RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY

NEW BRUNSWICK

AN INTERVIEW WITH ROBERT E. ROSS

FOR THE

RUTGERS ORAL HISTORY ARCHIVES

INTERVIEW CONDUCTED BY

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FANTASTIC TRANSCRIPTS

Shaun Illingworth: This begins an interview with Dr. Robert E. Ross on December 12, 2017, in Raleigh, North Carolina, with Shaun Illingworth. Thank you very much for having me here today.

Robert E. Ross: Oh, it's my pleasure and, just preliminary, this is a wonderful initiative that goes on. For anybody that's reading this interview, I'd encourage them to participate as well.

SI: Thank you for the endorsement. [laughter] To begin, can you tell me when and where you were born?

RR: I was born August 25, 1948, in Trenton, New Jersey.

SI: What were your parents' names?

RR: Edgar H. Ross, Jr., and Mildred Irene Brooks.

SI: Beginning with your father's side of the family, what do you know about where he came from, where your grandparents were from, that sort of thing?

RR: Well, most of the Ross side came to Pennsylvania in the early 1800s and his mother's side, my maternal grandmother, were from Germany. They came also in the 1800s, but his maternal grandmother, my maternal great-grandmother, was from Cape May. Her family had come into Massachusetts in the 1630s. They migrated from there to Connecticut, Long Island and Nantucket Island. A lot of them became whalers and they moved down to Cape May following the whales.

One of them lived in New Amsterdam and, after the English took over, he decided to move to New Jersey, which was less populated--it was open area, mostly Indians--but they could set up English settlements, as opposed to Dutch settlements. There's actually a record of him being part of an expedition that sailed up the Raritan River in 1663. So, he was the first one in my family "On the Banks." [laughter] From there, he moved to Monmouth Tract, just near Sandy Hook, and down to Cape May, where my family remained for two hundred years until they married into the Rosses from Philadelphia.

My dad then moved back, actually after World War II. He got a job in Trenton, New Jersey.

SI: Were your parents married before the war or during the war?

RR: After the war.

SI: Okay. You were telling me a little bit about your father's generation and how they were shaped by World War II. Can you tell me a little bit about that, what your father did in the service, what your uncles did?

RR: Yes, and it's relevant because I think it really influenced me, the type of person they were, the dedication they had. They were religious people, they were patriotic people, they were hard-

working. They were children of the Depression and the war--yet, they had a very optimistic attitude and "can-do" attitude.

So, just briefly, my dad wanted to go to college after high school. His father told him that he didn't have enough money to send all his children--he had four sons-- so, he wouldn't pay to support any of them. So, my dad got a job and was working his way through college at night. Then, he got drafted into the war, or he may have enlisted, I'm not sure, but he was in the first invasion of North Africa and the capture of Casablanca with General [George S.] Patton [Operation TORCH in late 1942 and early 1943]. He went across North Africa, then, invaded Sicily [mid-1943] and invaded Italy [late 1943] before getting an appointment to Officer Candidate School. So, he came back to the US, and that's when he married my mother.

My uncle Walter was a bombardier in the Army Air Force, flying missions over Japan. His plane was shot down a couple days after the bomb was dropped at Hiroshima [on August 6, 1945]. He was stationed in Tinian, where the Tibbetts crew left. He didn't know the atomic bomb was dropped, but, while they were in the Sea of Japan, bobbing around in the life rafts, they saw a flash and heard the bomb at Nagasaki [on August 9, 1945]. After a week at sea--they were starving--they tried to steal some food from a village and were captured and sent to Hiroshima, where he was put in a prisoner of war camp.

Interesting, the word came out to execute all the Americans, but some lieutenant came running out and said, "No, no, stop, stop. Don't do this. The war's going to be over. It's not worth it," and he saved their lives. Years later, my uncle was co-chairman of a national committee to thank President [Harry S] Truman for dropping the bomb and saving so many lives, and he went back to Japan and met that lieutenant.

My uncle Harry was a radio operator as a young man. He was on a [B-24] Liberator Air Force bomber. He was looking for submarines and, on D-Day, he was stationed doing that, flying up and down the Channel looking for German submarines, and had a view out the window of the D-Day Invasion [on June 6, 1944]. In 2002, he was given the Distinguished Flying Cross, retroactively, for his service.

Uncle Harold didn't see combat, but he was stationed in England. He was repairing ships. He was a plumber and a very good tradesmen. So, he repaired the Liberty ships. He did make it across the North Atlantic during the War of the Atlantic, which was a little bit tricky, but, after that, he was relatively safe in England.

Harold was the only one of the brothers that got called up again after World War II, for the Korean War. He participated in the [September 1950] landing at Inchon with [General Douglas] MacArthur. He was ferrying frogmen, which was the forerunners of the Navy SEALs, to the beach to take out some of the fortifications and mines protecting Inchon.

So, I mean, these are the type of people I grew up with, that it really influenced me to be kind of hard-working. I owe a lot to them.

I didn't know all of this until the 1990s, or around the time that my dad passed away, and they sort of mentioned it because I was in the service and I think they felt they could share a little bit, and they were getting older. Certainly, I can see where they got their character from and I tried to do that throughout my life, looking at people of character and to emulate them. Maybe we'll talk a little bit about how Rutgers really had a big impact on me in that way as well.

SI: Certainly. Tell me a little bit about your mother's family. You described your grandparents' generation, but did she have siblings as well?

RR: She had an older sibling who was six years older, got married right before World War II, moved out to Montana with a cowboy. So, I really didn't know much about her, but her family came over in the late 1800s, around the turn of the century. Some of them went through Ellis Island and they settled in Philadelphia, but her family spent about five or six hundred years in Gloucestershire, England, on the border of Wales.

So, they were relatively new immigrants. My mother's grandmother, my great-grandmother, was born in England and my mother was a first-generation American.

SI: Do you know how your parents met?

RR: Yes, they met at church in Philadelphia. They went to the same church. My mother was six years younger and she was actually friendly with one of my dad's brothers and would come over the house. They had an attraction. So, they kind of waited for her to grow up, to be old enough. That's how they met, but she lived nearby and they met through church.

SI: What church was your family involved with?

RR: Episcopalians. My family, going way back, they were mostly tradespeople. Just some of the occupations that I've been able to find through Ancestry.com and other things is plumbers--my grandfather was a plumber, my great-grandfather was a plumber. Before that, they were night watchmen, they worked on the railroad. A couple of them were hatters and worked for the Stetson Hat Company, which was kind of interesting, and were involved in some of the ways that business was run then, very paternalistic, almost like company towns, where many of the companies in Philadelphia and New Jersey were basically company towns.

They gave "cradle-to-grave" support for their workers. It's interesting in this story, because, many times, later, the workers unionized and demanded more and more and put the companies out of business. So, the paternalistic type of attitude that many of the, quote, "robber barons" of the time had, they did away with that and ended up having really nothing, so that they had a tough time. It's interesting, also, how many of the people that lived in the cities, my ancestors, died of infectious diseases, whereas the ones that lived in Cape May or areas that were more rural lived to their eighties and nineties. So, interesting what life was like before infectious diseases [were curbed].

Which brings Rutgers to mind. I met Selman Waksman once at a fraternity dinner. We invited him. My fraternity, Chi Psi, used to invite professors to come to dinner and they invited him one

time. Being a science major and taking microbiology courses, I had a chance to talk with him. Of course, he developed streptomycin as a soil scientist at Rutgers and it saved a lot of lives. It's just interesting to think what would've happened if a lot of those miracle medicines were available earlier. It makes you think how lucky you were to actually have survived, since so many of my ancestors died from childbirth or infectious diseases.

[Editor's Note: Dr. Selman Waksman was a microbiologist whose research led to the discovery of streptomycin and who coined the term "antibiotics." He earned his bachelor's from Rutgers College in 1915, a master's from Rutgers in 1916 and his PhD at University of California at Berkeley in 1918 and joined the Rutgers University faculty that same year. He was awarded the Nobel Prize in Physiology or Medicine in 1952.]

SI: Your parents had you in 1948. Do you have any older siblings or younger siblings?

RR: Yes, I have a sister, Elizabeth Sherman, who's three years younger, who still lives in New Jersey. She went to Monmouth College and became a teacher in Holmdel for thirty-eight years or something and is now retired down at Beach Haven. So, she's been a lifelong New Jersey person. I tended to be the wanderer in the family and moved around a lot, mostly with my career.

SI: When you were young, around the time of your first memories, were you still living in Trenton? Where were you living?

RR: Yes, actually, I was born in Trenton, but I lived right across the border in Ewing Township. So, I went to the public schools in Ewing Township, but the church I went to was on State Street in Trenton, New Jersey, which was a massive, kind of Gothic cathedral-type place, very impressive for a young man.

It was interesting, what Trenton was like at the time; I'll give you little memories of Trenton. The Trinity Cathedral was just decorated with statues and monuments. It was an Episcopal church, so, it had that kind of Catholic feel to it. One was a great, big portrait of the Virgin Mary all done in pearls and semiprecious gems, donated by the Roebling Family, which built the Brooklyn Bridge amongst other things. They were great patrons.

I go down to Trenton now and it's sad in a way. It's mostly a government town and not as many people live there. I used to go to the movies in Trenton with dates--there's hardly any movie houses, if any, in downtown Trenton. It's really kind of a dead city now and it's mostly office buildings, not many hotels, but, when I was there, people used to go down a lot. It was quite a wonderful place, with the barracks and the big "Trenton Makes, The World Takes" sign. There was a lot of pride in being from Trenton, New Jersey.

SI: Tell me a little bit about the neighborhood you grew up in.

RR: Well, it was a development built right after the war. I lived in a Cape Cod-type of house that was built in 1948. My parents lived in an apartment in Trenton, but, when they were expecting me, they decided, "It's time to get a house." So, we moved to this place. It was a

three-bedroom, less than eighteen hundred square feet or so, had one bathroom--kind of a small place by today's standards, but my family, both my parents, grew up in row houses.

My dad shared a bed with one of his brothers. They had four boys and two bedrooms. So, they shared beds until they went into the Army. My dad said the first time he ever had his own bed was a cot in basic training. So, it was an interesting perspective, when, now, in the era of big homes, you try to relate a little bit of that to your children, just when they say, "Oh, how come I don't have a private bathroom?" or something, and you say, "Well, you can get by." [laughter]

SI: I was curious, since your mother had a German background, did that affect your household at all, in terms of the food you ate, cultural things?

RR: Yes. My grandmother on my father's side was German. My mother was all English.

SI: Okay.

RR: But, yes, it did. She was an English cook. Her mother passed away when she was six. So, she was raised by her grandmother, who was born in England. So, she learned how to cook from her. So, we ate English food. We had no *al dente* pasta, even though we lived in an Italian neighborhood and we obviously had access to good Italian food, but, yes, she tended to cook everything well-done. We ate a lot of organ foods, liver, kidneys, yes, you name it. We used to have--our big meal was on Friday--we'd have pancakes, which we thought was just really great, and it was sort of economical.

Both my parents were very frugal, because of the Depression era, I guess--it's what they grew up with. My mother's father had lost his job as a stockbroker during the Great Depression, in the 1920s, and never worked in that field again. He was a bookkeeper and I don't know what he really did to survive. He bought a lot of stocks. He kept them, which she ended up living off of, some of the interest from it when she inherited them, but he had a tough time. They all did, I mean. My other grandfather, who was a plumber, though, he didn't suffer much during the Depression, compared to his neighbors, because, when you have a plumbing problem, you're going to give that priority.

So, having a trade, they used to talk about that, on having a useful trade, which it brings up just a thought now. When I went to Rutgers--I'll talk about it later--I was Chairman of the Student-Faculty Relationship Committee in my senior year. It conducted studies on good teaching and student attitudes to what they expected from Rutgers. I remember talking with some of the faculty members and saying, basically, "I came to Rutgers to learn a trade." I was in the College of Agriculture, which went over maybe a little bit better, than when you talked to college professors at Rutgers College, saying that you were there to learn a trade, it was really, maybe, a way of expressing your desire for education that they weren't familiar with.

You could just see the shock on their faces. "But, my trade," I said, "I want to be a scientist and I want you to teach me how to be a scientist," because I knew that if you had something that was a good trade, like my ancestors who were plumbers, it was something valuable and something that

you had as a skill. So, I always thought, "I want to try to make sure that I do that for myself as well."

SI: Growing up in this neighborhood, what would you do for fun? What were your interests as a child? Were you in Scouting or anything like that?

RR: Yes, my family was very active in Scouting. Many of them are Eagle Scouts. My dad was an Eagle Scout. Two of my uncles won the Silver Beaver Award for being adult Scout Leaders. They spoke about Scouting a lot and the camaraderie that it gave, and they said that it really helped them, actually, in World War II. They could tell who were Scouts and who weren't, that they were self-reliant, they were able to fend for themselves, they'd spent some time outdoors.

So, it was a no-brainer that I would get involved in Scouting, and my family has, to this day, many generations of Eagle Scouts. It was a great experience for me. Most of the Scout Leaders were former World War II vets. So, we had sort of a paramilitary thing. You learned discipline, you learned how to stand to attention, you addressed the people as, "Sir," out of respect, sort of like they do in the South now. One of the things I like about Raleigh is that you do use, "Sir," and, "Ma'am." I find that to be a degree of niceties that you wish would continue--but, yes, Scouting was good. I became an Eagle Scout. It really focused me on other efforts and maybe started a lifetime of trying to have more than one interest in life.

One thing I was very proud of is that, for some reason, and I don't know why--it happened to me a lot--but I was picked in 1964 to be an Eagle Scout representing the State of New Jersey at the Tricentennial parade that they held in Trenton. I was down at the National Jamboree--it was in 1964--in Valley Forge and they picked one Scout from each state to come and march in a parade. They picked me, maybe because I was from Trenton, New Jersey, and was an Eagle Scout and, I guess, was a good guy. So, I met the Governor and he made a formal ceremony about the Scouting and how it was good for young people. So, yes, it played a big part in my life.

SI: Was that Governor Hughes? [Editor's Note: Governor Richard J. Hughes served as Governor of New Jersey from 1962 to 1970.]

RR: Yes, Governor Hughes. I got my picture in the paper. It was pretty neat.

SI: Would you go to a lot of jamborees?

RR: I just went to one. I went on a wilderness expedition in Canada in my senior year in high school. I stayed in Scouting until I was eighteen, so, as long as you could. You went up and lived off the land for two weeks, which was a great experience. That, and the Army in general, and, later, I'm sure we'll talk about the Army, but just being in situations where you had to kind of fend for yourself, I look back at it and it was good.

I mean, you failed at things. You had tough times. Just sleeping in a hammock out in the wilderness, drinking out of a lake and you're kind of cramped or, in basic training, sleeping in a foxhole in the rain, maybe you're not quite as upset when maybe the airline seat is a little bit too

crowded or they don't have your beverage of choice. So, I think having maybe what I thought were hardships at the time weren't.

In general, maybe because of the optimism of my ancestors and my dad and uncles, I always tended to look at, "So, this is a really bad thing that's happening now--what can I learn from it and how can I benefit and how is this going to help me in the future?" So, I tried to always think, "Forget about how uncomfortable you are, how you really don't want to be in this situation, to say, 'Hey, I'm in this situation. What can I learn from it?'" It happened a lot at Rutgers and all throughout my life, but certainly in those formative years.

