RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY

NEW BRUNSWICK

AN INTERVIEW WITH CHESTER SZARAWARSKI

FOR THE

RUTGERS ORAL HISTORY ARCHIVES OF WORLD WAR II

INTERVIEW CONDUCTED BY

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Kurt Piehler: This begins an interview with Mr. Chester Szarawarski ...

Chester Szarawarski: Szarawarski.

KP: Szarawarski, excuse me.

CS: Yeah, you have to take it one syllable at a time.

KP: On September 29, 1995 at Rutgers University in New Brunswick, New Jersey with Kurt Piehler and ...

Andrew Zappo: Andrew Zappo

KP: I'd like to begin by asking you a few questions about your parents because I am sure there's some stories there. Both your parents came from Poland?

CS: Correct.

KP: And what led them to come to the United States?

CS: ... We never discussed it, I just assumed that they became aware just like many others that there's more opportunity in the U.S., but with my father there is a little more of a history, because ... in Poland, as you know, Poland was partitioned, and it was under Russian and German rule, and at the age of seventeen he would have been drafted into the Russian army which he didn't want to do, and if he had refused to comply it would have been tough on him and tough on his family, so before that he turned seventeen he decided that he would leave, which he did, and he went to Germany, and he worked in Germany probably in the coal mines for about eight years. And from Germany he immigrated to the U.S. and he went, this is what he was familiar with, the coal mines, so he went to work in the coal mines, probably in West Virginia or Pennsylvania, and eventually he, there's a fairly large community of Polish people in Passaic, New Jersey, and he migrated there, and that's where my mother was located and, of course, I guess, in about 1916 they married.

KP: Your father worked, coal mining is a rough occupation. Did he ever talk about his experiences?

CS: No, strangely enough he never discussed, almost never. To get him to talk about it you would have had to ask him a specific question, and as we were growing up, we were kids, we only knew what was happening in our neighborhood. I mean we were, you know, playing ball with the local neighbor kids in a vacant lot or something of that sort, that's what occupied our time.

KP: What led your father to come to Passaic?

CS: I don't know, just the fact, probably hearsay.

KP: But he never said how much harder the coal mines were?

CS: No, no never, never talked. ... He did occasionally use a German word to indicate that so we knew he had some German background as a result of working there.

KP: Did either of your parents stay in touch with their family in Poland?

CS: Yes they did, I would say in the '30s particularly ... on my mothers side, and incidentally you had a question about education, my father never went to school, ... but he did learn to read, because the way I understand it, my mother would not marry a man who couldn't read, and so he had had some friends teach him to read in Polish, because ... there was a Polish community there, and eventually from that he sort of picked up the English on his own, and then he became a reader, and as a matter of fact he was very well-informed on news events of the day.

KP: So your father was very literally a self-taught man?

CS: Yes.

KP: You don't know how your parents met?

CS: No.

KP: When your father and mother met, where was your father working, where was your mother working?

CS: Now I don't know where they were working at the time, but in the Passaic area there were factories, textile mills, and rubber mills, and he worked for many years, I would say from at least I know from beyond 1925 to about the early '40s at the U.S. Rubber mill in Passaic, they had a huge, huge factory there, huge factory buildings actually, multi-story buildings and he had worked there.

KP: When you were growing up, where did your father work? Did he continue to work in the mills?

CS: Yes, he continued to work in the mills. And during the Depression, ... the mills worked two or three days a week, which he was very satisfied with in other words, it was a matter of they shared the work and there was some money coming in.

KP: So your father never faced a point where there was no work at all?

CS: That's correct, and also, my mother ran a small grocery store, and so between the two we didn't feel the pinch. As a matter of fact, by today's standards, and the things we owned and the things we had and the clothes we wore, we were poor, but didn't know it, and that is by today's standards, we never considered ourselves poor.

KP: In other words, you were doing better then you neighbors?

CS: I would say, again my neighbors also were probably in the same boat, they had work maybe two or three days a week most of them, and well we knew that, at least in the immediate neighborhood, within I would say, in the Fourth Ward in Garfield at the time, and people did lose their houses, I know some instances, but it was a working neighborhood, and I would say that the majority got by.

KP: Was it primarily Polish or was it other groups?

CS: It was a mixture; it was a mixture. ... On the street where I lived there were well, Polish, at least three or four families on the same block, there was Dutch, directly across the street there was an Italian family, they had five or six children in a very small brick house. There was, I guess I mentioned there was a Dutch, a Hungarian, Italian, but primarily Polish.

KP: The church you went to, was it a Polish-speaking church, or was it an English-speaking?

CS: It was Polish-speaking, in other words they would have a Mass in Polish. Actually in those days the Mass was actually conducted in Latin, although it was a Polish congregation.

KP: Yeah, I'm so used to Masses now being in English, that I forget about the Latin. My step-father used to say it in Latin.

CS: And my father was very annoyed at that, he rarely went to church. My mother was more inclined to go to church.

KP: Was your father a skeptic or was it more? ...

CS: Agnostic, yes, definitely.

KP: You mentioned that you look back on, and in a sense realize, how by today's standards you would be considered poor, yet your family owned their home were able to make mortgages.

CS: Correct.

KP: But you did not own a car?

CS: We did not have a car, the first car we owned, you see I used to work on farms summer vacations, starting when I was what, about fourteen or fifteen. And I guess in the last year, I bought a car, and that was the first car in the family. I paid 90 dollars for it, and it was a '32 DeSoto, and I remember it very well. Then I went away to school, after high school, to a technical school in Pennsylvania, so I left the car at home, and my younger brother used it, and I remember their saying that in order to economize, they would use half gasoline and half kerosene, or some other cheap substitute. ...

KP: Although your parents were able to get by, you still grew up in a very tough time.

CS: Right.

KP: How did your parents feel about Roosevelt and the New Deal?

CS: They loved him, they absolutely loved Roosevelt. ... He was the greatest person on Earth. ...

KP: In their ...

CS: In their mind. ... Well you had the WPA and I can still see the picture of it when they were putting a water line, I lived on Shaw Street, and ... from the water plant, the Garfield Water Plant was located in East Paterson, they were pumping from artesian wells, and they were laying ... it must have been a 36 inch line, boy it was a very large pipe, they put into the street, and there were crowds of men with picks and shovels digging the hole ... to put that pipe into the ground and without the WPA those people would have been without a job. They had a job and they accomplished something, they were productive.

KP: So the New Deal was not an abstraction for you and your family, you could see it?

CS: Right, we could see the results, right. Well there's also the CCC. A few of the ... neighborhood kids were in the CCC, one in particular that I remember, this is after he came back, after he had been in it, and there is some similarity with the CCC and the military, I was in the military, and whenever you had a formation that marched you would sing, and well the second lieutenant who was in charge of the group, ... he would demand that you sing, and not only sing, but sing loud, because he was competing with another lieutenant and he had his bunch singing, so every time you marched you sang, and so when he got back from the CCC camp, I remember, not to far away, it was in East Paterson, ... it was a built-up area, it was still wooded area, and we'd go up there and make a campfire and this fellow would sing the songs that ...

KP: He had learned in the CCC camp?

CS: ... Right, and we thought it was great.

KP: Did any of your brothers or you ever think of joining a CCC or work in any of the WPA programs?

CS: No. ... I had three brothers, I and my older brother and younger brother, we all worked on the farms in Paramus during the summer vacation. When I say that we worked there, I mean from like seven in the morning to six at night, including a half a day on Sunday, because a half day on the Sunday load to market had to be prepared, so once that was done you quit for the day, but otherwise you worked all day long, ... and it was meaningful, the family could have used it. ...

KP: You gave most of the money you made to your family?

CS: It was automatic, you never even thought about it, you came home, "Mom, here's the pay." And she [said] , "Well here's a dollar and a half, but be careful don't spend it." [laughter]

KP: Did your mother run the household financially?

CS: Financially, yeah, she handled it all. Same way my father's check was handled by my mother, and once a week ... we walked down to the bank with the Christmas Club, I don't know that they have it today, but you'd have the Christmas Club which means you made a regular deposit every week and in the early in December you got a check for a certain amount of money, and everybody did it. People were very conservative then.

KP: In terms of money?

CS: Right.

KP: How did you end up working on farms? Why the farms as opposed to maybe a factory or a store?

CS: Well first of all, it was for only a certain period of time. It was during the summer vacations, and in the spring ... it would be like Saturdays and Sundays. But once school was out we worked every day. And I don't know, I guess one fellow started it and we became aware of it, and so ...

KP: So a lot of your neighbors worked on the farms?

CS: I wouldn't say a lot, but a few, ... and we would travel by bicycle, it was about an eight mile ride to Paramus, to Midland Avenue in Paramus, they had a lot of celery farms, ... not just celery, but also garden type vegetables.

KP: It must be a surprise for you when you drive by Paramus now?

CS: It's all built up, I can remember. ... Today it's so different, entirely different, and the thing I remember, where the ... Garden State Mall. ...

KP: Oh yes.

CS: ... That was a swamp, ... now somebody was smart enough, ... there was a swamp in which you couldn't build, and the land was cheap, and there was also a hill not too far away that wasn't very good, either, and he combined the two, by cutting down the hill and filling in the swamp, and now you've got a very valuable piece of real estate.

KP: You're not the first, I have heard that someone else, I think he had an opportunity to buy that swampland, and he dismissed in the '60s and said, "Who wants to buy swampland?"

CS: And it's the same way with the Willowbrook Mall. I remember that the people who bought it were smart, and they held it for a number of years, but in order to hold property you have to at least pay the taxes, and so there was an ice skating rink, and I guess the ice skating rink made enough money to pay the taxes. Well the value of the land depreciated. So you as a young man, thinking of making money someday, buy a ... large tract of land that nobody wants and it will grow for you.

KP: It sounds like your family moved out of Passaic to Garfield.

CS: Initially they moved out of Passaic. Well, where they lived was a tenement area, like four family buildings, apartment buildings, typically ... a crowded congested area, what was then considered crowded. We moved to Wallington, which was less densely occupied, actually my parents opened a store, a ... grocery type, where people would buy things that they needed ... from day to day, ... and they were there for very short period of time, I don't know if it was a year or two or more, but it wasn't long, and in 1925 we moved to Garfield, which at the time was very sparsely populated, and then they found that there wasn't enough income for two from that store, because there were lots of others. This was in the middle of the block, on the corner there were ... three little stores, ... and it was initially intended to be a butcher and grocer, they had a huge icebox ... from floor to ceiling, walk-in type. But it was never really used, 'cause there just wasn't enough business and so my father worked at the U.S. Rubber Company, and my mother ran the store.

KP: Did your father belong to a union in the 1930s?

CS: No, no there were no unions.

KP: Any attempts that you remember?

CS: Not where my father worked, at least not that I'm aware of, I was aware of unions in the textile business, in the textile field, because I guess ... there was a man in the neighborhood who was in jail because of some activities that he was involved in during a major strike, ... and I knew his family, as a matter of fact, his son was about my age, and we palled around a lot.

KP: When you went to school, what expectations did your parents have for you and your brothers? Did they have any visions that you would go to college?

CS: No, none whatsoever. We became aware, and this through my father's efforts that there was a technical school in Alliance College. ... Actually, ... there was Alliance College and Alliance Technical Institute, Alliance College was a junior college with courses like pre-law, pre-med and Alliance Technical Institute had courses in machine shop training and machine shop practice. ... Machine shop practice ... would take half a day, the other half a day was classwork, and math and, you know, general college courses, chemistry and mechanical drawing and shop theory, and ... several others, metallurgy, things of that sort. And so we arranged for my older brother to go there, and it was a two year course and he did well in it, and got a job immediately

as a result of it, and so ... while I was in high school I never gave it a thought. There was no future planning in my mind at all.

KP: What subjects did you gravitate toward to?

CS: Actually, the thing that I regretted later on, I had a lot of natural ability, and I could get by without doing any homework, and in algebra, freshmen algebra, never did any homework, I could just get by, so as a result my background in math was very weak and that I always regretted as a poor start. ... Well, I guess I paid a little more attention to geometry and perhaps a little more in trigonometry, but still it was a very weak background in math, but I liked the general science course, and as a matter of fact, if there is such a thing as favoritism, I had the first seat in the first row, and the man who taught the general college chemistry would direct his attention to me, so I paid attention, and I did homework in general science because he would act as if the rest of the class was a bunch of dunces and he's talking to me because I was smart, and so I worked at it. The same way with chemistry, I studied, and did my homework in chemistry faithfully, and I liked the course and I liked the man who taught it did an excellent job. And I belonged to the science club, I was president of the science club, the editor of the science club newspaper, and ... so ... that was really the direction that I was going into.

KP: How active were you in your high school?

CS: Well I was involved in football, I was on the team for four years, we had a state championship team several years. As a matter of fact in 1939, we were national champions, we ... played .... at the Orange Bowl on Christmas Day in 1939, and we won that game, so we were proclaimed national champs.

KP: Which was a big ...

CS: A big deal at the time. Oh yeah, ... as a matter of fact, you know, 50 years later, they had a celebration to celebrate 50 years of that football team, and, of course, I was mostly on the scrub team because ... as a freshman I weighed about 119 pounds, and we had a line that was about 190, and the year that I graduated, my fourth year, I weighed about 144 pounds, and again we had a very powerful team. ... So my contribution was mostly on the scrub team which means that the assistant coach would go out and scout your opponents for the following week, and come back and teach us their plays, teach the scrub team their plays and we would play against the varsity on Wednesday or Thursday, so the varsity could at least know what the plays were, what to expect. But I did play, I got credit for about twenty quarters, and I did earn a varsity letter for two years.

KP: And you got to travel with the team.

CS: I got to travel, yes. ... That trip to Florida was the first time that I was out of the state.

KP: You must have very distinct memories of that.

CS: Yeah, it was interesting, it was a pleasure.

KP: What did you think of this different part of the country, Florida?

CS: Well, I was curious about everything. You know, as the train went by, my eyes were out the window all the time, and the same way in Florida, we walked around just to take in the scene.

KP: Andrew?

