

RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY

NEW BRUNSWICK

AN INTERVIEW WITH JOHN G. LOFSTROM

FOR THE

RUTGERS ORAL HISTORY ARCHIVES

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

INTERVIEW CONDUCTED BY

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and

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NEW BRUNSWICK, NEW JERSEY

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TRANSCRIPT BY

DOMINGO DUARTE

Shaun Illingworth: This begins an interview with Mr. John Lofstrom on March 22, 2000, with Shaun Illingworth and ...

Sandra Stewart Holyoak: ... Sandra Stewart Holyoak ...

SI: ... In New Brunswick, New Jersey. As we usually begin, we will ask you about your parents and your family background.

John Lofstrom: Yes, I understand.

SI: Your family was from Wisconsin.

JL: Yes, the northern part of Wisconsin, just below Lake Superior.

SI: They were Scandinavian, of Swedish and Norwegian descent.

JL: Yes. My mother came from Norway with her parents and my father was born in this country. ... His mother was from Norway and his father was from Sweden and that's where we got the Lofstrom name. He was an under officer, like a petty officer, sergeant, in the Swedish Army, in the Medical Corps. That was my grandfather.

SI: Did you know your grandparents when you were growing up?

JL: Oh, well, ... I never met my mother's father. He died shortly before I was born, but I got to know my grandmother, ... my mother's mother. ... She died the year before I finished high school. She was in the hospital. She got osteoporosis, I guess, and she fell and she broke her thigh and she got clots and died from it, but, [of] my father's parents, my grandfather lived until about 1932. He died just about the same year that my mother did, the year before, and then, my grandmother there, I think she died while I was in the Navy, and she was very anxious about me. She didn't want her only grandson going into the big, black ocean and getting swallowed up, [laughter] because, apparently, she had a pretty traumatic trip across herself, when she was little.

SH: Did she tell you the story of her coming over from Europe?

JL: No, she didn't. I got this secondhand from my father, but she never learned to speak English very well and I learned a little bit of Norwegian from her. ... I maybe even picked up a little bit of an accent, because, when I first came to New Jersey, the people said, "That guy with the foreign accent," [laughter] and it wasn't Polish.

SH: What did your father do in Wisconsin?

JL: He was kind of a frustrated guy. I think ... his parents had high hopes for him and he was reasonably bright and a big, husky young fellow. ... His first job was, he worked in this town, for a bank, and he used to meet the train and get the big satchels of silver dollar coins, to bring them over to the bank. [laughter] They used to get shipments of silver dollar coins and he worked at that for a short time, and then, he ran away and worked on the railroad as a fireman

and a brakeman. ... His home life must have been pretty oppressive. I guess his father ... ran the home like a military base and was kind of angry and he used to have a little bit of an alcohol problem, too, Grandpa (Johannes?). ... I guess he was a bit mean, but he was a first aid man for the [locals]. Back on the farm now, when the drunks used to come walking by there, and some of them had been in fights in the tavern in the town there, ... he'd help patch them up a little bit on the way home. [laughter] ... After my father worked on the railroad, then, he ran away and worked in some lumber place in Idaho. Sandpoint, he went to. I don't know if there were some relatives living there or not. I never really caught on to that. He mentioned it a few times, and then, he was a postal delivery man for a while. He had a little sleigh, with runners on it, and he had an old horse called Prince that he used, too, and that horse, Prince, lived a long, long time. ... We have pictures of him with this delivery thing, and then, Prince was still around when I was little. So, I got to know him very well, and then, when the country got into the First World War, well, my father was about [in his] late twenties and most of the guys that got drafted in were in their early twenties, so, he was a little bit older and he got a special kind of a job there. I didn't understand what it was about, but they needed spruce lumber, spruce wood, for making ... those old flivver airplanes. ... Because he had been on the farm, where they had lots of [timber], Grandpa had lots of big timber there, and my father was used to cutting wood and working on the lumber mill and stuff like that, so, [when] he got in the Army, he got a special assignment to go to Washington State, to help cut spruce timber to build those little airplanes to use in France. So, he didn't go overseas at all, but he was assigned, in the Army, to go to [Washington], and then, after the war was over, he went to the University of Wisconsin, to the short course there, for one session. It was about six weeks, in the middle of the winter, and the farm boys would learn how to do farming scientifically, and they learned how to test for butter fat and the soil tests and all. I've got some of his notebooks about that. ... Then, when he was going to go there the second year, to finish it up, well, then, ... some local politician, or something like that, said, "Well, that's kind of a waste of money there and we've got better things to do with it." So, they said, "Well, you can't go anymore. You've had enough of it, then," and so, he had part of the family homestead farm and he said it was a section that was a little farther out, back in the woods. ... So, he started [out], he built a couple of buildings there, and then, he met my mother and they got married. ... This was really back in the woods there, and then, they had the three children there. ... Well, he used to drive us to school sometime, with the horse and buggy, and, for a while, he had a Model T Ford, but it was awful troublesome. Sometimes, it wouldn't start and he would get awful angry at that thing. He would jack up one wheel, and then, he'd crank it. Somehow, with the transmission, it was easier to crank with ... one of the back wheels jacked up. Somehow, it would go through the differential and it was easy to crank, and then, the thing is, with the engine going full speed when you finally got it going, to get it off the jack with that wheel turning. [laughter] That was pretty hairy. ... Our next-[door] neighbors, oh, about a mile-and-a-half or two miles down the road, sometimes, they used to come down there with their horse and buggy and, once in a while, they'd drive us. They had a little car, too, and then, we got ours. I think the school was at least three miles from us and we were the only two families down that road, and then, we went to that school there for a year, and then, ... my fall of my second year, well, my mother died. ... Then, well, we stayed there for a while, with my father, and then, ... I remember this, we called her the "relief ... lady," it was really a welfare thing, and I remember very distinctly that she came over there with her fancy, I think it was a Buick or something like that, and she took the four of us, my father and the three children, out to a restaurant. I can't imagine where the heck that restaurant [was], because I don't remember any

restaurants around there, but it must have been someplace. ... Then, she watched the kids and I don't know if she thought that we were getting a little wild or something like that, but she made a recommendation to the county judge. ... I've got this letter here, ... to my father, a notice to deliver these three young, you know, minor children to the court and that this lady, the "relief lady," Mrs. (Radloff?), had decided that we weren't being brought up properly, that it was just too much for my father to handle. ... They had sent a couple of people over there, I guess they were going to be homemakers or something like that, but none of them wanted to stay [on] that little farm, way back in the woods there, with these three little, wild kids and bears and wildcats and stuff like that around there. [laughter] They just didn't, and, of course, you had to pump your own water and there was outhouses and stuff like that. ... So, then, they said that he would have to deliver us to the court, and then, in the meantime, my aunt had, my father's sister, heard about that and she didn't have any children, so, she and her husband volunteered to take us in.

SH: Can you tell us about your brothers and sisters? Were they older or younger?

JL: Oh, well, I had two sisters, one about two years older than me and one a year-and-a-half younger than me. I had a half-sister, a foster sister, that was older. ... My mother had an illegitimate child ... before she met my father. She had been raped by a relative and she kept the child, and so, that was my oldest sister. ... She lived until just a few years ago. [At] ninety-five, she died and I went to her funeral in Wisconsin. That was my oldest sister, and then, ... actually, it was three sisters, but only two of them were the ones that [I grew up with]. The oldest sister, my father didn't really treat her real well. He wasn't really mean to her, but he let her know, in sort of a non-verbal communication, if necessary, that she just wasn't quite one of us, especially after my mother died. ... Then, so, she ran away with one of the neighborhood boys, and then, my father had that marriage annulled and she was placed in a foster home in a distant town. ... So, it was just the three of us, then, when ... [they] decided with this county court thing and said that that was all. We saw my ... oldest sister once in a while after that, just [that] we didn't see her for a year-and-a-half or two years after she had ran away.

SH: When you were placed in the foster care of your aunt, how far were you from your father?

JL: ... It was only about eight or ten miles away, maybe about ten, I guess, yes. So, he could come and get us once in a while; not to get us, but to see us. The thing is, there was a small railroad that ran through northern Wisconsin there, from Minneapolis up to Ashland, and it ran through both of those towns. ... There was a town where my father [and] ... we'd had our little, tiny farm, way out in the woods. There was a train station there, and then, ... that was Grand View, and then, there was Mason, was the next town north of there. That's where my father's [mother] and his father, his family, had lived, with my Grandpa and Grandma Lofstrom, and then, another five miles, or six, seven miles, north of there was Benoit. That's where my aunt and uncle lived. So, they were all on the same train line. So, my father, being an old train man, and the train didn't go very fast, ... if it was going uphill, he could hitch a ride on the train, and the train crews got to know him. So, every once in a while, he'd jump on a train going there, and then, they'd come up to Benoit in fifteen, twenty minutes or something. Then, he'd jump off, sometimes in the dark. He'd jump out into the dark and he'd fall over and roll in the brushes and, sometimes, when he came to see us, he was all bloody, [laughter] and he never broke any bones or anything like that. ... That was great. He'd jump off the train and come and see us, and then,

sometimes, he'd get the train [back]. Sometimes, he'd walk back. He didn't usually hitchhike. ... He'd walk along the railroad track, and then, he'd stop at the intermediate places there and stuff, and so, that went on for several years. ... Then, well, my aunt and uncle, my aunt was a schoolteacher, so, she made sure that we studied our stuff and went to school on time. ... Well, my father valued education very much, too, and so, it was in the family. ... Well, like, my aunt had gone to what they called a normal school. It was a teacher's college, but there was something funny about it, because she hadn't finished high school, but she was still able to go to the teacher's college. ... She taught school for, off and on, ... several years, and even she was a part-time teacher when we were living with her there, and then, sometimes, even in my classes. ... She was a pretty good teacher and a little bit strict. ... I knew this stuff pretty good, so, I didn't have any problems. Some of those kids, they tried to get out of the homework and she went right after them, [laughter] but I never learned how to spell real good, but I don't know; that was ... another problem there. ... My uncle had the farm there. He had a great, big barn and he had anywhere from, oh, fifteen to twenty-five cows and calves, and then, he had two horses there for the first few years. He had an old tractor, but he used the horses for a whole lot of the work. ... Eleanor, my older sister, ... of the three of us, she was really good at farm work. She ... worked out, and then, she milked cows. She could milk cows way better than I could, when I came to [that] time, and then, she usually was pretty good at throwing hay, but, as I got to be, well, in my early teens, I got stronger than her. ... She was a master at making up the hay loads, you see. We'd cut the hay and let it dry a little bit. That's called curing. I guess that killed the enzymes in the hay, so [that] it wouldn't rot so fast. See, it had to be dried, ... and then, we'd make little piles of hay. You'd rake it up and they're called windrows, and then, you have a dump rake, and then, they'd have a horse pulling that thing. ... When you got enough hay there, you'd push this little lever, and then, that [rake's] big teeth would jump up there and it'd leave a pile of hay there. ... Then, you'd leave piles there, rows of them, along the fields, and then, the people would have to come along ... with a pitchfork, with three tines, and make piles out of it. ... Those were made like those thatch huts, so that if you made them right, ... if it rained, it would only sink in a little bit. It would run off the top, and then, you'd go with a big wagon, with the big sides on it, on the front and back, ... pulling that with the horses, and then, there'd be somebody on top of ... the wagon, the loader, and then, there would be, probably, usually, one or two people throwing the hay from those little piles. We called them hay shocks and, usually, when we got old enough and strong enough to do it, well, my sister was the one that was on the wagon and she would; oh, she could drive horses like [an expert]. ... I was never able to drive horses. ... [laughter] They knew they were their own boss and they'd go pretty much where they wanted to. Sometimes, with difficulty, I could make them go [where I wanted], or, when I was pulling the cultivator, well, I'd sit on the horse and the guy would hold the cultivator, and then, the horse would go, if I'd pull real hard, but I never got to do it like my sister. She was real good. ... She could make the horses go anywhere, and then, she would steer the horses ... up to the piles of hay, and then, my uncle and I would throw that [onto the wagon]. ... I got really strong then and I could throw that hay up there real good. ... I could have broken a handle, and some of these guys ... deliberately broke the handle, just to show how strong they were. Handles weren't that ... difficult to break, because you just bend them and give them a jerk, but, if you did it carefully, you could haul a real big load of hay on that. So, that's the way we farmed for quite a while, and, as I got older, I was able to do that real good, and then, after a while, we got a new tractor. That was a good one and we got a thing that you could push in front of the tractor, and then, those piles of hay, those long rows, instead of making it into piles, you'd just push along

that row with this thing with the big wooden teeth that went underneath it. ... You could push a great, big pile of hay, just push it in front of the tractor, just ... pushing on the ground. Then, you'd put that in front of the barn and they had a great, big door in the side of the barn, up on top, and it was quite a job, opening that. It was with pulleys and stuff like that, and then, there was a track on top of the [barn]. Inside the top floor of the barn was where they'd store the hay, and then, there was a trolley track along the length of the barn, right at the peak, and then, there was a pulley in the back that would go down, where you could have a rope. ... Then, you could pull on that rope and that was how you hoisted the hay there. ... There was a big, what they called a harpoon fork, that would ... hang from the trolley. Then, you'd pull that out with a little, small trip rope. You'd pull that out, and then, when this carriage on the trolley would come out to the end, and there was a little overhang there above the door, ... when that came, if you hit that real hard, then, ... it would drop the pulley that held the harpoon fork, and then, that would come down. It was a big, heavy rope holding that, so [that] it didn't come dropping down on you, and then, you'd set that, push that into the load of hay. You'd have to be careful where you'd set that, too, because, if you had a big load of hay and if you set that right in the middle, real deep, it would break the rope or the horses couldn't pull it. ... If the loader had done a real good job, you could probably get four loads from the thing, or, if it wasn't that big of a load, you could get two, one from the front and back, and then, maybe two levels, something like that, anywhere from two hoists for a small load, and then, up to four or five hoists from a big load. ... Then, Eleanor, the one that was the master loader, well, she'd run in our barn. So, she'd be in the hayloft then, and then, you'd push that harpoon fork there and set the tines on it in the load, [laughter] just like that, and then, you'd holler real loud when you had it set. Then, the person who had the team of horses, they would pull the horses and hoist that thing up in the barn and, as soon as the pulley on the harpoon fork hit the carriage there, the trolley, then, it would go in there. ... Then, the person inside, when they wanted it to drop, they would holler real loud, and then, the person that was on the load, that was setting the fork and stuff like that, they had that little rope, and then, they would pull it real hard. ... So, then, this thing that had the fork that went down in there, and then, there was a little tine that came up, like that, that was hitting the front, then, when you pulled the trip rope, those little forks that were holding it would drop down, those little fingers, and then, the load would drop. ... The person inside would give you a signal as to exactly when and where they wanted it to drop, and then, ... they'd have to move the hay a little bit, to stack it in the barn properly. ... Then, after it was tripped, well, then, you'd just pull it back out and load again. ... That was haying, and it was hot and hard work, but, if you had plenty of water to drink and had a good straw hat, it was very helpful. ... Of course, ... like I said, after ... we got the new tractor, well, then, we pushed the hay up there, and instead of having a harpoon fork to set into this well-designed load of hay that was made, this was just a pile of hay, loose. So, then, we had; ... I've forgot what they call it. It had four loose arms and you just pulled that out as far as you could, to grab as much hay as possible. Then, when it started lifting, it would just grab underneath it. It was called a grapple fork, grapple. That's what it was, too, and it had a pulley and it went up into the carriage the same way and it tripped, but it was an entirely different way of engaging the hay and holding it. ... You didn't have to make those funny, little hay piles and you didn't have to even lift the hay. You just pushed it, and so, that was much easier. Then, later on, ... just as I got [to be] eighteen and went off, ran off, to the Navy there, just when the hay season was starting, I felt a little guilty about that, but I wanted to get [out]. I thought that was my opportunity to get off that farm and I was already thinking a little about this crap about being a professional Navy man and staying there for retirement. I knew, down inside, that wasn't going

to turn out that way. I talked to people and told them I was going to be a career Navy person, all that stuff. It sounded good, but, down inside, I knew it wasn't what I really wanted to do. [laughter] Then, when that GI Bill came along, ... I think that was passed in late 1944, so, you see, I knew all about that GI Bill then. ... I'd get in there and go to that school, [radar technician school], and then, get out and do the GI Bill, and then, I could go to college and do whatever. So, these weren't well-organized in my mind, but it was there, and I knew that's what I wanted. [laughter] ... So, it turned out remarkably well, ... but I did feel really guilty, leaving my uncle there just before the harvest season was starting there, in that June there. The first crop of hay would have been harvested pretty soon there, but he survived. ... Well, I came back after two years and I said I would work on the farm during the college vacation, during the summer, and they said, "Well, hey, we got along without you. You go and do what you want to do." So, is there anything else I should cover?

SH: I wanted to ask you about your high school years. Were there any subjects that you really liked or teachers that were very influential?

JL: Oh, we had an unusual time in ... this Benoit school. It was ... kind of a new-ish building; high school, it was called, at that time. It was a big building. It'd been built a few years before that, like, built in, probably, about ... the early '30s, so, when we got there in '34, I guess it was, the fall of '34, that it was still a fairly new school. ... It had four giant classrooms on two levels. It was two on the bottom floor and two on the top and the one bottom floor [room] was supposed to be for the primary [grades], first through four, and then, ... the other big room on the bottom floor never was used for a classroom, ... at least while I was there, and then, they had the two big, giant classrooms on the second floor. ... One of the classrooms was for five through eight, and then, the other one was for nine and ten. ... When they started, that's as far as people went. When I was little, they just went [to the eighth grade]. It was a big deal to get through to graduate from eighth grade, but, then, when I was coming along, ... most of the kids were figuring on getting through [grade] ten, and then, ... when I was getting closer, well, then, a lot of them were going to the city, they were getting bussed to the city, to go the last two years. There were three high schools within driving distance, ... four-year high schools, and they would go for the last two years to some of those, which[ever] ones they picked. ... So, I remember, in my first year, in the ninth grade in our little high school, well, there was a male teacher who had been there for quite a number of years and he was a reasonably good teacher, a little bit. Well, you had to have discipline there and I remember, one time, something was going on and we were talking a whole lot and he says, "Be quiet, now. We have to start studying," something like that, and I kept on talking and I just didn't really pay any attention to him. ... All of a sudden, "Ka-bang," he hit me. ... He didn't hit me with his fist, [but] with the side of his hand. He just hit me, a real [wallop], just dazed me for a while. I saw stars, side of the face, "Boom," and I didn't see it coming. I was just so busy talking to them, "Boom," oh, boy. [laughter] That sort of caught my attention there, ... but he was a pretty good teacher, and then, the next year, when the fall came, my aunt there was on the board of education there, the school board, we called it. ... A day or two before school started, the principal, Mr. George (Schapa?), said, "I've been here for five or six years now," he says, "and I need a little bit more pay. Just a little increase, I'd like to have. I've got these two or three children to feed and I just need a little more money," and they said, "Good-bye," and they didn't have a teacher. So, they were thinking very creatively there. Then, it was this young, ambitious woman, who had been teaching five through eight for three or

four years then, very well, a real good teacher. So, they asked her if she would take the [grades] nine and ten, on the condition that she would study up on these courses at night school, while she was teaching, and I don't know just how she said it, but she did say yes, and she was our teacher then. Mary (Rodozovich?), her name was, and she was a very good teacher, but she didn't know too much about math and science. So, it very shortly came [to pass] that we were teaching her algebra and some of the science, because we were learning it by ourselves faster than she was learning it at night school, [laughter] ... but I heard that she went on to be a very good school principal and stuff like that. She was a good sport, but, then, when I left there, the end of the tenth year, that one year with her, I'm not sure, but I think she gave me the highest grade that any student had ever had in that school. [laughter] ... She just didn't know how to grade me, because I was teaching her in those courses, [laughter] instead of she teaching me, and I wasn't the only teacher, but I was the best one. ... One of the big things that we did at that time, in the spring, when the winter thaw would come, there was a stream, that we called it "Fish Creek." What a better name, [laughter] and, when ... the ice used to break in that and it'd start flowing, well, that ran into Lake Superior and there were these sort of "junk fish." We called them "suckers." They'd come up there and spawn and that was poor people's fish. ... Besides their skeletal bones, they had bones that were just here and there in the flesh of the [fish]. If you took a fillet of that thing, it would still be full of bones, and funny, little bones, just fork bones, and they would catch in your throat something awful. ... The Croatian people, the Slavic people from southeast Europe, they would smoke them and pickle them and stuff, and that would dissolve the bones, but we Swedes and Scandinavians, I guess, I don't know if we were too dumb to do that or something like that. [laughter] Drying cod, that's what they know how to do. So, I got [to be] pretty good at that. My aunt would fry the fish, usually, or broil it a little bit, and then, I would always have some chunks of this coarse bread. So, as soon as I'd feel a bone getting caught in my throat, I would grab a handful of bread and chew it real quick and swallow it, and there goes the bone. That was the end of that, but my sisters never mastered that and they would be throwing up, over and over again, [laughter] in the middle of a meal. They'd get a bone caught and there was just only one way to get rid of it. ... That was poor people's fish. ... That was quite (an adventure?), going fishing. ... That creek, ... the best fishing places were down there, oh, a mile or so down in the woods there, and we'd go down there with; we had ... the trap nets. It was like a funnel. ... When the fish would come upstream, we'd have the funnel arranged so that they would swim up in the funnel, and then, they'd get in the net, and then, they couldn't find [the way] to get back out of the funnel. ... We'd get anywhere from, oh, a few fish up [to], sometimes, we'd get twenty or thirty or fifty fish. You get fifty two-pound fish, that's a heavy load, and I was the biggest one there. I grew faster than the Croatian kids. I don't know if they hadn't been fed well or if there was just a genetic difference, but I was way [taller], a head taller than all of them. So, then, I couldn't lift the sack of fish on my shoulder. There was this burlap sack of these slimy, wet fish there and three or four of those kids would load this up onto my shoulder, and then, I would carry it a mile along the railroad track, to the first stop there, and then, we'd divvy them, ... but I was the main fish carrier. [laughter] ... I don't know if some of them were one hundred pounds or what. It was pretty close to it and I was the biggest and strongest one. So, then, that was it. Our favorite sport there, playing at the recess time, we would go out and play, in the summertime, we would play ball with ... what we'd call a softball, I never thought it was very soft, or else with a rubber ball. We didn't play baseball, with the real hard balls on there, but we played mostly football. We played all seasons and, since I was the biggest and the strongest and all that stuff, we had one person in the background, backfield, ...