Rutgers was like that. One of the reasons why I decided to go to the school, it had that reputation, that it was sort of like "The Working Man's Ivy League School." Rutgers, as you know, was once invited to be in the Ivy League and declined. The other land-grant college, liberal arts school with a land-grant college, Cornell, did join, Rutgers didn't--but Cornell was maybe a little more, I don't know, upper-class maybe. Rutgers was, and is--and I think it's one of their strengths--maybe more of a working-class type of school, with people that wanted to move to the next level.

I know my dad, he didn't have a chance to graduate from college, neither did my mother, although they were both excellent students. It just didn't happen. They were very proud of my sister and myself and their grandchildren when they all graduated from school. So, you kind of had that desire, that you want to be good to the challenge.

SI: Along that point, can you tell me a little bit about your early education in the Ewing-Trenton area, where you went to elementary school, and then, high school?

RR: Yes. I could walk to school. Elementary school was about a half-mile walk each way, and then, you came home for lunch. So, you'd walk a mile to eat lunch and go back. So, you got some good exercise in those days. I don't remember too much about the classes. It was an older school, built in 1929, Parkway School, and right on the border of Trenton and Ewing. It's been torn down and modernized now. I remember being a patrol boy. It was where you wore a little sash and you would help the younger students get across some intersections. It was probably the first time I had a position of responsibility. I really learned a lot about being that way and kind of helping people. So, that was a really good experience and I think I was a decent-enough student.

Junior high, I went to Antheil School and we took a bus. Then, I went to Ewing High School. I kind of liked the sciences. I wasn't good in French or languages. I actually failed that my junior year, or I was failing and I dropped it.

I got interested in sports, mainly because, I think, being throughout my elementary school days and junior high school days, particularly junior high, I think, when we used to wait at the bus stop, there was an attitude back then. There wasn't much in the way of TV or whatever, but what was on TV were kind of Westerns. The Westerns were Roy Rogers and Gene Autry and all those things. We wore Davy Crockett hats, when that was on, and those sort of things. It was

always fist-fights. They never shot people. It wasn't that gory. Nobody died, but they had fights.

Boys tended to emulate that. So, fist-fighting was [popular]. I remember a lot of fist-fighting, and it wasn't always because you were mad at people. Boxing was big at that time, was a big sport. People used to follow all the matches. So, boys would fight a lot. I was young and small--I'm small now--and I was usually the youngest in my class, because I was born at the end of August and the cutoff was September 1st, which didn't help. So, I used to get picked on and bullied a lot. I was beaten up quite a bit.

So, I decided I wasn't going to get much bigger, so, I'd get stronger. So, I was the proverbial kid in the ads about Charles Atlas, with somebody kicking sand in the kid's face. So, I worked out a lot, and then, I got tough. I could hold my own, sort of like when the *Rocky* movie came out, where he kind of won by just getting hit so often, the other person got tired hitting him? [laughter] That was kind of my style, but, then, I got involved in athletics, which I did and I went and played football.

I loved football. I was very good at it in neighborhood games. We played with no helmets, no nothing, full-speed tackle. My wife says, sometimes, that I got hit in the head too often from that, which explains a few things. [laughter] Anyway, I never got to play when I was on the freshman team at Antheil, though, because I was small and people really wouldn't give me a chance. So, I was asked, "Why don't you just quit the team? You're not going to play. You're not good enough." So, it just made me work harder and I ended up becoming pretty physically fit, but still didn't get much playing time.

Then, in high school, the backfield coach was the head track coach. I said, "Well, I'll go out for track." As kids, we used to play--we didn't have any balls or anything like that, except for maybe a Wiffle ball--but we used to run a lot and would play tag and hide-and-seek, where you're running all the time. I found out I was very fast. So, I said, "I'll try the sprinting." So, I went out and, just in the tryout, I ran faster, just in sneakers, than the best sprinter they had. So, I became a sprinter on the track team.

The next year, interestingly, now being a favorite of the backfield coach, I was a starting defensive player for the school--but we weren't very good. I think if we were a good team, I wouldn't have played much, but I ended up then continuing in track at Rutgers, for the same reason. I enjoyed it and it was a way to meet people. I was a walk-on, which you could walk-on in those days.

Track was an all-year sport at that time. There's winter track, which is, quote, "indoor." We called it "winter track," because we didn't have a place to run indoors. We used to run on a wooden track outside of the Rutgers Stadium, where they now have the big Athletic Training Center, on the far side of where the press boxes and everything are. So, a lot of times, we would come up and we'd have to shovel the track of snow before we worked out. We would also work out on the top of the stadium. We would run back and forth on the concrete for sprints, when the track down below was used by other runners--Rutgers Stadium used to be surrounded by a track. That was really good.

One of the proud things was that I got on the team and we set a school record in the four-by-one-hundred-yard relay. So, I got a nice white sweater. They used to give letter winners a red sweater with a black "R" on it. If you were either on an undefeated team or set a school record, you got a white sweater with a red "R." I don't know if they still do anything like that.

SI: I do not think so, but there are other forms of recognition.

RR: But, I was very proud of track. We traveled around for meets. Athletics was good. It really focused you a lot, because I'd spend three hours a day running and I'd come back ready to study. I was taking pretty hard courses as a science major, so, I had to study, but the exercise was good, the teamwork and the camaraderie.

Since I was small and fast, the lightweight football coach asked me to come out, because they knew I had played football. I said, "No, I don't want to get injured, because we're doing well in track." My senior year, I said, "Hey, I'm a senior, I want to go out for it." So, I did and, unfortunately, I broke fingers and dislocated them on both hands. My hands were bandaged up and I couldn't take notes. I was really struggling. Then, it kind of dawned on me, one of these epiphanies, is that, "Hey, you're not going to make your living playing professional sports. You're going to probably make your living doing chemistry and biochemistry and all that." So, I retired. [laughter]

SI: When you were in high school, did you participate in any of the--I forget the name of the games in Philadelphia.

RR: Penn Relay?

SI: The Penn Relay, yes.

RR: No. I did at Rutgers, though. We ran in it. That's where we set the school record, at the Penn Relay. I actually was invited to run the hundred-yard dash, but I came in eighth out of eight in the first flight. So, I didn't do as well in that, but our relay team did very well. We also ran against the Quantico Marines in Virginia, which was quite exciting, and Army at West Point.

I always remember, one time, one of the cadets was a long jumper and he had jumped and cut his foot badly. He was a good athlete. I said, "Oh, gee, he's not going to be able to run, which is good, because he would probably beat me," but he did run. He bandaged it up and, bleeding and everything, he ran and he beat me, [laughter] but not Rutgers--we still won the meet. We were very good. We were Met Champions and everything else, but I just remembered that, with the quality of the person at West Point, of working their way through injuries. So, it's just one of those other things you kind of filed away. It's sort of looking for role models, little things that you saw, and sports gave you a lot of that, of people that sacrificed.

For my case, I kept a pretty good, healthy lifestyle, because I had to be a hundred percent. A lot of the people were better athletes than I was and maybe they'd party on Friday night. I'd go to

bed early, and then, we'd have a time trial, to see who got to run in the event. I'd win by a little bit, because I was a hundred percent and they were sixty percent. [laughter]

SI: I want to go back to your years growing up for a little bit. You described the Cathedral in Trenton, but, in general, what role did religion play in your life growing up? Was it a center of activity?

RR: Yes, it was very big. I was an acolyte. I just felt, always, that you wanted to have a balance in your life. So, I worked at academics, athletics, and then just being a good person. The Boy Scouts taught you, "Be prepared, do a good deed," all of that. Church taught you to do a good deed. So, I used those things to help me be a good person and, yes, it made a big difference to me. It's an example, again; it's just kind of look at role models. Maybe it's, "What would Jesus do?" I didn't think of it in those terms--that's an expression that came up later--but, yes, it's sort of like it was a little self-control and helped me, especially, I think, at Rutgers.

At the time, there was a lot of freedom as a student, but many hadn't traveled much to learn about being away from home. I wasn't on an airplane until my senior year at college. When my family went to Florida, we drove down, which was one of the few trips we took because of my dad's job. He was a bookkeeper and an accountant. He worked for a company that made, grew, and canned vegetables. When they closed the cannery, after selling the land to build Fairless Steel Works, across the river from Trenton, he lost his job.

Well, then, the owners of the cannery owned farms and asked my dad to be the manager of their farm in Yardley, Pennsylvania. So, he commuted from Ewing Township to Yardley to be a produce farmer. They grew spinach and green beans for the Philadelphia-New Jersey fresh market. So, it was interesting. He would go to the farm and drive home and the car would be filled with dust and mud. He always, when we parked outside, and you could tell where he parked, because, when he left, there was a big pile of mud and dirt. Most of our neighbors worked for corporations or the state or they were teachers. They had kind of white-collar type of jobs, but my dad was now a farmer who couldn't take vacation during the growing season.

The family that owned the business, Starkey Farms, lived in Princeton, New Jersey. They owned farms around the nation, in Florida, the Poconos and in Pennsylvania. They farmed it, as a tax write-off, but, then, they eventually sold the land. So, my dad got very involved in tax accounting and worked more and more as a tax accountant. I always wondered how this guy, who grew up in a row house in Philadelphia, where the yard is about the size of a large bathroom--it's really small [laughter]--became a farmer. Well, he took Extension courses at Penn State. I don't know why he didn't do it at Rutgers, but he did it at Penn State, I think because the farm was in Pennsylvania.

I think they really hired him for that job because a lot of it was transportation of vegetables up and down Route 1 to go from Philadelphia up to New York, which was their big market, back and forth and back and forth. The Turnpike really wasn't a big deal back then. The trucks broke down a lot and had traffic problems. So, my dad would get phone calls at all hours of the night from the truck drivers delivering the day's harvest. "Oh, I have this problem, I have that problem." Well, my dad didn't accept [excuses].

He had to speak very loudly and the one phone we had in the house was in his bedroom. The truck driver was usually on the side of a noisy highway. So, my dad had to yell, and maybe he got a little agitated at the guy not being able to solve his problem, because, when he drove a truck in World War II, you had to get through and they don't care if you're being strafed by airplanes. You've got to deliver men and supplies to the front. So, it was interesting, kind of, he did that in distribution. There were no cell phones, so, I don't know where these drivers called from. They probably had to walk to a stop or a gas station or something, but I always remember that as quite an ordeal, with the delivery system and distribution.

SI: When you were growing up, particularly in high school, did you have to work, either part-time or in the summers?

RR: Oh, yes, oh, absolutely. I always had a job. I delivered newspapers on my bicycle, Sunday newspapers. I drove all over the place delivering those. I had a business where I would shovel yards and mow lawns. First, I did it for my dad, obviously. That was one of the household chores. Everybody had a chore, but, then, I would do it for the old lady across the street and the people, who had a busy job and couldn't do it, down the road.

So, I had, like, five clients, where I mowed their lawn and shoveled their driveway. They'd say, "Well, how much do you want to be paid?" and I said, "Whatever you think is fair." So, everybody paid me different amounts and it was always more than I would've asked for. I worked in a restaurant, which turned out, in my career, to be really good, because I went into the food industry and did a lot of research and development work with food service.

When I got older, I actually had two jobs. I told my dad I wanted to work on the farm. So, he would hire me. He was the manager of it and he had one assistant there, who was, like, the foreman. They got their workers by sending a bus into downtown Trenton. They just drove up and down the streets and anybody that wanted to work that day would get on the bus. They'd take them over to the farm and they'd pick vegetables or harvest or do something, whatever. Then, they'd get paid in cash, right there, and then, they'd get driven back and they'd go up and down the street. When somebody wanted to get off, they would get off.

My dad said, "Well, you're obviously [different]--they would pick you out as being the son of the boss." So, he said, "I'm going to give you the hardest jobs and I expect you to do the very best job, because you need to set an example for everybody." So, I did that. I worked in the barn, fixing the vegetable crates, which were all splinters and rusty old nails.

One day, I said, "I want to go outside on the harvester," that went up and down the field. My job was to sit on the front of the harvester and, when I saw a rock, to jump off the harvester, run forward, grab the rock and move it to the side. Then, of course, over the years, eventually, you had a stone wall, as you kept moving it over. I got so sunburned. I was horribly sunburned and I'm fair-skinned. I said, "I can't do that anymore." He said, "That's why I didn't want you to do it." It was really tough. At the end of the day, I would wait in line and get paid in cash.

That was in the daytime, and then, in the evening, I would go to the restaurant and I'd work until a little bit after midnight for closing. So, some days I worked roughly from about six in the morning to maybe midnight, for two summers. It makes you study harder, so [that] this isn't going to be your career.

I remember, years later, I worked at Pepperidge Farm in Connecticut. I used to go to the factories and do a lot of work starting up new products and trouble shooting. I talked to the plant manager one time and I said, "Well, it's a tough job you've got. A lot of people here," and I asked, "How do you deal with it?" He said, "Whenever I start feeling bad about my job, I go down and I pack cookies for an hour. When I go back to my office, I feel a lot better about what I do for a living," and Nabisco was the same way, when I worked in factories. So, you kind of developed that sort of feeling. I spent a lot of time in Nabisco factories when I worked in New Jersey. Nabisco's R&D Center was in Fair Lawn and there was a factory there, where I spent time.

I got a summer intern job at Rutgers, my sophomore year. I was a food science major and the department said, "Pepsi-Cola has a research grant that they gave to Rutgers. Would you like to be a summer intern there?" I went, "Hallelujah, [laughter] I can get off the farm and out of the kitchen. Yes, I'll do it." So, I spent a summer at Rutgers working and lived in my fraternity house. They let me stay there and I worked in the evenings painting walls in the "Lodge" on College Avenue.

Pepsi, at the time, was developing the very first PET [polyethylene terephthalate] plastic bottle, and one of my jobs was to push this plastic bottle out the window of Bartlett Hall on the Ag Campus, right near Passion Puddle. It fell down two floors on to a concrete sidewalk and I recorded how many times it bounced and where it broke and whatever. I said, "Okay, that's fine," but I always wondered why we were pushing them out that window. "Isn't there a better way to do it?"

Years later, I got to know the person who was the head of the lab and he told me. The reason was that, one day, the Chairman of Pepsi-Cola came down to see how this Rutgers packaging group, which was very well-recognized, were doing on this new technology of plastic bottles. So, he drives down in his limo, says, "Bring me a bottle," didn't even get out of the limo, "Bring me a bottle." So, they run into the lab, run back out, hand him this bottle. He steps out. He tosses the thing up in the air in the parking lot. It comes down, it crashes, it shatters. He says, "It doesn't work. You're not done yet," gets back into the limo and drives back to his office. The window was chosen for future testing because it was at about the height that the CEO had thrown the bottle.

Of course, everybody thought, "Well, hey, if you took a glass bottle and threw it up in the air, it would break, too, and then, have shards of stuff," but nobody wanted to tell him that, [laughter] but it was an interesting story and, sometimes, [showed] the practical natures of business that I learned just from that one experience working as an intern at Rutgers in the summer.

Then, of course, the summer between my junior and senior year at Rutgers, I was in ROTC, so, I went to basic training. That was my summer job then, and I did get paid from ROTC. In my junior and senior year, cadets got fifty dollars a month.

