

Regional Oral History Office  
The Bancroft Library

University of California  
Berkeley, California

William Lester  
Professor of Chemistry, University of California, Berkeley

Interviews conducted by  
Nadine Wilmot  
in 2003

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**William Lester**



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[End of Interview]

## Interview History

Professor William A. Lester, Jr. joined UC Berkeley's chemistry department in 1981, after having worked in the government and private sectors. As director of the National Resource for Computation in Chemistry, he led the nation's first umbrella group for chemists, which pioneered and disseminated new computation methodologies. His research work is focused on theoretical studies of the electronic structure of molecules, an area in which he and his research group work to extend the quantum Monte Carlo (QMC) to the range of problems that form the domain of quantum chemistry. He is the recipient of numerous awards and honors. At UC Berkeley, he served as the Faculty Athletics Representative from 1999 through 2004 and Associate Dean of the College of Chemistry from 1991 to 1995. Like others interviewed as part of this series, his life and work has spanned several critical shifts in higher education in the United States.

This interview consisted of eight sessions, all of which took place at Professor Lester's office in the chemistry department of Gilman Hall in the summer and fall of 2003. The interview was recorded on minidisc as well as on digital video. After it was transcribed and audited, Professor Lester reviewed the transcript for accuracy of names and dates and technical language.

Professor Lester was interviewed as part of the *African American Faculty and Senior Staff Oral History Project* series. This series of interviews explores the experiences of African American faculty and senior staff at UC Berkeley as part of the broader history of the University of California and its commitment to access and diversity.

This series is grounded in the premise that higher education is one of the primary strategies for gaining social equality—access to employment and income—for historically disadvantaged communities. Moreover, the University, comprised of its students and faculty and administration, with all of its intellectual and financial resources operates as a critical touchstone in processes of systemic social change. Therefore the university functions not simply as an educational institution, but also as a significant site of past, present, and future potential for imagining and crafting opportunity for ethnic and racial groups formerly excluded from higher education. This project recognizes that the University of California, as California's premier public educational institution, plays a significant role in the socio-economic mobility of all of California's residents. The story that we hope will emerge from this project is a story of California—its people and one of its most important public institutions.

This interview was conducted under the auspices of the Regional Oral History Office. The Regional Oral History Office was established in 1954 to augment through recorded oral memoirs the Library's materials on the history of California and the West. Copies of all interviews are

available for research use in the Bancroft Library and in the UCLA Department of Special Collections. The office is under the direction of Neil Henry, Director and the administrative direction of Elaine Tennant, Director of the Bancroft Library, University of California, Berkeley.

Nadine Wilmot, Editor/Interviewer  
Regional Oral History Office  
Berkeley, California  
August, 2005

**Interview 1: July, 7, 2003**

[Begin Audio File 1]

**Wilmot:**

July 7, Professor William Alexander Lester Jr. the Second.

1-00:00:12

**Lester:**

The Second? What does that mean, the Second?

1-00:00:16

**Wilmot:**

If you are a Junior, doesn't that mean you are a second?

1-00:00:19

**Lester:**

Yeah, but I've never used that.

1-00:00:20

**Wilmot:**

Okay.

1-00:00:23

**Lester:**

Use Junior, and the Second can go. Just Junior.

1-00:00:28

**Wilmot:**

Sorry. Interview one.

1-00:00:29

**Lester:**

Interview one. And it is possible to get a copy of this at some point? Because I think of my children and grandchildren and so forth.

1-00:00:44

**Wilmot:**

We are going to transcribe it and you'll get a copy of this videotape if you would like. You can have this CD as well if you would like the audio.

1-00:00:53

**Lester:**

Yeah, yeah. I think it would be great for them, for the generations to come.

1-00:00:56

**Wilmot:**

Sounds good. Okay, generally we start our oral history interviews with the question of when and where were you born?

1-00:01:05

**Lester:**

Okay, I was born in Chicago, Illinois, April 24, 1937. [pause] That's the when and where, right? [laughs]

1-00:01:16

**Wilmot:**

Yes, and I'm wondering can you tell me just a little bit about your parents, their names and their occupations?

1-00:01:24

**Lester:**

Yes. My father, William A. Lester, was a mail carrier in the city of Chicago until he moved from a regional area post office to the main post office downtown where he became a clerk. He then retired from the post office and subsequently took a job in the postal area of, I think, Aetna Insurance. And then rose from a postal job there to another level of job where he wore a suit every day. And that particular job I can't tell much about. But I know well his experience as a mail carrier, because I did the same thing when I was in undergraduate school while he worked there. So we worked side by side for a while in the summer, a summer job, temporary. I guess that's about it.

Except for the fact that in the summer when I worked, if you know about carrying mail, there are components to it. You must throw the case, carry the case, then return. And then I drove collection after that. Driving collection is simply picking up the mail from the boxes, delivering that mail back to the post office for transmittal to the downtown, main post office, that sort of thing.

The people in charge were very helpful to me in the summer time in terms of making money since I was known as a schoolboy. And I could stand that. So that was my father's professional activity. My mother—

1-00:03:06

**Wilmot:**

Would you tell me her name?

1-00:03:08

**Lester:**

Elizabeth Frances Clark was her maiden name.

Let's see, oh, in terms of education, my father completed high school and did not go further. My mother had one year of college—Wilson Junior College, at that time—before marrying my father. The thing she did, I guess, at one place we lived, she actually did piecework in terms of sewing. I remember her sewing robes on power machines. We had two power machines in the basement, as opposed to when I was growing up, younger in life, when it was Singer treadle machines. Once she got the piecework, they moved in these big powerful machines where you put your knee on them. The motor in the thing just flies. I remember her making quilted robes for women. And they would pile up in the basement where she was doing this work. Subsequently, she became an assistant receptionist for a medical doctor in Chicago. And that was it. She died early.

1-00:04:14

**Wilmot:**

When you were how old?

1-00:04:15

**Lester:**

She was thirty-nine.

1-00:04:17

**Wilmot:**

And you were how old at that time?

1-00:04:19

**Lester:**

Seventeen.

1-00:04:21

**Wilmot:**

You were seventeen.

1-00:04:22

**Lester:**

I finished my first year of undergrad school and I was seventeen that April. She died in May.

1-00:04:27

**Wilmot:**

Do you remember who she was working for? Who she was doing the piecework for?

1-00:04:34

**Lester:**

The piecework? No, I don't recall.

1-00:04:36

**Wilmot:**

That was too early?

1-00:04:37

**Lester:**

Not too early; I just didn't know, and nor was it something that I really followed. [laughs] But it was something that was made possible by friends of the family whose names escape me though I can see them in front of me. The doctor she worked for, his last name was Adamson, I think it was. I can't even swear to that at this point. I'd have to go back and look up some information to be sure of what I'm saying in this regard.

1-00:05:06

**Wilmot:**

Right now, what I'm doing is I'm just writing down the names you say because they'll go to a transcriber and I just want to try to have some correctly spelled names for them.

1-00:05:13

**Lester:**

Sure. Okay.

1-00:05:15

**Wilmot:**

So can you tell what do you know about your parents' families as far back as they go?

1-00:05:22

**Lester:**

Sure, let's see, I started with my father's family. His father, William Mason Lester was from Georgia, which was also where my father was born. In doing some genealogical work back about four or five years ago, I discovered his name and a name of a cousin in the Fulton County census of about 1920—again that's vague, but I have that information elsewhere—where they lived side by side. This relative was named Flanagan, which I'd have to again double-check that in terms of the spelling. But my paternal grandmother's half-brother is a Flanagan, so just how that plays out, I'm not totally sure. That's unclear in terms of the family, although I might be able to get some clarity from some information that a cousin here has in terms of the family line since he's on that line, my father's side.

1-00:06:28

**Wilmot:**

And Flanagan is an Irish name?

1-00:06:30

**Lester:**

Yeah. As a matter of fact, I think there's an Irishman in the background, according to my father. I think two generations ahead. [creaking noise] That creaking, I heard some peculiar creaking earlier as a matter of fact. I don't know what's going on, because this is supposed to be one of the most earthquake resistant buildings on campus.

In any event, William Mason Lester married Deborah [pronounces with accent on second syllable], not Deborah [pronounces it with accent on first syllable] Flanagan—I guess that's where it comes in—my paternal grandmother. They left Georgia, I guess my father was two, went to St. Louis, were in St. Louis for a year as I recollect. Recollect means that I spent a year in St. Louis and met some folks who knew my folks. My father came down when I went to St. Louis, when I started doctoral studies at Washington University in 1959.

Then they went from—that is my father's family—from St. Louis to Chicago. The year of arrival in Chicago is I believe either 1918 or 1919, I have to double check that, because my father talks about the race riots in Chicago and seeing them get started in Chicago as a youth. So at that point in 1919, he would've been eight years of age, born in 1911, January 17, 1911. Okay?

My mother's side, let's see, starting with my mother's mother. My uncle tells me that she came up from Florida, that she may be part Seminole. Her background is probably the least known to me. The one thing I got from all of this is that she attended Morris Brown College in Atlanta, Georgia.

1-00:08:34

**Wilmot:**

This is your grandmother?

1-00:08:34

**Lester:**

Yeah, maternal grandmother. Maternal grandfather attended Atlanta University. I remember seeing a picture of him with a football between his knees, sitting in the middle of the picture of the football team at A.U. It must've been about the turn of the century. So we had the situation of a very educated side of the family on the part of my mother and a less educated part of the family on my father's side. My maternal grandfather, based upon the census work I did and from what my uncle told me, was from Chatham County, Georgia, which I discovered was Savannah. And some census work I did there, his father was—and I have that name stashed somewhere, but I'm drawing a blank at this point—but I did locate an address in Savannah where he lived. There were two possible locations for this address, I guess, a north or a south. I went to the one that existed. I was told that the number that I obtained from the census never existed at that particular location, so it must've been in the other place where there, at the time, existed a project.

I just let that out of my mind in terms of being able to locate where he had grown up, that is my maternal grandfather. So it must've been in the other place where there at the time existed a project. So I just let that out of my mind, in terms of being able to locate where he had grown up, that is my paternal grandfather.

So after Atlanta University, my maternal grandfather then spent three years at three different law schools to earn his law degree: Ohio State, Northwestern and Wisconsin. A year at each place. I met the black family that he lived with in Madison, Wisconsin, at the turn of two centuries ago, the Hill Family. I met them when my maternal grandmother and uncle about 1941 or '42 took my sisters and I to Madison, and we met the Hill Family and discovered this connection dating way back to 1903 or something of that sort. That family had been there with this store. It was just a fascinating dimension.

My uncle, maternal, my mother's side, attended University of Wisconsin before going into WWII about 1940 or '41, played on the freshmen football team at Wisconsin at that time. I have vivid memories before his going of his taking me to the governor's mansion in Madison, putting me in the governor's chair and saying, "Someday you'll be governor, son." And that's a very vivid memory of that time.

So let's see, that's my maternal grandmother and grandfather who, I should add, before he died and retired in Chicago, got a plaque from Cook County bar for fifty years of the practice of law in Cook County, which upon reflection was an amazing thing considering the racial prejudice of the time and what Chicago was like with residential segregation and so forth. This man survived, and survived successfully in the milieu, with a law office at the time that I recall was on 35<sup>th</sup> and Michigan Avenue. He had this roll desk, one of these big things. I'll never forget, you would roll it up and there was all these compartments contained in it and that sort of thing. A very interesting guy, cigar smoking, three-piece suit almost all the time, rarely saw him with his suit coat off. And a marvelous influence, in the sense that he would come to the apartment we lived in Chicago—this was at 6309 Champlain—every Sunday evening at six thirty, you could almost check your watch. He would come with a shopping bag. In his shopping bag would be fruit and nuts, that sort of thing. And he would visit with us, my sisters and I.

I have an older sister, Florence, a year and half older, two younger sisters, Judith and Karen. Judith is three years younger than I am and Karen is seven years younger than I am. My sister, Judith, is here in Oakland. My older sister Florence is in Pittsburgh, Pennsylvania. And the youngest is in Boca Raton, Florida. Those are my siblings, and that's that for the moment.  
[laughs]

1-00:13:16

**Wilmot:**

I have a question about your grandfather first. What kind of law did he practice?

1-00:13:22

**Lester:**

Law. In the sense that I'm sure whatever crossed his desk, as opposed to specialization, which we think about nowadays. I'm sure almost anyone who walked in his office who needed a lawyer, he could deal with. You did whatever was necessary, since you were a lawyer, you know, you would not want to specialize in this, that, or the other as the case may be. That's my sense of it from growing up, from my youth.

1-00:13:43

**Wilmot:**

When you say that his office was at 35<sup>th</sup> and Michigan, what kind of neighborhood is that, what does that mean? Because you are speaking to someone who is not familiar with Chicago.

1-00:13:54

**Lester:**

Oh, it was at that time a good area, as far as the black community is concerned, as I recall. I think that's right, 35<sup>th</sup> and Michigan, I remember that. But I can't say for sure that was absolutely the case. But I'm pretty sure that's the case.

1-00:14:10

**Wilmot:**

You remember going to visit him there?

1-00:14:12

**Lester:**

Oh yeah, oh yeah, sitting in his swivel chair and all that sort of thing, sure.

1-00:14:19

**Wilmot:**

I've heard you say that you did a lot of research on your family in terms of looking at census records

1-00:14:27

**Lester:**

Yeah, some research, I wouldn't say a lot of at his point.

1-00:14:29

**Wilmot:**

Sorry. I'm wondering what kind of stories did your parents tell you about your family? What kind of stories did you hear from your parents and your aunts and your uncles and your grandparents about your family?

1-00:14:42

**Lester:**

Not a great deal, upon reflection. That's interesting. Let's see, on my father's side, my paternal grandmother's half-brother, Johnson Flanagan was his name, had about seven children, of which the youngest, Tommy, was one of the most outstanding jazz pianists ever to play. If you listen to any jazz recording beginning about the fifties or maybe late forties up until most recently, when he died a couple of years ago, he appears as the pianist. He's a past musical arranger for Tony Bennett and Ella Fitzgerald. And his own recordings were just amazing. I first heard him play at my grandmother's house when I must've been about eight or so. He came over from Detroit. And there were other entertainers in that family, his siblings, a couple of others. And I have documentation, some pictures related to that sort of thing, but a very talented family. Are we functioning? [referring to recording equipment]

1-00:15:51

**Wilmot:**

Yes.

1-00:16:00

**Lester:**

Let's see, to go on, another cousin of my paternal grandmother was Cousin Julia. Cousin Julia is the mother of William Alexander Jackson Ross, a cousin of mine here in the Bay Area, who is an orthopedic surgeon. We are roughly the same age. He, by the way, was the first black submarine doctor who went in, I guess—Admiral Rickover recruited him back in the days of first atomic submarine. So he's had a nice article in Ebony magazine about that timeframe, that's been a while. But very interesting career-wise in his own regard. Let's see, what else? Where do you want to go? Siblings or—?

1-00:16:54

**Wilmot:**

Well, I'm really interested in learning about the stories, like when you said, your father's family is from Georgia and your mother's family is from Florida.

1-00:17:03

**Lester:**

Well, I'm not clear. That's part of the fuzziness of this. My uncle did indicate this at a time when I don't know how clear he was on this issue.

1-00:17:10

**Wilmot:**

Do you know what kinds of work they did or—?

1-00:17:17

**Lester:**

Not at all. A great void when I try to get some sense of that. I'm not sure my uncle even knows. I don't know what kind of talking took place in the family that there was so little in that respect to appreciate, in terms of my maternal grandmother. Maternal grandfather again, I mean, no real story. Although my maternal grandfather had a sister, Annie Clark. She was a schoolteacher in the city of Chicago ever since I can remember. She did the very unusual thing of attempting to teach my sisters and I French. She was fluent in Spanish and French and had done some graduate work at the University of Chicago with travel to the France of North America, namely Quebec

[laughs] during the summer. She taught at a Chicago public school and finally one day, said with regards to me when I was eight or nine, “Well, we should let Bill go and play ball since he seems not to be doing his lessons.” She used to give us report cards, and the report card grade came out in French: *trés bien, bon, excelent, supèrieur*. She was great, I remembered, “*Madame Souris est en la maison,*” the first word in the reader that we had. I never got any further than that, hardly. It’s fascinating in retrospect, to attempt to give some culture to us on the Southside. [laughs] She took us also the first time to the Garfield Park Conservatory, which was the conservatory in the city of Chicago back when I must’ve been less than ten. So that was a very interesting dimension, too, in terms of the family.

My father had a sister, Florence whom my older sister is named after. I always got the feeling that my father felt he was less favored than his sister by his mother.

1-00:19:26

**Wilmot:**

On what grounds?

**Lester:**

On what grounds, from him? No grounds. That was the way he was treated! [laughs] He felt that way. There were some expressions of this, which give me further basis to have the sense of his understanding of the relationship. But she was a delightful lady. Married Joseph Davis. Joseph Davis was a dentist in the city of Chicago. Or became—yeah, he was a dentist already when they married, I remember that, early ‘40s. They had a son and a daughter, Joseph and Cheryl. And then we go on from there.

Oh, and Uncle Joe’s brother—he had a brother by the name of Steve, he became a very high ranking military officer in World War II. And subsequently, very high up or maybe was head of the black newspaper or reporter organization, can’t remember what it was called. Do you know what it’s called?

1-00:20:35

**Wilmot:**

No. I’m thinking there’s actually a black newspaper empire that’s in Chicago.

1-00:20:42

**Lester:**

I don’t mean the paper. *Chicago Defender* is the major newspaper in Chicago. No, I meant the organization of black reporters. It’s called National something. That’s what I’m referring to. I believe I have that right. Can’t take that to the bank.

1-00:21:02

**Wilmot:**

Well I can always research it and add it later. [National Association of Black Journalists?]

1-00:21:03

**Lester:**

Yeah, Steve Davis was his name, now deceased.

1-00:21:08

**Wilmot:**

Did your parents tell you the story of how they met?

1-00:21:13

**Lester:**

Oh, I have a sense of that, yes, yes. You have to back up to where my father went to find his father, who I guess had left the family and for a period was riverboat gambler, William Mason Lester. My father found him in Cleveland and I guess things didn't work out well. In the meantime, he had dropped out of high school about his sophomore year. He had been attending Phillips High School. At the time, Phillips was the principal high school for black folks in the city of Chicago. Then they built the new Phillips, which then didn't get the name Phillips, because they kept the old Phillips open and that's how Du Sable High School was named after Jean Pointe Du Sable, first black man in Chicago and resident of Chicago and that's very controversial, too.

And when my father came back to Chicago, he did very well academically. In my growing up, he was forever showing me his high school course book, course book being the grade book, which showed he did very poorly up to the time he went to find his father, came back and excelled with high grades. "This is what you can do when you apply yourself," and so forth, so—

1-00:22:25

**Wilmot:**

Sounds like you found some motivation there.

1-00:22:27

**Lester:**

Absolutely. [laughs] So where were we going? What were you asking?

1-00:22:33

**Wilmot:**

I asked you about how you parents met?

1-00:22:35

**Lester:**

Oh yes, yes. Oh yes! I backed up to give you that background. Because my mother was younger and I guess my father met my mother as an older guy, maybe three or four years older, I don't know. They started dating. As I understand it, at one point when my father was visiting my mother at her parents' home—and this was like, I believe, well I can't say for sure, I think in the 5400 block of Michigan Ave. That could be purely erroneous, part of my memory. I believe that my maternal grandparents told my father, "Well, you know, you really should stop seeing our daughter." Because after all, she can do better than this. That's my reading of it. From their point of view. I mean, both of her parents were folks with college educations and here's this guy who's not in school and so forth, and only has a high school education. My mother told her parents, "Well, we really can't stop seeing each other since we're married." Back in the day, when folks got married, they often continued to live the way they had, because they couldn't afford to get together, you know, financially.

And that was just prior to my father passing the civil service exam and enabling him to go the post office and to have, you know, a regular job. Because before that, he'd been pressing clothes and so forth. He tells me a story, occasionally he would do a little bootlegging during Prohibition, moving liquor around and so on. My father was quite a man about town in his youth. I've got some pictures that indicate this.

1-00:24:26

**Wilmot:**

Does he appear very dashing?

1-00:24:28

**Lester:**

Oh yes, yes, absolutely!

1-00:24:30

**Wilmot:**

And beautifully dressed?

1-00:24:31

**Lester**

Oh yes! Impeccable! I remember when he worked for the post office, my father had, you know, Palm Beach for the summer, whatever, white suit with white wingtips and things of this sort. I mean, oh yeah! And he had a very good friend, who was my godfather, Shelby Crawford, who was a tailor. He was such a good tailor, he used to make clothes for Joe Louis. Joe Louis was a heavyweight boxing champion who lived in Chicago.

I went to work for Shelby when he fell upon harder times during my high school days prior to my going to work at the post office during the summer, in which I learned to press clothes and learned fabrics. He actually cut down some old suits for me, and I was dapper, myself, once he cuts those suits down for me! Learned how to handle the front counter for the cleaners while he was sewing in the back. But early on, when he was very successful, which I gather was the middle to late thirties, he had a four door Packard, convertible, town car. You know, it was back in the day. So it was an interesting aspect of all of that, all getting away from where my parents met. But anyway, that's a story.

I remember we lived at first at my paternal grandmother's house on Langley Ave. Then my folks rented a place in the next block, 6400 block of Langley on the South Side. Rented one room out to a man, Mr. Cleo Baker, who worked at the Chicago Stockyards. I remember that vividly, because every now and then, at least once a week, he would bring home these packages wrapped in brown paper. Talking about meat, big slabs of bacon, other wonderful meats that you just didn't see in the store, that sort of thing. But it was fascinating, he had hands which had tremendous calluses on them, because he pulled ropes in the slaughter house. It was just fascinating, we used to just look at his hands, and we would often ask, "Can we see your hands?"

So, and then we moved from there to two blocks over to 63<sup>rd</sup> and Champlain. See, each of these moves had coincided with a child being born or something, as I recall. No, I guess my older sister and I both ended up at 6514 when my mother came home from the hospital; third child at 6425 Langley; and then the last one, just before we moved to 6309 Champlain. All of that is rough. I might have to go back and research that myself.

But then we moved to Princeton Park in I guess it was fall of 1945. My wife and I jokingly talk about this, that Princeton Park was a project, but we said it was not a federal housing project. I describe it as a private project and she says, “Oh, those are all government projects.” Probably it was in terms of the source of funds to enable it to be created. But I was contrasting Princeton Park with Altgeld Gardens which was the big massive federal housing project much further south. And that was interesting, too, because in moving from Woodlawn, which was the name of the neighborhood where we had lived closer in, the addresses I gave you earlier, I attended McCosh Elementary, which was somewhat of a dicey school from the perspective of gang elements, the existence of zip guns and so forth, out to Princeton Park, this new community where we went to.

By the way, McCosh was all black, I mean, that community was all black, at least the part west of Cottage Grove was. Because the boundary for white folks was to the east—let me get my directions straight. Yeah, on the east was Lake Michigan. The southern boundary was at that time about 67<sup>th</sup> or 68<sup>th</sup> Street. And it’s an interesting history of Chicago in terms of how the black presence continued to move southward. There’s a fascinating book by—I think I may have mentioned this to you—by Dempsey Travis [*Autobiography of Black Chicago*] on the history of black Chicago, which talks about block-busting, the whole migration and so forth. And it’s tied to our existence where we lived in a very real way, because Princeton Park was a leap all the way out to 9300 south, so there was a large area in between which was all white. So once I went from third grade to eighth grade at this elementary school, Gillespie Elementary, which is the local elementary school for Princeton Park, before going on to Calumet High School, in which the first black student went to that high school from Princeton Park. I guess the first ones were maybe four or five years before I started high school in ’49. So it must’ve been right towards the end of WWII that this occurred. So we had an interesting, unusual experience in that respect, being a small bunch of black kids going into this large all-white high school.

1-00:29:26

**Wilmot:**

What was that experience like?

1-00:29:29

**Lester:**

Very mixed. I mean, there was no mixing socially of the groups. You’d get on the bus or streetcar—I can’t remember which at this point—go back, occasionally met by snowballs in the wintertime when you got off the bus. Some intimidation played on occasion. But it was very mixed. And notwithstanding all that, I’m going to my one and only high school reunion.

1-00:29:50

**Wilmot:**

At Calumet?

1-00:29:51

**Lester:**

Of the Calumet High School in a month or so, the fiftieth reunion.

1-00:29:59

**Wilmot:**

Have you been to all the previous ones?

1-00:30:01

**Lester:**

Zero! Go to that place?

1-00:30:03

**Wilmot:**

So this is the first one that you are going to?

1-00:30:04

**Lester:**

First and last. I said, "I will do this once in a lifetime." As a matter of fact, my wife has a cousin who attended Calumet four or five years before me. She said, "I take my hat off to you. I wouldn't go anywhere near a reunion of that place, the way I was treated." I just want to go this time to see what those folks are all about. The reunion spans a number of years I should add. In other words, from about I guess '45 on to '60, I guess, is the span of years of graduates of the high school who will be in attendance.

But again, Gillespie Elementary where I attended was an all-black school in which one of teachers, the fourth grade teacher I had was a good friend of my paternal aunt, Aunt Florence. You know, there was a fair amount of—there was real care on the part of black teachers for kids who went there. There were some tough teachers there. It's sort of like, you know, people talk about the South before and after segregation, of the care and concern? Well, that was very much what my sisters and I experienced at Gillespie at that time. And though we were from Princeton Park, which is this project, in between there was an area called Lilydale, which was a very old black community, so some streets had no sidewalks, that sort of thing. And then when you crossed State Street, which was the major divide street through Chicago—State Street ran all the way from downtown, ran almost the length of Chicago going to the North Side—when you went on the east side of that, you had these very nice homes in the area called Westchesterfield. And though kids from Westchesterfield went to the same elementary school, they went to a different high school. They went to Fenger High School whereas those of us from Wentworth west in Princeton Park went to Calumet. So it was interesting, you know, where you went was geographically based upon where you lived.

1-00:31:51

**Wilmot:**

I was confused about something you said, which is I know you went to Gillespie Elementary, but you always mentioned McCosh Elementary.

1-00:31:58

**Lester:**

Yeah, that's where I went before moving to Princeton Park, when living in Woodlawn.

1-00:32:02

**Wilmot:**

I wanted to back up quickly just to ask you a couple of questions and then return again to your education.

1-00:32:09

**Lester:**

Right.

1-00:32:11

**Wilmot:**

The question I wanted to ask was around your parents. You mentioned that your mother's side of the family was highly educated and your father's side of the family was not as highly educated?

1-00:32:23

**Lester:**

Right.

1-00:32:24

**Wilmot:**

Was that like a continuing tension that you remember in your life beyond the story you told?

1-00:32:29

**Lester:**

No, not a continuing tension. Not at all. Because what I indicated in terms of my father quitting school and doing very well, my father was a very smart man, I mean in many ways: how he handled his business, how he talked about things with me in terms of day to day life, in terms of handling money; you know, the aspects of dealing with people. Though he was by a lot of people viewed to be very gruff and assertive. I mean he was. I mean he was in that sense a man's man, I mean he took no stuff. And people either liked him or they didn't. He was not the person to build close relationships.