and just one there, and he'd center the ball to me and it was a matter of running or passing or kicking. ... I did all of them, not real well, ... and I was used to just a one-man backfield. So, then, when I went to the high school in the city, I went out for football in my second year. It was a disaster. I was no team person at all. ... I couldn't learn the plays. They used to juggle the numbers, to fool the opposition, and I was the one that went off sides, instead of the opposition. [laughter] ... I couldn't figure out the numbers very well, so, ... all this passing and kicking ability, they couldn't use it at all, because I couldn't understand their numbering system to coordinate very well. So, they put me in the line. ... Here I was, 155, 160, I wasn't really a giant guy then, but I was bigger than all those little kids, but, then, here in the city, ... some of those guys were two hundred pounds and some of them were All-Americans a few years later. ... So, when I was in the line, well, when they'd come along, it was just a one-way ride back and, sometimes, I'd sneak between them or something like that, but it wasn't very often. [laughter] ... My great glory was that, one time; I was on the defensive team. We were the cannon fodder for the main varsity team and, one time, I snuck through the defense and they had what they called a flat pass, out sideways, and I was right there and I grabbed it right off the guy, the passer's hand, and went running for a touchdown. Since it was just a practice game, they didn't even run after me. [laughter] ... I cracked a tooth there, and I never got in a game. They ... wouldn't let me in a game. They didn't dare let me in a game, [laughter] because ... I'm kind of a klutz, ... but I was real great for cannon fodder. So, one game, they never even took me on [the bus] to the away games, but I watched the [home games], got all suited up there on the bench for the home games, but, then, there was this one last game of the season. ... Well, they called me "Igor," or something like that. There was this Russian scientist or something like that, like one of those Dracula guys or something like that. Well, somebody named me that when I first got there, and so, they said, "Igor's going to go with us on this game, on this away game," and just before the game started, ... one of the best ballplayers, he says, "Come on, Igor. I've got a job for you." So, he [says], "Come with me." So, we ran behind the; they had sort of what they call a band shell, or something like that, and they used it, part of the time, for a change room and stuff. So, we went behind that thing and he says, "Here," he says, "I tore my trousers real, real bad," and he says, "You've got a good pair and you're just my size." So, we traded trousers. So, my trousers got in the game, but I never did, [laughter] and they wrote that up in the newspaper, but that didn't bother me too much. I was kind of [glad], the way those guys were really brutal there, compared to the games that we used to play back at the little Benoit school, and it was just like a machine. It was like the guys'd be knocking each other over and stuff like that. ... It was a little bit too brutal for me and I'm kind of glad that I didn't get into it, because it would have been mayhem. ... I just couldn't understand the [plays]. My mind couldn't handle that many things at once. When I was back there, running things myself and didn't have to be scrambling around, doing a whole lot of things, coordinated, that was fine. I'd just wait until that guy [the receiver] got down there, and I could run away from the other fellows for a while, evade them, elude them, for a while there. I had the blocking good. Then, when that guy got down there, I would just whip that ball down to him. ... So, I was a pretty good passer. I could lead those guys, and some of them, they'd get back there and stop, ... and then, the ball would go way over their head. ... I said, "When I tell you to go down there and run, you just keep running until you get to the end there. ... When you get down there, you look up and that ball will be coming right in your hands," and so, we made lots of touchdowns that way, but that was just when I [was on] the little team, but I couldn't work with the numbers and all that stuff. So, that was quite a high school there, ... oh, and then, those nights out fishing, those were fun. ... Oftentimes, it was on Friday

night, and then, we'd stay up all night, because we didn't have to go to school the next day. ... The Catholic boys, they would have their old pocket watch or something like that and they would have all this eggs and bacon and all that good stuff and, when it got [to] twelve o'clock, midnight, bingo, the bacon would go in the pan, [laughter] because that was when they weren't supposed to eat meat on Friday. Boy, they knew it and they were following that. So, that was some happy times. ... We surely didn't stay out all night, but [we did] a couple of times, and my uncle says, ... "Quit that all-night stuff." He says, "You come home after you get done fishing for a while," he says, "but don't stay out all night." He said, "That's kind of dumb," and then, sometimes, it would rain there, and then, we'd get really soaked. ... Oh, we'd build a great, big fire down there by the creek, and that was fun.

SH: Do you remember where you were when you first heard about Pearl Harbor?

JL: Oh, yes. I was up in our hay barn. ... I don't know why I was up in the hay barn and I was throwing hay and there was a little side door there, on the front of the barn. ... I think my sister called me or something like that and she said, "Oh, there's something about;" ... the news came on the radio that the Japanese were attacking Pearl Harbor. ... I was up in the hay barn there, with my fork there, going to feed the cows or something like that. ... That was later in the day. ... Hawaii Time, [it] was just morning, and so, this was noon or the middle of the afternoon, when it came there, and it was a cold day. ... I don't know if we'd had snow yet or not, but, oftentimes, we'd have snow in October or November and, sometimes, we'd have deep snow by then. So, it was the winter and, yes, I remember my sister coming to tell me. ...

SH: What kind of discussions did your family have about the war in Europe?

JL: Well, my aunt and uncle didn't talk much about it, but I was glued to that radio. ... I've still got a great, big scrapbook of the war, where the armies were moving. ... I have a vivid imagination. I could just see those dogfights over England and see those German tanks crashing through the woods there into France and stuff like that, and I heard about that Maginot Line and, somehow, I never really thought that was much of a thing. ... It didn't seem real, and I guess, in design, ... they were building for the war before, and I was thinking about ... how I could improve some of those weapons. ... We had a terrible rubber shortage. Most of the rubber came from the Malay Peninsula. The rubber plants were native in Brazil. ... For a while, I think they tried to keep them in Brazil and keep them from being moved, because they had a monopoly, but they were brought to [the Malay Peninsula from] Brazil and they had big; they didn't call them orchards, but they were groves of rubber trees. ... They were planted and it was very organized and it was highly productive and that's where all the world's rubber came from, [the Malay Peninsula], just a little bit from those jungles in Brazil. ... That's the first thing the Japanese conquered, and so, here, they had a drive to get ... any scrap rubber and my uncle, ... on his mother's farm, there were big piles of old tires. They were all rotten, but, in their [desperation], they took any kind of rubber, just on the chance it was good. So, I remember, I took this old wheelbarrow and I hauled, oh, one hundred or two hundred-pound loads of rubber. I pushed this in the wheelbarrow, over half a mile up this hill and down the other one there, to the town and they gave me a cent a pound for that rotten rubber that wasn't worth anything. It was just bad rot, but ... the furor was so [that] they would take anything that had rubber in it. ... Then, the tires were rationed and they got into this retread business. If ... the sidewalls were still good,

they would ... glue new treads on and stuff like that. ... I could remember pushing ... that wheelbarrow and it made me a lot of money there. Well, to me, a few dollars there, that was great stuff. [laughter] ... Then, I remember, let's see, the rubber; well, we were able to get enough tires to do the farm work, and then, you had the thirty-five-mile-[an-hour] speed limit and you didn't just go joyriding anyplace at all then, because ... those tires were so precious, and then, they had scrap drives, too, for aluminum and copper. ... Where we pastured our cows, in a field, sometimes in the hay fields, after we did the haying, but we had a second-growth hardwood forest there and it'd been just a pristine pine forest when the Indians were there, but, then, the lumber companies cut down all the good pine trees, and then, the poplar trees [were] coming [in]. You know what poplar are? They're like linden trees, I think, and there were a lot of them and the leaves are not that bad to eat for the cows, when they're little, and then, ... until it grew real thick, there was a lot of grass growing in there, too. Then, I used to go and get the cows. I'd go out and chase them home when it was milking time, and then, here and there, I would find, I think I found three, these copper stills that had been abandoned there, because, during the Prohibition days; well, I think my father had a still and he made a little bit of home brew. That, I don't know for sure. ... I think he gave it away to the neighbors and stuff like that, but these Croatian people would come to this country, after the First World War. That's where the big fighting is over there, in Bosnia and stuff, right now. Those were tough people and they knew how to make moonshine real good and I've heard more about it since, too, but, when the Prohibition came, well, that's when they really made out like everything. ... Then, after the revenuers from the Government started really flushing them out, in the early '30s, ... some of them just abandoned their stills and they threw them back in the woods there and that was one of the woods where not too many people went. ... I even found some bottles that'd been partly buried there and I brought them home and my aunt said, ... "Most people would drink this, but we're not sure how it was made and we don't drink that much of that anyhow," so, we just threw it down the drain. I found five or six big bottles of that stuff there and those copper stills were [valuable]. I think it was twenty-five or fifty cents a pound for copper then. That was big money, but copper was scarce. ... So, I made several dollars on those copper stills. I think I found, probably, about four of them and I never knew about my father's until I found it in his attic of the little house, many, many years later, when just visiting there, [laughter] just like, maybe, thirty years ago. It was the first time I knew my father ... really did that, but I'd heard this, also, when I was back visiting, on one of our trips. We went to a church picnic and this guy told me about my grandfather, (Johannes?). He says that an old Lutheran minister used to come up there once a month to that church, whether he had a little horse and a buggy or a sleigh, depending on what the weather was. ... He says, "After the service was over," he says, "your Grandfather (Printer?) always used to go with him, in the back room there, and then, Father had a couple of bottles there, and warm him up for his trip home." ... Apparently, they had a little bit of that stuff and they knew how to do it, but the Croatian families, ... they paid for their farms that way and they had a road that they called the "Moonshine Alley," sort of, kind of derogatory-like, but the road is still there. ... It's called "the Alley" now, but the moonshine isn't there anymore, [laughter] but I remember, even the last [time], when we were home in ... '95; no, it was in '98. ... Our trip was in '98, wasn't it, Adeline?

Adeline Lofstrom: Well, the big trip was in '98.

JL: Yes. It was when we stopped at the Benoit [school] for the reunion. Okay, well, they had a big reunion at that old brick schoolhouse. It's a museum now. ... One of the women, that she ... moved in there maybe fifteen, twenty years ago, but she's very interested in the history there, ... she says [that] some of those Croatians, they were kids when I was there, my age, ... she says some of them told her that they used to have a vigil there, that at least one of their kids, at least seven or eight years old or older, would be attending that still twenty-four hours a day. That thing just cooked and distilled and that was ... a big part of their livelihood. ... She says they didn't feel that it was [like] being big outlaws or something. She said, "It was part of our tradition, that that's what they used to do back over in Croatia, in Austria-Hungary country."

-----END OF TAPE ONE, SIDE ONE-----

SH: You were telling us about the Croatian families.

JL: Yes. So, this girl was telling us, [the] lady that was interested in history, and she said, "We were very, very ashamed of that and we never talked to anybody about it, ever, for a long time." ... She's sixty or seventy years old. She says, "Well, this was part of our story, now," and she says, "I'm not ashamed of it anymore. It was just part of it and it was our history. I'll tell you all about it now," [laughter] and so, she, ... apparently, had [had it] described ... in very great detail to her. ... One of the big things on our farm was that, in order to keep your cows producing milk, they have to have a baby every year. In order to have a baby every year, if you don't have a bull, you have to go take the cow and visit the neighbor's [bull], and that got to be my job and I was pretty adept at it, but, ... looking back, it was quite a dangerous job. Sometimes, the neighbors weren't home. I'd go out in their pasture and they [would] have a big, mean bull and I'd have to hit him with a stick to make him go down there, and then, he knew what was going on. Then, he'd go galloping down there, and then, when it was done, well, then, I had to get him out of there and get that cow and go home. ... I don't know, one time, ... I had been there one day and the neighbor wasn't home and I got all that dangerous stuff done and I was just leaving and all of the cows, his cows, had come over there. ... It was like a big picnic or a party, ... just chaos there, and his cows are rearing around there and trying to jump on each other and, you know, it was just like a big party. ... Of course, that stirred them up, so [that] they probably wouldn't produce milk very good that night, and the farmer comes home there and he was [Editor's Note: Mr. Lofstrom growls to indicate the farmer's anger]. I just took off. [laughter] ... My father was never very comfortable about me [doing that] ... when I was fourteen or fifteen. Usually, after the cow had been through a couple of pregnancy cycles, they would be used to being led and walked around. They knew how it was, and so, they'd followed me, ... but he didn't like me out there playing games with those big bulls. ... Some of the farmers had been gored and killed with those bulls, but I never got in any trouble with any of them, and I guess ... I was quite assertive when I was with them. ... I knew that it was risky and I just sort of ... showed them I was boss. I didn't have any trouble with cows, cattle, cows or bulls, but those horses, I was scared of them. ... My sister was so [good with horses]. She just knew them. She talked to them. ... She could pat them, and she didn't put shoes on them or something, but she could have, easily. She just ... was comfortable and they knew it, ... but I never [liked] horses. ... I still don't like horses, but cows [are fine]. ... I've got a real mean story to tell you. One time, I was out farming, during college. ... During the first summer, I went to summer school. ... I went to college for two years straight and I was really beat. I was studying awful, awful

hard. The first year was terrible. ... I went combining, out in the wheat fields, for the last two summers ... when I was going at college, and it was [on] one farm there where, this might sound a little crude here, but they had cattle and we just lived there in [the barn]. I think we slept in little cots in their (partare?) barn, or something like that, or maybe it was a place in the house there, but we weren't exactly part of the family there. When we went harvesting, we were dirty and workers and they tried to get [us] to work as cheap as possible. ... [At] that one place, this one guy owned the combine and stuff and he was the manager of the thing, and then, his cousin was with us, too, and he was a hillbilly from Missouri. Now, that's just a [characterization], not significantly derogatory, but a little bit, though. He was a real hick and they had the beef cattle there, you know, the heavy ones, and he says, "I don't like that bull over there. He scratches the ground there and puts his head down," and he says, "I just don't like it," he says, "when we have to go into that water tank to get the water," for washing and stuff like that. ... He says, "I don't like that at all," and I said, "You're scared of that bull? I'll show you." [laughter] So, I walked right in there, into the pen where the bull was, ... and I picked up a stone, about, oh, not quite as big as a baseball, [laughter] and I did a David-and-Goliath job on him. I walked right up to him, about a little farther away than this, about like that, and, boy, ... he knew something was going on there. ... He had his paws, his hoofs, down there and he was putting his head down a little bit. He was about ready and I just laid that thing right between his eyes, on his forehead, and his knees buckled. He didn't fall down, all the way down, but I threw it hard. It was dumb. It could have killed him, ... and then, as soon as he recovered his senses, he just turned around and ran. ... After that, we were there for probably three or four more days, ... he'd still torment those other guys, but whenever he saw me coming, he would hightail it. He didn't want to have no part of that. ... Another thing I might as well tell you, while I'm telling [you] that thing about the bull, when I was ten years old, it was the spring of 1938, I guess it was, I'd gotten into an argument with a couple of guys, not a bad one, or something like that, and we were walking home from school. ... I lived about a half a mile from school, where my uncle's farm was, and the road divided there and I went back ... toward our farm and the other boys had a little further to go. ... I don't know what precipitated this, but I started throwing stones, ... here comes the stones again, at this other guy. ... It was about three or four other guys, but I was throwing stones at this one guy and he threw some back. The other guys said, "Stop," and they didn't want us to throw stones, but we had gotten [to] throwing stones. ... All of a sudden, I didn't see it coming, it was a "clunk" and it was just about just like what I did to that bull. [laughter] ... I woke up, I don't know, fifteen, twenty minutes, a half-hour later, in the middle of the road. There was a little pool of blood there and I walked home and I don't know if my aunt washed it off a little bit or something. ... I said I just got bumped a little bit. So, I didn't say much about it, didn't get any medical attention, ... but it must have been a Friday, because I didn't see those guys for a couple of days. It must have been, like, a weekend, and so, I'm coming to school on Monday there and this guy that threw the stone at me, he came running up to me. He said, "Oh, I'm glad to see you." He said, "We thought you were dead," and he says, "We ran away." He says, "We ran away, as fast as we could, home," he says, "and never said anything to anybody." He says, "We thought the sheriff would come looking for us," he says, "because ... it was a big clunk," he says, "and you just dropped, just collapsed there and just laid there," he says, "and we were scared," he says, but I had it coming. I was the one that started it. So, I don't know if that knocked some sense in me or out of me. ... I've got some, I don't know if it's really neurological problems or something like that, so, I don't know if it was from that or not. Many years ago, in fact, it was just a few years ago, I went to a neurologist to see if I was getting Alzheimer's. ...

After a whole lot of questions about naming the Presidents backwards and a whole bunch of silly little things like that, he says, "Oh, you don't have any Alzheimer's." He says, "You're all right," and then, I told him about this. He says, "You ever have any head injuries or something?" and I told him about the stone and he says, "Did your behavior change at all after that?" I said, "Oh, it changed tremendously." He says, "What happened?" I says, "I quit throwing stones." [laughter] ... I made fun of it, but it may have. I don't remember if [it did], because ... I was forgetful when I was little, anyhow, long before that, because my uncle used to tell me to buy things at the store and I'd run down to the store, and then, I'd forget what it was. He says, "Buy these big nails," when the big storm, it wasn't a hurricane, but it was an awful, awful windstorm, ... blew our barn, so [that] it was tilted, not ready to fall over, but it was really slanted. So, he got some big jacks and poles and pushed it straight, and then, he put some diagonal boards on the end walls to strengthen it, so [that] it wouldn't tip like that, and he wanted some great, big nails. ... It was twenty penny spikes, he called them, and I ran down to the store and I come back with ten or twelve or something like that and he was just furious. He wouldn't write it down. He just [said], "You're supposed to remember," and I couldn't remember. Well, he should have known that, too, but [he] used the little nails, but the barn still lasted until a couple of years ago. So, it didn't fall down. ...

SH: When did you become interested in science? Were you in high school?

JL: Oh, no, no. When I was in the third grade, I told the teacher I wanted to be a scientist. It was Ms. (Edith Holmquist?). She was one of these Scandinavian teachers, you know. There was a whole bunch of these Croatian immigrants, where their parents had worked in the coal mines and the steel mills when they first came here from Europe after the First World War. ... Then, after the timber companies had cut down all the good trees and they had bought the land for practically nothing, I guess from the Government, ... they got the timber off, then, they were going to sell it to whoever could [afford it]. So, there were some Scandinavian settlers there, but, then, they had their ads in the foreign language [newspapers], in the Slavic language newspapers, in Pittsburgh and wherever they had the steel mills and the coal mines and stuff. ... They said, "Well, you have these cheap farms over here, lots of land with a tremendous [yield]. It was like a Garden of Eden there. You can go out there and get these [farms]." ... So, they got, I don't know what kind of financial arrangements they had, long-term mortgages or something like that. ... I didn't know if the timber company knew they were going to pay it off with moonshine money or not, [laughter] but that's how it ended up. ... What did you ask me about?

SH: Your interest in science.