I also waited tables at my fraternity. We used to have dinner parties and formal dinners on Monday through Thursday, where you had to wear a sport coat and tie and it was really fancy. They had a little dinner chime that a brother would play a song on, like *Camptown Races*, calling everyone to dinner. The house mother--we had a house mother--would be escorted into the dining room by the president of the fraternity. We'd have dinner and be waited on by other brothers, who wore little serving jackets. Then, after dinner, you'd sing songs, college songs.

It was great. My fraternity brothers used to bring dates to these dinners and it was apparently something that the women just really liked. It was certainly better than the dining hall and really a unique experience. I remember some of the upperclassmen telling me, when I first did this, that, "This will probably be, on a sustained basis, the finest dining experience you will ever have in your life," and it has been. I'll tell you, we don't have dinner chimes and nobody serves us meals and we don't sing songs afterwards in my household. [laughter] It was just that wonderful camaraderie, and I did earn money doing that.

SI: Did that remain the same all four years, the tradition of having the dinner and being so formal?

RR: Yes, yes, and, in fact, I used to ask for ties for Christmas and whatever, because I needed to have ties to dress up in. It was very formal. We used to go to football games wearing a jacket and tie, sport coat and tie, and, a lot of times, three-piece suits. I remember I never owned a three-piece suit when I went to college, and when my parents asked, "What do you want for Christmas?" "I want a three-piece suit," and they said, "For what reason?" I said, "For the football games," because we would dress up and you'd have a picnic outside in the little grove where they have the statue now. Rutgers then, as now, it's one of the most beautiful football stadiums to go to that I've ever seen. There was not much tailgating, because not as many students had cars. So, we walked to the game and had picnics and then go in and watch the game.

Rutgers was a smaller school back then--you knew people who were on the team. They didn't have their own special dormitories or any of that. So, you were rooting a lot of times for somebody who was in your class. I always remember Bruce Van Ness. He was a very well-known Rutgers football player at the time, quarterback. He played professional ball later. He was my lab mate in a quantitative analysis chemistry course. So, I used to tutor him a little bit on chemistry, he used to give me a few tips about football and sports and training. So, it worked out really well. It was good interaction.

SI: Let me step back before we get more into Rutgers. You talked a little bit about how you were very interested in science in high school. Did you have any mentors or anybody who was urging you to look into the sciences?

RR: Yes, I took a course at Ewing High School in biochemistry, taught by a professor Robert Starrett. It was a senior honors project. They didn't have advanced placement then.

SI: Yes, AP.

RR: They didn't have those courses as such, but this was something for people who really had an interest in biology and it was biochemistry. We dissected fetal pigs and cats and we did experiments that probably would be illegal now. With tadpoles, we would put carcinogens, known carcinogens, in water or into their feed or whatever and you'd see that some tadpoles would develop mutations and others wouldn't. It really had a dramatic visual, visceral view on learning about the effect of clean water, clean air, safe food, all of that stuff, because you could see what went wrong.

It was a very hard course, very detailed. In fact, I usually tell people that course in high school was the most involved, dedicated biochemistry course I took all the way through my PhD. I majored in food science and minored in biochemistry, I did my dissertation on cell physiology, but that course in high school was the best science course I ever had. I wrote to him a couple times from college and just let him know that, "Hey, thank you. I'm doing well. I'm taking biochemistry at Rutgers," but they wouldn't allow the type of experiments I did in high school--I guess because of the large amount of students--we weren't able to do dissections, for example.

I actually even thought a little bit about going into medicine, but, when I got to Rutgers, I took a bunch of courses and I said, "I like the biochemistry, but there's so much more and I want to do other things." I had [fellow] students that were business majors. So, I said, "Yes, I kind of like business." So, later, I took economics and accounting. I ended up becoming a food science major, but maybe I'm jumping ahead a little bit here.

SI: No, it is fine if you jump ahead or back. It is good because it is all connected.

RR: So, I started out in a program called "Preparation for Research" and I did it at the Ag School, which, like you said, "How come you're going to the Ag School?" I said, "Because, really, they had the good science programs then." Rutgers College was more humanities, all right, and the College of Agriculture was something else. I didn't have a bias against agriculture. I mean, I'd worked in agriculture. New Jersey's the Garden State; I thought it was really good. Then, I kind of took a little bit of engineering and was exposed to it. I said, "Maybe, biomedical engineering."

Then, one of my fraternity brothers at college, Bob Gravani--he was a senior and I was a freshman--and he took some time, right before graduation, he said, "So, Bob, what are you going to major in?" I said, "I don't know. I like everything," and he said, "Well, you might want to try food science, because it's a little bit of everything," and I said, "Yes, okay." So, I went and visited a professor, Elizabeth Stier, and became a food science major. Bob went on to get his PhD from Cornell and taught at Cornell. Years later, my daughter Allison got interested in food science and my daughter actually became a student of Bob's at [Cornell].

SI: Wow.

RR: One of my nephews, Jeffrey Sherman, heard me talk about Rutgers and food science so much, he went there and he became a food scientist graduate and, now, works for Nabisco, where he's the manager of research for Oreo. So, just with that whole thing, my fraternity brothers really helped a lot in mentoring. So, that was a big mentor for me. In fact, the whole fraternity was a mentor in a way, because they were all people that were involved in a lot of things. They used to have a thing called "Gentleman's C,'" where the people weren't only interested in their academics, they were more interested in the total experience of college.

That made a big influence on me, being surrounded by people like that. We had many people in my fraternity who were on student government, Student Council members, a lot of them. They were on sports teams. They tended to be on things. Because they were mostly prep school students, they tended to play lacrosse and hockey and crew and things like that. I did track because no equipment was required, [laughter] but, yes, the fraternity were big mentors.

Later, I was mentored a lot by the pastor of Kirkpatrick church. I became a chapel usher. Reverend Abernathy, he lived right across the street from Chi Psi. Some of my fraternity brothers were chapel ushers and they invited me to be a chapel usher. I eventually became the co-chairman of it. Reverend Abernathy recommended me to go into a course that was taught by Dr. Mason Gross, who was the President of the University at the time, on "Traditions in Western Religious Thought." So, because I was a chapel usher, I was interested in that. It was maybe half a dozen or so students that were handpicked from Rutgers College. They were all Henry Rutgers Scholars, Phi Beta Kappa, liberal arts majors, brilliant people--and me, this "aggie" from food science--but I found it to be a wonderful course. [Editor's Note: Dr. Mason W. Gross served as Rutgers University President from 1959 to 1971. Reverend Bradford S. Abernathy served as University Chaplain from 1945 to 1974.]

They sort of mentored me. Some of the best advice I ever got was from Dr. Gross. We had to read books by Calvin and Luther and all the major writers of their time. A lot of the other students had taken courses in that before. I was taking physical chemistry and calculus and all that, so, I mean, I didn't have the liberal arts. I didn't take many liberal arts courses, the bare minimum, and then, I had this one. So, I was reading their books and, being a scientist, I read it, you had to analyze it. So, I always read very carefully, very slowly. I wrote a huge report, taking every little detail of what they said and analyzing it. I thought it was brilliant, a great big, thick thing.

So, I handed the report in, and when it came back, I got a "B" in this course, where everybody got an "A". Dr. Gross wrote, "Impressive in extent, but wanting in analytical sophistication." That always stuck with me. What he was telling me, I think, and, if you put it into layman's terms, is, "Look at the big picture." I was looking too much at the little things and I was missing the big picture of these big traditions in Western religious thought. That stuck with me always. I'm thinking about it now, fifty years later. So, that was sort of a mentoring, a little bit, to be exposed to that.

SI: Tell me a little bit more about Reverend Abernathy, because his name comes up a lot. He was very influential in a number of areas, but what do you remember about him, other experiences you had with him, perhaps?

RR: Oh, he was a wonderful gentleman. He always encouraged me, encouraged people to come to the campus and he invited me to his house for dinner. It reinforced [my morality] on me, because there's a lot of temptations in college that can distract you, and I think he helped. I had a religious background, attitude before it and he just kind of helped reinforce that with me always, that, "Be a good person," I mean, not necessarily a religious person. I mean, obviously, I think that's a good thing, but a good person. That's kind of what he stressed, because it was an ecumenical or multi-denominational [congregation]; it really didn't emphasize one thing. It tried to be open to all the students, which he was really a voice on tolerance of different thinking.

I look at campuses now and the tolerances don't seem to be there. I think that's what he taught us. "Yes, we're going to have a service, but we're going to invite people that have different religious thoughts to come." So, he kept it a little bit generic, taking good aspects of religions that they all share and not getting into the details of whether things that, reading about my ancestors, the Puritans and the Quakers and Baptists used to fight and burn each other at the stake on trivial matters. What he taught was kind of like, "Look at the bigger picture of what religion can offer."

It was interesting, too. I had some other fun experiences. I got to ring the bell at Old Queens, bringing people to church. Rutgers also used to ring that bell only when Rutgers beat Princeton in football. Well, of course, that was a rare event, [laughter] but they rang that bell every Sunday. So, I got to do that, which I thought was fun.

SI: Let us go back to how you made the decision to come to Rutgers. Why did you choose Rutgers? How were you able to come there?

RR: Well, it was a state university, of course, so, people knew about it, although I didn't really realize at the time it was the State University. It was just the local one. It was about a half an hour from me in New Brunswick. So, it was close by.

Probably, the number one reason was, it was inexpensive and I was sensitive to the fact that I didn't want to stress my parents too much. As it turned out, they were very good savers and lived well below their means and could afford it, but I thought, "Well, this is a good school." I didn't go there because it was cheap, but that certainly didn't hurt. My tuition was 254 dollars a semester. I always remember, my dad wrote me a check for nine hundred dollars and he said, "This probably won't cover all your college expenses. You have to work to make up the difference," but that's what he gave me each year.

I visited some other schools. In fact, I went to Muhlenberg, Franklin and Marshall, which were the home colleges of some of the teachers I was influenced [by] in high school. I got to know the teachers a lot. I mean, I reached out. I always had this idea of asking people to talk to me about themselves--sort of, obviously, what you're doing now. I always felt that was a real help to me. Both schools, in fact, wanted me to play football and I said, "No, I don't think I want to,"

but Rutgers was the big school. It had an Ivy League type of image, as I talked about before. It was known for really rigorous academics and I said, "I want to go to a place that's going to really challenge me, give me an opportunity to learn a lot of different things." So, I went there.

It's interesting, the first time visited the Ag School in the summer between my junior and senior years in high school and walked around campus. I said, "Yes, this is really nice." My dad took me up there and we looked at it. I don't think we even met with [anyone]--maybe somebody escorted us around, I forget--but I thought it was pretty good. I noticed there were a lot of women there--just not that that was a big drawing feature for me, but it leads to my later story.

I said, "I made up my mind. I'm only going to apply to Rutgers." So, I was accepted early admission. Interestingly, the guidance counselor at my high school was really not one of my biggest fans for some reason. He told me, "Bob, you're in the top ten percent of your class academically, but, I don't know, Rutgers is pretty tough. I don't think you should go there. I think you should apply somewhere else." He said, "I don't think you'll get in," or, "I don't think you'll succeed there." He really actively discouraged me from going to Rutgers. So, maybe that played a little part in my desire to achieve and win and whatever, and I went to Rutgers.

Just an aside, in my freshman year, the professional society of Alpha Zeta gave out awards at the College of Agriculture. I was named The Best Freshman at Rutgers in 1967. So, actually, I sent the guidance counselor a little note saying, "I did pretty well. I was The Best Freshman, I was Dean's List, I was President of Demarest Dorm, I was on the track team," so, all those sort of things.

Anyway, returning to the story, when I actually went up to Rutgers to start classes, I was in Demarest Hall dormitory on College Avenue, which I don't recall from my visit. Maybe we drove by it. I noticed first thing that there were no women around. I thought, "This is unusual." So, they told me, "No, that's Douglass College," where all the women were. There were none at Rutgers. It was an all-male school at the time, and then, I learned it was a state college. So, I guess, actually, I don't recall really having done a lot of detailed homework on Rutgers. It was more anecdotal, that it was where the best students in my high school went and it was nearby. It had a great reputation. So, that's why I went.

SI: Did you enter the College of Agriculture immediately or was it when you decided your major?

RR: No, I went there immediately.

SI: Okay.

RR: But, they had no dorms, or very, very little. I can't remember anybody living over at the College--Cook Campus, now, they call it. Everybody lived on College Avenue, which is, of course, where I would want to be. So, you had to commute back and forth.

SI: You got on the track team your freshman year as well.

RR: Yes. It got me out of required freshman and sophomore phys ed, which, actually, I thought it was good they had those programs. You had to pass a swimming test, which, of course, I had done lifesaving and was quite a good swimmer from Boy Scouts days. At the YMCA, we used to do all of our training.

SI: You also were in ROTC right from the beginning.

RR: Yes. They had programs and you could sign up for different things. So, I kind of tried to join everything. ROTC, obviously, I listened to them. I really didn't have any desire for a military career, but I felt that you needed to serve your country. The Vietnam War--[it] was '66 when I went into ROTC--was pretty active, and my dad was in World War II. My grandfather wasn't in World War I because [of] my father--he had a young child, so, he was exempt. I also knew World War II vets from Boy Scouts. They would talk, occasionally, about their World War II experiences.

I always remember my Scoutmaster in Trenton showing us--while we were camping--how you could make a frying pan out of an old tin can. You broke the side seem, which cans used to have, and flatten it out and cook. I remember saying, "Wow, that's pretty neat. Where did you learn that?" and he said, "I learned it when I was a POW in Germany." So, I was like, "Wow." So, I asked him more about it a little bit but World War II vets--they didn't talk about their war experiences unless you probed. It just kind of seemed to be the thing that you did to support and serve this wonderful country.

As it turned out, and I'll get into it a little later, but I give a lot of lectures on food science as a career and guidance and I've done mentoring through the Institute of Food Technologists. Sometimes, people ask me, "What were the best courses that you took in college that helped you in your career?" and I tell them, "ROTC," and they're amazed. They said, "Why?" and I said, "Well, because as I got up into management--I was fortunate enough to do that--I found out that it taught me leadership."

It taught me how to give orders, how to take orders, which was always a little harder for me, or for most people. It taught me public speaking. It taught me leadership skills. One of the best things it taught me was, "If you're a lieutenant and you want to stay alive, you listen to your sergeants." I said, "Okay, that makes sense," and so, I always insist on that fact, "Just because you outrank somebody, don't write them off."

So, in my career at six different companies, three as vice president of R&D, when I went to plant trials, I would talk with the line supervisors, the mechanic that repaired the machine, the women that packed cookies, they'd have great ideas and I would write them up, put them in a PowerPoint presentation. I'd make the presentation, many times to the president or chairman of the company I worked for. They'd go, "Brilliant idea, Bob," and I'd say, "I got this from some lady on the packing line," because you ask them, "How would you do your job better? What would you like to see better?" So, I mean, that was just a wonderful experience and where ROTC really helped me a lot.

Then, also, like I told you, just discipline was important. You learned how to be disciplined. You also, something maybe that comes up recently now is--you talk about people need "safe spaces" and comfort dogs and "the snowflakes" and all that--I guess when you're in basic training and throughout ROTC and people are three inches from your face yelling at you, if you can survive that, you can probably put up with some other little affronts that you might have.