My mother was a very well-liked person by many people, a very beautiful woman too, I should add. So education was really not a contentious issue within the family. But my father was very strong with regards to education making a difference, "Get an education and things will be better" was sort of the mantra he communicated. And my mother was very much concerned about education as well. But there was no beating of the drums around education as such. My paternal grandmother did go on to become a practical nurse, that is, completed studies related to it, this sort of thing.

My paternal grandfather died prior to my birth, about 1934, '35 as I understand it. So he was not around. Interesting tidbit here is that my maternal grandfather and grandmother later separated, I can't remember when. But it was also interesting that they referred to each other as Mr. and Mrs. Clark. [laughs] I mean, they were rather formal in their exchanges as I knew them. It was fascinating.

And my maternal grandmother was known as a businesswoman, but then it became clear to me as the years rolled by, in retrospect, that really she bought buildings on South Parkway, later became Martin Luther King Drive, and cut them into kitchenettes for folks coming up from the South. She did well financially that way. I remember that where she lived, we used to make jokes about how grim this place looked. Why? Because she liked Chinese antiques, various antiques of one sort or another. I remember there was this black desk, teak, she had the matching ivory elephants. Chairs, high-backed chairs in velvet. This place was sort of dark. So we kids come in there, "Oooohh" and so forth. On the floor above were the Hansberrys, Lorraine's parents, and all those folks, Carl and other siblings. We'd gone up there once or twice to see their place and it was bright and really striking. So it was clear that my maternal grandmother did quite well financially. [chuckles] No ifs, ands, or buts about that.

1-00:36:04

**Wilmot:**

One last question about your family beyond your parents and your grandparents, did you a sense of the push pull factor bringing your family from Florida and Georgia?

1-00:36:14

**Lester:**

As I said, I know nothing about Florida except what my uncle told me the last time I saw him and discussed these kinds of things three or four years ago. When I was asking, probing with him—we called her Big Mama—“Where did Big Mama come from?” “Oh, I think she came out of Florida. Remember the picture that was on the teak desk,” that I talked about, “and she’s in the Indian dress?” I said, “Yeah.” “I think that’s a part of her ancestry in terms of the Seminole Nation.” I’m going, “Oh”—I thought it was a masquerade ball. So it was very limited information in that respect. In terms of my maternal grandfather, I have nothing more I can say. He came north for law school. Coming out of AU, there’s no law school he could attend in the South. So he goes to Ohio State, Northwestern and Wisconsin, I don’t know what the order was in terms of Wisconsin and Northwestern, which one he finished. But there were the three that I know.

In terms of my father’s family coming from the South, the drivers there, I can’t say anything other than why most black folks moved at that point. You know, it was a chance to get out. The one aspect that I’ve yet to get any information on was the name of the place they came from near Atlanta. He said it was—and I had this written down somewhere—there was a plantation name. Whether it was actually a plantation or a neighborhood, I have no idea, but it was called Rose Hill. That’s what it was. “Where is Rosehill?” is my big question at this point. And some of this I do have, you know, in terms of the census stuff, some copies which can clarify what I said in terms of location with respect to my father’s and mother’s sides in terms of Georgia beginnings, that sort of thing.

1-00:38:08

**Wilmot:**

This is another question about your parents. I had asked you off-tape about political affiliations. I was just wondering—this is more specific, given that as I understand Chicago in that era was a place that was very much governed by ward politics?

1-00:38:27

**Lester:**

Absolutely, yeah.

1-00:38:28

**Wilmot:**

I was wondering did that come into play at all for your family, interacting with that at all? Was that an issue?

1-00:38:37

**Lester:**

Not really, except when I was in undergraduate school. There was so much graft and corruption in Chicago. I recall being stopped by police because of headlights or taillights being out and the policeman saying, “Well, I need a cup of coffee.” I said, “Well, this is what I have,” reached in

my pocket and gave him a handful of change. “Okay! Get that light fixed.” I also remember getting a ticket and discussing it with my father. He said, “Go down and see this guy at the garage across the street from the courts down near the Chicago River,” which I did and got the ticket fixed. [chuckles] It was a three-ring circus back in Chicago in those days. But in terms of actual ward politics, I remember some discussion when I was quite young along these lines in the family, but I can’t recall anything critical or that my family played any critical role in terms of ward politics, or anything of that sort. I remember meeting some ward committeemen, this sort of thing, but beyond that, no more political involvement in that regard.

My father was a Republican up until Roosevelt.[chuckles] I mean after all, “Republicans, that’s the party of Lincoln, freed the slaves.” I did say off record before that I think on my mother’s side, there was some looking at the USSR. There had been an exposition, I guess it was in New York in ’32? And they brought back information—I mean, during the Depression—with regard to how wonderful things were in the USSR. I remember finding some information along those lines and my mother said, “No, leave that material alone. Just leave it where it is.” In other words, don’t be pulling that stuff out. It was in the basement stashed somewhere. And then, I think—

1-00:40:32

**Wilmot:**

You had the sense of there was some kind of interest in communism?

1-00:40:36

**Lester:**

Yeah! Oh yeah! In terms of an alternative way of life in the light of the Depression at that time. I think I did indicate to you that staying with my maternal grandmother during the war years was a couple by the name of Hansbrough. As I recall, he was the head of the Communist party in U.S at that time. I guess from Jamaica, Long Island, but he really was Bajian, from Barbados originally. But all that require some further look see for accuracy. But that was the sort of thing that struck me as very interesting, that in the two bedroom apartment that I mentioned, where my maternal grandmother lived, she had one bedroom, and the Hansbroughs had the other, Mr. and Mrs. Hansbroughs. Interesting, you know. Whereas my maternal grandfather lived with his sister, Annie Clark, elsewhere—remember they referred to each other in that respect—and they lived apart, never divorced as far as I know. They referred to each other as Mr. and Mrs. Clark.

Another interesting aspect of that time were dinners that my maternal grandmother would have. It was a very large dining room she had. My mother would take my sisters and I to her apartment and my mother would prepare the meal. And we kids would be back in the kitchen. And in terms of antiques and so forth, I recall the German beer steins graded in size, the authentic kind that my maternal grandmother had. So, it was very interesting, you know, sitting back there. Oh my father would have fits on that, “You’re going over there to fix a meal and serve?” [laughs] It was not something that he particularly cared to see happen, but that’s something my mother did for her mother, you know. So it’s just interesting little dimensions that occurred during my youth which I look back on as “Mm, this is interesting, what’s playing out here.”

1-00:42:48

**Wilmot:**

You’re a junior, and your father was the first.

1-00:42:53

**Lester:**

Yeah, William Alexander Lester.

1-00:42:56

**Wilmot:**

There's now a fourth?

1-00:42:58

**Lester:**

Yes.

1-00:42:59

**Wilmot:**

And a third.

1-00:43:01

**Lester:**

Right.

1-00:43:02

**Wilmot:**

So I wanted to ask you about what it means to you to be a junior, and what you were told about being a junior and what you tell your son about maintaining the family name.

1-00:43:10

**Lester:**

I was told nothing about being a junior. That's what I was named. But my father was very strong on the issue of "You're the last Lester of this line," and "After you, there are no more," and so when my son came along, I named him the third. I didn't realize it at the time that actually my father had been talking to my son after reaching a certain age with regard to the same issue. So lo and behold, my son names his son the fourth. So the name continues, and we jokingly say, "Well, it's a lot of baggage to carry around." [laughs] in a certain sense. From your father and your grandfather, my son, the race car, race truck driver.

1-00:44:02

**Wilmot:**

Well, let's see where we're at. I wanted to return to something that you said when I first met you at our first meeting. You said, "I'm from the South side of Chicago."

1-00:44:24

**Lester:**

Yes.

1-00:44:26

**Wilmot:**

Me, being from Oakland, I didn't really have a clear sense of what that meant.

1-00:44:30

**Lester:**

Well, first of all, I'm from Chicago. Then I'm from the South Side. South Side is where the black community first really developed in Chicago after people came up from the South in the old

days. The black community expanded from South of the Loop. And for a period, even now, had a reputation of being a rather rough area all things considered. But as the black community moves South, the southernmost part of the community, of course, was the middle class or lower middle class, as the case may be. But Chicago got such reputation at a certain period as just a rough place. That's why I jokingly say that. I also say it in the sense that I'm from the South and then say Side, South being the south of United States. And that's not really true. But it is in another sense in terms of all the folks who migrated and came up from the South. In other words, I'd be in elementary school, and we'd have somebody new come in from Mississippi, this guy is six feet tall. Here we are five-four, you know. Just in terms of where education was at the given time. So, in a certain sense, the South Side was very much the South in the North, in terms of black folks and their life existence.

So you had all of this coming together. I mean it was really, you know, folks who were relatively highly educated, those less so just off the farm. I mean it was all of that. And all of that kind of experience which results when you have people with very diverse backgrounds coming together. Blacks folks, you know, not even considering the white folks in areas around, as far as that's concerned. So, it's in that sense that I made the statement.

1-00:45:59

**Wilmot:**

You mentioned about three different places when you talked about different places you had moved with your family. Princeton Park I think it was the last one.

1-00:46:11

**Lester:**

That's the last one I mentioned, but that's not the last place we lived in Chicago.

1-00:46:14

**Wilmot:**

Which was the place that you stayed the longest and have the most kind of clear memories of?

1-00:46:21

**Lester:**

I remember all the places.

1-00:46:21

**Wilmot:**

Which one do you call home the most?

1-00:46:23

**Lester:**

Oh, I remember all the places we lived at, period. I remember all of them well. It's a question of how long we spent in any given place. Because I remember the pre-school I went to. It was one block from McCosh Elementary I mentioned. I remember growing up at 6514 Langley and then moving to 6425 Langley and 6309 Champlain. Princeton Park I mentioned, the address there is 9228. Don't ask me what my address was two years ago [laughs] before the last time that we moved, that is. But I think I can remember that. I can remember all my addresses from day one.

But in any event, after Princeton Park, the family moved again in my junior year of high school, 1952, back north to a place called Park Manor, 6918 Michigan, second floor. Then after that, the last place I lived in Chicago before heading off to Washington University in St. Louis, was 8605 South Wabash Ave. So I remember every place I lived in Chicago.

1-00:47:40

**Wilmot:**

Which of these moves was like a move to a bigger, better place and a better neighborhood?

1-00:47:46

**Lester:**

All of these were, I mean every step [pounds table for emphasis] was geared towards that end, to improved housing. Because when we left Princeton Park, which was, you know, a rental—I mean, it was a three-bedroom apartment. Fascinating because the floors were concrete—and the apartment was a two-story, so we had a gate at the top of the stairs so that the youngest wouldn't come tumbling down the stairs, but every now and then it happened. I mean think about that. And walls, I should add, which were like sandpaper. They were so raised, fooling around, you could scrape your elbow. [laughs] You'd see blood, I mean. It wasn't the best place in that respect. But it was new housing. We used to play early on in the basement of the new structures going up, and would find little garter snakes, that sort of things.

But again, I mentioned moving to 6918—that was to a two-flat, which we bought. Family lived on the second floor, rented out the first floor. And then later—what year did we move from there? Was I in college? Of course, because I started college in 6918—to 8605, which was a larger house, further south, but not as far south as Princeton Park, but the area in between which had been white. It was a steady migration further south to the suburbs, that sort of thing. Okay, does that—?

1-00:49:07

**Wilmot:**

Yes, that answers my question. Thank you. Just to kind of get into your school years and your early education, do you remember any classes or subjects kind of being more riveting than others? Do you remember what really engaged you when you were in school—I mean everything prior to the end of high school? Is there anything that was really riveting for you?

1-00:49:39

**Lester:**

Oh, yes. I did well in elementary school. I had two double promotions.

1-00:49:48

**Wilmot:**

So you skipped years twice?

1-00:49:52

**Lester:**

Skipped semesters, not whole years.

1-00:49:55

**Wilmot:**

Okay. So you skipped one year.

1-00:49:57

**Lester:**

Then I went summer school once, so that moved me up another semester.

1-00:50:02

**Wilmot:**

So you were always with children who were older than you.

1-00:50:04

**Lester:**

Yeah. When I finished high school I had just turned sixteen that April. I graduated that June. And had said as a sophomore when asked to write an essay about my future vocation, said that I wanted to be a chemist. I went to the library, did my research on what becoming a chemist involved. I saw these U.S government Labor Department reports on careers. So I did my essay on this. So here I committed to being a chemist and hadn't studied the subject, which I later studied as a senior. And in the class I was in at Calumet High School, I was probably the top of the class in the sense similar to spelling bees, I did well on question bees by the chemistry instructor. I used to win those, do the calculations in my head. I remember the chemistry teacher, Schlessinger, Gus, a white teacher. All the teachers were white at Calumet High. He was a rough old guy, but I delighted in him. He was very supportive as opposed to the physics instructor who was good but very dry, Mr. Wilbur.

I had at that point, no honors courses, but star courses in English. And I was moved into the star course as a sophomore. A girl, Vera Sanford, and I were the only black students in the class. I remember one heavy set teacher, Mrs. Sadler I guess it was, who subsequently, by my senior year, was on a committee which made the judgment that I should be the recipient of a scholarship to the University of Chicago. My high school had, because of a librarian, a scholarship to the University of Chicago, which three students in my class won, a scholarship that had lain dormant for a number of years; there had been no recipients of it. So three of us went to the University of Chicago. I was the only one to graduate.

1-00:52:08

**Wilmot:**

Do you remember what the scholarship was called?

1-00:52:10

**Lester:**

Yes. It was the Victoria Adams Scholarship Award. I actually have it on my CV. What you have there may actually have it if I can pull that out. Let's see. The second page here, the top entry.

We took a special exam on the Franco-Prussian War. And who knew about the Franco-Prussian War anyway? I think the teacher sat in there and said, "Who do they think might be able to survive the University of Chicago?" at that point. That sort of thing.

1-00:52:47

**Wilmot:**

Were you thinking about going to college prior to that?

1-00:52:52

**Lester:**

Oh, absolutely! Oh sure. That clearly was what was necessary to advance education.

1-00:52:57

**Wilmot:**

Was that the expectation in your family?

1-00:53:00

**Lester:**

Oh yes! Sure. That was the expectation.

1-00:53:03

**Wilmot:**

What kinds of resources were available to you to kind of navigate the college application process?

1-00:53:09

**Lester:**

You sit down and you fill out the application. Navigate it? You sit down and write your name.[laughter]

1-00:53:15

**Wilmot:**

You know it's funny, I'm speaking from the era of the college counselor who says, "This is what you can apply to and this is what you can't apply to. These are some good opportunities."

1-00:53:26

**Lester:**

Bah! Zero. We didn't get that.

1-00:53:28

**Wilmot:**

Did you think at all of going to a historically all black college or university? Was that on your horizon at all?

1-00:53:34

**Lester:**

Not at all. Not at all. I mean, where was the money coming from? There was Chicago Teachers' College and community colleges of the city, but in term of resources—then there was University of Illinois, Chicago, which at that point was University of Illinois, Navy Pier, which may have been a possibility, but I didn't apply there. I thought I could get into IIT, Illinois Institute of Technology or University of Chicago. And in the regular process, I got admitted to none of them. So it was a little downer until the scholarship situation came along. Really, it was a tremendous benefit. Sure, I ended up going to one of the top ten institutions in the country.

1-00:54:11

**Wilmot:**

Did you apply to University of Chicago?

1-00:54:15

**Lester:**

I think I had. Yeah, I can't recall for sure, I think I did. I think we had to in order to get the scholarship. That was "Oh!" My worries went away, I got into a decent place. But it was very problematic as to whether or not I would end up at such a quality institution after the other places basically said no. I graduated 13<sup>th</sup> out of 365, in the top four percent.

1-00:54:39

**Wilmot:**

So you were a pretty stellar student.

1-00:54:40

**Lester:**

Well, I thought so.

1-00:54:41

**Wilmot:**

Yeah, that put you in the top 5% or something like that.

1-00:54:46

**Lester:**

Yes. I had a lot of activities: I played on the basketball team; I was on the school paper, German Club, all these things. Still, no success in terms of getting into these better places.

1-00:54:58

**Wilmot:**

What do you think that was about?

1-00:55:00

**Lester:**

Oh, I don't know. Only thing that crosses my mind was they were looking at this young brother, and saying, "Well, I'm not so sure about this." Really, that's the only thing it seemed to me at that point could play a role. I suspect it did. But I can't say that, you know, factually.

1-00:55:18

**Wilmot:**

Right.

1-00:55:20

**Lester:**

I have nothing on which to base that on as such, except my experience of subsequent years. [laughs] There was no strong HBCU influence running in the family, notwithstanding the fact that my maternal grandfather and grandmother both attended such.

1-00:55:40

**Wilmot:**

Had gone to Morris Brown.

1-00:55:42

**Lester:**

Well, she'd gone to Morris Brown; he had gone to AU, Atlanta University, which was obviously was an undergraduate institution at that point, subsequently became primarily a graduate institution. Until Clark and AU combined to become Clark Atlanta.

1-00:55:57

**Wilmot:**

Before we leave your high school years entirely, because we are about to go right into University of Chicago, I wanted to go back and ask a couple more questions.

1-00:56:07

**Lester:**

Sure!

1-00:56:09

**Wilmot:**

One is that you mentioned—and this is a little bit of departure, I'm taking us a little bit out of our way. But first, you mentioned that your uncle was in World War II. You were very young in the 1940s, but were there any other members of your family who went and fought in World War II?

1-00:56:35

**Lester:**

Not of my immediate family. My father attempted to go, but they needed him at the post office. But he also talked about—and whether this was a joke or serious—that when they gave him a psychological test and shone a light in his eye, he jumped forward instead of backwards. [laughs] I don't know whether that's real or not. But in term of reaction, you know, the tendency is to jump back, not forward. This may be a joke, but this is something he talked about. But I suspect very likely that there was a deferment based upon size of family, four children. And he worked for an industry which the government utilized. I mean the post office. That's my general sense of it.

1-00:57:15

**Wilmot:**

And your uncle, do you know where he went to go fight? This is your mother's brother?

1-00:57:18

**Lester:**

He didn't go fight. He never went abroad. He was a Tuskegee Airman and he was there as a trainer, he said, at one point, a flight instructor, that sort of thing. But he never went abroad. When he was there, he would send me the black plastic model enemy airplanes, which were used for identification purposes. And they were to scale. He sent me a couple of Japanese Zeros and something else. I don't know what else he sent me. But those were impressive. They were black plastic, to scale, of fighters in World War II. During that period of my life, I had airplane books, you know, fighter planes of the various countries of the world—that sort of thing.

1-00:58:04

**Wilmot:**

What does it mean when you say "to scale"? It doesn't mean actual size? It means—

1-00:58:10

**Lester:**

It means that each part is a size scaled down that the actual plane was built to. I can take it and shrink it over all by some factor of a hundred. It was a very precisely constructed plastic airplane. It was not a toy. It was used to identify—they had to identify planes often at a distance, so they'd take these small silhouettes, "What is it?" Small black planes. Oh, that was a wonderful thing! I have one letter that he wrote me in those days. So it's just, you know, interesting things.

He was an important person in my life. I mentioned that he played football, he played basketball. I remember after—this is jumping ahead again—I went to the university, he wanted to play or something. Or was it before? I think I was in high school. Yeah, it was probably in high school. I played high school basketball. I was in love with basketball. Basketball for me was a serious activity. I joined a club because the guys had a regular basketball practice and a coach. And I remember his wife saying, "Billy, be careful with your uncle." [laughs] You know, he must've been in his forties by that point I would guess. I was in my mid-teens. Anyway, interesting aside.

1-00:59:38

**Wilmot:**

I think it's relevant. The other question, this is again a question that I didn't ask earlier, but should have. Was your family religious? Did you go to church? Was that part of your life?

1-00:59:51

**Lester:**

Oh, yes, yes. To say religious, that's a very interesting concept. My father was a member of the AME Church, African Methodist Episcopal. My mother was a Congregationalist. And these two churches were very different in the black community on the South Side.

1-01:00:16

**Wilmot:**

Congregationalist?

1-01:00:18

**Lester:**

Yeah. Congregational Church. Familiar with it? Comes out of New England, no colored windows, austere, and all that. Generally very highly educated black folks, that sort of thing. My father's church, the rose window, whatever you call the round thing, if that's what you call it, the colored panes and that sort of thing, and long church services. I used to go to Sunday School there, that was nice, because they had felt figures. Have you ever seen it? The biblical scenes, the figures of Joseph and Mary or whatever the scene was, and they'd put the sky in and you'd put it on this felt board. In Sunday School, you look, [chuckles] you know, the whole bit. Whereas it was a very different situation at my mother's church, the Congregational Church. But I had the great ability, whenever I went to a regular church service, to end up sleeping. You always had to wake me up.

First of all, there was a famous minister, well known in the City of Chicago, one of the early black aldermen, Reverend J. Archibald Carey at Woodlawn AME which was sort of a powerful church. And for me, boy, he was sleep inducing from the start. Then at my mother's church, the first minister I remember was Reverend Arthur Gray. He later became president at Talladega College, then he came back. I don't think the minister at the next Congregational Church my

father ended up with much later in life had also been president at Talladega or Fisk, I can't remember which, I'd have to look that sort of thing up. But by that time, that was Reverend Falkner—he was not sleep-inducing. He was good, but Reverend Gray, boy, he was truly sleep-inducing. I would get there [makes snore sound] head bobbing, [chuckles] I was an embarrassment to the family, you know! So, they'd give me a prod in the side to keep me awake on these occasions.

Sunday School, well, I guess the driving force for me subsequently as I got into the later years of high school was—they had a youth group, Pilgrim Fellowship; they had a choir, tried to sing in the choir. Girls were very cute in those days. But then they said one day during practice, “Bill, why don't you be quiet for a minute?” They sang the piece again, then they invited me to leave. [laughs]

1-01:02:44

**Wilmot:**

Oh no! I'm sorry.

1-01:02:48

**Lester:**

My singing voice was the pits then. I claim it's better now, but it's never been put to the test since, seriously. That ended my involvement with the choir.

1-01:03:00

**Wilmot:**

Did you carry forward either of those two traditions in your own life as a faith?

1-01:03:06

**Lester:**

No, I went the full gamut. Back in college later on, I had a roommate who was assisting Dick Gregory. See, Dick Gregory had come back from the Korean war—I'm jumping ahead now—as part of being on the basketball team—

1-01:03:27

**Wilmot:**

Hold on. I'm going to need to ask you to stop for one minute because I have to change both tapes.

1-01:03:29

**Lester:**

Yeah, sure. Okay.

[End Audio File 1]

[Begin Audio File 2]

2-00:00:04

**Lester:**

I haven't seen one of these before.

2-00:00:07

**Wilmot:**

They are really cute and the sound is really good which is why I like them so much. You can hear it. So you can just kind of hear people's voices in very clear tones. It's better than a tape deck. We just switched over to these.

2-00:00:29

**Lester:**

Oh, I see.

2-00:00:30

**Wilmot:**

Yeah. Okay, so let's see, just to pick up where we closed. I had asked you a question about religion and faith and if you had stayed with your parents' denominations.

2-00:00:42

**Lester:**

No, I did not. What I started to mention was interactions with Dick Gregory, who always told the joke back in the day about how if you found a black person who wasn't Baptist or AME, then the white man's been fooling with his religion. And that was sort of my spring board into—it was actually in graduate school when I started going to the Unitarian Church and continued to do so during my post-doc in the Madison days, '64—'68. And that was interesting, too, because it was during that period when the Unitarian Church attempted to broaden its participation by having—well, a black caucus was created. My wife was very active, went to the Black Caucus meeting. The white folks at the Unitarian Church in Madison, Wisconsin couldn't understand why indeed such an activity was created—we're talking mid-sixties at this point. Then we moved to California because I took a position at IBM research. Went to the Unitarian Church in San Jose. And that's when I decided that I could do better continuing religiously in my living room than I could at the church where they sat on the floor and threw flowers on each other. I was like, "Let me out of here! This is ridiculous!" [laughter] So, that's sort of where I am now.

I went to the Church by the Side of the Road for a number of years. And then, things got a little twitchy there and I haven't been to church. I don't go to church. I think I'm a spiritual being and all that sort of thing, but in terms of organized religion, I find some serious shortcomings in my view and I will not go further in that respect.

2-00:02:28

**Wilmot:**

Thank you. Well let's turn now to the University of Chicago. So you got the scholarship to go. Did you move away from home to go to school or were you close to the university?

2-00:02:48

**Lester:**

I was a commuting student. Except for one week, orientation week. I earned some money that summer at the post office so I could afford to pay for orientation week so I moved into the dorms orientation week and moved home at the end of orientation week and commuted by public transportation through the remainder of my undergraduate experience.

2-00:03:07

**Wilmot:**

If you were kind of to draw a map of the different types of people who were at the University of Chicago—and I'm speaking in terms of, "These people were the ones who only wore black and these people who were into progressive issues, or—."

2-00:03:33

**Lester:**

Let me give you a brief sense.

2-00:03:35

**Wilmot:**

If you could draw a map of that socially and then locate yourself in it—

2-00:03:38

**Lester:**

Well, I'm not sure if I can do that. Well, I possibly can in terms of the description I will provide you. From the first quarter, an English course, when we were at the classic oval tables at the University of Chicago, the instructor went around the room, asking each of us—

2-00:03:55

**Wilmot:**

Classic oval tables?

2-00:03:57

**Lester:**

Oval tables. Oval shaped. The classic shape of tables for a discussion at the University of Chicago, in the College of the University of Chicago. Quick point about structure there, there's the College of University of Chicago, you could earn a PhD back in those days, a bachelor of philosophy. Then there were the divisions, such as Chemistry, Physics, Mathematics, so forth, Humanities, and so on. So the College was rather well known, because of the great books, few other institutions followed on in terms of this philosophy. Mortimer Adler and all that bunch. So it had a curriculum which involved three academic years of natural science, three academic years of humanities, one year of mathematics, one year of English. What else? And your grade was determined by one exam in the spring, an eight-hour exam.

2-00:04:49

**Wilmot:**

Every year or at the end of four years?

2-00:04:52

**Lester:**

No, each year, each course. But you got advisory grades at the end of the first two quarters.

Anyway, going back to the English course first semester, the instructor went around the class asking where everyone had been educated, where they had come from. I was the only person from a Chicago public high school. You had the classic prep schools of the East Coast, some from the Middle East, some from Western Europe, just the full range of folks with very elite educations. And advisory grades I remembered, I was interested in nothing but Ss and Es. I got two Cs for advisory grades that first quarter, two Bs and Cs. I said, "Oh gosh." I was crushed,

you know, I was not used to getting this kind of grade. Well, things got worse when it got better, as a matter of fact, at the university, subsequently, that is. But in any event, it was a very competitive environment. In terms of, some folks, very well to do, I guess I was in the lower end of the economic stratum clearly, in this group of students.