AZ: About your football experiences, you said that rest of your teammates were like you and interested in everything on the train ride down?

CS: I would say so ... yes.

AZ: Do you think that this was the first time out of state for most of your fellow class members?

CS: Probably, yes. ... When you're traveling with a team, you have a bunch of guys who play together and [have] known each other for many years, and there's a ... lot of camaraderie. I mean, there's kidding, ... and it's a lively group, there is always talking, kidding going on. ...

KP: Was there any notion among your teammates, especially your better teammates that they would get football scholarships, did that factor in a lot?

CS: I think that was a factor, yes, and many of them did.

KP: But you did not think that you would have that opportunity?

CS: ... No, no, I just ... physically ... didn't have the capability that they had, I was interested and I enjoyed the sport and I liked traveling with the team.

KP: It sounds like you did do quite a bit of traveling even for today's teams.

CS: Even within the state we traveled a lot.

KP: In 1940, when you graduated, how many people from your high school went to college immediately?

CS: It's hard to say, because we went off in so many different directions. When I went away to school for two years, I just lost contact with many. ... One of my good friends, palled around with in high school went to school to a textile school in Philadelphia, it was textile chemistry and dyeing and that type of thing, because his father was in that type of occupation. And ... there were several that I know of, who went away to college. ... I would say a fairly good percentage, maybe not 50 percent, but still.

KP: But it was not uncommon for people to go to college?

CS: Anybody who had any aptitude or desire, I think they did.

KP: In a sense followed your brother's path?

CS: Correct.

KP: But you were also living away from home, how were you able to afford this?

CS: It was very inexpensive. I think that this school was subsidized by a Polish fraternal organization, and so ... the cost to us was like 250 dollars a year, now I don't know how you would equate that to today's times, this is what, how many years ago-- 1940 to 1995, that's what 55 years.

KP: Yes.

CS: ... Let's decide at what rate does money double? Back in those days it was probably about twelve years, and for a period of time it was only like seven or eight years, if you said every ten years, that would be, let's two, four, eight, 16, 32, well if you multiply that out, it's actually probably more then that, it's probably ten years, ... it's probably about 50 times that today in dollars. And, of course, ... it was a self contained unit. ... The most that you could spend is to walk downtown to get an ice cream cone, ... and all your other needs were taken care of, you have a place to sleep, ... and you're provided three good meals, and so you ... had no spending money, I probably didn't spend more then ten dollars in the whole year.

KP: You mentioned earlier that school provided general technical training. What did you think you would do from this training?

CS: Well, probably with that kind of background, thinking about it now, and seeing how other people progressed with this type of background, it was an excellent training in machine shop, because you not only operated all of the machines, you were taught, you just didn't operate a single machine as you would in a factory, you were taught to operate all the machines. You had shop theory, shop mathematics, and many people on that basis were able to get a start and be recognized in the factory or in the shop, and advance because of that early recognition into a management, supervisory type positions, and many branched out and started their own shops. I had a lot of drive at the time, even in high school as I indicated to you, president of the science club, and editor of the science club paper, and was active in football. Even in grammar school I was president of the eighth grade class, and I think I had enough initiative and enough drive and had I followed that path I could have probably wound up ... starting a business of my own, and as you know, people who start up a business of their own very often are far more successful and ... accumulate more wealth than people in a professional career working for a large company.

KP: So in other words, if the war had not come on?

CS: My life would have been totally different, and I recognize that now, because in 1942 when I graduated and started to work in the special products engineering department for Westinghouse,

it was just on the drawing board, very simple. The people that I was friendly with, in my community after I graduated from Rutgers and took a job, a low-paying job, beginning engineering, and then I had to travel a few years as an itinerant engineer, because there was more money in that as a job shopper, I could make 50 percent or 100 percent more than I could have ... working for a company. Because of that span of time and I was in the service, for three years, from January 1943 to February '46, and the next three and a half years at Rutgers, and a year or two after that traveling, there was a span of time of minimum, nine years, possibly ten, when I realized that the people that I associated with in 1942 when I graduated from school and started to work, were totally different, it was a totally different. ...

KP: Generation? You saw a different generation?

CS: Absolutely, I had ... no connection with, you know with the life that I had in 1942 after graduating from the technical school. ... Well, of course that was due to the war, and I realize that even now, well, I'm married and ... have a wonderful wife with ... three bright, energetic children ... and had it not been for the war, I can't say that I would not have had a wonderful wife and a wonderful family, because the people that I associated with and the people that I noticed who appealed to me were equally nice, and equally intelligent, ... but it would have been totally different.

KP: Well, that is a good place to ask about the war. Had your family followed what was going on in the 1930s in Europe?

CS: Yes, we knew what we read in the newspapers, ... we had I guess ... a radio, ... in the beginning of 1936.

KP: So that was a big purchase?

CS: That was a big purchase, yeah. I can remember when we bought it. ... That was really a big deal. I enjoyed the radio then, ... I used to listen before going to school in the morning, Arthur Godfrey, and then the news, and he had a song about Hitler at the time. Schiekelgruber was how he referred to him, ... it was right in the Fuhrer's face, I don't know whether you ever heard the song. ... So we knew about Hitler, we knew what was coming.

KP: How did your family greet the invasion of Poland?

CS: I don't really recall, but ...

KP: Because your mother had relatives in Poland.

CS: Yes, and I'm sure it was an impact, very severe impact, but I can't picture it, maybe it's just blocked out.

KP: You mentioned that your technical school was run by a Polish fraternity.

CS: It was subsidized, yes.

KP: Were your parents active in any Polish group?

CS: They belonged to fraternal organizations, ... basically an insurance company, and they would have a monthly meeting where you ... went to pay ... your monthly cost, and, of course, there were lots of other people seated there, and it was a social affair as well.

KP: Where were you when you heard the news of the attack on Pearl Harbor?

CS: I was at Alliance ... Technical Institute, as I recall it was a Sunday morning, December 7th, and the news spread immediately, and it was just door to door in the dormitory, it was all that people talked about. I remember in particular that two older boys, fellahs probably in their early 20's, saying, you know, "Gee, we're going to have to go to war, we're gonna have to protect you guys." I was nineteen at the time, ... but as it turns out, I was in the war before they were, but eventually they were in, too. I didn't wait to be drafted.

KP: So after the Pearl Harbor attack, did you think that you would enlist right away?

CS: I didn't know, ... it was just a shock.

KP: You would enlist, but you first finished your technical training at Alliance.

CS: Yeah, I graduated, it was a two-year course which I graduated from in June of 1942, I started to work at Westinghouse, and a lot of the graduates, ... there must have been about six or seven others in nearby communities went to work for Westinghouse, because what happened ... the first fellow got a job, and he was doing so well, they said, "Do you have any friends?" "Oh yeah!" So he passed the word around and they all went over to Westinghouse, and got a job.

KP: This was the Westinghouse plant in ?

CS: In Bloomfield, New Jersey.

KP: Bloomfield, Okay. Because I always think of the one in Newark.

CS: No, it was in Bloomfield, New Jersey and it was a huge complex, and apparently they were doing well, and they were [a] working machine shop. I had a little more, I guess better qualified academically, the courses that I took, it was such a small school they could ...

KP: How many were in the school you mentioned?

CS: Several hundred, maybe 250, 300 perhaps.

KP: So you knew everyone pretty much in the school?

CS: Yes, yes, ... you get to know most of them, ... They could assign courses pretty much on your ability, and so I took ... college math, chemistry, physics, ... tool design, machine design, and so on. I got a job on a drawing board for Westinghouse.

KP: You were at Westinghouse for only a few months.

CS: That's right, I left. ... I enlisted in September, which was just three months later, and I was called in January.

KP: So you worked for roughly six months.

CS: Six months, yes.

KP: And what were your responsibilities?

CS: ... They were very low level, because ... they had called back some old timers, because I remember there was one fellah I worked with a lot, who was about 75 years old. He was really an old timer who had been brought back from retirement, and there were some others who were probably in their 30s and 40s and I would be detailing some of the things, in other words, given specific assignments and specific directions, and I kind of figured that's not a job that I would be coming back to.

KP: So you had no vision that you would go back to Westinghouse?

CS: I had not thought about it, but I didn't have a vision of it, no.

KP: I imagine a lot of people who worked in factories just before enlisting said, it was not chaotic, but there was a lot of movement, people were coming in and leaving, and you had older workers being recalled. What about women, did you have any women?

CS: Well in the department, secretaries and clerical, but not ...

KP: No designers?

CS: ... Correct.

KP: And what did you design?

CS: Well this was, nothing very complex, this was the lamp division, and most of ... the special products were like special tubes. If you visualize vacuum tubes back in those days, like you had in a radio, for example, and some of these were huge, and some of them were various shapes. And I guess in one case, ... there was some sandblasting of the glass envelope, and it was a thing to ... think in terms of a stencil, you know, you had to design this so certain areas were protected and some areas were prevented from being sandblasted.

KP: Were there any military applications?

CS: Not that I knew, ... at that level.

KP: You really didn't ...

CS: You didn't know, really didn't know.

KP: So you had very specific assignments?

CS: Right, and I was there for such a short time, too.

KP: But this plant, it also manufactured ...

CS: It manufactured, it was the lamp division. ...

KP: Lamp division, so it actually manufactured ...

CS: Lamps, bulbs, and things of that sort, and the special products engineering was a very small department.

KP: How many people were in it?

CS: I would say less than twenty.

KP: In a much larger plant.

CS: In a much larger plant, yes. This was sort of off by itself.

KP: How big was the plant, roughly?

CS: There were multi-story buildings, about four stories, and there must have been a half dozen. And ... some of these are about a block long, and there must have been about four or five of them. So it was a huge complex.

KP: You had decided to enlist in the army or the Army Air Corps. Why?

CS: Well, I preferred to have a choice, rather then wait. At the time I was-- in 1942, I was 20 years old, my birthday was in June, and so why wait. ... At that time they were drafting people 21 years and older, so why wait until I'm 21 years old? I'll do it now, and I thought I'd prefer the Air Corps to some other service.

KP: Like the infantry?

CS: Right, I don't think that I was particularly interested in avoiding anything.

KP: It was more that you wanted a choice?

CS: More of just in having a choice.

KP: What about your brothers, how did they feel about serving?

CS: I don't know what their ... feelings were, but they were all in the service, all four of us at the same time, and they followed very soon afterwards.

KP: Had they all tried to enlist, too?

CS: I don't know whether they enlisted or not. My older brother worked in a machine shop in Newark for, I'm trying to think of the name of the company, (Celanese?) I believe was the name of the company they had a big factory in Down Neck Newark. And I don't know exactly what his progression was from industry to the military, but eventually he was in the infantry, that's my older brother, and the youngest was also in the infantry, and the one who followed immediately after me was in the Seabees. ... He likes to talk, and he talks a great deal about Seabees and about his experiences. He spent eighteen months on the Aleutians for example, and the temperatures were so severe that the bulldozers were never even turned off, because they couldn't start them, so they would have them idling on. It was a terrible waste, but apparently they found that was what they had to do. And I guess, there were no trees on the island, and well he would talk about things like that.

KP: The war really left an impact on him?

CS: On him, oh yes. ... Then after that he was in the South Pacific, and I guess on the islands off Okinawa, and places like that. ... He had a lot of pride in saying, talk about the times when they would put up a sign, you know, "Welcome" ... [in] places prepared ... by the Seabees, and stuff like that. But the other thing that he used to remark about was the Aleutians, for 18 months he never saw a woman and he never saw a dog or a tree, that's how barren it was.

KP: What about your other brothers?

CS: My older brother remarked about how accurate the German 88mm gun was, because that's where, I guess he was standing next to a tank, ... when it was being attacked by another German tank with an 88mm cannon, and I guess the shrapnel was what hit him. As a matter of fact he had a piece of steel in his head ... until he died. As a matter of fact, he couldn't have an MRI, because ... when he was in the hospital because he had that piece of steel in his head.

KP: They never operated?

CS: No, no. And my youngest brother, well he still has problems today, well one of his hands because be was wounded in Italy. ... He mentioned the battles in Italy and North Africa, one of his hands is ... smaller then the other hand, and I guess he still has some effect.

KP: So all of you experienced fire at some point, in various form?

CS: Right, right.

KP: How did your parents feel about having four sons in the service?

CS: Well my mother died in 1941, so it was just my father, and he never said very much. ... But I'm sure it ... affected him.

KP: Your mother's dying, how did that affect the family?

CS: It was sad. Well, ... from September '40 to June '41, I mean we were away at school, and as soon as we got home for vacation in 1941, I became aware that my mother was seriously ill, and she went to the hospital, there was an operation for a tumor, and as a result ... the death was attributed to peritonitis, which they didn't have the drugs to handle peritonitis in those days.

KP: Did your father ever remarry?

CS: No, no he had no inclination to.

KP: How often did your father write to you during the war?

CS: Well, let's see, probably two or three times. ...

KP: Did you write to him?

CS: Because I was in touch with others. ... When I was first in I would hear from my brothers. ... I would hear from my brothers more so than my father. My father was not much of a writer.

KP: You enlisted in 1942, and January 1943 you were called up. Where did you initially report to?

CS: I reported to Newark to apply, to take the tests, there was a written test and a physical test, and then when I was called I was to report to Newark, and you know people talk about the fanfare in connection with the Vietnam veterans, there was so much talk about well they did not have a good reception ... when the war was over, and they came back. When I think back about it, we came back as individuals, there was no fanfare either. When I left ... to go to Newark, ... you didn't take anything, just the clothes on your back, ... and a toilet kit, toothbrush and ... a razor. I took the local bus to Passaic, from Passaic I took the bus to Newark, and from then on the military provided the transportation, and when it was over it was the same way. I was told to report to Westover Field in Massachusetts to be separated from the service, I borrowed a car, because ... the last week I was on leave for the last couple of weeks, and I drove up, was separated from the service, came back-- it was an individual thing, there was no fanfare. ...

KP: So you had no parade?

