohio State University, 1952

Ph.D., Clinical Psychology, The Ohio State University, 1955

Service at the University of Kansas

First came to the University of Kansas in 1986

M. Erik Wright Distinguished Professor of Clinical Psychology, 1986-2001

## AN INTERVIEW WITH RUE CROMWELL

Interviewer: Alan Newton

Q: I'm speaking with Rue Cromwell, who retired in August, 2001, as the M. Erik Wright Distinguished Professor of Clinical Psychology at the University of Kansas. We're in Lawrence, Kansas, and the date is June 14, 2002. Where were you born and in what year?

A: I was born in Linton, Indiana, in 1928.

Q: What were your parents' names?

A: My father's name was George Harrison Cromwell. My mother's name was Iona Mary Taylor.

Q: What were their educational backgrounds?

A: Well, that's an interesting one to start with. Neither of them graduated from high school. My father was fairly bright, I would presume, because he got double promotions in elementary school---in other words, skipped some grades. He was

small for his size, and then he was even smaller when he was double promoted to another class. He developed behavior problems and finally got expelled from school for throwing bricks at the principal, or something like that.

Q: That=s pretty severe!

A: My mother lived in the Taylor family homestead. It was so far away from town that she got eighth grade education, but high school was four miles away. She got there for a few months, but things didn=t work out so that she could continue in her high school education.

Q: Did your father go to work after being expelled?

A: Yes, I think he was a little bit irregular. Then he went into the Navy. This was in the early 1910=s. Then he got out of there and got married and was assuming that he was going to become a farmer, but he was drafted into World War I. He went back into the Army and was getting prepared---being trained to be shipped overseas to Europe, when the war---the Armistice, it=s called---came and war was

over. He returned and, at this point, my grandfather Taylor was fairly disabled, so he and my mother moved onto my grandfather=s farm and maintained that up until 1939, I guess.

Q: Did he have an occupation in addition to or beyond farming?

A: No. He had worked in factories and actually was not really a farmer in the economic sense we think of today in terms of being organized. But this was during---at least while I was alive---during the Great Depression, and he was pretty much growing stuff for our own use. We had five or six cows for milk, butter, whatever, and a good sized garden. So we sold a few eggs, sold cream I remember---we had a machine that extracted cream---and sometimes some garden produce, just to buy the physical things. You couldn=t raise sugar, and you couldn=t grow shoes for the kids. I had two older brothers and myself. It was a pretty low middle-class type of existence of survival, which was true of a lot of people back then. You could always look at many people who were worse off, who

had much less, or who were on the road. They call them homeless today. Back then they were called hobos, tramps.

A: Right. Did your mother work as well?

Q: After we moved closer to town, in 1939, she worked as a cleaning lady in people=s homes, and at the local small hotel. Actually, when I started college, it was her work actually that gave me a source of income besides the work I did myself to get through college. So I was always highly appreciative of that. Interesting story in terms of race relations in this country. I moved South later on, and found out that she did the kind of work which black women refused to do. It was only black men who did the window cleaning and the woodwork cleaning, and that type of thing, which she did. I found that I had kind of an emotional reaction to that at the time, feeling a bit indignant that a black maid we=d hire when I was on the faculty would not do the kinds of things my mother did to help put me through school.

Q: Brothers and sisters that you had?

A: Three boys in the family, and I was the youngest. The older two were identical twins. They were born in 1921, the exact right age to go into the service when World War II broke out.

Q: Are they still living?

A: No. One of the twins went into the Navy, and was killed at Pearl Harbor---the Japanese attack at Pearl Harbor---on the very first day of the war. My other brother, Harold, was actually in Hawaii at the time, but he was in the military police force in the Army in Honolulu. So they actually saw each other the night before the attack, the night before my brother=s ship was hit and went down. Then he spent the duration of the war, and came out at the end of the war, then actually went back in and made a career out of the Navy.

Q: Did you grow up in the town in which you were born?

A: I grew up, in terms of really growing up, in the country, about four miles out of the town. My great grandfather had built this very grand two-story brick colonial house

in the middle of a big plot of land that he had bought. It was all wooded and had to be cleared. When the county came through and put roads in, we were exactly in the middle. You know, they made gravel roads on the mile square---they divided up mile squares. So we wound up being a half a mile from any road. It took a half a mile through the snow, mud, or whatever, everyday, to get the mail. When you're that far away from civilization, sometimes you don't know it's Sunday. So I often went to check the mail on Sunday when it wasn't there. But this meant that I was---oh, I had no playmates within miles, no boys or girls my age. And my brothers only rarely appreciated my tagging along with them.

Q: That's right, you were seven years younger.

A: Right. So, I had favorite places in the woods and in my grandfather's great arbor---huge concord grape arbor. I'd climb up in the grape vines and sit and read and daydream. I think that had a big effect on my ability to generate research hypotheses, new ideas. Because I spent my time dreaming, daydreaming and

reading rather than getting along with other kids, as kids usually do growing up.

Then, from about the fourth grade on, I went into---I was living nearer, only a mile out of Linton. Then---well, another thing that helped my socialization---since my brothers got into the military service in 1939, they put a bit of their small salary together and bought me a bicycle. So I got a job as a newspaper boy. I was actually delivering extras the night of the Pearl Harbor attack. I didn't stay with the newspapers very long. But I got involved in the Boy Scouts, and was heavily involved in that throughout World War II.

Q: For elementary school, did you have to walk a great distance as well?

A: Yes. Fortunately, although we were half a mile from the nearest roadway, the school---the old one-room brick school building---was only a mile and a half away from us. I walked that often. I remember my first day of school, in first grade, my dad, just to be nurturing or over protective or something, drove me there. The lanes were muddy, so he couldn't drive a wagon, and so he drove me there on a

sled through the muddy roads, and so forth. This was an unusual education. They had eight grades---first through eighth grade in one room. I didn=t realize it at the time, but I was a little bit better than the other kids. So I could sit and listen to the upper grades reciting history, math---it was just wonderful. Once in awhile I would get caught having not done my own homework. But I remember spending most of my time sitting and listening to the upper grades recite their lessons. Out in back, there was a very small cleared-off place for a playground. They didn=t have indoor flush toilets until high school, actually. No electricity. I did my studying at home with what we called coal-oil lamps. Nowadays, they=d be called kerosene lamps, but we called them coal-oil lamps. Out in back of this cleared-off place was solid forest. So this was a great playground for kids. We would build huts and have all kinds of cowboys and indians games. And then beyond the forest, about a half a mile, were stripper hills. It was a mining area, bituminous mining. There were these actually fairly dangerous stripper hills and then stripper pits which would fill

up with water, and the county conservation people would stock them with bluegill and bass. And so we were always taking hikes or having clod fights in the stripper hills, watching for minnows and tadpoles and various things like that to come alive in the spring.

Q: What specifically did you like about Boy Scouts?

A: It's interesting you used the word "like," because I didn't readily have the choice of liking. I guess I liked everything. But, I was named---this was a newly constituted troop---there were about five or six troops in Linton at that time---Boy Scouts was a very popular movement. There were none of the soccer, and tennis, ballet, all of these things for kids. Boy Scouts was about it. I got actually entered into the Boy Scouts as Tenderfoot on December 1st, made a Patrol Leader, and then my Scoutmaster, Assistant Scoutmaster, all the adult leadership were drafted or volunteered for the war six days later, on December 7th. So I was left in the unusual position of them saying to me, "Well, take care of the troop, and we'll be

back when the war is over. Well, actually, I think all of them got back, but they did not want to return to scouting. They had a different agenda than being a Scoutmaster. So I had, I guess, probably the most difficult time in my life, in terms of feeling that I was responsible---here, everybody else was in the war, and I had to hold up my side of the responsibility. And, of course, I had no notion of discipline, and I had to learn to teach kids merit badges and so forth. The worse thing was, with no discipline, my troop got kicked out of one church basement after another because of destroying furniture. I learned a bit of discipline, but it was usually overkill or underkill. I would become too harsh and too punitive. I lost a kid or two from the troop.

Q: Most of these boys were your age, I imagine.

A: Yes, they were my age or one or two years below me. Fortunately, there were two or three that were almost my age who were very interested in Scouting, and they turned out to help a lot. It was the only time in my life where I=ve had suicidal

thoughts. I felt so much a failure, I didn't want to live. But then I got invited---  
no, I went to my first Boy Scout camp, and I was indoctrinated into the Order of  
the Arrow.

Q: I was in that, as well.

A: Oh, were you? It was a great thing for then. It was great for me. After all this  
failure experience, I had this honor. Actually, later, I moved on up and got the  
second and third degrees, and became chief of the Order of the Arrow lodge.  
Then, to top it all off, with Indiana University as the venue, our lodge became the  
sponsor for the national Order of the Arrow convention. So I got a huge shot at  
the Order of the Arrow, including even the founders of the organization---E. Herner  
Goodman, as I recall. Concurrent with that, there was a guy over in Bloomington  
in a Boy Scout troop who was a nature director at Boy Scout camp, a counselor,  
teacher of nature merit badges. He kind of pinpointed me to the Scout  
establishment, that I should be trained to be a waterfront director. So they sent me

to waterfront school to learn how to teach rowing, canoeing, lifesaving, swimming style and technique, to teach kids how to be Scout lifeguards, and so forth. That really catapulted me to the top of the social ladder. Being the waterfront director at Boy Scout camp was like the number one hallowed job, and I was very conscious that I was king of the hill there. So that became actually the center of my extracurricular activities while I was in high school. I was no good in sports, except track, and there was no track team at my small high school. So I was involved in the Boy Scouts.