But one thing that I saw I could do immediately was when I walked over to the field house and saw the basketball team playing, and I said, “Gee, these guys are not very good,” compared to what I had experienced on the South Side of Chicago where basketball was at a premium and I was fairly good at it. It was clear to me I could play with this bunch any day of the week and I surely did. As a matter of fact, I didn’t start the first game, but I started every game after that for four years, sixty-seven straight and set scoring records along the way. I was given license to shoot. That means, the coach says, “Whenever you see a shot, take it.”

2-00:06:38

**Wilmot:**

They don’t extend that to every player.

2-00:06:42

**Lester:**

I was the only one on our team. It’s rare that that’s the case, that you operate within the system. But I was given—you know, because of the skill I’d developed over years of so many playgrounds and traveling from playground to playground with guys who—. This was something that was very important to us! You see it also even today in terms of student-athletes, folks bypassing the college and going to the NBA, this sort of thing. It’s a similar syndrome except the emphasis was different. This wasn’t the days of dunking; this was the days of shooting. We could shoot back in the day. These guys can’t shoot like we used to be able to shoot back at that time. And also when I was in high school, it was the beginning of the jump shot. This is all technical basketball, you know what jump shot is? [chuckles]

2-00:07:20

**Wilmot:**

I think I know.

2-00:07:21

**Lester:**

[laughs] Because before that, there was the one-hand push and the two-hand set, that’s old fashioned basketball, you know? And here I was a part of a group that was the first to bring the jump shot into the game. So, for a relatively short person, like myself, this was a revelation! Because you could get to a point quick, jump, shoot before the big people get to you unless they were equally as quick. And so it was just a whole new dimension.

2-00:07:47

**Wilmot:**

A different approach to playing that game.

2-00:07:48

**Lester:**

Oh, yeah!

2-00:07:49

**Wilmot:**

Who was your coach by the way?

2-00:07:53

**Lester:**

Nelson Norgren.

2-00:07:58

**Wilmot:**

Swedish? Scandinavian?

2-00:07:59

**Lester:**

Yeah, probably, one of the two twelve letter men in the history of the University of Chicago.

2-00:08:03

**Wilmot:**

Nelson Norgren? What was his style of coaching?

2-00:08:08

**Lester:**

[laughs] Well, to hear somebody who was a few years ahead of me, a fellow scientist who was foreign secretary of National Academy, "Not much." He was the first coach to bring both guards down the floor in the 1920s at the University of Utah. I mean, what—he had his own system. The assistant coach had a very different system. Norgren and I retired at the same point. I finished my eligibility; he retired from the University. The next year, they went to a very much structured offense, scores were much lower and so forth. When I set the scoring record, in a game in which the score was 111 and 110, we were shooting the ball, as the assistant coach said, "Playing no defense at all." Well, we played defense as far as we could see.

2-00:08:49

**Wilmot:**

As far as you needed to.

2-00:08:50

**Lester:**

Yeah, you know, this is what we did at that time.

2-00:08:55

**Wilmot:**

Tell me the person who you would pass to?

2-00:08:58

**Lester:**

Say who would I pass?

2-00:08:59

**Wilmot:**

Yeah, who would you pass to?

2-00:09:00

**Lester:**

Everybody. I passed to my teammates.

2-00:09:03

**Wilmot:**

So you didn't have one person who you had a really good routine with?

2-00:09:12

**Lester:**

How should I put this? [chuckles] We had all sorts of plays and they involved everyone. And as the opportunity presented itself, the person shot, except I saw more opportunities than others did on occasion. [chuckles]

2-00:09:23

**Wilmot:**

Did your teammates kind of feed you the ball?

2-00:09:26

**Lester:**

Sometimes, as the coach told 'em. One of my buddies says—another buddy in the locker room, my other buddy had had a good first half shooting the ball. And the guys described the situation as one in which the coach told the guy who had been doing well, “Okay, you had your time,” now get the ball to me. It's embarrassing! Because these were your teammates, you know. And the other guy, he quit the team the following week, “The heck with this,” you know. What can you say? And the fellow who was the best man at my wedding was also on the basketball team with me.

**Wilmot:**

Who was this?

**Lester:**

Mitchell Watkins. He is a consultant in Chicago. I guess one day, when I broke one of the records, he had come within five points of me and we scored two thirds of the team's points at that point. He was also from Woodlawn., but he went to University High. In other words, the Laboratory High School of the University of Chicago, so he came up through that system, which some would say is better educational preparation for the University of Chicago.

2-00:10:30

**Wilmot:**

Were there other African Americans on the basketball team at that time?

2-00:10:34

**Lester:**

Prior to my getting there—well, there had been some historically dating back, but in my class, there were four of us, all came at the same time. A fellow by the name of Fred Hubbard, returning Korean War Airborne paratrooper, he were twenty-six or so. And we had another returning Korean War veteran who played on the team too, a white guy. Then we had Walter Walker. Walter Walker also was from Woodlawn. His father worked with my father at the post

office. He had come up through the Lab school as well. Walter later in life was the president of Lemoyne-Owen University or College, HBCU. Familiar with it? In Tennessee.

2-00:11:16

**Wilmot:**

What did you say the name of it was?

2-00:11:17

**Lester:**

Lemoyne-Owen. [spells] I'm not sure if it's still in existence at this point. That first year, Fred, Walter. I have to go back and look at my picture file in order to tell you. So anyway, it was a totally different change. The record of the team for three years prior to my class's arrival was one win and forty-seven losses.

2-00:11:46

**Wilmot:**

Whoa.

2-00:11:48

**Lester:**

We played almost five hundred ball—that is, we won almost half of our games, because I jokingly would say, “We didn't have to compute the trajectory of the basketball. We had played the game before.” That sort of thing.

2-00:11:57

**Wilmot:**

Who did you play against? Who were your opponents?

2-00:11:59

**Lester:**

Oh, small colleges in the area, Illinois Institute of Technology, University of Illinois, Chicago, or Navy Pier.

2-00:12:06

**Wilmot:**

Did you win your league?

2-00:12:08

**Lester:**

We weren't in a league. We were independents. All of these institutions were independents.

2-00:12:11

**Wilmot:**

Were you at the top of your league of independents?

2-00:12:14

**Lester:**

There was nothing to be top of.

2-00:12:16

**Wilmot:**

Okay.

2-00:12:16

**Lester:**

There was nothing to be top of; we were independents. You're just out there playing. Other small schools, Aurora College, a small school down in central Illinois—what were some of the others?—St. Procopius was somewhere out in the suburbs. I have a list. I can bring it in actually if you really want to see some of this stuff for the record.

2-00:12:43

**Wilmot:**

I would like to see it.

2-00:12:44

**Lester:**

And, you know, the letter regarding the scholarship, all kinds of stuff, I have a scrapbook of stuff. You know—of historical interest.

2-00:12:50

**Wilmot:**

I would really like to see it. It would be really helpful to me. It would have been more helpful to me to see it before this meeting, but it's okay.

2-00:12:57

**Lester:**

I have a bunch of stuff, which you sort of just throw it on the shelves and, something interesting, "Keep that, keep that." Planned to organize it, but I haven't done it yet. Kept it in a book, by the way, sent by my uncle from Tuskegee, Tuskegee picture album.

2-00:13:16

**Wilmot:**

This is your uncle—?

2-00:13:17

**Lester:**

Lawrence Oliver Clark. I don't think you have the name. I don't think I ever said—

2-00:13:20

**Wilmot:**

I don't think I do either. So how did this kind of being a basketball star, and that's what I'm hearing from you—

2-00:13:36

**Lester:**

Yeah, it went much better than my academics.

2-00:13:39

**Wilmot:**

Really?

2-00:13:41

**Lester:**

Oh yeah. In college? I never got that kind of notoriety for anything academic. I'm sort of in the mix academically.

2-00:13:48

**Wilmot:**

How did it impact your social life to be a star at basketball?

2-00:13:53

**Lester:**

Oh not very much. I mean, Chicago prided itself on ignoring athletics.

2-00:13:57

**Wilmot:**

Really?

2-00:13:59

**Lester:**

I mean, Hutchins had said whenever he thought about exercising, he would just roll over and lie down. You don't know about this tradition at the University of Chicago, which prided itself on being an intellectual mecca? Oh yeah, this was not a big deal. As a matter of fact, a year after I left there, I guess it was 1960, when Chicago was attempting the resumption of football and Walter Cronkite was going to come and film the resumption of football in the University of Chicago. The students sat in on the fifty-yard line to prevent the game from taking place because it would undermine the reputation of the University of Chicago.

Another incident of this sort, jumping way ahead, was the year before the Cronkite thing, the University of Chicago played Washington University of St. Louis in basketball in January of that year. The game was nip and tuck, Chicago went to the locker room at half time and we waited for resumption of the game. We waited and waited. So, I went down to check on what was happening. The coach was so unhappy with the refereeing, he told the guys, "Shower and get dressed, we're going back home." That hit Time Magazine. The athletic director told the basketball coach, if he ever did that again, go find another job. I should add, as I recall, coaches were tenured at the University of Chicago. [laughs] In other words, the University didn't want to have that kind of reputation. And I should add I had earlier in the academic year spoken to athletic alums of Washington University about education and athletics at the University of Chicago. So when I saw folks who had been there, they said, "University of Chicago, huh?" [laughs] I mean it was really an interesting time. So anyway, this is just an aside related to athletics then.

2-00:15:47

**Wilmot:**

One thing is you mentioned that you felt like in relation to some of your teammates, two of them, I think, Walter Walker and Mitchell Watkins who had both prepped—.

2-00:16:02

**Lester:**

I'm sorry, Mitchell was not on the team that first year. It was the second year, he was a year behind us. So, he was still playing for the high school that first year that I played varsity. I'd have to bring in the book and look and see who was in the picture.

2-00:16:16

**Wilmot:**

So you mentioned that you felt like you were ill-prepared in comparison to your teammates who had gone through the lab schools.

2-00:16:23

**Lester:**

Academically.

2-00:16:24

**Wilmot:**

Academically. And I—

2-00:16:25

**Lester:**

Well, I don't think ill-prepared. It's just I probably did not have—actually, not ill-prepared. I would just say, in terms of the system, I would expect that they would be in a better system as a private institution associated with the University. But I felt no serious detriment in terms of my preparation. It was not as if I had not been exposed. I think for having attended a public institution, I did a pretty good job, quite frankly. As opposed to what happens now as I perceive it in a lot of public schools. But there again, we are talking about a situation which was a predominantly white high school and so forth and some of the problems which arise when teachers change, move out because of the increase of the black population and quite often standards will fall. This was not the case where I attended, as a public institution.

2-00:17:11

**Wilmot:**

This was not Calumet.

2-00:17:12

**Lester:**

This was Calumet.

2-00:17:13

**Wilmot:**

This was Calumet. Okay, so the standards did not fall at Calumet is what you are saying.

2-00:17:19

**Lester:**

I'm saying that there were just so few black students, it was not a black high school. The number of black students was very modest. In my class, thirteen out of three sixty five graduated, thirteen black folks, three guys and ten girls, those kinds of numbers.

2-00:17:37

**Wilmot:**

Did everyone that you went to school with have a similar trajectory in terms of going to college as you did? Did most people in your cohort?

2-00:17:48

**Lester:**

I think so. I mean the guys talked about college and girls did. Yeah, I think those aspirations were there. Yeah, sure. I mean, there was some selection it would seem to me in terms of those who moved to Princeton Park, that there were families trying to improve themselves and that which goes with that sort of situation in terms of aspirations as opposed to a more difficult social situation.

2-00:18:21

**Wilmot:**

When you went to the University of Chicago—for some people college is like two parts social, one part academic and maybe one part athletics—how would you describe your focus? What was your focus while you were there?

2-00:18:42

**Lester:**

I'd say—

2-00:18:44

**Wilmot:**

And you don't have to use my "one part, two part" language.

2-00:18:47

**Lester:**

Well, I'll use yours. One quarter athletics, three quarters academics.

2-00:18:49

**Wilmot:**

And not social?

2-00:18:51

**Lester:**

Well, it was always social there. I mean, I was from the city. My social life was not limited by the University of Chicago. As a matter of fact, young ladies I would take to social affairs there which were few and far between, all the white guys were saying, "Would you introduce me?" I mean it was grim socially at the University of Chicago. I can't begin to tell you how grim it was [laughs]for guys who didn't know the city. Jeez, it was—. Young ladies who were queens there would have a more difficult time in a more heterogeneous setting of women, period.

2-00:19:33

**Wilmot:**

I'm confused. What do you mean?

2-00:19:35

**Lester:**

[laughs] Means that—

2-00:19:38

**Wilmot:**

Oh, I see what you mean. You mean that there was different standards inside that university than outside.

2-00:19:41

**Lester:**

It means that the competition that you would normally meet in the cross-section of young ladies was not there. That was because of the academic demands—there was a selection process that in terms of competition for males would be less extreme than it might have been at another institution, such as the state institution, University of Illinois, and what have you, because of the scholastic demands of the place. So, young ladies who really wanted to compete were the ones who came, and in many instances, they were not as beautiful as the women from other places. That's what I'm saying. In many instances, I'm not saying all, don't get me wrong, so that those who were attractive really got a bum's rush, really got a lot of attention, more attention than they would on average at most other institutions. That's all I'm saying. No matter how bad that sounds. [laughter]

2-00:20:30

**Wilmot:**

That's alright. I wanted to ask you also about what was happening for you intellectually while you were at college. What was kind of really exciting to you?

2-00:20:44

**Lester:**

Well, I think the whole experience was exciting to me. I mean I'm at the University of Chicago, the place where the first self-sustaining chain reaction took place—tremendous reputation in terms of science. And I should add that as a high school senior, I went to work for a physics laboratory—Laboratory of Molecular Structure and Spectra, which was headed by a fellow named Robert S. Mulliken. I think I may have mentioned Mulliken had won a Nobel Prize in Chemistry in '66. And that's Mulliken, not Milliken, people get very confused. Milliken was the guy at Cal Tech with the oil drop experiment. Even folks in science get confused by the two. And a fellow by the name of Clemens Roothaan who was my immediate supervisor when I first started working there as a clerk typist. Because I had gotten an award for typing as a high school junior and I took this job as a senior in high school. I tell young people I had a choice of jobs, cleaning monkey cages in the medical school at eighty eight cents a hour, or typing at a dollar nine in the physics department. So it was a no brainer where I went to work. And it was in an area, a discipline, that I do now. At that point, it was theoretical physics, but on molecules. They are interchangeable, chemistry or physics, as far as molecules are concerned.

So it was a place steeped in a lot of tradition. I recall as a very young person, again with my maternal grandmother, and uncle going to Hutchins Commons, which was a large dining hall, and having a tour of the University, and subsequently winning a scholarship there. I mean that was a big deal, you know.

2-00:22:39

**Wilmot:**

Was the scholarship with you all four years?

2-00:22:41

**Lester:**

Yeah, until my last year when they were going to reduce it. Another black guy had just come to law school, and we talked about my situation. They were going to reduce my support, he said, "Oh, go see Dean Strozier." He said, "He'll take care of you." And I said to myself, "How

uninformed am I that a guy who's only been here two months can tell me the ropes about how to get additional funding to cover my costs? But, sure enough, I made an appointment with the Dean. "Bill, happy to do so," wrote out a voucher, just like that.

2-00:23:15

**Wilmot:**

So there was financial support throughout undergraduate time in college.

2-00:23:18

**Lester:**

Oh yeah. I had to have it. I wouldn't have been able to attend otherwise.

2-00:23:22

**Wilmot:**

And you were working also at this physics lab?

2-00:23:24

**Lester:**

Well, yeah. During the school year, one day a week. So I got my spending change. Except the week my pocket was picked.

2-00:23:31

**Wilmot:**

And were you also working at the post office in the summers?

2-00:23:33

**Lester:**

No, not every summer!

2-00:23:34

**Wilmot:**

Okay.

2-00:23:36

**Lester:**

Not at all. And some summers, I worked at the lab and other summers, I was actually at the post office. Post office was far more lucrative.

2-00:23:44

**Wilmot:**

I want to return to your work in the physics lab. Can you talk about what really was exciting to you there?

2-00:23:53

**Lester:**

Oh, everything was that exciting to me there. [beeping noise]

2-00:23:56

**Wilmot:**

What's that?

2-00:23:57

**Lester:**

That's my PDA telling me I had set something else up, but that's okay.

2-00:24:07

**Wilmot:**

How close were you to the work that was going on in the laboratory?

2-00:24:11

**Lester:**

I was typing the papers on the first IBM electric typewriter with interchangeable keys, a historical event which will get you nothing.

2-00:24:19

**Wilmot:**

Well, that's still very interesting.

2-00:24:21

**Lester:**

For each of a certain set of keys, you could pull them out of the typewriter and stick them in this device where you could store the keys. I put in integral and multiplication signs. Not a multiplication sign, that's a standard one, but the Greek alphabet.

2-00:24:33

**Wilmot:**

Umlauts, different languages, symbols?

2-00:24:36

**Lester:**

No, I don't think so, but all sorts of mathematics symbols. This is pre-Selectric days, you know the IBM Selectric typewriter which had a ball? You know that one? This goes back, you know. Because we are talking when I was in that lab first during the spring of '53 and on through that time period. Examples of what I did, let's see, we've got some of the history right here. This is the first one. [retrieves a heavy document from the shelf]

2-00:25:07

**Wilmot:**

This is the first one you typed?

2-00:25:09

**Lester:**

Yeah, a good deal of it.

2-00:25:14

**Wilmot:**

Wow.

2-00:25:16

**Lester:**

At age 16, I was doing that. That's right, I was sixteen. I went to work that spring in April.

2-00:25:23

**Wilmot:**

So it's interesting, because you described to me this time when you wrote that paper in high school before you knew what chemistry was about and said, "I want to be a chemist."

2-00:25:31

**Lester:**

Right. But you know, DuPont had this theme, "Better things for better living through chemistry," exotic and interesting area, I liked science. Biology wasn't interesting from my perspective. Now it is, now it's a much more quantitative science. The thing I wanted to show you about this, you'll see that on the staff, we have Professor Mulliken, the Director. If you jump down to—where's the secretarial staff?

2-00:26:02

**Wilmot:**

There you are. Oh, Eugenia Bautista and Arlene Johnson, and Joel Rosenthal.

2-00:26:10

**Lester:**

Some of those I don't remember. Some of those dates, do they overlap with me? No. Because Rosenthal left just before I came on board and Bautista had left too. This was during—

2-00:26:19

**Wilmot:**

So everyone had taken—okay. So what was that like for you going from a place where kind of chemistry with this kind of idea that thought about, but then actually learning all the ins and outs from writing these papers?

2-00:26:34

**Lester:**

I wasn't writing these papers. I was just typing them. I didn't understand what I was typing. You hear me? No! At that time? No, indeed! Look at this stuff. As a high school senior, I'm going to understand that? No, I didn't. It's not until my junior year of college that I got a sense of what this was all about. I took physical chemistry, which is what this overlaps with. Come on, in the beginning, I was just typing stuff. Those were the symbols, type it.

2-00:27:01

**Wilmot:**

Who was your professor in your junior year of college?

2-00:27:04

**Lester:**

My professor?

2-00:27:06

**Wilmot:**

The one who taught physical chemistry to you.

2-00:27:09

**Lester:**

Oh. There were different ones. We were on a quarter system. So the different instructors taught at different times. Let's see. [voice becomes inaudible as he moves away from the microphone and then returns] Gee, I don't know. Oh, for undergraduate, probably it was Robert Gomer, I would guess. The course was called 261. I guess it was Gomer. I have to look that up. But it became clear to me this was a course that actually related to what was in those books. I mean, that's research work and they were providing us with the basics in quantum mechanics. It was quantum mechanics for chemists.

2-00:27:54

**Wilmot:**

Did you work mostly with Milliken?

2-00:27:57

**Lester:**

I wouldn't say I worked closely with him. I typed his papers. I could read his handwriting. During the week, his regular secretaries would come and hunt me down, "Could you read this for me?" They couldn't read his handwriting. And "bond" and "band" mean very different things and they could not tell which was which, and I could not understand that from his handwriting, but I knew it, because of the context. I learned enough from the course itself. And so I could type those letters very easily.

But for the most part it was typing reports of the type that I just showed you, because they continued. [moves away from the microphone again to look at bookshelf] Let's see, actually the next one, I'm not even in the second one up there, but I got them regularly because I had finished and I was part of the distribution list as a scientist as opposed to being someone who helped type them. And I moved up in position from being an assistant as a secretary to a project assistant, actually inputting data for computers. The position changed as I became more knowledgeable about what was going on. And I was more educated too based on the courses that I took.

2-00:29:06

**Wilmot:**

How did you come to find that job?

2-00:29:09

**Lester:**

Oh, a buddy said they were hiring at the University of Chicago's Employment Office. I went over there. As I said, I was asked two things, "Can you type?" "Yeah, I took a typing test." I had taken a typing course and they gave me a typing test. I did thirty-two words a minute, no mistakes. They said, "Oh, you are accurate, but you're slow. You can either go to the Physics department or you can go clean monkey cages at a lower salary." You know, it was very easy.

2-00:29:35

**Wilmot:**

Professor Lester, why chemistry? What is it about chemistry that you found compelling?

2-00:29:41

**Lester:**

Well, I thought it was just a fascinating field. Why did I think it's a fascinating field? Oh, it dealt with molecules and their behaviors. Molecules are exotic, otherworldly sort of stuff, it was fascinating. I mean the old DuPont commercials on radio, this is not TV, about transformation, change of things, you know, molecules, how they behave, what the electrons are doing. I find it really interesting. It turns out by my junior year, I said, "Oh, okay. This is what I'm looking for." Because from my first two years, it was not clear that I had chosen the right thing? I wasn't exactly burning up the place in terms of my academic performance plus I was having so much fun at basketball. It was tugs and pulls! So much so that it wasn't until my junior year that it wasn't totally clear I was in the right place. And then, by the time I finished, I think I did mention to you off the record that my GPA was less than 3.0, and so therefore places I applied to for graduate school all rejected me. And then the Chair of the Department said, "Well, you'll get the best Master's degree by staying here. We'll accept you for a master's." And so I stayed for a Master's. I did B-plus work. I mean I had to! It was a matter of survival if I was going to go on for the PhD, to establish the case.

2-00:31:09

**Wilmot:**

When did you know that you were going to be a chemist? When did know that you were a scientist and that's what you were going to do? Was there a turning point for you?

2-00:31:16

**Lester:**

No, I liked science my entire life. My mother bought me books on alligators when I was five and so forth. Science was always intriguing to me more so than other disciplines. There's something interesting about being a scientist. A buddy of mine, we used to joke about the fact, "Who's your mentor?" This was in high school. "Don't have one." We used to joke about that, "Don't have one." "Oh, George Washington Carver, yeah right." I remember speaking now probably '51, '52, around that time frame. He was going to be an engineer and I was going to be a scientist. That's what we decided. We were going to do that thing.

2-00:31:59

**Wilmot:**

When did you know that you were definitely going pursue a PhD and be a professor?

2-00:32:04

**Lester:**

I'm on the record for saying that at the end of my undergraduate experience before I graduated. Yeah, I said that. In that scrapbook, there is a published account where I made that statement in an article, which said—I can't remember what it said exactly. I was the captain of the team and the article was headed, "The Might Who Proved Mighty." [laughs] That was the title of the article on me.

2-00:32:31

**Wilmot:**

How did you arrive at that conclusion? That that's what you wanted to be?

2-00:32:34

**Lester:**

Because I had seen from these guys who are graduate students and so forth what the path was. This is what you did, clearly I had to do that. It sounds rather arrogant at this point as the words come out of my mouth, but this is exactly what the agenda was. Now it didn't happen on the timetable I had quoted in this article, far from it. In fact, I went to IBM and did research there and that's another whole chapter in terms of educational experiences, exposures which come later.

2-00:33:09

**Wilmot:**

Listen, let's close for today.

2-00:33:10

**Lester:**

Yeah, okay. Great

2-00:33:11

**Wilmot:**

And then we'll pick up right there.

2-00:33:15

**Lester:**

As long as you bring reminders [laughs] where we are.

2-00:33:17

**Wilmot:**

I will. I'm pretty clear and I think you are, too, so we'll be fine.

[End Audio File 2]

**Interview 2: July 28, 2003**

[Begin Audio File 3]

3-00:00:27

**Wilmot:**

Interview number two, William Lester. July 28, 2003. So today I want to start off, I wanted to ask you how did you come to make your decision to pursue your Master's at the University of Chicago?

3-00:01:01

**Lester:**

Well, that was dictated by my applying to various graduate schools for post-graduate study and having no success in terms of my applications to other institutions. So, the Chair of Chemistry at the University of Chicago said I should stay there for a master's, that I could get the best masters in terms of quality of degree from Chicago than any other institutions that would have me. So, based upon his willingness to have me stay on as a graduate student, I stayed at Chicago. The Chair at that time was Professor Henry Taube, who subsequently won the Nobel Prize in Chemistry some years later for his work on inorganic exchange reactions with solvent.

3-00:01:41

**Wilmot:**

Did you work with him in that area?

3-00:01:43

**Lester:**

Not at all. But I had a course from him in Advanced Inorganic Chemistry and in that course, he taught us about these reactions. Another fellow who was on the faculty here now, just recently retired, Professor Robert Harris, was in that course. We both agree that that particular course was one we really didn't care for particularly. In my case, because it did not prepare me for the graduate record exam, the GRE, in which typically you're asked questions about the entire periodic chart. And here we studied only these exchange reactions with solvent, which turned out to be sufficiently important that they led to the Nobel Prize—well, at least to receive a Nobel Prize by the person who worked on that subject. But to our uninformed minds, this was not something that we were really turned on to understand at that point in our careers.

3-00:02:30

**Wilmot:**

It didn't prepare you well for the GRE.

3-00:02:32

**Lester:**

That's exactly it. Right.

3-00:02:37

**Wilmot:**

Were there any faculty that you did work closely with while you were getting your Master's?

3-00:02:41

**Lester:**

Yes, but I would like to not lose a point with regard to the fact that I got my undergraduate degree in five years instead of four, because I hadn't been informed that there was a certain course that to my understanding I didn't have to take. This was Natural Science 2. When I came in and said, "I'm ready to graduate," my advisor said, "No, you haven't taken this course." But I said, "For two years, I asked you whether or not I have to take this course." I was very unhappy to learn that I had to spend another year before I could get my bachelor's degree. So I had to take this course, Natural Sciences 2, in the College. I had already taken courses in the divisions, which come after the College. This meant that I could actually get a Masters within a year from the time that I got my Bachelors in June of '58. So I completed all coursework for the Masters by spring of '59. But I had run into this interminable other barrier of the language exam. The language exam was given by the Language Department at Chicago, which meant you had to pass each section of it in the same way that somebody majoring in the subject would have to unlike most places, which typically only had dictionary translation. So I wasn't able to complete that until August 1959, and that's when I was awarded my Master's degree.