JL: Oh, the science, oh, yes. So, the teachers, until Ms. (Radosovich?) came along, and Emily (Hessmovich?); no, it was Anna (Hessmovich?). They were schoolteachers. The older Croatian girls, the first born ... over here, or at least when they came there [to Wisconsin], ... some of them got to be teachers, but, at first, all of the teachers were Scandinavians or Germans, and they called the Croatian people, they called them "Polacks." It was, like, Catholic/Slavic people and they weren't too well-respected, and most of them were cooking whiskey besides, and my grandma thought they were all devils. [laughter] So, she called them "Polackers," the ones that didn't speak English. ... Anyhow, so, then, these Croatian kids noticed, pretty soon, that the Scandinavian kids were ordinarily getting better grades than the Croatian kids, but they spoke

Croatian or Polish or whatever there was at home. ... Their parents weren't able to help them with homework and stuff. So, we were primarily ahead of them, pretty much, and my sisters and I were way ahead of them, and so, they used to say, "Teacher cheats for the Swedes." ... They resented that quite a bit, but I remember telling Ms. (Holmquist?) something, I don't know if she asked me about it or something, "I'm going to be a scientist when I grow up." [I] didn't really know what a scientist was, but I knew the constellations and I studied the different kinds of stones and, when the train went by, they used to; DuPont had a big powder plant, north of us, just about on Lake Superior. They made explosive powder there. ... I don't know if that plant had been started during the First World War. ... I think it was made there ... to make powder for the war, ... but, primarily, the powder was used in the mines, in iron mines, in northern Michigan and northern Minnesota, and that went on while I was living there and they only shut that plant down probably about twenty years ago. The last big load of explosive they made, ... they made explosives full-time, maybe overtime, for, oh, several months, or maybe half a year, they made just a gigantic [load], thousands of pounds, maybe, many, many tons of explosive, and they shipped it off to ... Canada, close by Victoria and Vancouver. There was a channel there, along the coast, that was a big shipping channel. ... It was a rock that was just barely visible at low tide and, any other time, it was just below the surface, a big, strong rock there, and it ripped the bottom out of many ships. They had a channel [route], that they had to follow it very carefully, otherwise, they'd go against the Ripple Rock, because, just before it would show up, it would come clear, they would see ripples there. ... They had thought of how they'd get rid of that and they were thinking about blasting the top of it, but they tunneled underneath from the land. ... It wasn't like a mountain, it was a big tunnel, and then, they made a great, big hole right in the middle of that thing, and then, they piled [in] all that explosive that they'd made at that plant back in northern Wisconsin for a good part of a year. ... I think that was some of the last explosives they made there. It was the biggest non-military explosion that, like, there was. [Editor's Note: Mr. Lofstrom is referring to the destruction of Ripple Rock in Seymour Narrows between Maude and Vancouver Islands on April 5, 1958.] Well, the atom bombs were bigger, of course, and then, there were a couple of ships that exploded ... with ammonium nitrate down in Texas. They were loading fertilizer and the ships exploded. So, it was about the size of those explosions. It was just a giant explosion and it ripped that rock out of there and it's never been a bother since then, but it must have been a real strategic channel ... to get into the port there at Vancouver, or something like that, because an awful lot of ships used to use it, even if it was such a hazard. ... I don't know if it was the only way in there or not, but it was a terrible hazard and they sure got rid of it. ... So, getting back to our farm there, our farm, where my aunt and uncle lived, they were right on the railroad track. We used to see those great, big engines come on winter nights, "Boom, boom." You could ... see their light and hear their engines, oh, a mile or so away, and it made a big noise. ... The fire would fly from their firebox and stuff. ... We were about [at] the crest of the hill there. It wasn't a big hill, but it was shallow. So, they had to work ... either way they were coming. They were working at it and, sometimes, if it was a real heavy load and they put too much steam on, the wheels would spin, and then, you know the train, the smoke goes up the sides, "Chook, chook, chook?" Well, that's the steam pistons. That's coupled with the drive wheels. ... That's the exhaust steam coming there and that makes the draft for the fire, too. ... So, whenever the wheels would spin, the pistons would go fast and they would go, "Choo, choo, choo-choo-choo," and it always made an awful noise. ... Those wheels are spinning, sparks are flying, it was just [spectacular], but, then, they would shut off the steam, and then, they'd start over again. Sometimes, they'd have to do that two or three times. That was

really [bad]. If we were close by, we were scared stiff and stuff like that, but that's ... where my father used to jump off the train when he came to visit us. So, we used to see that on nights, and then, these long trains with these gondola cars, the cars for hauling sand and stuff like that. ... They were open on top, and then, they had things for unloading. There were big doors, that they would open the bottom, and then, they could ... unload it. Well, they used to ... have several cars. I don't know, maybe; I know I never saw, really, a trainload. In fact, I couldn't really recognize them real well, but they used to have many carloads of sulfur that they would ship up to that DuPont plant, and then, they would burn that sulfur and make sulfuric acid. That was part of making the smokeless powder that they used in the mines, and then, sometimes, ... the smaller chunks of sulfur would fall out of the cars while they were going there. So, if we'd walk along the railroad tracks, which we often did, we would see little pieces of sulfur and, sometimes, there'd be [chunks] about as big as a hen's egg and, oh, those were fun to play with. Of course, that was one of the ingredients of our black powder that we made, too. We made black gunpowder, but, if you light a match, and, if it was a sharp enough corner, you hold a match on it for a long time, it would start melting and it turned all brown. ... Then, pretty soon, it would start burning with a little blue flame, and then, if you breathe it, you cough and choke, [laughter] but we used to pick up sulfur enough, and then, I'd grind it up, and then, well, like I said before, I tried to make some gunpowder, but it never exploded for me, but it would burn real fast. ... During the war, my father ... was a laborer in the big powder plant in southern Wisconsin and, a couple of times, he brought home a small piece of smokeless powder. ... It looked like; [have] you heard of this Fels-Naptha soap, the ... old, yellow soap? It looked just like the old, yellow soap and it was kind of tough. It would bend a little bit and I guess it would dissolve in ether. Well, I used to take my pocketknife, a little jackknife, everybody had a jackknife then, and I would shave it real, real [fine], into little pieces. ... I just wanted to see if ... part of it would really do the job. So, I took .22 shells apart. You know what a .22 is? It's a small caliber gun. I never had one of my own. My uncle never trusted me to have one in the house there. ... [I] don't know if trust was the word or not, but he just didn't want it with the children. He didn't have guns accessible there in the house, but my father had a small gun collection, and so, I'd get a hold of his .22 once in a while. ... Then, I'd take ... the long rifle bullets and I'd take the lead out, carefully pull it out. You could pull it with the pliers. Sometimes, if you squeezed real hard, you could just pull it out with your hand, by bending it, and then, I'd pour that powder out. Then, I'd put my ... shavings of powder [in] and it would send the bullet out the end of the gun, but that's about all. It'd just drop after a little while. ... It didn't really burn very good and, well, I guess it wasn't supposed to. ... I found out that the pieces, the actual gunpowder, was much smaller than the pieces [I used] and the rate at which the gunpowder burns depends on how big the particles are. The smaller particles have more surface area for the amount of powder. So, mine had a much smaller surface-to-mass ratio than the real gunpowder. So, in the real gunpowder, for the big guns and stuff like that, they're like doughnuts and they have little holes in them and stuff like that, ... [to expose] the maximum surface. ... Then, some of them were made so that, as it burned, the surface would get bigger, and then, it would generate gas faster and that would push the bullet out, but I never got into that much ... with my little experiments there, and I tried to make a cannon. I had a piece of pipe and I ... drove a piece of wood in it real hard, and then, I had a little hole that was supposed to be the ignition place. ... I never could get the gunpowder burned, but I got it so that if I'd drop a firecracker [in], and then, put something in there quick, then, it would pop it out. It wasn't a very good cannon, though. ...

SH: What other science projects did you work on?

JL: Oh, when the teacher asked me about if I wanted to be a scientist, I looked at the stars and I knew the constellations stuff real good. Then, I played with the Model T ignition system, ... to make those electric fences for the cows, and then, ... I really got interested in radio, ... when I was fifteen or sixteen. I never had much luck with a crystal radio, but I was really interested. Have you ever heard of a spark transmitter? They're a dirty, old thing. ... When they first transmitted radio waves across the Atlantic Ocean, what they had was a high-voltage spark, like an arc welder, like a welding spark, only it was much higher voltage and it was a bigger spark. ... That is a tremendous generator of just radio noise and it's really noise, it's just all kinds of stuff, and then, they would have a big antenna hooked up to this thing. ... So, that tremendous energy, that noise, radio frequency, over a wide spectrum of frequencies, they'd put that on to this big, big antenna and some of it got across the ocean, ... was able to pick it up with those primitive detectors. Well, I made a spark transmitter with the Model T Ford coil and just a couple of pieces of metal. I don't remember if I got the Model [T] batteries or something like that and I had them about a half-inch apart, quite a bit further than they would be in the sparks in the car, and I had a key, so that I would key the primary circuit on the Ford coil with the batteries and it would, "Buzz, buzz," and it would make just an awful noise on the radio. ... It just killed every radio in the area. ... It was wonderful for sending code transmission, dots and dashes, ... but that was another problem I had. I just never learned the Morse code and some people learn it very easily. It just comes to them, but, me, it didn't come to me. So, that was well after the bump on the head, so, ... maybe I wouldn't have done it anyhow, but there's some sort of things I just don't learn. ... I can't play piano or type. I don't have coordination in my hands very good. One hand doesn't know what the other hand's doing, the fingers, but I can do real fine work. I can do microscope samples. I can take tiny, little microscope samples apart, just like a surgeon and stuff like that. I'm sure I could have done surgery real good, as far as the cutting and the needlework goes, but I just didn't like the idea of having somebody's life in my hands. I just couldn't. ... I knew I couldn't handle it, like, and butchering animals was tough, too. ... I just got sick when they [would] kill the animals. It just made me sick, but ... cutting out the innards and skinning them and cutting up the meat, ... no problem there. I could [do that], but killing them, that was just [too much]. It made me sick. I only participated in it once and I did get sick. I held this little calf down. My uncle hit it on the head and cut its throat. ... I was just petrified. [laughter] I felt that calf just go. ... It went stiff. It was just hard, and then, it collapsed. ... My uncle didn't realize that I hated it so much, but he saw and I must have turned just white or something like that. I didn't faint or anything like that, but I just froze and I just got out of there for a while, and then, I helped him cut it up after a while, but that was too much for me. ...

SH: You were in the barn when you heard about Pearl Harbor.

JL: Yes.

SH: How did you keep track of the war? You said you kept a scrapbook.

JL: Well, [I] got the local newspaper and I cut the pertinent articles out, probably still have some of the banner headlines about different parts of the war, and, well, I used to be glued to the radio. They had news on ... our local radio station and, sometimes, I could get the stations further, the

Ashland station. They had a good station there, and then, from Duluth to Superior, ... Superior, Wisconsin, that was on the ... southern end of Lake Superior to down on the west end, and we could pick them up on good days. ... Sometimes, I'd get news, but Ashland had good news and I was glued to that radio and, sometimes, I was listening to the news and my aunt would talk to me and, oh, I didn't think it was all that important. I guess maybe she did. It was something she wanted me to do or something like that, and then, I'd turn the radio up a little bit, and then, she'd holler a little bit louder, and then, I'd turn the radio up a little louder and she'd [say], "Shut off that radio. You know I'm talking to you," [laughter] and then, I reluctantly shut it off, and then, ... turned it on again as soon as she got done talking, but I was very interested in the war, about the progress of the war. ... Well, in Poland there, when the Russians first attacked; well, when the Germans attacked first, and then, the Russians attacked, I thought that was kind of strange. ... Then, they divided Poland, and then, when Germany started attacking the small countries there, before they attacked France, ... I didn't understand why ... the German Army was just [superior]. I just couldn't imagine how they could have been so much superior and that the other countries were so ill-prepared for it. It just amazed me, and back to this rubber shortage. I heard, when the airplanes landed, their tires would hit the ground and it would, like, skid for a while and make a big smoke there. ... I figured, with our precious rubber, that's terrible. So, I figured a way that they would put veins on the sides of the tires, so that when they were going, it would start the tire spinning, so [that] the tires would be spinning full-speed before they hit the ground. Well, the Government didn't like that idea at all. ... I found out, later, why, that helps to stop the plane a little bit, but a more ... important reason was that if you have a fast spinning wheel, that can be like a gyroscope and, if they tried to turn or something like that, it would affect their control of the plane. ... They didn't want a spinning wheel up there no how, but I didn't realize that at the time, the connotation. ... One of the other things [was], I was interested in torpedoes and how they could get them to be accurate to hit the ships, some kind of a guidance system, instead of just aiming it there, sometimes far a ways away. ... Sometimes, the ship would see them coming and dodge them and stuff like that. Well, I figured out a system that would have a light sensor and it would home in on the silhouette of ... the ship, and then, of course, [with] waves and stuff like that, you'd have to have a long-time constant, so that if one wave came across the thing, it wouldn't just go flying. ... When the wave went away, it'd still be aimed in the same general direction, and then, if it went to one side, the signal would straighten it out. ... I didn't have a real good circuit mapped up for it, but I sent that in to the War Department, as an invention and stuff like that, and they said they were considering it and stuff like that. ... Then, I wrote to a patent attorney and all they wanted was money, money, money, money. ... There's patent attorneys advertising now that all they want is money and they'll do all this stuff. So, I didn't get anywhere with my [ideas]. That was my two big things that I was going to help the war effort [with].

SH: Was your family involved in other war effort activities? Were there bond drives? Did they serve as air wardens?

JL: Well, out in the farm there, we were pretty busy producing farm crops. ... Well, with electrification, ... my uncle was doing the big war effort to get those farm boys to know that they could do the wiring of the houses, of the farms, so [that] you could increase production. You could work at night that way. That was one obvious thing, with the lights, and then, there was electrical motors that you could use for driving farm machineries, to a certain extent, and then,

... some of the farm boys learned welding, so [that] they could fix their own farm equipment. So, that was very important. ...

SH: Did many men get deferments to continue working on the farms in that area, or did most of them try to volunteer?

JL: A few volunteered, and their families, some of them, thought that was patriotic and some of them didn't really like it. They said they might have been able to get a deferment if they were the only [young man] there and nobody else could do the farm work, but many of the Croatian boys went off to war, just pretty much. There was just one family in particular, maybe there was another one, too, but one had four or five big, strong boys and he got deferments for all of them. ... Nobody liked that. They thought that was pretty rotten, that one family got all the deferments. ...

SH: They were a Croatian family.

JL: Yes, they were, and some of those [boys] are still there and I think all of the people remember it, and our town, they were the main Croatian town around there. There was a real big community of them and they were super baseball players. So, then, their best players went off to war, ... but that one family, ... they were then the main part of the baseball team all during the war. Then, when the guys came back, some of them were still able to play baseball. ... Quite a few of them were flyers and some of them had been in prison camps for several years and they came back and they just weren't able to get back to their baseball shape afterwards. I remember one fellow, ... I don't think he was a prisoner, but he had been in Europe for quite a while and I hadn't seen him for a long, long time. ... Here, by this railroad track, there was a small strip of land on our side of the railroad tracks that still belonged to the people on the other side, so, they had a special crossing, with gates and stuff. ... I saw, here comes this wagon, with a couple of horses and two people there, going to pick up some of that hay one evening, and I was kind of curious about it, because this young boy that lived there and his sister, who had been doing quite a bit of the haying, I had gone to school with [them]. It obviously wasn't them, and here was this guy and he had his Army uniform on. In fact, while the war was on, even when the guys were on leave, they were supposed to wear their uniform, all the time, even if they were doing work, or, ... theoretically, they could be charged with being deserters, just for going outside your house without your uniform on. ... They were strict about that, but, so, here he is, this guy with this Air Force uniform, officer's hat and stuff like that. ... Then, he had a young woman with him. She was a girl he found in Europe and brought her home and she was his wife, and he remembered [me]. We remembered each other. ... He had been gone for at least like a couple of years or something like that, ... but we still knew each other real good, and so, that's the one and only time I saw him there. I don't know [if] he was at the farm. ... Both his [parents], the father and mother there, had worked. I don't know if they'd worked in Pittsburgh or something like that and they both had tuberculosis real bad. In fact, an awful lot of those Croatian people had tuberculosis from working, from breathing the dust and dirt and stuff in Pittsburgh, in the mines and stuff like that, and so, the father was a tiny fellow. They called him "Little John," and then, there was another fellow by the same name that lived on the other side of the farm area there and they called him "Big John." So, this Little John, he'd been in this tuberculosis sanitarium for many years and he came back. I guess they let him go. ... They knew he was

dying. They let him ... go home for a while, and the family treated him terribly. He swore in Croatian at them, stuff like that. I could tell, I'd learned some of these swear words from the Croatian kids there, [laughter] and they just didn't like him. They didn't want him home there, ... and then, he hung himself shortly after that. ... It was that fellow with the military uniform that came there, and I think that was after his father had committed suicide, and he was just back to the old farm there. ... It was so sad and all that stuff that he just was there for a little while, and then, ... I don't know where they went, but they stayed there a little while. ... I guess he wanted to show his new wife the place, and then, he took off. It was kind of a sad thing.

SH: You were still in high school then.

JL: Yes. That was before [the service], yes. ... My high school time coincided almost exactly with the time that [America was in the war]. I started high school the fall of Pearl Harbor and I graduated a few months before the atom bombs and V-J Day. [laughter] So, I got in there a few months before the war was over. It was still going on. Otherwise, I wouldn't have gotten that program at all, but, once ... I'd volunteered for that program, and then, when the war ended, I had just finished my recruit training and I was ready to go off to school then, to start that radar school. ... Then, here comes V-J Day and the war was over and they stopped all the schools and everything like that. ... Everybody's going to get out immediately, but, then, a couple of weeks later, they said, well, the Navy had made a commitment to us, that they would [continue the training], if we would volunteer to go to [more schools and], ... in a draft, that we [would volunteer] for immediate induction, don't wait for the lottery or anything like that. They said that we had made some commitment there, so that they would let us go to school, if we wanted to stay in for two years. So, I thought that was my way to get my college paid for and get some good education in the Navy to start with, and then, a year of experience. I wanted to; well, I'm not sure what I wanted. ... There was three parts to the electronic training and, after I got through the first two parts, in the final part, the first two parts were kind of general electronics, ... but, then, the final part was called the secondary, the final school, and that was where you trained on the equipment that you were going to use in the field, ... we had the option of going with the fleet or with the aviation [arm] and I went with aviation, and so, that way, ... I didn't get into the fleet. ... I think they told me that, with my colorblind eyes, they probably wouldn't let me on ships. I wasn't absolutely sure of that, but they would let me on planes. So, that's how that got there. ...

SH: Where did you go through boot camp?

JL: At Great Lakes, Illinois. ... I don't know if most of the RT, the radar technicians, [were] there, but there was lots of RT guys there. ... Our company number was 894, and they told me that every RT company had a four on the end, maybe an eight, too. I'm not sure, but I knew about the fours. ... So, that was 894 total companies [that] had come through that Great Lakes Training Station there and every one [that] had a four was an RT company. That was during the first part of 1945. I don't know what it was before that. ... How many fours are there? ... Ten out of every one hundred, and there was eight hundred, so, ... there'd be eighty companies coming through there, at least, and, if they were counting the eights, too, then, it would be twice that many. Then, each one of those had about one hundred guys in it. So, it wasn't hundreds of thousands of guys, but ... it got to be a few thousand. So, then, that was Great Lakes and most

of the guys were general service guys. That was the regular Navy guys and we didn't really look at them with contempt or something. They had some contempt for us. They knew we were going off to school and they would be done with boot camp in six or eight weeks, and then, they would get assigned to ships. ... Sometimes, they go to a few weeks of training or something like that, specialties or something like that, mechanics' school or something, but most of them went on to ships there within a couple of months and our guys would be in school for a good part of a year. So, you heard about service flags, with the stars on them? Well, they used to sing a song. ... They could tell our companies. I don't know, I guess they had a company number and stuff like [that], so, they knew us all the time. They could probably tell us [by] the way we marched, [laughter] something like that, and then, they'd say, "Your son is not over the ocean/Your son is not over the sea/So take down your service flag, Mother/Your son is a blank-blank RT." [laughter] They used to sing that real loud sometimes, when there weren't officers around. They didn't like the RTs. ... The regular service guys, ... the greatest things they could do in the world, we got a negative opinion of them, [was] to get good and drunk and have lots of sex and get some VD [venereal disease] on the side. ... That made real men out of them, and most of the RT guys had not experienced or even thought much about ... what we call the ecstasy and the pain of alcohol and sex at all. They were so busy with their studies and stuff like that, they just [could not], and there was one thing; I'm probably getting a little ahead here. ... My first training schools were in the Chicago area and, one time, on a liberty in Chicago, I remember, ... a guy said to me, he said, "Hey, come on over here. We've got a real good place to go," and we went to; it wasn't in the center of the city. ... It was a short streetcar ride or something like that, or bus or something. It wasn't very far off and here's a great, big church there and they have a big activity room, like a recreation thing, in a small gym and stuff like that. It's all full of young girls, seventeen, eighteen, nineteen, early twenties, and stuff like that. This was a mixture place for girls to meet young sailors, but only RTs, absolutely nobody else. ... You know the reputation, "Mothers, keep your daughters hidden when the sailors come to town?" Well, this was a group that was there ... to attract these RT scholars, these students, and it was obvious, right from the start, it was there ... to get them to meet for prospective mates. They thought these were guys they held up with such high esteem that they just [had to be good matches], and they had refreshments there. I don't remember what. They had cake and just a lot of good stuff to eat and beverages and stuff, and maybe some ice cream, and then, ... they loved to dance, those girls. They wanted to teach these guys how to dance, just get to know them. They wanted to meet these guys and get to know them. That was the only purpose of this place and I only went there once. I guess it was shortly before I was going to leave, but it was a great place. ... I wasn't terribly interested in meeting a girl right then, so, I went over and shot baskets for a while, [laughter] ... but a lot of the guys had been there several times and it was working. They were bright, attractive, young women and they were looking for suitable guys ... to make a permanent companion, absolutely. I wouldn't have the slightest idea [how to] find that place, but ... there were very few people in our group that knew about it. ... There was plenty of RTs there, ... but Chicago was just full of RT schools. So, they were getting some of them. ... I don't even remember who told me about it or took me over there, but it was a great place. ...