CS: No parade, no. It was quiet, but to answer your question, I reported to Newark, and from there went to Atlantic City, and ... the military had to provide spaces for people who were being called in, because you don't go from ... your home to the military base and get thrown right in. I mean ... you're joining the pool every step of the way, you're in a pool of people. And so ... they sent us to Atlantic City, and they took over all the hotels in Atlantic City, and they were stripped down of everything, and they put up bunks in hotel rooms, ... and every day they would march you out to (Brigantine?) Field, and you'd do close order drill, and so after drilling all day you'd march back and that was it, until they were able to find a place for you, and even then ... after some time in Atlantic City, probably several weeks, we went to Massachusetts State College, in Amherst. We were called air students at the time, again taking courses, classes, but actually to spend time, a way to pass the time. And then from there we went to Nashville, Tennessee, which is the classification center.

KP: So you really spent a lot of time waiting. I mean, they did things with you, but it was more to mark time.

CS: ... Right, exactly, and then [we were] sent to the classification center, because ... it was already decided that we would be going into ... air training, for either pilot, pilot/navigator, or bombardier. And so you went to Nashville, Tennessee, where they would conduct the tests, ... further tests, most of the tests ... [were] psychological tests. ... We weren't aware what the questions were all about, there was probably psychological testing.

KP: What type of questions did they ask you?

CS: I really don't have much of a recollection, but one thing that was in my mind, Russia was in the war, ... Russia is a country which in my mind was to be distrusted, and I expressed my antagonism and ... my dislike for Russia at the time, then I stopped in the middle of an answer, and said, "Well this may prejudice me, you know, hey these are allies, they're our allies. I better stop this ... and get off it," which I did. But apparently there was no feedback from the interrogator so I don't know what the impact was.

KP: So you do not know whether it was positive or negative?

CS: ... Right, but there were also tests, ... in coordination. And there were things like, for example, if you can picture a disc, like a 78 rpm, ... with a round brass spot on it, and it's going around in a circle, and you have a pointer, and you're supposed ... to put that pointer on this brass disc, ... it's an indication if you can't do it, you know, that have the ... coordination ... and depending on how many times you break that contact, I guess determines [your placement], ... that was just one example. There were other things like putting a square peg in a round hole or making things fit like a jigsaw puzzle, what else I don't remember, but it was a bunch of those types of tests.

KP: Did you want to be a pilot?

CS: Yes, definitely, definitely.

KP: Growing up had you wanted to be a pilot, or was this more, you saw this chance?

CS: You know, you didn't think about things that were out of your reach at the time, but I do remember collecting, there was a certain brand of candy which had a wrapper which on the other side of the wrapper there were pictures of airplanes, and I do remember having a whole collection of these different airplanes, so there must have been some attraction. And I do remember a lot about, for example, I could tell you who was in charge of Pan Am, ... they flew the ... Yankee Clippers, planes ... in the Pacific. That was (Juan Trippe?), that was the name of the one man who was in charge ... many of the questions on the tests were about ... ... airplane manufacturers, well I knew about Grumman and Boeing and so forth.

KP: So you had an interest?

CS: So whether or not I realized it or not, it was probably an interest in aviation.

KP: You made it through some very rigorous tests, both physically and mentally. Where did they send you after Nashville?

CS: Well the first, to Montgomery, Alabama and for the pre-flight, Maxwell Field, which is pre-flight training, and, everybody ... went, all branches ... and it was a huge, huge field, and that is where you went through the typical aviation cadet business, you know, the hazing. ...

KP: What kind of hazing did you get?

CS: Well, it was nine weeks, you were nine weeks at every one of these places, at pre-flight, and at primary flight, and basic flight training. ...

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KP: You mentioned that for four weeks you were an underclassman.

CS: Underclassmen, ... well you had to assume, ... you know, the attention braced position, you know, which is an exaggerated position. ... We were addressed as Mister, and ... we would fall into formation and then you would say, "Mister, did you polish your brass before this formation?" I mean it was shiny like, ... but he would ask, "Did you polish that?" "No sir." Well, you'd get demerits for that, you didn't polish your brass. ... Well actually we didn't get demerits, but you were, the attitude of the upperclassmen was such that ...

KP: They had only been upperclassmen by a few short weeks.

CS: Well they had gone through it, ... so they were giving it to you. ... For example, you ran seven miles on the Burma Road, ... then you had to go back to the barracks and ... run through a

shower, and dress, and get into formation ... in an hour, and after such a short period of time they would ask you, "Did you polish your shoes? Did you polish your brass?" And obviously ... and then you would ... feel very small, because this guy is towering over you and telling you, you know, just the attitude.

KP: What else did you learn in pre-flight, besides a lot of military discipline and marching?

CS: We had classes, like weather, meteorology, Morse code, and that was completely useless for us, but nevertheless you had to go through that, and I wasn't so good at it, and I ran into trouble there. For example, ... what other courses, I guess geography and radio and so forth. ... Actually, we did some of that after we got to England, for about the first ten days. But I was doing poorly in Morse code. ... Some people could handle it. I apparently did not have an aptitude for it, and I knew that that room would be open and available to those who wanted to practice Sunday morning, and everything was so very regimented, if you wanted to leave your immediate area you had to go to the day room and sign out, say where you're going, and the officer of the day was there, and he got the rank of the enlisted man who was there, and you'd actually be challenged. ... And I went to the grid room where this Morse code was, and later on during supper one night, I hear my name over the loudspeaker system, and that I was to report, I forget what it was like, it was like a court martial hearing, and what I had failed to do, I failed to go to church, to meet the church formation, and church was a requirement at the time. Well, the fact that I went to and signed out at the area, and the officer of the day knew where I was going, as well as the enlisted man whatever his position was, I thought it was perfectly okay. Well it wasn't, and because of that it was like a court martial, I had to appear before this group of four of five officers, with ranks of captains and majors, and ... march in ... and salute and you're instructed as to what the proper military procedure is, and you'd be interrogated and that was it, and later on the punishment was ten permanent demerits and twenty punishment tours, and the only time that you can do the twenty punishment tours is when you have time off, which means that on a Saturday night, ... instead of having free time, I was out marching, with the punishment tours, you'd wear a ... full uniform with white blouse and all, and ... marching back and forth. So I didn't like that at all.

KP: It sounds like you were a little bit ambivalent towards pre-flight.

CS: Right, that kind of set me back a little bit.

KP: When you look back as a pilot and your missions, what did pre-flight teach you or did it help you?

CS: I don't think it really did, ... well the fact that you got some courses like weather and meteorology, I thought that was good. The Morse code, ... well there was never a need for it. But the other courses, well they weren't bad, ... navigation, we got a bit of navigation and meteorology. Well, the military attitude was drummed into you, ... obedience, that type of thing.

KP: So you look back and found some of that useful?

CS: ... That was the only gripe that I had. The fact that I came close to washing out before even starting a career, because of a stupid little incident like that. If I had known, obviously I would have gone, I had no objection to ... joining that formation and going to church.

KP: And so would everyone go to the same service?

CS: No, you had your choice, whatever your service was, whether it was Catholic or Protestant or Jewish, ... it was democratic in that respect, it was just the fact. ...

KP: That you had to go to church formation?

CS: You had to meet that formation.

KP: You accumulated some demerits and punishment tours, did you ever get off the base, Maxwell Field while you were at pre-flight?

CS: Yes, yes I did. ... I think I was probably off for a Sunday morning or two, afterwards.

KP: So you really did not get to see much of Alabama?

CS: Very little of ... Montgomery, Alabama.

KP: After your pre-flight, where did you go to next?

CS: Primary flight training in Albany, Georgia.

KP: And you were there for nine weeks?

CS: Again for nine weeks, and we were taught by civilian pilots, this was primary flight trainers, it was a bi-plane, ... a PT-17 Steerman, and that was fun, it was one of those open cockpit jobs, ... with two places, one for the instructor and one for the student. And the weather was good, and so we didn't miss any flying time. We put in about 65 hours of flight time.

KP: Was this the first time that you had flown?

CS: No, I had been up in a Piper Club prior to that. As a matter of fact when I was going to Alliance, they were starting some kind of civilian training and we would have to travel to Meadville, Pennsylvania, to Allegheny College. It was open to the students of Allegheny College, and it was extended to students at Alliance Technical Institute, which was about twenty miles away, and they were willing to provide a driver, ... which they did, and I did that several times, and then I realized how much time it was taking, and how much a burden it was for the school and I decided I would drop out of it, but I did ... have several flights. And also at Massachusetts, at the Mass State College at Amherst, they had provided, and there were some flights, ... whether it was the same airplane or not, it was one of those primitive type of planes.

KP: So you even had some flight training before Albany?

CS: A little bit, yes. But it was nothing like sitting in a open cockpit, having the engine in front of you, the propeller in front of you, ... with the wind and the smell of oil and so forth, it was interesting, it was fun.

KP: How many people washed out of your pre-flight and your initial flight training?

CS: Not many, ... well people would wash out, you know, every step of the way, but I would say there were very few.

KP: So generally, you did not stand formation and look around and see people disappearing.

CS: ... No, but you knew the fact that some disappeared, some were not there. Well some were washed out because of, not necessarily because of their ... problems in flight training, ... there were washouts for a ... violation of the honor code for example, and I don't remember specifics, but when there was a violation of the honor code it was a big deal, because they would call formation at night, after dark, and suddenly they would call ... everybody out there in ... full dress uniform, and you need be in formation, and then the announcement would be made that such and such a person ... was out of the corps, and it's permanent.

KP: So they made a sharp distinction between people who left because they couldn't handle flying versus?

CS: Right, if you didn't handle the flying you weren't washed out in a ceremony, ... but if you washed out for a violation of the honor code--

KP: Such as stealing or--

CS: It was a big deal, yeah. And there wasn't much of that either.

KP: You were in Albany, Georgia for nine weeks. Did you ever get out into Georgia at all?

CS: Yes, we were allowed out on ... late Saturday afternoon, and Sunday, and it was a small town, but it was a nice community. Sometimes you wish, you'd think, "Oh, I'd like to go back," and just make a tour or visit the place.

KP: So you've never been back to any of the places you served?

CS: Never been back to, ... that's true, not to any of them. Well, I might be interested, but, of course, my wife would have to be agreeable to it, and I'm sure she would agree, whether she liked it or not, but I would not impose upon her.

KP: She has never suggested let's go take a tour of your bases?

CS: No, as a matter of fact, I'd also be inclined to take a trip back to Alliance College. The college is not there, it's now a penal institution for females in Pennsylvania.

KP: The same buildings?

CS: ... They bought out the whole campus. And so ... there'd be no visit there, ... but Cambridge Springs is a small town, and there's a resort hotel there, it might be a pleasant visit, but I'm sure that my wife would not be particularly interested, and so I'm not about to suggest it.

KP: After your initial flight training, where did you go to next?

CS: From Albany, Georgia it was to Greenwood, Mississippi, where we flew the multi-vibrators, the BT-13, that was a low-wing monoplane, and it has a little more power, and it's a little more instrumentation, and you not only fly during the day, but you fly at night, then you make several cross country trips, which means you have to do your own navigation. ... I don't recall ... very much about Greenwood, Mississippi and the advanced flight training was also in Mississippi, that was in Columbus, Mississippi, and it was the same sort of deal, you'd get off on ... late Saturday afternoon, and be off, come back Sunday night. And, of course, you were not allowed to drink for 24 hours before flying, which was always a ... very strict rule, so Saturday ... whether it was in basic flight training or advanced flight training. I guess it was advanced flight training, you'd go into town, and have a steak dinner, and a beer, which is on Saturday night, because on Sunday you would not ...

KP: Sunday after midnight, you were not allowed to drink?

CS: And that was a big deal, go out and have a steak dinner and a beer. As a matter of fact at the time, ... the most popular beer was Miller's, and it was in a white bottle, it was not in a dark bottle as I recall.

KP: You were in the South, and in the South growing up in the 1920's you still had a very active Klan, that was really aimed in part against Catholics. Did you ever have any comments regarding your name?

CS: None. ... I remember only once, and this was in the classification center in Nashville. I broke out in a rash, and I had to go to the hospital, the reason why ... I broke out in a rash, when they were handing out blankets, as they were dropping them off the truck, the guy [was] making a joke, "If you get a clean one, bring it back." Probably got a rash. I don't know. Well anyway, ... at the hospital for observation, there was another fellow, I don't know why he was there, but he was a real redneck Southerner, and I don't want to go into the details of that, but the way he talked about being deprived of his right, you know, because things are becoming so liberalized, ... that was one incident, I don't know who he was, and I never saw him after that, he was never in any of my classes, and I never ...

KP: But otherwise you never encountered any?

CS: I never encountered anything. Certainly not in the service, and as a matter of fact, a lot of the people in the service were Southerners.

KP: But you did not seem to be refighting the Civil War or anything like that?

CS: No, not at all.

KP: Where did you receive your training for the plane that you would actually fly?

CS: Well, ... advanced flight training was a twin engine plane, because the choice ... in basic flight training, they made a choice whether you were going to go into fighters or bombers, single engine or multi-engine, and the choice for me was multi-engine, and it was also my preference, and so generally after graduating from advanced flight training, you go for operational flight training into the operational type aircraft, which in my case were a B-17's, but I didn't go into operational flight training. At that time they needed pilots. This was when the war was ... going full blast, and so had I gone-- ... those who went to operational flight training were being the first pilots, ... those who skipped it were destined to be co-pilots, and so I was immediately sent to Plant Park, Florida, which was again where crews were being sent, where they would put together a crew--pilots, co-pilots, navigator, and bombardiers. And so our crew was ... essentially selected in Plant Park, Florida, which is near Tampa. Then we went to Avon Park, Florida, where we got together, we first met as a crew, and we flew as a crew, and that's where ... I flew in the right seat of a B-17.

KP: So you really?

CS: For the first time, but at Plant Park, ... I met a fellow there who was from my hometown, and he said, "Look, ... would you like to join, be on my crew? And if you're willing, I'll mention it and see if it could be arranged." I was sort of lukewarm about it, it didn't make any difference to me as a matter of fact, ... it might be possible, it might not. Well ... I did not disagree, and surely enough, he came back and says, well he had made the arrangements, and we're going to be on the same crew.