But it was an informative time. The person that I worked under was a new assistant professor by the name of Stuart Rice, now widely recognized, a member of the National Academy of Sciences who was very helpful to me, wrote letters of recommendation for me for the next stage, that is, to go on to the doctorate. I took courses from him his first year at the University as an Assistant Professor. Oh, some years later in the 70's when I visited Yuan Lee, who was our last recipient of the Nobel Prize here in chemistry, but then on the faculty of University of Chicago, when he told Stuart Rice I was going to visit him, Stuart Rice said, "Well, oh yeah, Bill Lester, I remember that name. He's a basketball player." This was the 1970's, and I hadn't played ball in Chicago since the '50s. That shows how things stay with you. But anyway, Stuart Rice was the person, very supportive during that last year at the University of Chicago while I worked on my Master's. And I didn't write a dissertation. This was not done in chemistry, this wasn't necessary. If you were going to write a dissertation, then you would go on to the PhD. This was not something that typically was done in chemistry. It had been done as a gesture of good will by the Chair for me to stay on for the Master's degree.

And actually Stuart Rice did help with regards to making connections to Washington University in St. Louis. I applied there for a PhD as well as the Catholic University of America in Washington D.C. I was awarded an assistantship at Washington U. in St. Louis and it turns out that I was also offered an assistantship at The Catholic University of America. But my award letter went to Doctor William A. Lester Jr., Head of Student Health at the University of Chicago, who also had a sanitarium in Elmhurst, Illinois, a suburb of Chicago. I didn't get that letter until after the April 15<sup>th</sup> deadline. So at a certain point, I had only one choice and that was to accept the assistantship at Washington University, which I did.

Earlier, Stuart Rice introduced me to a faculty member from Washington University, Lou Holtzer, who met with me and evidently was a decision maker with regards to my admission. So that's how it was that I ended up going to Washington University in the fall of 1959.

3-00:06:05

**Wilmot:**

Let me ask you a question about Stuart Rice. Do you think that his understanding of you as a basketball player affected the way he mentored you or networked on your behalf?

3-00:06:14

**Lester:**

No, I don't think so necessarily. Athletics was not a big thing at the University of Chicago. He knew I did that. I don't know what particularly colored his mind, so much as being an African American. I was the only one around at that point. There were some in the lower division, but in the graduate school, I was the only one. I did play basketball as an undergraduate, but he never knew that except for what I had told him and learned from some others, since I was not active doing it from the time he had joined the faculty. So, not totally clear.

3-00:06:49

**Wilmot:**

Why did you shift from Washington University to Catholic University of America after a year?

3-00:06:57

**Lester:**

The reason was because I got a C in physics at Washington University and I did not have a compensating A. I got a B+ in quantum chemistry in the Chemistry Department. The C came in the Physics Department, an electricity and magnetism course. So, it was felt by the faculty that I did not deserve to go on or they didn't feel that that would be the appropriate thing to do so that was the end of it. So I got in touch with the people at Catholic and asked if I could come. They said, "Yes, do come." In the meantime, that Christmas between the time I entered in the fall of '59 and the spring semester, I married Rochelle Reed, spent my honeymoon with a take-home exam from that physics course. By the way, I don't think that was a determining factor in my grade, but nevertheless, that was very annoying. So I completed the spring semester, looked around for a summer jobs, talked to Mallinkrodt Chemical, Monsanto, and TriCities Oil, which all were in the St. Louis area. And they weren't hiring me [chuckles] or didn't extend offers of hiring. Professor Lindsay Helmholtz suggested I come to campus and do summer research in his group.

3-00:08:26

**Wilmot:**

Lindsay Helmholtz?

3-00:08:28

**Lester:**

Right.

3-00:08:28

**Wilmot:**

Is he German?

3-00:08:31

**Lester:**

Well, I'm sure his background is of that extraction, but not a recent generation. I think actually he has a brother or a relative who had been a member of faculty here by the name of Helmholtz in the physics department.

3-00:08:46

**Wilmot:**

Is this where you met Olly Wilson?

3-00:08:50

**Lester:**

No, not at all.

3-00:08:51

**Wilmot:**

At Washington University?

3-00:08:54

**Lester:**

Washington University? No. We did not overlap at all.

3-00:08:56

**Wilmot:**

Oh, okay.

3-00:08:58

**Lester:**

I didn't meet Olly until I came here. What was I going to say?

3-00:09:04

**Wilmot:**

Where did you live while you lived in St. Louis?

3-00:09:06

**Lester:**

4925 Wabada Avenue, just off King's Highway, which is a major artery through the city of St. Louis, on the third floor of this big old building or house. I'll never forget that summer. It gets very warm in St. Louis. You throw open the windows and you smell this, I guess it's a magnolia tree. You sit there and swelter in all that heat. It was quite a living experience, let me tell you. But that's all I could afford at the time. So my new wife and I lived in this third floor walkup of this big house in a part of St. Louis that had a lot of big houses on the block. Our landlady was Goldie Ashby. It comes back to me.

3-00:09:59

**Wilmot:**

Was St. Louis segregated racially at this time?

3-00:10:02

**Lester:**

Yeah. What St. Louis reminded me of at that time was Chicago maybe some ten years earlier. It wasn't segregated to the extent that one had water fountains which had signs on them and that

sort of thing. No, not at all. It was residentially segregated like Chicago. I mean Chicago was residentially segregated.

3-00:10:29

**Wilmot:**

Did you feel more or less segregation?

3-00:10:33

**Lester:**

Oh, I think the big difference for me was the fact that it was a far less cosmopolitan city in general, more or less. Well, I mean Chicago was the epitome of residential segregation. There was no place worse [laughs] as we discussed earlier I think in terms of blockbusting and all that sort of thing. On the other point regarding the department at Washington University, was that I went to Washington University to work for a fellow named Sam Weissman. And he said, no I couldn't work for him, so that only left Helmholtz, who was fine, but I mean his research area was not the sort of thing I wanted to do.

Helmholtz' research dealt with what was known as crystal field theory, it was a combination of theory and experiment. So I spent the summer trying to grow what are known as seeded crystals of germanium hexafluoride seeded with manganese in order to get an electron spin resonance signal, that is, an ESR signal. You precipitate these crystals out of HF, that is, hydrogen fluoride, which is a very noxious vapor which can etch glass. So you do this work in the hood, and then you carry the samples to the spectrometer. Anyway, you work with rubber gloves, and each evening my fingertips would be pink from the corrosive effect of the HF going through the rubber gloves. And so it was clear to me after a summer of no signal and having sucked up these very noxious fumes; I didn't want to do experiments. Really, theory was what I had gone there to do. And that's what I really wanted to do. So it was, I think, reinforcement on the direction that I had in mind to do initially.

See, the idea was to go to work with Professor Virginia Griffing at The Catholic University of America. The idea of doing that stemmed from my working with Doctor Bernard Ransil, who was a post-doctoral associate with Professor Robert Mulliken at the University of Chicago.

3-00:12:38

**Wilmot:**

Mulliken, who you'd also worked with when you were an undergraduate?

3-00:12:42

**Lester:**

Yeah, I didn't work with; I worked for.

3-00:12:45

**Wilmot:**

I understand.

3-00:12:48

**Lester:**

So there was no research with Mulliken. I was a clerk typist. Then I became a project assistant under Ransil, who was under Mulliken. So in that respect, my position was elevated to one involving somewhat more technical material than I had dealt with in the early days.

3-00:13:01

**Wilmot:**

Now can you tell me again Virginia's last name?

3-00:13:03

**Lester:**

Griffing. [spells]

3-00:13:07

**Wilmot:**

What was she known for?

3-00:13:09

**Lester:**

For her work on electronic structure where let's see—primarily Ransil had got his degree working with Griffing on the electronic structure of some hydrogen systems, hydrogen exchange reaction, the barrier to the reaction. The reaction is hydrogen atom plus hydrogen molecule to form an exchange where you have a new hydrogen molecule plus a hydrogen atom. There's a barrier to that reaction, the calculation of that energy barrier was something which theoreticians had been greatly concerned about. It's the smallest system for which one can look at an exchange reaction. And so a number of her students had previously worked on that system. Probably her most well-known work was done by a graduate student whose name escapes me at this point, but was on CO<sub>2</sub>, the electronic structure of CO<sub>2</sub>.

But in any event, Ransil had suggested Catholic because it's one of the few places that one could get a PhD on the subject of quantum mechanics in a chemistry department. So quantum chemistry is sort of being born as a subject as such in chemistry departments, whereas routinely it had been the case that you could do this sort of thing in physics departments. An alternative I had at Chicago was to stay and go into the physics department, but I wanted nothing to do with that since physics wasn't exactly my strong suit. [chuckles] So I said, by all means, I wanted to go to a chemistry department where I could do that further study. And so once offered the opportunity to do so, you know, after the experience at Washington University in St. Louis, I collected my bride and we went to Washington.

So we arrived in the fall of 1960 with Camelot—the Kennedy administration was just coming in. I looked for an apartment, found one in Southeast. Because D.C is divided up into quadrangles, right? Northwest, Northeast, Southwest, Southeast. Well, it was pretty far out. This particular place was 1800 D Street Southeast, which was right around the corner from the D.C. Jail, which is a block or two from where RFK Stadium eventually was built. It didn't exist in those days.

And this was in a house of which we had the upper floor. The son of the family lived in the front bedroom and we had the back rooms beginning with the bathroom, another entrance into our bedroom, and then another entrance into our kitchen, and then from there on to the sun porch,

which was our living room you see. So we had this interesting living arrangement in which we had furniture, which we think was purchased at one of those three rooms for the price of one sales. [laughs] I mean, the mattress went out in about three months, we said, “Hey you’ve got to replace this, the springs are killing us.” So, the way it was to scuffle as a new graduate student, married, living in the city, there was no graduate student housing. Then I had this piece of car—no it wasn’t so much a piece of car—it was a Plymouth, which I bought in St. Louis, drove to D.C. with a U-Haul and after getting there, I think we drove it for I guess a year before it required repair work of the order of four hundred dollars. I didn’t have it, so the place where I was going to get it repaired said, “Look, we’ll take the car off your hands for a hundred dollars” I said, “Give it to me.”

Then the question was, how would I commute to Catholic U., which was in Northeast. So I had to go from Southeast all the way to Northeast to the University. Ideally, I would have liked to live near the university, but I couldn’t find anything that we could afford there. Since this was my second year as a graduate student at Catholic, I was taking an advanced calculus course along with a math methods course. In the advanced calculus course was a guy who was teaching at the Naval Academy. He said he had an old car I could have if I could get out there and pick it up. So I had a buddy drive me out to this guy’s house in 1961 and I got this 1950 Chevy Powerglide, which I could always find in any block, because it was higher than anything on the block. It was black, used to wash it in Tide so it would shine. But that was our car for a while. That was our car actually until I left in ’64.

3-00:17:55

**Wilmot:**

I’m wondering when you went to Catholic, how did you pay for graduate school?

3-00:18:01

**Lester:**

The department covered those costs because you are serving the department as a graduate teaching assistant or graduate research assistant. One does not pay out of pocket to cover those costs. That’s a major advantage in terms of the sciences, or at least chemistry in most institutions across the country.

3-00:18:27

**Wilmot:**

Was this university tied to government research?

3-00:18:36

**Lester:**

Oh, it had government research. It depends upon individual faculty members having funding. Griffing had funding from, I believe, the Air Force. I can’t remember where else. But even to this day, one of the people who was on the faculty when I was there retired but is still continuing research to this day, they have a glass structure center in the physics department under Ted Litovitz, whom I took a classical mechanics course, intermediate mechanics, from when I was a graduate student there, about ’62 or it must’ve been ’61. I can’t remember for sure now at this point.

But pedagogically, Catholic was very good. These folks taught, unlike the University of Chicago, “Here it is, lap it up.” I had the experience at the University of Chicago of a particular faculty member, when I asked can I go see him about a question in preparation for the exam, he said, “Come back after the exam.” That is, to talk about material that’s going to be on a forthcoming exam, he said, “Come back and see me afterwards.” I was quite bothered by that contrasted with the experience with Stuart Rice, which was very positive. You found a wide range of such responses on the part of faculty. Maybe this one particular faculty member was an outlier, in terms of his behavior in response to students, but nevertheless. Maybe it was just a response to me. I have no idea. But it didn’t endear me to him, that particular faculty member. Whereas there was a greater sense of teaching on the part of the faculty at Catholic U. Not so much Griffing, but some of the others. Griffing was not a particular good teacher herself, but the person who taught quantum mechanics in the physics department was very good. A man by the name of James Brennan did an excellent job. And I had been told definitely to take quantum mechanics from Brennan, that Griffing wasn’t that good. Ransil told me this. He ran down the faculty members, “Take courses from Karl Herzfeld.” Karl Herzfeld was an atomic physicist, a statistical mechanician who came from Leipzig, Germany. He spoke with a somewhat thick German accent.

3-00:20:46

**Wilmot:**

What did you say his name again?

3-00:20:48

**Lester:**

Karl Herzfeld [spells] was widely recognized for his research on statistical mechanics or statistical physics as the case may be. He was of the old school. I mean, his lectures, you could just write down his every word and you got an edited book over the course of the semester.

3-00:21:10

**Wilmot:**

Was he the most meaningful who kind of —?

3-00:21:13

**Lester:**

He was the best lecturer by far.

3-00:21:14

**Wilmot:**

Yeah, which of these professors were the best in terms of contributing the most to your learning?

3-00:21:22

**Lester:**

Well, that’s a mixed bag. [chuckles] I say, in the following sense, that in quantum mechanics, you don’t take it once. I took quantum mechanics, introductory stuff in Chicago as a senior undergraduate, some further introduction to it during my master’s degree study, sat in on a course in the physics department at Washington University, took a course generally in the field in chemistry at the same time, then took Griffing’s course, and then Brennan’s course. I mean, these were all quantum mechanics either in physics departments or chemistry departments. Quantum mechanics is very different from most other areas in the sense that unlike even

classical mechanics, which is familiar physics in a certain sense from what you had earlier, the aspect of quantization, which comes with quantum mechanics at the time was a concept which would just be alien. Max Planck got the Nobel Prize for the introduction of quanta into physics about 1900 or so with the necessity of introducing discreet bundles of energy. Energy was no longer continuous. So I think, in general, it takes some adjustment on the part of students to appreciate the conceptual dimensions of quantum mechanics and how that plays out in terms of the mathematics associated with it.

3-00:22:42

**Wilmot:**

Which of your professors at Catholic University was the most important for you?

3-00:22:46

**Lester:**

Which was more important? That is an interesting question.

3-00:22:52

**Wilmot:**

It doesn't have to be just one.

3-00:22:56

**Lester:**

Well, I mentioned the excellent lecturing of Herzfeld. Griffing died, by the way, at the end of my second year. But I shall never forget the person I worked with at National Bureau of Standards between my first and second years—Morris Krauss. He suggested I come back out to NBS the following summer, I tell young people about the fact that Griffing asked, "Well, do you want an education or do you want to make money?" I said, "Well, really I have to do both," because by this time I had two children. And because she died, there was no question that I would spend the next summer at NBS. As a matter of fact, I learned that you could do your research work for the doctorate at the National Bureau of Standards. They have programs of that sort. So that's what I took on. I should add by the way that my contact with Morris Krauss came about as a consequence of Ransil suggesting I contact him with regards to summer employment.

3-00:23:48

**Wilmot:**

Ransil was very important for you in terms of, you know, really connecting you to the whole network of chemists.

3-00:23:56

**Lester:**

Yeah, Bernie was. He subsequently went to medical school and became a M.D. himself. But he still dabbled with quantum chemistry from time to time. I haven't seen him for many years, actually. He went on the staff, I think, at one of the Boston hospitals.

3-00:24:14

**Wilmot:**

So he was the person who introduced you to Morris Krauss?

3-00:24:17

**Lester:**

Well, he told me to contact him. It wasn't a direct introduction, but he set up the entrée for me to meet him. "This is the guy you should get in touch with," because they knew each other from the time they both I think were post-docs at NBS and then subsequently Krauss went on the staff. A post-doctoral associate, is a position after the PhD, a year or two of advanced study with somebody more senior.

3-00:24:39

**Wilmot:**

I want to ask you what was the chemistry department at Catholic University known for?

3-00:24:46

**Lester:**

What was it known for? I think to a great extent—see, it did have a heyday some years earlier with this research in chemical kinetics, people like Keith Laidler. Keither Laidler subsequently went to Canada. He was a very well-known kineticist. The early previous head of the chemistry department, F. O. Rice was known for his work on free radical reactions.

3-00:25:11

**Wilmot:**

How do you say his first name?

3-00:25:12

**Lester:**

I didn't say his first name. I think it's Francis. I just said it's F. O. Rice. These were the people who put Catholic on the map, as a matter of fact. By the time I got there, F.O. Rice was retired; Laidler had left. Oh, another person at the time was Walter Moore who subsequently went to Australia. So they had some very outstanding people at a given point and Catholic was by far the strongest chemistry department in the Washington D.C. area at the time. In other words, they were better than Maryland, better than Howard, better than Georgetown, better than George Washington, and so forth. They lost a lot of these people and didn't have replacements of comparable quality. So when I arrived, Ransil had said, "You know, I don't recommend Catholic as strongly as I once did." I said, "Well, too late now. This is where I am. This is my only alternative." [laughs] A lot of only alternatives in this business. So the idea was to make the best out of where I was.

3-00:26:12

**Wilmot:**

Let's see, were there other African American graduate students in the chemistry department?

3-00:26:17

**Lester:**

Oh, yes! Let's see, the number of African American graduate students at Catholic added up to less than the number of fingers on one hand. [laughs] A fellow named Mylous O'Dell was there. He was taking classes and we were in some together. He had been an undergrad at Howard, and I believe at that point was working for the night radar folks at Fort Belvoir, Virginia, for the Army. He was one. Oh, and there was a research assistant associated with Griffing by the name of Pauline Piper. She was a post-doc who I think chose not to go elsewhere.

And furthermore, when I first arrived, people kept asking me did I know Harry Morrison. I said, “I didn’t know him,” but after the fifth or sixth person asked me, I said, “Hey, he must be black.”[chuckles] Eventually I met Harry. Harry had been a graduate student of Griffing’s and took a National Research Council post-doc at the National Bureau of Standards to work in statistical physics. So he crossed over, I believe he took a number of physics course, including statistical mechanics from the physics department at Catholic. He joined the statistical physics section at the National Bureau of Standards and we would meet from time to time. Occasionally, we would double date, that sort of thing. He didn’t get married until years later after he went out to—actually, I guess to satisfy his military commitment he taught at the Air Force Academy. He went to Colorado Springs and eventually met his wife-to-be, Harriet. So, I met him—a nice guy.

3-00:28:04

**Wilmot:**

Was there a community among the African Americans students? Did people study together?

3-00:28:10

**Lester:**

Oh, no. We didn’t study together. We took very different courses. Typically in the courses I took, there were no other African American students. Odell had been there already, so he had already passed some of the courses I was dealing with. Another person who was not on campus, but who was in the graduate program at that point when I arrived was William Jackson, Bill Jackson. He is the present Chair of Chemistry at UC Davis. Bill was already at the National Bureau of Standards working in chemical kinetics as an experimentalist. Eventually we met. So at one point, there’s Morrison, Jackson, and myself; we all end up in California, not far from one another. But that association began in the early sixties. Jackson finished in ’62; I finished in ’64. Clearly, Morrison finished in ’60, academic year ’59-60.

3-00:29:07

**Wilmot:**

Intellectually, while you were at Catholic University, was there a trajectory? Did you become more clear about what direction you wanted to take and what that looked like?

3-00:29:19

**Lester:**

No, I already knew.

3-00:29:19

**Wilmot:**

You already knew?

3-00:29:20

**Lester:**

Already knew, yes. It was clear to me from my experience at the University of Chicago, subsequently at Washington University, that I didn’t want to do experiments, that I wanted to do theory. And that’s what Griffing offered. But then after spending a summer with Morris Krauss, that was more interesting—i.e., to be with a young guy who was only three or four years my senior who I sat across the desk from.

The experience at NBS was that we were in a room of the Manse, which was the house that in the past was where the Head of Bureau of Standards lived. It then became an office building. Typically every bedroom had a little card which identified the division and the names of the people in that particular room, except our slot was always empty. So people were always sticking their heads in wondering, “Who’s in there?” So it was Morris Krauss, I sat across from him, and then to the side was a post-doc, when I first arrived, from Brown University by the name of Frederick Mies. So I had the experience as a graduate student of interacting on a daily basis with a post-doc and a more senior staff member of the Bureau of Standards who talked science and so forth. It was the way they did work every day. So this became a part of my routine. I think it was a fabulous graduate experience.

3-00:30:35

**Wilmot:**

That contributed to your becoming clear about theoretical—?

3-00:30:44

**Lester:**

No, as I mentioned, it was already clear about what I wanted to do. What this was was an educational experience that was enriched by the nature of the people I interacted with on a daily basis. It was not anything to do with deciding to become a theoretician. I had already made that commitment, I knew what I wanted to do in terms of general direction, but the experience was enhanced by the nature of the communication and interaction I had with Krauss and with Mies.

3-00:31:07

**Wilmot:**

What was special about that communication?

3-00:31:09

**Lester:**

Well, these were very knowledgeable people talking about the problems of the day. You know, who’s research is going where and why and what were the crucial issues related to it. The sort of nitty-gritty thing that a fellow graduate student probably couldn’t talk about because he or she wasn’t knowledgeable enough.

3-00:31:24

**Wilmot:**

So, that’s interesting that you would find that actually in the government sector.

3-00:31:27

**Lester:**

Oh yes. Well, I don’t know if it’s so unusual. Most major labs had summer intern programs, this sort of thing, and in a number of them, you could also work and work on a degree at the same time. I think it’s probably less known by the general public that these sorts of programs existed. There was always the question of how much money was available for this sort of thing based upon the budgets associated with the agencies. But I wasn’t the only one doing this, okay, Jackson was doing this down the street, as a matter of fact, in the same laboratory in chemical kinetics. And there were other people in other places that were doing this sort of thing.

3-00:32:04

**Wilmot:**

What were the major issues and problems of the day that you were discussing, that you remember kicking around in that group?

3-00:32:09

**Lester:**

Yes, well, Mies was working on what was called unimolecular decomposition, how does that individual molecule—

3-00:32:14

**Wilmot:**

Unimolecular decomposition?

3-00:32:16

**Lester:**

Yeah, unimolecular reaction, we called it. In other words, the molecule can be excited and then based upon that excitation, the nature of the timing associated with redistribution of energy, or decomposition, or whatever the process, is dominated by a single process, which is said to be unimolecular. That it depends upon the concentration of one species, not two. Because we also talked about bimolecular reactions where clearly in order for the reaction to take place, two species come together, react and move on. Here we talk about a molecule that's been prepared and then undergoes subsequent chemistry. That's the difference.

3-00:32:53

**Wilmot:**

Now, I do have a clear understanding that this is theoretical chemistry. But are there actually applications of your work from this time? What kind of applications was being talked about in this group at the National Bureau of Standards?

3-00:33:07

**Lester:**

We weren't talking about that many applications at that time. We were talking about how you actually compute these quantities. They could have implications for applications at a subsequent point, but we are talking about frontier basic research. How do you actually compute these quantities from theory? The kinds of computers you had to do calculations limited what you could do. So to a certain extent, the field of theoretical chemistry was not particularly looked upon with high favor by a lot of people in chemistry. Because so many of the systems that one looked at involved hydrogen, which in many respects was relatively uninteresting, unlike today where you talk about hydrogen fuel cells and things of this sort, which involve hydrogen. But at the time, it was viewed that, "Gee, who needed theory?" per se. This was something that was discussed in the fifties and sixties and partially into the seventies, as well—not through the seventies, well, through the mid-sixties.

So as machines got faster you had impact from theory which colored the thinking of people more broadly in the field, that is experimentalists. So we are talking about a cultural change that evolved over this timeframe. So applications were not a driving force at this juncture. More recently, in the last ten or twenty years, absolutely, theory can contribute, can predict results for systems, which was impossible back then because you didn't have the compute power, or even

knew how to carry out the calculations accurately enough in order to contribute to an understanding of particular application areas. The main point was—well, there was a certain period, late sixties, early seventies, where a lot of discussion dealt with what are the systems that theory and experiment can come together on and exchange information, where one can impact the other? And these were fairly small systems from an experimental point of view, which meant that the experiments quite often were quite difficult. But theory was trying to reach these size systems, okay, because they are the smallest ones that one can consider. And if you are talking about shedding light on processes which involved these systems which were being treated by experimental techniques, and if you want to do it accurately enough, this placed a further burden on theory to be able to do this. And later, I guess the seventies, I did some work, which showed very clearly the impact that theory could have on experiment, that is, showing at a certain scattering angle the experiment was wrong and our calculations were right. But we are talking about, at this point, early seventies and the graduate work was early sixties. That's a whole decade difference.

3-00:35:40

**Wilmot:**

At the National Bureau of Standards, who did your work go to?

3-00:35:49

**Lester:**

Go to?

3-00:35:50

**Wilmot:**

When you think of the circuit of work and the research you were doing, who did the results go to? What did it inform?

3-00:35:57

**Lester:**

Oh, it informed physical chemistry and theory more generally. We published in the national journals. *Journal of Chemical Physics* was the main one, I guess, that I published in at that point. That's the American Institute of Physics American Physical Society journal as opposed to the *Journal of Physical Chemistry*, which was the ACS (American Chemical Society) journal. So it informed other theoreticians. We would come together and talk about work of common interest as opposed to an applications area, which is the sense that I see you are driving at in a certain way. But, that was not the driving force. The driver was how do you do things better, so that you can inform people about how to do things—what's happening in terms of the electrons and nuclei in the system that determines the subsequent chemistry—that's what we do; that's why we do it. In order to have predictive capability, but also to understand at a fundamental electron-nucleus level what's happening with the molecule when it undergoes various processes.

And that has implications for all the applications that you might think of. Depending upon what the systems are, whether or not it's condensed matter or it's individual molecules, or molecules interacting, it falls under different classifications. If it's solids, quite often, you are talking about solid state chemistry or condensed matter physics. But these boundaries are blurred. Or you are talking about clusters, which are one form of solids, but also are amenable to treatment by systems or by approaches, which are quantum chemical solely in their description.

3-00:37:31

**Wilmot:**

At this time, I understand that you were one of the users of the early computer. Is that correct, at the National Bureau of Standards?

3-00:37:43

**Lester:**

We used high-speed—well, at the time they had big IBM machines, big IBMs—?

3-00:37:52

**Wilmot:**

How big?

3-00:37:52

**Lester:**

740, 7090. Well, it was the largest machine available at the time.

3-00:37:55

**Wilmot:**

So how big was that?

3-00:37:57

**Lester:**

Well, it's about as much as a fast hand-held nowadays, but it filled the room in those days. It shows you how the evolution of computing is taking place. So, I wrote code for that, you know, to do my particular research problem, I had to write the software. Fortran came into play. I think in the previous discussion, we talked about the fact that I had taken a class in the summer, I guess, between my first and second years of undergrad, in which Clemens Roothaan, who was the number two person in the laboratory at the Laboratory of Molecular Structure and Spectra, suggested that I sit in to learn machine language programming. And after a summer of that, I decided this wasn't really for me. Then the next year, I think or so, symbolic programming came in, so-called FAP and SAP languages, and these languages had instructions, which involved multiply and divide whereas earlier you're actually shift register and this sort of thing, actually coding to the machine itself. And when Fortran with instructions which were more or less like sentences, then I felt this was great. It turns out the inventor of Fortran, John Backus, was somebody who was next door to me at IBM Research some years later. By that time, he'd become what is known as an IBM Fellow. But the point simply is that with the higher level languages from my vantage point and my mindset, I could deal with that as opposed to the lower level languages, which I really didn't care for. The Fortran statement, when dissected into subsequent symbolic instructions leads to many—one statement leads to many symbolic and to many more machine language code instructions. So it gives you some sense of what you had to do.