SH: When did you first hear about the radar training program?

JL: Yes, sure, yes, okay. It was in three parts. ... Let me get my little notes here; ... first, it was recruiting and this Eddy Test, this fantastic test that Captain [William Crawford] Eddy made,

who wrote part of this book, [*Wartime Refresher in Fundamental Mathematics* (1942)]. Well, then, when we got there, we went through the short boot camp real fast, but you got the essentials of obeying. "Obey first and ask questions afterwards," when some officer tells you what to do, and then, radio; pre-radio, that was what it was, a very intense, one-month course. ... I don't know if there was schools at other places, but there were about five or six high schools or junior colleges or something like that in the immediate Chicago area that had several thousand guys in each one of them and this was a one-month course of basic mathematics, starting from, well, in this book, it goes from adding one and one up to ... trigonometry and somewhat advanced algebra. What would you say, Adeline, about that? ...

AL: Complete high school and a little more.

JL: Yes. It was a real good high school course there and this was designed, I think it was ... supposed to be in twenty-one days. ... It's called a refresher review. ... We got this, actually, in high school, preparation for the Eddy Test, but, then, we used it in the actual school, in the pre-radio, as a part of our textbook.

SH: You knew about the Eddy Test in high school.

JL: I had to take the test to get into that course.

SH: You took this in high school.

JL: Oh, absolutely. We took it in our junior year.

SH: All right. That is information that we need.

JL: That was our protection against this Army sergeant that told us we were going to be cannon fodder for that terrible invasion of Japan. We got that Eddy Test and they had courses at the junior college there ... to prepare for it, not extensive, but there was about a dozen ... guys that were juniors and seniors that studied real hard for that. ... I remember, an old, codgery professor showed us how to take cube roots. Now, taking a square root is something that people never do anymore, but they used to do it just once in a while in regular high school or in college courses, but he showed us how to take cube roots. Well, so, it was just a preparation for that. Then, when we got in this pre-radio, that was one month, we were in a big high school. Hugh Manley High School, it was. I remember getting there. It was from Western, California, Sacramento, that was the streetcar stops, and then, at Sacramento, we'd get off. It was two blocks to the Hugh Manley School, and then, it was one block and that was US Navy in that block and we weren't supposed to step off the curb there. ... If they wanted to be mean, they could get us for "absent without leave" by just stepping off the block, without leave, permission, and, there, it was, like, basic mathematics, just learn about geometry and algebra and stuff like that. ...

-----END OF TAPE ONE, SIDE ONE-----

SI: This continues an interview with Mr. John Lofstrom on March 22, 2000, with Shaun Illingworth and Sandra Stewart Holyoak. Mr. Lofstrom, you were telling us about your training.

JL: This was at the pre-radio school at Hugh Manley High School in southwest Chicago, not that far southwest, just a short ride on the "L" [elevated train] that we used to take out there when we had liberty, and it was a fairly big high school. ... The gym was converted into a dormitory and they had three-high bunks, and these weren't these cramped bunks like they have on submarines or little things, where the guys just crawl in. These had full headspace for sitting up and stuff. So, the top one was really high up there and you'd have to climb up there kind of carefully, ... but it was just full. The gym had, I don't know, probably two thousand guys in it, the way they were stacked that way, and it was a very intense school. In fact, they told us that, "If you're walking down a hallway between the classrooms, no talking or whistling or anything. Somebody might be just doing that crucial problem, they were thinking real hard and you come along there, whistling kind of carelessly, and it might just destroy that thought, and we don't want any destroyed thoughts." ... It was just they want us to just study as hard as we could and learn, because it was very intense, and, if you didn't make it, you'd flunk out. I remember a fellow by the name of Frank (Lewis?). ... He had gone to the University of Chicago, ... a tall, skinny guy, real bright, and he helped me in the math, these complex fractions, real big fractions, lots and lots of numbers on top and lots of dividing lines and stuff, and I didn't have the slightest idea how to divide it up. ... He showed me how to do it real good and I got through that, but I could not show him how to use his hands in the shop, to use a hacksaw or a screwdriver or a file or something like that, or a wrench. He just couldn't work with his hands and he flunked out. He was one of the brightest guys there, but ... you had to be able to work with your hands there, besides with your mind. So, then, well, there were some people that did flunk out there, but they fed us real well there. ... We didn't have to do any kind of what they call cooking or any chow duty or anything like that. In fact, some of the places, even there, I think, they had ... a little bit of housekeeping there. So, they treated us real good, as far as Navy people goes, and they had, ... like I said, the civilian cooks and all that stuff, ... but the study, study, study, and each week we'd have [a test]. I was only four weeks there, so, we'd have tests and, one time, I remember, I was studying real hard for this one test. ... I thought, "I've just got to do this," and I drank two of these big, almost one-pint mugs of that real strong coffee, without any cream or sugar in it. ... By the time that I got to the test, my hands were shaking so bad, I couldn't even use my slide rule, and the slide rule was absolutely essential. This was the days before they had these electronic computers or anything like that, the calculators. ... I had learned to use ... the slide rule in high school some, so, I was somewhat familiar with it already, but they had training on the [slide rule]. We had to use that slide rule. ... We couldn't use it in the dark, of course. We had to see it, but it ... came like second nature and it's a really powerful tool and doesn't have any batteries or anything like that. ... If you just took a little care with it, it would last almost forever. It was a wonderful tool. I still have mine and I was one of the last scientists at DuPont, where I worked, that still used a slide rule, and I still use it now. I tell my students, when I'm tutoring, "I use a slide rule and I'll race you with some of those calculators on some of those problems." I can take the square roots and cube roots and stuff like that, okay, but that was a very intense thing and quite a significant number of people flunked out, not a whole lot of them. ... The war had ended and this was after a continuation and they were trying to fulfill their obligation to give us this course, but they were going through it pretty fast and, if people couldn't keep up, they'd just drop them along the way. During the war, while they wanted these people desperately ... to fix these radar units in the combat [zones], they needed them, so, they kept everybody in, if they possibly could, but, after the war was over, they ... shipped us through

there pretty fast. ... Like they say, ... “Any stragglers, ... you drop them out,” and then, after I got through that, well, then, there was primary and ... this pre-radio training. That first month there was, like, I think it was five or six courses in schools in the immediate Chicago area. I've got a list of them in my letters for my father and I still remember a few of them, ... and then, the second, the primary school that was the next [place], that was about two-and-a-half or three months and they had schools [around the nation]. They had one big school at Navy Pier in Chicago. I think they had one, it was called 190 North State Street, and it was one of the tall buildings, skyscraper buildings, there. ... I never went in there. They had guards and ... you couldn't go in there unless you had a pass for that area, and then, they had one at Gulfport, Mississippi. ... The Northern boys heard awful stories about that, but I guess it wasn't too bad, and then, they had ... a big one at Great Lakes and I think they had some other ones, too, but I don't remember about them, but I picked two. I don't know if I picked it; ... I don't think we had a choice. I was assigned to Great Lakes, and so, I had three more months at Great Lakes then and, there, we learned more math, of course, and started doing real radio circuits, and we made little radios of our own. It was part of the course and one of the things I remember [was], ... you'll remember I told you a little while ago about this, we were supposed to learn to use that equipment real good, but, if we didn't have equipment, we were supposed to be able to put something together with just bailing wire and chewing gum, they said. Well, they had a big radio that was supposed to be like a regular radio that you'd listen to the broadcasting stations [on], but they made it on a great, big board on the wall. It was, what? maybe thirty feet long and they had the big circuit patterns of the essential parts of the radio, well, all parts of the radio, circuit diagrams, and then, they had the actual parts there. Then, they wired one section to the other and the idea was ... to help us understand the different parts of the circuits, how they work together, and then, the most important part was that we were supposed to take certain parts out. You take this part out, this wire, disconnect it, nothing happened. Well, that's not an essential part. Take this part out and it sounds a little funny. Well, that's a “maybe” one. You take this one out and it's dead. So, those are ... the important ones. We were supposed to know the different classifications, how important the circuit parts were, the crucial parts that it just absolutely wouldn't work at all [without]. ... If you had to get a communication through or a radio signal or radar or something like that, well, we were supposed to know those parts, and don't worry about those other parts, just the main parts, so that you could get ... the signals through. ... Several rooms had those great, big [boards] and we used to tinker with them, just for fun, to see ... which are absolutely essential, and those are the ones that you fix when you're in trouble. ... Troubleshooting was a very important part, because, if something just breaks or if a shell comes through or a bullet, something like that, and it gets damaged, well, hey, you've got to fix it up quick and know which parts are broken and which ones are important. So, we started learning some of that in this ... primary school. It was ... more math there and the radio circuits and they told us a little bit about the [radios]. ... We started out with the ... broadcast radio frequencies, because ... a lot of the radio communication was still on that. ... It was all, like I was telling you before, those spark transmitters that made all that big noise and stuff like that. ... They didn't have any of them anymore. They were already obsolete. They were so noisy, they would spoil the communication of everything around there, but they had these dots and dashes. The code transmitters were still being used and they can transmit much, much further than the voice transmitters, even at that time. They were still using them then, at the time when I got in. It was just, like, at the end of the war. The thing about that [was], you were listening here and there's lots of static and stuff like that. Dots and dashes come through. Where you couldn't

understand a voice transmission at all, those dots and dashes came through and those guys that were trained for it could recognize it and, of course, like I said, I never was able to learn, but that wasn't part of our training. We weren't supposed to be operators; operating just enough to see if the thing works, then, turn it over to the operators. So, that's where we learned that part and it was a pretty tough grind there and it was much more [regular Navy]. It was a big Navy station there and there was ... Navy police and stuff like that. They called them SPs, shore patrols, and some of them, it seemed like ... they were arrogant policemen. ... It was part of their job and their mindset to show who was boss and they would do things deliberately to sort of [do that]. Not real mean things, but, if you were at least ... sensitive and you sort of talked back to them, then, oh, they'd get you for that. ... Then, they had Marine guards. They were really snotty. They did beat people. I know, one time, ... later on, I was asking [for] some instructions. I wanted to know where this part of the school was and these guys pointed at the Admiral's house and I go up to the Admiral's house and, here, this black steward [was] there. All the servants and the cooks and stuff were black in the officers' quarters, and then, it was obvious it wasn't that place, and the guy knew enough; he pointed [out] the place where I was supposed to go, this black man. ... I was thankful for that, but these Marines were snotty and they'd go out of their way to antagonize us. It was part of their training, I guess, to ... let everybody know that you're the boss, and they were the boss and they went out of their way to sort of antagonize us. Well, I got done with that. I had stretched my muscles too much one time in some athletic activities and I got a hernia and I was in the hospital. ... They operated on me immediately and fixed it up, and so, ... I dropped out of this one class, then, while I was in the hospital, ... so that I got into a different course, and that set me back a little bit, but it was only a few weeks. ... Then, I got back in there, and so, this timeframe was, I got in the Navy in June, and then, just after I finished boot training and stuff, in the first part of August, the atom bombs and V-J Day and the war was over. So, then, they closed the schools for a little while and said, "You guys are all going to work in the chow hall for a while, and then, you'll get discharged," but, then, they said, "Oh, we have an obligation to you and we're going to let you go back to school then," or into school. So, then, I got into school, ... I think it was September into November. Then, I got into the primary school. That was up until, it was supposed to be a little after Christmas. So, it ended up in the later part of February, and then, [I] took this long train ride down to Texas. I had decided that I wanted to go into the aviation [arm] and that was at Corpus Christi, Texas. The other choices were Treasure Island, it was in San Francisco, and I think there was one or two others. I don't remember where they were. That was called the secondary course, where you trained on the equipment that you were going to use. ... It seemed like it took us about a week to get down to Texas. ... We were part on this Bluebird express train going from Chicago to St. Louis, but, then, we got on some slower trains. ... It was three ... Pullman cars that were set aside for us and we ... had to stay in those cars, too. That was Navy land there at that time, and then, these black Pullman porters came in and made up the beds for us at night, the first night, anyhow, [laughter] and that was an interesting train ride. ... Then, we went through Texarkana, and then, down into Texas, oh, it went on and on and on. Texas is big, and we finally got to Corpus Christi, and then, it was hot, hot, hot down there, and we were on, it was Ward Island, was a little island. ... It wasn't really an island. There was a little bit of a little sliver of land that went out there and there was kind of a bridge that went along there, and then, there was a big Corpus Christi Naval Base, was right about less than a mile from our little [facility], but this was an isolated island. ... Most of it had the regular fence around it, but there was a part in one corner that had a big, high fence. That was called the compound, the inner sanctum. That's where all

our classes were and all the radar equipment. Now, the war was over then and radar wasn't really that big of a secret right then, some of it was still secret, but they had to check all our books when we went out of the compound and we'd march in there each day to classes, and then, we'd have to march out at lunch ... in the chow halls. ... So, that was the study area and it had a big fence around it, and then, ... before we went to the first class, we had to sign this paper, that we understood this Espionage Act of 1917, that any of that secret equipment, if we divulged any of that, we would be subject to prosecution under that law. We had to sign that agreement, that, up until that time, none of the stuff we had [been taught] was really secret, but, there, that was secret stuff. ... They had their armed guards right at the gate there and I remember the day that the last Reserve unit went home. ... Us guys had signed up ... to stay in for two years, to finish the course. Well, we were staying there, but the guys who didn't sign up ... to finish the course, well, some of them went home a little early and they had a big band there and the guy that was the drummer had an electronic metronome that he had made himself, out of little, tiny tubes. They didn't have transistors then, but they had what they called peanut and acorn tubes. They were little, tiny things. ... Some of them were called wheat grain tubes. ... He fixed up a circuit, that metronome that he had in his cap there. So, I'm sure he could have drummed pretty well without that metronome, but that was the big thing. He had that under his hat and he was beating away on the drum. ... The last day, when they left from the secondary school there, they were going home then, ... instead of a regular march, they played the *Blue Danube Waltz*. They were marching to Strauss, but, then, we never had such good band music after that. It was the special Naval Reserve Band. I wasn't in the Naval Reserve. ... They had to pass the physical for that. I was in the special assignment class, and that was different. ... You weren't, say, 4-Fers or something like that. ... So, on my dog tags, everything, all my records and everything had a big "SA" on it. That meant "special assignment," for special physical, why, I guess you'd call it a disability now, but it was the eyesight and stuff like that. ... Then, I remember, ... we used to come marching in and make a sharp right turn, to go into the compound there, but, ... if they had fire drills, the fire engines couldn't make that sharp right turn, so, they had to go down a couple of blocks. ... The general service guys that were on the fire brigade, they wanted to go in real fast, too, and sort of scare those RTs out of there, and they'd brag that they would knock one off, once in a while, if they caught them on the streets. [laughter] ... If they had a fire drill, they would come up the street, several blocks away, and come full speed into the thing there, and they didn't have to wait for the guards or nothing like that. They took a big glee in that, [laughter] but, at the chow hall there, ... it was all the general service guys that handed out the food and stuff like [that]. There was one time, I don't know what the purpose was, ... there was one special [shift] of RT guys. I don't know if it was punishment or just something, or maybe they were going to go home soon and they left, out of school, and they were there for a week. ... So, they were in the chow hall for one week, I think, and, boy, did they serve us good. They gave us extras on anything we wanted. [laughter] ... The general service guys, they wouldn't give you extra on anything, unless they had too much and they wanted to get rid of it, and I made some remark about that to one guy and, you know, they had me in front of the captain for captain's mast, that's a criminal trial there, for obscenity. ... I got punished and I had a captain's mast and I was a prisoner there for two weeks. Well, I went to the classes and stuff, but, as soon as the class was over, I had to put on this prisoner's uniform and go and sweep the sidewalks and pickup cigarette butts and stuff. ... I think it was for two weeks, and these guys, they had an assortment of ... entrapment things. They would bait the guys and antagonize them and some of these guys were the foulest mouth [men] you could imagine, but, then, if they heard us say one

word out of line, "Oh, you're fouling the morale, ... or the morals, of this place here," and they had me for just doing terrible things there. I told them something about, "Stick it up your whatever," [laughter] and that's all they were waiting for. They had two witnesses there and the guy; they had the PO [petty officer] there ... to arrest me, right there on the spot. [laughter] It was some sort of entrapment thing and they caught a few guys. ... Then, we had to muster twice a day, early in the morning and at night, after the class, and then, one time, I wanted to get leave. There was a big religious celebration in Corpus Christi then and I wanted to go to that. I'd planned to go to it for a long time, and then, I was a prisoner then. So, after the muster was over, they called everybody's name and stuff like that and gave them their assignments and stuff like that. So, I went up there and saluted the officer of the day there. ... I don't think it was one of the junior officers. He was a pretty young guy. He wasn't much older than we were, arrogant SOB he was, and so, I said, "I want to talk to you about something, Sir." He [says], "Oh, you're late again, huh?" ... He thought I was coming late, again. ... He'd never seen me before in his life. ... He wanted to show that he was the boss, but, finally, I explained to him and he says, "Oh, you want to go to this special religious thing and you're the guy that swears so bad." [laughter] So, they wouldn't let me go, ... but these officers, I got a hearty dislike for those arrogant young officers there, because they ... just wanted to show us that they were in charge. They would berate us, deliberately, and, to a certain extent, they knew that we were this special technician group and they kind of thought that, in certain ways, we could have beaten them out in any of their intelligence tests or the technical tests and stuff. They were our bosses, but they knew ... who had the brains there. They knew it. [laughter] ... So, we learned radar there. ... There was high voltages involved and we were warned about that, and there was one instructor [who] told us, he said, "There was one guy, had been instructor a while before, and he had told the guys, he says, 'Don't touch that thing there,' and he got his finger too close and he got zapped real bad, and it didn't kill him or something, but it shook him up real bad," and so, it was fun, learning those special kinds of circuits. ... We had jokes about it. There was some circuits; in the regular voice transmission, like radios and stuff like that, you just have sound waves, those are waves from sound, but, for radar, you need a real short [wavelength], a millionth of a second wave or two millionths of a second, in tens of thousands of volts, and right down again, and that's the power pulse that sends the radar energy out. It powers the transmitter, sends those real short waves out, and then, they bounce back and that's how radar works. So, it had to be a real short one, and then, that all shuts off, and then, the receiver comes on to listen for the echo and that's the important part. ... Then, in some places, they had what they called sawtooth waves, and then, we had jokes about [them]. They said, "Well, now, what do you do if you have a sawtooth generator and the waves get so sharp that they cut the insulation off the wires, and what are you supposed to do?" "Oh, you're supposed to tell the chaplain about it." Well, it was dumb jokes like that, and, one time, the instructor told us, he said, "Oh, you guys know what logarithms are?" Well, they're mathematical shortcuts, a way that the astronomers and stuff used to do calculations, before they had the big calculators and stuff like that. It takes a long time, but it was mighty fast, compared to long-hand multiplication and stuff like that. ... So, we did use logarithms and this one instructor comes along, he says, "Now, here's a new, special way that the Navy has of doing logarithms real good," and one of the wise guys in class says, he says, "Make up your mind." He says, "Is it Navy or is it good? [laughter] It couldn't be both." So, it was stuff like that. ... They had jokes in class, and quite a few of them, and a lot of them were sort of [corny]. They called the guys "twidgets", and ... the word "nerd" hadn't been invented, but ... it meant exactly the same thing, and some of the guys used to stay on the base and ... do little