Q: Did you ever do any lifeguarding in other venues, as a way of making money?

A: Just a little bit. Usually my time was tied up running the Boy Scout camp program.

Finally, during the last year while I was in college, I ran the Girl Scout program also. They had a couple of weeks at the same camp at the end of the summer, and I ran that as well.

Q: You were paid for this, I assume.

A: Yes. Well, mostly room and board, but I think I got twenty-five dollars a week, which was not bad.

Q: What do you remember specifically about the war, say, in school? I know, obviously, with your brother having been killed, it affected your family greatly.

A: My major memories about the war---I was kind of like an abandoned child. I had two older brothers in service, and from the very beginning, you get the telegram from Admiral Nimitz that my brother is missing in action. People weren't told immediately that they were killed. We were also told to keep absolutely secret what ship he was on, and so forth. Consequent to that, in cooperation with the news media back then, it never did get highly publicized that my brother's ship went down to the bottom. They didn't want to let the story out that it was really bad, that the whole Navy was pretty much wiped out, except for some aircraft carriers, which were at sea. The major experience---there's a guy here on campus, in the English Department, or History, Tuttle, who's done research on

what you call latchkey children, children who were kind of, in quotes, abandoned, because their parents were either in war or in Defense factories, and not home. I didn't realize it at the time, but I was one of those. I remember this prolonged grief in my house, which was relived or brought up again when my brother's personal effects were sent home after the ship was raised. His high school class ring was taken off his hand, and some other things that they sent home. So this reactivated the grief. That's my major memory of the war. The other thing is my listening closely to the radio and trying to follow and plot a map of the movement of the troops in Europe, then the Battle of the Bulge, of course. Another thing I remember is when I was a junior in high school---no, a sophomore---I got a job in the Rexall drug store cleaning it and making Borden's ice cream for the soda fountain up front, and actually working at the soda fountain and around the drug store as a clerk. And that was another one of these king of the hill jobs. I actually was offered this simply out of the reputation in town I had accrued from the Boy

Scout work. In that job, I was in a lot of contact with things like rationing, things that people experience in the homefront in the war effort. Since then---only in the last two or three years---my interest has been rekindled, because of trying to track down some of the facts of what happened to the USS West Virginia at Pearl Harbor. That, of course, is an interesting story, but it=s very different from what we=re talking about. It had nothing to do with my career, just kind of a hobby to track down that information.

Q: Well, sure. We can talk about that later, if you=d like.

A: I well remember the VE Day, victory in Europe, and then VJ Day. You know, all hell broke loose in my hometown, doing all kinds of crazy things.

Q: And your brother=s homecoming.

A: Yeah, that was kind of a shock. He had not prospered well with his---he=d gone through period of, I guess you=d say, depression, grief, after his twin brother was killed. Sometimes he would advance, but then there was---he was in this military

police force where there was a lot of religious prejudice, and also urban versus rural prejudice. It was a place where the Catholics were against the Protestants, and Protestants against the Catholics, and the country bumpkins against the city kids, and so forth. So, he=d get promoted to corporal, or sergeant, and then the leadership would change and he=d be busted back to private again. And so he came back a very skinny guy, not much larger than me, very frail, looking pretty worn. Whereas I was expecting him to be big, taller, and strong. Of course he was much taller and bigger than me when he left. But I was almost as large as him when he came back.

Q: Back to high school. What were your favorite classes you remember, or teachers?

A: I think that=s clearly math. I made straight A=s in math, and one of my major mentors for the future was in math. I, in general, made the honor role in my junior year, while I was working full-time down in the Rexall drug store, full-time in the evenings. Interesting, as I=m sure you know, when you=ve got that much outside

work you've got to do, you've got to become much more organized. So that was the only year I made straight A's. When you have free time, you screw around. You drop a grade or two. But I was always able to make A's or B's, I guess. Once in Physics I made a C, but that was not the year long grade. That was just one grade report. Anyway, that was definitely the top thing for me, the mathematics. Partly due to a brilliant single woman, a mathematics teacher who was also my Sunday school teacher, in the Baptist church. No one realized it then, but she taught math very well. Later on, I got an appointment to West Point, but turned it down. But one of my buddies, Bill Gatchess, went in place of me, and he was the top scoring person at West Point. Someone else in my class did well in math. So it made me realize that it wasn't just us. We had unusually good instruction from this lady who, interestingly enough, reached the age of one hundred and died on 9/11---September 11, when the World Trade Centers went down. She also was a---although we looked on her as this homely old maid

school teacher---she got married and outlived her husband. She was like married for thirty years, or forty, something like that. So her life turned out to be very happy. We had the term---it=s very offensive today---to call somebody an old maid school teacher. But that=s what everybody called them back then.

Q: Was it assumed that you would go college, during high school?

A: No. None of my relatives, no relative had ever been to college, except one---I think it was a third cousin, who was a chiropractor. My first interest in college was wanting to go to West Point. I read a lot about that, and was wanting to compete in the competitive exams they give to screen people. The Congressmen used those. So that was my first interest. While I was working on that, I got a joint in my finger cut off, which I thought was going to disqualify me, but it turns out that it didn=t. But I became more and more interested in psychology, I think greatly because I was a pretty neurotic, anxious kid. I went through this period of feeling like a complete failure, feeling like I didn=t want to live, wanted to commit suicide

or something during this early part of the war when I had like twenty or thirty kids under my direction, and I was thirteen years old at the time. That left me in a general state of tension. The major thing that happened to me functionally was that, in my junior year, when I had to get up in front of the class and give a five minute talk, I froze up completely and became what I now call a social phobic--- what psychologists would say. I was unable to get up in front of class and give a talk until later on in college. If I signed up for a class and found out that I had to give a book review or some talk, I would drop the class in college. Finally, I got into ROTC as a substitute for West Point, and it wound up there that I was forced into having to give lectures in class, and I learned how to give talks. Early on, I was on the drill field. I was marching other college students. That was more like Boy Scouts, and teaching kids on the waterfront. That didn't bother me. But standing formally in front of a class was just absolutely terrifying to me. Ironically, back in the time I had this complete stage fright, and had to sit down, I had the

leading role in the class play. That did not make any difference, because those words I was producing and the way I was acting was not my production. It was only when I felt it was my production and thought that everybody=s going to think this is stupid, or terrible, and I just couldn=t do it.

Q: So you began reading these books on your own? Or were you encouraged by---?

A: Well, my dad, of course, was very smart, and he talked about books to me, and loved to read to me and discuss various issues. It was intellectually stimulating--- and he bought me books. What=s the guy=s name, on Masterpiece Theater?--- Roger?---not Roger Bacon. Anyway, his mother always wanted him to make something of himself, and that=s what my folks did. They wanted me to make something of myself, though they didn=t know what. They really didn=t understand college. None of them had been to college. But I did wind up getting what=s called a merit scholarship---it=s actually a fifty dollar scholarship---which paid for my books. So I went off to college with a whole lot of help, in terms of people

sending me money, and working as table waiter, and so forth.

Q: What happened to your West Point aspirations?

A: Well, that's an interesting story, too. I can't remember how I missed the first year---I think this was because the Congressman didn't have any slots available to appoint anybody.

Q: Oh, I see.

A: But I took the exam, and I was successful, and I got a phone call, a long distance phone call from the Congressman telling me that I'd gotten appointed. But that did not occur---in fact, I didn't take the competitive exam until I was a freshman in college, I recall now, because I had to take a bus out of Bloomington down to Vincennes to take the exam. The---I'm trying to pick up the line of the story. Well, after getting the appointment---going to Indiana University as a freshman in 1946 was a huge experience, because you had literally thousands of G. I.'s returning to college on the G. I. Bill. In my freshman class at Indiana University

was 6,400 people, and about 4,600 of us, as I recall, got out with degrees four years later. I think the majority of that group, if I'm not mistaken, were returning G. I.=s. Well, I was living---I didn't have any money for fraternity life, and I had no money to pay for a dormitory---so I was living in town in the private home of the parents of Boy Scout friends, and kind of getting by. The guys I was living with were all older than me, and G. I.=s. And they found out that I had gotten an appointment and was going to West Point, and they got together, independent of me, and had a meeting about me. They decided that this was the best way for anybody to ruin their life, going into the military. They hated the military, because of the war, and they hated officers. They hated everything there was about the military. So, they went through a brain washing thing with me, trying to get me to drop the idea of going to West Point, and it was very deliberate. You know, they loaned me their car---I couldn't afford a car. They=d set me up with dates. I=d go out and double date with them. With every turn, I was more and more

pressured---@You=ve got to stay here.@ And they won! By the end of the year, I turned down the appointment at West Point and stayed at Indiana, majoring in psychology and also pre-med. My interests and, very clearly, my good grades were always in psychology. So I maintained that route all the way through.