I mean, people who were good machine language programmers were a breed apart. I mean, you talk about the concept of nerd or someone who really is attuned to very refined detail, those kind of people did machine language programming. To me, they were a special breed. And, you know, to be good at that was a special talent, I mean, like many other special talents. But that's not one that I had. I mean I could program, program reasonably well, but not great. My programs worked, and they were right, you could check them.

Another aspect of the whole business of theory is that the right code gave you correct answers. How do you test it? What do you test for? And so forth. What are the limits, that is, in terms of certain situations? What do the equations degrade to if you set or reduce certain variables to certain values. Well, the code should give you those numbers—how do you test in order to assure yourself that your code has integrity? It's a critical issue. And later on, I got a certain amount of acclaim because I wrote a code when I was a post-doc, which subsequently became the benchmark against which people subsequently tested other ways of computing the same quantities—scattering matrices for collision processes.

3-00:41:06

**Wilmot:**

I want to know how you arrived at your dissertation? I understand it was about correlated gaussians?

3-00:41:14

**Lester:**

Yes, yes, yes. It came about as a consequence of discussions with Morris Krauss. Well, let me back up and say that in 1950, S.F. Boys at Cambridge University introduced gaussians as functions for expansion of wave functions in quantum mechanics. These were one-electron functions. We call them orbitals. Orbitals, in a sense, came out of the language of molecular orbitals which were the analogue of atomic orbitals for atoms in which, in a loose way, they describe, that is in a classical description, the path of electrons in atoms. So, that's the notion of an atomic orbital. The actual mathematical description of it comes out of the Schroedinger equation and approximate approaches to solving it. The Schroedinger equation is the equation that describes the behavior of electrons and nuclei interacting with each other in molecules. It's one formulation of quantum mechanics for molecular systems.

There's also something called Matrix Mechanics, which never caught on that greatly, which was developed by Born and Jordan in Germany at about the same time that Schroedinger was coming up with his formulation in Austria in the early '20s.

So anyhow, we have the concept of orbitals. For an atom, the potential is described by a one over r dependence and there is no angular dependence associated with it. The potential depends on the distance only. So it's known as a central field problem in physics. The natural solution of the central field problem is a function which has an exponential distance dependence. There can be algebraic factors in front of this exponential, but basically, the exponential part is  $\exp(-\alpha r)$  so to speak where r is the distance from the nucleus out to the electron. And we say that's an orbital. So if you solve the equation, the Schroedinger equation, for electrons in an atom, you get these solutions which have this dependence that I have mentioned,  $\exp(-\alpha r)$ . And later, they got the name, Slater orbitals after John Slater, a very well-known physicist, who dealt with—I have three, four books over there by Slater dating from the forties and fifties. They actually end with the sixties. But then in 1950, Boys came out with the notion of using gaussians. Gaussians are well-known mathematical functions  $\exp(-\alpha r^2)$  rather than  $\exp(-\alpha r)$ . Furthermore, he suggested that one can have a dependence  $\exp(-\alpha r_{ij}^2)$  and where i and j are electron variables, so that these orbitals depend explicitly upon the distance between electrons of the system. Such dependence of where electrons are in the system one with respect to another, is called correlation.

Now, one formalism of quantum chemistry is built around solutions for atoms as a central field problem where you view the problem as one in which a given electron is interacting with the  $n$  minus one other electrons of the system in an average way. The formulation of this problem is called the Hartree-Fock problem after a fellow by the name of Hartree and a fellow by the name of Fock. Fock was a Russian and Hartree was an Englishman. They both came upon this particular formalism and so the Hartree-Fock idea was born. One then can solve the Schroedinger equation approximately in terms of this picture conceptually, which gives you integro-differential equations of the Hartree-Fock form for atoms. Okay? Let's leave it at that. There are integro-differential equations for the Hartree-Fock approach for atoms. That is, a solution of one electron in the field of  $n$  minus one other electrons, and you treat the others the same way and you average this result. Well, because it's an average result of one electron and all the other electrons, i.e. with the  $n$  minus one other ones, you have no description of correlation, that is, the instantaneous behavior of one electron with respect to another. If you are ever going to solve this problem correctly, then you need to be able to solve and gain information on that explicit dependence. So we speak of Hartree-Fock solution and post-Hartree-Fock. After Hartree-Fock, what do you do? Well, in a formal way, you can treat the problem in terms of an expansion—I should back up and talk about wave functions.

Electrons are what are known as fermions. They have half-integral spin. This means that when any two electrons are exchanged the sign of the—typically you describe these wave functions by determinants because they can directly express the antisymmetry of interchange of two electrons. And one can write the formal and exact solution in terms of an expansion in determinants, an expansion with linear coefficients, in terms of functions in the determinant, which are orbitals, even more to the point, spin orbitals. That means they have associated with them both a spatial and a spin function—a product form.

Orbitals, I mentioned, are one-electron functions, but you could have conceptually, as opposed to this expansion, one that would be exact in principle—but you can never get there in practice, because it has to be an infinite expansion. A description explicitly dependent upon the positions of any two electrons, one electron with respect to another, and consider this situation with respect to all the electrons in the system. In any event, Boys came out in 1960 with a paper, which talked about or which described explicitly correlated Gaussians. That was 1960, I arrived at NBS in the summer of '61 and Krauss just said, "Hey, this paper has just come out." I don't know if I started working on it then or the next fall, but I [thought] this approach should be very interesting in terms of having a more compact description of the wave function rather than the description in terms of an expansion in orbitals, the one-electron functions.

So I got into this business and the idea was to apply Gaussian correlated functions to atoms and to molecules. And so I actually, based upon the literature and some thoughts, let me back up again—the way you got higher dependencies—you have in a classical picture an atom, say a nucleus here, and electrons which are around it. For each principal quantum number, that is, radial function, you have associated with it angular momentum for a principal quantum number. And without going into the essence of quantum mechanics—you have to be able to describe angular momentum of the electron as well as the principal quantum number. And angular momentum is a classical physics concept, so you have the lever arm associated with the nucleus, but you also have these electrons with spin, so there's also spin angular momentum. This leads to the whole business of coupling angular momentum and formulating the equations of the

problem, and without getting too much into that, the idea was strictly in terms of the spatial dependence of the two electrons with respect to one another that—. I went off on a tangent a bit that when one would find an advantage, use the Gaussian-correlated functions. But the other piece of it is—oh yes, the higher angular momentum functions, you typically obtained the corresponding expressions by differentiating with respect to the parameter of the exponent of the Gaussian dependence. In order to get the factors out in the front, when you differentiate it, you've got, depending on how much you are differentiating with respect to a higher order of coefficient of the exponential functions. So each case that you wanted to consider was a separate differentiation and so the expressions were awful looking. Based on generalization of an idea for orbitals in Gaussians, I generalized to a more compact form for Gaussian correlated functions, which was a part of my first publication, which was the first part of my dissertation, and subsequently applied it to a two-electron molecular  $H_3^+$ . And that was sufficient to get me a PhD. That's what that whole business is all about.

3-00:50:25

**Wilmot:**

What use did NBS have for that work?

3-00:50:28

**Lester:**

Oh, NBS had no particular use except the advance of science. This is basic science. We didn't know where it was going to go. The point is that it enabled people to use these concepts more easily. This is how basic research operates. At some point, somebody who's more applied can pull these things into a particular problem area and that gets done downstream. As codes began to be built, as more and more people began to be involved in computation and the notion of having a computer code that others might use, only at that point is it very easily, that is, the notions, the concepts that were developed are more easily used by people who are not necessarily theoreticians. And the first such code became very popular, led to John Pople getting a Nobel Prize, was the gaussian program package, which is based on gaussian orbitals, but that's what he and his collaborations chose to name the code.

3-00:51:26

**Wilmot:**

What was most exciting to you about this subject area or the research? What did you find the most exciting in doing this work?

3-00:51:36

**Lester:**

Oh, the fact we could have a much more rapidly convergent result for the energy using these ideas, which had lain dormant for many years. Notwithstanding the fact that Boys had published this paper, it hadn't been used by anyone, and I still occasionally get referenced from my first publication or two because I was one of the first persons, with Krauss, to actually do this sort of thing.

3-00:51:58

**Wilmot:**

Did this dissertation give you legs in terms of your career?

3-00:52:04

**Lester:**

Give me what in terms of my career?

3-00:52:04

**Wilmot:**

Legs?

3-00:52:06

**Lester:**

Well, not particularly as far as I can see. It demonstrated that I could do this kind of very serious theoretical work. And to some extent, it may have helped in terms of the problem I had to deal with as a post-doc. As a matter of fact, my post-doc mentor said, he would not give the problem I had to deal with to a graduate student because of the complexity associated with it. So that's a little bit downstream and that's not a big deal it seems to me, in any particular way, except to say that with the background I had, I was able to work on a difficult problem, I thought it was an interesting thing to do.

3-00:52:44

**Wilmot:**

You use this word that I didn't really understand the usage in this context, it was formalism. Can you help me understand that?

3-00:52:54

**Lester:**

Yeah. Just the formalism.

3-00:52:58

**Wilmot:**

Oh, formulism.

3-00:53:00

**Lester:**

Formalism.

3-00:53:03

**Wilmot:**

Formalism, okay.

3-00:53:01

**Lester:**

Formal development, what you layout, how do you do the calculation? What's the formalism that you follow? We get up and we present equations of what we've actually computed, that's the formalism. Formalism has to be translated into algorithms, computational algorithms, which indeed, from the algorithms you actually write code. Okay? So you have theoretical equations you develop. Those equations get transferred into algorithms, that is into a mathematical formalism with the mathematics associated with this theory that's been set up. Then you have to write code associated with implementing the evaluation or solving the equations that arose out of your formalism. Is my context clear?

3-00:53:49

**Wilmot:**

Thanks. So, am I correct to understand that your dissertation largely took place outside of Catholic University, it really took place at the NBS?

3-00:54:10

**Lester:**

Oh yes. All of the research work for my dissertation was done at NBS. I mentioned that Griffing died at the end of my second year—

3-00:54:16

**Wilmot:**

Yes, so I'm wondering who your dissertation committee was?

3-00:54:20

**Lester:**

Oh, Professor John Dooling, Father John Dooling on campus became my campus advisor. My actual committee, Krauss was not on it, were all Catholic University people. I had two minors; Catholic required two minors. I had a first minor in mathematics and a second minor in physics. And so there was a mathematician on my committee. And also a new faculty member, Yang Nan Chiu, who had been a post-doc in Chicago, actually, with Mulliken. He was I guess the lead person who knew what I was doing along with Dooling. But Dooling ostensibly was my research advisor, because Catholic didn't have that many people working in this area.

3-00:55:04

**Wilmot:**

Were they a responsive and useful dissertation advising group?

3-00:55:09

**Lester:**

Oh, I didn't have an advising group. They were the committee that tested me at in the very end.

3-00:55:13

**Wilmot:**

Okay, I understand.

3-00:55:14

**Lester:**

So in the meantime, it was just Krauss and me at NBS, that's all the folks I dealt with, occasionally went on campus and said hi to Dooling, that was it. Now he had done electronic structure himself. So I mean he was reasonably knowledgeable about the field, but not so much about what I had been doing. But he was sufficiently interested that when he visited somebody at Case Western Reserve who was interested in  $H_3^+$ , he told him about my work. He sent a copy of my research work in the area to this individual. So you know, there was some connection here that was appropriate of the type that would exist for a graduate student at this point in his career.

3-00:55:52

**Wilmot:**

You were in D.C. Howard University is in D.C. Was there any kind of interaction with the chemistry department there at all?

3-00:56:00

**Lester:**

Howard at the time? Not formally.

3-00:56:06

**Wilmot:**

Was there anything exciting coming out of there that you knew of or heard?

3-00:56:08

**Lester:**

Well, I had very little contact. My wife is a graduate of Howard. So I knew a lot of people personally who had gone to Howard. At the time, no, my primary focus was on getting my work done and getting out, as a father of two and poor and all that kind of stuff, you know.

3-00:56:23

**Wilmot:**

Did you ever buy a home in D.C?

3-00:56:25

**Lester:**

No. Buy a home with what? [laughs] It was from month to month. Graduate student existence, sort of like around here, you know, same sort of thing. How many graduate students out here could afford to buy a home? I mean there are some if they are independently wealthy. If you have your own means, then that's one thing. I had no independent sources of income. No way.

3-00:56:46

**Wilmot:**

Your son and your daughter were born in D. C?

3-00:56:53

**Lester:**

Yeah. Son was born at Freedmen's Hospital in February, 1961, February 6<sup>th</sup> to be exact. My daughter was born at Freedmen's August 23, 1962. We left D.C. in November of 1964, when I finished up.

3-00:57:14

**Wilmot:**

Would you say your children's names? What are your children's names?

3-00:57:18

**Lester:**

Yeah, my son is William A. Lester, III. My daughter is Allison Kimberleigh Lester, Ramsey now.

3-00:57:24

**Wilmot:**

Now I do have a sense of where your son's name came from, but how did you decide to name your daughter?

3-00:57:29

**Lester:**

My wife and I discussed it.[laughs] Names that were interesting. We had at one point discussed whether it was Kimberleigh Allison or Allison Kimberleigh. We decided on Allison as the first name. There was no one in particular that those names are drawn from if that's what you are asking.

3-00:57:42

**Wilmot:**

That's my question.

3-00:57:45

**Lester:**

They are names that my wife and I agreed it would be nice to have. Allison, I think was popular around that time with the whole range of spellings, two Ls, one L. Our Allison has two Ls in her name. Kimberleigh, the English way, K-i-m-b-e-r-l-e-i-g-h.

3-00:58:03

**Wilmot:**

How did you come to take the post-doc at the University of Wisconsin?

3-00:58:21

**Lester:**

Well, I wanted to learn how to compute chemical reaction rates and of the various places that—by hook or by crook I thought about, it was the place which offered that promise. Mies and Krauss talked about Richard Bernstein and his molecular beam experiments, who also had a theory group, as being someone doing very good work at that point, someone to think about applying to. In addition, a fellow name Oktay Sinanoglu was at Yale who had come out with a very popular many-electron theory of electronic structure. And though at the time, there was no association from my advantage point of his having been a graduate student at Berkeley, he was. He had finished Berkeley under Kenneth Pitzer who was a past dean here, former president of Rice University, former president of Stanford University, who then returned here. But anyway, Oktay was a graduate student under him. Oktay was written up in Time Magazine as the youngest full professor, I guess, in the history of Yale; professor at 28, elevated to full. And the other place was back to Chicago to work for Roothaan.

3-00:59:35

**Wilmot:**

These were the options that were—?

3-00:59:35

**Lester:**

These were options which basically I had at that point.

3-00:59:38

**Wilmot:**

Yale, University of Chicago, and Wisconsin.

3-00:59:42

**Lester:**

Yeah. Something newly created was the Theoretical Chemistry Institute (TCI) of Wisconsin, which was where I wanted to go to. In January of '64, I got an offer from Sinanoglu to go and join him at Yale at \$6000 a year when I was making \$9500 at the Bureau of Standards, because I went on the regular payroll at the end of my second year at NBS. So, now I am working on my dissertation as an employee of NBS. So all of a sudden, my money problems have eased. We moved from Southeast to Northeast to an apartment with a lock on the front door, you know. Hey, two bedrooms.

3-01:00:17

**Wilmot:**

You are not living with another person who's not a part of your family?

3-01:00:19

**Lester:**

Yeah, right, right, right. Well, we weren't living with that person in South East; but I mean he came up the same stairs to go to his room, you know. So subsequently I guess, yeah, about year or so later, my wife became the resident manager of our apartment complex on Irving Street, North East. So things financially got much, much better. So much better that by the time we left D.C in November of 1964, we bought a new car, a Volvo 122S, four cylinder. I would never have a car so gutless again in my life. But anyway.

3-01:00:51

**Wilmot:**

It was kind of a family car, you mean, when you say that?

3-01:00:54

**Lester:**

No, it was a four-cylinder. You had to get a running start to pass anybody on the highway. I mean, it had no power. That's what I mean by gutless. I like cars with power. Anyway, the question you were asking was?

3-01:01:05

**Wilmot:**

What kind of car do you drive now?

3-01:01:07

**Lester:**

A Porsche 911 Carrera. It's an old one, '84.

3-01:01:11

**Wilmot:**

Okay, what color?

3-01:01:11

**Lester:**

Black. The top comes off. So anyway, you were asking?

3-01:01:20

**Wilmot:**

Okay, well, sorry that was a digression. I wanted to get a sense of what your universe of opportunity looked like after you finished your dissertation. Were these all three post-doctoral positions or were they faculty positions?

3-01:01:34

**Lester:**

No, these were all post-doctoral positions.

3-01:01:34

**Wilmot:**

Was that your aim, to get a post-doctoral position?

3-01:01:37

**Lester:**

Yeah. That's what I learned from my days as an undergraduate in Chicago—what the path was. I mean the Chicago experience was very clear in terms of what people did, where they went, and all that sort of thing. I had a good sense of the culture of the field. That's why I suggest an undergraduate research experience for young people.

3-01:01:54

**Wilmot:**

It seems to me also that you were really embedded in the social networks of the field, is that so?

3-01:01:58

**Lester:**

Oh, I knew some people. I knew all the fellows who were graduate students—there were no women at that point—at Chicago in the graduate program. And later through Krauss and Mies at NBS, I got a sense of who was doing what, where, and this sort of thing. Because of Oktay Sinanoglu offer being so low, I held off from responding to it, because I thought I would go to New Haven and starve to death. I didn't like that notion, you know, almost \$4000 less if we're going to live in New Haven as opposed to D.C. You know, that didn't make a lot of sense to me. And furthermore we weren't paying rent at that point in D.C. And then Roothaan came to visit.

3-01:02:45

**Wilmot:**

Roothaan?

3-01:02:44

**Lester:**

Yeah, he was the number two man at Chicago, spelled R, double O, T, H, double A, N, Clemens, Dutch.

3-01:03:01

**Wilmot:**

R-o-o-t-h-a-a-n. Okay. Please stop for one minute, I just want stop and change all our media.

[End Audio File 3]

[Begin Audio File 4]

**Wilmot:**

Sorry you said that you had a—?

4-00:00:08

**Lester:**

Yeah, I was going somewhere with that notion. Oh, about post-doc and where I went. I got the offer in January from Yale. In the meantime, I heard nothing from Wisconsin and so Morris Krauss mentioned, “Well, you know the meeting of the American Physical society, Chemical Physics Division will take place in Baltimore in March,” the so-called famous March meeting of the American Physics Society, which is always devoted to chemical physics. And they’re going to have a symposium on electronic structure or chemical physics, as the case may be, that will bring all the big names to Baltimore, including Joseph O. Hirschfelder, who was the director of the Theoretical Chemistry Institute at Wisconsin and a very well-known theoretician. Krauss suggested and I agreed it would be good for me to I go over to the meeting and ask Hirschfelder where my application stood? I got on the train and rode to Baltimore and to the man, “Hey, what’s going on?” So, okay, I did that.

4-00:01:10

**Wilmot:**

What kind of response did you get?

4-00:01:12

**Lester:**

Well, he said, “We have your application on file and you’ll hear from us in a couple of weeks.” I’m trying to remember when exactly it was, because I think I heard from Chicago later, and the offer from Chicago preceded the offer from Wisconsin. However, I’m a little fuzzy on the ordering here on the dates and so on. But in any event, I talked to Hirschfelder. He said, “We have a lot of applications, very good people. But you’ll hear from us in due course.” “Oh, okay. Thank you.” Got on the train and came on back home. I listened to some talks. Eventually, I did get an offer, by the way, and the offer paid better than any others. I’ll never forget, \$8500. So I took a cut of a thousand to go to Madison. [chuckles]

When I get there, I get the sense that they didn’t know what to do with me in the sense that it wasn’t clear who I would work with. I went there to work for Bernstein, and Bernstein took me on, but I think there was some ambiguity upon arrival in this respect. That’s my gut feeling.

4-00:02:20

**Wilmot:**

Why did you think that was?

4-00:02:22

**Lester:**

Oh, I can’t say for sure, but it just appeared to me that there were some indicators, can’t remember exactly what they were. It wasn’t clear who I was to work for, Hirschfelder or Bernstein. I didn’t want to work for Hirschfelder, because in my view, his work dealing with perturbation theory was not as close to the cutting edge as was the work I had done as a graduate student, as a matter of fact.

4-00:02:45

**Wilmot:**

Perturbation?

4-00:02:47

**Lester:**

Perturbation [spells] theory.

4-00:02:53

**Wilmot:**

Thanks.

4-00:02:54

**Lester:**

Without going into that, basically you have a solution for a problem, which is not quite the problem you want to solve. You solve the problem you can solve and then you perturb it to answer the question you want to answer, the equation that you ideally want to solve.

4-00:03:10

**Wilmot:**

It's like backing into the answer.

4-00:03:13

**Lester:**

Yeah, well, you don't back into it. You move to it, because you don't have anything to back to. You have something to move towards. The question is how do you perturb the system to get to the solution that you want. Just typically by modifying the potential, adding perturbation terms, terms which are small relative to the solution you have obtained already or else it's not a perturbation; it's a whole new problem. So it has to be small relative to what you start with. That's the whole formalism, which is standard in quantum mechanics.

So that didn't thrill me, but I went to Bernstein. He said, "Okay," and then introduced me to the so-called strong-coupling rotational-excitation problem. When an atom hits a molecule, the molecule can rotate, vibrate, or become electronically excited. The rotational problem is called strong coupling because the separation of rotational energy levels is much more closely spaced than that of vibrational levels. Okay? And all of these levels, the rotational ones, are close together, energetically. So you can't deal with one level alone, one must, deal with the whole assemblage of energetically accessible levels at the relative collision energy that is involved in the collision that takes place. And that's dictated by how much relative energy the colliders have with respect to one another. So this leads, in quantum mechanics, in the full formalism of quantum mechanics, to coupled equations, which come out of the Schroedinger equation development. Set up the formalism, you then write down the equations, and then the question is how to solve these equations? Well, the same formal equations occur when an electron hits an atom.

4-00:04:43

**Wilmot:**

So it's connected to your dissertation then?

4-00:04:46

**Lester:**

No, because my dissertation dealt with electronic structure. Electronic structure typically deals with bound states of a system, that is, the electrons never leave the system. In the scattering theory I'm talking about, you solve the electronic Schrodinger equation at a number of different geometries, all of those which you would encounter in the two systems coming together. So it is a prelude. It is a problem which in general has to be solved, but not necessarily in today's market, but has to be solved to define the potential of interaction between the scattering partners. So it enters as the potential—and this is the whole formalism of quantum mechanics and something called the Born-Oppenheimer; approximation which says that the electrons of a system move much more rapidly than the nuclei. Electrons are a factor of roughly two thousand lighter in mass than the nuclei, so that you can freeze the nuclei, solve for the electronic energies, and map out the forces or potential energy surface, which defines then the nuclear motion of the scattering of these two molecules with respect to each other. The electronic energy becomes the potential for nuclear motion of the atom-molecule scattering system.

Okay, so strictly—.

4-00:06:12

**Wilmot:**

Hold on for one second. Okay.

4-00:06:16

**Lester:**

Bernstein had spent his senior sabbatical period at University College, London, working with Sir Harry Massey, knighted by the Queen, a fellow named Alex Dalgarno who was at the Queens University of Belfast and Ian Percival. The paper was BDMP. B, Bernstein. D, Dalgarno. M, Massey. P, Percival. I know this from the initials. [chuckles] This paper was what I call a qualitative or semi-quantitative description using a not as rigorous approach as Bernstein wanted me to pursue to handle the strong-coupling problem, that is, to solve for the cross-sections for rotational energy transfer: atom hits molecule, rotates faster, okay. How is energy distributed and what are the magnitudes of the system going from a given rotational state it might be initially to various excited final rotational states? Or alternatively, to have the molecule initially in a high rotational state and be de-excited and excited. What are the probabilities of these processes taking place in which they're intimately connected? That is, energy is moving back and forth between these states, and that is something actually one can see as a function of the calculation if you want to break it down that way. It's not normally what we do in what we call time-independent quantum mechanics. There are two fundamental formalisms in quantum mechanics, time-independent and time-dependent. We were looking at the time-independent formalism which gets the scattering information embodied in cross-sections which are the probability of the event taking place as a function of the three dimensional aspect of the collision process.

4-00:07:52

**Wilmot:**

Was this an exciting option to you, to do this work?

4-00:07:55

**Lester:**

Oh yeah, this was very interesting. Very interesting, because it had never been done before at the rigorous level we were pursuing. And that's the advantage of going to places which are at the cutting edge, because the problems that you deal with are new, in that respect. So, I went off and visited folks at the Argonne National Laboratory, who had been doing electron-atom scattering, because the formalisms were similar. There was a fellow named Kenneth Smith who knew Bernstein and who very helpful. Actually, one of his collaborators, Kenneth actually spent a period at Argonne but is based at Leeds University in England. So, by visiting his colleague, Bill Cody, I got some of the papers and a little bit of code related to how they computed these scattering cross-sections for electron-atom scattering. So basically what I did was adapt that formalism to the atom-molecule problem. And there are very notable differences because the electron atom problem is more complicated by the fact that you have integro-differential equations as opposed to the atom-molecule problem where the electron interactions have been embodied in a potential for nuclear motion, which meant that you are not dealing with integro-differential equations; you are getting system of coupled differential equations that you evaluate at each value of the total angular momentum of the system.

So, you form a cross-section by summing these separate contributions for given values of the total angular momentum. Summing all of these gives you the total cross section. There are number of different cross-sections you can define. Cross-sections for explicit transitions from a given initial state to a given final state, from a given initial state to a sum over all final states, these kinds of things. There are also differential cross sections, that give how much of the scattering goes into the center-of-mass angles. The various directions and the magnitude of the probability of going off in a given direction tells you something about the nature of the interaction of the two species with one another, for example, when the angular distribution is backward scattered, this means the particle comes in is scattered and it goes back in the direction from which it came. Or for a glancing collision, this means it goes off in directions that don't deviate much from the initial directions which means they are forward scattered, i.e. it's deflected from straight on.

In any event, we are in competition with Dalgarno, one of Bernstein's co-authors on this classic paper from 1963. I get to TCI in the fall of '64. Dalgarno has a graduate student working on the same problem. I'll never forget, Dalgarno came to visit and Dick said, "Well, I don't think you should talk to Dalgarno about what we are doing." "Oh, okay." So, we don't talk about it. He visits, very nice, very pleasant. By the way, Dalgarno visited here last year. Or was it this year. I'm Chair of the Hitchcock Committee, of UCB. The Hitchcock lectures are the highest level seminar series on campus. Dalgarno is the former head of the Smithsonian Astrophysical Observatory. He comes and talks about atmospheric processes, which is what his primary interest is and always has been. So the scattering is to understand what happens with atoms and molecules in the atmosphere and further out, in the interstellar medium.