It was the same thing in ROTC on campus. It taught you a little bit of tolerance and "turn the other cheek" thing, too. I remember, a lot of times, we had drills at Buccleuch Park where we'd march and would do formations and we'd do close arms with your rifle and whatever. It was the kind of things that I was used to from Boy Scouts for discipline and teambuilding. People would come up and they'd stick flowers in your rifle or they'd taunt you and they'd run around you--and you had to stay at attention. You had to stay focused on what you were doing. I mean, you were called "baby killers" and all sorts of names. I was spit on several times.

I ended up becoming the deputy brigade commander, which is the number two ranking cadet. I was first in my class, but I was number two. My best friend and fraternity brother Michael Freeman became the brigade commander. He was very good and he had a good bearing and he was a super leader. So, he had better leadership skills, even though, overall, I ranked pretty well. I did well in ROTC and it helped me a lot. I became a quartermaster officer, so, I learned warehousing and distribution, which my dad kind of did that on the farm, as a quartermaster and transportation officer in the Army. He drove a truck for Patton in distribution. So, I kind of said, "Okay, quartermaster," because of my father. My father encouraged me to go in ROTC, but didn't push me to go in the Army. Once I went in, he gave me a lot of good advice on how to do things. It turned out to be really good experience in my career.

Years later, I ended up being asked to run a factory for a small company called Estee in Parsippany, New Jersey, which included running a distribution and warehousing center for them. They said, "Well, how did you learn that? You're a scientist," and I said, "Well, the Army gave me the training for that." So, little did I know that my Rutgers education--in its totality, not only courses but extracurricular activities--would've prepared me to run a warehousing and distribution system for a fifty-million-dollar company in Parsippany, New Jersey. It was quite interesting.

SI: You spoke about how you got into food science and some of your professors, but were there any other professors who served as a mentor or you found their classes particularly interesting or influential?

RR: Yes. I took, my senior year, a George H. Cook Honors project, mentored by Dr. Norman Haard. He was a recent graduate from the University of Massachusetts who had gone to Rutgers, came back as a professor, and was a big help in teaching me how to do research. Interesting story as to how I got into this program, because I was in the military and I decided I wanted to go for a PhD. At that time, if you wanted to get into R&D management--and I was kind of grooming myself as a leader. I wanted to go for a PhD, but had a two-year military commitment.

So, I said, "Gee, I don't know--if I spend two years in the Army, it's going to be hard to pick this stuff back up again." I wanted to get a PhD and then do my military service. So, I applied for a

deferment and I asked for three years for a PhD, which was really pushing it, but I said, "Well, I'll see what happens after three years." Well, they most would only give me two. So, I decided, "Okay, I've got to find a school that will let me get a PhD in three years, if I can get a one-year extension from the Army."

I didn't want to go to graduate school at Rutgers, because I was advised that it's a good idea to go to a different school; you meet different people. Norm Haard was a UMass grad, so, he told me about the University of Massachusetts. So, I ended up talking with them, and with Cornell, because my fraternity brother had gone to graduate school there. I told them, "I want to get a PhD in three years. Can you do it?" Cornell said, "No, it takes five, at least, because you've got to go for a master's first." The University of Massachusetts said, "Yes, it depends. If you can do everything, fine. One of the things you can do is, you can avoid, skip, your master's degree. If you have proved that you could do research, you wouldn't have to do a master's thesis." I applied and was accepted at the UMass.

I told Dr. Haard I wanted to do a really good job, [so] that I could submit my George H. Cook project as an equivalent to a master's thesis. So, what I did was, I quit the track team and I spent the time that I would run--three hours or so a day running around the parks and doing meets and everything--I spent it in the lab to make my Cook project a master's thesis quality. I really spent a lot of effort on it and I was kind of driven in a way.

My cumulative average suffered when I did the George H. Cook project because I spent so much time working on that. I took a little bit of it from studying, because I wanted my thesis, my project, to be good enough for a master's. I also took some tough courses my senior year, so [that] I wouldn't have to take them in grad school.

Dr. Haard guided me a lot through that and going to the University of Massachusetts. I graduated from Rutgers on Wednesday, was in class on at UMass Monday morning, and began working like a dog for two years. I did get my George H. Cook project accepted as a master's thesis, which I thought was pretty good, because of Norm. He really, really helped me a lot.

SI: Just in general, what was your thesis on?

RR: I did it on respiration of plants, of preservation of fruit. They breathe and they respire. If you put, like, ethylene oxide in or other things, you can affect the postharvest physiology of plants, which was kind of interesting to me, because my dad was always interested in getting produce fresh from the farm across New Jersey to New York, fast--I was kind of interested in that, but I was mostly interested in the biochemistry aspects.

At UMass, I did my thesis on the intracellular location of glycolytic enzymes in muscle--so, it was a real hardcore biochemistry project. In fact, I published in *The Journal of Cell Physiology* and *The International Journal of Biochemistry*, which were really not food science type things. It was very rigorous, but, like most of my career, I always tried to push myself in the limit. So, I really wanted to do academics really solid, I mean, hardcore basic research as a grad student, because that isn't what I wanted to do for the rest of my life. So, this was my only chance to really do it. I wanted that academic rigor, which, generally, was the approach [to] the way I did

with Rutgers, too, that I pushed myself always to try other things, and Rutgers kind of let me do that. So, you'd push yourself, and some of the things I failed at, so, you got used to failing.

I didn't do well in foreign languages. I didn't take any foreign languages at Rutgers; I was so horrible in them. Interesting, at University of Massachusetts, they had a program that you needed to take, pass two language proficiencies for a PhD. I went, "Oh, my, how am I going to do that? I failed French III in high school, I didn't take any languages at Rutgers," but they had a program at UMass, which was you could pass programming in two computer languages as an equivalent. So, I said, "Oh, that's it." So, I learned and programmed in FORTRAN and BASIC and I passed the tests on writing a program in both that worked. So, that gave me my pass on languages.

Ironically, I had figured, "Computers are going to be the wave of the future, so, I should learn how to program," but, really, now, today, very few people program their own things. I never programmed anything else again in my entire life. Yet, I ended up working for two bosses who were native speakers in French and I lived in the French section of Switzerland for a year. So, probably, knowing some foreign language actually would've been good, but you kind of recognize your limitations. That wasn't good for me. What was the other thing you were asking me?

SI: I had asked about your thesis.

RR: Mentors, yes.

SI: Going through the later part of your career at Rutgers and your doctorate at UMass, was the idea always that you would get a job out in the corporate world? What avenues were you looking at?

RR: I wanted to go out into business and here, again, maybe I should go back to mentors and recognize two people at Rutgers. Rutgers, Food Science Department at the time, had a program of bringing in executives from industry, either as acting professors or *emeritus* professors or whatever, or full-time professors, at the end of their career. Two who influenced me were Dr. Robert Di Marco, vice president at General Foods in Tarrytown, and Dr. Roy Morse, vice president at Pepsi-Cola in Valhalla, New York, that came and joined the faculty.

Both did product development, were vice presidents, taught courses, and mentored. I spent a lot of time talking with both of them. We became lifelong friends, especially Dr. Morse, but they really helped me a lot in terms of wanting to go into business and the dynamics of it. It just was thrilling. So, because I wanted to go into business, you had to be well-rounded. I took a few of engineering courses, because, when you develop a new food product, you have to not only have the formula, which is a lot of biochemistry on interactions of ingredients, but, also, the equipment for how you manufacture it. Then, also, there's a business aspect to it. So, they encouraged me to take business courses.

I took economics, I took statistics and, actually, one year, I took a semester in accounting, which is an interesting story I'll tell you about, on maybe good versus bad mentors. So, first, the bad

mentor--I had a tough time with accounting, and my dad was an accountant. That's what he did. He went to night school for accounting. So, he was thrilled, "Wow, you're going to take accounting." I said, "Yes, it's good discipline." So, I took the course and I took it as an elective, and I was averaging eighteen credits a semester. So, I didn't need that many and I took this--I could've taken basket weaving. Most people took easy courses as electives. Accounting was not an easy course, all right. Even the business majors thought it was challenging.

Before the midterm exam, I went to the professor and I said, "I have a track meet during that day, so, can I take the exam early?" He said, "Oh, no, because you'll give the questions to other people," which I sort of took offense at. I told you, I prided myself on being a good citizen, a good individual, honest person. So, I kind of said, "Okay, great, I'll negotiate with you. I'll take it afterwards." "Well, no, then, people will tell you the answer." So, I said, "I have a real problem with that. What am I going to do?" and he says, "Well, son," very patronizing, "you have to realize what's important. This is your education at Rutgers."

I told him, "Respectfully, sir, my education at Rutgers is more than just academics. It's everything about making me a person, a good citizen, well-rounded. That's why I'm involved in extracurricular activities. I'm an honest person." So, we came to an impasse. I said, "I have to go. I'm on a team. I have an obligation. I'm on the second leg on a relay team for a four-by-one-hundred. I can't not go." So, he gave me a zero on my midterm exam, a zero. So, what happened back then is, if you were failing a course, the University would send a letter home to your parents. I don't know if they do that now.

SI: Probably not.

RR: So, they send a letter. So, my dad opened it, and then, I didn't know. I didn't know they sent it. They sent it just to your parents, didn't tell the students. So, I get a call from my dad, "Bob, I see you're failing accounting. I'll come right up. I can tutor you. I can do this, I can do that." I said, "Dad, Dad, Dad, thanks, thanks for the offer. I appreciate it, but this is the situation." So, I used to get money for being on Dean's List from my fraternity. If you made Dean's List, Chi Psi would give you a hundred dollars.

SI: Really?

RR: Yes. I usually made Dean's List, so, that was an extra hundred dollars, about forty percent of my tuition, to put it into perspective, all right. So, I said, "I can't fail this course." So, I studied really hard for it over the Christmas break, and my dad helped me. Back then, you took exams in January. So, basically, the whole Christmas break, I did nothing but study. Eight, ten hours a day, except for Christmas dinner, I was just really studying. So, I always did very well on final exams. Because I was so busy during the academic year, I had trouble doing as well as I really would've liked during most of the time and counted on the finals. My dad tutored me. I guess I got an "A" on the final exam, but I ended up getting a "C" in accounting, which was kind of disappointing to me. So, that was the bad experience.

A good experience is, I wanted to learn public speaking and writing. I thought, "Writing's important and I need that skill," because most scientists are not good writers and I recognized

that. So, I signed up for a course in "Written and Oral Exposition," but went to the professor and said, "I really, really want to take your course, but I have a conflict." I had a lab, like a four-hour lab, all afternoon. I said, "I can't change that, but is there any way I could take your course without coming to the class? Can I get the notes? Do you have lecture outlines you could give me? I can cut my lab for some days, like when you had to give a speech. I'll come to my written or exposition course to give the talk, but, for writing, could I just write and just mail it in?" He said, "Yes." The guy was very accommodating.

That was one of the other courses that, probably, I used most in my career, written and oral exposition, because I ended up doing public speaking. I worked at trying to become a public speaker, but that was really the first time that I gained any experience in public speaking, which was critical to my career, and then, writing was also very important as well. Years later, I had a person I hired who had a degree in electrical engineering from MIT, a PhD in food science from Cornell, but she couldn't write. So, I'd send her her notes back and I was correcting grammar and spelling and all--this is before Spellcheck and all that. I'm correcting all this stuff and she wasn't getting it. So, then, I started using a red pencil, red ink. So, she came to me, she was very upset with me. I said, "If you really want your career to go, this is the best thing I can do for you. You've got to improve your writing. You're a brilliant scientist, but you can't communicate." She has since had a very successful career in management.

That course helped me communicate. Rutgers ROTC did the same thing. Being a chapel usher, at least sometimes, you'd get up and lead a prayer or you'd be asked to do something. As dorm president, I had a chance to do some speaking. My fraternity was also helpful. We used to have, I told you, speakers come over and visit our fraternity. So, you'd watch them and how they spoke in small groups. I observed the professors on how they spoke. I noticed the ones who could communicate better, had students who were more enthusiastic about their class.

In my senior year, when I was Chairman of the Student-Faculty Relations Committee for the College of Agriculture, we did two studies for the faculty. One was on student perceptions of Rutgers as undergraduates. We did a big survey and issued a report on that, and then, we did another one. Dean Merrill asked my committee, after seeing our first report, he said, "Could you write a second report and do it on good teaching?" So, we did a survey on good teaching and found out that it just corroborated how important it was for professors that communicated well. They had to know their subject, but to try to communicate well. So, those were a bunch of mentoring experiences that I had. [Editor's Note: Professor Leland G. Merrill served as Dean of the College of Agriculture in the 1960s.]

SI: Going back, why did you decide on Chi Psi as your fraternity?

RR: Yes, it was because of my preceptor in the dorm. I don't know if they have preceptors now, but he was in the room right next to me. We got to know each other because I was dorm president at Demarest. He brought me over and introduced me to the fraternity and showed me around. He thought I was a person of good character and what they were looking for. His name was Skip Flanagan, played lacrosse, was involved in a lot of things.

Of course, Chi Psi had a big presence there on campus, with a big, white building right near the student union. Also, they emphasized well-roundedness, which I wanted, because other fraternities that I looked at, that I liked, were more for athletics. Deke [Delta Kappa Epsilon] was one that a lot of the track guys were in, so, I had many friends there. Other ones were more for academic-based. Chi Psi promoted the well-roundedness of people and I said, "That's really what I want." I wanted to be around people who were successful, and many of my fraternity brothers became very, very successful people and I was very proud to have known them.

Interesting thing I'll mention with Rutgers about becoming the dorm president, and I wanted to add this story for maybe how things change. I started out as vice president. The president failed out, left after a couple months, dropped out of school. So, then, that's how I became president. I was kind of moved up. I remember, when I first went to Rutgers, they had an orientation. You've probably heard this, but, for some of the other people, they may not--when you sat in your welcome to Rutgers in the big auditorium on College Avenue, at the gymnasium, which is where they went then, they told everybody, "Look to your right and look to your left--one of you won't be here on graduation," all right. Well, my class had 1,766 freshman in it, which people made a big note, whether it was intentional or not, but we were the two hundredth entering class at Rutgers and founded in 1766 and we had 1,766 entering students. Less than a thousand graduated four years later, so that that's maybe two-thirds or less. So, that's right--one on the right or one on the left wouldn't be there.

In my high school, five of us went to Rutgers--only three of us graduated with our class. One was a National Merit semifinalist, which I think they still have that, do they? a brilliant, brilliant person, one of the smartest in our class. He flunked out, because--I talked to him later--high school was so easy for him, he never developed a work ethic and he didn't apply himself. So, now, all of a sudden, this "king of the hill" in high school was at Rutgers, where everybody was good in high school. So, he didn't learn how to apply himself and work hard enough soon enough. For me and for some of the other people, the three of us that graduated were really, of the five, were probably the less academic of the group, but we worked for our degrees, for our grades. We studied, had good discipline, good study habits, those sort of things, and we all did well.