Q: Any particular professors that you remember at Indiana?

A: Yes, very definitely. When I was a sophomore in college, I was invited to become the lab assistant for Dr. W. N. Kellogg. He was an experimental psychologist who had a dog lab. This dog lab was oriented towards doing brain surgery and surgery of the spinal cord, in order to track down---I think we=re going to have to have some water. My voice is---

Q: Absolutely, absolutely.

(A brief pause.)

A: We were talking about professors that had an influence on me, and this definitely was Dr. Kellogg. A position opened up in his lab for a research assistant, and I, or

course, immediately applied for it. Something which didn't hurt any was that his son had been a Scout at Boy Scout camp, and I had already taught his son the swimming merit badge and lifesaving merit badge at that time. He was not one of my close friends, but I knew him, cordially, as one of the kids I worked with. Interestingly enough, he was kind of a shy guy, and we never talked about the fact that I worked for his father, and he never made note of the fact that he put in a good word for me, although I know he did. Interestingly enough, when I moved on out of college and went on to ROTC camp, actually, he had moved up---I taught him canoeing, and rowing, and stuff like that---he actually took my place when I left the Boy Scout camp and went into ROTC and then into military service. So there was that parallel relationship with his son, which neither the father nor the son talked about. But in the lab, Kellogg really taught me a great deal about research and about careful experimental methodology. I took care of the dogs in their kennels, cleaned them out two or three times a day, and everything was fairly

set up so you could do that quickly and easily with a hose. And then on Saturday mornings, we all got around in bathing suits at most, and got a dog between our knees so they can't escape, and lathered and washed all the dogs. That was our Saturday morning activity. I had one other assistant hired working with me. We literally had a room in the lab, across the hall from the dogs in the basement of one of the teaching buildings. It was in Alpha Hall, over where the Department of Education was housed. And we were in this basement lab, and I lived there. For all the rest of the time through college, I lived in that lab and took care of the dogs. That was a great experience, just because of the learning. I became an assistant surgeon, and, on some operations, became the anesthetist, to keep the dog under but not kill them. This gray area where they're unconscious but not dying and not walking off the table. Then, learning about the various thinking at that time: the relationship of the EEG and the brain anatomy, and animal learning. Nowadays--- well, even back then---there was a certain degree of opposition to animal surgical

research. Part of my initial training the very first day was to keep all strangers out of the lab. Don't let anybody in, but contact Kellogg if there's any problem to be dealt with. That was three years where I learned a great deal about how to do things in a lab, although all my research has been with human beings. That was still great training in terms of how to design and do experiments, and so forth. How to maintain a good control of extraneous factors that can foul up an experiment.

Q: Was the research that Dr. Kellogg was doing innovative for the time?

A: Yes, it was. He was the one who was able to show that there's no learning that occurred in the spinal cord. That is, if you had a spinal cord of a living dog, and you had the brain sectioned off from the spinal cord and tried to condition leg movements and so forth with the afferent and efferent fibers off of the spinal cord, no learning would occur. Actually, that was new information back then. Some things did not work out. A great deal of what we were focusing on was to try to

pinpoint the place on the brain, in the motor area, which controlled the conditioning of a dog hearing a tone, or buzzer, and then getting a mild shock two or three seconds later. But the dog very quickly---it was conditioned to lift its leg, when it heard the tone, to avoid the shock. Well, we had dogs conditioned like that. Then, with the opening of the skull, Kellogg and we who were helping him would find the very point on the motor cortex of brain which would elicit a leg lift. And so we would plant an electrode on that spot, and screw the brace of the electrode onto the skull so that it would stay in place. Then we=d sew the dog up, and monitor the EEG right off of that point where the conditioning was taking place. This was not successful, but the reason for it was because computers had not been invented, and there was no such thing as an averaged current evoked response---where you average EEG waves across a number of trials in order to look at the effects of a given stimulus point in time. Nowadays, you could track the effect of EEG waves. But there was no such thing as computers, which would average EEG waves back

then. No average transience. CAT---computer for average transience---now CAT refers to other things---that was the instrument that made the breakthrough there.

Kellogg was an interesting individual in other ways, though. During World War I, he was a fighter pilot, and he wrote, after becoming a psychologist, the first article ever written on aviation psychology. It was entitled, "The Psychology of Flying an Airplane." He explained psychologically how people fly in a fog, how you keep the plane level by flying by the seat of your pants. In other words, you allocate your attention to your right and left buttocks, to see how much relative weight you have. Because you can't look out and see that your wings are level with the horizon because there is no horizon. He dealt with a lot of things like that. Since I was in Air ROTC, he told wonderful stories about his experience as a fighter pilot back then. For example, he couldn't believe how technology had advanced in terms of bombing and bomb sites. He said that when he was in the war, he'd get a basket full of bombs and put them in the open cockpit beside him, and then he'd toss

them over the side of his open cockpit when he was over the enemy target. That seemed unbelievable, but it was true. It was fun to discuss the old types of airplanes---DeHaviland and various types of airplanes they used back then, since I had some training in that area.

Q: So you graduated in 1950. At that point, did you go straight to Ohio State?

A: That=s right. I got accepted to the graduate school program. It seems as if my life has been a series of being really on the top, or feeling like on the bottom. Making ice cream in the local Rexall drug store, that was king of the hill stuff. Being waterfront director at Boy Scout camp, and having this research assistantship---I knew that other people were envying me greatly. And then there were the down times in my life, when I felt I was a complete failure. Moving into Ohio State, having come out of an experimental oriented department, knowing nothing about clinical and interning---a clinical psychology program. All of the sudden, I found myself competing with kids who=d made straight A=s through their

careers, and knew huge amounts of stuff about clinical psychology---Freud, factor analysis, psychotherapy, all that. And so I found myself at the bottom of the heap again, in terms of taking tests and so forth. So I was not a spectacular graduate student because I was simply outclassed by the guys. Some came from very elite undergraduate programs. I'm trying to think of this one in Yellow Springs--- Antioch College---turned out a lot of people.

Q: What led you to Ohio State?

A: The name of the game back then was to apply to a great number, because you knew you were going to get turned down by a lot of them. So I applied to ten, was accepted at five, turned down at five, and among the five where I was accepted, Ohio State at that time was definitely the best. So I took it. One point of pride I've said in years later: of the five that turned me down, I was later offered full professorships at each of them. So that was of course restorative to my soul, for that to occur! But I was definitely the low man on the totem pole, and

very nervous and anxious about my entry into doing clinical work, clinical practicum work, and so forth. So that was again a big hill I had to climb.

Q: Did you teach? Were there GTAships, or did you have other kinds of assistantships?

A: Some of my colleagues did. They were the chosen ones, the better backgrounds, more prestigious schools, and so forth. The students on my level were immediately dispatched off to the VA hospital, where we started doing internship work and actually carrying out various psychological testing of mental patients, psychiatric patients in the VA hospital. So, my first year in graduate school---it was a quarter system---I spent one of the four quarters at the VA. The next year, I spent two of the four quarters. And then my third year of graduate school, three quarters; in other words, most of the time. And then back to two quarters while I was doing my dissertation. Actually, all of this work in clinical background sort of moved me ahead, so I finished in five years, which nowadays is pretty much standard. But

back then, some people finished in four.

Q: Where did you find your interests in the field developing, in terms of your later work in with schizophrenia?

A: That=s a very clear and interesting story, too. Arriving at the VA hospital, I found that I---even though I was a waterfront director, I was often referred to as the skinniest waterfront director in the United States. I was 139 pounds I think when I started the job, and I finished it at about 152 pounds or something, during my fourth year as waterfront director. So, I found myself frightened by violent mental patients. This was in the days, starting in 1950---tranquilizing drugs came out while I was in graduate school, and later on. And so when mental patients were violent, they were really violent. The only thing you could do was put them off in the violent ward. They could not be controlled with tranquilizing drugs, or anything like this. I told myself, just as I did with the public speaking thing---there=s a bit that I left out, in terms of how I beat the public speaking thing, and that big phobia.

My senior year---no, it was earlier than that, an earlier year. I had to give a report on a psychological experiment I had done. And I knew to go on in psychology, I had to do this. Otherwise, I=d flunk the course. So, I spent the whole half hour as I was telling my experiment with a piece of chalk facing the blackboard and talking at the blackboard as I drew graphs.

Q: I=ve had lots of teachers like that!

A: Well, then I finally got the courage to turn around and face the audience. It turned out it was an interesting study I had cooked up. I had good results, and so that helped. So, I knew that that was a hurdle I had to get across. In the first year of graduate school, the hurdle was to be able to deal as a professional person with a violent mental patient. So, I decided that if I can=t deal with the violent schizophrenic patients, I should really decide to get out of the field. I graduated from ROTC, so I had had option of going into the Air Force. I had other job opportunities. So, I went over to the building where they had the violent wards,

and got the attendant to open the door to one of them, and I asked, "Who is the most violent person on the ward?" Well, it was this big black veteran who looked like Joe Louis. And I see him and talk with him. This started a relationship where I gradually would see him longer. It started out five minutes, then ten, but I met with this guy repeatedly over a number of years. I learned a great deal about schizophrenia from him, in terms of delusions, hallucinations, thought disorder, word salad. There are certain situations where he would just lapse into a language that had no relationship to subjects and predicates. It was quite a word salad type language. But one thing I learned back then was in the same sense of the John Nash story---A Beautiful Mind, if you've seen that.