experiments of their own, making gadgets and stuff. They had their own little radios, tiny, little ones, and sort of special. They were just making all kinds of gadgets. ... That was their main interest in life. A few of them, well, they'd go to town on liberty and go to visit the museums. ... In fact, I picked up a few girls in museums, high-class girls, and I know, we went home with a couple of girls and there was a couple of us guys and the girls took us to their house. Nobody was home, but somebody across the street noticed their girls had gone into this house with these two sailors. ... I don't know, they knew where the parents were, and some people, ... their parents or some close relatives, came rushing over there, within a couple of minutes, and we were sitting there, reading funny papers. [laughter] ... "Whew, wow, ... what kind of sailors are those?" the same ones that were at that church in Chicago, [laughter] same kind of stuff like that. So, I think my wife is breathing a little easier now, [laughter] but that's the way it was, and we went to Mexico once. In fact, I think I went there twice. ... It might have been one hundred miles or something like that and hitchhiked down there once. I took a bus once and I rode in the back of a big truck, you know. It was a flatbed truck and here [I was], with the white suit, out in the open, and it wasn't really a dusty road, but there was some dust. It was hot. That was some ride there, bumpy, bumpy, ... going fifty, sixty miles, well, maybe it wasn't that, forty, fifty miles an hour, across, it wasn't quite desert, but it was hot and it was a little bit dusty. The uniform wasn't so nice and white when we got there, [laughter] and then, most of the guys went down there to see the girls. They had big brothels down there, and then, they had some historic stuff, too. It was Matamoras. It's next to Brownsville, [Texas], and I went over there and I took pictures of a few of the girls in the brothels. ... They didn't want too many pictures there and the girls would come along there and stuff like that. ... The regular sailor guys, oh, they were in there having a great time and us RT guys there were just, "Oh, what's going on here?" [laughter] Then, when we came back across the border, they asked us if we wanted to have a, well, you might call [it] a "sanitation job." They called it a "pro." [laughter] They'd sanitize your genitals, to put it mildly, and none of the RT boys needed that, or very, very, very, very few, but that was part of it and I was just curious. ... There were regular nightclubs and they had, I guess they had, mild alcoholic beverages there and some of the guys ... actually got drunk there. That was a big deal, to get, what did they say? "Stewed, screwed and tattooed," or something like that. [laughter] Some of them got tattooed, too, but I don't remember one RT that had a tattoo. They were a different kind of guys and, well, after a while, ... I got fungus in my ears there. It was hot and very moist. I ... got down there in, I guess it was late March or April, and stayed there until September. That was pretty good. ... There, one day, I got a little pimple or something on my arm. I can almost feel it right there and I guess I scratched it a little bit and, the next day, it was a little bit bigger and it got red and, after about a week, my arm was swollen from my shoulder down to my wrist, big, and it was just hanging there. ... I'd gone to the sick bay, the military hospital there, several times and they'd put some black salve on it, "No, no problem." So, then, ... it was hanging there. Just for all intents and purposes, it was like dead. I was still going to class, but I said, "I want to see the doctor. I want to see him for sure, right now. This has gone on enough." I don't know if ... the medical corpsman would have done that, but I initiated it. They made no movements up to that time. ... So, the doctor looked at it and he says, "Put him in there with the other guys that are getting penicillin." Who do you think they were? It was the VD ward, all these "tough guys." Some of them had been in there three or four, five times, they were supermen, and penicillin was big stuff then. Oh, a couple of shots of penicillin and they were out and raring to go again and here's this RT over there in the corner there, with the hot packs on his arm and getting the shots the same time as the other guys. They'd give you a shot

and they'd be big loads of penicillin, day and night, every three hours, or something like that. Fortunately, I didn't have any bad reaction to the penicillin. Some of my friends came over to the hospital to see me and they said, "Oh, he's over in the VD ward." They said, "Huh?" [laughter] They didn't believe it and they teased me over that for a long, long time. ... These general service guys in the VD ward, their girlfriends used to come over and see them and they'd talk to them so foul. Oh, they'd just swear at them just like the guys were swearing at each other. ... I wasn't comfortable there. ... Between the real hot packs and the penicillin, it shrunk real fast. Then, it finally came down. It was just like a ... partly dried up boil and my doctor says, ... "I'm ready to lance it now." He says, "I'm going to give you some, like, Novocain or something like that, while I cut it open and dig it out," and I said, "Oh, don't give me no Novocain; just dig it out." Well, I was sorry I said that. ... It did hurt, but he dug it out and ... that was the end of that. I don't know if there's any scar there or not, but, of course, then, I got delayed in my class again. ... I think I was in just about the very last class of those ones that went on for two years, and then, the general Navy ... classes came in and we heard rumors that they were changing the tests and making them all easier after that. I don't know if they did or not, [laughter] and then, some of the same instructors stayed on, but there was new Navy, general Navy, instructors then, too. ... One strange thing happened there, one Sunday afternoon. I never learned to swim. That was another reason why they wouldn't let me on a ship. They found that out in boot camp, right away quick. ... My coordination was so bad, I couldn't stroke and swim at the same time. I could have floated there and stayed on the top, but I couldn't propel myself. ... I could swim pretty good underneath, as long as I could hold my breath, and I could swim across the pool. It wasn't a real wide pool, but, then, I'd have to get up and get air, and then, I couldn't paddle. So, I never did really learn to swim, but I ... kept taking lessons, on my own, and then, some regular lessons, too, the whole time I was in the Navy. Sometimes, I snuck into the pool by myself, which was completely against all the rules. I was so determined I was going to learn to swim, but it just didn't work and I don't know what [kind] of punishment I would have got if they would have found out for sure that I was [doing this], because it's a terrible risk, swimming underwater for a long time. ... I learned about that, too, very strikingly, because, one time, at Corpus Christi, it was a Sunday afternoon and I was down sort of by the shallow end. It was probably not over shoulder high, but it was much, much deeper out in the deep end, and I was flopping around there and, all of a sudden, I don't know if I saw this guy, ... but there was a big splash, like something came out of the sky and just crashed there. It was a lifeguard. He must have jumped from the side and it was a monstrous jump and there was a guy unconscious there. ... I guess I was aware of him just about the same time as the splash and the guy, lifeguard, pulled him out of there, just real fast, put him on the ... deck, next to the [pool], it was all concrete there, and started; they didn't have this mouth-to-mouth then. He put the guy face down and pushed real hard on his back, "Whoosh." They called it the Schafer method, or something like that, and it worked. ... It was a pretty husky fellow that had passed out there in the water and this guy started moving a little bit, and then, he started coming to and he was hysterical. He was just thrashing around something awful. He was a pretty husky guy, too, and about six or eight fellows, two, three on each leg, ... they held him, so that he wouldn't [hurt himself]. He would have just beat himself to pieces on that concrete deck there if they would [have let him]. He was just starting to really thrash, so, they held him, and then, after a while, he quieted down. ... The ambulance came and they carted him off and we were talking about, "What the heck was that guy doing?" Someone said, "Oh, he was trying to see how far he could swim underwater," well, hey, whoa, "and he passed out." I said, "That's kind of dumb there, to do that," and so, that's [it].

Then, I sort of, kind of forgot about it, and many years later, well, when I was at Northwestern, ... I got a few good friends, my roommates, and my especially good friends were in the Lutheran student group. That's where I met my wife, Adeline, somewhat later, but it was several of them, and two of them in particular. ... There was Ray and Kirby, and so, Ray was a year ahead of me and he had been in the Army. He was a child prodigy, or something like that, and he took advanced placement courses, and so, he was a year ahead. ... After he finished his chemistry thing, he went on to the University of Wisconsin, to graduate school there, and he told me about how wonderful it was. ... Being from Wisconsin, I had gone to Northwestern. I'd picked Northwestern because it was a private school and the tuition was much higher than it was for the state school, but the GI Bill would pay tuition at any school, any price. ... Northwestern, I hadn't heard too much about it, but I had gone to some of their basketball games and I'd heard something about it. ... After I met him at Northwestern, that I'd picked because I thought it was a good school, ... Northwestern didn't let anybody stay there to go to graduate school. That would be inbreeding. They didn't want academic [inbreeding]. ... So, Ray was at Wisconsin and he thought it was the greatest, greatest school in the whole world. So, I decided I'd go to Wisconsin, too, and I had a choice between biochemistry and chemistry, and they had such a reputation in biochemistry, I thought that [was for me]. ... I talked to the guys over there and I found out, when I got there, that I said, "Oh, Ray was my good friend at Northwestern and he sort of suggested I come up here." They said, "Well, he's just kind of a dumb Northwestern playboy and he doesn't work very hard and we don't think much of guys like that. We'd rather have Dakota farm boys." "Well, ... did you notice, on my application, that I was a Wisconsin farm boy?" He never even got to that, but he said, "Well, we might give you a chance here," but, then, I went to the Chemistry Department instead. ... One time, Kirby, this other fellow from Northwestern, came up to visit us and we went out and we had a picnic and we were talking about the good, old days and Kirby says, "I almost drowned once," and I said, "Oh, where's that?" He said, "Oh, it was at Corpus Christi," and I said, "Oh, it was, huh?" I said, "When was it and what day of the week?" He said, "It was a Sunday afternoon, like in August, I guess it was," and I said, "I was there and I saw it." He said, "Did you rescue me?" I said, "Not quite," I said, "but I was practically standing on you when I saw you there and the guard came and got you," and he says, "Well, what did you think about it?" ... I told him about this rumor, about that some dumb guy was trying to swim underwater as far as he could, [laughter] and he says, "That's exactly what happened." He said he had hyperventilated. He'd breathe as hard as he could for a while, so [that] he'd get all the oxygen he possibly could. So, then, he jumped in the water and swam as far as he could and he said, "All of a sudden, it just went black," he said, no warning that he needed to breathe, because, I guess, ... ordinarily, when you stop breathing, the carbon dioxide builds up and, pretty soon, that you gives you a signal that you've got to breathe. Well, he had pushed all the carbon dioxide out and he didn't get any signal and he just passed out. If that guard hadn't found him or if I hadn't got something going there, he would have been a goner and there it was. ... We were the best of friends and we met there, years, years later, and he was my ... best man at my wedding here, many years later. ... Back to the school, well, we worked on the radar sets, and then, ... finally, the last part of the school, we actually got to put the radar sets in the plane and work on it in the plane, see how the controls were inside the planes, and then, he showed [us] how to start the engines on the plane. ... These were all propeller planes, of course. ... Primarily, the ones, planes, that we saw there were fighter planes and I guess they were little reconnaissance planes that had radar sets on them, because ordinary fighter planes didn't have ... radars on them, and the engines were kind of funny, because you'd

twist them around, so [that] the engine was all loose, and then, you figured on it was full compression, and then, ... the spark would come. ... Then, they had a thing, it was like a big shotgun shell, it was a big explosive device, and there was a cartridge holder there and they'd put that in there, and then, they would hit that and turn whatever starter they had on the side and that gave the thing, engine, a real hard kick and, hopefully, it would start then. That wasn't radar training, but we were supposed to learn some practical things about the engine, too, and some of the guys thought that was real fun, but the radar sets that we worked with, mainly, they looked like a bomb. ... I guess they were about six, seven feet long. They were about this big around. ... They were over a foot in diameter, but probably sixteen, eighteen inches diameter, and then, they had a tail, and then, the front part was where the radar dishpan, little dishpan, was. That's the antenna that wobbles to scan the target area and we were to see how they fit into the plane, ... so that we'd be ready to [do it]. ... All of the work up to that time had been on workbenches and stuff like that. I remember, one time, there was a bunch of [officers], it was a special class of officers, that were supposed to get a quickie training course on troubleshooting and stuff like that. They were the electronic whizzes in the Navy officers and they were supposed to have sets [where] things were deliberately changed on them, ... so [that] they wouldn't work. ... The instructors put some little things in that they were finding out, but we helped them out, and I remember, I wrapped a heavy paper, a tough paper, around the fuses, so that they didn't make contact, and besides the thing that they were supposed to look for, the fuses didn't work, either. [laughter] They found it pretty quickly, though. ... They said, "Who did this?" but, of course, I wasn't going to say anything, but they figured that one of those smarty RT guys had done it. [laughter] We were getting pretty brave by that time. ... Then, oh, the guys who signed up for the two years, so [that] they could finish school, and then, they had a year or more then at a place; well, in my case, it would be some airbase and, [for] the other people, it would be a year in the fleet. Well, I picked Quonset Point, because ... I wanted to see the bright lights of New York City and that wasn't too far, and so, I ended up over in this area, Eastern area, too. I'd never been east of Chicago before in my life. ... The first time I went to Texas, that was the first time I'd been sort of out of the Middle West area. So, I went to Quonset Point, Rhode Island. ... We hitchhiked, four of us, I think, from Corpus Christi, Texas, up to Chicago. We had a ride with a young couple that were newly married and two of us rode in the front seat with the couple. ... It seemed like the car was really full when we were in there [laughter] and they took us for a couple of hundred miles, and then, from St. Louis up to Chicago, we got on some truck. I think there was only three of us by that time. Some truck driver took us in, ... but he made us sit in the back of the truck. It was one with the enclosed [trailer] there. ... I don't know if it was completely dark or not. Well, we were inside that truck with the door locked there for quite a few hours, but it was a ride to Chicago, and we were a little dirty when we got there. [laughter] ... Oh, when we got ... done with the Corpus Christi [training], the guys that had signed up for two years and got the year [of] extra service, well, we were rewarded then with a thirty-day leave, then, after we got out of school, before we went to our assignment. So, I went to Chicago, and then, I went north to my home in Wisconsin for a month. That was a wonderful time, and then, I came back down, took the bus down to Chicago. It was good train service and bus service between Ashland and Chicago, so, it was no problem there, and Milwaukee was on the way, and so, I went down to Chicago. ... The Navy had given me train tickets from Chicago to New York, and then, I don't know how I got to; oh, bus, to Quonset Point. Now, I had my sea bag with me then. I think I did. ... No, I think they shipped it over there. ... No, I wasn't lugging my sea bag when I went home. ... That was one of the things in the recruit training. When it

was the first time we got there, when we got our issues, our uniform and our bedding stuff, we were one of the very first groups that didn't get a hammock and they had little sea bags that were about less than a foot in diameter, about a foot or a little less in diameter, and about this long, and ours were called barracks bags. ... While they weren't twice as big [in] diameter, ... they were probably twice the area and they were at least over twice the volume of the regular sea bag, and so, ... there was supposed to be room in there for all our clothes and our mattress, too. Then, we had beds then, bunk beds to sleep in, ... all the way. So, we took our mattress with us in our sea bag wherever we went, until ... after we're done with school. Well, then, I think they told us that ... all our assignments from then on would have bunks or something like that and that we'd never need to use our own, take our own mattress along. So, we didn't, but, since then, just last summer, on one of our trips, I met a fellow that was one of Adeline's boyfriends when she was in high school ...

AL: College.

JL: College, okay, Michael, and so, we were visiting them in Rhode Island. He's a patent attorney there, isn't he? and he'd been a Navy Reserve officer for many, many years and he retired from that, and then, he was a patent clerk and an engineer, or patent attorney, and so, then, we were talking, visiting at their house up in Rhode Island. He still works for the Navy as a patent guy and we started talking and he said he was in the Navy, in that special RT program. "Oh, you were?" ... So, Adeline had been with two RT guys. So, then, he was in one of those groups, quite a few months ahead of me, who had had the hammock in the special little sea bag, and they had to tie those up real tight to get all the stuff in. It was a big [chore] ... and they'd fold that hammock real tight and wrap it up with ropes and stuff like that. So, he had heard about those special sea bags that we got, those barracks bags, ... but he had the original ones. So, I've met quite a number of ex-RTs, guys that had been in the RT program, in my professional work and just here and there, once in a while. ... So, all of them, I sort of thought they were kind of special people, and I still think so. [laughter] So, that Navy base that I was [at], it was at Rhode Island, at the Quonset base, ... it was on a little point of land that stuck out into the, I guess they called it Narragansett Sound. It's a big deep-sea port. Newport was the main base, port, home base, of the Eastern Fleet for many, many years, until Norfolk beat them out, but they still have a big, big base there. ... That's where the French Army that won the Revolutionary War landed there and helped George Washington to defeat the British. The French really won that war, the French Army. Well, I learned that out from Michael and those people over there. [laughter] ... I'd met some real nice guys and he told me about [some], and then, there's a fellow that used to be in New Jersey. ... I met a fellow just a couple of years ago and ... a lot of the guys who were in the RT program went into electrical engineering, which was a natural for them, because ... it was electrical engineering, electronics, and, in fact, I got, I don't know, six or seven credits at Northwestern in electrical engineering that ... helped me finish there a year ahead of time. I finished there in three years, partly because of that electrical engineering course, ... the credit I got from the Navy course. So, that was very helpful. It was one of the option courses. ... I think it maybe got me out of one physics course, too, which was related to that. ... At the base at Quonset Point, ... we were in a group. The fleet aircraft carriers used to come in there, after they'd been out on a cruise, or some of them hadn't been [in] to have a real restoration since they'd been in the war. So, they would bring in a big ship full of these little planes, these

bombers and fighters and stuff like that, and, once in a while, there would be two-engine planes, too. ...

-----END OF TAPE TWO, SIDE ONE-----

JL: ... This is the second side of this cartridge. Okay, so, ... at Quonset Point, these big aircraft carriers, they were giant ships, they'd come in loaded with these little fighter and bomber, dive-bomber, planes that really won the war. ... Some of them were in need of repair, real bad, and we stripped them down. Well, I shouldn't say "we;" I was on the other end of it, of the job. They'd take them down, take all the engines off and all the electronic gear, and they'd take all the wiring out and everything, just about rebuild them from the frame. ... Then, after they'd rebuilt them real, real carefully, then, they would get a primary inspection by this exceptions group, and then, when they said it was all right for a flight, ready to go, then, ours was final inspection. ... We were supposed to look over every little thing, [see] if it was fixed up real good, just ready to fly, and then, we were the first ones to fly them, after they had gone through this big overhaul. ... Generally, they were in real good shape, but, once in a while, [there was a problem]. ... I only flew a few of the little one-engine planes. ... Some of them only had one place and, sometimes, like, they wanted to have two pilots [test it]. So, I never got to ride the fighter planes or the bombers, but I got to ride these funny, old things, biplanes, seaplanes, and there was room for a radioman down in the bottom of that dumb thing, [laughter] but we were supposed to run the [communications gear]. Most of those had a lot of communication gear and navigation gear and only a few of them had radar sets on them, but the communication work was quite important. ... Well, you have to talk to the tower, you have to communicate when you're flying, and then, they used to have, when they were flying, [retractable antennas]. ... The size of the antenna depends on what frequency it is. For the high frequencies, for the voice communications, some of those have little, tiny antennas, but the old-fashioned long wave, for all the dots and dashes, the code transmissions, ... some of those planes still had Morse Code keys on them, and then, some of the voice transmission was on the longer wavelengths, too, they had a long antenna. It had a big reel on it. Then, when you were flying, when you wanted to transmit, you'd let this reel out. It had a lead weight that was a little like a turkey's egg. It was a little bigger than a hen's egg. It ... weighed about five pounds or something. ... Then, it was a strong cable, so, you could let that out of the plane, like, a thousand feet, and reel it back. ... Every once in a while, when I was winding it out, I don't know if I loosened up on the switch or something like that, it would bob and it would get caught on some of the landing gear. Not that it hurt the landing gear, or the tail, but the thing would get snagged, and then, it wouldn't wind in again. [laughter] So, after I had lost three antennas, [laughter] this officer came over and he says, "Just what's going on here?" He says, "Nobody else loses antennas," and I showed him how I did it and he says, "Well," he says, "hold that thing real tight." He says, "You're not holding it tight." He says, "I think you're letting up on it a little bit and it stops there, and then, it wobbles into the side, and that's when it gets snagged." So, I didn't lose any more. Then, one thing, the first few times I flew was on a two-engine plane. It was like what they call these DC-3s, these C-47s. ... Those were super planes at that time. They were the ones that dropped the parachute troops into France when they invaded there. So, they were a real workhorse transport plane and we had lots of them to fix up, too, besides the little fighter planes, and we used to fly them, ... we had to, in the final inspection. If it was ready, you'd have to run them on each engine by itself. You'd have to shut off one engine and fly it and make some maneuvers and stuff like that, and then, start that

engine, oh, and feathering the propeller was very, very important. You ever heard of feathering the propeller? That's when the engine stops. If you have it pitched for driving, for pulling, the plane, it'll go by itself then, like a fan. The air stream will turn it and it'll rip the engine apart. So, you have to adjust it real fine, so that the air goes right straight through it without twisting it. So, they would shut the engine off, until it stopped, and then, they would feather it, real quick. It would feather, and then, un-feather it and start it going. ... It was usually pretty easy to start it, because the generator from the engine that was going gave plenty of electricity to start the starter engines. So, then, that would start, and then, you would get that going real good. Then, you would stop the other engine and feather it and see how well you could fly it, and then, you'd start it again. ... Then, you'd try a whole bunch of other things, test all the stuff, different maneuvers and stuff like that, and then, you'd come flying back. Sometimes, one engine wouldn't start again, and then, you'd have to signal "emergency" and they'd clear off the other planes, say, "Nobody land now, until this plane comes in." ... One time, after the plane had been checked over real good, everything was just perfect, supposedly, you know that you pull back the stick? ... That's when you take off. ... Those planes, they'd gun their engine real hard, and then, they'd let go of the brakes, then, you go racing down the runway, and then, just when you get by the end, you pull that back and, "Roar," up you go. Well, this one time, they start pulling on that, and the tiller, ... it looks like a steering wheel, the control thing that they steer it with and pull, they pull this back and the thing drops about a foot down. The bolts that were supposed to hold it to the rest of the thing underneath there were loose. The thing dropped and they couldn't lift it and they couldn't move it and, here, we're coming to the end of the runway at full speed.