KP: And you were the co-pilot?

CS: I was the co-pilot on that crew, ... during the training. And so I thought we had an excellent crew, we had a bombardier, and a navigator, and we had two waist gunners, a ball turret gunner, and the engineer was the top turret gunner, and a tail gunner. And so I thought they were a very fine bunch, so we got along very well.

KP: So that would be the crew that you would go over with?

CS: That would be the crew that we would be going to combat with, and we did our practice bombing, the practice bombing was done with ... 100 pound bombs, with about three pounds of

black powder, so that they could ... make it drop and photograph and ... just see how you were doing. And we apparently did well, and also the gunners could fire their guns, they could tow targets, and ... imagine being in the plane towing the targets, but ... this is the kind of experience that you had.

KP: Maybe going back a bit, you would meet this crew in Florida, and you would serve with them throughout the war, what were their backgrounds? You mentioned the pilot was from New Jersey, and had he gone to college?

CS: I think that he had gone to an aviation school, not so much college and not so ... [much] flight training, but more in perhaps the mechanical aspects of aviation, but I'm not too sure of that.

KP: And your bombardier, what was his background?

CS: The bombardier, he was a fellow by the name of Ira Beckman, from Minnesota, and I don't know what his background was. As a matter of fact, I have a difficult time trying to recollect them, because there were so many that came afterwards, because I never flew with my crew in England.

KP: So in other words, this crew flew together?

CS: This crew was put together, we went over, we didn't fly over, we went over on a ship. And we went up, and the 365th Squadron ... of the 305th Bomb Group, and fully thinking that we would be flying ... as a crew, and so that I forget their origins, all I remember, (Gerschwin?) was a New Yorker, he was our radio operator, Phil (Caroll?) was a waist gunner, very intelligent, astute type of individual, he's probably from Oregon I believe. The others I remember their names and I can picture them all, Cook was our ball turret gunner, Walkenheimer was the other, he's from Jersey City, ... he was the other waist gunner, and incidentally, once overseas they did away with one, we flew with a crew of nine, not a crew of ten, so Walkenheimer was off the crew right away, and I think he was trained to become a (toggleir?), in formation, ... not every ship had trained bombardiers, so some were just (toggleirs?), they would drop on the leader's

KP: Signal.

CS: Yeah, so I don't actually remember the background for all of these people.

KP: But you trained with them, got to know them?

CS: Trained with them, got to know them. As a matter of fact, when we went off on leave, we went off, this is from (England Park?), Florida, ... we all would meet in Miami, and rent a car and I have pictures of the whole bunch of us.

KP: The whole crew, officers and enlisted men?

CS: Yes, in a convertible, on a bright sunny day in Miami, and all big smiles on everybody, you know, it was great. It was a good bunch.

KP: It sounds like you have some very fond memories of training, especially in the later part of training.

CS: ... Right, yes.

KP: It sounds like pre-flight was very rigorous in terms of military discipline. Did you get a sense that the further you trained the discipline became less important?

CS: I would say yes, definitely, because ... your trainers were officers, and in primary flight training, the trainers were, ... the pilot training was by civilians, but the other administrative personnel were officers, and beyond that point it was officers every step of the way.

KP: You went by ship to England. How was that voyage?

CS: It was good, it was an Italian liner, which was taken over by the U.S. Army, and incidentally, the army had a lot of ocean-going vessels, this was a U.S. Army ship.

KP: Oh, so it was fully army?

CS: Right.

KP: And who made up the crew?

CS: Excuse me?

KP: Who made up the crew?

CS: Oh, the crew was [made up] by merchant--

KP: Merchant Marine.

CS: Merchant Marine, but the people in command were military, but it was Merchant Marine who actually operated the ship, and we all went across in convoy, and a lot of ships, everywhere you could see ships, and we would be zigzagging across, taking a ... long route. We were quartered above deck, enlisted men were below deck, and that was a tough place, and we had a certain drill in case of an emergency, you were assigned what you had to do. What I had to do was to go down, I guess about five decks to where the enlisted men were, and ... notify them when it was all right to come up, because not everybody was allowed to come up at one time, ... there were ... certain procedures that had to be followed, so I got to see what it was like ... where they were, they're ... stacked up in hammocks about five high. It was really a densely packed [area], we were in double decker bunks on the upper decks.

KP: So you had more room?

CS: We had more room, far more comfortable surroundings.

KP: Any memories of the voyage, did you get seasick at all?

CS: No, no, I don't recall anybody getting seasick, but ...

KP: And the food?

CS: It was good, ... as you find out, in the service, wherever we went, I would say they would start out with excellent, sometimes it's abused, but it was at least good food to start with, ... and it was always ... sufficient in quantity, I never complained about the food, there was no reason to, it was good.

KP: You got to England, and where did you land?

CS: We landed in Liverpool, and then went by train to either, I don't recall now whether it was Stone on Trent, or Stoke on Trent, ... it was one of those two, and the primary purpose there was to spend about a week or ten days, or two weeks some period of time, and we were taught a ... little bit of the geography of Northern Europe, and the radio procedures, and ... some of the codes, some of the procedures, particularly when you're challenged, for example, ... if you had to leave your formation, and you're ... coming back by yourself, in a lone plane across the channel, you would be challenged, because they would be suspicious, and the Germans had owned some B-17's that were captured, so you had to know what the code for the day was, you would have to fire a flare, and you'd have to know what colors to show, so you were taught some of that, and that's obviously elementary, ... but that's some of the simple things I remember.

KP: Also the rules of the road.

CS: The rules of the road, right.

KP: And then where were you sent with your crew?

CS: And then we [went] to the bomb group that I was stationed with, and that was at ... Chelveston, England, and it was the 305th Bomb Group, and we were in the 365th Squadron, and my whole crew was there, we were there as a crew at the time, but ... the next day, or two days afterwards, ... in my notes I say there was a flight of ... 36 airplanes, now this is normal, to put up three squadrons of twelve planes, ... but actually they would put up 39 planes, and they have three planes trailing, and if somebody aborted then ... one of those would join the group, so you always had 36 planes going in, and maximum effort would be 54 planes, and that was everybody who could possibly fly would fly, and it was one of those days, and so they called ... the members of my crew who were flying with various other groups. I did not fly, my first pilot and I did not fly that day, and our bombardier, navigator, and several other crewmen were flying with other

crews, and it was a disaster. That squadron lost six planes, six out of twelve didn't come back, and so obviously we didn't have a crew anymore.

KP: So your crew was parceled out.

CS: Parceled out.

KP: And most of them didn't make it.

CS: Some of them didn't make it, right. Our navigator and bombardier, ... it's possible that our bombardier got back, but our navigator ... didn't make it back that day, although we did see him many months later, and he had got back by way of the underground, but others, like our ball turret gunner and a few others did not get back, so as a result ... every flight after that was with a crew that had some new people. And then, after about two, three missions, we were transferred ... from the 365th Squadron, to another squadron on the same field, it was the 364th, and I know Howard Dubanovich who was the first pilot, and I ... went over to the 364th, and I don't recall seeing any of our crewmen going over to the 364th, not because my crew was broken up, but because I was really needed.

KP: You are not even quite sure why they did these things?

CS: I guess there was a need for more pilots in the 364th, so we were transferred. So as a result, I always flew with a different crew, I mean there ... may have been several missions with the same [crew], but ...

KP: But you never had a steady crew?

CS: Never steady crew, that's why when there are reunions, and people talk about camaraderie, well, we didn't have a crew.

KP: How did you feel about that, especially since you had had a crew that you trained with?

CS: Well, you were told to make friends, but not such good friends that you would miss them. I mean it's a horrible thing to say, I'm merely quoting, and it's not that I felt that way either, but as far as the missions went, it wasn't bad, because these were experienced people, I mean they had flown many times, only once, ... in one of those flights, I had a brand new radio operator, ... it was his first mission, but most times it was people who had had experience. As a matter of fact, when I checked out as a first pilot, ... the last ten missions I flew as the first pilot. I checked out while there, ... you had to display the qualifications of the first pilot. And I had crewmen ask to be on my crew. Maybe I was more of stickler than some of the others, ... like for example, ... some people ... didn't like my attitude, and one day coming back, while I was flying co-pilot, I'd wander back on the return, and there were two gunners in the radio room. They were not supposed to be out there, and I made an issue of that, because the orders were that you were never to leave your position until you have crossed the English Coast, and the fact that we weren't even over the channel yet ...

KP: You were still on the continent?

CS: ... On the continent, ... I'm sure it was safe, because we were ... far enough, and at that time in the war, it was very unlikely that the Germans had enough fighter power in order to challenge us that far into our return, but nevertheless, it was not proper, they should have been in their positions, so I got to have a reputation for being a stickler, I've had people ask to be on my crew.

KP: You mentioned that you were a stickler, were there other issues that were important to you that were sometimes, come up.

CS: Not that I recall, no. I think that most people were, I can't think of any other incidents.

KP: One of the things that a number of pilots have talked about, and other crew members have talked about was that especially when crews got to know each other better, there was a sense that it was important for pilots to teach other people, members of the crew how to fly the plane in a pinch. Did you see any of that, training the bombardier how to do a crash landing?

CS: No, ... actually you didn't have that opportunity during any missions. The only time, if that were being done, it would be a done, a policy of the field, that particular field, that field commander, and it would have to be done, we had practice missions, and we had night flying, and we were after midnight why I guess on one occasion ..., and so many flights, missions took off in the darkness, because it gets dark early in the winter, and ... it's a lot different trying to join a formation at night, ... so we had some practice of night flying and we had some practice, well just practice, but not of the nature ...

KP: I get the sense that it was totally against regulation, but that a number of crews when they had a number of hours, the bombardier might come up for an hour or two, and be given a sort of: "Here are some of the basics you need to know in case something happens to us." What was your first mission like? Was that a distinct memory?

CS: Well, it sort of blends in with all the rest. I do remember I took a camera, I had a camera on the first mission, and I was taking some pictures of flak bursts in the distance, and obviously I put the camera away as we approached the target, and I never took a camera up again, but I had no fear. ...

KP: You were not scared?

CS: I wasn't scared at all. ... I had a lot of confidence, because ... on that field I didn't see anybody that was ever scared.

KP: Did you ever have any close calls, was your ship ever hit?

CS: Oh yeah, we were hit ... numerous times! ... These are flak holes, and sometimes you'd come back with a dozen holes. ... That's all they were doing was, the fuselage was a little thin sheet of

aluminum, ... and you came with many holes like that, but as far as serious damage, we had to feather an engine once, so that we only had three engines to go on, there was another time that we had an (airlieon?) shot out, which means that you had lost ... some control, we had had some injuries, we had the windshield cracked twice, we had propellers nicked. ... We never had any fighter attack, although there was a time when we could see fighters attacking the group in front of us, but ... the German fighter force was so weak at the time, as a matter of fact, we could tell them where we were going, and challenge them to come up. ... The Eighth ... [Air Force] was that strong.

KP: Did you arrive at the point when you had fighter escorts the whole way?

CS: Oh yes, the people who suffered most ... were there in 1942, and '43, because the German air force was superior at the time, ... the U.S. fighters did not have enough capacity of gasoline to escort you all the way into the target and back again. They could escort you across the channel and then had to return. But by 1944, we had good fighter escorts. Of course, ... there were some spots which weren't protected, ... because you had a 1000 planes in the air, they couldn't ... cover that distance, but I guess if you were being attacked you could make a call, and they would notify them of your position in the formation, and they would ... come to your rescue. ... You had a fighter escort going into the target, and you had fighter escort in the target area, and you had fighter escort coming back.

KP: When did you realize that you were fighting a whole different air war then the people in 1942 and 1943? Did you know that at the time?

CS: I think so, ... knowing that the fighter escort that we had, and, you know, ... most of the missions we didn't see fighter escorts out there. I mean in some cases we could see them, it was little friend and we could see little friend out there, but most of the times we didn't, but we knew ...

KP: That they were there.

CS: That they were there, and ... if we were attacked, they could come to that area, ... because we were flying at a very slow speed. We were flying at 150 miles per hour indicated air speed, and they could do 350.

AZ: With these planes that were escorting you, were they Mustangs and Thunderbolts?

CS: Mustangs, Thunderbolts, there were no P-38's at the time, but Mustangs and Thunderbolts right, P-47's and P-51's.

KP: You had a lot of confidence in your abilities as a pilot, one of things that I was struck by interviewing a lot of people, was a lot of planes crashed, there was a high accident rate even in training. Did you see any of this?

CS: In training in the states?

KP: Either training in the states or overseas?

CS: ... Well the pace of training was so stepped up, like for example, we would do ... night flying and they would put up a lot of planes, and they'd tell us to circle, ... to circle at say 1000 feet, another one at 1500 feet, and others to circle at 2000 feet, if you're shooting night landings, and they would call and say, "Alright, the ones that are at a 1000 feet, come in." And you'd immediately have to drop 500 feet, and come into the pattern to do your ... night landings, and then everybody else, there's always a danger in that. When the guy's told you to come down, one is going to come down immediately, the other may not respond soon enough, and therefore there may be a conflict of planes in the flight pattern. ... That was a potential source of danger, and another source of danger, was ... night cross-country. You were told to go from your base to a certain city, or a certain other airbase, to another one, in other words a triangle, and then come back to your base. You had to do your own navigation, and if you wanted to do it ... strictly by the book, well you had a navigational aid in other words, where you could plot, ... there was a 360 degree circular device, and you would plot your position and where you wanted to go and have to consider ... your air speed and the wind direction, and make that correction, and go fly a ... certain number of minutes, ... well usually it wasn't so precise, you were there by yourself at night, and you know the compass heading you're going to take, and you're gonna depend upon that, and then you may get scared, you may decide well, there are certain points on the ground that I would recognize, and ... if you think you have identified a certain thing, well that's such and such a city, or such and such a field, and it isn't and you base your next direction on that, well you could be off, and never get back to base, so there was a danger of that, too. So other than that, ... they were speeding things up ... and the issue was raised of people [in training]. ... Well, one of the members of our football team, our championship football team, Johnny (Gremblins?) was killed in training, in basic flight training, so I know that these things happened.