Q: I have.

A: When he was very psychotic, some colleague had asked for help on a mathematical problem, and he could give some good ideas. He even got co-authored in a study because he actually gave the idea which solved the problem, or

something like that. It seems like that=s the correct story. Anyway, this guy, when I gave him an actual role to carry out, something to do, he could carry it out in good logical fashion. Like, playing a role. Say, we=re going to play a role. I=m going to be the patient, you=re going to be the doctor, and I=m going to raise hell at you and scream at you because I=m being kept in here by the government, or not being let out by the Masons, or whatever the delusion is, and you=ve got to deal with that. Well, he would do that very well. He would be very gentle with me, and very controlling, saying, ?Look, I am the doctor, you=re the patient,@ and do a fabulous job of actually playing role where he was solving a problem, in terms of how to deal with me, when I was playing the role of a patient. Then we=d turn the tape recorder off---it was a gray audiograph back then---there were no such things as cassettes---and he=d take a deep breath and then role into complete word salad. The psychosis just came out, fully and greatly. So I got to understand the various nuances in terms of what actually goes on with a person with

schizophrenia. And I learned greatly from this guy, Oscar, that oriented me towards actually doing more and more research in schizophrenia, even though this was not the favorite subject area of my major professors that I did my Masters thesis and dissertation with. I still continued to focus greatly during my career on schizophrenia research---not completely, but to a great extent.

Q: So your thesis and your dissertation were in another area?

A: My Masters thesis was with George Kelly, who's internationally known now as a psychologist. He developed a theory of personal constructs, which is essentially a theory of understanding people by how they put together binary information. You know, friendly/unfriendly, honest\dishonest. The basic notion of this theory is that people store information in binary form, and then the way in which they organize it in superordinal levels, and so forth. It spells out how they respond emotionally, cognitively, any thinking or problem solving situation. It's a way of explaining psychopathology, and so forth. Kelly was another guy who grew up on a lonely

farm situation in Perth, Kansas, which is down near the Oklahoma border. His father was a wheat farmer, and he was far away from any school. So he was home schooled by his mother. He grew up in this lonely existence. He had a background in physics, and then psychology. I did my Masters thesis with him. Then I went on to work with Julian Roder for my doctoral dissertation on social learning theory. This was the more popular thing at that time---not now, but back then, in terms of integrating social psychology constructs with learning theory and constructs, so that you formulated a research area in that, and also ways of doing psychotherapy and diagnosis. The major end goal of clinical psychology at that time was psychodiagnosis, then psychotherapy. Very few graduate students jumped ship and changed major advisors, because they would get identified or oriented with one person, and continue to work with that person, that one professor. But I made it clear that I wanted---my background was too narrow in clinical, and I wanted a broader background. I wanted some experience working with both of them. They

were the two major domos in the clinical program, and that=s what I did.

Q: Let me back up just a moment and ask you if you were married.

A: Yes.

Q: And was it during this time, or later?

A: Yes, let me see. I got my bachelors degree in the spring of 1950 at Indiana University. I went off immediately into the Air Force reserve, but with full intent that I was going to be in just for the summer, and then get out and go to graduate school at Ohio State. So the moment I got out of my Air Force training, I was then off to East Chicago, Indiana, for my wedding. I married one of my Indiana University classmates, Evelyn Steiner. That wedding was in August, and after getting out of the Air Force---while I was in the Air Force, the Korean War broke out. But my orders had already been cut for discharge, so, fortunately, they did not revoke my orders. After getting into graduate school, they tried repeatedly to call me back into service, but I managed to get out of that and resign my reserve

commission completely, on the basis of having hay fever and varicose veins. That combination got me a medical discharge from the reserve. My motivation was clear: I wanted to stay in graduate school, and get a Masters and Ph.D. So I was successful in going that route. Yes, married just before moving off to Columbus, Ohio for graduate school.

Q: Where did you meet your wife?

A: At Indiana University. Before I had the job with Kellogg in the basement dog laboratory, I was a table waiter in a girls dormitory. So I actually met her while I was waiting tables and washing dishes, and that sort of thing, in a very small girls dormitory on campus.

Q: Do you have children?

A: Yeah, I had the first child in 1954, and I got my Ph.D. in '55. When I got my Ph.D., we had one child. Three more later on after I took my first job.

Q: What are their names?

A: First child was Donna, Donna Lisa. We went South to Nashville to teach, and all the girls had double names. Boys, too, for that matter. Donna Lisa. And then later on, Leta, Leta Lorraine. And Joe, Joseph---Joe Dean, we called him. Then finally Lincoln, Lincoln Harrison, born in <63.

Q: And they=re living all over the country, I imagine?

A: Yes. Donna is married to an MBA who decided to drop out of being a bank president. They have a horse ranch, and own a bunch of horses, up in Wyoming-- -although first in Colorado, and then moved to Wyoming. Leta is married to a guy who headed up the Blue Cross program in the upper part of the state of Michigan. But now he=s in a private health insurance consultancy type practice, which is actually a more attractive type of job, because it=s not with a non-profit agency. You know, Blue Cross is a non-profit organization, so he moved out simply because the salary advancement is greater. They live near Traverse City, Michigan---

Q: I know that area.

A: They have a twenty-eight foot sailboat, and a very different kind of life. Then the next one, Joe, lives in Syracuse, and he was a victim of the drug era, in terms of having drug problems and some emotional disturbance to go along with that, and wound up living in a halfway house. And now he=s doing pretty well, out living on his own, holding down a job---a girlfriend, too, I hear, recently. And then the last boy, Lincoln. He grew up while I was in Rochester, New York, primarily. He went to college and got degrees in history and in education, and was teaching English as a second language, and also teaching homebound handicapped children, and that sort of thing. He=s teaching in a school system now. And Leta, very late in life, she went back to school and got an education degree *cum laude*. So she=s teaching---was teaching first grade, but with all of the economic turmoil that=s happened here and everywhere else, she got laid off and then rehired as a fourth grade teacher. So now she=s hired full-time as a fourth grade teacher.

Q: So after leaving Ohio State, you went south, you said, to Peabody College, where you were director of clinical research.

A: Yes. I took an assistant professorship at Peabody College, teaching courses in clinical psychology and in mental retardation. I was taking on doctoral students immediately. They had just gotten an NIMH---National Institute of Mental Health--- grant, to train Ph.D.=s with research skills in mental retardation. They tried to get some senior people to take that program, but actually senior people were not available and didn=t have the skills in research methodology---you know, general research skills, and clinical psychology skills, and so forth. So they decided that they=d hire somebody with these types of skills, and then let us learn mental retardation on the job, so to speak. And that=s what happened. We learned about mental retardation as we proceeded.

Q: Were you able to continue your research with schizophrenia?

A: No. All of my time and focus was taken up with mental retardation. This was

interesting and a challenge, even though I knew eventually that I wanted to get back to schizophrenia research. It was interesting in the sense that I and my graduate students were able to show that simple conditioning---eyelid conditioning, for example, where you can get conditioned to an air puff. You get a tone, and then a puff of air, and you learn to blink ahead of time to avoid the puff. This type of learning, which you can plot very nicely with laboratory equipment---you can plot the exact learning curve---this has zero correlation to intelligence. In other words, profoundly retarded kids, who are down to like twenty-five IQ, and the moderately retarded, such as Down=s Syndrome---they=re every bit as good as college students on this level of learning. And so it=s helped open up and get a better understanding of what intelligence is all about, and also what mental retardation is all about. Another thing which we did---a great series of studies---was to show that mentally retarded children performed poorly not just because they had limited intelligence, which is true. But also their performance is depressed because of an

expectancy of failure. This was a real fun type of research to do, because it had some application into the field: to show how we could elevate or accelerate the learning of retarded children by putting them in an atmosphere where they were experiencing success. So we learned a lot about that, and learned how long it takes to give up when you have successive failure. Some kids give up quicker, and some try harder. We were able to pinpoint these type of aspects in mental retardation. Those two things---expectancy for failure and the eyelid conditioning. Oh, yes, also, a whole series of studies on hyperactivity. We debunked a lot of the notions people had back then about hyperactivity and the brain injured child, in terms of being where and when they are distracted by sensory stimulation, and when they are not, and so forth. What drugs are effective, in terms of ritalin and dexadrine.

Q: Were you teaching as well?

A: Yes, teaching full-time, and supervising graduate students, reading with them,

researching in the evenings and then on other evenings conducting a private practice. Tennessee was one of the first states where psychologists could be licensed. They took a licensing examination. That was attractive simply because it was rare thing back then. Now, all states have some sort of certification or licensing role. So I was actually working very hard because the pay was very small. Academic pay was very low back then, so I was picking up a few extra buck in private practice, doing psychotherapy.