[laughter] Well, I don't know, I guess, with the wing controls and the tail, somehow, they got it up a little, tiny bit and we went, took off over the ocean then. It wasn't any trees or towers, ... it was wide-open ocean, so, it was no problem. So, we were skimming the waves for a while, gradually got up about one hundred feet, after flying several miles, and then, of course, they radioed right away for an emergency and they made a long, big circle, and then, came in and landed. ... So, there were a few people sweating then. This one old chief, apparently, he had been in some crashes and he was really worried. ... I thought it was kind of adventurous.

[laughter] ... The first few times ... I flew, you always wore parachutes, and everybody wore parachutes then, in these planes, but they were very careless. After the war was over, they got really sloppy. I had never seen a parachute before. I'd never worn a parachute. They said, "Here's your parachute," and so, ... we put the harness on. So, I put this harness on; it's loose and hanging there. ... Then, we'd be sitting on the parachute in the seat, and then, if you were supposed to jump out, well, you'd clip it on there, and then, you'd jump out, and then, pull this thing and it was supposed to open, never had a practice or anything like that. Then, one guy saw me one time with that harness hanging there, loose, and he says, "Hey, you know what'd happen if you tried to jump in that parachute?" He says, "If you were really lucky, the parachute would open," he says, "but you wouldn't be so lucky then, because you'd just pull right out of that harness, because ... your body would just pull out of it." He says, "You've got to have that tight if you're going to use it. It's got to be on you, to hold your body when that snaps." "Oh, thanks. It's good to know that," [laughter] but I didn't know that, after I'd been flying for awhile. They were really sloppy after the war was over, and even on guard duties and stuff like that. They went through the motions of it [and] stuff, but it was really sloppy. So, well, we fixed lots of the little planes. We flew some of the big ones. ... Providence was the big city there and I visited there. I went to a special, big Lutheran church there and I ... went on a couple of dates to a couple of the towns there, and I even stayed overnight at one girl's boarding house, but they had

a room of my own. ... Everything was proper, but, in the middle of the night, though, I heard a horn tooting and I woke up and looked out the window. ... It was a couple of cousins there, that were there, and another girl. ... One of the cousins that actually lived there, two of those girls were from the base, that worked at the base with me, and so, this girl that lived there, she ran out there. That was her boyfriend, signaling her. [laughter] ... I went to Boston several times. There was one of my friends that I'd gone to secondary school at Corpus Christi [with]. He was a Pilgrim from Boston, a real blueblood. He was real pale. ... Many family generations lived there and he invited me up to his house at Boston. I went there, oh, three or four times at least. I was up there at Thanksgiving and there had been some marching, and, I remember, we had had to march in one of the local towns there. They had a military march, you know, for the war heroes. We were marching and someone said, "We have to march for those lousy Pilgrims here," but, then, those girls that worked at the airbase there, who made the new wire things ... for the controls and all that stuff in the plane, they assembled all the wires. ... For a while, I was the inspector of the wire pieces there, besides checking the planes. I was checking that they had put the wires together. ... They were big bundles of wire cables, some of them, for lots of different circuits in the communications gear, the radios and, ... sometimes, the radars and the things that, the plane controls and stuff. ... I was supposed to check those, to make [sure] all the wires went to the right place and all that stuff, and there ... must have been about close to two dozen young women that worked in that thing there. ... I was their chief inspector and I had my rubber stamp there and I checked those things, to make sure that they worked all right, and then, one of the dangerous parts of the job for them was that they had quartz crystals. That was a thing to keep the frequency of the radio sets exactly right and they had to etch them. They were cut to roughly the right size, and then, they were supposed to test them, [learn] what the resonate frequency was, and then, if it wasn't exactly right, they'd put them in a ... hydrofluoric acid bath and etch the quartz until it got thin enough so [that] it vibrated exactly right. ... They didn't have really adequate [safety conditions]. They had some ventilation, but not much, and then, they had the little gloves. So, I'm pretty sure some of those young women probably had fluoride poisoning there, after they'd worked for a while, and then, they just soldered and soldered and soldered and soldered, just all those cables. There were connectors on everything. Some of them had twenty, thirty, fifty wires in them and they had to wire every one of them exactly right, and then, of course, I was to test to make sure that they were exactly right. So, I got to be a pretty good inspector there, too. ... So, then, they were breathing the fumes from the soldering irons, stuff like [that], some ventilation, but not that much, and then, they used carbon tetrachloride, which is banned. Nobody uses it any more. It's terribly toxic to the liver. They splashed that around there like crazy. This one Navy chief; I was complaining, I says, "That carbon tet gives me a headache and I don't like it. I don't think we should use it around that much. ... Something's the matter." "Carbon tet is good for you. Go ahead and don't complain no more," carbon tech, and he was a chronic alcoholic. He was a tough, old chief. I guess he'd been in the war for quite a while. ... He'd been in the Navy for, like, almost thirty years ... and he was drunk half of the time. He used to drink deicer fluid, which was almost pure alcohol. ... A couple of times, he was drunk as anything and the officer wanted him for something, and then, we'd have to try to cover for him. "Oh, he's not here," or "He's real sick," or something like that, and then, he was a nasty, old guy and he really abused [the women]. There were a few black workers there, and those women, he used to paw on them something awful. ... They didn't dare to object to it and he used to paw them in a very nasty fashion. ... One day, I guess he was drunk and he got one of these flare pistols. It's a thing that's like a little gun and it shoots the flare way up in the air, and

he was outside and he had one of those flare guns and he was shooting some of them, so that they landed on the top of this hangar there. ... People saw it right away and they sent some Navy police over there to check it out, those SPs, those shore patrols. ... Oh, nobody knew a thing about it, of course, and they had conveniently hidden all the equipment. ... They knew somebody was doing it, but nobody would admit anything at all, and this old chief, ... we covered for him lots of times. [laughter] ... As far as I could see, he wasn't doing the Navy any good whatsoever. He was just a [drunk]. It was kind of an alcoholic retirement there, and I made a lot of friends there. Even there, this RT thing had gotten there before, it was ... two of us from Corpus Christi, the guy from Boston [and I], and then, there was a rumor that there had been an RT once before there, and I guess they found out about RTs then. [laughter] ... They used to make jokes about us, that we didn't like girls and that we never got drunk and a whole bunch of stuff like that. There was something strange about us, and then, one day, it was, I think, three or four of those guys, they said, "You guys are so damn smart? We're going to show you. We're going to go to RT school and get better grades than you did." So, they went over to the records office, or the information place, where they have everybody's record; ... personnel office, they called it. So, they wanted to take the test for the RT school and they just looked at their records and they said, "Oh, your general service test..." ... It was an aptitude and IQ test that we had to take when we first got into the Navy and they had to have a certain grade on that to get into the RT school, ... well, besides the Eddy Test, and these guys, their tests were just; [laughter] they didn't have a chance. ... They came back and [said], "Oh, they didn't want us. We were too good," or something like that. [laughter] So, they didn't say anything more about it after that. ... After I had been there for a while and I'd been exposed to a lot of [things]; oh, about a quarter of the guys in the RT course had gone to college, a little bit, at least. Some of them had just started college, some of them actually had gone for a couple of years, something like that. So, here's these college boys and it was the first college people I had ever run into and [I thought], "They're not so doggone smart. I think I can do it, too." ... Something in my brain was telling me that. So, it sort of gave me some confidence there, and so, then, I start talking with this friend of mine, the Pilgrim from near Boston, one of the suburbs. ... Well, he was going to go to Northeastern and be an electrical engineer; just, that was the natural thing to do. I said, "Well, if you go to Northeastern, I'll go to Northwestern," and that's about as [simple as it was]. That was where I first started thinking about Northwestern. I hadn't really given it a thought, as going to school there, before. ... Wasn't that a kind of flip thing to do? It was a real good choice, but, then, when I got more serious, I wrote to Northwestern, and then, I got to thinking, "Well, there's Wisconsin, too." ... I had a scholarship at Wisconsin, ... worth fifty dollars, for being the second in my high school class. [laughter] It was on a postcard. It was written, "This is a scholarship for fifty dollars," or something like that, "for the University of Wisconsin." Well, I still had that, but, then, I could have the GI Bill, so, I could go to any school in the country. ... So, I sent a little letter to both of those schools, the same day, and I said, "The one that comes back here that sounds best to me, makes me the best offer, I'm going to take that school, University of Wisconsin or Northwestern." So, then, the one comes from Northwestern, and they came back just about the same time. Northwestern says, "Come on over. We want to talk to you. It's interesting." So, Wisconsin, it says, "Well, we won't send you an application, because you'll have to prove that you're a state resident," and a whole bunch [of stuff], "and then, the GI Bill will cover your stuff, but we have to prove that you're a state resident before ... we'll even send you an application." So, well, I had the thing for Northwestern and I said, "Well, hey, they can keep it." ... I found, many years later; ... well, they had a special subsidy for their state

students, that they would charge out-of-state students almost twice as much as the residents, but the ones on the GI Bill, they charged them the full tuition, which was almost as much as Northwestern's, because the GI Bill said that the GI Bill would cover the cost of the education, not the tuition rate. So, it was the only college or university in the country that charged the residents the full tuition and got away with it, because this amounted to many, many millions of dollars, that they got the full tuition from all their GI students ... that were residents. ... So, the Federal Government sued them for millions of dollars, for charging too much, and Wisconsin took the court case. They said, "If you read the bill carefully, the GI Bill, it says that the GI Bill will cover the cost of the education. It doesn't say that they will only cover the tuition with its subsidies for the residents or nothing like that," and ... all the other schools, it was all past then, so, Wisconsin, ... some people say they got away with it. ... Well, in that way, I was able to go to the expensive school and they paid the full tuition. If I'd gone to Wisconsin, I would have wasted my GI Bill credits, being a resident, ... so that I got the real high-priced school, and then, I went to Wisconsin for my graduate school after my GI Bill was just about run out, but I used it right to the hilt. It paid for all my Northwestern there. Of course, I got the little credit, the extra credit, for the electrical engineering in the radar school, and that helped a whole lot, too. ... Then, when I got the [letter], Northwestern said that I could come there and apply, but, if I wanted to take electrical engineering, I would have to take solid geometry, and I only had regular geometry at high school. So, oh, great, they had the ... Armed Forces Institute, [which] was a giant ... correspondence school. ... They had textbooks on just about any college course that you could think of, and they'd send them to the military people all around the world, people who were taking correspondence courses. So, I got the correspondence course for solid geometry and I [thought], "Oh, this is it. I'm going to be an electrical engineer." So, then, I start working on it, and then, after a while, I found [a tutor], just looking around that whole Quonset Naval Air Station there. This was probably in February, or something like that. ... My term was up in June and I'd probably get out a month early, or something like that. So, I had a couple of months to go there. ... It was pretty tough, so, I found somebody who knew solid geometry and he helped me with that first lesson. I worked on that first lesson, ... in my spare time, during the whole week. I really studied, real, real, real hard, and I sent it in and got a good grade on it, but I said, "Hey, that's [it]. I've had enough of that. I don't want to be an engineer that bad, ... to take that course." [laughter] So, then, I decided to major in chemistry instead. I liked chemistry, but the engineering part didn't go well. Of course, I had the electrical engineering credit. I found out, later on, that I could get that, but not without math. ... So, I had plenty of math to do the chemistry and I got good math grades in high school, but that solid geometry was just too much for me. ... I had trouble with calculus, partly because it was communication with the teacher. ... So, that's how I got to get into chemistry at Northwestern and I finished my term there at Quonset Point, did my [duty], inspected my planes. One time, I didn't really get in trouble, but there was one plane which we had to give an inspection in. It was one of the generators, that when the engine starts, this generator, it's supposed to make electricity for some of those transmitters and stuff like that, and those were the things that always worked real good. ... I was checking the stuff there and I don't know if I'd noticed that that one little instrument didn't work quite right or not, but it didn't, and they found it on the test flight. It wasn't anything critical or something like that, but they found it. It was that little generator wasn't working, because the magnets had gone dead, and there was nothing in the school that told us magnets went dead. ... I didn't have the slightest idea what to do about it, and I wasn't even sure what the symptoms would have been, but this friend of mine, ... the Boston guy, he was going into electrical

engineering and he was studying [this]. He actually knew more about the [equipment], that that was the direct current circuits. I was real good on the communications circuits, the alternating current and the sound waves and the radar waves and stuff. ... We had a little bit of training on those little DC parts, where they made the engines turn the generators and that made the electricity to run the plane and the radar and radar sets, but that direct current energy, that was twenty-four volts and it had big batteries and stuff like that that had to be changed into alternating currents to run the communications gear, and then, there was that generator that didn't work. [laughter] ... So, the guy told me. He was in the crew that did the pre-inspection there. They had missed that thing, and I guess I missed it, too, but, then, maybe it had gone dead after they had tested it. That's what he said he thought had happened, it had gone dead after they had tested [it]. So, what they had to do was take a big battery and ... make a big spark on that thing, to give it a real shot. Now, if they had left it on, it would have burned it out, but it just gave it a quick shot. It was kind of a tricky thing to do, and I'd never even heard of it. Well, they went and did it, and then, it worked fine, but they told me, they said, "Be a little more careful now. You missed something there and ... we don't like that," but they didn't give me any trouble for it. They just [said], "Watch it."

SH: Did you have thoughts about staying in the Navy? Did you have the option to stay in?

JL: Well, I think I probably could have stayed in, ... maybe there or as an instructor, but, because of my eyes, I had that special assignment and they may not have let me stay in. I never really pursued it. By that time, I was so fed up by those smarty-pants young officers ... and those Marine guards. I was just starting to feel I didn't want people bossing me around in sort of arbitrary ways. ... It wasn't really bothering me real bad, but I said, "I don't need this and, here, I've got a chance to go to college with this good GI Bill and I think I'd like to do chemistry and maybe fool around with the radio stuff," ... but that's when I decided I wanted to do chemistry instead.

SH: When did you get out?

JL: At the end of two years. ... Well, they actually let me go [early]. I think it was about the last part of April or middle May, maybe it was, and then, my time was up in the middle of June, the two years.

SH: Then, you went home to Wisconsin.

JL: Yes, I went home. ... Oh, that was a great trip, going home. I rode in a little Volkswagen Beetle from Quonset Point to Chicago. One of the employees there, one of the laboratory [employees], the shop foreman, who was in charge of all those women, he was the civilian officer in charge of those girls and I was the Navy inspection officer in charge of them, ... he was going to Iowa, I think, or something like that, and he was driving through Chicago. ... He says he wanted me to go with him and we drove down and went through the Holland Tunnel. Oh, my God, that little; I don't know, maybe it wasn't a Beetle car. We didn't have Beetles then. It was a little car, just about like a Beetle, though. It was a little, bitty thing and my sea bag fit in there. So, I'm not sure; it seemed like a Beetle, but, then, again, it couldn't have been, but it was a little car that buzzed just like a Beetle. Then, ... we went through that tunnel, oh, and before

we come to the tunnel, it was about evening rush time, you know, and the cars were all coming from a side street to get into the main street that went in there. ... We were at an intersection and the lights were ... like stoplights, signal lights, but the cars just crowded in there. They'd move a few feet with each light, and then, there was never any opening and they just wouldn't let anybody in, absolutely. We were there for, I don't know, fifteen, twenty minutes, and then, some policemen on horses came and they stopped the people. They said, "Don't move until this intersection's all clean and there's space for others." So, then, we got in there and went. Then, we went through the tunnel. Then, we went through Pennsylvania, and then, it was an Amish town, and here's those girls with those dresses, uniforms. I said, "Oh, I'm going to whistle at some of the girls." He says, "You'd better not. Why, you'll be in trouble real bad," [laughter] and then, pretty soon, he wanted me to drive. ... I'd driven farm machinery a lot, but I'd never driven a car and I said, "I don't want to drive your car." He says, "You'll learn real fast." He says, "There's not much traffic and I'll show you how." ... I just didn't feel right about driving, so, it ended up [that] he drove the whole trip, but he was quite disappointed that I didn't drive. ... Then, we went through, ... on the Pennsylvania Turnpike, ... the tunnels and that was a superhighway. It was designed, supposedly, like the German *Autobahn* and people would take cars from any part of the country to see how fast they would go. They'd take them to Pennsylvania, on the turnpike, and here we were, on that road. Fortunately, we didn't meet any people who were trying out their cars. ... We stopped and he slept for a while, and then, he drove again, but he was a little bit disappointed that I didn't drive, but we got to Chicago there in a couple of days. ... Then, I'd sent my sister a telegram, my younger sister, Clara, and I said, "I want ... to show you Chicago. I've been there. I know the place pretty good." So, she came down there and I got her a room at the biggest hotel in the world. It was the; I don't even remember the name of it any more.

SH: The Conrad Hilton?

JL: It seems like there was a Hilton name in it. I'm not sure, but it was a big [hotel]. It looks ancient now. I don't know if it's even still there, ... and they got her a room that was ... just one of the little spaces between the [windows]. There was no view of anything at all, but she was just a country girl and we went down there. We visited sights, we went to some of the amusement parks and I showed her around the different places. ... We maybe even took the streetcar out, the "L," and went by that school I had been to and stuff like that. ... She was down there about three or four days, but, when I met her on the train and she came off the train, I was at the station waiting for her and she'd bought a special pair of pajamas for me, because ... my birthday was on June 4th, and here; well, no, that was in May that she came down there. So, she gave me my birthday present early, but she was walking along the platform and just about walked past me. She says, "I was looking for a great, big guy." She says, "My brother's a big sailor." [laughter] ... Well, she was looking for someone ... that looked like our father, I guess, and he was six-foot-six, or something like that, and here I was, 160, 170 pounds and just an ordinary guy. ... I'm not sure if I was wearing my uniform then or not. It was all right not to wear the uniform then. You could still wear it, though, if you had that, they called it the "ruptured duck." You've heard of them? That was the [pin]. So, I had a couple of "ruptured ducks." ... You could still wear the uniform, but you had to wear the "ruptured duck" then. Then, the military police wouldn't bother you, ... and so, then, we had a few nice days there, and

then, she went back on the [train]. Maybe we went back together, I think. I'm not really sure.
...

SH: Why did you have two "ruptured ducks?"