KP: Did you witness any crashes in training?

CS: No, ... not in our group.

KP: What about in your bomb group, did you ever have close calls closer to the base, or you know after leaving the combat area?

CS: Well, the typical [thing], we had to leave the formation ... several times. For example, we lost a prop. Another time we lost an aileron control, and so there we[re] some episodes like that, but ... I mentioned the type of damage that we encountered, but we always got back. There was another time when we got back, and I was flying co-pilot for another guy who had just checked out recently, and when we got back, it was a very high overcast, well an undercast and an overcast, and you're flying between the two, and there is a ... certain procedure-- ... that group leader would circle the field, and then one squadron at a time would drop, then one squadron at a time would circle the field, and they would drop off elements of three to drop through the undercast to ... [be] visible, so they ... can see the field, ... and they circle, and as it comes over the base legs, they would peel off, one after the other and ... come in for a landing, and we were in that position, ready to drop, ... and this pilot thought he was stalling out, so he left, he veered

away ... and now to make a 360 degree turn and then come back, but he not only did that, he lost sight of the leader, he lost sight of the field, it was poor visibility, and so he was about to nose it up, and that's when we ... took over, and kept it down so that we had at least visible contact with the ground, even though it was a very low altitude, we were practically at ... church steeple level, and now you don't know where you are, you don't know what direction, ... there are other fields, as a matter of fact, on a clear day, if you took off, and were at a fairly high altitude, you could see a lot of fields in the area, ... England was covered with military fields, but now you don't know where you are, ... but eventually we saw a field which possibly we could land at, and it came on so suddenly, and he wasn't lined up with the runway, so I had to go around again, and align himself up with the field again as he came around ... he still wasn't around, so at that point I kind of assisted and I flew the pattern, and brought it around, and lined it up ... with the runway so that he could execute his landing, and I didn't know how he would react, but his ... comment was that ... he was glad that I was on the controls and assisted him to take out the crab, in other words, if you're coming in and ... if the wind is not aligned with your runway, you're not coming in straight in, you're coming in at an angle, and you have to wait until the very last minute just ... before you kick that out, and so he says well, he appreciated the fact that I was on the controls, ... actually at that point I wasn't on the controls at all, because I knew wouldn't want someone on the controls when I'm flying. I did fly it through the pattern, but once it was aligned with the runway, it was his.

KP: It seems that you enjoyed being a pilot a great deal.

CS: Yes I did, I thought it was good. Well, we were a very good ... outfit, it was a good squadron, and well even in the barracks, we had quonset type huts for barracks, and they would be divided into four rooms, and there were four guys in each room, so it was like coming through a railroad car actually, because there's four guys in the first room, then there's a partition, then you go through that partition and then four guys and four guys and so forth. ... So these are the people that you saw, more so then the people that you flew with, and so you had a good rapport with all of these people, and it was a good bunch.

KP: What was your squadron leader like, and how good of a leader was he?

CS: A guy by the name of (Golgerow?), and actually he was an artist, and he had some beautiful paintings of B-17's, and as a matter of fact this was his career as a young man, that even later on, like years later I would hear, (Golgerow?) ... and the acclaim that he would have for his art. And he was ... quartered in the first section there, and his co-pilot was there also, a man by the name of Douglas, and so ... these were the people that you talked with and associated with, you knew about, you knew what, you didn't know all of them, but you knew what motivated some, like one of the fellahs, a guy who was diagonally across in the same room that I was in, Ken (Riordon?), and he was a bombardier, ... and it was very important for him to be a lead bombardier. ... And some people knew the politics of the organization, something I never knew and was never interested in. But as a matter fact, ... I was always interested because he always had something interesting to say, because he not only knew the organization, he knew the politics, if you could call it that, and being a lead bombardier was very important, it was a matter of pride, and he was the kind of guy who took pride in his appearance, pride in his presentation, and pride in his

position, and it was something ... of a downfall ... once when he had the misfortune of not ... hitting a target, and what happened there was, this was during the month of December, I guess it was near Christmas, but I didn't fly for that whole month of December. I later found out why, but it was also ... to my advantage, I was finishing up my tour so rapidly, that I was put in for promotion to first lieutenant, and they wanted to allow time for that to be processed.

KP: So actually they were doing you a favor?

CS: They were doing me a favor, I never knew. I didn't know it too long afterwards, ... but anyway, to get back to the story, this bombardier, the bombing was somewhere, I guess an airfield near Cologne, and it had snowed that day, and there isn't much that you can see on an airfield after a snow, so the target would have been very difficult to find. But what complicated the matter, ... his oxygen, you're connected with a tube to the ... oxygen system, and that got fouled up between ... him and the navigator ... in the nose of that plane, it got so fouled up that before they could unsnare the thing, and this was during the bombing run, they had to either go around or there were some things got screwed up anyway, he missed the target, or he didn't drop, or maybe it was that he didn't drop on the first time around, and ... that's a big danger, because they get a second shot at you, in other words, the people who were shooting at you. And as a result, the field where I was, you don't get a chance to make a mistake twice, and so he was relegated to the bottom of the bombardiers now.

KP: So that was a big blow for him?

CS: That was a big blow. And I was always curious afterwards to get in touch with him, but I never did, and I think I tried to send him a Christmas card or something, but I never got a response.

KP: You mentioned this head bombardier, he really liked the whole organizational structure and politics, what did he relate to you about what was going on?

CS: Only as it related to-- well sometimes ... you could get inside information you might be alerted to a mission, which is not the case, but, you know, maybe if ... somebody that there was a pet project or a pet target which ... has not occurred yet, then sometime in the future, he might get wind of it.

KP: What was your hardest mission, or the most memorable?

CS: ... We knew, and everybody on that field knew, was Merseburg, and Leipzig. And Merseburg, was in the Leipzig area, and Merseburg was ... a huge synthetic oil plant, and that was one of their most important industries. And whenever you went to Merseburg, it was the most heavily defended area, and somebody referred to it as the most ... heavily defended forty square miles in Europe, but there were several other synthetic oil plants, whenever you headed for a synthetic oil plant, you could expect the worst, you could expect flak, heavy flak and fighters, and so forth. During the briefing, ... they would tell you what the weather's going to be, what ... type of fighter opposition you can anticipate, ... what sort of flak you can anticipate, but

when that curtain was moved, and you saw the screen, their would be a huge map on the wall, which means the target was Merseburg, you could hear the groan ...

KP: Because you knew you would have a tough time.

CS: Because you knew you would have a tough time, and as a matter of fact, one squadron, the squadron leader of the 364th squadron was killed, was shot down on one of those Merseburg missions, and it was also ... his final mission, his 25th mission or 35th mission I should say. At first it was 25 missions, when I was there it went up from 30 then 35, because it was easier, the missions were easier, so you had to do more, and it was his last mission, and he was leading the squadron over Merseburg, and he did not drop on his first time around, he didn't feel comfortable, ... and he went around, and came back over the target the second time, and that's when he got hit, and ... we always knew, don't do the second pass, make sure you drop on the first pass.

KP: You quickly learned that?

CS: Oh, absolutely!

KP: Since you even got to know the head bombardier, it almost sounds like there was a real desire to hit the target, and not drop early or not drop incorrectly. Is that the sense that you got?

CS: ... Yes, ... they were very conscientious about dropping on the target, hitting, you know, doing the mission, and the instructions were always very, very clear, they could tell you what the weather was ...

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

KP: This continues an interview with Mr. Chester Szarawarski on September 29, 1995 at Rutgers University in New Brunswick, New Jersey with Kurt Piehler and ...

AZ: Andrew Zappo.

KP: I'm going to let Andrew ask a few questions, because he always says he has these questions pop in his head.

AZ: You were saying something about bombing the town?

CS: Cologne?

AZ: No.

CS: Merseburg?

AZ: Yeah.

CS: I mention in my notes incidentally, and you may find some extensive notes on Merseburg ...

KP: Actually, you should excuse my cold, you were in the middle of a story I hadn't realized, and maybe I should let you finish that before Andrew ...

CS: Where were we? ...

KP: The importance of hitting a target the first time.

CS: ... Well, ... the way these missions were organized, ... they get advance information on weather conditions and wind conditions, and the idea is when you're making your bombing run, you start what is called the IP, the initial point and you're heading ... a certain direction to the target, and at that point, the bombardier has control, the pilot puts the plane on automatic pilot, and the bomb sight is keyed in to the automatic pilot, and therefore he has control of the direction of the airplane. Now the direction of the bomb run is determined by the wind direction because we're flying ... at an indicated airspeed of 150 miles per hour, in the rarefied atmosphere, this was actually maybe perhaps about 350 miles an hour ground speed. Now if the wind is, let's take a number and say 50 miles an hour, ... if that 50 miles an hour is with you, as versus 50 miles against you, it's a difference of a hundred miles an hour, and that determines your time over target, and the time over target should be as short as possible, right. So that's why, when all that is being planned, if you wanted to be over the target in the shortest time, that's exactly what you want to do, and not for some reason screw up, and then have to come around again, and do it again, or do it from another direction. ...

KP: I know that a lot of soldiers in the infantry will not fire their weapons out of fear. I would imagine that there would desire by a bombardier to just drop the load and let's get away.

CS: I never had that feeling, not even once, and Ken (Riordan?), who was our lead bombardier, but there were others, ... because after all there were flights ... almost several times a week, sometimes three or four days in a row, and there would be others flying the lead ship.

AZ: You keep mentioning lead bombardier, would the lead bombardier be in the first plane?

CS: Yes, ... in the head of the formation, ... well you had three squadrons, ... and each squadron had a leader, now ... the first one was the leader, the second one was the deputy leader, they had bombsights, the other planes did not have bombsights. In other words, every bombardier was instructed how he would set up his rack of bombs, each mission was different, and you would have different size, different targets, different patterns, and the others planes, the other ten airplanes would have a (togglier?), and all he had was a toggle switch, and the lead plane, the first thing they would drop was two smoke bombs. Immediately, when you saw the smoke bombs, the (toggliers?) would drop their loads, you see.

KP: So in a sense, flying the lead planes was really the crucial role?

CS: Exactly. It was the lead and the deputy, and, of course, when we were flying, ... our position could be anywhere in the formation, and it was, it always changed, and when we were forced to leave the formation, well we didn't have a bombsight, and our instructions would be to seek a ... target of opportunity, well first of all there's the secondary target, but that is where the formation would go to if they ...

KP: Couldn't hit the target.

CS: ... Couldn't hit the primary target, and then we would ... be told to seek a target of opportunity, and that would be a factory, ... marshaling yards were a favorites, because usually it's a large area, and you can create a lot of damage to an important ... part of their industry, and as a matter of fact, marshaling yards were targets very often, or crossroads, or something of that sort, and you'd be amazed at ... how that information would get back, for example when we dropped on the target of opportunity, and we'd get back for debriefing, and everybody went through this debriefing, and we'd say well we'd dropped, and the navigator and the bombardier would be interrogated on this, where did you drop and ... what did you see, and then you wouldn't ... immediately get credit for a mission, and it would be like three weeks later, [they'd] say, "Okay, you get credit for the mission." Somebody verified that, and I don't where, ... they never told you how, or where, whether it was through the underground, or whether it was through observation.

KP: So how much do you know about how effective your efforts were?

CS: Oh you knew, you knew because you saw the photos and you saw the bomb strikes, for photos were ... always taken. ... This was the other thing that used to occur, like once a week, or maybe not quite that often, but once every two or three weeks, you'd have an assembly on the field, and the commander would get up there with his pointer, and they'd show the bomb strikes, and actual photos, you know, the bombs actually hitting the target, exploding on target, the results of ... the photos bomb strikes after the target, and ... this was real, I mean you saw it, and ... they would tell ... what you did wrong. And the other thing, then they'd also add a little excitement, they'd show pictures that the fighter planes had, our fighters as they left the target they wouldn't just come back, fly straight back, they would also seek targets of opportunity, and do some strafing, and they saw railroads, trains. As a matter of fact, one thing you saw whenever we were flying and you looked down at the highways, and you never saw anything on the highways.

KP: Because the road were empty?

CS: Those roads were clear. ... When they showed the fighter films, coming in to strafe a train, ... this was real, because you saw the tracer bullets, every so often there'd be a tracer bullet, and you'd actually see them ... as they [were] coming in to shoot them up.

AZ: Was there a standard formation each time you went over?

CS: Absolutely, absolutely. ... A good reason for it, you had 36 planes, three in the lead, with the leader, there was the leader and his deputy, and another guy, and then three to his right, slightly high, and three to his left slightly lower, and then three more filling in the diamond as they called it. That was the most difficult position to fly, filling in the diamond, because you'd ... [faced] an attack of vertigo. You know, ... if you're occupied, your hands and feet, both feet on the rudder, your hands on the throttle, to maintain your position, ... and you're watching ...

KP: Constantly looking up.

CS: Constantly looking up, and it's tapered, especially if there were contrails, you got the feeling, because that is tapered, you had the sensation that it is going down, and so you think, your body is telling you that you're going straight down, and you're holding in this formation. ... I managed to be able to hold that position very well, so whenever we were in the diamond, I was the guy who was flying. But to get back to your question about the formation, you had ... three slightly higher, three slightly lower, and the other guy filling in the diamond, and that accounts for twelve in the lead, off here, and you've got another squadron of twelve back here, you got another, about a 1000 feet difference, and you got another squadron of twelve. And you maintain that position, because this gives you, ... you got defensive firepower, you've got twelve 50 caliber machine guns, so no matter which direction you're being attacked from. ... If you've got twelve planes, you've got twelve planes firing, at the front, ... top, bottom, whatever every direction, from the rear, so wherever their coming from. And the mistake that the German fighters made early in the war, they used to come off, when they attacked, ... let's say they attacked from head on, ... which is very often what they would do, they would try and break up the formation, and once you're separated, ... you've been weakened, ... you don't have that concentrated firepower, and they'd come in from the front, peel off one at a time. Well, as they came in one at a time, you've got to shoot at them one at a time, okay. It wasn't until much later in the war that they discovered that if they come in-- in formation, wing to wing, they can immediately break up that formation, see.