So, interesting, just how Rutgers was at that time, but, yes, I got in Chi Psi through my preceptor, which, again, were role models. I thought it was great that you had the seniors [who] would be right there in with the underclassmen and spend time with them. They were a great group. Many of the people in Chi Psi were preceptors and they recruited. I think one of the reasons why Chi Psi, at the time and still does, had, I think, good pledge classes was because of them. I could tell you a little bit about pledging.

SI: Sure, absolutely.

RR: Because that's kind of come up, too. A lot of the fraternities at Rutgers had some aspects of the movie *Animal House* in the 1960s. Everybody got a little nickname. Mine was "Baby Bobby," because I was small, looked so young, but everybody had some sort of a funny name. Chi Psi did do hazing, but it wasn't like you hear now, it breaks my heart, you hear these stories of people being killed doing crazy things in hazing. We had hazing, but it was mainly to break

you down and develop team spirit. I think that was sort of what the Army did, too. I mean, basic training breaks you down, creates unit adhesion, and I think that's at least what Chi Psi tried to do at the time. I think that was their purpose.

I mean, it wasn't that bad a hazing. It was more just some humiliation and that sort of thing. It wasn't anything stupid, but they also had an attitude that it was kind of optional in a way. I didn't need the hassle of hazing. "I've got the Army that does a good job of that for me," [laughter] and my coaches were yelling at me. So, I was used to having people yelling at me for stuff, but, sometimes, we'd have a hazing event and I just went, like, "I don't have enough time for this," or, "I don't really want to do this now. I have to leave now." So, they would have you hazed and, a lot of times, I just went, "I'm sorry, I'm out of here." So, I'd just leave and [Dr. Ross imitates his fraternity brothers giving him grief] and I said, "Well, if you want me to be in the fraternity, fine. Then, don't make me do this. I want to be in the fraternity, so, I'll be back again. I'm not leaving forever." So, they accepted that fact.

I wish, now that you hear about these kids being buried alive in the sand at beaches because they hop into some sort of pit, you [could] just tell the students, "I'm sorry, I'm not doing that," and leave. If they don't want you in their fraternity, good riddance. So, they accepted it, which taught me, again, that, sometimes, you can do something on principle. You can take a stand and people won't hold it against you. A lot of times, they appreciate it.

SI: Let me pause for a moment.

[TAPE PAUSED]

SI: Are you ready?

RR: Yes.

SI: We were talking about Rutgers. We spoke a little bit about the social side with the fraternity. You were also heavily involved with the Student-Faculty ...

RR: Relationship Committee.

SI: Relationship Committee, okay. How long had that been in existence?

RR: I think it started in '68, '69.

SI: While you were there?

RR: Oh, yes. It'd been around for a while in some form. They had a Vice President of Student-Faculty Relations a couple years before that. I'd have to check records or whatever on it, but there was a faculty position or a dean that had that position in the '60s. It started in response to campus unrest, because of the war and other things, and then, the whole Civil Rights Movement, too. It was not only about the war, but there were a lot of African-Americans looking for more equality, and so, there was a whole [scene]. Women were trying to do this also. So, it was a lot

of different people trying to make things more equitable. Rutgers had a faculty member, a dean, I think, that was the Student-Faculty Relations [specialist].

Well, it was starting to heat up a lot more into my senior year and I guess they wanted to establish a committee that had students on it as well, so [that] it wasn't just a faculty member doing it. Again, it was an outreach. They picked [me], and I'm not exactly sure how I got volunteered for it, but I was approached to join the Committee, maybe because I was outspoken and knew people, may have been Reverend Abernathy or maybe Dr. Gross, Mason Gross. I was in his course. I guess I was reasonably well-known with the faculty and I got to know a lot of them. As I said, I would always try to talk with them about things after class and learn from them informally as well. So, I guess I was well-known enough that I got an appointment to this Committee.

The Committee had three faculty members, it had a junior, a senior and a graduate student. So, we got together and they wanted to have a chairman of it. So, I guess I kind of got it not necessarily because of me, but because I was a senior. They figured maybe a grad student was too close to the faculty and a senior outranked a junior. So, anyway, I became the chairman of that organization. I know it was fairly new, that was the first year, because the faculty minutes, which I saved for that year, I think it's November of '69, mentioned that it was the first time ever that a student had been a chairman of a standing faculty committee, which would turn out later, as I'm sure we'll talk about, to be fortuitous, because, as the chairman of a committee, I could get air time at faculty meetings.

I could request making a presentation before the group and I attended a lot of the faculty meetings when it wasn't a private session; if they were talking about other students, for example, if somebody wanted an exemption or whatever, I didn't get involved in that, but they would open up parts of the faculty meetings to having students come and address, which I did on occasion. I presented two reports to the faculty, and then, as we'll talk a little bit later, I asked to talk about ROTC. It's the only time I requested, actually, to make a presentation to the faculty.

SI: You kind of described the issues in general, but do you recall specific problems that you would try to tackle in the committee meetings?

RR: Well, most of what we talked about was doing surveys. First, it started out fairly benign, for lack of a better word, in that [the Committee] wasn't to be involved in contentious issues early on. First was the mission to understand what undergraduate expectations were of Rutgers, which kind of tangentially was related to maybe why they're unhappy--maybe they expected more from Rutgers when they came and maybe they expected more in terms of various rights for groups or whatever. So, we did a survey of undergraduates as to what their expectations were, how well were they being fulfilled by the faculty, those sort of things.

It was later, when there were some issues related to ROTC, we got involved, partly through my initiative, when the Rutgers faculty voted to discontinue ROTC, not to offer it for the 1970-'71 academic year. I made a request to speak to the College of Agriculture faculty. So, I actually saved my handwritten notes, because I didn't want to be extemporaneous in front of the faculty. It was an important issue. Basically, I was asking the faculty there to take a position on ROTC

from the Ag School, not just from Rutgers College. The Rutgers College faculty had voted to ban it.

I recommended that, "We should do something at the College of Agriculture and survey the students and see what the feelings amongst the students were." So, I did make that presentation to Dean Merrill. I requested that we take a little more time, because it was a very [contentious time]--people were occupying offices of the President and there was some violence starting on campus. It kind of got nasty. It was around the time of Kent State. So, it had gone beyond the kind of peaceful Martin Luther King-type of protests to something becoming a little more violent, or the potential, certainly, for that, and it seemed to be a major issue.

[Editor's Note: On May 4, 1970, Ohio National Guardsmen fired on students at Kent State University, killing four and wounding nine others. Some of the students had been protesting the United States entry into Cambodia, while others had been passing nearby or observing the demonstration. On May 14 and 15, 1970, students at Jackson State College protesting against racial harassment were fired upon by state and city police, resulting in two deaths and a dozen injuries.]

According to the notes I saved, I started, "Yesterday, they voted," so, it was the day after Rutgers College decided to end ROTC. The committee then took a survey of the students about ROTC on campus. Other groups held rallies, did a bunch of other things to try to keep it on campus.

Then, sometime after that, and I didn't record dates, but I was asked to make a presentation of the student petition to the Board of Governors. They had an open hearing in the College Avenue Gymnasium regarding ROTC and I spoke on behalf of ROTC, but I was very careful--I thought how I should approach this and wanted to really keep it just focused on one issue; that the majority of people felt that ROTC had a place at Rutgers on a voluntary basis.

I didn't make any of our presentations about taking a stand on the war in Southeast Asia or any of that sort of thing. We wanted it to be just on, "This is what the people [said]. Some people want it. If the others don't, that's fine," and didn't want to really debate the issues. So, I presented information about the petition. We had three thousand students sign a petition for keeping ROTC on campus, which there were about five thousand students total at Rutgers at the time. So, it was a pretty large percentage.

I was trying to remember how we organized these sort of committees. Obviously, I was on the steering committee on it, that I write about in my presentation--maybe you'll appended it to the full one, because it's hard for me just to remember and talk about it and it's fairly brief--but we had speakers that talked about it. I'm not sure who else was on the steering committee of what we called the Ad Hoc Committee to Preserve ROTC at Rutgers. It was probably some fellow ROTC students or others that felt that it did have a place on campus.

The Board of Governors meeting was packed. They had various speakers and I went through the survey. Soon afterwards, they did vote to retain ROTC on campus as optional. It was optional when I was there the entire time. I guess, shortly after World War II or for part of the history of Rutgers ROTC, it was mandatory for two years. Then, it became voluntary your last two years

and you'd have no service commitment, but, then, it became totally voluntary. So, if you didn't want to serve, fine; if you did, fine. It was the kind of commitment that I thought was consistent with Rutgers offering something for everybody and this was something.

We didn't get into the patriotism issues or any of those sort of topics. I don't recall a lot about it, because it all happened within just a few days, a few hours. I was also busy doing all sorts of other things. I was preparing for graduation. I was going to be starting at the University of Massachusetts soon afterwards. So, it was really a hectic time. I didn't take a lot of notes. My presentation to the Board of Governors was typed and submitted, though. So, I do have that. I typed as many things as I could. The presentation to Dean Merrill in the Agricultural College was just handwritten because it was so quick. I didn't have time to type it and didn't save it.

I wish I had saved more of the notes and I wish I remembered who else was on this ad hoc committee as well, to give credit to some of them. Obviously, I didn't personally go out and get all ten speakers and circulate these petitions. We recruited other like-minded people. We also had a Corps of Cadets available to help out with circulating this petition and that was maybe five, six hundred students. If they each got five or six, that would give us our three thousand. I was pretty pleased that this happened and the response and that the Board of Governors did hold an open hearing. It was very open.

My memory of the meeting is that the gymnasium was packed, but everybody was respectful. It wasn't disorderly. Everybody came up and said their piece, and then, the Board of Governors went and made a decision, and then, announced it. It could've gotten worse, I guess, but I think Rutgers handled the situation very well. I was pleased, like the people that were on the Committee with me, to present the side from the people who were in favor of ROTC, and let their voices be heard, because it was being drowned out.

You really didn't read about it in the newspapers. They all had articles about the people who were rebelling or whatever word you want to use--demonstrating is a better term--demonstrating against ROTC, got a lot of press, but the other side really wasn't heard of that much. Rutgers actually did take their opinions in mind and I was very proud of it. I wish I could remember more details about how we organized, who all spoke. It was quick and it was a rewarding time and something that I'm proud of when I see ROTC still at Rutgers. I know that recently a number of colleges are thinking of bringing it back and offering it, and I think Rutgers was good to keep it.

SI: Was the faculty at the Ag School divided on the issue? Were they more supportive of ROTC?

RR: [Dr. Ross retrieves his notes] I wrote at the end of my handwritten presentation, that the faculty voted 132 in favor and 13 against. The Rutgers College faculty meeting--I'm looking at my notes here--they voted 137 to 108 to, quote, "Support a mission to admit no more students into the ROTC program as of the 1970-'71 academic year." So, it was close in Rutgers College and it was overwhelming in support at the Agricultural College, which maybe is consistent with maybe a difference between STEM students and faculty, tending to be maybe a little more conservative, even back then, than say the liberal arts colleges, but it was close at Rutgers.

SI: Tell me a little bit more about your training in the ROTC, what kind of things you would do. You mentioned that you went for basic training one summer. Was the other summer advanced individual training?

RR: Yes, you started out, your first two years, just taking courses, almost like a military history course. They taught about how the Army's structured and those sort of things, including leadership. It drew a lot on that. It wasn't as much on tactics and those sort of things, as I remember, it was a half a credit course in "Military Science," as they called it. You had to drill once a week, where you'd dress up in your uniform. You had to maintain your uniform. You'd be given an unloaded rifle, sometimes, to work with. They had other activities, such as the Rangers and Queens Guard that did the exercises with the rifle, doing the fancy tossing around and whatever. So, they had extracurricular activities as well.

After two years, you had to make a choice, whether you wanted to go on for a commission or not, after you got a taste of what military [service] was like. If you signed up for your junior and senior year, leading to being commissioned, you were given the rank of private, an E-1, and you were actually in the service. If you dropped out of school or ROTC, you were immediately in the Army. You didn't have to be drafted. You were already in; you committed. So, your next two years in ROTC were as an E-1 paid fifty dollars a month.

Then, it stepped up a lot more into tactics--how you manage forces in various combat, how you maintain training, how you develop *esprit de corps*. In the Advanced ROTC Program, the courses went up to one-and-a-half credits of military science. It became a lot on leadership and public speaking and those sort of things.

Between your junior and senior year, you went out to Indiantown Gap, Pennsylvania, near Harrisburg, and did basic training for six weeks, which was similar to basic training for enlisted men, except that you'd be trained by veterans who really put you through the wringers, because you were going to be an officer leading people. We were trained by the 82nd Airborne, who had just come back from Vietnam. These people were no-nonsense and they let you know, in no uncertain terms, this stuff is important to learn, because your life and the lives of the people that you are entrusted in leading depend on you being good at it.

I gave ROTC probably my highest priority in my entire time at Rutgers because of the responsibility I knew that I might have to bear. See, this is important stuff. Not only my life depended on it, but, perhaps, other people's lives. So, it got you serious real fast. But it was hard to be in ROTC, as I mentioned before, because you were kind of shunned on campus, wearing a uniform around. You'd wear it walking to and from drill--you had to--it was in your classes, you had to keep your hair short, you had to be groomed. So, it was difficult taking some of the abuse from the students, but you learned to live with it. Again, it's one of those things of standing up for your convictions.

I mean, God bless the people that volunteer today to protect our country. They all seem to be outstanding people. The Army, I think--well, the whole military, I shouldn't just say the Army--ROTC had an Air Force contingent as well at Rutgers. They didn't have Navy. Princeton had a

Navy group. I can't remember for sure--but I think if you were interested in Navy, you could go out to another campus.

I was supported by my fraternity brothers. Several of them were in ROTC. Two of them ended up, after college, going in the Marines and going to OCS. So, it was a quite rigorous program and it promoted physical fitness, and you just learned. I told you before about lessons that you learned from it, that were very important. You had the luxury, at Rutgers, of not being actually on active duty and you're busy doing other [things]. Here, many times, you'd spend an hour in class and an hour-and-a-half at drill. Then, you had time to reflect on what you learned and to see *esprit de corps* and working with people and encourage them.

I always remember one example in basic training that stood with me. I was in very good shape from the track team and, when we had our physical fitness tests at the beginning of camp, I did real well, obviously. When I was running, one of the cadets was a little overweight, wasn't [in] that great of shape. I slowed a little bit from running when we ran the mile, said to him, "Hey, come on, you can do it. You can do it," when I lapped the guy, "You can do it. You can do it," and kind of encouraged him.

At the end of camp, because I was fast in running and everything, they made me company runner. When you didn't have radios--before walkie-talkies or cell phones--a lot of times, they'd appoint somebody as a runner. We were out in the field and it rained the entire three days we were out there. So, I had to run from one place to another through the mud and I was cold. You're sleeping in a foxhole and it's raining. Then, if you did well in your first PT tests at the beginning, they put you on KP before you did your final physical fitness test, because they figured they know you would pass. They wanted people that were maybe struggling to have a good night's sleep.

So, I was sick as a dog from the basic training and I was up early at KP. Then, I went out for the final test. I was so tired, I could barely complete the mile run--and that same kid that I encouraged the first day, he slowed down and encouraged me. So, it just really struck home as an example to me that if you help somebody, it'll pay back, always help your fellow [man]. It was a real lesson and it just was that opportunity in the military that, I don't know, it just made a big, big impact on me. As you can tell, my voice is quivering a little bit.