JL: Oh, they were giving them away like crazy. They had boxes. They had a whole bunch of them. ... Maybe I grabbed a couple when nobody was watching, something like that. [laughter] ... I think she went back there alone. I stayed down there and I had my interview at Northwestern then and I came in there; I had bought a pair of gray cotton, like, work pants and I had a short sleeved shirt there. ... I went to the admissions office and talked to this, I don't know who, ... whoever interviews the prospective students, and, here, these other guys were coming in with ... both of their parents with them and they were dressed up like everything. Everyone had fancy suits and ties and everything and I'm here with just a pair of cotton slacks and no tie and just a shirt, and probably slightly messed up hair, a little bit, and stuff like that, [laughter] and he had my record there and had my high school record. ... He probably had heard about that RT program. That helped along the way there. [laughter] So, he says, "Oh, yes, you can come to school here." ... He told me about [how] I'd get some catalogs and stuff in the mail, and I didn't get any of them in the mail. That was the problem, because the town I came from was Beniot, B-E-N-I-O-T, and Beloit [is] the famous college town in the southern part of the state and they had lots of people from Beloit, and some of their professors were from Beloit. So, all of my stuff went to Beloit and I didn't get a damned thing. [laughter] ... I don't know if I wrote down there or called down there, something like that, and, finally, I did get something and they said, "Just come on down and we'll get you a place to sleep and get your assignments and stuff like that, when you get [here]." So, being a freshman, we were supposed to be down there a week early. So, that was the new student week and the biggest part of that week was when ... the fraternities were picking out their pledges then. ... Of course, ... as soon as they found out that I was an ex-serviceman and I was a farm boy, peasant poor, they didn't even want to talk to me, and I was just as glad. I didn't want to talk to them, either, [laughter] rotten, spoiled kids. ... They were a little bit mean, and then, I stayed at this [dorm], it was a regular dormitory, for a couple of weeks, and then, I got assigned this [slot] in the huts, where the rats lived. [laughter] That was called the temporary housing. Some of them were regular Quonset huts and some of them had straight walls and they called them pre-fabs. They were aluminum, metal huts. ... I was living in there. I lived there for three years then, except for the summers, when I took off for the wheat fields. ... I joined the Navy Reserve right away then, because, for two hours a week over there, I was a petty officer then. ... Most of the guys there were high school kids. ... They started the draft again, because, as soon as the things started heating up [in] Korea, they opened the draft again, and some of the guys wanted to get in the Reserves to keep out of the draft. So, there was mostly high school kids there and here I was, one of those old petty officers there, and so, I'd tell them about electronics a little bit and do a little bit of that stuff, and then, I'd sit and study my courses, ... [going] over to that big gymnasium there, the armory, for one evening a week. So, that was pretty good and we had two weeks of training, once a year, up at Great Lakes, and I was sort of king up there, too. I remember, ... I went there for over Christmas vacation. Oh, I don't know if that was the first year I was there, or something like that; maybe, I don't really remember for sure, but it must have been. ... So, these guys were making test panels for the Reserve centers around there, for people like them, who were doing electronics training. They had switches and resistors and tubes and stuff, little sets that they would train with, for training

equipment. ... That was their assignment during the two weeks, to make them, and here comes this petty officer there, ... with the two stripes yet, and so, [the officers said], "Oh, well, you're not going to sit there and assemble these little kits there." So, this guy that was in charge of it there, he says, "Well, look around here and see if you can find some job that fits your position," and I looked around. I said, "I was an inspection guy at the big cable assembly plant," and then, I said, "That's exactly what they need here. Shall I set up an inspection?" He says, "Go to it." So, the chief [job was], besides the ohmmeters and stuff, to check that the electricity was going through, we were supposed to see if the joints were strong, that if the wires pulled, if it'd pull out. So, it was [done with] a mini-crowbar, we called it a pick. It was like an ice pick, about this long, one who had a straight, real sharp point. These were made of steel, ... tool steel, and it had a hook on the other end. ... It was part of the inspector's [job] to see if you could pick any of the joints apart. ... The first few I picked, I was rejecting every one of them. Somehow, I'd picked a half a dozen joints apart, sometimes, I'd pick almost all the joints apart in the whole thing, and here's this table full of rejects. They weren't getting anything through and I just kept rejecting them. They kept making them, and then, after a couple of hours of that, these guys were really getting angry. "What in the hell are you doing with that crowbar there? You're tearing our stuff apart." I said, "That's my job." I said, "They're not supposed to stand that." I said, "I know, because I was inspector on the fleet." "Oh, you were, huh?" I said, "Here's my ... inspection thing." So, they said, "Well, this is terrible," and I said, "Well, I'll show you how to do it right." "Oh, hey, this is great." So, I went right through it. I said, "The first thing you do [is], you clean up the joint real good, the parts that are suppose to solder together." They don't solder that much [anymore]. They solder some circuits now, but electricians and stuff like that use these solderless joints and stuff like that now, but, here, everything was soldered, and a lot of real good stuff is still soldered, so, it's still an important thing. "So, you clean up the joint real, real good, and then, if it's a twisted joint, if you've got one of those hooks and you put the wire around it," I said, "you have to twist that around there real tight, squeeze it with your pliers, so [that] it's mechanically tight before you even touch it with any solder, and then, you heat it up and put the solder on, just enough so [that] it just flows into all those joints, and then, you can't pull it loose, unless you break something." I said, "That's what every one of these joints [has] got to be, every one," and, pretty soon, every one of those guys knew how to solder and everything was coming through. ... There was very, very few rejects after that, but they were making pure scrap, one hundred percent, or maybe ninety-five percent, rejected. It was just an accident if something got through with all the good solder joints, because they didn't know how to solder and they didn't know how to put it together. They sure learned fast, because I showed them exactly how to do it and I made sure each one of them knew how to do it, too, and so, hey, that worked out real good. I did a real good job at that place, and then, I went back to study my college lessons. [laughter] ... Well, there were some other guys that had been in the RT training, too, there and they were studying their college calculus courses and stuff like that. [laughter] ... That was kind of fun, and so, that was just one time I went up there, at Christmastime, and then, ... the first summer that I was there, I studied at summer school. ... I guess I went to the meetings then, but, then, the second summer, I didn't want to go to summer school. I was just absolutely beat then. The first semester, actually, I'd had a terrible time with English. ... I had taken remedial English. They called it ... English composition, but, really, it was remedial English and our first lesson was an autobiography and I wrote a one-page story of my life and what I had done, and the instructor was an advanced graduate student and he read my autobiography to the class. He didn't say whose it was, but he read it as an example of just about every possible mistake

somebody could make, plus, a whole lot he didn't even know about before, [laughter] because it was just atrocious, and then, the bell rang. ... I don't know if my face was red or not, but he didn't say a thing, a word, to me at all. So, then, people are going out, and then, when I come by, he says, "Hey, guy, I want to talk to you," and then, when everybody else was gone, he was very discreet about it, he said, "Hey, guy," he says, "this is absolutely awful," he says, "unacceptable," he says, "and you have to fix it up real fast or you're out of here." He says, "We don't waste our time with this kind of stuff." I said, "Well, I'll do what I can." So, another [assignment], ... it was some other kind of paper, I don't remember. I couldn't type; I tried to type. I bought a typewriter especially to go to college with and I took it with me and, some nights, I'd stay up until three in the morning and it'd take me that long to type one sheet of paper, because I just ... couldn't get it together. I hadn't taken a course, and maybe if I had taken a course, I don't know if I'd [have learned]. ... Some people learn it on their own, but I just couldn't learn it. I gave up after a while and, sometimes, I had somebody else [type it], but I asked the instructor, I said, "I cannot type and I don't think I can get somebody to type for me and it'll take me all night or longer and it will look pretty awful," and then, I said, "If I write as carefully as I can, will you accept it?" He says, "I will." ... I was one of the very, very few that came in handwritten, but I never had any record of them. ... All the other kids, kids, you know, a lot of the frat people, the Greeks, they typed all their stuff. They didn't even write their stuff. They had libraries, at their frat house or their sorority house, of old papers for all these courses. ... In fact, one time, this teacher says, "Hey, guys," he says. I heard him talking to these guys. He says, "Your two papers about this tobacco auction and all the auctioneer's antics," he says, "they were identical, word for word." He says, "Are you trying to tell me that you both made that up all on your own?" "Absolutely. We swear on the Bible. We did it. Absolutely, absolutely," and he says, "All right." He says, "It's just your word and mine," and he says, "I'll have to take your word for it," he said, "but I don't believe you," ... but, then, after [that], I had this assignment. ... I worked a whole week on the one sheet of paper. I went to my other classes, I had four courses, ... but I didn't study the other classes. I just let my homework go on those others. I studied, worked day and night, on that one lousy piece of paper, one sheet of paper, and he read that to the class as the very best one of that assignment, and then, when the class was over, he said, "Hey, guy, I want to talk to you," and then, he says, "Who do you think you're kidding?" [laughter] He says, "You didn't write this, no way." I said, "I did." He said, "I don't believe you." I said, "I did," and I said, "I worked awful hard on it. I worked real, real hard." I said, "I didn't do anything else. I've worked a whole week on this thing." He says, "Well, I still don't believe you," he said, "but," he said, "I'll have to take your word for it," he says, "and keep it up. I want your work this good all the time." I said, "I can't." I said, "I've got three other tough courses and I'm a freshman here," you know, and I said, "I'll do the best I can. I'll work real hard at it, ... but I can't do it like that." He says, "Well, you'd better," he says, "and that's your tough luck." So, I wrote, apparently, better and I spent a lot of time at it. ... My aunt, that I'd been writing to, once in a while, while I was in the Navy; in fact, some of these letters should tell the story. Not these letters; I've got my letters from when I was in college, too. My aunt says my writing ability changed quite abruptly, and for the better, after I'd taken that course at Northwestern, [laughter] but, so, ... I might have ... gotten a "B" in one of [the] English courses, but, otherwise, it was a sure "C" or a "D," every time. I don't think I got any "Ds," because that was pretty bad, but I got "Cs," and I wish I would have had those papers, because I wrote some real good ones. ... I went to the art museum in Chicago, they have a real nice one, and I wrote about one of the paintings of ... one of those famous painters of fruits and still life

and stuff like that, and I wrote, used lots and lots and lots of adjectives. ... I spoon-fed those advanced graduate students. I cased them up. I had three different ones. ... Northwestern was on the quarter system. ... My freshman year, I had one teacher, he was an amateur boxer and he had his Golden Gloves ring, had little gloves, on his keychain on his belt, big, husky guy, like Li'l Abner in the funny papers, [laughter] but I guess he was doing all right in English, and so, I wrote about Joe Louis. ... "Joe Louis' manager was like a pimp man for the prostitutes and he used and abused Joe Louis' body and, when it was broken and beaten, he threw him out, and he died a millionaire and Joe Louis died broke." I said, "If that isn't prostitution, I'd like to know what it was," and that guy just ate it up. [laughter] So, then, I sized up each one of the three guys and there was one of them, he ... had [made] some religious mentions a couple of times. So, I wrote a story about how the Jews were God's "chosen people" and the Nazis and everybody else who ever discriminated against Jews would have to pay, answer, for treating God's "chosen people" that way, and he ate that up. ... This one guy liked colors and adjectives and I was spoon-feeding those guys. So, I caught on to those things, but I still had trouble, though. ... One time, I was taking reading courses. I didn't take the very best English course they had at Northwestern, because I was afraid I probably wouldn't be able to pass it. It was lots of books and stuff like that. It was a famous course. The guy was world famous and guys used to crowd the lecture hall, people that ... weren't taking the course. He used to be a famous TV guy, too. He had some word games.

-----END OF TAPE TWO, SIDE TWO-----

SI: This continues an interview with Mr. John Lofstrom on March 22, 2000, with Shaun Illingworth and ...

SH: Sandra Stewart Holyoak.

SI: You were talking about ...

JL: Yes. I was talking about my problems with English. I have trouble with written communications. I think I still do. ... It takes me a long time to write a letter. If I'm talking with people and I can see the feedback, I can see their expression and all that stuff and I can just talk away like everything. ... If I get off on the wrong track, I can tell right away and change it, but, when you're writing a letter, that's there and they see it and, if there's something wrong there; ... so, I still have trouble. ... I did get through it, and this one time, which I thought it was a terrible injustice, this journalism student, who I'd met in this Lutheran student group, all these righteous people, ... we were pretty good friends and he was a pretty good journalism student. ... The night before the exam, one of the final exams in this English reading course, lots and lots and lots of books, ... he says, "John," he says, "you're doing pretty good and you read all these books." He says, "How about helping me out?" He says, "I didn't get to read those books." He said, "Could you spend a couple of hours with me and just tell me a little bit about it?" So, we went through about five or six or maybe seven books, not giant books, but stories of English and American literature, story books. I don't really remember the names, but I had read them all real fast, but with, apparently, a little bit of comprehension. So, I would open up the book, and he was really focused. Now, I'm telling you, he was listening to every, every word, and we would go down the table of contents and I'd tell him about each of these chapters, and then, we would

page through the book real fast, about ten or fifteen minutes per book. I'd tell him the story real fast, the story of the book, six or seven books, that probably took me ten hours or maybe twenty hours to read thoroughly, but I scanned them real fast, like that, just real high speed, fifteen, twenty minutes a book. He went and got a "B" or a "B+" on that course, on that final, and I got my "C" or "D," or something like that. ... I transmitted the information to him orally and he organized it and put it down on the paper and did it way better than I did, and, of course, that was his journalism [background]. He was a good writer and I'm pretty sure he was listening real carefully, too. So, that first quarter was real rough. I had two traumatic experiences. Well, of course, that thing within the English class was kind of traumatic, too, [laughter] but here comes Thanksgiving time and ... one of the friends that I'd had ... in the boot camp, he was a boy from Milwaukee, and Milwaukee wasn't very far from Chicago. It's just a train ride up there and he invited me for Thanksgiving and I went up there. I took the train up there and he met me, and then, the Thanksgiving here; ... he had got out of the Navy a little early. He didn't take the two-year extension and he was going to go on the GI Bill, but his family could have paid for it. They owned a chemical factory there and they had several chemical engineers in the family and that's what he was studying, chemical engineering. So, I went to his house and I stayed there overnight, and then, Thanksgiving dinner. Oh, they had a big spread of stuff and, oh, there was a whole bunch of guys there and here's this new guy, one of Bob's friends from the Navy, old buddy. So, they just kept asking me questions and I was real, real polite. I kept [answering] this one, this one, that one, and by the time they were all done eating, I had this plate full of food and I hadn't touched it and they said, "Well, I guess, [he does not want it]." Well, they just took it and I was hungry as heck. [laughter] I was too embarrassed to say anything. ... I had been the hot rat there, in with the frat boys and stuff like that, and they had been really loading it on, that school there, that we were the [outsiders], just because of the war and all that stuff. ... We were just there temporarily and ... they were privileged, and so, I wasn't feeling all good about myself and here [was] this boy, who came from a well-to-do family, and here's this rich family and all this stuff and I just was feeling worse and worse and worse all the time, and then, I didn't even dare to say anything about that. I was still hungry and I wanted some time to eat. I was just trying to be polite and I left shortly after that, and I guess my face was red and they knew something was wrong, but they didn't ask me what was wrong. ... I probably wouldn't have told them anyhow and I've never seen or heard from the guy again. He was one of my best friends in the Navy. ... I might contact him now, if this thing gets going, if he wants to make a story of his life in the Navy, but I don't know if I could even contact him, but that was a very sad thing. ... Then, about the first part of December, that's in my letters there, ... I didn't tell my father all the details about it, but I got a sore on my neck or my forehead, someplace here, above my shoulders, and I went to the hospital there at the university. ... It wasn't a real bad sore, and so, I wanted it patched up a little bit, so [that] I wouldn't have a repeat like I had on my arm, like there, and he [the doctor] says, "This guy's starving." I was about 125, 130 pounds, ... but he says, "He looks like he's from a concentration camp," or something like that. [laughter] ... I wasn't taking time to eat and there was a guy who'd come around at night with sandwiches and I'd buy a sandwich from him or something like that. ... So, then, they put me in the hospital for about a week, just before final exams. They fed me like crazy, and then, I came out feeling a little bit better about that, but, then, I changed my eating habits some. The food and living allowance on the GI Bill, ... it was enough to eat, exist on, but I wasn't used to picking my own food and preparing [it]. We had to eat out someplace and, sometimes, we'd buy a loaf of bread, or something like that, at a store and stuff like that, but I just wasn't eating right, and then, once

in a while, I'd eat at a restaurant, and that would spend all my week's allowance. ... One of my roommates, it was about that time, maybe that was the spring, shortly after that, his father came to visit and, after his father had left, he told me, he says, "Hey, Gus;" they called me Gus there, because there were so many Johns there. Everybody's name was John, at that time. He says, "Gus," he says, "my father says, 'Take that guy out and give him something to eat. He looks like he's starving,'" and I was too proud. I said, "Oh, forget it," and so, I was too proud to take that up. ... So, I wouldn't accept that free meal, [laughter] but I was eating a little bit better then, and then, not so long after that, I met Adeline. ... I guess she noticed I looked hungry, so, she used to bring sandwiches and cookies, lots of them, and so, that really helped and, of course, that was instant attraction. [laughter] I was attracted just as much to the food as [to] her. [laughter] So, she fed me all the rest of the [time]. Well, I met her the second spring I was there, I guess. Then, ... I went away that summer, and then, it was the fall, and then, the next spring, I went and ... [graduated]. So, I knew her about a year-and-a-half before I graduated and she made sure we got engaged before I went ... off to the grad school in Wisconsin. [laughter] So, then, when I went to graduate school, it was pretty tough at Wisconsin, but I had a real good-natured professor there, that was in the chemistry department, and he said, "Well, you were out of school for a couple of years." He says, "You'd like to get through this, wouldn't you, as quickly as possible?" I said, "I sure would," and he said, "Well, let's do it." There were some graduate students there in chemistry, and probably other departments, they were slave labor and those old professors kept them there for, some of them, ... six years or more. It was work and work and work. My professor got me out in three years and I really appreciated that, but I saw something. At first, I thought I would want to go ... in the academic world and be a professor, or something like that, or a teacher, or something like that, but I saw how cutthroat they were. Those guys would sell their soul for a publication. I know one guy, a whole bunch of the undergraduate students had done a whole lot of work for him and he was a post doctorate. ... After he'd got his doctorate, he was working there for a while, until he could get a good job offer. So, he was getting as many publications as he could. So, he had several ... undergraduates working, doing a whole lot of his lab work, and then, when it came time to publish the thing, the old professor said, well, he wasn't that old, though, but I call him the old professor, ... "Well, these guys did some work. Let's get them in on it." He says, "The publication would be good for them, too." This guy says, "I really need it and they don't." ... The professor didn't argue with him then. He didn't want to have a fight on his hands, but this guy got to be a famous professor himself and I suppose he's still [like that]. ... He was mean to the [undergraduates], but this poisoned me so bad; I just hated that. I saw other examples of that, overworking the grad students and giving your soul for a publication, or something like that. ... When I finally got my thesis written, I had trouble writing it, too, the professor helped me a little, but I ... stumbled through it, and then, ... every graduate student, just about every one, they read a publication just for their professor, covering their stuff. ... Maybe that's the only reason they do it, sometimes, is for the professor, and then, of course, it helps them, too, if they get into a position where publications are a credit for them, but I never gave old Professor Blaedel a publication. I helped on several that he and other people published, but I never got my name on one, and I didn't really want it. ... If I had to do it all over again, I would have written some and got my name on some of them, but I just [did not]. It just sort of discouraged me so doggone much, and so, then, I got a job in industry instead. In fact, when I first was applying for graduate school, the people at Wisconsin, they said, "Well, what do you want to do when you [graduate]? Why do you want to go to graduate school?" and, well, I was thinking about maybe doing some research in animal reproduction, or something like that. I had

an idea of making clones there, fifty-five or fifty years ago, but it was very naïve and it probably wouldn't have worked, but they were talking [about], it was a big, big deal, artificial insemination, with these prize bulls. A bull could take care of several thousand cows that way, or it would be just a few dozen otherwise, and this was fantastic. It was a big breakthrough and the University of Wisconsin had been really into that and they were proud of that and they were bragging about that, that they had done that in biochemistry there, in the ag department, and I said, "Well, why bother with the bull? Just ... duplicate the cow exactly," and they said, "That would be against God's will." Well, I wasn't sure if it was or not, [laughter] but I'd heard that smaller animals, little amphibians or something, small things, did reproduce, ... sometimes, that way and I figured, "Well, hey, if they can do it, maybe you can do it with big ones, too," and I just threw it out. I wasn't really serious about it, but, boy, they were serious about it, that they didn't want any part of it, and that was one of the things; well, that wasn't why I went to chemistry instead. ... Then, when I told them my buddy was from Northwestern, they said he was a playboy, and that didn't do any good. So, the biochemistry department just wasn't too thrilled about having me over there. So, then, when they offered me a teaching fellowship at the chemistry department, oh, I grabbed that up and started teaching right away. That was a very nice experience with the students. ... I worked too hard for the students. I stayed there sometimes during my vacation time, helping them finish their lab experiments, that they didn't get any credit for. [laughter] So, I didn't realize that at the time, ... because they had used up their allotted time in the lab and that was part of the grade, ... how much work they could get done in the allotted time, and I didn't realize that. So, I helped them finish the experiments, but it didn't help. [laughter] So, then, when I told them I might be teaching or research[ing] something, then, I said, "I might work for one of those good chemical companies, too," and I named several of them. They didn't want to hear about that. They didn't want teaching graduate students with advanced degrees ... working for chemical companies, but, well, that's where I ended up, though. ... I studied real hard there, and then, ... the head of the department, his name was Mathews and he was okay. He was kind of a hack chemist. He'd helped [write], was a co-author of some of their textbooks, and his very good hobby was to study the riflings of small arms. So, my father had two handguns, which he sent to me by mail, [laughter] down to the University of Wisconsin, and this guy tested them in his ballistics test, ... but they were stolen from his house many years later. ... As far as I know, they were never found to be used in any crime or anything, but I didn't really want the things, ... and she [his wife] wouldn't want a gun in the house. ... They were ballistics tested, and he was a very, very [well-known]. ... He had been an investigator on the ... Lindbergh kidnapping thing and he had had these, what they called comparison microscopes. It was pieces of wood and nails that ... had been found at the building, the ladder that the kidnappers supposedly had got the baby out of the house [with], and Mathews there, some of the wood pieces and the nails had been sent to one of the Wisconsin labs, and other ones, too, and he had the comparison microscope, so [that] he could look at the two pieces at once. ... Then, [he tried to see] if he could match the lines, ... see if the nails were made at the same factory or if the pieces of wood in the ladder ... matched the grain in the woods from some of that [wood] in that Hauptmann's home in New York, and he had done a little bit of that work himself and he was very proud of that. ... He says, "That poor baby got really mutilated and that was terrible." He said, "Hauptman deserved to get fried," ... but he wasn't much of a chemist, though. He had this book and he used to read out of it. ... Some of the old professors, ... I don't know if they do that in all their courses, but they'd get a standard textbook that ... the students have to buy every year, and then, they ... sell them back to the bookstore and

they charge almost the full price for the used book and, after a couple of years, they make a minor revision in it, and then, everybody's got to buy a new book. They go on in that, and then, after a while, they get old and fixed in their ways and they read out of the book. They don't even lecture, they just read out of the book. "On this page here, it's this and this and this; then, you just do that," and then, that gets pretty dead after a while. Well, that's what it was. It wasn't all that [way] at University of Wisconsin. In fact, I never ... took a course that the guy actually did that, but there were a couple of courses, that were required courses, that I was supposed to take, but, then, ... the people that were assigning the courses there, the ones that were registering us for the chemistry department courses that we had to take, well, I said, "Well, I don't know about this. I think I took something like that at Northwestern, in my senior year," and they said, "Oh, no, no. This is the only place in the world that this course is taught," and it was, [in] some of those cases. This one guy, he shows me a textbook. He says, "This is the only lab in this whole world that can do every one of these experiments," and, if I would have been smart, ... well, if I would have been dumb, I would have said, "Hey, it's because you guys made them and that's why they can only be done here. Nobody wanted to do them," [laughter] but I very politely didn't say that, but that's why it was. So, then, when I went to the professor who taught the course and I told him, I said, "I took this course at Northwestern," he says, "Oh, my God." He says, "I wish we had that course here." He says, "It was way better than our course. You don't have to waste your time on that one." So, I felt good about that. [laughter] So, then, I took my [course], wrote my thesis and did my [defense]. Oh, I made sure that, before we got married, I was done with all of my courses, except there was one course that everybody passed. ... You just attend class and make a couple of pretty pictures. ... That was Soren's course on ... the phase diagrams and stuff. ... So, I had some research work to do. So, she'd come over there and knit or do something like that, while I was doing my research, and then, she got a job in the lab across the hall. So, she would be able to wave at me from the lab where she was working, sometimes, and one of these tools that I used in the Navy work, I'd gotten something that was like that, even better, at a gun shop, or a shop, after I got home. ... Then, she found that, it was a grabber thing, that you could reach things ... that were in a remote place. It was the first one I'd ever seen. I'd never seen one before exactly like that. ... A salesman had a real good one, so, I bought one, and then, one day, this guy dropped his screw into this real complicated instrument, which somebody else had built, designed it and worked on it for years, to get it built exactly right. ... He had dropped a screw down inside the guts of it and he was just sweating bullets. He didn't know what the hell to do. There's no way he was going to take that machine apart, because he'd never get it apart. So, here's little Adeline over there and she says, "Just hold on a second there." So, she comes over, she says, "John, you have that little grabber thing of yours?" and I reached down in my drawer there. She goes out there, and did you grab it or did he grab it?