KP: I get the impression that keeping the formation was immediately drummed into you.

CS: Absolutely, ... this was religion, this is what you did, and to hold a good formation, you could hold within the wings of the other plane, you could sock it in that tight, and keep it there. And we, as a matter of fact, this was in our early training back in Avon Park, we flew formations, when we flew bombing runs it was in formation, and that was what we were told to do, and that's what we practiced.

KP: You were on base, and in some ways the air force was like the navy. A lot of the people have said to me about the navy, that you get clean sheets and good meals. And the air force, you can be on very dangerous missions for a few hours, and then you get back to your base and you're basically very far from the war.

CS: You're absolutely right, you could read about it in the newspaper the next day.

KP: And you could get out and see civilians?

CS: Right, correct.

KP: Did you ever get out and meet the English?

CS: Oh yes, yes. Well, we were in a small town, so there wasn't much, ... mile or two down the road there was a pub that you could go to, which we sometimes went to, and the some of the locals went to. But about every three weeks you got a day off, which means that was a day and a half, because as the following day was off, you could take off the afternoon of the day that you were told that you were off, so you threw a toilet kit into your bag, and would go to London. Take a taxi to, well we were near (Wellingborough?), or ... another couple of small towns where you could grab a train to go to London, and that's what we would do, a couple of us would get together, and go to London, and spend a night, and the following afternoon we would come back to the base.

KP: What would you do on leave, did anything stand out?

CS: What anybody else does, you know. ... Well first of all you'd do some sightseeing. And ... in the evening you'd visit a pub or a bar, whatever, talk to the locals, of course, in London, Picadilly Circus was famous place, that's where young ladies, girls congregated.

KP: Did you date any English women when you were there?

CS: I did go on one or two dates, but they were nothing, well you'd go up to the Tower of London, or one of those places. ... The Tower of London is the one that I remember. I remember touring the Tower of London, but it's nothing that I kept up with.

KP: Were you in London, or any place in England when a V-2 hit?

CS: Well we knew about V-2's when we first arrived, we first set foot in, and I mentioned the first place that we went into, I don't know whether it was Stoke. ... Well anyway it was near, well it couldn't have been too far from ... Coventry. It wasn't too far from there, and ... you actually heard them. When they sounded a red alert, ... you had to run out to a bomb shelter. Now the bomb shelter was very crude. What they were, it was like a big tube, ... the dirt was piled up so that even grass would grow on it. And it was sort of open-ended, and that's where you're supposed to go. ... But, you know, we were new, and we had no fear, red alert, ... you'd go outside to see what was [going on]. ...

KP: So you went outside to look.

CS: Right. And you'd hear this putt, putt, putt, putt, ... that was the kind of sound that it made, because it was pilotless, and then when you didn't hear anything, you knew that the engine had cut out and that it's gonna drop. So we would hear them putt, putt, putting around.

KP: But you never had visual contact?

CS: Never actually saw it. But another experience with bombing, well, of course, London was bombed, and very heavily bombed. And you would hear ... every once in a while sirens and so forth. But the first, I remember the first time we went to London, ... [we] went to a hotel, this was not in Picadilly Circus, because after that we became a little more familiar [with London]. ... This was a smaller hotel, and we got a beautiful room, big picture window overlooking the street, and we marveled, "Gee, as crowded as London is, we got the beautiful room." Well we were dumb, because this big beautiful picture window, if a bomb went off, there would be shrapnel, there would be glass all over the place, and that would be an extremely dangerous place to be.

KP: And it didn't dawn on you at first?

CS: It didn't dawn on us. Of course, at night you would draw the curtain, there's a very heavy curtain which ... blocks off the light, but even that would have not been much protection. It never, it wasn't until the second time ... we were not going there, we were going to some place that didn't have a lot of glass.

KP: Were you in any air raids in London that you actually experienced?

CS: You would hear it.

KP: You never actually came close to one?

CS: ... Not that a bomb dropped in our immediate vicinity, because London is a very big place.

KP: Any thoughts on the English that you encountered?

CS: On the English?

KP: Yeah.

CS: We didn't encounter too many of them, but the English girls liked Americans, that you knew, and they were very easy to get along with.

KP: Did you smoke at all during the war?

CS: I was a smoker, not a heavy smoker. I quit smoking in 1959, ... because I decided that's what I wanted to do, even though I was never a heavy smoker, I had been smoking for many, many years.

KP: Had you smoked before getting into the service?

CS: Yes, I had smoked, ... probably [started] when I was high school age.

KP: How comfortable were you at your base, for example you mentioned earlier that food was fairly good, did it continue?

CS: Yes ... well ... when you're scheduled for a mission, and you went to breakfast, you got two fresh eggs. I mean it wasn't powdered eggs, other times it was powdered eggs. So in that sense you were being treated, but I would say in general that the food was good. The mess hall, of course, was some distance away, and you'd have to get on your bicycle and pedal to the mess hall, and everybody had a bicycle. And when it came, when there was a mission, a truck would come by the barracks, and everybody would just pile on, then they'd transport you to the mess hall. ... And after breakfast they would take you to the briefing area.

KP: It sounds like you were very confident in your abilities, and you had good crews that were under you, did ever cross your mind, suppose you got hit and had to bail out, especially into Germany, had you been given any training?

CS: Well you were told certain things, one thing was never give up your shoes. ... In other words, ... let's say that you fell into friendly hands, ... let's say that you landed in France or Belgium or even in Germany where you could evade being picked up, which is not likely. Because when you're on the flight line, you put on those sheep skinned lined boots, and you tied your shoes onto your parachute harness. And ... obviously, if you got down on ... the ground, you'd take off your flight boots and put on your shoes. And people would want them, ... they're in a position to help you, ... to do you a favor, I mean you need food and you need directions and a place to stay, if that were to happen-- ... not under any circumstances do you give up your shoes.

KP: Why were they so emphatic?

CS: Well, because you can't walk out barefoot, you know.

KP: Did they tell you anything else?

CS: Well, the typical, if you're taken prisoner, name, rank, and serial number and nothing else, and don't disclose where you're from, and what your missions were, that you know anybody. ... Typical military instructions.

KP: You mentioned that one of the members of your crew actually made it out through the underground.

CS: Actually there were several. My crew yes ...

KP: The original crew that you flew over with.

CS: Harry (Kohl?), ... I think his ... name was ... Harry (Kohl?). He was our navigator, which again we never flew with, ... but I did see him, as a matter of fact I think I saw him in the states once. ... Because when we came back to the states we came into Atlantic City. ... But there was

another guy, French was his name, ... Ken French. Must have been two or three that made it back. ... Well, in those first couple missions they were bombing roads, crossroads in France, ... because this was after the Normandy invasion, and they were bombing ... to support the troops, and so if they were downed in France, there was a good chance that they could get back, ... and some of them did.

KP: But you knew if it was in Germany, you were not going to make it.

CS: Not much of a chance, the only thing is you would be hoping for is that some German farmer wouldn't run a pitchfork through you, I guess. And that's why, in other words, lets say you parachuted out in a field in ... Germany. It's very possible that the civilians would kill you.

KP: You had that fear at the time?

CS: Right, right. ...

KP: So in other words, you almost would rather be captured by say the military, rather then take your chances.

CS: It's no guarantee, you didn't know really what to expect. But this was a possibility, and that's why I never carried a weapon. I mean we were issued 45 caliber ... automatics. Every crew member had one, but I never carried it, and a lot of the guys didn't carry them. I mean what good is it to you? If you're in a German city, and you're gonna ... firing that gun is not going to help you, or ... somewhere in the field, so I didn't carry it, the only thing, you're defenseless. But if you're in Belgium or France, again you have no use for that gun.

KP: Did you ever wonder that your bombs were hitting the target, in a sense, were you ever concerned that you might be bombing civilians?

CS: Well my last mission was to Berlin, and the aiming point was the Peace Monument, in the city, heart of the city, which was where the government buildings were. The government buildings, and the chancellery, the Reichstag whatever were right there. ... And one thing you knew, if you were in a parachute, you would not expect a German fighter to kill you in a parachute, but it doesn't mean that your life wasn't in danger on the ground. And it's the same way when they were bombing the cities, the Germans were bombing cities, they were attempting to destroy England, and you saw evidence of that everywhere, wherever you traveled. So our targets for the most part, I would say, I listed what they were in my notes, ... I think we went to Merseburg about six times, we went to some others where there were synthetic oil plants, we were hitting marshaling yards, we were hitting on several occasions, known factories, and they knew ... what was being ... manufactured there. ... That one mission that was to Berlin, ... well you couldn't feel too badly about it, because it was where the government buildings were. And, of course, that was my last mission, and I didn't see the results ... of the bomb strikes.

KP: I am eager to read later, your last mission was what month?

CS: February 3 of 1945, just before the war ended.

KP: The war will end officially, will finally stop in May. What happened to you after your last mission?

CS: After the last mission, I came back to the states, and I guess I went to Atlantic City, and ... I think I had about two weeks leave from Atlantic City, it was my first time home after, and I was sent up to Bradley Field in Connecticut. And [at] Bradley Field, ... we were the pilots, ... when the war was now over, which means that warplanes were coming back, when the planes were flown back to Bradley Field, the crews that flew them back would leave, and then we would fly the planes to storage fields in Texas and Oklahoma. And so if there was a B-17, I would fly as a pilot, and a B-24 pilot would fly as a co-pilot. If it was a B-24, the B-24 pilot would fly first pilot, and I would fly as co-pilot, and that's all the crew we had, ... just the two of us would take these planes to Texas and Oklahoma.

KP: And how would you get back from there?

CS: And then take commercial air to get back to Bradley Field. And so we did that a few times, and then after that we went to Romulus, Michigan and then we were with the Air Transport Command, and well that field was an Air Transport Command Field, and actually probably there ... as a make-work project at that point for us. ... They were providing some training for us in other airplanes like B-24s, I remember getting some B-24 training. But that didn't last too long, then we went up to St. Joseph, Missouri ... to be trained in C-46s, because the Air Transport Command flew not combat planes, but C-46s which was a cargo carrier. But even that was cut out, that school ... was cut out. And we went out to Long Beach, California, at this point I was slated to be separated so I was just sort of biding my time there for a couple of weeks, a couple of months.

KP: But it sounds like you did quite a bit after completing your missions, you flew a number of different planes, and had a number of different assignments. Were you frustrated at all that you could not just get out of the military?

CS: Well, in the fall of 1945, I guess I was still at Romulus, Michigan, which is near Detroit, and I had enough free time to visit, to go to Detroit. And at some time I came to the conclusion, that, well there's the G.I. Bill, will you do it? And the thing that brought it to mind, brought it to a focus, I and two or three other, I guess two others, pilots, had not too much to do, and we could see that we were going to be discharged, we were having a drink at the bar at the Cadillac Hotel in Detroit. This was probably late afternoon or early evening, and not that we were drinkers, but we would occasionally stop in and have a beer or two. And the place was empty, ... quite a large place, and there were four men on the other side of this bar. And they were from some fraternal organization, whether Rotary or Lions Club or something. And the one man was speaking to us, and, because the other three guys were kind of chummy, and he's with them, but yet not completely with them, and he's saying, "Now these three guys went to college." ... Indicating that he didn't. Then came the thought of, well there's the G.I. Bill, and the opportunity to go to college. That sort of focused it for me.

KP: So you really had not given the G.I. Bill much thought?

CS: ... I was just becoming aware of it, ... and had not decided. ... And I decided well, I better look into it. So when I had an opportunity to get back to New Jersey, and well there were ... two things that occurred to me, well Rutgers is a school in New Jersey and that I could visit easily, I could borrow a car and drive down there, which I did. And the other was, the school that I thought of was the University of Michigan. At Alliance Technical Institute, the dean was a graduate of the University of Michigan, and he occasionally mentioned it. So I thought, well ... the next opportunity I'll take a trip to the University of Michigan. But that didn't come about, because when I came down here to Rutgers, apparently there's a recruiting drive, I wasn't aware of it, I just came down to get some information, and by stepping up to the desk where the information was being disseminated, they were filling out application forms. So unknown to me, the ... fellah asks the questions, he wrote it down, gave my name, address and so forth, and the next thing you know I was accepted to Rutgers.

KP: And you were shocked at how easy the process went?

CS: And so, without any effort on my part, okay. ... February that became my target, because it was already early in the fall of '45, so I decided well, I'll make a target for February of '46, and it worked out for me.

KP: So you started out in February of '46 at Rutgers.

CS: Yes.

KP: And Michigan just ...

CS: Faded away.

KP: I guess before coming to Rutgers, I had just one more question about the military.

CS: ....

KP: Did you go to mass at all when you were in the air corps?

CS: Not really, I was not, I had been. ...

KP: But you did not attend regularly.

CS: But not with any regularity.

KP: Did other members of your crew or the squadron go?

CS: I wasn't aware of it. All I knew, ... Issac (Everts?) for example, was Jewish, he was our tailgunner. But I don't know whether he was actively going to temple or services. All I know is that when he flew ... a mission, he borrowed somebody else's dogtags.

KP: Really, because he didn't want?

CS: He didn't want to be taken prisoner in Germany. But other than that, ... and he was an ex-fighter, too. You know, rugged individual, and you had to be rugged to fly that position.

KP: The tailgunners?

CS: Well you're laying on your belly in the back of a B-17, getting bounced around, and when you think of the temperatures could be down to like 60 below zero, and if you have a failure in your electrical equipment, you're wired to a ... electrically heated suit, you can have a problem with oxygen, ... it's tough.

KP: I have also heard the temperatures were so low that people ended up making ice cream on their planes, and chilling their beer.

CS: I haven't heard of that.

KP: It's also, those temperature changes are really ...

CS: Well, the gunners were warned, if you get a jam, and you want to clear a jam, never take your glove off, because you would have instant frostbite.

KP: It sounds like you liked your experiences a great deal.