SI: It is always interesting to look at how there were these divisions on campus between people who were for the war and against the war, people who were for military service or against military service. Obviously, the sides are very stark when you are being yelled at while you are exercising in uniform. Would you perhaps have to deal with these other sides in other settings, like class, the fraternity, the track team? Otherwise, was it often an issue that came up, support or nonsupport for the war or the military?

RR: Yes, I think it did, but it didn't affect any friendships. I was first in my class in ROTC, I was Deputy Brigade Commander--they knew I was pretty much supportive of it, of serving your country. I had no desire to be a career military officer, but I thought there was good and bad in the war, kind of a noble cause. I'd seen my dad and my uncles' reaction to tyranny around the

world, how if it's left unchecked, it could grow into worse things, so, maybe "heading it off at the pass," as they say, was maybe a good thing.

I thought about how the war was executed--I felt bad for some of these restraints that were put on the servicemen that cost some of them their lives. The people that I met from the 82nd in basic training would mention how these rules of engagement cost the lives of people. So, I envied a little bit, in a way, the fact that the country was united in World War II. I don't think we've had that since in terms of committing people's lives to something that not everybody was for. I didn't really think--this is reflecting back--I don't think I had quite all those thoughts then. It was mainly that it was just something you did. It was your patriotic duty.

Then, I really got into it, because I found out I was learning a lot. So, that's why I think I did so well. I was a Superior Cadet Award, I was a Distinguished Military Graduate. In fact, after I got done ROTC, I actually had more ribbons on my uniform than my father. He had two, a campaign ribbon with three silver stars [Battle Stars] for his three amphibious invasions in North Africa, Sicily, and Italy, and a World War II Victory Medal. I had a National Defense Medal, that everybody got if you served in the military during the Vietnam era, and that Superior Cadet Award, and the distinguished graduate award. So, I had three ribbons. There is no comparison between the medals, but my dad and I joked about it.

Getting back to your basic question, the big issues on campus were whether the students would strike and if final exams would be held. I mean, all this was happening and, as I told you before, I really relied on a break between the end of class and when you had your finals, because I studied like heck. I did nothing but study. I did, like, sixteen hours a day studying, because I was so behind from track and this and that and whatever. I had to really pull out a lot of my grades in their final exam.

So, now, I was so busy doing other things with the Student-Faculty Relations Committee, which I felt, just strategically, had a lot of significant importance. Nobody's going to long remember whether I got a "2" or a "3" in physical chemistry. That's gone and forgotten, I know, but whether ROTC is still on campus, I think, is a bigger issue than my grade in some course. I can always make that up. Rutgers ended up cancelling most exams, including in all the courses I was taking.

I felt, in a way, cheated, in that I didn't look at studying for exams as studying for exams--it was learning. That's why I went there. I went there to learn, which is why I didn't really protest or object to what the teachers were teaching. I felt, "You teach me what you think I need to know and I won't tell you how to do your job. I'm paying you to tell me what you know." I think, now, when students tend to say, "This is what we want," when I was eighteen and nineteen and twenty, I didn't know what to ask for. How did I know what was important? I trusted the faculty to teach me what they thought I should know. Then, I thought, "After I graduated, I'll fill in the gaps on my own or I'll do something else."

It seems reversed now that a lot of students are telling the faculty, "This is what we want." My attitude, when I walked in the door at Rutgers as a freshman, was, "You got me for four years--make me a better, more educated person, with a trade that I can support myself and my family

on, and give me enough understanding of other things that I can appreciate life more, because I'm knowledgeable. I'm in your hands.'" There was a different attitude from the people who wanted to say, "No, no, this is how we want it done."

Now, obviously, there's a gap, because some of the practices, the discriminations and those things, that happened at the time--for example, no women being allowed at Rutgers [College]--yes, you did have to have some feedback on that. So, there had to be some give-and-take on it. So, it's not black-and-white, but I don't know if I'm expressing it well. I was the last--my Class of 1970--we were the last class to go all four years as an all-men's school. So, I think it's probably helped the University that you had that.

See, now, I was fortunate in having some exposure to feminine views, if you will, by taking so many courses at Douglass. I used to take a lot of my science courses at Douglass, because it was easier than going all the way from Cook Campus up to The Heights. Do they still call it The Heights?

SI: Not really, Busch Campus.

RR: Oh, Livingston, yes, Busch Campus, and that was hard to do in the traffic in New Brunswick. There wasn't the nice bridge or the superhighway. There was a little, dinky thing that went across the Raritan River to the park across the way.

SI: Landing Lane Bridge.

RR: Yes. It was not easy to get over there. I took quite a few science courses at Douglass, and so, I had that kind of atmosphere, because it does make you more well-rounded. I mean, women tend to look at things a little bit differently than men and it was good to have that perspective. So, I think that helped me, and I assume people agree it's helped Rutgers.

A lot of the changes were for the good, but some were just contentious, I think to the point of being overly contentious. It became--I don't know, maybe I'm kind of generalizing--but I felt, at the time, this was the extracurricular activity of some of the people who were protesting or demonstrating for different things. Some of it, most of it, was probably good, but the methods were not, I didn't think, "Good," at the time, in terms of you could do it more peacefully and not influence or adversely affect other students. For example, closing down the campuses or taking over the Dean's Office or those sort of things deprived me of being able to finish my coursework education. So, it did affect me, but I think me being in ROTC didn't really affect other people's experiences at Rutgers, except they'd have to see somebody in the uniform.

I lived in Switzerland for nearly a year at the end of my career, working at Nestlé's headquarters. I don't think I've ever seen as many people in military uniform on the streets as in Switzerland, a neutral country known for being very peaceful, but they had a requirement that every single male, and probably female now, but every single one had to be in the service until they were in their fifties. They had to go out and train every year and to maintain their defense. It was an obligation. So, you saw a lot of uniforms. So, I think just physically seeing a uniform bothered some people, at Rutgers, which I never quite understood.

SI: You spoke about your time at UMass. Do you want to say anything else about that before we talk about your time in the service?

RR: Yes, just that when we were talking about mentors, I had a mentor there, my faculty advisor, Dr. Herbert Hultin. He'd won a distinguished professor award, as a young researcher, and was very good. When I was researching cell physiology and metabolic pathways, I'd say, "Well, maybe this is the way it works." He always asked, "Why would the cell want to do that?" and, "Life doesn't do things arbitrarily. Ask, "Why?"' So, I became used to asking why.

Throughout my career, I think I probably annoyed a lot of people, because I kept always asking my companies, "Why do we do it this way?" Then, a lot of times, you find out that there was a good reason that you could explain to people and pass that information along and share it, and then, go to the next step--or maybe you'd find out there wasn't a good reason except, "It's the way it's always been done."

I worked a lot in new product innovation and just being able to ask why led you to go down a lot of paths that could create innovation and efficiencies, a lot of good things, although, sometimes, I think people thought it was a little bit of a nuisance, because, you keep questioning everything, but you're not questioning as much as you're seeking understanding. Rutgers, as I look back at the professors throughout my academic career, did that, and so did some of the better bosses that I had throughout my career. When I speak to students, I usually ask them, "Just constantly ask, 'Why?' It just leads you to understanding and learning and innovation."

SI: You graduated from Rutgers in 1970 and went right to UMass. You were there until 1972. Is that correct?

RR: Yes. Then, in '72, I applied for a third-year extension of my military deferral. By then, after two years, I had had my master's degree and passed the PhD exams, a series of tests over three days. It was very rigorous and I took them my first year. UMass advised me, "Nobody takes their PhD comprehensive exams one year out of undergraduate," and, to Rutgers' credit, I was very well-prepared.

I had saved notes from my science courses at Rutgers and used a technique for learning that I'll pass on--I took all of my notes and I read them. If I already knew it, I just passed on. If it was a fact that I wasn't clear on or didn't remember, I wrote it on a piece of paper. I wrote it again, and I did that through all my class notes, and then, I'd read where I consolidated it. If I knew it, I wouldn't write it again and I kept rewriting my notes until I had nothing on the page that I didn't understand. I took good notes and was well-prepared at Rutgers and passed all my exams.

UMass cautioned me that, "If you fail the PhD exams, you're basically given your master's, a handshake and shown the door." You only got one shot then at the PhD exams, and I said, "Well, two things about that. What are they going to do, put me in the Army? I'm already in the Army, right, and I'm not going to fail." Needless to say, I was definitely "all work, no play" that first year.

So, when my deferment rejected, I had to go into the service, but, by then, it was 1972. The war had wound down; they didn't need as many lieutenants. They wanted me to serve three months active duty for training, and then, spend eight years in the Reserves afterwards, instead of two years commitment and four years in the Reserves. I took them up on the offer and dropped out of graduate school. It turned out it was a little more than three months. Then, I went back to UMass and finished my PhD, which I did finish it in less than three years of actually being on campus, but it was a really tough time. I worked hard.

SI: Tell me about those months on active duty.

RR: Yes, I was assigned to the Quartermaster School in Fort Lee, Virginia, and I went through officer training. As a food scientist, I wanted to specialize--they gave you different assignments on what you would do. Depending on your grade, you had a choice as you went through the class. I wanted to be in food service, in commissary operations, mess halls, those sort of things.

Your assignment was determined by how well you did in training. Sort of like in ROTC, they ranked you in your class and whoever was number one in the class got first pick as to what branch they would be in and they went down the line. So, in ROTC at Rutgers, there were maybe only two openings for quartermasters. There were very few that were noncombat arms. The top half was mostly Armor and Artillery; if you were in the bottom half of your class at Rutgers, your only choice was Infantry.

Same thing in officer basic. The top was country club management, that'd be pretty good. [laughter] You go to Waikiki and run a rest-and-rehabilitation center. The bottom was Graves Registration. Nobody wanted to do that. I did well enough and got my first choice, which was commissary operations. I spent the rest of my time inspecting mess halls for food safety. You'd go in and do a sanitation check on it. Also, I had to inspect the barracks for some of the troops that were in my command and others. Sometimes you'd be officer of the day preforming tasks like guard duty.

Barrack inspections were an interesting experience for me, because the first time you went in, you're really looking for drugs. I had no experience with drug culture or exposure to anything like that at Rutgers. Maybe I was naïve or sheltered from it--I certainly didn't seek it out. So, I really was a novice in this whole thing, but, now, I was shaking down lockers or whatever and looking for drugs. I carried a forty-five [pistol] with me and had two sergeants for protection--same thing when I was payroll officer.

The thing that helped me the most was just doing sanitation checks. That was real-world stuff for a food scientist. I learned about mass feeding, mess halls, I worked in warehouses and that helped me later in my career as well. We did have a field training exercise that we did have to go out and pass, similar to ROTC. Almost every Army thing that I know of is that you had classroom, but, then, you always had like a final exam was in the field. So, we went up to Fort A. P. Hill in Virginia, which is right along Route 95, and we got put out into the woods.

One of our experiences was that you were given the assignment [to pretend] you were a prisoner of war and you escaped, and you had to find your way back to the base in the woods at night by

yourself. You had a compass and whatever and a sketchy little map that they gave you. It was kind of what they called in Boy Scouts orienteering. So, you had to kind of find your way back. Well, I'd done that in the Boy Scouts, so, I had no problem with it, but it was dark and it was cold. They had to go out and find some people. I mean, not everybody made it.

I think that helped my score. Also, we were graded in marksmanship but not as rigorous as in basic training. As ROTC cadets, we had to walk down a little path where little human silhouettes would pop up at random. They'd be anywhere from about fifty yards to four hundred yards away. With your rifle, you had to shoot this, hit this silhouette and, if you missed, of course, they'd say, "Well, they didn't miss--you're dead. You're going home in a body bag to your mother. You'd better improve your marksmanship," but I did well in marksmanship, because the Boy Scouts had a rifle range. So, I had some experience with marksmanship and it worked well.

I enjoyed target shooting in the Boy Scouts, but I never went hunting. After going through the military and having fired and practiced with almost all the weapons--you did flamethrowers, you threw grenades; thank God I never had to do it in combat--I came away with a respect for it and almost a little bit of a fear about how powerful these things are. So, I've really never gotten involved in shooting or hunting. I mean, it really made an effect on me.

It was just the seriousness of it. I again thought this may be something that you'd be called upon doing. You had to rise the occasion, but it really wasn't in my nature, but I did well at it, because, as I told you before, other people depended on it, which was, again, sort of a good lesson. I thought about that a lot throughout my career--if you're managing somebody's life and if you hire or fire somebody, that's going to have a big effect on their life. So, I ended up, I only fired two people. That's because I was ordered to, but I would usually work with the people and I'd find the right job for them.

It's like, "Protect your men;" I kind of had that attitude with my staff. A lot of times, if you're a vice president, you're given kudos if you had the guts to fire people, but I always felt, "No, work with them and your team," and I found out that it gave loyalty. One of the things I learned in all these exercises that the Army taught is to develop pride and *esprit de corps* in every member of the team and "no man left behind."

So, I always did that with the groups that I had. I was always understaffed, by design, so everybody had to work harder, but, then, I never had to lay anybody off in the bad times and everybody worked harder, and they knew they worked harder and I had high expectations. So, they developed a pride and an *esprit de corps*, which is what the Army teaches you, high expectations, be the best, all right. The Marine Corps does that really well, the SEALs are the best. "It's important that you be the best," and I think it really helped me in my career in so many different ways.

I took, I think it was fourteen credits' worth of physical chemistry, which is a combination of physics and chemistry. It's really tough. It's a lot of math, which I was never particularly good at. I could do well enough, but I really didn't use a lot of that in my career, but I did use what I learned in the military and through things like the Student-Faculty Relations Committee, dorm

president, Chairman of the Chapel Ushers. I always tried to get into a leadership position in something. Rutgers gave you ample opportunities to do that and I thought that was really good.

SI: After your commitment was over, you then started looking for jobs. First, you went back to UMass, correct?

RR: Yes. Then, I started looking. I had joined the Institute of Food Technologists, a professional society, in 1970, and went to their national convention in July 1973, as I neared graduation from UMass. I saved up all the money I could--I was on an assistantship--and I flew down to Florida and looked for a job at this convention. I met somebody from California and they offered me a job. I signed on for it, to be there in the middle of October, and so, I had to finish my dissertation by then.

It was tight timing, because I was running--my last experiment, a chromatography test, and had trouble getting the technique down and I had to write the dissertation. It was tough, but I finished. When I went in for my dissertation defense, all my belongings were already on a moving van, moving out to my job in California, and my car was packed. So, I mean, you obviously had to pass your final dissertation presentation, but, when it was done, I shook everybody's hand and got in the car and red-balled it out to California for my job. [laughter] So, I didn't have a lot of time between graduating and starting another career, but, yes, it was [intense].

I didn't anticipate that one of the longest things to do was just to type my dissertation. I couldn't afford to have anybody type it for me and you weren't allowed to have any mistakes. It was 144 pages on a manual typewriter and I'm plunking this thing away. I had taken, in high school, a course in typing, which I guess would be keyboarding now. It's another thing, just about people that influence you and somebody gives you a break.