Q: Were you working with schizophrenic patients in private practice? Or just whoever would come to you?

A: Not at that point, because the people whom you could take into private practice were in the community. If they were schizophrenic, they pretty much had to be under a psychiatrist's care, in terms of managing drug medication, and so forth. Also, they were often in and out of the hospital. Those were things at that time that a psychologist couldn't do. The research became more and more the expert

in terms of what to give at what dosage level, and what the long-term and short-term results of treatment are, and so forth. Psychologists became more and more expert about that. When my time for a sabbatical came up at Peabody College, I made it clear to the head of the department, Nick Hobbs, that I really wanted to go back and get my feet wet in mental retardation. I wanted to do a sabbatical back at NIMH---National Institute of Mental Health---in Bethesda, Maryland, in their intramural labs there with the bigshots like David Shakow. They had major researchers from all over the world they brought in to Bethesda for that big research center. So, in the summer of '59, I got my first sabbatical chance, and lived in the Washington, DC/Bethesda area. That got me back full-tilt into schizophrenia, and I did a major research study that summer with schizophrenic patients at St. Elizabeth=s hospital in Washington, DC. That was one of the major accesses that researchers had

Q: Now, I=m trying to remember. Is Peabody affiliated with Vanderbilt?

A: Back then, it was a separate teachers college. Psychology was the only degree you could get outside of education. It had a long, prestigious career in psychology, because there had been some major leaders, some APA presidents and so forth, who were there. But it was the only graduate program outside of education degrees, like educational leadership or administration, or elementary teaching---you name it---special education, everything else.

Q: So when you switched to Vanderbilt, you did have to switch your office, I imagine.

A: Yes.

Q: Trek across campus!

A: Right across the street was Vanderbilt University Medical School. So I wound up eventually making the move, having an appointment on both sides of the street and then finally gravitating towards Vanderbilt.

Q: So there was some overlap between Peabody and Vanderbilt?

A: Yes, a couple of years. But my major move back into schizophrenia research was

in 1959 with David Shakow and his research group in Bethesda, Maryland.

Q: At Vanderbilt, after the move, were you also teaching and supervising, the sort of joint duties that you had had at Peabody?

A: What happened after I moved across the street was, as far as having good students, dissertation students to work with, I had the best of both worlds. I got very outstanding graduate students from the Vanderbilt University Department of Psychology, and I retained the group of students I had at Peabody College. I was at the Medical School, so both of these groups would come to the labs and to the program I was setting up in the Medical School. This led psychiatric residents and other people into joining my research group, and my research group got very large for a period of time. Actually, my weekly evening research meetings, where we went over research and had somebody presenting, got up to be about twenty or twenty-five people, which we called the research team, or research crew. Here at Kansas, it's always been referred to as "Rue's crew"---my first name is Rue. I

learned early on that, if you're going to handle a great deal of doctoral students doing empirical research dissertations, it's good to have them working as a group, because there are a lot of tricks of the trade they can teach each other. And so you work hard on one group. And then as they become a year more advanced, they're teaching the next echelon of graduate students moving up. So to work on research---even on research problems, I learned you can do a lot---the great way to teach research design and generating hypotheses, and analyzing data, computer analysis and so forth, was to have each of them presenting at our weekly research meeting, so that they are actually interacting and helping each other. Then, to troubleshoot each other, I would set up mock oral examinations. I gave everybody the instructions, "Be sure you make the questions harder than any professor would. Be as tough as you can." Students learned that this is a very good way to prepare for orals, and they would beg to get on the agenda, to have the mock orals before their exams came up. They knew they would get slaughtered, but they also knew

that they would get slaughtered by me and a group of students who were on their side, and who would discuss the alternative ways of dealing with a problem, so that they would be well prepared to go into the oral examinations.

Q: At Vanderbilt, you shifted your focus back to schizophrenia. What types of projects were you working with?

A: Things continued on from the work I did with Shakow, in terms of basic or fundamental aspects of information processing. Like, how an individual takes in and deals with a very simple piece of information. To give an example, if you have your finger down on a reaction time key, and a stimulus goes off and you raise your finger off the key as quickly as you can, that's called simple reaction time. People with schizophrenia are profoundly slow, about a fifth of a second slower than normal individuals. At the same time, if you have an EEG hooked up to the individual, monitoring EEG and the alpha waves blocking or becoming desynchronized as a result of this reaction time stimulus, people with schizophrenia

block in their alpha waves faster than normals do. So you have this situation where, in responding to a given stimulus, the EEG response in schizophrenics is faster than normals, but the finger response is slower than normals. And then there are other things that affect that, like the distracting stimuli, or repeating trials over time of the same sort of stimulus, and so forth. So, we came to realize that, while this is nothing you=d get in a psychiatric interview or talking to the patient about the delusion, and while you=re listening to whatever disorder they display, there is a completely different world within people. And there=s no way you can get at these types of variables from a psychiatric interview. So there=s this whole world of information processing as a way to understand---and as a general hypothesis, to understand the ideology or causes of schizophrenia, you=ve got to look for the breakdowns as they occur within a---we used to say, within a thousand milliseconds span. In other words, within a second, which was a thousand milliseconds, right? That became our big focus: we were going to conquer

schizophrenia by going in that direction. Schizophrenia is not conquered yet. Then, in terms of genetics, to think in terms of these specific behavioral deficits, the goal of this information processing as being genetically determined---the answer to schizophrenia may be here rather than trying to use genetic research to explain the development of delusions. The general argument, or the line of thinking was, that=s too far down the road. People develop these psychotic symptoms as the last step on the way. Much earlier on, they are showing these deficits in the laboratory, which is true. You can take a normal individual who is schizotypal, and show that these types of deficits occur early on before any evidence of psychosis is present.

Q: In 1969, you moved to Detroit for three years. What was the impetus for your move?

A: Well, as you can probably tell from my description, technology and computerized control of experiments were getting more and more important. To program a

computer so that the computer administers the experiment you're doing, in terms of information processing, how they deal with stimuli. The computer is important in that. With a computer, you can monitor the EEG, heart variables, heart rate and EKG variables, galvanic skin response or skin resistance response---you can monitor all of these and actually deliver the stimulus of the experiment to a person under highly controlled circumstances. When the alpha wave is at such and such a point, when it's in between heartbeats, for example. You can program all of this on a computer, and perform very exquisite experiments that one could never do without a computer. Then, the computer can immediately analyze the data, and deliver an output. So to have all this chained together does great stuff. Well, the Lafayette Clinic was like the number one place in the country where schizophrenia research was going on, and they were developing this very advanced computerized and technologically sophisticated laboratory. So that was my reason for going to Detroit.

Q: And you were also teaching at Wayne State at the time.

A: Yes. Primarily they wanted me because I was good at supervising dissertations.

But, just for the fun of it, they gave me a course to teach. Actually, I did no formal teaching. I was the head of twenty-six psychologists who were doing clinical work only, who were not on the faculty teaching. And they had no students. They weren't supervising in any way, no graduate students doing research. They were seeing patients, and writing up diagnostic reports, doing therapy and so forth. So I was administratively the head of that group and also focusing on developing the research program manual, participating in the interdisciplinary research program with the local neurologist, biochemist, psychophysicologist, and so forth, in these various labs. So, actually, my focus on teaching was very little. When I did have a graduate seminar, it was usually joint taught with somebody else. I did not have a lot of time to prepare for it, because of my administrative responsibilities and the research program.

Q: Had you continued with your private practice from the early days in Tennessee?

A: No, that came to an end. Let me see---I had not even had time to get licensed in the state of Michigan. I did get licensed after I left Michigan and went to New York. I got a psychology license in the state of New York. But I wound up really not using it. I never did really have time to do any private practice.

Q: So, after three years in Detroit, you moved to the University of Rochester.

A: The University of Rochester was looked upon as one of the great settings, because their point of view in psychiatry was much more a social---I guess you would say a social psychology-oriented psychiatry rather than a biological focus, or Freudian focus. Their focus was on the social functioning of not only mental patients but of other patients---kids with diabetes, or people on hemodialysis, the kidney machine--and handling the psychological problems that go on with severely ill patients throughout a medical school hospital. So that---I've lost your question now.

Q: I think my question was very general. I guess I was wondering what led you to

Rochester.

A: Well, at Rochester, another attraction was that there was indeed a big focus on schizophrenia. The department chairman and I organized what was referred to as the Second Rochester International Conference on Schizophrenia, where we brought in researchers from all over the world. That was a great time. We brought in Manfred Broiler, whose father in Switzerland coined the term schizophrenia, back in the 1910=s. I became close friends with him and many other European research colleagues. This was a huge conference, which attracted psychiatrists and psychologists and biochemists from all over the United States, in 1976 I think it was. So, the focus at Rochester on schizophrenia remained. The difference in my job description was that I all of the sudden went back into supervising clinical work, whereas I had not done this previously, either at Wayne State University and Lafayette Clinic or at Vanderbilt.

Q: But like you had done at Peabody.