So in any event, Dalgarno and his student published the smallest calculation you could carry out on the scattering of helium by  $H_2$  molecules.

4-00:11:48

**Wilmot:**

So you never mentioned that you were working on the same—that you were in competition to each other?

4-00:11:54

**Lester:**

We know that from something they had published at one point. They had not published a full paper up to that point, but they came out with something slightly ahead of us, and then the question was, “What do we do now, since we have the capability, “Bernstein was asking me this, “How do we demonstrate we have the capability but not do the same problem?” Because we couldn’t do a much larger problems at the time, but I can show you literature where, subsequently, when we’re talking about these papers—Gee, what year are we talking about? I have to look at my list. But that in the mid-seventies, actually the problems were tremendously much bigger and this led to state of the art computations with the computer capability at IBM, where I was employed from 1968 until 1981, but on leave from 1978 until I resigned in 1981.

But jumping back to the discussion Bernstein and I had, I said, “Well, we can calculate a given scattering matrix, one of these total angular momentum  $J$  values, as a function of the size of the coupled equation system we are solving.” Because you have to solve this coupled-equation system for each partial wave, every value of total  $J$ , we did one at the simplest level, which is the level at which a cross-section had been computed by the Dalgarno group. Then we did it for the next rung—that is what, there is degeneracy. What do I mean by that? That is each level splits based upon what we call projection quantum numbers. So though it may appear to be one level, it’s actually two  $J$  plus one, with  $J$  being the quantum number. So if it’s zero, then the degeneracy is two times zero plus one or 1. Okay? If it’s one, you get two plus one, so three, and you go on up.

We did one, four, nine, then sixteen completed-equations for this particular paper and published the findings. And that set of calculations then became a benchmark standard for people who subsequently wrote programs for this sort of problem and the test code. So, in a certain sense, I got more recognition for this study than Dalgarno and student gained for the simpler problem which was published earlier. The point here is that you sometimes don’t know what people get turned on to or find of value, or even if it’s a question of finding value. So that went very well, and I wrote some papers; i.e. we co-authored papers, but I basically wrote those. Bernstein was a good writer and so he would come back and change my drafts just as I do now with my students. You write a draft because, I mean, you’ve got to learn how to do that—and that, I think, is a very important educational function—and you critique those papers. But in any event, I published a number of papers on rotational excitation by atom impact.

And that was basically what my Wisconsin research consisted of from ‘64 to ‘68. Then in ‘68, of course, I went to IBM. And continued this sort of thing, but now with a focus on computing both the potential, which I described before as the electronic problem—you solve the electronic problem, take the results of the electronic problem which becomes input into the nuclear motion problem, and then did that, oh, as a dominant part of my research for my entire period at IBM.

4-00:14:57

**Wilmot:**

Okay. Now can you tell me a little bit about being Assistant Director at TCI?

4-00:15:02

**Lester:**

Assistant Director.

4-00:15:02

**Wilmot:**

Assistant Director. How did that come about? What was that like?

4-00:15:06

**Lester:**

Oh, that was driven by a NASA program officer saying that TCI needed to diversify the organization. This was 1965. I had been a post-doc for eight months. The guy who had the position had just gotten a job at State University of New York at Binghamton. And I didn't realize what the driving force was at the time, but I learned it the next day after I accepted the position. I was going through the files and I saw the letter from the program officer to Hirschfelder. Second paragraph talked about the need for the place to diversify. And this is prior to—this is 1965, freedom rides are going on, this sort of thing. What impressed me about this subsequently, not so much at the time was the emphasis that NASA was placing on diversity at that point. My becoming Assistant Director was a diversity hire. Mind you, I'm on leave from NBS as a regular employee.

4-00:15:57

**Wilmot:**

For four years?

4-00:15:58

**Lester:**

No. One year. I went on leave and I said, "I'd like to be on leave another year." They said, "Okay, at the end of the second year, you need to come back." Second year rolled around, I said, "I'm not going back." I looked at NBS and decided, well, it has to be more to it than going back there. So I stayed on basically in a soft money position at Wisconsin with the hope of eventually going on the faculty. In point of fact, I gave a talk for that purpose to the Chemistry Department. It was very well received according to Bernstein, by everybody, but Hirschfelder was not supportive of my joining on the faculty. Bernstein suggested that I find a job elsewhere and don't tell Hirschfelder until the job is squared away, because Hirschfelder knew everybody and he may not have been happy with my going wherever I thought I might want to go.

4-00:16:53

**Wilmot:**

What was his issue?

4-00:16:55

**Lester:**

Well, I had been told by my predecessor as Assistant Director that—and this gets touchy, so this is something which I wonder about, writing about, if this becomes known—that Hirschfelder blew hot and cold on people. This very well known, internationally recognized scientist would

say, in essence, “This person jumps lakes with a single bound, and the next day would say he can’t tie his shoes.” He (my predecessor as Assistant Director) said, “Don’t let Joe send out letters which denigrate his students.” His students, you hear me? And sure enough, I saw that play out at one point. I said, “Oh no, Joe, you don’t want to send that letter.” “Oh, okay.” He wouldn’t fight you on it, but I mean, it was just depending upon how he felt at the time. So anyway, he was the basis upon which Bernstein said, “Find a job. Don’t tell him until the job is cemented away.”

And it turned out in the spring of ’68—you know spring of ’68 was a very dramatic period—I went to two meetings. The American Physical Society met on the Berkeley Campus one week. There was a week off before the American Chemical Society met in San Francisco, I had a sister at that point in Hayward. For the week in between the two meetings I borrowed my brother-in-law’s VW and drove to Disneyland with my wife and children. But prior to doing that, I visited IBM, which had a number of folks who were graduate students in Chicago when I was an undergrad, who before the day was out said, “Hey, why don’t you come and work here?” “Whoa!” I mean, I had gotten off the plane out here, the sky was blue and the breezes were warm. I left gray skies, gray people, gray days in the Midwest. If you know the Midwest, hey sure, absolutely! They were going to pay me much more than I was earning at Wisconsin. So when I got back to Wisconsin, I said, “I’d like to leave and go take this job at IBM.” And Hirschfelder said, “Okay, but first, you have to organize this meeting.” The meeting was the Midwest Theoretical Chemistry Conference. It was the second in the series and as the Assistant Director, I was charged to do this. So I organized it, and I was out of there by August of the year.

But I recall on the plane returning from the West Coast, the assassination of Martin Luther King, Jr. all that stuff was happening through this period. And all kinds of things were breaking loose up here in Berkeley, you know. It was a San Jose thing I was experiencing. I had dinner with the then—this is an interesting story—the Director or Head of the Large Scale Scientific Computations Department at IBM, who we tried to hire at Wisconsin—that’s how I met him, Enrico Clementi.

4-00:19:41

**Wilmot:**

Enrico Clementi?

4-00:19:47

**Lester:**

E-n-r-i-c-o C-l-e-m-e-n-t-i, who said he’s not sure he’s coming to Madison and then all of a sudden he said, “No, changed his mind.” Well, he was using Wisconsin as a negotiating dimension to get this department created at IBM Research. And we have to consider whether or not to keep this kind of business in here as well. I learned this from one of the guys who had been a graduate student who I knew well at Chicago when I was an undergraduate. Once that happened, once this group got created and when I visited, Clementi wanted to hire me. I didn’t come in the usual way, which is a long story dealing with diversity at IBM Research. Because it was very difficult for people of color to get in. He said, “Oh, we know your work,” which he knew from visiting us, related to his potential hire there. So I didn’t give a talk, that sort of thing that people normally do. They said, “Come on in, here’s the paper work, sign.”

4-00:20:46

**Wilmot:**

“His visiting us?” Is the “he” Enrico?

4-00:20:48

**Lester:**

Yeah, Enrico visiting TCI.

4-00:20:51

**Wilmot:**

So in a sense, you kind of got into that the old boy’s network?

4-00:20:54

**Lester:**

Oh, it was definitely an old boy’s network, in the sense that I knew these folks. It wouldn’t happen today I’m sure in light of the various diversity requirements advertised, but it turns out in this instance I could walk in.

4-00:21:10

**Wilmot:**

I have a couple of questions for you before we close for today.

4-00:21:14

**Lester:**

Yeah.

4-00:21:15

**Wilmot:**

The first one is, it sounded like there were some different kind of dynamics that were going on at the University of Wisconsin. Was racism at play at all there?

4-00:21:30

**Lester:**

Oh, I would dare say very likely. I mean, Hirschfelder said, “Lester belongs at a mid-level institution, not a top ten institution like Wisconsin.” And I think that partly stemmed from the fact that he asked me to do something and I had a mistake in it. And, boy, that was the wrong thing to do. Some work related to my PhD work. “Oh, there’s an error, oops! Changed it.” But the die had been cast, and I guess in a certain sense in Hirschfelder’s eye, this was totally unsatisfactory. So therefore I was not suitable. Notwithstanding the body of work I had done up to that point. That’s my sense of it. That’s sort of my reading of the situation. Whether that’s racism or not, I don’t know. As I describe him to you, he probably would’ve done it to anybody who made a mistake in something he was associated with. Don’t know, are you with me?

4-00:22:18

**Wilmot:**

I am with you, but I’m also—

4-00:22:19

**Lester:**

So it becomes a complex issue as to whether or not—I would say it could play a role in terms of do I give this person the benefit of a doubt or not. The classic issue, you know, of where do you

start from, twice as good, all that sort of business, you know. So, unclear. I suspect probably it had some role. He was part of an older school; he had been at Princeton in the thirties and all that sort of thing.

4-00:22:46

**Wilmot:**

Was he at the Institute for Advanced Studies?

4-00:22:49

**Lester:**

No, no, no. This goes back to Henry Eyring, all these guys in the Chemistry Department. I mean Princeton in the thirties had an outstanding Chemistry Department and sort of pioneered the calculation of cross-sections, rate constants, for chemical reaction led by Henry Eyring who subsequently went to the University of Utah. He was Mormon. He had to get away from this den of inequity on the East Coast. This was a whole fascinating dimension related to the characters, the individuals whom you come in contact with and how their history plays a role in terms of your life story.

And by the way, I should add that Morris Krauss went to the University of Utah to work for Eyring and Eyring said no because he smoked cigarettes. So Krauss ended up working for another person. Krauss was smoking cigarettes and he used to go outside the building in the late 40s and early 50s when he was at Utah; he told me.

4-00:23:43

**Wilmot:**

I want to expand the question I asked you about racism at the University of Wisconsin. What about your PhD education? Did you experience racism from the time that you were in Catholic University from mentors, professors, colleagues?

4-00:24:08

**Lester:**

Well, it's hard to say. There had been black students through Catholic. Catholic, in terms of chemistry and physics, basically led the nation in terms of black folks getting PhDs in chemistry and physics. They were way ahead for a certain period. Based on its size, there was no reason in the world why this should've been the case.

4-00:24:27

**Wilmot:**

Why do you think that was?

4-00:24:28

**Lester:**

Well, just some folks took you on based upon who you were in the sense of what qualities you showed. A fellow by the name of Howard Foster who a number of us used to talk about a great deal was a very good graduate student. He went to Alabama A & M, I guess it was. He was a graduate student there, i.e., at Catholic. I mean I knew more folks who had come in, worked in the government, got their PhDs and so forth. Catholic was located in Northeast Washington and there were black folks around and all that sort of thing. So it's just an unusual aspect of history I would say.

4-00:25:11

**Wilmot:**

Let me just ask one more question. What I'm hearing from you is that you kind of locate when you got turned on by your work with the NBS. So I just want to confirm that with you, that's when you became you became really excited about your work.

4-00:25:34

**Lester:**

That's what I'm not clear on. What do you mean when I became really excited about my work?

4-00:25:37

**Wilmot:**

Was your work with NBS, working in that environment with that kind of intellectual exchange, what really turned you on intellectually in terms of chemistry?

4-00:25:50

**Lester:**

No, it was already clear to me from my master's work that I had to work very hard to make it in this business, okay? And in many ways, that was the turning point in terms of basketball which had to take a second place to this other dimension if I was going to make it. So it was clear from that year, the masters work, that I had to really take care of business if I was going to go anywhere.

4-00:26:15

**Wilmot:**

No, I understand, but I'm making a differentiation between working hard and being excited about your work. And that's what I'm really hearing excitement is when you were talking about the kind of level of intellectual exchange that was occurring was at NBS.

4-00:26:27

**Lester:**

Yeah, that was very stimulating. Yeah, very stimulating, I'd put it like that, not necessarily that one wanted to pursue things any further. It was a very stimulating intellectual environment in something I was very much interested in.

4-00:26:41

**Wilmot:**

Okay, I want to stop now just for fear of putting words in your mouth, so I'll stop right here. [laughs] Okay, we're done.

4-00:26:47

**Lester:**

Because I don't think there was any particular—

[End Audio File 4]

**Interview 3: August 1, 2003**

[Begin Audio File 5]

5-00:00:06

**Wilmot:**

Professor William Lester Jr., August 1<sup>st</sup>, 2003, interview three. Well, so you just showed me today's USA Today where there is an article on your son.

5-00:00:37

**Lester:**

Yes, that's right.

5-00:00:37

**Wilmot:**

What was that article about?

5-00:00:39

**Lester:**

Oh, he's a NASCAR Craftsman and Truck Series driver, race driver. This article talks about him primarily because he's currently the only African American driver on the circuit—the circuit encompassing Winston Cup, Busch Series, and the Craftsman Truck Series, the top three series of NASCAR. So he's been getting a lot of good PR of late, most recently because his image now appears on a Honey Nut Cheerios box, a nice endorsement that's been added, but also because he has an unusual background compared to most NASCAR race car drivers.

5-00:01:18

**Wilmot:**

Is that because he came out of industry and then became a race track driver?

5-00:01:23

**Lester:**

No, I think more so because of he's African American, college educated, holds a bachelors' degree in electrical engineering and computer science from the University of California, Berkeley. And in addition, of course, has been a professional research and development manager for many years. He spent fifteen years at Hewlett Packard in professional capacities. So that's novel in terms of the racers on the NASCAR circuit to have that kind of life experience.

5-00:01:50

**Wilmot:**

There's a picture there of you and your wife as well

5-00:01:53

**Lester:**

Oh, yes, yes, yes.

5-00:01:53

**Wilmot:**

How often do you get to go to his races?

5-00:01:57

**Lester:**

Well, it varies. Last year, I was at either five or six races. This year may be the same number. Both years we were at Daytona. Daytona opens the season, Daytona Beach, Florida, the big race was there. And then my second race this year was at Mesa Marin I guess we both went to Mesa Marin, which is just outside Bakersfield, California. Go ahead.

5-00:02:22

**Wilmot:**

No, you go ahead.

5-00:02:23

**Lester:**

After that, Brooklyn, Michigan, which is where we were this past weekend, was the third one. Very likely we'll go to the Las Vegas race where we went last year as well. Then there's a race in Southern California at Fontana, not far from Ontario speedway and Ontario Airport. Those would be the main ones I think remaining that we might go to.

But after four races, I have to, or anyone has to, actually get a license of some sort. Unlike a freebie, in terms of access, to the pits which one can gain access to by nature of the driver signing off to make this possible. After four such instances, you have to hold some sort of official capacity.

5-00:03:19

**Wilmot:**

What will yours be?

5-00:03:21

**Lester:**

Oh, there's a starter license or something of that sort that I bought last year, probably the same thing this year. Last year, I remembered it being fairly expensive. I think it's less this year. I think you can get in most cheaply, around ninety dollars for the remainder of the season. That's one race.

5-00:03:40

**Wilmot:**

What is it like to watch your son just whiz around this track in his race truck?

5-00:03:45

**Lester:**

Oh it's very exciting! To see one's offspring whizzing around, depending on the raceway, at anywhere from ninety to a hundred on the small, tight, what he calls bullrings, about a mile or a little less or a little more being the distance around the track as it contrasts to the big speedways, which can be two and half miles around where they really get to high speeds. Top speed's a hundred eighty, a hundred eighty five miles per hour. All in a bunch sometimes until they stretch out. But they do stretch out on the big fast speedways. And he's been hit in the past. As a matter of fact, he was running second at Daytona two years ago in his inaugural race as a rookie when somebody hit him. He thought he was through the accident but then he came spinning with about eight other trucks. He wasn't hurt or anything of that sort, but those things happen. That's a part of racing. So, there's a lot of expertise out there on those tracks, but still and all, occasionally

there are people who are less experienced or things just happen, because they are going so fast that accidents do occur.

5-00:04:48

**Wilmot:**

Well, it's pretty clear that you are a proud papa.

5-00:04:51

**Lester:**

Oh yes! Oh yes! Absolutely!

5-00:04:53

**Wilmot:**

Yes, of both your children.

5-00:04:53

**Lester:**

Oh, of course!

5-00:04:58

**Wilmot:**

Well, okay, we left off when you were leaving Madison and coming to IBM on Monday.

5-00:05:04

**Lester:**

Oh really? That's where we were?

5-00:05:04

**Wilmot:**

Yeah. Do you have a different memory of where we were?

5-00:05:10

**Lester:**

No.

5-00:05:10

**Wilmot:**

Did you want to start someplace else? [laughs]

5-00:05:12

**Lester:**

No, I just don't remember. Monday was so long ago.

5-00:05:16

**Wilmot:**

I have this question for you before we go too much further. I mean, it was 1968 when you left TCI and came to IBM. 1968 as you said, it was a really big year, I mean the civil rights movement and also—

5-00:05:43

**Lester:**

I think more the assassinations, the outcomes from those.

5-00:05:47

**Wilmot:**

Yes, there was the assassination of Martin Luther King, Jr.

5-00:05:50

**Lester:**

And Robert Kennedy.

5-00:05:51

**Wilmot:**

And JFK.

5-00:05:52

**Lester:**

No, Robert.

5-00:05:53

**Wilmot:**

Sorry, Robert Kennedy.

5-00:05:54

**Lester:**

Robert Kennedy, yeah. JFK was '63.

5-00:05:57

**Wilmot:**

Sorry.

5-00:05:58

**Lester:**

Yeah. I lived these times you know. [laughs]

5-00:06:00

**Wilmot:**

I understand.

5-00:06:03

**Lester:**

Were you born then? [laughs]

5-00:06:04

**Wilmot:**

I was born in 1972.

5-00:06:06

**Lester:**

Okay that explains it, see?

5-00:06:08

**Wilmot:**

So my question to you is when you were in graduate school starting a family, where were you vis-a-vis the Civil Rights Movement and by 1968 then that would be Black Power Movement as well. Where were you involved or was this influencing your consciousness or awareness?

5-00:06:30

**Lester:**

Oh yeah, clearly. I think any black person no matter what their thoughts were would be influenced by these events, for sure. This is happening to society at the time you are there. But what in particular? What sorts of things?

5-00:06:47

**Wilmot:**

Well, were you involved with any organizations?

5-00:06:51

**Lester:**

During that time? No, not when I was in graduate school. My total focus was on completing the degree. It had been the case that some people did drop out of school, but it seemed that that defeats the purpose, from my vantage point. My philosophy was one of “Get the degree and then you can do something from a better position.” So notwithstanding helping people and so forth—and I guess a fellow graduate student when I was at Washington University and I wrote a letter to the editor of the school paper regarding civil rights issues at that time. And that’s the sort of thing, that sort of level that my involvement was. At Catholic University, I’m married now, and the primary focus was getting through school, getting my requirements done, that sort of thing. We’re talking ‘60 to ‘64. I get to TCI and I recall after I guess the first winter, it was the Winter Institute in Quantum Chemistry in Florida. And I was going to take my family, we were going to stop off in Washington D.C. and then drive to Sanibel Island off Fort Myers, which was where the meeting was being held. At that time, because of the nature of circumstances, a critical issue was where would we stay on this drive once we got to the South. That was a time that it was well-known that Holiday Inn accepted black folks, so we set up a schedule of reservations at Holiday Inns along the way to get there. So, to that extent—that was 1965—we were deeply concerned about just getting safely from where we were in Madison, Wisconsin to Washington D.C. and then from there to Florida, going through Virginia, on down through the Carolinas, into Florida to get to this meeting.

But if you ask about active participation and well-known civil rights organizations as such, I was a member of some, but I was not a frontline civil rights activist in that sense. Because for the reason I indicated, that basically the goal was to get the degree, finish the degree, and move on and do things that you could do. And so that’s why I’m even until this day still quite active in terms of aspects which impact black folks, in particular, in terms of education. Because that’s where I can have impact by nature of the position that I occupy. It was very much a strategy along those lines. Because I’d seen people go out, and they go out and they stay out. They never come back. That’s life changing and that may be the thing for them, but it was not something I foresaw for myself based upon the agenda I had set for myself many years ago. So it was full steam ahead to try to achieve the goals I had set for myself.

5-00:09:46

**Wilmot:**

Did you hear about the events that were unfolding in the South in the early 60s?

5-00:09:53

**Lester:**

Oh, absolutely! They were all over the place, as a black person, you could not ignore them. You could not be a part or at least be aware of what was going on all over the place, for sure.

Absolutely.

Arriving in Madison in '64, I mean, you're off the beaten track to a certain extent. You read about what's going on. And then moving to San Jose, California in '68, again you're off the beaten track. We were down in the bedroom community of the Bay Area, comprising less than 1 percent of the population of Santa Clara Valley, that is, African Americans. And all the action was going on up here at Berkeley, at the University. I mean, that was another world. I read about it. Not a part of it.

5-00:10:46

**Wilmot:**

I'm wondering if we could turn now to talk about IBM.

5-00:10:48

**Lester:**

Yes, I'm reminded now of some experiences in Madison that are relevant in terms of civil rights issues. I recall in particular one incidence where the family went to Chicago for Thanksgiving weekend—we have family in Chicago—and returned to find that our house had been painted with epithets, in Madison, the great liberal town. Furthermore, every black family in the area—there was one a block or two away, another one three or four blocks away, very sparsely distributed in the west end of Madison—somebody got oil over their hood as a consequence of antics by somebody in the community. And this was such an unusual circumstance in the city of Madison that we were asked to go on radio to talk about our experiences, we, the black folks who were impacted this way. I recall a good friend who was coming to see us in Madison saying, “Gee, I was driving up, I heard your voice on the radio!” talking about Madison, this great liberal bastion which in some respects had exceptions to that liberality. So that's to mention things that happened by nature of who you are and where you are.

5-00:11:58

**Wilmot:**

Was there a significant black community in Madison?

5-00:12:02

**Lester:**

No, but there have been black folks in Madison for many, many years. I think I did mention earlier my maternal grandfather going to law school in Madison and knowing a black family that had a grocery store just off the downtown area, folks whom I met when I was quite young. I had estimated maybe five or six years old. Because they still had the same store, the family did. And then when I came later to be a post-doc on the staff of the Theoretical Chemistry Institute, the same family's, offspring were still living in the family's area. So we're talking about a family, there may have been a few others.

The numbers were very small in Madison. It was a very small community. And there were a certain number who came because of the University. There were some staff people, some faculty very early on in select disciplines, this sort of thing. But not a large number.

5-00:13:00

**Wilmot:**

Did you imagine raising your children there?

5-00:13:05

**Lester:**

No, not really. Remember that I went to Madison on educational leave from the National Bureau of Standards, so the idea was eventually we would return to Washington D.C. We didn't do that, but still and all, I was on a soft money situation at the University. I had hoped to go on the academic step ladder and discovered that that was impossible and based upon my research mentor, Richard Bernstein, suggesting that I find a job elsewhere, I began to look around. But nothing formal in that regard. I came out in the spring to these two meetings, brought my family: American Physical Society meeting here in Berkeley, American Chemical Society meeting two weeks later in San Francisco. The weekend between, I visited IBM and that's when I got the job offer to go to IBM. Not in the usual way, that is, in terms of a formal interview process. The head of that particular department, Enrico Clementi, introduced me to the head of the laboratory, a fellow named Andrew Eschenfelder, and said, "We'd like to have him come in and join us." And that was the nature of the process. [chuckles] "Oh that would be great." So, they set the mechanism to enable me to come to IBM Research. All this took place in late March, well actually the first week or so of April. And when I returned to Madison, Hirschfelder said okay, but I had to actually put on this meeting, the Midwest Theoretical Chemistry Conference, before I could do so. That made it August before I could actually leave. We moved in August of 1968 to San Jose.

5-00:14:42

**Wilmot:**

Where did you live?

5-00:14:43

**Lester:**

In San Jose, we lived at 1629 Andalusia Way in Willow Glen, in an Eichler track there. It had a nice big cherry tree in the front yard. That's when I learned about the bounties that the earth can provide. Because each fruit producing season you could take cherries off that tree by the handful and distribute them to the neighbors. All of this area had been orchard. Our tree turned out to be one which was very fertile and just delivered all the time. Really not Bing cherries, but very small little dark cherries that were really sweet, really good, eat them by the handfuls, spit out the pits, that sort of thing.

5-00:15:24

**Wilmot:**

How long did you live in that house?

5-00:15:27

**Lester:**

We lived in that house beginning August, 1968. Because we had had an earlier trip to hunt for housing back in June of that year, I think it was. We closed the deal to buy the house. So we lived there until we moved in June of 1978, so almost ten years.

5-00:15:48

**Wilmot:**

This parallels your time at IBM?

5-00:15:50

**Lester:**

Yeah, yeah. My actual time at IBM. The official time at IBM was longer than that, because I went on leave, even though I moved. The idea was I was supposed to move back to San Jose if I went back to IBM, but the circumstances changed and that never happened.

5-00:16:11

**Wilmot:**

Can you tell me about the process of buying a house? Was that smooth? How did that work for you?

5-00:16:17

**Lester:**

Oh yeah, that went very easily. Found a realtor in San Jose, took us around, a white guy who had lived in Hawaii and used to talk about the nature of interaction between the natives and white folks on the island and so on. He was very helpful. Then after closing the deal, we had a neighbor a couple of doors down who would cut the grass for us in our absence. This was a couple by the name of Sam and Adrienne Richardson. Yes. Sam was a faculty member at San Jose State, an artist of quite some repute who at that time was dealing with media in sort of a foam capacity. It was very unusual art, the sort of things that he did. But he was a very nice guy, he and his wife. A couple of kids. So he'd go down and he'd cut the grass for us. Just met him briefly, very friendly. It was a very nice area actually.

There was a black family around the corner, the Jacksons. Dr. Paul Jackson, he was a physician. And then I think, subsequently, I can't remember at what point, another black family moved in down towards the other end of the block from us. We were towards one end, the far end. Let's see, by this time, 1968, our kids had already started school since in '68 my son is seven, daughter is six. [chuckles] So they attended Booksin Elementary School in San Jose, California.

5-00:17:57

**Wilmot:**

What was that?

5-00:17:57

**Lester:**

Booksin. [spells]

5-00:18:03

**Wilmot:**

So you chose to send them to public school?