So, I wanted to take typing and I took the course and it was almost all women who wanted to be secretaries and me. I think there were two guys in the entire typing class and they're like, "Why do you want to take this typing course?" I said, "Well," I said, "it's important, so [that] I can write. I just want to learn how to type," but I had broken and dislocated fingers almost constantly in football, always had at least one, two fingers taped together. So, it's hard to type when you've got two fingers taped together because they're broken. So, I failed.

After, the first semester, marking period, the teacher said, "Well, you failed, so, you can't continue in the course." So, I told the teacher, I said, "Obviously, I'm not going to make my career as a typist," said, "I just want to learn." So, he said he'd raise my grade to a "D," so that I could continue. [laughter] So, I ended up having "Ds." It didn't help my average in high school to have a bunch of "Ds" in typing, but it really helped, because, when I went to Rutgers, almost everything in my freshman year, sophomore year, was handwritten, all of your reports, handwritten.

The poor professor had to pour through these handwritten reports, with scratch-outs and whatever. I typed mine and would submit it, and I have to think that helped a little bit, [laughter] typing the things out. What it also did was, you had to really be careful, in the day where you

couldn't just cut-and-paste. You had to think about what you were writing, because, once you typed it, you just couldn't move it, if you had to move it around again. [laughter] So, anyway, that's what I did.

So, I went out to my first job in California as a food scientist and, actually, there were a couple other people from Rutgers who worked for Hunt-Wesson at the time. I don't know, I guess we're going to talk a little bit about career. Do you want me to [go into it]?

SI: Yes, if you do not mind, if you could tell me a little bit about the different jobs you had.

RR: Yes. Hunt-Wesson, at the time, was its own company. It's now part of ConAgra; it had been bought out. It was really at the forefront of R&D and research and it was an exciting time, because there were so many new developments.

I worked on retort pouch technology, which had been developed by the Army, by the way, for field rations, so [that] they'd be in flexible pouches rather than tin cans. When I was in the Army Reserves, I was issuing rations in tin cans from the Korean War era that were twenty years old. Now, they were redoing those and making them in flexible pouches that you could fall on and crawl on. That was an interesting new technology.

Hunts also did plastic packaging. I told you I'd worked with Pepsi on plastic bottles for sodas, but that's very acidic and it's not much problem with sterilizing. I worked on chemical sterilization of plastic packaging and did some of the very first of that, in the U.S., by putting puddings, a product called Snack Pack Pudding, into plastic packaging. We would sterilize the package with peroxide. It was really kind of innovative type stuff that I really liked, but my most fun job at Hunt-Wesson was after they had acquired Orville Redenbacher Popcorn at the time.

I was assigned to do a study on ad claim substantiation. They wanted to find out why Orville Redenbacher's Popcorn was supposedly the best because he had bred it that way. Orville was a PhD plant scientist from somewhere in the Midwest [Indiana] and he developed this hybrid corn. We call it GMO [genetically modified organisms] now, but he actually grew two crops, bred them as a hybrid. That hybrid crop performed better as a popcorn, but he had to grow three crops to get one, so, it was expensive.

So, he'd pushed this with a lot of the food companies, popcorn companies, [they] said, "Eh, popcorn's popcorn. Who wants this popcorn?" Talk about mentors, he had a real big effect on my life. He said, "Okay, you don't want it? I'll start my own business." He was a real entrepreneur based on science. He became one of my heroes and he did his own thing. It grew and it grew, and then, Hunt-Wesson eventually acquired it and they took it national and advertised it as the world's most expensive popcorn because it's better. They wanted to put ads on TV, but, to do that, you had to do comparative claims against other popcorns to substantiate it.

One of my first assignments was to write an ad claim substantiation report and pop a gazillion popcorns. I had eight people popping popcorn around the clock to get the data for it, and then, we did the statistics. Now, I took two semesters of statistics at Rutgers and I thought, "Well,

maybe it'll come in handy someday." Little did I know that that would be one of my first assignments, and it was almost all statistics. Now, we hired a professional statistician, because they weren't going to rely on me, but I understood statistics from Rutgers. Fast-forward, Orville Redenbacher Popcorn became the number one dollar-volume popcorn in the country. I think it still is. It's very big. So, that was fun.

SI: Did you actually get to work with Orville Redenbacher?

RR: Oh, yes. He knew me by name. I spent time talking with him because I was fascinated by, "How in the world did this scientist, a plant scientist," and I took plant science courses at Rutgers, "how did this plant scientist become this entrepreneur?" and he told me the whole story. Nobody ever asked him about it before, and it was fascinating. Ever since then, I always said, "If I have this technology that I want to do and I think it's good, I'm never going to give up on pushing it. Orville didn't and look where it went."

It took him years and years to do it, sort of like Edison, another one of my heroes, plugging away. So, it's another example, if any prospective students ever listen to or read the transcript of this interview, "Never give up, do as many things as you can. You never know when you're going to need it, as things pop up unexpectedly all the time." I think that's why that general education that Rutgers offered meant so much to me.

SI: Any other stories from Wesson-Hunt?

RR: Oh, yes, just tons. Well, I worked on sensory panels, in tasting foods and finding out how your different senses tested as to how a product works. I worked on ketchup and spaghetti sauces and tasting the different spices in it. So, that was kind of interesting. Two of my bosses were also Rutgers graduates.

So, just to digress, when I went into the business world, just a little going back to this George H. Cook project and why it was so important to me and my career, not only because several people I worked with at Hunt-Wesson were from Rutgers, but I worked a lot with grad students in the lab. In that era, the grad students were really an outstanding group and many of them became vice presidents, almost all of them. I think we lived in a time, as a Baby Boomer, that was fortuitous.

I look at this generation now, my daughter and nephew who were food science majors--it's tough times out there for them, but, in my era, we were fortunate in that you could advance quickly in management or in an organization because there weren't that many people before us because of the war years, so, there was a gap. I was born in '48. There weren't a lot of people born in the early '40s. The men were away, all right. The Depression was the '30s; the birth rate was down a little bit, so that when you went into a position when I did, out of college, that there were not this backlog of people.

If you were young, they gave you a lot more responsibility, I think, than maybe they get now, because there weren't as many experienced people around. The war had kept [young people occupied], a big void in a lot of your predecessors' times. So, I thought this, having the

experience of those people just doing so well and just being, again, around people that I met at Hunt-Wesson, at Rutgers, the grad students, that all had ambitions and wanted to do great things.

We had a mission there--we wanted to try to feed the world. That was one of the things that was really drilled into us at Rutgers in food science, is that the population--Paul Ehrlich wrote his *Population Bomb* [published in 1968]. He said, "You're going to have eight, seven billion people. How are we going to feed those people? There's going to be [famine]." When I was in school, it was predicted, by now, there'd be mass starvation. Of course, we had the Green Revolution through DNA and plant scientists, primarily, not food scientists, but food scientists, we did our part by learning how to preserve foods better and protect them. That was why I liked working on new technologies such as chemical sterilization, flexible pouches or other things on food safety and preservation.

In the 1970s, they were predicting that there was going to be mass starvation because of climate change, such as a book called *Climates of Hunger* about the coming Ice Age that would make it so that you couldn't grow enough crops in the temperate area to feed the world's population. So, now, you fast-forward and we're concerned about global warming doing the same thing. So, maybe that's why, sometimes, people in my generation might be a little skeptical of it, because we remember when the opposite was the case. [Editor's Note: *Climates of Hunger: Mankind and the World's Changing Weather*, by Dr. Reid A. Bryson, a University of Wisconsin-Madison professor in meteorology, and science writer Thomas J. Murray, was published in 1977.]

The only constant--weather will change--the only constant that I've learned is that technology changes generally for the better and people are eating better and safer than they have ever been through technology. It's kind of sad, in a way, that technology tends to get a bad rap lots of times, but it's really been a savior. So, when I was at Hunt-Wesson and we're trying to come up with new food processes, I really felt--and everybody in the lab felt this way, too, and my fellow students at Rutgers, when we were growing up and studying--we felt we were going to help save the world by making a better food supply.

I still feel that way, but that was a real message that you had as far as, you're there, again, as I told you about not getting hung up in the details, so, from Mason Gross' thing about religion, "Don't worry about the details; think about the big picture," it's the same thing with food. "Think about the big picture of safety and technology and maybe some of the good things they're doing."

Then, with Orville Redenbacher, his popcorn, it would probably be classified maybe as a genetically modified ingredient now, but we were thinking about, "How could I use high lysine corn syrup?" for example. Lysine is an amino acid--without getting too technical--it's an amino acid that's deficient in corn and people have dietary malnutrition by it. So, you genetically modify it to make it high lysine. You do that. I mean, we're adding things to make sure--we always used iodized salt, enriched flour. All those things that we put into our foods when we were formulating them, we're taught and we learned and really felt a mission to put these things in the foods.

Of course, now, I think maybe because of marketing or whatever--I don't know what the reason--but a lot of those things, we all want it to be natural or organic or this or that. It discounts why a

food scientist put these additives into things to begin with. It isn't to poison the people that are eating; it's to make it safer and better. So, that was really a lot of the emphasis at Hunt-Wesson at the time. They had built a huge new research center. When I walked in, it was brand-new. It was humongous. It was a real investment in R&D. Unfortunately, as I've seen just through my career, in subsequent jobs, food science increasingly became focused on cost reduction, "How can we cut costs? How can we make it cheaper?" rather than, "How can we make it better?"

I was blessed that--maybe it was the generation I was in--that our emphasis was, "How do we make it better?" We were influenced a lot, I know I was influenced, by President Kennedy, just the inspirational messages that he had. Maybe my generation was charged by that, "Ask not what your country can do for you, ask what you can do for your country. We're going to go to the Moon in the next decade," big things. I think a lot of the people in my generation, and certainly I was, influenced by that to try to do a big thing to the best of my ability in what I could do. That was kind of the attitude in that research center there at Hunt-Wesson.

SI: How long were you at Hunt-Wesson?

RR: Four-and-a-half years, and then, my dad started having a lot of health problems. I said, "I don't want to be three thousand miles away. I want to move back." I kind of missed New Jersey, too, to be honest. California was a great place to be single in your twenties. After being "all work and no play," I had a real good work/life balance out there, but I missed the family, I missed changes of seasons. I liked New Jersey. [laughter]

So, I came back and got a job with Nabisco in Fair Lawn, New Jersey, on Route 208. They had a research center right next to one of their factories, where they made Oreos and all their different products. I worked in the corporate R&D group in doing new products and business development. So, even at that point, I asked them, "Could I get more involved in entrepreneurialism and business things?" So, I guess maybe as a way to recruit me, they let me tack business development on to my job title, which is kind of the attitude that I have, is that we're trying to build businesses, to get people to think better about technology.

SI: What kind of products were you working on at Nabisco? Were there any products that you developed that you want to talk about?

RR: Yes. We did a lot of joint ventures with pharmaceutical companies. I'll start with the high level stuff; I'll tell you the things that really made the money next.

Some of my first projects in this business development was developing products with [other companies]--one was with Abbott Laboratories on developing foods for surgical diets. We called it medical nutritional products, for people with different diseases that could be helped by having better nutrition or targeted nutrition, and one of the things included a clear surgical diet that tasted good, but had no residues. So, that was a big venture. We developed cookies, breads, all sorts of things for them for that. We did high-fiber products as nutritional supplements, but the big bulk of it really was trying to develop technologies for the core businesses. I mean, that paid the bills for these joint ventures.

So, I worked on low-fat products, which were big at the time, reduced-salt, reduced-sugar. I developed a line of low-sodium crackers, [for] which I actually got to use, just for those people who are struggling with chemistry, an example that they might find interesting. Usually, [what] consumers think about sodium is that it's the salt that you put on the top. Well, salt--because sodium, of course, raises blood pressure--and so, sodium chloride is salt and it's the sodium that does that, but there's other sources of sodium from your leavening, baking powder, sodium bicarbonate. So, if you replace it with other types of chemicals, inorganic chemicals, potassium bicarbonate, potassium carbonate, other things, you can reduce the sodium without reducing the salt level.

So, we actually had a patent on just taking the sodium out of the leavening and leaving it on the top as salt. Here's where I learned an interesting fact, is that we did that and, now, we could claim, legally, according to the government regulations, low-salt, which just really means low-sodium, but we didn't take out any salt. So, it still tasted salty. Consumers rejected the product because they said they didn't believe it was low in sodium, because it tasted salty. So, I wanted to put a little description on the box on what the technology was, how we did it, but marketing said, "That's too technical. Nobody wants to read that." So, we ended up taking some salt off the top, but still used the other technology.

One of the biggest hits was Teddy Grahams, and that came about, actually, from a marketing person I talked to. I'd try to talk to the marketing people, "Tell me about marketing, and I'll tell you about science and we'll train each other." Usually, marketing and R&D were kind of at odds. So, she taught me, "If you want to be successful, you have to think of the food industry as a branch of the entertainment industry. The big problem, in America at least, is not starvation, but overeating. People eat for enjoyment and for entertainment, not for sustenance. You're thinking sustenance--I'm thinking entertainment. So, make it fun."

So, I started thinking about things that you might do for fun. Well, one day, Marketing came up with this idea, they wanted to make whole-grain crackers, graham crackers, more fun, because it had high fiber, but high fiber tastes bad, right, "Equals tastes bad." So, we made it fun. We put it into shapes. I said, "Well, let's do something that's, like, a three-dimensional thing."

My children, at the time, used to eat Cheerios as little food on their highchair that my wife would give it to them and the kids ate it. I proposed we could get them to eat something like that, so we developed Teddy Grahams, which was a small, bite-sized, little sweet that had whole-wheat flour in it. It gradually involved into putting some sugarcoating on the top and, now, some varieties have chocolate chips in it, but it turned out to be a couple-hundred-million-dollar business on something from just observing how children eat.

I learned that, "Some of the times, [what] you have to look at for success, is to look at your inner child, think out-of-the-box,"--I'll admit it here in public for the first time--I used to love to eat breakfast cereals out of the boxes as a sweet snack. [laughter] When I was in a dorm, I didn't have a kitchen, I didn't have anything. I mean, [if] you were hungry, I couldn't get anything in a refrigerator. I couldn't just run down to someplace and grab a snack. Somehow, I'd keep a box of cereal or something, I'd just munch some Frosted Flakes or whatever. I thought, "Maybe that's something we could do."

So, it became fun, but, also, we did Mini-Oreos, Fruit Newtons. Asking "Why?"--I remember making presentations to the President of Nabisco and saying, "I think we should come up with other fruits for Fig Newtons. We have just Fig Newtons," but I asked, "Why is it only just fig?" So, I made a big presentation about that, and he said, "No, Bob, you don't understand." He said, "It's called Fig Newton." I said, "Well, respectfully, sir, figs don't make the top ten in terms of most popular fruit. Maybe if we added apple and strawberry, we'd get some incremental business. Easy to do, we've got the equipment," but it took a long time, took about two years, to sell that idea. It's still on the market.

Another example, when I was at Pepperidge Farm, I noticed the Goldfish crackers, which is their biggest seller, had a little picture of a fish with a smile on it. So, I said, "The package has a smile on the fish, but the fish itself doesn't have a smile. Why don't we put a smile on the fish?" Well, it was like, "Oh, gee," it's like making New Coke, "you're going to take our flagship brand and tinker with it?" I said, "Well, why not?" They said, "No, why do we want to risk that?" Well, after a long story that I won't get into, we finally did it and it was a big hit, but they wanted to make every Goldfish with a smile. I said, "Well, it makes it more fun if you have to find the smile," like, my kids did with *Where's Waldo?* You remember *Where's Waldo?*

SI: Yes.