CS: Well the thing that I sometimes think about the hazards and the potential danger, like for example, oxygen. At 25,000 feet, and you're exerting some energy, if not physical, then due to anxiety or whatever, ... you need oxygen, and all you need is one piece of flak going through your oxygen system, because these were oxygen, sheet metal, thin skinned bottles. ... So you ... have two systems, you had a backup system, but the strange thing about oxygen, [is that] you don't know that you're being deprived. And you saw this in an oxygen chamber on the ground, ... where you would take off your mask, as a demonstration, you take off your oxygen mask, and this is when everybody else has their ... oxygen mask on, and the guy in charge, and you're being monitored so they can see from the outside of the chamber as well as the inside. And you tell the fellah to write his name, and continue writing his name or some simple thing, "How you feeling Joe?" "Good, good." In the meantime, ... he's not on oxygen any longer. "Are you okay?" "Yeah, fine, fine." He's completely unaware. ... Eventually, you show it to him, and what he thought he was writing his name, is just a scrawl, and eventually is nothing at all, and then, of course, then you bring back, revive him, and put him back on oxygen, so that you become aware of this, you know the danger of an oxygen failure, and you know that you have a backup system, but after all the backup system could be hit too. And you're told that if you need go back, take a walk around bottle, and it's a bottle about this big, and it has about five minutes worth of oxygen,

and you can go ... back and forward. So when you think of the dangers ... of losing your oxygen, and not being aware of it, and you wonder, well, so many planes that spun out, you know, was that a possibility that there was a minor, sure he was hit, ... but what was the main, what put him into a spin?

KP: You mention that when you were actually doing this, you were fairly fearless, I almost get the sense that you look back now and have had time to think of all the dangers?

CS: I'm more aware of it now then ever before. And I know if I had it to do over again, I would have learned much more about the systems in that airplane, and what if this fails me, what if that fails. Well you knew a little bit that if your hydraulic system failed, as you come back over the field, and the wheels ... you can crank them down, and leave your pattern and fly around and crank down wheels. If something else happened, you knew certain procedures. But, what about the ... failures that occurred at 25,000 feet? Because we flew anywhere from, we flew a couple of missions in support of ground troops at about 17,000, but most of them were up around 23, 25 and some as high as 29. So when you think of it now, you realize how lucky you were, that these accidents didn't occur.

KP: Had you thought of staying in the air corps at all?

CS: No, no. ... It was a clear cut answer for me.

KP: And did you ever think that, did you enjoy flying enough that you thought you would like to be a commercial pilot?

CS: I wrote a couple of letters. Well, first of all I went back to school immediately afterwards. I joined the reserves and flew with the reserves out of Newark for a short time, but it ... wasn't too practical, I didn't have a car, I would use ... the train to get to Newark. I guess once or twice I could borrow a car. But then the reserves were put on the paid status, ... and once they were put on the paid status, which they weren't when I joined. It was just fun to fly around, ... at the time they were just, training aircraft, like advanced flight trainers, twin engine, we used to call the Spruce Goose with the Tin Chin, because it was a plywood plane with a metal nose. ... And when they were on the paid basis, it became much more demanding, and I had to fly on all hours of the day and night, ... and you had to keep up with the training, and I couldn't manage it with going to school at the same time, so I just dropped out. But to answer the other question about commercial flying, I wrote a couple of letters, this was while I was still in school, ... and I didn't know what I would do if I got a favorable response, but I ... would decide when that happens. ... It never happened, because ... back in those days commercial aviation was very, very small, all they were flying was C-3s, and I guess there were a couple of Boeing planes, but they could select the pilots by the color of their eyes there were so many of them.

KP: People have said that too, that even if they thought about it, there were just too many pilots because of the war. You ended up living on campus at Rutgers, how did you like Rutgers, what were your initial impressions?

CS: Well, ... no strong impressions, the people I associated with, the fellows that I associated with were mostly my age, I was 24 at the time. ... With similar experience, and I found that ... I had to work a little harder than perhaps most others because of the gap.

KP: You did not think that your military training prepared you better for college?

CS: I didn't have any problems, other than having to concentrate a little bit harder, on math particularly. Calculus was being taught by a professor from South America, and he had a little bit of a language problem. One thing, and that was not my strong suit to begin with, I mean I tried real hard, and I got ... through calculus. But when it came to analytic geometry, there was ... an older professor, I guess he must have been, he was white haired, and very even voiced, low paced, low key man. And I guess other people understood what he was saying or what he was presenting. But analytic geometry was a complete loss to me, I passed the course, I don't know how, I think he was very kind. And after that, well the mathematics that were needed in mechanical engineering, simple algebra, simple arithmetic, elementary algebra actually. So between arithmetic and elementary algebra and a lot of common sense, engineering has a lot of common sense, so ... I could manage it, it's just wanted to make sure that I didn't do too badly. And, of course, ... you were always being reminded whether, if not directly, indirectly, that if you leave your place here, there's five other guys ready to take your place here. So stay with it, be on the ball.

KP: In a sense, you knew you were expendable?

CS: Exactly, right.

KP: When you entered Rutgers, what did you think, what was your career goal? What did you hope you would get out of Rutgers?

CS: Well, ... mechanical engineering was the direction which ... I was headed, ... and I realized now, that if I had to do it over again, it would be different, I made a couple of mistakes. For example, I had credit for English, which means that I didn't have to take it, but I kind of felt, well this would be a good thing for me to do, ... but when I got the book, this was Beowulf, and I says, "This is English? Hell, I got credit for English, I'm dropping this." And I got out of it, and I thought it was a mistake, I really should have taken the English course, I needed the English composition, and I needed the public speaking, I needed that ability. I was kind of somewhat introverted, and somewhat shy, I didn't go for ... that type of course, and ...

KP: Looking back, you wish.

CS: Looking back I should have done it, because it wasn't until about 1978, I joined a toastmasters club, and realized how important that was. Because by this time in industry, I was an engineering manager. I often had to make presentations or even talk to the people who worked for me, I had about 14 or 15 people in my department, ... and early on it didn't matter so much, because in the 60's and even in the 70's, the people were very practical, management was very practical. They could see results, and what was needed to be done to obtain results. Then

when you got into the late 70's and 80's, ... you got a lot of management trained people in industry, who didn't know so much about industry, but had learned a lot about management. And there was another layer that was brought in, in other words, ... when I got a project when I first started, let's say with Becton Dickinson, the company I worked for, I was given a project, and I was given a free hand, and nobody expected reports, or anything. But if it was five weeks later or five months later depending upon the size of the project, somebody looked for results, and the results were there or they weren't and usually they were, and somehow we managed to accomplish what we set out to do.

Eventually, it became more important to, ... if you got an assignment, you now have to prepare a budget, say what you're going to do, how long it's gonna take you, how many dollars are you going to spend, and report on it every day. ... And what became lost, and this is an important point, you had to report to management on the progress of your work. When I was working as a manager, I knew what the people worked for me, I would report to them, I would monitor their progress, I would give them help if they needed it, or I would coach them ... so it did not go off course. Our objective was achieved. Well, when you want a report, ... let's say ... you've got a technical project and you're reporting to management on your project, what dates your meeting ... and there's a layer of management that doesn't understand. Also my boss understood, that if I miscalculated, ... or I knew also, if somebody working for me misjudged what he's going to need in resources, I could understand it. Because, ... very often, you might say, you know, schedule a breakthrough. Now, well this is in essence this is what you're doing, right. Something which hasn't existed has to come into being, now schedule that for me, and tell me how you're going to achieve it, and now you said you're going to have this on May the first, now here it is June the first. Where is it, how come, and now you're being battered. And engineering became a totally different field, and you had to become aware of making presentations, ... you were talking to groups of people who didn't exist before.

KP: It is interesting that you bring up this point. In other words, the influx of MBAs in management structures really changed things?

CS: Absolutely, and it became a joke. ... Now schedule this scientific breakthrough.

KP: Going back, though I found those comments really fascinating, going back to Rutgers, was there anything else you would have changed looking back at your career?

CS: As I mentioned I would have taken that-- oh, I did sign up for a course in public speaking, ... but I signed up for midterm, like February, and I got in with a group who had been there for the whole semester, and I realized what a misfit that I was, and the next day I dropped out. ... Those are the mistakes that I made.

KP: But in engineering, were you pleased with your education?

CS: Mostly, well certainly the people who taught ... were sincere people. Some hard working, for example, math ... electricity has a good deal of, you have to be able to think in the abstract, ... and be good in mathematics. It was a difficult course for me, I managed it, particularly when it

came to doing labs, and dealing with equipment, I could handle that, but I needed an extra five minutes on a test, and the fellow, I guess he was an instructor, or a trainee, or graduate student, or whatever he was, he was very good, he was tolerant, he could understand my predicament and I could get that extra five minutes, and so I appreciated that. And there were some good chemistry [classes], I always enjoyed chemistry, so even though I had credit for chemistry from my previous school, I took it again. ... And this was a little bit at a higher level, and it was a little more challenging, but I enjoyed it. And as I recall, the prof ... who gave the lectures was excellent, and he always made them interesting. Like, for example, there was one, even though you're sitting in this theater, and he's down there talking, and I guess the subject had to do with hydrogen or oxidation or something, and he's working with hydrogen and making bubbles, you know, soap bubbles. And the soap bubbles rising, and well what he very cleverly did, he put a bunsen burner, ... a ring of flame above his workbench, so when that bubble went up, and nobody's expecting it as the bubble risings, it exploded. [laughter] So little things like that made the course interesting. ... So I enjoyed that course.

And I thought highly of the people who taught the electrical course, the surveying course was good, the guy was very practical, ... you had to actually go out with a surveying team, and I guess there were three of us, and in order to do any surveying, within a hour, ... whatever it was, it was a short time, and you're measuring distances, and ... siding and taping and so forth, you really had to hustle. And I was able to get my team hustling, and the instructor was that kind of a guy, he could, you know, see that ... speeding, hustling. I mean, just so long as you got-- ... if you missed by a tenth of an inch, just so long as you got the whole idea of ...

KP: How to do it?

CS. How do it, and it's okay. And you maintained your books and your log, that was okay. ... He was, when I needed a reference, I used him as a reference, and he was very good. The fellow in, heat power, thermodynamics, he was a hardworking young professor, and very conscientious, very serious guy. He made us work, of course, which ... is to be expected. But he also knew it. There was one prof, which kind of made me, I guess, he was a German sounding, I guess he had his training in Germany. After came the first test, we were all there sitting there for the test, and it's like fifteen minutes after the hour. And we thought well, if he's fifteen minutes late, he's not going to give us this test, it'll be the next session or something. ... Oh yes, we will take the test. And students say, "Do [you] make any allowance for the shortage of time?" "No." So I decided, so the hell with this, I'm getting out of this class.

KP: You were very active in high school, did you join any clubs or any teams, or anything at Rutgers?

CS: At Rutgers, I joined, ... there were actually two, there was an interfaith council. ... I was not a very religious person, but I did ... took the bible course. I was interested in religion at least from a historical, and that kind of perspective. And so there was an interfaith group that was organized, so I joined. And I stayed with it I think ... for about two years. As far as sports, obviously, ... I probably weighed about 150 pounds at the time, so I was not a heavyweight, ... and there was a 150 pound football, ... but with the engineering curriculum I couldn't hack it, so I

never bothered, or made any attempt to. In fact, when it came to football, I guess I went to maybe two or three games at the stadium, but most of the time I'd flip the radio on, Saturday afternoon to get the score, then I'd go back to what I was doing.

KP: It sounds like college for you was a lot of work, whereas in high school it was hit or miss?

CS: Yes.

KP: Did you ever go to dances?

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

CS: I have a vague recollection of some social function, ... I guess it was with the New Jersey College for Women at the time, but nothing beyond that.

KP: Where did you get your first job?

CS: Well, the first job, ... after leaving Rutgers, was with Walter Kidde, in Belleville. And at the time, you see, almost anybody graduating from school today is oriented to, where to look for jobs, what type of, he is aware of skills he has, the jobs that are available, what is easy, what is difficult, who is succeeding, who is not, all of that business. And there's a section in the newspaper, column after column written on careers and jobs and so forth. Well it wasn't quite that way. And as a matter of fact, if companies ... are willing to pay for the fees to the agencies that provide recruits. Well it wasn't quite that way. One day as I was driving past Walter Kidde, I stopped in to inquire about the possibility for work, and oh no they weren't hiring.

Short ... time later, I stopped at a personnel agency in Newark, and registered with them, and they sent me to Walter Kidde, and now I owed them two weeks salary, because I had to pay the fee for the ... personnel agency that sent me. ... Well I ... stayed with Walter Kidde for a year, actually the level of the job was such that it was very ordinary. It was at a level that the technical school that I went to prepared me for that, not a college education. ... And the salary was like $55 a week, and knew I was doing well, I was constantly getting a pat on the back. And so I asked, there was nothing automatic ... about getting reviewed and so forth, so I asked for an increase and I'd get a huge pat on the back, and said, yes, you deserve it next pay period, ten percent. Well it just wasn't there, and this went on for a while. And when finally one of these times, I said, well, next pay period, ... it wasn't there. Well, next pay period 5 percent, well, the hell with this life, I'm going to get out of here there's no future, and there really wasn't any future.