A: Yeah. I was supervising psychology interns, psychiatric residents, and pediatric residents in the cases they were handling, all of which had some psychological disturbances prior to (?). Otherwise, I wouldn't have been involved in the supervision of them. So I got far more heavily involved in clinical work, and also got some grants which required that I bring in families with a multiple cases of schizophrenia in the same family---studying the genetics of the family. We'd bring the whole family in and hospitalize them in the research ward at the University of Rochester. That again got me more heavily involved in the clinical responsibilities, as well as carrying out the research.

Q: And your focus on the genetic ties to schizophrenia---this is really when that became your focus?

A: That's right. That really got off the ground there, where I got my biggest research grants, there in studying the genetics of schizophrenia. Another thing which was big back then, during that period, besides genetics, was high risk studies. The

basic idea in a high risk, or vulnerability, study, as it was called, is that if you just study people with schizophrenia and try to get an understanding of the causes of it, you got a lot of problems. Like, they're already highly medicated, and then they've got the effects of being in the hospital. The chronicity effects, so to speak.

So, the better thing to do would be to identify groups of individuals who do not have schizophrenia at all, but, for some reason, you can identify them as having a higher probability than the general population of having schizophrenia. There are essentially three ways of doing this. One major way is, if an individual has had at least one parent or one sibling, a first-degree relative, diagnosed as schizophrenic, then you've got an increase of probability from one percent up to about twelve percent probability, that they will eventually wind up as schizophrenic. People who score on personality tests to be in the area of schizotypal, they have an increased probability. People who have had an unusual amount of stress---for example, childhood abuse, things like that. That has turned out not to be so promising as

we thought, in terms of high risk. They turn out more like PTSD, in other words, trauma---individuals who have suffered---well, the big thing in the news media right now is childhood sexual abuse. You do not expect a high rate of schizophrenia. But you do have a high rate of dissociation symptoms and trauma, the types of psychological scarring I guess you=d say that follow from that.

Q: So some of these veterans that you worked with early on in your career---they would have been predisposed to schizophrenia? It wouldn=t have necessarily been their war experiences?

A: That=s basically right. There are some factors, some (?) factors, so that some veterans who went through similar types of severe combat were just fine. The same is true for PTSD---past-traumatic stress syndrome. In Viet Nam, there=d be some veterans who went through equally severe combat, but did not break down with a stress disorder. Others did. As a consequence, the research points you back to try to identify the variables---what happened earlier that makes some

people vulnerable, and some not vulnerable. Some of these are with early experience, and some of the factors are genetic. In schizophrenia, the genetic factors are definitely a contributor, but also definitely not the whole picture. It's the interaction of the genetics with the stress which appears to trigger or precipitate the schizophrenic reaction.

Q: So, in 1986, were you longing to return to the midwest?

A: Let me back up for one previous small thing, and that is the most, I guess you'd say, most exotic high risk study I ever designed. We got funding for this from federal grants. I had a well-trained post-doc psychologist hired, and I sent him to Sweden to do this thing. That is, this. We, in our thinking, decided that the most ideal vulnerability group to identify and to follow would be the unborn offspring of pregnant schizophrenic women. Just about the only place in the world where you have a national registry of who's pregnant, and also a national registry of who is schizophrenic, is in Sweden. So, by making the appropriate contacts, we set up

this research project to follow pregnant Swedish schizophrenic women in Malmo General Hospital, which was part of the University of Lund, a medical school. And I spent a lot of time in Sweden doing that. And that project is still going on. When I went to Rochester, however, there was a---I had designed this project while I was at Lafayette Clinic in Detroit. But then, going to Rochester, there was a conflict of interest, because I was in charge of getting projects which were competing. And so I had to do one or the other. Ethically, there was a conflict of interest. So I resigned from that project, although I still feel highly identified with it.

Q: So it's been going on for thirty years.

A: Yeah, and these kids who were fetuses at the time we started the study are now coming into the age. In terms of mode, among the people who will become schizophrenic, about fifty percent become overtly diagnosed schizophrenic by age thirty-three. It happens earlier in life than other disorders. So that project still may have some very important things come out of it.

Q: And that still is regulated by Lafayette Clinic?

A: Actually, I don't know the answer to that. I do know the post-doc whom I hired phased into the academia in Sweden. He learned Swedish, of course, and his whole life is now as a Swede, as an American expatriate. Very clearly, he will spend the rest of his life following this project with a group of collaborators, other faculty members who joined with him. I wanted to mention that because that's kind of a unique project compared to what other people have done.

Q: It is. I'm glad you mentioned it. So you came to Kansas in 1986. Was it a desire to return to the Midwest? Or was it the position they offered you?

A: It wasn't a desire to return to the Midwest. My knowledge of Kansas was not one with any great positive view. There was the joke running around when I was leaving Rochester. One of my daughters is praying at the bedside: "Goodbye God, I'm moving to Kansas." People in Kansas didn't think that was funny. People in New York thought that was a good joke. Like the person in New York City at

Greenwich Village who gets mugged, they want their money. He says, 'I don't have much.' 'Where are you from?' 'Kansas.' 'Forget it.' Have to go someplace and mug someone else. Those are the jokes that people tell outside Kansas, more than inside Kansas. Anyway, the University of Rochester went through a major change with a new department chairman. The focus was to de-emphasize research, and put the emphasis upon all professors earning their salary through private practice. The whole department and the medical school was oriented toward kind of a private practice corporation. Anytime you did therapy, the money had to be turned over. And then you got the money back for your salary. Now it became necessary for medical schools to develop some plan like this due to economic problems and the development of health insurance rather than private practice, and also the pressures of what we view as social health programs in Canada and Europe and so forth. So the people at Rochester decided that they had to drop their emphasis on research. Well, I was not really interested in staying

around, although I had the clinical skills to do that. I was still hungry for more research career, and so I simply started job hunting. I visited and interviewed at six different places, and got five different job offers. I almost went to one of them at Florida State, but wound up coming here to accept this endowed---it was a newly created endowed professorship, the M. Erik Wright Professor of Clinical Psychology. The major attraction here was that I could have much more time for research because distinguished professors have reduced teaching loads and don't have to teach so many of the basic service courses, and so forth. And also, most distinguished professors are free of any administrative role. They do not have to play the role of department chairman, or director of this or that training program. So, all my time could then be devoted to the research program, and the training of graduate students.

Q: But you did do some teaching.

A: Yes, I did. I taught at least one course every semester plus, oh God, any number

of these courses that you have for research credit. If somebody's working on you with a research project, they sign up for these variously numbered courses, independent studies and various things like that. And so I had huge numbers of those. I never did count those as teaching responsibility, because you don't have to go to a classroom, prepare lectures.

Q: Was it sort of odd to come back to teaching, having been away from it for a while?

Were you nervous that first class?

A: Well, I'm always nervous. Since you called on the phone and invited me to come here to do this interview, this oral history, they've contacted me and told me I'm to be awarded the Joseph Zubin, what do call it, prize, or award, for research in psychopathology.

Q: Congratulations.

A: Thank you. Which is in San Francisco in September, late September. That's the good news for me. The negative news is that this requires that I give two talks. I

have to give a formal research talk for an hour, a prepared research talk. And then at the banquet, I have to give about a forty-five minute autobiographical talk.

Q: This is good preparation. You can just play this tape if you=d like!

A: That=s right! That=s a good idea. Anyway, I=m always nervous, because of my old pathology of fear of public speaking. Once I get going, I=m okay. But I=m still really not a good speaker. So when I=m invited to speak, or teach, I always think, ?Why are they doing this? I=m not good at this!@ Anyway, back to Kansas. Actually, my anxiety wasn=t too great coming back here and going into the classroom again. It was like coming home again. There=s something weird about medical schools. You get bright students, but they are not, what you=d say, research skilled. The intelligence doesn=t get applied to research, or scientific thinking, in terms of generating hypotheses. It gets focused more on, ?Okay, if there=s a problem with this patient, what action do I take today?@ Then, you forget about it until they come in for another appointment, and then what action do you

take? Whereas with me and my group and my research students, including the MD=s I must admit, as a researcher, your orientation is towards why is this going on, and how can you design a study to answer why it=s going on? So, when I came back here, it was moving out of the situation with medical students and psychiatric residents and pediatric residents, really not interested in research. They know their careers are going to be headed towards practice. Almost all of them---some of them research---but almost all of them. And so, it=s a dulling atmosphere. They=ve got lots of money, and lots of patients, in terms of doing a study on any patient population. But they don=t have the students and the people who are skilled to do the really outstanding research. Whereas here, really outstanding and advanced ideas could be dealt with, and things could get done. So, it was like coming back home again. It was really fun. And then Kansas economically, when I arrived here in the =80=s, was very much like Indiana was in the =30=s. Kansas was a bit more economically advanced. This not one of the

richest states in the union. So, I enjoyed that, because this was kind of a laid-back, friendly, agrarian type atmosphere across the campus, without a lot of the cutthroat politics which you have back east, in the highly competitive campuses. I could win at that game, but I didn't really enjoy it that much. So, coming back here, looking at the faculty in general, these are my kind of people, and likewise with the students.