RR: And so, I said, "Maybe if you made them have to find this thing, it'd make it more fun and enjoyable." So, that's what they did. So, that's one reason why all the fish don't have smiles. So, my career ranged, from doing medical nutritional foods, interesting, good stuff, to doing kind of just fun-type stuff.

For example, when I was at Warner-Lambert, on maybe not so interesting things, one of the brands I was responsible for providing R&D to was Listerine, and we had an assignment to make it taste better, because it tasted harsh. It was kind of like a "no pain, no gain" type thing, but people then didn't like the flavor. So, the goal was to make it taste better, but not too good, because nobody wanted to rinse their mouth with Kool-Aid. So, you just had to make it a little better. So, that was where you used some flavor chemistry type things that you had learned.

SI: You noted earlier how in science, in general, but this field in particular, you would deal with a lot of failure for every success. Does anything stand out that you tried to do that just took a long time or never worked out or things you wanted to do differently?

RR: Oh, yes, yes, I guess so. Yes, we had some products that didn't do well. I worked on one project, and I won't mention the company, but it was the idea of delivering physician-subscribed meals to people's homes. So, say you're on a specialized diet, the company would make this meal plan, sort of like what Weight Watchers and others do. The company would deliver it to your house, but it'd be prescribed by a physician. We spent a lot of money on it, in trying to make the thing very nutritional, and I got involved in developing parts of it, but the business plan required that you had to deliver so many products that were frozen for a week and not a lot of people had humongous freezers to store this stuff. So, it became a real distribution problem.

Here, again, maybe it's just [me], I made the point and I was one of the few people in R&D that spoke up, saying, "I don't know if this project really makes sense, because it's going to be too hard to distribute it." I found, throughout my career, that one of the biggest reasons why a product didn't succeed, in many cases, was the inability to distribute it well, maintain freshness or whatever. Here, it was just really hard to distribute these things. This is pre-Amazon, where you'd have [a problem of], "How are we going to get our company, which doesn't deliver to all these little places--we have trouble servicing all of our supermarkets with trucks--going to take it to individual homes?"

So, it failed. I mean, they spent millions of dollars on this project. It was the most expensive project I was ever associated with and it failed. Even though it was designed with the best of purposes--everybody just loved the idea. It was certainly filled with good intentions. People had just a moral commitment to it. It was the right thing to do. It's good for people--but, from a business standpoint, it just wasn't the way to do it.

I think it might work, if it was tried now and you had Amazon distribute it--the technology for getting the things, implementing it, wasn't there before. We could make the food, but we couldn't get it to everybody that needed it, and that's why it was a huge failure. It was a shame. So, that was probably one of the biggest ones. I don't think I gained a lot of brownie points amongst people by speaking out, saying, "I have some serious concerns about this thing," because it had a lot of support.

SI: How many years were you at Nabisco?

RR: Eleven total.

SI: Where did you go after Nabisco?

RR: Well, to finish on Nabisco, I spent the last two years in the international division. I traveled all over the world, which was really an experience for me, because I hadn't really done much traveling outside [the US]. Before I had that job, the only time I'd been out of the country was to Canada with the Boy Scouts and one time to Bermuda, for my parents' anniversary.

So, now, I'm flying all over and they put me in charge of a joint venture, technical joint venture, in Japan. I had to learn a lot of this stuff. I thought, "Oh, gosh," and I wasn't good in foreign languages. Fortunately, I had a mentor there that kind of taught [me] and help me around, to become more global. I ended up going all over the world doing technology exchanges for Nabisco. It was a great job, but, then, Nabisco was bought out by the Wall Street firm, KKR, and they concluded, "This international business is really doing well, but it's all discrete, little companies. So, it's easy to sell them off to help pay for the acquisition." So, I lost my job. I was laid off. I had to lay off about twenty people who worked for me, and then, go in to my boss, who laid me off.

So, then, I took a job at the Estee Corporation in Parsippany, New Jersey, which was owned by a Swiss firm. They had developed sugar-free products, primarily for diabetics. Here, again, kind of, it's something where you could get into that niche of doing something that kind of has a

higher purpose, that is helpful to people. So, I said, "This is great, and it's nutritional products," such as low-fat salad dressings. They were pioneers in using artificial sweeteners, when these were a new technology. This is around 1989, '90, and I worked for that small company. It had sales of about fifty million dollars.

Estee sent buses into New York City to pick up their workers, mostly in Brooklyn or the Bronx. The people would get on the bus, they'd be driven to Parsippany to work in the factory, and then, taken home at night. Since a lot of the people had young children, the Swiss company decided to build a daycare center for them, so [that] they could drop their kids off in the mornings, see them at lunchtime, and then, come pick them up at the end of the day and go home. It was really nice. Unfortunately, the day after it was completed, it burned down and it was never rebuilt. It didn't happen, but it was a really good company in that sense. One of my saddest days was telling the people who worked for me in the factory that the center wouldn't be rebuilt.

I started out in R&D and quality assurance, but, then, I was asked later, when Estee had a reorganization, to take over their factory and warehouse and distribution systems. So, I became vice president of operations and was responsible for not only new products and quality, but, also, manufacturing and warehousing and distribution. A lot of people were saying, "How's this PhD food scientist, geek-type guy, how can he manage warehousing and distribution?" I could do it because of my military MOS. I brought in a lot of people. I hired a lot of vets for quality assurance jobs, to put in a plug for hiring vets, because they were good at taking a manual and doing what's in it, and teaching other people to do it. So, it worked out really well.

That company was in the right place, right time, for this growing trend on nutritional health foods. You see it--it's really blossoming now, with smaller companies doing it--but it caught the attention of Hain Celestial, which was a startup company, founded in Long Island by Michael Irwin. They bought Estee and, basically, absorbed it into their company.

I could see that coming and, being a senior manager in the company, I took an opportunity to go work for Pepperidge Farm in Connecticut; a subsidiary of Campbell Soup based in Camden. I became the Vice President of R&D and stayed there for eight years and worked on things like Goldfish, crackers, cookies, breads, and branching into snacks. "How do you make something like a snack?" We put seasoning on the top, which was a real kind of, "Why?" If we want to do a snack, why don't we follow what Frito-Lay is doing? Frito-Lay puts the seasoning on the top, to make it taste like a snack, not to bake it into the cracker. So, we put it on the top and using a whole bunch of technology to make that happen, Flavor Blasted Goldfish is still on the market and we sold a lot. It was a busy time. We were averaging fifty-some new products a year, on putting them on the market. So, it was very aggressive.

After eight years at Pepperidge Farms, they had a management change. I had an opportunity to go work for Nestlé, in a business development type quasi-marketing job, because, like I said, I liked to try different things. I'd done R&D, I'd done manufacturing. I always figured, "You only go around once in life," so, I wanted to try something different every time I changed jobs, if I could. This seemed to be more of a marketing business development one. So, I went there.

It turned out to be on helping grow their Toll House Cookie business, which they wouldn't tell me during the interview what businesses they wanted me to work on, because it was proprietary and, of course, I had some experience in that area. I worked on their Toll House Cookie Dough business and launching that globally, and it did really well. I also ran a market research group, which was kind of fun, and developed food service products.

You never know where little things come back throughout your career and another example was at Nestlé. They were very involved in growing their food service business and wanted their R&D managers to spend a week in a fast food restaurant to learn about food service. So, they arranged with McDonald's to make that happen. Almost all of the people manager level and above went and did that, unless you had prior experience. Having worked summer jobs in restaurants and my military background, I didn't need to go spend a week working in a McDonald's for training, since I already had it, but that was the level of commitment that you saw and how companies became more customer-focused.

My career ended up at Nestlé--it was a wonderful company--but they closed their facility in Connecticut and spread my groups out to a couple different places. They really didn't have a good spot for me, so they offered me a year's assignment doing strategic planning in their headquarters in Vevey, Switzerland, which is on the opposite end of Lake Geneva from Geneva. I worked there, doing long-range planning on their chilled and frozen food business, which included Stouffer's entrées, chilled doughs, pizza and things like that.

I went over by myself because my wife was working at the time. I worked there for eight months until Nestlé, they offered me another job. One of the reasons they did this is to wait until something opened up somewhere else around the world that might be more fitting. There was one in Germany for three years, but my wife didn't want to move and my family was here. My kids were in school. So, I took their severance package and left.

Then, I decided I always wanted to be a consultant and have my own business. I'd been exposed to people that were entrepreneurs and said, "Well, I'm going to try to do it." I consulted for the food industry for seven years, helping big and small companies start new businesses and new products, sometimes with the help of Rutgers, CAFT [Center for Advanced Food Technology], Dr. Bill Franke, who's the director of that. He was my classmate as an undergraduate. I used to lease some facilities at Rutgers for doing product development for some of my clients. It was a real pleasure to go back to the campus and spend some time there and do some work.

Then, I retired down here. Well, I was still working, but moved to North Carolina, just for ease of getting to airports and kind of as a pre-retirement. Now, I spend time working with the Institute of Food Technologists. I'm still very active in that. I served on the National IFT Board of Directors and as chairman of a bunch of committees and all sorts of activities, and I've stayed involved in that here. I participate in the Rutgers Alumni Association of Raleigh-Durham as well. So, I'm enjoying the retirement.

SI: At other points earlier in your career, had you either sought out any type of assistance from Rutgers or had any reason to consult with people at Rutgers regarding technologies you were using or the science behind it?

RR: Yes. When I was at Nabisco, Nabisco helped fund the construction of a new food science building on the Rutgers Campus. I played an advisory role. They asked what sort of things would be useful, especially in terms of the pilot plants and other things that they put in. One of my assignments at Nabisco was being in charge of the pilot plant, so I knew about small-scale testing areas and I recommended putting more of that in the building at Rutgers, so that they can produce products to teach those students that might want to go into industry about equipment and processing and kind of real-world type things.

During my career, I did a couple projects at Rutgers and we hired people, particularly in the area of nutrition. I told you we were doing a lot of things with medical nutritional products in joint ventures. We relied on some of the professors at Rutgers as consultants. At the time, not many food companies actually had a full-time nutritionist in their R&D staff. Now, almost all of them do.

An interesting change in my career was, when I first started, the adage was that, "You can't sell nutrition." That was a marketing adage, not a technical one. Well, of course, it's morphed now into you can't sell a product that doesn't address nutrition. I'd have to say that kind of technology awareness won out, which is good. People are much more sensitive to what's involved and what's in foods now, which is rewarding if you've been a food scientist, because people never really gave it much of a thought before.

Now, it's a big issue. Nutrition is important and, also, the quality. Look at chefs now--they're the new rock stars. One of my goals is that, hopefully, you get the food scientist to be a rock star like the chef, [laughter] maybe, and get the science there. You certainly have it with computer programmers and a lot of things. So, I think the food industry is kind of catching up.

SI: To go back to your military service, you said you had an eight-year Reserve commitment after active duty.

RR: Yes.

SI: How active was that? Would you have to go on active duty in the summers?

RR: Yes. I had to spend two weeks a year at summer camp with the Army Reserves. I got called up twice in California--one was to go to the Desert Warfare School in Fort Irwin, California. It's out kind of halfway between LA and Las Vegas, just south of Death Valley, hottest place I ever been. They put me in charge of a motor pool, because it was, "You issue rations or you issue jeeps and tanks--what's the difference?"

My basic training focused on wooded areas, like Vietnam, when I was an undergraduate, but, then, the Army's needs shifted later to being more in the desert. So, I went out there and it was kind of interesting in a way, because I thought that's probably what my dad went through in North Africa in World War II and, now, I'm out there taking supplies to troops out in the desert. I mean, it was so hot, they used to fry eggs on the tanks. I was glad that I was assigned to a barracks in camp that at least had a fan. [laughter]

Then, the other year, I was up at Paso Robles in the Central Valley, which was really hot as well. There, I was in charge of a warehouse for two weeks, supplying food. The first week I went there, there was a captain who was in charge, and then, he went on vacation the second week. So, he left and I was in charge of the entire base commissary operations for that week--so, really thrown into the fire. Little did I know this would happen to me again in my working career at Estee. So, those were the two.

The hardest part was, I was letting my hair grow a little bit and grew a mustache, as was the style then in California, and I had to cut and shave all that off each time I went to training for your two weeks. When I came back to New Jersey, I was in the Inactive Reserves and didn't do anything with the military. I was just on call.

SI: Tell me a little bit about your family. You said you had children and grandchildren.

RR: Yes. I met my wife Nancy Handloser when I came back to Nabisco in New Jersey. When I was single in California, I was traveling all around the country to various factories and whatever. You'd have some time--you'd get stuck over a weekend in a place--and [you say], "What do I do?" So, I learned, you go find some bar and go in and ask the bartender, "So, I'm new in town--what's happening?"

So, I did that in New Jersey, and the guy told me, "There's nothing happening here, but the Maywood Inn has a ski club on Wednesday, if you're interested." Well, I had taken up skiing at University of Massachusetts. I wasn't allowed to do any of that stuff when I was at Rutgers, because the track coach worried about injuries.

So, anyway, I went to this ski club meeting. The social chairman introduced herself when I came in, because--nobody knew who I was--and she turned out to be my future wife. We have two daughters, Jillian and Allison.

Jillian graduated from St. Joseph's University in Philadelphia and became a teacher. She is very people-oriented and taught in inner-city Philadelphia for two years, which was really tough, but she wanted to do that. In fact, she taught at a school that was about four blocks away from where my dad had grown up, so, kind of full-circle. Then, she had a couple other teaching jobs, but teachers have a "first in, first out" profession so, a couple times, when they had cutbacks or layoffs, she'd get hired, then, the next year, she wouldn't get renewed. So, she said, "I'll move out to California."

So, she moved out there and started teaching English as a second language and married one of her students was from Brazil. They set up their own company doing boot camps and personal training in San Diego. So, she's a real entrepreneur.

My other daughter Allison got very interested in science and liked baking. She decided to become a food science major. So, we looked at a lot of schools. She didn't pick Rutgers because I went there, and she wanted to do her own thing. She went to Cornell, got a degree in food

science. I think as I mentioned before, one of her professors was the fraternity brother who'd introduced me to food science. So, they had a connection, and she loved it.

Then, instead of going on for grad school, Allison went out to culinary school for her postgraduate degree and became a pastry chef, and then, got a job with Pepperidge Farm, reporting to somebody I had hired. So, it's all that kind of interrelationships and why it's important to have good relationships with everybody you meet. You never know. So, she worked at Pepperidge Farm for several years and works for Unilever on their ice cream business in Englewood Cliffs.

SI: Is there anything else you would like to add, anything that I skipped about your life that you want a note?

RR: Gosh, I think I've data dumped almost everything on you. [laughter] No, I can't think of anything else.

SI: All right. I will pause for now, but thank you very much. I appreciate it. If you think of anything else, when you see the transcript, we can always add it in.

RR: Okay.

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

Reviewed by Shaun Illingworth 5/9/2018
Reviewed by Robert E. Ross 9/6/2019
Reviewed by Zach Batista 10/1/2019