So I went to Curtiss-Wright in Caldwell, that's their propeller plant, and immediately went from $55 to $75. And apparently I was doing well there. Again, well I was preparing manufacturing operations sheets for the people in the shop, in other words to indicate what their machining procedures should be. ... And one of my co-workers told me about a job shop, they said, "Oh, there's an outfit here in Newark, sign up with them, and there's a job in North Carolina for ... AT&T." ... This was the manufacturing arm of AT&T, I guess it was Western Electric. And it pays $125 plus per diem, and ... ten dollars a day, a good deal, it sounded good, so I applied for

that, and I got it. But that was for a limited time, it was a contract, from ... January 1 to June 30th, and at the end of the contract, the firm that I worked for had that contract, and that was it. So, well, where's the next job, it was at another job shop. And there was ... a job in Stratford, Connecticut. They were manufacturing one of the Wright-Aero engines for helicopters, and they were converting a plant from making aircraft to aircraft engines, which means it is ... total change in machinery and operations, and they needed a lot of engineers, and they couldn't possibly hire them all, but they could hire job shops, to work there for a year or two, or until the plant is on stream, and then they go and the people who are regular crew would. So I did that for a while, worked as a job shopper, and then realized that ... I'm working now in Stratford, Connecticut, and I'm commuting on a weekly basis. Then I was out in Farmingdale, Long Island, and again commuting on a weekly basis, and then out to Cleveland, Ohio for several months. Then I began to realize that well, I better ... change, I'm having ... all my meals out, what do I do for the rest of the evening? Go to a restaurant, and we'd go there with my other co-workers, at seven o'clock for dinner, and we don't leave the place at ten o'clock. So I decided, well I'm going to end it. ... I decided I would get a permanent job, that's when I applied to Becton Dickinson, right here in New Jersey, very close by to where I lived. And it worked out very well. And I was with them for the next 38 years.

KP: A lot of people that I have interviewed, sort of started with one firm right from the very beginning and stayed with them until they retired. Do you think that working these different companies helped you?

CS: It was helpful, yes, in fact when I started with Walter Kidde, and Curtiss-Wright, and AT&T, and ... Avco in Stratford, and Republic Aviation out in Farmingdale. Yeah, I think that it's an advantage, I dealt with a ... broader range of people, a broader range of disciplines. ... It was an advantage I thought, because when I started at Becton Dickinson, it was in a very small department, it was a department with only four people, and so my contacts there would have been very limited, but they had been on a broader scale previously, so I was able to function much better.

KP: When you look back on it, what were your favorite projects that you worked on?

CS: Well, very early at Becton Dickinson, Becton Dickinson was buying bandages from Paula silk mill in Pawtucket, Rhode Island. And then they decided-- and there was a new bandage, an adhesive bandage, they had never made an adhesive bandage, now this was not a branch of the company it was a vendor to the company. But ... they were an exclusive vendor, and so when it came time to set up that adhesive operation, they had their consultant, and they bought some equipment, how to apply the mix, and prepare this adhesive, and how to apply it. Then when it came to make this thing work, my boss called me, and said, "Look, we're gonna take a ride up to Paula silkmill." And the man from the R&D department, who had responsibility for the adhesive bandages, and the guy from quality control, and my boss and I made the trip up there. And he ... showed me, what was there. So he said, "Okay, now make it work." So it was my responsibility, and I saw how crude the method ... of formulating and taking this adhesive into a five gallon bucket, and putting on this roll with a spatula, even though I had never seen an adhesive bandage

before, I never saw ... the operation, I thought this is impossible, this is just too crude, ... it's so primitive.

So I developed the method of putting it into 55 gallon drums, suspending a drum above the machine-- it's a doctor blade machine, where you have the roll of fabric come up, and it actually puts the layer out, in other words controls the width, thickness of the layer and it comes over a steam vent. ... I changed the equipment to such a degree, that it could be operated on a continuous basis, ... there was no exposure of adhesive to atmosphere until it was placed on the machine. Then the other thing, when it came, after the project was made, ... it was put onto a fabric, and put onto a roll. Well as you peeled it off the roll, you could peel it off this side of the fabric or that side of the fabric, and it would never work. So ...I made up a solution of (rosin?) and haptene, and then had it sprayed ... on this web of material, so that the adhesion would be to one side of the fabric rather than the other. Well I went up there never thinking much about it, developed the process and trained the people, then back to my job in East Rutherford. Nobody said a word to me, so I thought well, I guess it's running okay.

Well ... I never realized how pleased they were, that it's working so well, until a very casual back of the hand compliment, that had to do with some other thing, and I guess the vice president for purchasing at some point, well first came this back-handed compliment, my boss' boss, saying, made some casual reference about the good job that I had done for them up at Paula silk. And then some months later, the vice president from purchasing wanted to know, what should we be charging these people? He was interested in cost, you know, because I had set up. ... At the time, ... I had no idea what cost was, I don't know about costs of fabric, or any of the material, I didn't buy them. All I did was take everything and put it together and make it work. So I was hardly in a position, but the fact that the vice president from purchasing, wants to know, and he's consulting with me, kind of indicated ... that maybe he thinks that I know something and I did a good job. That was one thing.

Much later, I guess about 1960, ... I attended a Society of Plastic Engineers, we were heavily into plastics, and I had some plastics background. So I discovered that some of our competition, ... there some people from ...

KP: Union Carbide.

CS: Union Carbide, were selling plastics ... to a competitor, and they were working with this competitor to develop a plastic single-use syringe, what is referred to as a disposable syringe. So I came back to Becton Dickinson, I says to my boss, I think we should be working on a disposable syringe, a single use syringe, because I overheard that these people from Union Carbide are flying down to this place in Florida, where this competitor of ours [is located]. And so, ... a short time later, he says, "Well, you got the job." So I undertook the job, and I ... designed a whole line of syringes, from the two and a half cc, to 5 cc, 10 cc, 20 cc, 30 to 50 cc. But the main thing was ... to start off with a two and a half cc, which was the most common size. And it worked so well, well first thing I worked with, we didn't have molding at the time in house, so we ... were working with a company in Erie, Pennsylvania. And I go up there, ... with the drawings to make the prototypes. And came back, ... with the barrel and the plunger, and so

forth-- ... the main three components, and showed it to him, and my boss looked at it, tried it. ... He says, "Well it's a beautiful instrument." And so it worked very well. And again I didn't realize until much later, like years later, I did the design, and the prototypes, had the acceptance. Then I went off as a project engineer, went on to other things. I was managing a department now, with a bunch of people, making disposable type products. And ... there was a real tough guy, ... George Keller, who headed up the R&D division across the street from us, happened to ... just remark in passing, in answering to somebody else. ... [he] acknowledged the fact that I had ... designed this disposable syringe. And yeah, he says, "He ... designed the whole line of them and he did it all in one summer." Well, gee, I had never got a compliment like that, but here again is sort of a back handed compliment, so I was rather pleased with having done that. But also from the fact, that it became over the years, the disposable syringes are one of the biggest product lines that Becton Dickinson has. So from 1960 until 1990, they were manufacturing, probably still are, a huge line, probably one of the biggest profit items for Becton Dickinson.

KP: So you look back on your career, and can point to several things that people are using?

CS: Yeah, I happened to be in the hospital, in let's see, 1985, I guess ... talking to the doctor, it became apparent, even in a hospital you have to become aware of where you are and what is being done to you. And so the fellah knew that I was from Becton Dickinson, and he's curious to know, well what else are they doing now? Well one of the biggest things, which did not pan out incidentally, I thought it would, it was a try, you know when let's say they want to put a catheter down your throat, ... or into your lungs. They coat it with K-Y or something of that sort. So the thing that I was trying to develop was a coating on vinyl tubing, which is very dry, all you have to do is immerse it in water, in other words, so the actual coating, because there are some ... undesirable features of putting a foreign substance on a ...

KP: Sterile?

CS: On an item just to make ... well it would be a sterile coating that you apply, it would be in a hospital, but nevertheless, it's a substance that you really don't want to be there. Now, if you could make that slippery condition on the surface of the piece of tubing, without ... introducing another material, that's a big advantage, and that's one thing that ... I would have tried to do. But as I said, ... it has not worked out, and I would hope that somebody succeeds with it.

KP: So you did have projects that did not work out?

CS: That was one that didn't, right.

KP: I guess one other question that comes to mind, is how did you meet you wife, did you meet her at work or elsewhere?

CS: Well I met my wife, in ... 1958, I think it was a social group. Actually, again, this is Kosciuszko Foundation, ... it's an educational organization, ... they provide ... they subsidize people. In other words, if you wanted to study, you're interested in studying, for example in Europe, or here, and you can justify what your objectives are, they will fund you for a year or

two. And it's ... also a social group, at the time, they have a lot of old codgers there, back in the '50s there was a young group that used to meet, purely social gatherings, go on a picnic or something, it was one of those occasions. And then there's ... another group here in New Jersey, in Newark, called ... the Polish arts group. They used to meet in downtown Newark, in the '50s when it was okay to go to Newark at night. ... On the second floor of one of the department stores, actually a piano store. And one day I decided to follow up, called her up for a date, and that was it, and we continued on from there.

KP: You joined several veterans organizations. When did you join them, immediately after the war or did it come later?

CS: ... Well, immediately after the war, I joined the Veterans of Foreign Wars, because a man who lived on the first floor in a house, this was my father's house, and whenever I was home I lived with in my father's apartment. And he was active in the Veterans of Foreign Wars, and so because he was active I decided to attend a couple of meetings and joined, but was never really active. But as a matter of fact, when I left, ... this was in the late '40s, and once I began to spend so much time away from home, traveling and so forth, I just dropped out. But I rejoined them fairly recently, maybe ten years ago, fifteen years ago, and that's the Veterans of Foreign Wars. ... I probably haven't been, in the last ten years, I ... may have been to one or two meetings. ... I'm a life member incidentally, because instead of paying my twelve bucks a year or so, it was like $75 or $100 ... to become a life member. So I get their ... monthly ... newsletter. ... And I live in Wayne, and so I says, "I'll join an organization right here in Wayne," so I joined the American Legion in Wayne. And, ... actually not immediately, what prompted me to join the American Legion, they sponsored Boys Town, are you familiar with Boys Town?

KP: Yes.

CS: It's an excellent organization. They send a bunch of boys down to Rider College for a week, to learn about government, and they create a government of their own, and they run their own. Were you in Boy's Town?

KP: No, I wasn't, but I had heard about it and wanted to be when I heard about it.

CS: One of our sons, the one who is now working for a Ph.D. in political science, was ... selected, and he was there, and so I became aware. ... And they do such a marvelous job, it's really excellent. And that was sponsored by the American Legion. And then when I was in Toastmasters in the late '70s, ... a committee from Toastmasters went down to the American Legion, and listened to the speakers, ... and ... make the choice to who goes to Boys Town. ... So I was part of that also, and I thought that the American Legion is doing such a good job that I better become a member of it, so I did. And again I became a life member of the American Legion.

KP: You also joined the 8th Air Force Historical Society?

CS: Right, ... the 8th Air Force Historical Society. They meet several times a year, ... well I would say ... at least three times a year, maybe even four times a year. And they used to meet at various military installations, like Fort Monmouth, and what's the field near Trenton?

KP: McGuire?

CS: ... McGuire Air Force Base, and other places, and Picatinny Arsenal. And so one of my friends here in North Jersey, this goes back about ten years ago, he eventually moved out to Cape Cod, but he was gung-ho in this organization. Now he ... was a navigator on a B-17 crew. Now his crew was intact, they were a gung-ho bunch, they had reunions, they had that camaraderie, and he loved ... the 8th Air Force Historical Society. It was opportunity to do some, you call hangar flying, I guess, or hangar barn storm, whatever. And I used to hear him, well I'm not interested in living in the past, but eventually I joined. And so we attended some of the meetings ... at Fort Monmouth. It's quite a drive, but we nevertheless went there and to Picatinny Arsenal. As a matter of fact next Saturday we're meeting at a VFW in, right there in our backyard, so I am going to that one. But it's convenient, ... and ... they generally have ... a dinner, it is usually scheduled for an evening, although now some people hate to drive at night ... as they get on in the years, and some of them are scheduled for lunches rather than dinners. ... It's a dinner, ... and a time for socializing, and they also present a speaker, military, or a congressman, and so forth. Like one of our meetings at ... Picatinny Arsenal we had Marge Roukema the representative from Bergen County speak. We've had some retired generals speak. And so it's interesting, it's also a pleasant evening. So that's the 8th Air Force Historical Society, but they have other goals, and I don't go for it all, because as I've told you my friend, who went through this whole thing intact with his crew, and he has that-- he's gung-ho, ... I'm to a lesser degree. But ... they are creating a museum, they are creating a ... typical control tower, they want to set that up. In other words, restore some things, restore the esprit de corps. And also the 305th Bomb Group has-- I forget what they call themselves the 305th Bomb Group Memorial Society I think. And so it only cost 100 some dollars to become a life member, and I get the publications. As a matter of fact I gave you one.

KP: Yes, thank you.

CS: ... I guess what you have is the 8th Air Force's Historical Society's publication.

KP: Have you gone to any big reunions, one of the national reunions?

CS: No, I've never gone to any one of those. I wouldn't rule it out, but it's not very likely. Because if I went, I wouldn't know ...

KP: Do you sometimes look back and wish you had had a crew that had stayed together?

CS: Right, it would be more ... meaningful. This way to go back as an individual, and see everybody else as a stranger.

AZ: I was just curious, when you came back from overseas, were you impressed by any changes that were in the country, between the period before the war and after the war?

CS: No, just that it perhaps it was just a little more built up. In other words there was a house where there was a vacant lot, but there were still some vacant lots where I lived, but to go back now, you really see the change. There are no vacant lots anywhere, ... and here on campus, the Scott building that we walked by was not there, now there's a massive building. There was a lot more open space out here, and I guess the buildings have changed. I lived in Ford Hall, ... for the first couple of semesters, and I would walk over to the engineering building, now the engineering building is something else.

KP: Yes.

CS: This building was the physics building, and then there was the ceramics building. ... They are all something totally different, and the cafeteria which used to be Winants, is no longer a cafeteria.

KP: No, the buildings in some ways, on the outside look roughly the same, but this is now the humanities area.

CS: Right. ... Yeah, and the skyscraper dorm out here, or several.

KP: Have you come back to any of your college reunions?

CS: No, and I think very few engineers have. Because there was a grind, let's face it.

KP: I sense that you realize at the time, you look back at it.

CS: Well I would have taken some other courses to perhaps make the stay here a little more pleasant. ... But it's not that I couldn't tolerate it or I was in anyway displeased with it, it's just that's the way it was, and you accepted it.

KP: Is there anything that we forgot to ask?

CS: No I think you pretty much covered everything.

KP: No, I have to apologize on record for my cold, which at times has left me a little lightheaded too. Thank you very much.

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

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