Q: What were your specific---well, you mentioned some---but other impressions of Lawrence when you first came here?

A: Oh, I loved Lawrence. I still do. The honeymoon is still on. One of my favorite things, always, is a small university town. And, when I was in Bloomington, Indiana, it was about the same size as Lawrence, not much bigger. In fact I think it was no bigger. Now, it's much larger than Lawrence. And then the various places where I've gone, consulting or giving colloquia, like Chapel Hill. The campus at Chapel Hill is a great one.

Q: That=s where I did my undergraduate work.

A: Oh, is it? It=s just lovely. I got a job offer there and stayed at the Carolina Inn, sat in those rocking chairs out in front. It=s that kind of general small atmosphere, and yet a big, classy university in the middle of a small town atmosphere. That, I love. Ann Arbor is very much like that. Ann Arbor has built so many technical institutes, and spinoffs, and the community is a lot bigger than Lawrence. I love this type of setting.

Q: Can you tell me some of the classes that you did teach here at KU?

A: The major class I taught in the fall, here at KU, was the psychopathology class, where essentially I was going through the whole manual of psychopathology. This actually caused a bit of turmoil, because coming out of a medical school, I knew what it took for a clinical psychologist or an intern in clinical psychology to compete in the mental health social framework, where, immediately as you arrive on the scene, your ideas are being matched up and compared with those of psychiatric

residents and social workers and occupational therapists, and so forth, each of which want their place in the sun, and want their own profession to look good.

And there are certain things that you need to know, in terms of actually knowing and memorizing the DSM, the diagnostic system, which doesn't come over well with graduate students who are really interested in ideas rather than sitting down and having to memorize what the criteria are by which you evaluate passive/aggressive personality, or schizophrenia, or pica disorder in children, or narcissistic disorder, personality disorder. You've got to know what the criteria are in order to talk the talk and walk the walk. If you did that, it was very clear that psychologists would walk away with prestige at the conference table when they're discussing the case. They'll turn and listen to a psychologist when they can quote various criteria and research evidence and how this should be treated, and what the prognosis is, and so forth. And that's a lot of memory, and it was an onerous course for a number of graduate students. Then, at the same time, my own

personal interests were not towards memorizing all this bull, but instead in the ideological and theoretical ideas of what psychopathology is all about. So I was playing both roles at once. This was difficult---people were oriented towards only one of these, but not the other. If they got sent off to internships to a medical school or a mental hospital, I wanted them to come off looking good, and that required a different kind of skill. So that was a big course which I taught early on. Then, in the spring semester, I taught different things, seminars in various focal areas, such as depression, trauma, various things like that.

Q: Any outstanding students that you had here at KU that come to mind?

A: Yes. First of all, in terms of numbers, the Psychology Department in general is I think, on the undergraduate level, it=s second only to the Communications Department in terms of the number of bachelors degrees. On the doctoral level, in terms of doctoral dissertations, while I=ve been here, I think it=s been between psychology and chemistry in terms of the number of people turned out. With my

approach to organizing doctoral students into research teams, and also having a lot of people wanting to come work with me anyway---I=ve always been successful in that---once things got up and going, I was able to turn out about four Ph.D.=s a year, who go on and get hooded. The only one to compete with that, when you look at the graduate program---I think in chemistry, two or three of the distinguished professor there have been able to turn out four or so per year. Now that I was anticipating retirement, I=ve of course cut that back. I=ve graduated here, since 1986, seventeen Ph.D.=s, fourteen Masters theses. All of these are varied---each one represents an experimental, usually laboratory, study of one kind or another. And, in some way, the way I think about graduate students, every single one of them is bright. I=ve never found it useful to think, ?Who are the outstanding and who are the less outstanding?@ But rather, the question when they walk into my office and they=re just entering graduate school is, where are their talents? Where are their skills? And where are the weaknesses which I have to

pay an eye to? Believe me, the very most outstanding student you can think of, in terms of their career later on in life, everybody has his weaker points and stronger points. So, my orientation has always been, no matter what the student is, to take advantage of their strong points, while at the same getting them caught up to speed on the weak points. This is a little bit different from the way a lot of other professors think, and also the way students think. Students may have halos around some students, and say, "He's the greatest, or she's the greatest in the department." It comes as a surprise to me, because that's not the way I think, because this person who's looked upon as the greatest has one heck of a lot of stuff to improve on in a given area. So I'm always taking people where they are and moving them forward. To go back now to achievement record, in terms of what they've done out of school, Irene Elkins has been in on the research faculty at the University of Minnesota for a number of years. She was about my second or third graduate student here. Ken Sewell has not only become internationally

known in research in this Kelly personal construct theory, which I described to you, but he=s also hosted some regional and national conventions, and has been the director of clinical psychology training out at the University of North Texas. He=s played major administrative roles in the department. So he=s had a very distinguished career as a young person who got his degree with me, probably about 1991 or <92, perhaps. Craig Neumann has got some major research awards. He was just recently recruited to the University of North Texas. Craig, in terms of looking at a pattern in one of these laboratory measures of perception called iconic integration---he was able to show that anti-depressant drugs bring a depressed person from below average in terms of their perceptual performance to significantly beyond normal. They become superior in their visual resolution.

Q: This is with the---I think it=s called COGLAB?

A: Oh, well, you know a bit about that.

Q: Yes, with the eye and the blinking.

A: You must have done some homework.

Q: A little bit, yes.

A: Yes, well this test is a part of the COGLAB series, which we had computerized.

One of my University of Rochester post-docs developed this COGLAB at the University of Nebraska, where he=s on the faculty. This particular thing, and I think this is really going to turn out in the future to be a very important piece of information, and that is---let me just quickly describe the task. You=re given just a pattern of dots on a screen, that have no meaning whatsoever. Then you get a blank screen, except that the time it=s blank for one trial may be one millisecond, and for another trial it may be a hundred or eighty---it varied on up from zero milliseconds on up to a hundred milliseconds. One hundred milliseconds is one-tenth of a second. So this is all going by very fast. So you have one pattern of dots, then it=s gone, and then you get a different pattern of dots. Now if the two patterns occur with very little interval in between, people can quickly integrate these

dots and see a number, whatever we set up in the stimula. Like there's a number sixty-eight, people report that. If you move these dots farther apart in time, you're less able to do that. It looks like just a meaningless pattern of dots. But it so happens that people who are depressed individuals, who are given an anti-depressant drug, change dramatically in terms of being able to integrate these dots and see what the number is, long after normal individuals can't do it anymore.

The two sets of dots are too far apart for a normal individual to do it, but the depressed individual on medication can do it better. When they're off medication, they're not as good. Well, the jump from this back to the research literature on anti-depressant drugs, both the tricyclics and the recent SSRI, serotonin specific anti-depressant drugs---never have these compounds been looked upon as affecting the visual system. And yet it would appear that for people with depression who are hospitalized, these compounds have a huge effect on the visual system.

To answer the question as to why that is and how it can be understood in terms of

helping depression, and maybe having a better understanding of visual functioning--

-in many situations, like with an astronaut, or fighter, having to resolve visual information very, very quickly---so the kind of basic research on the visual system, this kind of finding is important. Well, Craig Neumann, while he was a graduate student actually, got a national graduate student=s prize---they call this Smadar Levine Graduate Research Prize---for doing this research. Now he=s into other research which is very important, and that is, when people are depressed and who are on medication, even when they=re on medication, there is a down period from about four to six o=clock in the evening, when they feel distressed and do not function well in terms of any task they=re given. But then they swing back, and later in the evening they perform just fine. This is different from the circadian rhythm which all of us have in terms of changes in our hormone levels. That=s kind of a straight downhill or uphill path. Here, it=s kind of a blip, and nobody really understands why. Craig now has gotten his second research funding to

pursue questions like this. So I'm sure he will have outstanding research career.