5-00:18:05

**Lester:**

Oh, yes, yes. We were great believers in public education. That's where we had gone, I had gone until I got to university. And there was no real reason to [send them to private school]. The local public school was good in that respect.

I did have correspondence and interaction with another black professional who had been at IBM Research by the name of Joseph Gayles. Joseph Gayles had taught at Morehouse prior to joining IBM Research and I remember him mailing me a map of San Jose, which had been annotated in terms of demography, in terms of the racial make-up of the various communities and with rough income levels indicated. It was a fascinating map, I wish I still had it.

5-00:18:54

**Wilmot:**

I love that he did that for you. That's great.

5-00:18:56

**Lester:**

Oh, yeah, yeah. So we had that sense of things, what the east side was like, the west side was like, and so forth. But he actually went back to Morehouse before I actually arrived that August. So he went back to the chemistry department at Morehouse. When I got to IBM—

5-00:19:17

**Wilmot:**

I just want to stop for one moment and ask you a question about Eichler. This is one of the places where I'm fairly fascinated.

5-00:19:23

**Lester:**

Oh really? Familiar with Eichlers?

5-00:19:24

**Wilmot:**

Yeah! A little bit. I've learned about it mostly because there are several people I've interviewed in the course of this project who lived in Eichler homes.

5-00:19:33

**Lester:**

I think that Eichler required that there be no restrictive covenants in terms of people who would buy into developments that he put together. But they were very much California homes in the sense that you open the front door and you're in this courtyard and there's glass all around. So in the wintertime, heat's going out the glass. [laughs] But it was, for us, a California house. We liked it, that notion really was very intriguing.

5-00:19:58

**Wilmot:**

The design principles really open up the space.

5-00:20:01

**Lester:**

Oh, yeah. Very contemporary compared to most homes.

5-00:20:05

**Wilmot:**

And the family, everybody's very connected and within sight of each other.

5-00:20:07

**Lester:**

Well, I mean, there were rooms, you can close the door. [laughs] But you know, to open the door and find out you're still outside was a surprise to many people. Then there were sliding glass doors, one immediately to your right, one going into one room straight ahead of you into the living room, and then slightly off to the left, going into the kitchen, sort of a family room area. One story, heating was radiant heating out of the floor. What else? Then there was a small backyard there, which later on we put a pool in. After that experience, no pool again. I remember on one occasion, wintertime, somebody must've left the heater on or I left it on, you could see the smoke rising off the pool because the water was warmer than the ambient air outside. And all I could see were little dollar bills floating up [laughter], the cost of heating the pool. Just turn the heater off! But it was nice, kids swimming in the back at an age where they enjoyed that sort of thing.

5-00:21:07

**Wilmot:**

Was there a significant black community in San Jose at that time?

5-00:21:14

**Lester:**

There were enough of us scattered around. I started to mention other black professionals at IBM. A fellow by the name of Aaron Harris was the librarian, in charge of the library at IBM Research, who lived about three or four blocks from us. That was Aaron and his wife, Edna. Then another black family, the Bells, Willie Bill and his wife—oh, it will come to me, his wife's name—had a numbers of children. Some were scattered all around. I mean, there was no concentrated group, but you know, one on this block, a few over there, and so forth. We knew each other, you know.

The other aspect of this of course was the well-known organization called Jack and Jill. You know Jack and Jill of America? Jack and Jill was very important in a place like San Jose, bringing black families and their children together to play together, meet each other and have a sense of community in that regard. Then, there were also the black fraternities and sororities, which were active in the area, the Alphas and the Kappas and the Q's. Actually Aaron Harris was a Q. I'm an Alpha, my wife was an AKA. And I was active then in the graduate chapter down in San Jose. I mean it was an important alternative to professional life, you know, in terms of other black men, getting together in the community, that sort of thing, having a focus.

5-00:22:28

**Wilmot:**

Networking?

5-00:22:30

**Lester:**

Just knowing each other. This is less networking in a professional sense than just touching base. I mean when we moved there, it was the kind of community in which, you saw another black person, you waved! It was none of this cool stuff. Hey, you were overjoyed to see him! [laughs] That was the way it was. I mean, we're talking 1968. We are talking about the Civil Rights Movement and so forth and there was a real feeling of community just in terms of people of color seeing one another. Which I see has drifted away.

That was also the period along that time in which the expression, “Black is beautiful” came out. And that was a very important dimension in my view in terms of aspects of stratification based on skin color which existed all through my youth. I guess up until that time, quite frankly, I’d put a different onus and it removed a lot of that dimension.

5-00:23:21

**Wilmot:**

I still think it’s very much with us.

5-00:23:23

**Lester:**

It’s come back. It fell dramatically and it’s come back fully. My son and I have discussed the fact that it’s here. No question, no argument. But there was a time when it was actually a less pronounced issue, in the days of the afros and all that and the very African orientation in terms of dress. You know when I worked at IBM, actually I wore bellbottoms at one point. Platforms! [laughs] Had a beard, yeah, had a fro, yeah! I’ll dig out some of the old pictures. That was the time for the people. Just by existence in that environment, there was a statement being made. Okay? People look at those pictures and go “Huh?” [laughs] But that’s the way it was.

5-00:24:10

**Wilmot:**

Did you feel like that aesthetic, kind of a political aesthetic, was greeted by your co-workers with—were they sanguine, were they—?

5-00:24:22

**Lester:**

No, no, no. In the Research Division, no. We started doing our own thing anyhow, so, “Okay, he’s with it,” whatever, you know. There were never any discussions along the lines of the dress and the appearance at IBM Research.

5-00:24:35

**Wilmot:**

And one other thing before we move into IBM, I have this question. You mentioned that what was happening in Berkeley and in Oakland was really kind of distinct from what was happening in San Jose. You would just hear about everything. Was that also the case in terms of the Black Panthers and what was happening there?

5-00:24:54

**Lester:**

Yeah, absolutely. It was like in another world. I might as well have been in Chicago as to be in San Jose vis-à-vis those issues as they were playing out in Oakland, Berkeley as far as police were concerned and all that sort of thing. Or the university situation up here, well the Free Speech Movement and all that was a little earlier.

5-00:25:12

**Wilmot:**

1969 was the Third World Strike.

5-00:25:16

**Lester:**

Yeah, well that rings no bells with me. They've been occurring here [in Berkeley], but I'm sixty miles south in 1969 one year into my employment at IBM trying to get my research program squared away and dealing with other issues, taking care of family. So I mean Third World Strike, that's a university thing, so that's the young folks doing their thing, which, one would've been involved in to some extent had one been here physically. It all depends, you know. But almost everyone I know who was at the university was involved or connected with it in some way. But that required an hour's drive to come from San Jose up here.

5-00:25:55

**Wilmot:**

Yeah, I know. I understand. I understand. Was your wife working at this time?

5-00:26:01

**Lester:**

At that time? No. No. Two young children, so she's taking care of the kids. Let's see, she did not work—she was working when we first got married. She was a social worker for the state of Illinois—I was at Washington University—after getting married that Christmas. She was the lady with the black book who drove the black car. Because she was social working in Southern Illinois and that's interesting too as a black female in terms of attitudes of that part of the country, you know, which were southern in their orientation. But after that, she was pregnant when we went to D.C. in the fall of '60. Son was born in '61, daughter's born in '62, so she was occupied with them fully right up to the time we moved to San Jose. So, she did not work during that time.

5-00:26:57

**Wilmot:**

Raising children can be a full time job.

5-00:26:59

**Lester:**

Oh yeah!

5-00:26:59

**Wilmot:**

For at least one of the parents, for sure.

5-00:27:02

**Lester:**

And it might be argued that the amount of time I was spending around, because I was going back to the lab in the evening, wasn't the greatest. In terms of trying to develop my professional program and so forth and so on, it's not a nine-to-five job, you see, in that respect. And likewise, when I was in graduate school, it was more or less a continuation of the same kind of thing depending upon what your goals are and what you had set out to do or plan to do, what your agenda was. My agenda required that kind of commitment from my perspective. Maybe in hindsight, a little less time in the lab, more time around the house might have been better. But it's remains to be seen. Kids seem to turn out okay. Maybe thanks to their mother. [chuckles]

5-00:27:40

**Wilmot:**

I wanted to turn now to your work at IBM unless you have more to say about your family in the early time in San Jose.

5-00:27:49

**Lester:**

No.

5-00:27:49

**Wilmot:**

Okay, what was your work there?

5-00:27:57

**Lester:**

Oh, to carry out research on scattering theory utilizing—as I talked before about quantum mechanics, that you need information on the potential for scattering and that comes out of the solution of the electronic Schroedinger Equation. Colleagues were working on that part of the problem. And my goal, the plan was that I would use those codes to generate input into my codes, which I wrote in order to do the scattering part of the problem. And so, that's what I did, wrote papers along those lines. I've got a listing of them if you are interested or if that's relevant.

5-00:28:29

**Wilmot:**

We'll get into it. Can you tell me a little bit about the hierarchy at IBM? To whom did you respond? You were part of a group.

5-00:28:42

**Lester:**

It was a department called Large Scale Scientific Computations, initially under Enrico Clementi. He was what was known as a second level manager. There was management underneath him, first level managers who handle smaller groupings. Those managers reported to Clementi. And we'd also sometimes do musical chairs in terms of management. At one point, I was manager years later. And then they broke up that department at a subsequent point and we got moved into experimental groups, that is, we the theoreticians. So there were all kinds of management changes that would take place over the span of ten years that I was down there.

But in the beginning Clementi was in charge. I think within about two years, he was named what is known as an IBM fellow, which meant that he did not respond to any management except to higher level management at Armonk; nobody at that laboratory. So they needed to find somebody to come in and manage the group. Armonk, New York is the corporate headquarters of IBM. Are you familiar with Armonk, have you ever heard of it before?

You know, you're talking about civil rights and so forth, by 1972, they were doing a salary survey and a survey of the situation at the laboratory. After the results were all in, we had this big meeting under the director of the laboratory in the auditorium where he talks about results of the survey. And it came to the question-answer period and I asked the director, I said "When will there be another African American professional in this laboratory?" He turned every color purple you don't ever want to see. So I said to myself, "Whoops." So I made an appointment

immediately after this meeting to go and see the director. So I go in, he says, “Bill, I thought you were pissed off.” This is literally what he said, pissed off. I said, “No, I was just asking a question of information.” But that shows you how sensitive things were at that point.

So I suggested, based upon work I had been involved in 1971, we formed—we being black folks in San Jose—something called the Black Liaison Committee. The Black Liaison Committee was formed then to assist a teacher, a special teacher in the district who was in conflict with other parents regarding literature that students read in school. In other words, there was black literature they felt was inappropriate and should be banned because there may have been a curse word, or whatever, I can’t remember exactly what the issues. But, this woman was named Nettie Goddard. Through Nettie, we formed this group to assist her in her travails with the San Jose Unified School District. So we met. We would meet from time to time with the superintendent of San Jose Unified School District, a fellow by the name of Charles Knight. And I was I guess, actually chair of that committee for a year or two. At those meetings, we had some teachers, other parents, and so forth. So we got things straightened out, in terms of the importance of not banning books of a certain type involving people of color.

That’s very different from the kind of stuff that was going on up here but—it’s very much wherever you are, there are issues. You deal with those issues where you are.

Jumping back to Don Rosenheim, who was the head of that laboratory, it occurred to me. At that period, that’s when I suggested that we have the person who assisted the San Jose Unified School District, recommended by Nettie Goddard, to come and talk to the laboratory on the issue of race. And this was Price Cobbs. You know Price Cobbs?

5-00:32:25

**Wilmot:**

I do.

5-00:32:27

**Lester:**

Okay. So arrangements were made for Price to lead essentially a tee group, a sensitivity session off-site.

5-00:32:35

**Wilmot:**

What did you say, a tee group?

5-00:32:37

**Lester:**

Yeah.

5-00:32:37

**Wilmot:**

What does that mean?

5-00:32:38

**Lester:**

A sensitivity session. “Tee group” is the term they used back in the ‘70s. So the session was held. The next day, the number two person in the laboratory, a fellow by the name of Ronald Kay said, “Well, Bill, I don’t think that that session was so hot.”

5-00:32:56

**Wilmot:**

Who went to that session?

5-00:32:58

**Lester:**

All professional scientists went to that session. We all had to go.

5-00:33:03

**Wilmot:**

And you went?

5-00:33:04

**Lester:**

Oh, yes, yes.

5-00:33:06

**Wilmot:**

What was that like for you?

5-00:33:08

**Lester:**

Well, this particular session was not like what I had anticipated in terms of really getting into the issues. Two years later, I discovered from some third party—yes?

5-00:33:21

**Wilmot:**

I interrupted when you were saying that one of the second in command came back and said it wasn’t a great tee session.

5-00:33:28

**Lester:**

Well, not tee session, but just there wasn’t much to it, and I couldn’t disagree. But then I learned two years later that, “Hey Bill, did you know that Price got a call from Corporate Headquarters that none of the professional scientists who were going to attend this session should be perturbed by the experience they were to undergo?” I said, “No.” Price actually didn’t tell me, you know, so I was wondering. This made it very clear as to why nothing much transpired on that occasion.

5-00:33:56

**Wilmot:**

Where did you hear that from?

5-00:33:58

**Lester:**

I can’t remember exactly whom I heard that from, somebody in IBM, may have been one of the personnel managers higher up. I can’t remember for sure. But it blew my mind in the sense that I

said from that point on at IBM, I would never get involved in any wholesale kinds of issues. Because you don't know what forces are operating.

5-00:34:20

**Wilmot:**

When you say wholesale kinds of issues?

5-00:34:22

**Lester:**

Here, we are talking about dealing with the issue of race in the laboratory. That's a wholesale issue as opposed to individual issues, you and me dealing with an issue with personnel. I said, "No more global issues for me there, because I don't know what's playing out." I mean, the forces that are operating, you don't know, you don't know what's happening. I'll give you another instance of that which sort of led to my going on leave eventually.

So, in any event, I saw Price some time later, I said, "Hey, Price, did that happen?" He said, "Oh yeah, that happened." [chuckles] "Wow!" I said to myself. If you don't know really what's going on, you can't really deal with it, can you? So that's when I sort of cut loose and left alone any more global kinds of issues within the framework of IBM.

5-00:35:10

**Wilmot:**

I think sensitivity training is also kind of hard—there's very few people that do it well or there's very few arenas that are really receptive to training of that type.

5-00:35:25

**Lester:**

That's happened more recently. Back at that time, it was being done place to place. Nowadays, I hardly hear about it at all. I mean, people talk about diversity, but there is no diversity training. I know people who—I knew a former chair of chemistry at University of Utah, set up his own company on human potential and so forth, doing diversity training. This goes back seven or eight years ago or even longer come to think of it.

5-00:35:51

**Wilmot:**

I have a question for you.

5-00:35:52

**Lester:**

Yeah.

5-00:35:53

**Wilmot:**

When you spoke to Joseph Gayles before you came to IBM, what did he tell you about how race and/or racism played out in the lab when he was there, pre-dating your arrival?

5-00:36:06

**Lester:**

Well, we never had a conversation of that sort. I mean, in our game it's, you know, can you produce? Notwithstanding the fact that this was done within the framework of racism, or any

racism that might exist. But the bottom line is you could always argue the strength of what you do by what you generated, which is very different from a lot of other disciplines, in my experience. The papers I publish, you want to argue with those? We can talk about the quality of what's there, which is very difficult to do in much more subjective disciplines, which I view over on the other side of campus, you know, English, Sociology, Political Science and so forth. But there are yays and nays here. I mean, does it work right? Does it advance thinking? And you get into shades of meaning in terms of value on that. The question of the value, you can't deny its contribution. The question is how much of a contribution, which shifts things somewhat.

I say it in the following sense, also. I got an outstanding contribution award from IBM in 1974. One of my more senior colleagues, a fellow I knew before I went there and before he joined as well, was an Australian who had been at a university in Australia and then in Canada at the University of Waterloo, then joined the Lab. When I got my award, he said, "Gee, they finally gave you one." In other words, to say "Where had they been?" in terms of the work I had been doing, which was getting acclaim across the country, internationally, and so forth.

5-00:37:38

**Wilmot:**

Do you want to say his name or do you remember?

5-00:37:39

**Lester:**

Oh it was John Barker, the fellow's name. Now deceased.

5-00:37:42

**Wilmot:**

Barker. Okay.

5-00:37:46

**Lester:**

Yeah, I have no problem naming names. I just haven't done that in some places.

I had been written up by that point in *Black Enterprise*. Is that right or wrong? I can't remember. I have to go and look at the stuff I have, which supports all this sort of business. So where were we in all this?

5-00:38:16

**Wilmot:**

We were talking about race and racism at IBM, not so much that it was occurring, you were saying that after that diversity training with Price Cobbs, that was the last time that you engaged those issues directly, used your person to somehow intercede. You were also talking about your audience with the second in command after you raised this question of when is there ever going to be another African American?

5-00:38:49

**Lester:**

That was with the head, that was not the second in command.

5-00:38:51

**Wilmot:**  
Sorry.

5-00:38:50

**Lester:**

That was the head who I had that meeting with. The second in command was the guy who said that the sensitivity session wasn't that hot. That was the second in command. He made the point that they are all PhD's and all smart people, what can a session like that provide to such smart people was the undercurrent?

5-00:39:10

**Wilmot:**

Well, I understand that, but then I also wonder what was the motivation in cautioning Price Cobbs to not do anything disturbing?

5-00:39:21

**Lester:**

I think they got sort of cold feet after they decided to go ahead with this activity.

5-00:39:26

**Wilmot:**

So what would have been disturbing? What would have perturbed everybody?

5-00:39:28

**Lester:**

I think it would have perturbed management if one of the scientists, white scientists, had become very perturbed and upset, raving and ranting or something, whatever. You know, this happened in those kind of sessions back in the day. This was IBM, you know, "We don't do that sort of thing. You can't have that sort of thing occurring," was the view at the time. This was a very button down operation. An example, when my son finished here and went to interview with IBM—he had been working summers at Hewlett Packard—basically he became an interesting commodity for IBM, because he had all this experience in the meantime. Early on, they were not interested in him. They didn't feel that his GPA was high enough to warrant his coming to IBM and working in the summer. So after graduation in his senior year he interviewed and he came back home and he said, "Hey, I interviewed with IBM today." I said, "You did? How did it go?" He said, "Oh, those people are cold." [laughs] And then when I visited him after he's back at Hewlett Packard, there was such a difference, the ambience in the lab, the way people got along, you know, very relaxed atmosphere at Hewlett Packard. At IBM, that was a cooler place, you know. Good people, it's different sort of feeling about the place. Personal interactions were different. Everybody was, I think, much more constrained in many ways.

5-00:40:56

**Wilmot:**

What about the presence of women scientists or minorities from other ethnic backgrounds?

5-00:41:04

**Lester:**

We were international in large-scale scientific computation, okay. The director, Clementi: he was Italian, from Padua, he came to the U.S. The graduate students who I had known from University

of Chicago and who were on the staff, Doug McLean was from Western Australia; Megumu Yoshimine was from Japan; Paul Bagus was an American person, he was from New York City. He was native born, shall we say.

5-00:41:33

**Wilmot:**

Tell me the name of the Japanese man again. Shumine?

5-00:41:35

**Lester:**

Megumu Yoshimine, now deceased. [spells] And Paul Bagus, I mentioned, from New York. He and I had been in undergrads together. We had actually taken general physics as undergrads together and he stayed on for his PhD at the University of Chicago. And then we come back together, met in 1968. He was hired within a week or two of me. And also Barker, John Barker, the fellow I mentioned, was hired around the same time. This was when the department was being built. And a good buddy of his was hired at the same time, a fellow named Douglas Henderson. When we were forming this department, Henderson was American, Barker, I mentioned was from Australia. In terms of women, actually there was one, Irene Ortenberger was in the department in condensed matter physics.

5-00:42:27

**Wilmot:**

Ortenberger?

5-00:42:28

**Lester:**

Yeah. She used to go around climbing mountains in various parts of the world. She was a big mover in the American Physical Society, the women's movement, as a professional. Who else?

5-00:42:42

**Wilmot:**

How did women fare in that environment as far as you could tell?

5-00:42:50

**Lester:**

As far as I could tell, okay. You had to get in. Getting in was quite often not a trivial operation.

5-00:42:55

**Wilmot:**

Not a trivial operation.

5-00:42:58

**Lester:**

Yeah, very competitive. And the whys of that are unclear. Partly who knew who and so on played a role, that good people knew good people and if you weren't part of that circle, gee, well, you are an unknown entity. Like my coming in was because I had been at Wisconsin and I was part of this group which generated these red reports, the red reports being the TCI reports. So, that gave me a benefit in terms of the view that I did quality work, besides having the papers published. But if you are not known by those in decision-making capacities, then there are real problems.

Another aspect of that, when I was IBM, which is really relevant is when other black scientists would interview. I remember one guy coming, and I would always talk to them at the end of the day, not before the talk but after the talk. He says, "All I want is a job." I said, "Well, that is the wrong mindset to enter into this place with, or any other place. You've got to enter in with the mindset of what will you bring to the table. How will your addition to this organization enhance its efforts in doing what it wants to do. And coming with the notion, "I just want a job," come on, really a lot of people want jobs, that's not going to cut it.

But I remember when I was at Yorktown Heights serving on the staff of the Director of Research, that another black guy interviewed, Elijah Johnson, who was from Illinois. He was actually in my neighbor's research group when he was at Illinois. Elijah was a very, sort of sleepy looking guy, a very smart fellow. And I remember after he finished his talk, people lighting into him, and boy, he was tough. Got them right back, he was very clear and concise. I said, "Hey, this is great." He eventually I think took a post doc someplace else. But he left there, and people had a measure of respect for him and his intellectual capabilities, which was very important. Whether you take that job or not, you get known for what you do in the circles, because the circles are small. Even internationally, they're small, people work in certain areas, so it's vitally important that you do the very best you can all the time, all the time. There is no "Well, I won't work this hard on this that and the other." You never know what the outcomes might be.

Furthermore, the product of our effort is available for all mankind forever. It is published work, okay? So there is a point in doing the best you can at the time. I'm not saying it's going to be right forever, you know. But that's what I impress upon my graduate students. I think most of us do. It's vitally important that you get it right. We make errors, we write errata occasionally if it's a fundamental contribution that's wrong or if you find later on that you made a mistake. But the idea is to try and avoid that. Okay, that's it on that subject for the moment.

5-00:46:08

**Wilmot:**

Okay, what was it like to work with Enrico Clementi? What kind of person was he?

5-00:46:13

**Lester:**

We didn't really work together. He was the manager. What does the manager mean? I was a manager at one point. You convey the work of your group to the management above you. So what did Enrico say to me when I was hired, because I had a question, "Do I have to show up at a specified time?" "No, just get the work done and leave the secretaries alone."

5-00:46:36

**Wilmot:**

That's what he said?

5-00:46:38

**Lester:**

Yeah! You could get into real trouble, if you hanky-panky with secretaries around IBM, that's for sure. Not that I had any inclinations, I'm a married man, but nevertheless, every now and

then, something would happen and [makes whistle sound to demonstrate the speed of departure] people were gone.

5-00:46:52

**Wilmot:**

The secretaries or the people who—?

5-00:46:54

**Lester:**

Well, the professionals and the secretaries. Who? I don't know. I never saw any incidences of this. But the point it was a very straight-laced company. You had very puritan historical upbringings. I mean, the Watsons, T.J. Watson Sr., T.J. Watson Jr., and the Watson brother, out of upstate New York. There was sort of that dimension.

5-00:47:22

**Wilmot:**

Believe it or not, I thought IBM was a California company until this interview.

5-00:47:23

**Lester:**

Really?

5-00:47:24

**Wilmot:**

Yeah, it's because I located in Silicon Valley. I didn't understand that it wasn't.

5-00:47:30

**Lester:**

Born in the state of New York, upstate New York, Westchester and above, Poughkeepsie, New York, that's where they made the big mainframes back in the day. East Fishkill, that's where they made the chips. And when I was back there and was on the fast-track, was supposed to learn the company and all that, it was clear to me that I didn't want do this.

5-00:47:50

**Wilmot:**

Let's get to that in a minute. Is that okay?

5-00:47:51

**Lester:**

Yeah, sure.

5-00:47:51

**Wilmot:**

I just want to stay where we are for one second. With whom did you work most closely? You talked about what Clementi said to you, but with whom did you work with?

5-00:48:02

**Lester:**

I was an independent operator, okay, until 1971. I got an outside contract from the Office of Naval Research. And then they said, "Okay, you can go get a post-doc," somebody who's just finished his or her PhD or maybe a junior faculty member from Europe to come and work with

you. “By the way, management said, there’s no connection between the grant you got and the post-doc except you have to have a grant to get a post-doc.” [laughs] That was the biggest joke in the world. Are you following me?

5-00:48:36

**Wilmot:**

No. Why was it important for them to say that to you?

5-00:48:38

**Lester:**

I don’t know, because it was utter fiction. They wanted to try and convey the message that the post-doc was independent of your getting the grant, that the grant didn’t matter that much. But it was some dollars and they could use those dollars to pay the cost. And typically this is for a non-domestic, a foreign post-doctoral. Why? Because in the program that Clementi had set up in terms of post-docs, one third of the salary was paid by the Laboratory; one third by IBM World Trade Corporation. That was the structure in those days. The World Trade Corporation was a corporation comprised of the IBM companies of each country of the world that had an IBM Company. And over, say, in Western Europe, there was an IBM Europe and under IBM Europe was IBM Germany and IBM France, all this sort of thing. And they would pay one third of the salary and then World Trade Corporation paid a third, and then IBM San Jose paid a third. So these people were less expensive than a domestic post-doc. And also, generally, they were very good, because of the European structure, which said that when they could take a post-doc, they were generally equivalent to an assistant professor in this country. So they came with that sort of formal educational experience—quite often not used to working as hard as we worked in the States. They were used to a nine-to-five sort of work thing. Well, we would sign up for computer time at night, in those days. The night you had it you might go home for dinner and come back at eight o’clock and work all night long and go home the next morning, because you are running the machine. As machines got a little faster, then you said, “Well, you didn’t want the burden, you couldn’t keep up.” I’m speaking now of the days of punch card input as opposed to now all of the input is done through terminals or computers. You input into the computer nowadays, okay? You know what computer cards are?

5-00:50:21

**Wilmot:**

I think so.

5-00:50:22

**Lester:**

Hollerith cards?

5-00:50:23

**Wilmot:**

Holler?

5-00:50:24

**Lester:**

Hollerith.

5-00:50:25

**Wilmot:**

How do you spell that?

5-00:50:26

**Lester:**

H-O-L-L-E-R-I-T-H. As a matter of fact, I had a card file I used to keep my old programs in. New students would come in and I would say, “You know what that is?” “No.” [laughs] I used to educate them about how we wrote code in the old days.

5-00:50:41

**Wilmot:**

So that’s what it was. It was the way you wrote code, some kind of data card that you plugged in.

5-00:50:46

**Lester:**

Well, the statements appeared on the card and the statement had corresponding to each symbol on the card a punch. That punch was uniquely identified with that letter, number, operator that corresponded to it. You with me?