AL: I did it.

JL: She grabbed the screw out of there for him, [laughter] saved that guy's life, just about, that little thing. I've still got that little thing, and it's better than the ones they sell in the stores now. The ones in the stores, their jaws aren't made of real high tempered steel. This one here, my daughter got her vacuum cleaner plugged, the hose. It was plugged and she had a regular grabber and she was grabbing there and it wouldn't grab. I said, "Here, [we will use] this one that I had from my Navy work," and I just grabbed in there and pulled [it] right out. It had those stainless steel teeth in there, with a strong spring there. [laughter] Oh, it just ripped it right out of

there. So, that was my Navy training, still working, and it still works, even now. I still fix all the electric stuff. Last week, I gave a workshop on using ... those miniature Christmas tree lights for simple circuits for grade school kids. You can get them for free, bulbs like that, well, similar bulbs, ... you know, not really similar, but that would be equivalent in the circuit. The ones you'd buy in a store would cost a dollar or two, and you can get them for free, hundreds of thousands of them, and you just cut them up and you can make all kinds of electric gadgets. ...

AL: Christmas tree lights that go dead in one bulb and the rest are all fine, and they're great.

JL: ... It was a ... New Jersey teachers convention of science teachers of primary grades and it was only a few people [that] came up, but they loved it. I showed them. They said, "We've been having so much trouble at our science fair. Some of these things just don't work right." So, I showed them exactly how to put these things together, and they could ... even use old batteries for the thing and it wouldn't cost them a cent there. ... They said, "This is great." So, even if there were just a few people, they loved it, and so, it worked out good. ...

SH: Where did you go to work after you left Wisconsin with your doctorate?

JL: Oh, that. In those days, ... it was ... a graduate's market there. I had visits, many of them by airplane, in those days. [laughter] I went to Los Alamos. I went to three places in Texas. I went to Oklahoma. I went [on] ... a trip, by train and plane, out to the East Coast here. I went to three places of DuPont. I went to Standard Oil and Texaco and Cyanamid. They sent recruiters to the chemistry department there and they'd sign them up. You'd sign up, the sheet, to talk to these recruiters and I probably had fifteen or so offers. ... If you didn't have a PhD in chemistry, you had trouble getting a job. ... Bachelor's or master's, they ... just didn't really count. The master's, especially, that was just a pure waste of time. It was a "loser's degree," they said. So, when I talked to my professor about getting a master's degree, he said, "Don't waste your time on it." He says, "If you get drafted into the Korean War from that old Navy Reserve unit that you were in," he says, "you think you're loose of that, but, if they still go after you, they might," they got a couple other guys from the chemistry department," he said, "but, if they get you, then, you write a master's thesis real fast, and then, we'll get that for you, but, otherwise, don't waste your time on it." So, then, I didn't. So, then, people [say], "Well, why didn't you get your master's degree?" Hey, I didn't need it. ... Like they said, it would have been a waste of time, ... but, if you had a doctor's degree, in chemistry, especially, you could get a job just any place, just about. It was a blank check to just get a job, really good offers, just anywhere, and I picked this DuPont place. I visited three or four DuPont locations. ... New Jersey here and Delaware are just the DuPont states. So, this photo lab, over in Parlin; I don't know if you've ever heard [of] DuPont at Parlin, in Sayreville. Well, when I visited there, it was a photographic lab and ... I liked photography a little bit. I'd done a little bit of experiments at Wisconsin there and we had an instrumental course that I had taught there as part of the chemistry department. ... We had done photography experiments and stuff. So, they showed me the lab and all the different things. ... I was the first analytical chemist that they ever interviewed, that they'd ever met, I guess, and so, they said, "Well, we think that you might fit in here," and they said, "What do you like about this place especially, if you do like it?" and I said I did like it and I said, "Well," I said, "it reminds me of this [H. L.] Mencken, this newspaperman, that he was a kind of an iconoclast. He used to write nasty things about people, really stir people up about it, and he said something about, ...

'Scientists,' he says, 'they're not looking for wisdom or new truths or something like that.' He says, 'They're like dogs, sniffing at rat holes for interesting things,'" [laughter] and I said, "You guys [have] got a lot of real interesting rat holes here," and they took it in the right way. They said, "Hey, we like that," and they offered me a job, [laughter] ... and I found a lot of rat holes there. I sniffed out a whole bunch of them in thirty-three years. So, is there anything more? ...

SI: I have one or two questions about Northwestern. You mentioned that there was a division between the frat boys ...

JL: The Greeks.

SI: Yes, the Greeks, and the veterans.

JL: Yes, especially the veterans. They called us "hot rats" and they had some other derogatory names, which I don't remember right now, but, well, they had to do it. ... It was their patriotic duty, this big wave of GIs that came along. ... The first couple of years right after the war ended, the GIs came up here and they were the mainstay of their football teams. In fact, even when I was at Great Lakes, way back when, in one of my letters, I went to a football game. It was the Great Lakes Naval Training Station against Notre Dame, and, here, it was Marion Motley and Harry Grant, you know, used to be the coach ... of the Vikings; oh, half of that Great Lakes team were guys that were All-American or coaches or real super pros afterwards. ... They just whipped the pants off Notre Dame. [laughter] Of course, ... it was just at the end of the war and they hadn't gotten any veterans in there, and they had just had these college students that had gotten, somehow, ... deferments, or something like that, or they weren't drafting them quite so much, and, here, they were real tough veterans who had really been in the war. ... Some of them had played on teams, part of that [time], as their Navy [duty]. ... I don't know if they had exhibition teams. ... Some of them did play ball. Like, they had exhibition bands that played, but, sometimes, they had teams that spent a lot of their time playing, too. So, ... they were playing against a pro team and, boy, they found out about it, too, [laughter] and so, then, I remember, at Northwestern, I saw Harry Grant. He had played against us at Ashland High School. So, I knew him and I went out to see him there, while he was at the game. He was playing for Minnesota then, and I think Minnesota [won]. I don't know if Northwestern [won]. I don't know who won that game, but I talked to him. I said, "I remember you from Ashland." He said, "Oh, you were one of them guys." [laughter] So, that's about all it was. We used to call him Harry, but, now, they called him Bud now, just when he was in [college]. So, now, you were talking to me. What more was it about? oh, the Greeks. ... Let's see now, what other humiliations did they give us? [laughter] Well, they had all their fraternity parties and stuff like that, and this wasn't directly to do with [the] Greeks, but it had something to do with the social atmosphere there. It was probably my second year there. It was the only time I was called in front of the dean for disciplinary action, the dean of men. ... Our little hut rats had had a big beer party, a big alcoholic bust, in this dry town. Evanston was dry there, no alcohol sold there, so, they had to have their party outside of the city limits, and then, we were assessed that on our tuition bill, or on our bill. ... I objected. I said, "Hey, I come from a family of alcoholics, ... and I don't drink for very good principles and I don't think it's a good thing, anyhow, and, here, you're trying to get me, to force me, to pay for this bill for this illegal party, or I'll be kicked out of school as being a non-conformist." That's what they said. If I didn't knuckle under, I would

get kicked out of school. The dean says, "You have to be part of the team. You're part of the group." He says, ... "We're not into this arbitrary;" I don't know what words he used, but like I was being too much of an individual ... when I was supposed to be part of the team. ... The group had chosen that and I had to go along with it, absolutely. Well, I knuckled under, but I didn't like it and that same graduating class, for their class gift, ... it was a small scholarship for someone who was socially active, but couldn't afford it. That didn't go very good with me. [laughter] I had to pay that assessment, too. ... I made a minimum payment for that, but under protest.

SH: Socially active, but ...

JL: Too poor to. ... The expression is that, "You've got a champagne taste and a beer pocketbook." ... It was a small scholarship for someone, and that's Northwestern, at that time. I don't know if there's still a little bit of that left or not, but that was it. So, I got a wonderful education there and I learned to write better, and they really put me to the test there, sometimes, and I almost starved to death, too, but they gave me a hell of good education. ... There was some social stigma there, that I knew all the time that I didn't fit, but it didn't bother me. I was so damned determined to get that [degree]. My father told me that he was so bitter about going to that short course ... for a few weeks one year, and then, wanting to go finish it the next year. ... I'm sure ... the cost wasn't that much, and they said, "Well, it was too much and ... you don't deserve it," or something like that, and so, they wouldn't let him. He was bitter about that, all his life, and, when he heard that I was going to college, he was very happy about that, and on the GI Bill. He says, "Get in there and pass your courses and get as much of that education as you can, as fast as you possibly can, before them damn politicians cut it off," and I was on there. I was on that escalator and I just hung on. ... It was a little step in the middle and I jumped right to the next one and hung right on to the next. ... I was just hanging on then. I didn't get real high grades or anything like that. In fact, at Wisconsin, ... it was a "B" or "B+" [average] and they said, ... "We ordinarily don't take people with this low of a grade in here. We'll give you a chance, but don't be surprised if we kick your ass out of here in a short time." [laughter] Well, my professor took care of that. So, that was good. I got through. ...

SI: In this time period, in the 1950s and the late 1940s, were you politically active at all? I am curious, because Wisconsin was McCarthy's state.

JL: What kind of a state?

SI: Joe McCarthy's state.

JL: Oh, yes. I wrote at least two letters to ... Senator Joe McCarthy, oh, yes. It wasn't really politics, though. I urged him to vote for ... building the canal. So, that opened up the Great Lakes to the St. Lawrence Seaway. I wanted [him] to be sure to do that and I was very, very strong for piggy-back trains, that I said, "We don't need all those trucks on the highway. The railroad system is a very efficient system and the trucks just clog up those little highways," I said, "and we don't need to build so many big highways. Just get those ... trucks on the train cars, and to the maximum, and then, just use trucks, just for the local [delivery]," and he says he thought that was a good idea, too, but that didn't come on for many, many, many years. ... He

thanked me for my thing, but I did something that he wouldn't have liked, if he would have known about it. ... In fact, I was on my interview trip out to the East Coast here. I'd just visited DuPont and I was going to Beacon, New York, to visit Texaco and I remember two big things happened on that trip. Joseph Stalin died while I was away on that trip, and that was a pretty big thing. He was a real bastard. He was mean and smart. He was a priest and he challenged God. He says he was afraid that if he wanted to do any mean things, that he'd get done in some way, and so, he challenged God. He says that, "I don't believe in you and your rotten things," just the awfulest things he could think of, straight to God, and he says, ... "And then, God didn't do a thing about it." He says, "Well, the hell with him," and he went out and did all the nasty things he wanted to do. Well, so, when he died, he had done a lot of awful things, and so, I felt good about that, but, then, it was during the McCarthy investigation. ... It wasn't quite the end of his thing, but I think the worst was over then. I don't know if they ... just about had him cornered in. I think he was still working for a couple of years, but it was the height of that investigation, that witch hunt, and I thought that was awful, awful, awful. ... Actually, while I was at the University of Wisconsin, the Rosenbergs were executed, and there was an obviously Communist organizer who came over from Milwaukee and gave a big fire-and-brimstone talk, just a fiery talk, about that the Rosenbergs shouldn't be executed. ... His main points, I remember it real well, he says, "In the first place, they didn't really steal any secrets that were worthwhile and they didn't give any away. It was just a lot of stuff [that] was cobbled together there. The Russians were smart enough; they could have done it anyhow," and that's what actually happened. It was [that] they'd got some stuff, maybe, and then, ... he says, "They didn't do it, and even if they had, it wasn't that important." That was the two things he said about that and I was at the meeting there. I don't know if there were FBI guys looking, taking pictures or anything like that. So, several years later, a couple of years later, when I went to Los Alamos, they wouldn't let me in their secret laboratory, because they didn't give the clearance to anybody until after they had been employed, but I was interviewed at Los Alamos to be a weapons development chemist. ... It would have been interesting work and I wanted to see this super analytical chemist there, but he was too busy to see me and I was kind of disappointed about that, and I didn't think I wanted to be involved in atomic weapons development anyhow. ... Then, the third thing, "What if the FBI had taken my picture at that Rosenberg thing?" [laughter] That would have been very embarrassing. That would have finished me, probably. So, I didn't want to dig that up. Yes, that was in the back of my mind there, just who was there. [laughter] ...

SH: What were the politics of your family? What did they think of FDR?

JL: Oh, I remember, once, ... I was too little to know about when Roosevelt was elected the first time, but, when he was running for his second term, I remember, that was after I was living with my aunt and uncle. Well, my mother's brother was very, very bitter about his sister dying. She died from a miscarriage, or an abortion, and my father hadn't been very sympathetic about it and he sort of berated her a lot and maybe that's why she had the abortion, and then, she died from it. Well, so, her brother was very, very bitter about that and, I remember, it was during the election campaign, Roosevelt against [Alfred] Landon, I think it was, and my aunt says, "Well, I guess we'll have to vote for Landon." She said that and my uncle heard her, my mother's brother. He says, "Oh, no." He says, "We'll have a revolution all the way if Landon gets elected." He said, "We cannot stand it." He says, "Roosevelt is fixing up the country and we're going to back him all the way," and he was very adamant about it. ... I never did know how he made a living. He

never married. He lived at home with his mother, and he died, oh, why, I guess he outlived her some. She died in '43, when I was in high school, ... during noon hour at school, or maybe I got a pass from school to visit my grandmother when she was at the hospital there. She had broken her thigh, her hip bone, from falling. She was a skinny little one and my aunt told me, just recently, that she had fallen in the snow and she laid in the snow and almost froze to death before they found out, and then, she had the hip, broken hip, besides. ... Then, they took her to the hospital and she just survived from that, and then, she died from a blood clot afterwards. I remember seeing her in the hospital. ... She looked at me a couple of times and she says, "Oh, oh," she says, "you're Johnny." She says, "Oh, yes, and you're big and tall, like your father." That's what she said to me, ... but Magnus, the son there, ... he didn't like my father at all after that. ... He was a shoemaker, a leatherworker. Maybe he made some of his money fixing people's shoes, and there was a tavern where they did some small, petty gambling there and they had little leather cans they called dice boxes and, when they got worn out and the thread started coming loose and stuff, they'd bring them over to him and he'd fix it up. ... He sort of did that, and then, odd jobs and stuff like that. I don't think he had any special job, and then, he died, I think, the week that I graduated from Northwestern, because it's in one of the letters that I got. I didn't really know that, or I didn't remember it, and my grandma died while I was in Texas, my father's mother, but they didn't tell [me] about it, because they didn't want me to try to come home for the funeral or something like that, because I wrote in a lot of the letters [that] I was going to go and visit Grandma. ... She might have already been dead. So, okay, now, what were you asking? I forgot what the question was now. [laughter]

SI: About Roosevelt?

JL: Oh, yes. Well, so, my uncle [said that], and I don't know what my father felt. I thought my father was a Republican all the time, but, later on, I talked to him about Truman. ... It was many, many years later. He says, "Oh," he says, "I vote for the Democrats." He says, "Those Republicans'll steal your money every time," ... but my aunt and uncle, they were Republicans, while I was living there, at least I know. They were considered to be sort of some of the Scandinavian elite. He had the first tractor in town. ... He built a sewer system and they were the first ones that had inside, indoor plumbing. They were the first ones that had electric lights, because he was an electrician. ... They were considered to be just a little bit uppity and she was a schoolteacher and ... he worked. ... Like I said, he was a very skilled guy. He could do just about anything, but he was very anti-union. He worked for seventy-five cents an hour, doing expert electrician [jobs], painting work, all kinds of stuff, when the union workers, who didn't know nearly as much about it, were getting a buck-and-a-half an hour, and he was just so proud. He wanted to work, while he felt sorry for some of those poor Croatian farmers, too. He worked practically for nothing for some of them. He just worked himself to death there for [them], and had he been in a union, he could have been well-off, because he knew the work, probably better than all the union workers, but, ... somehow, he just didn't like it. Now, his son became a union ironworker. He wasn't militant and he wasn't mean or anything like that, but he got union wages all his life and he's still working at it, now, part-time, ... but his father never, never wanted the union. His father hit me once. I talked back to him, but, otherwise, he never hit me, but my aunt used to spank us regularly, or me especially, when I'd talk back to her or something. She'd have a little stick or something like that. ... It didn't bother me too much, but I was pretty tough then. [laughter] ...

SH: Thank you very much for taking the time to come in and talk with us.

JL: Okay. ... I think the RTs have a story to tell, and it's not been told. Somebody might have told it already, ... but I'm not aware of it. ... The Navy had a little, bitty book. It was a thin pamphlet, had a dozen pages or something like that. It told about the technician's war. It said [they were] the people who, they didn't fight in the trenches or they didn't aim the torpedoes or bombs or stuff, but they were the ones that really made those war machines work, ultimately, especially the radar stuff. ... There was always that little book about that, and especially the Navy technicians, and I might even have that book back in my stuff someplace, buried in the basement, ... but I had seen it sometime just about when I got out, ... but that's the only time I've heard of anything about the RTs at all. Somebody might have done something a little about it already, but I'm not aware of it, and I've kept track of things pretty good during my career. ... I thought if I was going to track down the RTs, I would just go by the grapevine, like these people I knew, about a dozen of them now, and then, they would all know a dozen and they would go back quite a ways. You could probably cover that real good, if we wanted to. Another thing, I would look in the *American Men of Science* and I would look just about the time that I got out, ... minus two years and up to three or four years later, and I expect ... many of them would say "Navy RT" during that time. I think I could find them, *American Men of Science*. ... I never looked for them, but I'm pretty sure they'd be there, but, then, I got the old Navy picture of all the guys that were in our group. ... I don't even remember the names of probably a dozen of them. I've made a list of the ones [I know]. ... Oh, yes, here's my list of the guys I remember. Some of these, I remember, and some of these, I could contact right now, about four or five of them, but the rest of them, I remember their names from fifty years ago, but, then, most of them are probably still around. ... Well, is that about it? ... I think there was probably a technical and an economic impact from this bunch of guys hitting that [RT program]. Not many of them got to be plant managers or presidents. They weren't super ambitious to be big, tough leaders, as we didn't get leadership training, and most of them weren't super leaders. They were super technicians, though. Professional scientists, they would be; ... some of them would be in those, what they call the "ivory tower scientists" and some of them were sort of engineers, hand scientists, do, make things, make things work, build them, design them and stuff like that. So, a lot of creativity, but not tremendous ambition for real high leadership, and they didn't want to be big bosses and mean leaders or something like that, but maybe some of them were. I know, I saw some of them in graduate school there [that] I remembered from the Navy, at Wisconsin. They took some of our chemistry courses. Some of them were in medical school and stuff like that, so, in lots of fields, and a lot of them were in biochemistry. They all scattered. ... Pretty much all of them went into science and education and science and medicine and engineering. ... I'll bet a lot of them got advanced degrees, too, ... but not many of them got to be real big bosses, I don't think.

SH: We will look for other RTs. Thank you very much.

JL: Well, if you want, I can help you, if you want.

SH: Okay.

SI: This concludes our interview with Mr. John Lofstrom on March 22, 2000, with Shaun Illingworth and ...

SH: Sandra Stewart Holyoak.

SI: Thank you.

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

Reviewed by Shaun Illingworth 8/3/07

Reviewed by Adeline K. Lofstrom 8/12/07