Ken Sewell, who worked with me, has done research on trauma. I tend to be fairly liberal with students. I don't require that they do studies in schizophrenia. If they are, fine. Ken became interested in post-traumatic stress disorder, and following from my teaching him about how people develop their personal constructs, he developed matrix analysis of individuals called rep-grid tests. I think I'll try to describe that just briefly. You look down at something that looks like a crossword puzzle, just a grid, and each column represents a person in your life---say, there=s you, your mother, your father, your brother, your sister, acquaintances, teachers, what have you, people who have been part of your life---each one has a separate column designated. Then, with each row, you have to develop some way in which you group these people---two given people. If I were to ask you, ?Tell me how you and your mother are like each other and, at the same time, different from your father.@ You have to generate your own construct in order to do that. And then I

find out what the opposite of that is, what the contrast is, of whatever term you used to describe you and your mother. Well, you do this row by row, and what you wind up with is very simply a matrix of numbers. You know what the numbers mean because you have the people being classified up across the top, and you have the terms that you used to describe the constructs. But the big point of personal construct theory is that there's a lot to be understood by just looking at the matrix of numbers---understood about the personality, and how they organize and hierarchize concrete to abstract notions of people. Part of what we're into now, what Ken Sewell actually started, was from a realization that when people have trauma---say, combat in Viet Nam; childhood sexual abuse; rape; or your car turns over and over, and everybody else is killed but you---that's traumatic. And we found that, by looking at this matrix of numbers and doing a set theory analysis of the hierarchies of interrelationships, the people with trauma---the events of trauma and also the perpetrators, like if it's a rape or sexual abuse---they get

separated out as more concrete---we call a bottom class, or concrete concepts which do not relate to the rest of the matrix. The normal thing is, in your matrix there=s a hierarchy with regard to both concepts and people. Like, you can say, AI use the term <honest=, but that relates to two other constructs which contribute to that.@ Or, AI see my mother in a particular way, but that=s more on a higher hierarchical level because here=s my cousin and here=s my sister, and both of them are like my mother but in different ways.@ So there are elements down below that contribute from different directions in terms of this overall higher concept of mother, your mother. Let me get a drink of my water here. [*Brief pause.*] The exciting thing to me is, one can take this matrix of numbers and sort out whether an individual has had traumatic events in their life or traumatic people. You can do rep-grid analyses of events, people, situations, whatever you want. That, to me, is very exciting, because it gives insight in terms of how our brains---how we as a person store information and why these traumatic things get split off. And when

they get split off, you can't compare them or think of them in the ways you can deal with other, usual things in your life. In other words, an individual who's been traumatized in combat in Viet Nam cannot say, "Well, this is a little bit like what happened to me in high school when I had this kind of thing happen to me." People are absolutely unable to do that. This is why they end up with PTSD. So nowadays, we describe PTSD in terms of the various symptoms they show as you interview them. Here is something to me that's very exciting, because you can use a mathematical model of how information is getting organized, and without even knowing the individual's background, you can say, "Here is a high candidate for where some trauma has occurred early." And you can go and find out what that was.

Q: So individuals who may have suffered from an early childhood sexual abuse might not even be aware of it?

A: That's right. With dissociation, you not only get a certain amount of amnesia but

you get a breaking up of the continuity of time. For example, a rape victim may even be put on the witness stand to describe what happened, and they can't organize what came before what. Or an individual in an auto accident---and it's not due to brain damage, it's due to the trauma disorganizing the conceptual system---they cannot say, "Well, the turn signals went on here before we went to the exit ramp," or, "This car changed lanes before this one." They have each of these elements that they know, kind of snapshots in the whole picture, but they can't say which came first. Likewise, in the event of a rape scene, they become disorganized and can't say, "He hurt my arm before this happened," or whatever. They can't piece it together. So they make poor witnesses---a traumatized person makes a poor witness. Under normal circumstances, you and I can put together a story, a narrative, of what happened to us. It doesn't have to be a correct story, but it's our story. This is relevant for you as an English major---

Q: Right.

A: ---and it is a coherent story. This is what happened to me. People with trauma cannot. A lawyer, of course, can coach them into a story, but that=s not really displaying the symptoms. That type of thing is, well, Ken Sewell is involved in that. My current students are involved in that as well. One of my students who just finished her Masters thesis---one of these old schizophrenia reaction time researches---but the evidence is focusing in on two separate disorders that you can pick up in reaction time measures. You tell a person to press down and wait for the <go= signal, and then you get a distraction. If that distraction occurs just before the signal occurs, you get a deficit. But if it occurs and then you don=t get the <go= signal, like until seven or eight seconds later, then there=s a different kind of deficit that occurs. In between, the individual is relatively normal, but there=s this earlier breakdown and then the later breakdown. It looks as if these two may be reflecting separate genetic factors, in other words, a combination of genetic factors that occur together when people become schizophrenic. Some

people have one of these factors but not the other, so they never become schizophrenic. They become normal people. So that's the kind of thing they're doing. These people haven't been out long enough to say, "These are their outstanding records." But those are examples.

Q: Sounds like you're not really retired, then.

A: Oh, well, when I retired, I asked for an arrangement so that the students who were working with me had the choice, if they wished, to continue to finish their degrees with me. This I felt ethically bound to do. My whole life has been oriented towards students, and this is *pro bono*. I'm not getting any part-time pay for this. I felt, this is a contribution to them, to the University.

Q: What else is retirement holding for you?

A: I'm actually working on a book. A book to be addressed not to psychologists, or professionals in the mental health field, but to kind of the informed or well-educated lay audience. A lot of people do these books. They've done so in physics---

Hawking, for example---and---what=s the guy=s name, who=s in astronomy?

He=s dead now.

Q: Carl Sagan.

A: Yes, the Cornell professor. No one=s really done this in psychology, so that you really know what psychology=s all about. Most people can talk a little bit about Freudian theory, or they talk about Skinnerian operant conditioning, but they really don=t talk about the breadth, and how psychology relates to religion, how it relates to theories in physics, Einstein, and Niels Bohr, and so forth. And also they don=t know anything about this matrix theory type---I should say mathematical set theory---way of understanding how people think. So, I=m trying to write a book with a very common level of language, not watered down, but on a level where the general layman can understand this, just in the same sense that the general layman can understand what Hawking or Carl Sagan did. So that=s my big, big, big thing I want to get done. I=m in the middle of it. In fact, I=m well past the

middle, and there are only about two chapters left. Having agreed to take on these students and continue with them, plus things like a professional colleague in Britain wants me to do a chapter for her book on the research influence of this personal construct area---I promised to do that. And so my time gets (?) out.

Q: Do you have grandchildren?

A: I'm now in my second marriage, and my major time demand---my wife is a Chinese woman working on her third college degree. She had one in China in language. And then coming here with me to KU, and starting our new family here, she got a degree in math. But now she's working on computer science, both a bachelors and a masters in computer science. Meanwhile, our daughter, who's in the seventh grade at Bishop Seabury Academy, has a huge amount of homework which she brings home during the year. She's off, actually right as we speak, at this---she got one of these TIP awards---

Q: She's here, then.

A: Yes, she's over living in Hashinger Hall, doing a three week course in the TIP program. So as a seventh grader, this is big stuff, to go live in a dormitory and attend a class in the college, and so on. So this has been a focus of my time also. It's very enjoyable.

Q: Any other kind of community involvement that you pursue?

A: In my career, my major community involvement was in civil rights. In Nashville, I wasn't part of the CORE, but I had a wonderful working relationship with the civil rights group, the nonviolent civil rights group, that did the sit-in movement in restaurants. In fact, my graduate students and I participated in sit-in movements. As I moved on to Detroit, which was a greatly racially segregated place, anti-Semitic, you name it, I was a member of the Council for Racial Justice, which was an inter-church group. I was the representative from the Unitarian Church. It was down in the Unitarian Church in Nashville where I was active in civil rights. Martin Luther King would come as a local speaker, and I got to know Julian Bond later

on. But in Nashville, there were people like Jimmy Lawson, who taught these workshops and trained people in the nonviolent movement. I knew him well. And David Halberstam, who was a reporter back then---now he=s written several books on different topics. His initial focus back then was on civil rights. Another great member of the this group was John Lewis, who=s now a member of Congress.

Q: Yes, from Georgia.

A: When I was in Nashville, right out of graduate school as a young assistant professor, these kids were in the Baptist seminary at Fisk University. This is a bit humorous, but my involvement was, when people got arrested at restaurant sit-ins, the NAACP took care of the legal costs for the blacks who got arrested. But nobody took care of the whites, in terms of bail and legal expenses. So I and the Unitarian Church started a fund to support legal expenses for whites who got arrested in the sit-in movement. So that was my great claim to fame, being very actively involved in handling very large sums of money, working on the issues of

bail, and paying a lawyer, and that sort of thing. Then, in Detroit, we had confrontations with the local mayor of Grosse Point, and talks with the downtown department store owners, trying to improve racial justice. Then, as you know historically, the women=s movement replaced civil rights, in terms of newspaper space and everything else, actually. My activity wasn=t so great there, except for being really involved with education things as a parent. I=m pretty old to have a youngster who=s in the seventh grade. But there=s a great, great, great joy in life to do that.

Q: This is your only child with your second wife?

A: Yeah.

Q: What=s her name? The child=s name?

A: Wyn. Which works in both Chinese and American. I might mention that---I told you I had four children in my earlier marriage. That could be corrected a little bit. When my youngest son Lincoln was in I think the seventh grade, he brought home

a Vietnamese kid who had escaped Viet Nam in the very last days, when Saigon fell, Ho Chi Min City. He got kicked out of his foster home. I didn't know it. I welcomed him. And then it came, "Can he stay a whole week?" Well, sure. I thought it would resolve itself, and he'd get reassigned. It didn't happen. So finally it wound up till Christmas, then till the end of the year. To make a long story short, he lived with us all the way through. Finally, we adopted each other. He took my name, Cromwell, as well as his Vietnamese name. He graduated from high school, then two years of college, then into the military service. He is like an adopted son, Steve Cromwell. He's working in Virginia as a medical technician. He went back to Viet Nam to find a wife, and is very successful back here, and very happy with life in Virginia.

Q: All right. I think that will do it.

A: Yes, I can't think of anything else in particular.

Q: Well, then you very much.

A: Sure thing.