5-00:51:00

**Wilmot:**

Yes. I’m going to ask you this next question—I’m not sure if we finished this—did you get your postdoc and who was it?

5-00:51:11

**Lester:**

Oh, the first one?

5-00:51:11

**Wilmot:**

Yes.

5-00:51:12

**Lester:**

Oh yeah, I had a number of post-docs. Since I had this grant—grants, succeeding ones from the same agency over years from when I got the first one in about ’71. How did I get it in ’71? That’s an interesting point. We should come back to that.

5-00:51:27

**Wilmot:**

Then we should just stay there. We’ll stay there until I ask the next question. But how did you get it in 1971?

5-00:51:36

**Lester:**

That was my first trip abroad. I can’t remember what stimulated the trip, but since I was going, management said, “Well, contact IBM Country.” Oh, I know what it was. I was invited to give a talk at International Center for Theoretical Physics. Let’s, do I have that book around? *Computing as a Language of Physics*, a particular proceedings. [looks for proceedings]

5-00:52:09

**Wilmot:**

What country did you go to?

5-00:52:11

**Lester:**

This was in Italy, Trieste.

5-00:52:13

**Wilmot:**

Fun! You had a great time.

5-00:52:18

**Lester:**

Let's see, that's just the beginning of that particular—ah, it's over here with some of the more personal things. This was put out by the International Atomic Energy Commission in 1972, but based on a meeting in '71. There was a big international meeting, ICPEAC in Amsterdam, International Conference on the Physics of Electronic and Atomic Collisions. I must have one of those proceedings down here somewhere. Ah, yes. You're having me dredge up memories.

[returns to bookshelf to look for more proceedings]

5-00:53:06

**Wilmot:**

I think that's good. I have a lot of questions for you about this. I'm going to pause the recording equipment, okay?

[interview interruption]

5-00:53:40

**Lester:**

This would be it. Oh, this was the Paris Meeting in '78. And this was the meeting at Leningrad, which I did not go to actually because Wisconsin, TCI, said they couldn't afford to send me to Leningrad. Anyway, there were two IBMers here, myself and Robert Nesbet. I don't know if you saw that. We were both from the same lab.

5-00:54:28

**Wilmot:**

So you gave the talk on accurate calculation of cross sections for non-reactive molecular collision. And a lot of work at that time was focused on molecular collision.

5-00:54:37

**Lester:**

All of my work was focused on—either on the collisions per se or on computing the potentials for the scattering. Okay? So that's what my efforts were addressing mainly.

5-00:54:48

**Wilmot:**

What was that like, going to this conference and meeting people from all over the world and exchanging with them intellectually?

5-00:54:55

**Lester:**

Well, the first time was '65. '65 was the corresponding meeting; the ICPEAC meeting, that's the one in '67 I didn't go. But in '65, there was a meeting in Canada, my first international meeting. Actually in Laval, University of Laval. That's what it was. University of Laval is in Quebec City. And that was delightful. I had some interesting experiences there. I was doing this close coupling approach and I had an interesting experience at the meeting, meeting this Englishman who had worked in this area. I said I wanted to talk to him about the problem area and his contributions in this area. He said, "Oh yeah, who are you working with?" I said, "Dick Bernstein at Madison." He said, "Okay, when Bernstein is here, we'll talk about it." My feeling was, "What's your problem, dude?" [laughs] In other words, he didn't feel that possibly I could comprehend what he would have to say. Because I was doing the work. Bernstein had a whole bunch of stuff he was dealing with. So we waited. This guy as far as I was concerned was [makes a finished sound]. I never wanted to talk to him again in life.

But then again, I met another fellow, also an Englishman, Kenneth Smith who was just a delight. Kenneth Smith gave me his unpublished materials for a book that was due to come out. That was wonderful, because it was such a good book that it greatly assisted my getting my stuff done. Kenneth Smith was a guy who had spent some time at Argonne National Lab and who Dick Bernstein had suggested I go to Argonne to meet Smith's collaborator, Cody, who was a mathematician not a scattering person, to see what I can find out there. So it was just an interesting confluence of events.

I eventually wrote my own code in a series of papers. Then some people say later, "By the way, those papers are coming out, you and Bernstein." They thought it was Bernstein who discovered that. When I left TCI, those particular kinds of studies continued with me and not with Bernstein. You see? So eventually, people discovered who's doing the nitty-gritty work related to it. Nowadays, at the university, you depend on your students. You don't have time to do that kind of work, you know, hands on. That's where my professional experience differs from many of my professional colleagues here, because of the decade of "You do it yourself" that I experienced at IBM. Doing something, by the way, which was not completely germane to IBM's business, but the Director of the Research Division said in effect that this kind of effort was the window to the outside world. You're looking at the clock, is it time?

5-00:58:06

**Wilmot:**

I did just.

5-00:58:06

**Lester:**

Yeah. So where were we headed with all of this?

5-00:58:12

**Wilmot:**

That's actually a question I need to ask you. Let's talk, because I need to change all the equipment.

[End Audio File 5]

[Begin Audio File 6]

**Wilmot:**

Hold on one second, I just want to continue with this idea that we left off on. One of the higher officers at IBM said that this kind of research, the kind of work you were doing was the window to the outside world for?

6-00:01:17

**Lester:**

Yes, windows to the outside world—I shouldn't be doing that on camera [laughs]—windows to the outside world regarding science. In other words, by nature of doing science at the forefront, then you are able to bring that information to the laboratory and to IBM as a company. Whereas many people in IBM, scientists who did computing, said, "Wait a minute, we are helping to sell machines," and the company kept saying, "No, no, you don't sell machines." It's another one of those quasi-fictions because people looking at us doing the kinds of calculations we were doing gain some sense that, hey, those machines they are computing on have value for the kinds of things that they would want to do which was similar to what we have done. Okay, now where were we headed with that?

6-00:02:05

**Wilmot:**

Well, my question around this is can you tell me about how theoretical chemistry and the work you are doing around molecular collision scattering, how did that work and computers go together?

6-00:02:19

**Lester:**

Oh, okay. Well, in terms of physical or even biological phenomenon. You have something that occurs in nature, a process. Just like we are processes as human beings. You can have an experimental set up in which you throw atoms and molecules at one another and they react and what have you, and you need these detectors to do this. And you can infer the process that occurs in the collision zone where the atoms and molecules thrown together meet. This is sort of the classic molecular beam experiment, basically a beam of atoms going this way, a beam of molecules going this way, they hit in a reaction center and they scatter out depending upon their relative masses and the nature of the processes that they undergo and so forth. That's experiment; that's the ultimate determiner of what happens in nature. But by solving the equations which describe the behaviors of electrons and nuclei, you can actually carry out calculations which enable you, if you can do them accurately enough—because you can't solve the Schroedinger Equation exactly—we spent all our time trying to do better and better approximations or solutions to those equations, the Schroedinger Equation for electronic structure and for nuclear structure or even the total Schroedinger Equation, which to some extent, the techniques that we are pursuing in my group, one has the possibility of even doing that, exactly, which was unheard of before these Monte Carlo procedures came along.

Okay. So where is the connection here? Well, you can't solve these questions unless you have computers, very high speed computers, because the equations are complicated and the accuracy depends upon having increasingly stronger, better compute capability to get answers of sufficient accuracy for systems of interest not restricted by size. The smaller the system is, the smaller the

calculation you could probably get away with for accuracy for the calculation of interest. But if you want increased accuracy, generally it's a bigger machine. If you want larger systems, it's also a bigger machine. But what do you gain vis-à-vis the experiment? You gain the capability of actually seeing how electrons and nuclei rearrange and interact with each other during the actual physical process by displaying the numerical results from computation graphically on a CRT, a Cathode Ray Tube device or some sort of display device. And that's what you see on programs like Nova, these very pretty pictures. Sometimes they are simulations; sometimes they are the results of actual calculation, which can tell you quantitatively what's occurring in a time associated with the process that can be slowed down so you that can see what's going on. Because the actual physical process occurs at time scales of atomic motions, which one of the order of ten to the minus eight seconds or faster. So I got my atomic times down there. So yes, these are very rapid processes, but in a computer, you can actually see these things evolve and occur, these processes take place.

6-00:05:17

**Wilmot:**

So then back to that statement that "this is our window to the outside world," what was the market value—I'm not sure if that's right term—but what is the asset to IBM to host this kind of research under its umbrella?

6-00:05:31

**Lester:**

To have its scientists more knowledgeable so that as they pursue aspects related to IBM's business, they are better informed of new advances so that they can enhance and improve whatever it is the company is concerned about. Because they are aware of breakthroughs occurring all over their realm of science through the various scientists who have expertise in the various areas of science and engineering relative to the business.

6-00:05:57

**Wilmot:**

The idea at that time was that these scientists constituted a major market share—

6-00:06:02

**Lester:**

Market share?

6-00:06:04

**Wilmot:**

Demand market for the IBM computer?

6-00:06:10

**Lester:**

IBM was saying absolutely not. Some scientists were saying, "Yeah, it plays a role in terms of the willingness or desire of certain others outside of IBM to buy IBM equipment, because they can see the value as demonstrated by IBM scientists having used those machines to do certain kinds of calculations." But there's not an immediate payback. This is basic science. And presumably, the payback occurs downstream where basic scientists interact with developmental types. By nature of those interactions and exchanges one comes out with an enhanced

understanding, which guides the construction of new equipment or new software, whatever the situation may be.

And that's why a lot of people wonder, well—that's why to a great extent in industry nowadays, you see very little basic research. They say they can't afford it. They leave it to the government to do it, "They'll deal with it," the development they immediately need for their products. So some people talk about, "Well, gee, what's the future going to hold? How are you going to improve upon those products if you don't have people doing the basic science related to them." Well, it has to occur in universities. Well, that's why you now have a big concern in terms of big corporations making arrangements financially with universities and people becoming concerned about, "Well, what's the ability to publish if now there is a restriction on freedom of access, because there is a proprietary consideration by the company that they want to review whether or not certain information should be made public?"—to publish then gets restricted.

At IBM, we had to go through a review process before we could publish to see whether or not there were any ideas would have you—anything patentable contained within the research that we were carrying out. Nine times out of ten, there's absolutely nothing. Whether it was at a university or at IBM, it didn't matter. But in some instances, based upon what people were doing, there were aspects that were patentable. Not necessarily that IBM could make a product out of that patentable idea but that they then had leverage in the market place in terms of others using that idea. You had to pay money to gain access to the kinds of nuggets developed in that laboratory. So the numbers of patents which were coming out on an annual basis were a real measure of the contribution of research to the business of the corporation.

6-00:08:29

**Wilmot:**

I wanted to return to this question of who did you work with most closely. It sounded like your response was the post-docs that came and worked under your supervision.

6-00:08:37

Lester:

The ones I hired. In other words, there was no one guiding my work. I was an independent operator. I came there with research directions developed as a post-doc, because I left the stuff I did when I was a doctoral student, electronic structure, that's what I returned to in about 1980, '81 after a hiatus of sixteen years or so, at least, because of some work that one of the people who was working for me did which said to me that, "Oh, this is very powerful. Let's apply it to atoms and molecules." He's doing a condensed matter model problem with the quantum Monte Carlo method I'm talking about for which I was just floored by its power.

6-00:09:18

**Wilmot:**

Was that David Ceperley?

6-00:09:20

**Lester:**

Yeah.

6-00:09:20

**Wilmot:**

Yeah, we'll get to that later. Okay, were there any names that you want to mention as your **postdocs**, people you worked with especially closely?

6-00:09:32

**Lester:**

John Mulder from Leiden. John was an interesting guy. But I couldn't really get John to do what I wanted him to do. Years later, he said, "You know, I really regret not doing what you asked me to do." [laughs] It's the way these things happen, you know.

6-00:09:49

**Wilmot:**

What did you want him to do?

6-00:09:52

**Lester:**

Oh, certain sorts of calculations related to the collision theory, which I was dealing with. I think he wanted to do other kinds of stuff, you know, maybe some of the work he had done in Leiden.

On the trip to Germany—not just to Germany—but the trip abroad is where the connection comes in in terms of the next postdoc who came to join me and his impact. Then, all of a sudden, we got a lot done.

So backing up, to take this trip to Europe, to go to ICPEAC and Amsterdam, went to the Rijks Museum and saw the original Rembrandts and all that stuff, you know, big cocktail parties there, hobnobbing amongst the *hoi polloi*. Oh, it was really a gas, you know. From Amsterdam, I think we went to Venice, flew to Italy, went to Venice, Doge's Palace in St. Mark's Square, stayed at the Cavalletto. I think it was the Cavalletto Hotel. We arrived in the hotel, put our bags down, raised the window, and there was a gondolier in the back scrubbing down his gondola. He had a portable radio playing guess what? This is 1971, James Brown, "I'm Black and I'm Proud." [chuckles] I had to go half way around the world to hear that. I mean that's the impact, black music around this world. It's fascinating.

From Venice, where did we go? We went to Trieste for that meeting and stayed in a place that IBM Italy had arranged for us to stay at, a place called Grignano, Hotel Adriatico, which is north of Trieste. And we got into the hotel room and looked out and said, "Is this not the most beautiful place you've ever seen in your life?" You've got the Adriatic there, you've got these mountains plunging into the sea. It had this little restaurant down below us to the side, and these cars would roll in, Maseratis and Ferraris. [makes engine sound] I mean it was just picturesque and the sun would set over there and we would sit down and just marvel at it. But we were going on our vacation after that. We were going to Rome in August.

6-00:11:57

**Wilmot:**

When you say we, who do you—?

6-00:11:59

**Lester:**

Rochelle, my wife. Yeah. Anyway, I skipped Germany; I have to go back to Germany, because I lost that. But this aspect of rushing off to Rome in August. You get to Rome, and it's dirty—you've never been there before, right? We are not in a hotel, we're in a pension. So we have to walk past, my wife said, these old guys sitting there, leering. But then we get to our room, we looked around, it was the pits! We should've stayed in Grignano, but we don't know any better. Okay? It's fascinating! And also one floor above or below us, Nesbet stayed in the same hotel (Adriatico), the other fellow that I was talking about—and the Nobel Prize winner, P.A.M, Dirac also stayed there and invited us to dinner. And he was well known for not speaking to you or not talking to you. In other words, he only said about two words a visit. I mean it was really weird, weird stuff. This is well known. So we had dinner and we sort of talked to each other and his wife, he was sort of sitting there, you know. I mean it's just not to be believed amongst regular folks that this kind of interaction can take place, but sure enough it did.

So it was great. Oh, the other thing about the International Center that I should not overlook is that it was created by a fellow named Abdus Salaam. Abdus Salaam was a Nobel Prize winner in Physics. Now his country of origin, I can't remember. But he created this institute, which is a Third World Institute. Almost all the people there were of color, okay? Many from Africa, almost all of them are from Africa, or underdeveloped countries. Many got their doctorates in the States and so forth. And what was also interesting, too, was that for the first time I got a question, questions you were raising, since they hadn't done this kind of stuff: "Why are you doing this? How do you know it's right?" Very fundamental kinds of questions as opposed to the esoterica of the techniques we were using to do what we did. So it was actually just a very interesting experience. Some of the guys had gotten their degrees in Oregon, various places in the States who are now back in various West African countries for the most part.

6-00:13:51

**Wilmot:**

Mm-hmm. Building their countries.

6-00:13:55

**Lester:**

Yeah, well, the science infrastructure. Where it went? Don't know, because of the difficulties that have occurred in Sub-Saharan Africa over the years. But that was the goal of—let me take the book off underneath you there. [retrieves conference proceedings book from Wilmot and flips through pages] Then again, maybe not in terms of background. I don't see that it is. Except one has to look up the history of this place. There isn't information related to Salaam in there. But if one goes to the web and looks up his life, you'll find he's a very fascinating individual. So there are international efforts to keep that center going. It was really quite interesting.

Okay, going back to when we got to Germany—oh, I know what had happened. We started off Goettingen.

6-00:14:57

**Wilmot:**

Goettingen?

6-00:14:58

**Lester:**

Yeah, very Northern Germany. You've been to Goettingen?

6-00:15:01

**Wilmot:**

No, I'm not sure how to spell it, but I'll find out later. That's okay. [laughs]

6-00:15:05

**Lester:**

Goettingen. [spells] The umlaut becomes "oe." Goettingen is far north. At the outskirts of Goettingen, actually you could see East Germany. There was a no-mans-land in between, and you could see the Conning Towers of East Germany. After we ate dinner, guys took us out and showed us that. I lectured there the first night. We had dinner that evening, I remember I was almost falling off my chair, I was so dead tired, the time change and so forth. And then I was to give a talk the next day. So I gave my talk. The talk was actually geared towards a system which the head of that laboratory, Peter Toennies, had been carrying out experimentally. This was the business of tying theory to experiment and I was doing the calculations related to experiments that he had set up—lithium ion scattering off  $H_2$  molecules, looking at rotational and vibrational excitation. So I went there to talk about it. We had an interaction over a number of years where I was doing calculations related to that system. And he would visit me and I would visit there. One other guy at least who would come with him would bring a bottle of wine from his father's vineyard. Fantastic whites of Germany, not the usual stuff they ship in. So that was always great fun when he brought a bottle of wine from his father's vineyard.

Toennies had actually gotten his PhD in the U.S. He was raised in the U.S., though of German heritage, and returned there to head a Max Planck Institute. And these were very exceptional places, because they were supported by something called the Max Planck Society which has separate monies, different from the universities which were run by the state, to do almost anything they want to do. I mean, they were fat compared to many of our situations here in the States.

In any event, so let's see? Oh yeah, I know, then we went to Munich. No, then we went to Karlsruhe. This is out of order, but I can straighten it out. Karlsruhe is where I went to visit a theoretical chemist, German, by the name of Werner Kutzelnigg who was there. It was Werner Kutzelnigg whom we visited and I gave a talk about our work—collisions work. Then I went to Munich, the Institute for Physics and Astrophysics for which the fellow who I was ostensibly visiting had been a visitor to the IBM lab. He was at the San Jose lab when I arrived. Geerd Diercksen was his name. And so I visited Geerd and in that group—not his group, but associated with that department was a fellow named Joachim Schaefer, Joseph Schaefer, who was doing similar scattering as me. I suggested that he come and visit and work together at IBM. He thought about it and he said, "Okay." He was actually older than me. He'd worked in the coal mines before going to school. I guess he was about four or five years my senior as a matter of fact. So he came to San Jose.

At that point, San Jose was nowhere near developed as it is at this point. I used to peddle a bicycle from my home in Willow Glen to the lab. You would never do that nowadays. Because he was writing the same kind of code, I mentioned that my code had actually provided data that

determined whether or not other codes were correct. But in the meantime, another fellow by the name of Gordon, Roy Gordon, had written a code using an alternative formalism which appeared to be faster. Actually, I think it was faster. More difficult to get it as accurate, but it was accurate enough. And with that sort of direction that Schaefer was following—and Schaefer came to IBM San Jose for a year and stayed on for a second year. That's how I got a lot of this lithium plus  $H_2$  work done. So the first work that sort of hit the map as really being of excellent quality that I was involved with, we put together. And that led to the Outstanding Contribution Award. And Schaefer returned to Germany. I guess his wife didn't come with him, he'd go back on occasion.

Anyway, he continued in that direction, returning to Germany, looking at the collision of two hydrogen molecules and how they exchange energy. But anyway, my main point for mentioning this was just to say that after Mulder came Schaefer. After Schaefer, I think, came Frank Rebentrost also from Munich but from a different organization, the Technical University of Munich.

6-00:20:00

**Wilmot:**

You look very tired. Do you want to pause after when we get to a certain place and just call it a day?

6-00:20:06

**Lester:**

Oh, I don't know. Where are we? I need coffee. I'm just sagging.

6-00:20:12

**Wilmot:**

Let's just answer this question.

6-00:20:13

**Lester:**

Do I look tired? Uh-oh.

6-00:20:15

**Wilmot:**

You definitely are fading. Let's just finish this one question. How did you say Frank's last name?

6-00:20:22

**Lester:**

Rebentrost. R-e-b-e-n-t-r-o-s-t.

6-00:20:27

**Wilmot:**

Okay, and he was after Schaefer?

6-00:20:31

**Lester:**

Yeah. And his research advisor was a fellow name of Ludwig Hofacker who had been at Northwestern in Evanston for many years before returning as a professor to the Technical University.

6-00:20:40

**Wilmot:**

This is a really interesting interplay between the domestic and the international world of theoretical chemists.

6-00:20:48

**Lester:**

Oh yeah. The meeting in Sanibel—I talked about, Hofacker would come on a regular basis, a good friend of Per-Olov Löwdin, he was a Swede who had started all of that.

6-00:20:59

**Wilmot:**

Per-Olov Löwdin.

6-00:21:00

**Lester:**

Per-Olov Löwdin. [spells]

6-00:21:08

**Wilmot:**

Okay, and Ludwig What was his last name?

6-00:21:12

**Lester:**

Hofacker.

6-00:21:20

**Wilmot:**

Okay. When you talk about these post-docs, how would you describe the way you worked together with—they were essentially kind of your thinking partners but also they were your staff?

6-00:21:34

**Lester:**

Yeah, yeah.

6-00:21:35

**Wilmot:**

So what was your working relationship like?

6-00:21:40

**Lester:**

Well, typically we talked and they'd go off and modify my program, or in some cases, their program, to do what needed to be done for the application. In the case of Schaefer, we actually worked hand and hand, two different codes to ensure that what we were actually computing worked, eventually evolved to one code. I was also computing potential energy surfaces at the same time. I can't remember that clearly. But there were pieces that he was doing and pieces I was doing, put together and our product gave us the answers that we needed for the applications of interest, that is, the system that we were studying. So Schaefer was lithium plus H<sub>2</sub>; with Rebentrost, it was rotational energy transfer for fluorine atoms on H<sub>2</sub> molecules. And we had a *Journal of Chemical Physics Communication* which was a higher level of publication dealing

with what were called resonances, the fact that the energy level splitting of the atom, something called the fine structure splitting is the same as the rotational energy levels spacing of the molecule; this leads to enhanced cross sections; the values go way up, because of these energy matches, this sort of thing, which was very interesting at the time in the chemical physics community.

And he went home, came back, bought a muscle car, bought a Mustang while he was in San Jose. These guys usually go home the other way around the world. He went home via South America, came back into Miami and I got this call, “Do you know Frank Rebentrost?” This came from Immigration. “Yes, I do.” “He needs some money.” He spent all his money. [laughs] I had to wire him some money so he could get home to Germany. But then he would come back from time to time, “Hey, Bill, I’ll be in town. Can I stay at your place? Here’s a pint of Courvoisier,” [laughs] just crazy stuff. That’s the wonderful world of science, some of the guys I work with. Very smart people, very interesting people, no question about it. They’re fun. It’s very different from a nine to five corporate sort of thing, very strong bonds associated with the intellectual pursuits we were engaged in. With a common view to the value of doing this, that it meant something to you. That’s the kind of stuff that gets bred in departments like this, amongst some and amongst others, there’s not at all. This tied to the whole issue, “Should everyone go into academia?” No, not at all. Many faculty view their students if they don’t go in, then there’s something wrong with their student or something. No, not at all. Precisely the advantage of having worked in all sectors of employment—government, industry. Hey, don’t sweat it. There are a lot of things to do in this world, a lot of places to do it and people to do it with.

6-00:24:26

**Wilmot:**

Let’s stop there for today.

6-00:24:28

**Lester:**

Okay. [laughs]

[End Audio File 6]

**Interview 4: August 15, 2003**

[Begin Audio File 7]

7-00:00:00

**Wilmot:**

August 15, Professor William A. Lester, Jr., interview number four.

7-00:00:07

**Lester:**

Moving right along.

7-00:00:09

**Wilmot:**

Was there anything that you wanted to elaborate on from our last conversation today?

7-00:00:26

**Lester:**

Well, just to clarify that my comments regarding the civil rights movement, which were the outgrowth of a question along these lines. They could have been ambiguous with respect to the importance of the civil rights movement in my life and the life of my family. This was a very important time. By nature of what I was doing, it was important to complete the mission I had set out to do, and that is, to get my education, the advanced education associated with my field, and to become established. That would put me in a position to better address issues of civil rights subsequently in my career and in the life of my family. I think that the better positioned one is, the more one is able to contribute to issues of whatever sort, but especially those which impact me and my family in a very direct way, in terms of civil rights issues. So that's one point I wanted to have some clarity on.

7-00:01:22

**Wilmot:**

Has that decision borne itself out to be so in your life, that you are in a better position to—?

7-00:01:30

**Lester:**

Oh, indeed it has. Though it's very difficult to talk about a contrary situation other than that which I am actually in, it is also clear to me that the appointments and activities I am engaged in would not have arisen were it not for my professional attainments, which have put me on lists related to aspects of decision-making, and what I do professionally in other areas as well. So, I think it was an important decision and one predicated also on what I observed over my professional career. The ability to do things is to a great extent dictated by the position you hold. I think that's an important point not to be lost, but to recognize the reality of the interactions of people in our society, that attainment does carry with it the capability and flexibility to do more things than I would have been able to do otherwise, in the absence of these accomplishments.

7-00:02:22

**Wilmot:**

Was there ever a time when that other path emerged and was an option for you? When there was the possibility that you might step away from the career that you have arrived at now and be involved in the civil rights movement in a different way?

7-00:02:52

**Lester:**

No, not at all. It was never an option that I considered in a serious way. In fact, many things that I did over the years, in terms of being involved with issues regarding civil rights, the situation regarding black folks, have just been dictated by where I was. The ability to have an impact along those lines or to be involved, to be interested in these issues, dating back to the early IBM days with something called the Black Liaison Committee. This was a committee formed to assist a black teacher in the San Jose Unified School District who was concerned about pressures coming from the community around books that she was recommending for reading in the late sixties and early seventies, for which she was getting a very strong response from white families in the area. So, a number of black families in the area formed this committee to respond to this issue.

No matter where you are, it seems to me, in this country as a black person, indeed there are issues that will arise. The question is one of addressing those, being in a position to respond to them in a way which can be hopefully effective over a long period, as opposed to demonstrating as such. But recognizing and being knowledgeable about how systems operate, where does the power lie in addressing those aspects of power which can have influence on the issues that are of concern to you. I view that to be a very important aspect which grows out of education, knowledge of how our society operates.

7-00:04:21

**Wilmot:**

At this time, what organizations are you involved with?

7-00:04:25

**Lester:**

Involved with? Actively? I'm primarily active on campus in a variety of ways.

7-00:04:36

**Wilmot:**

I need to ask that question in a slightly tighter fashion which is, are there any organizations that you give a lot of your time or your money to? Would you say that you have a philosophy around giving or being active currently, around certain issues?

7-00:05:00

**Lester:**

I'm very selective in where I give. It's dictated to a great extent by the issue of where the funds are used, how organizations use funds. I'm reminded of the recent flap around the United Way and the amount of money that has gone to overhead essentially, as opposed to the organizations which comprise the United Way. Costs being such that they seem to be unusually high for the nature of the organization.

I'm a life member of the NAACP, but I'm not "active" in the NAACP at this point. I contribute to the Urban League, though I can't say I'm "active" in any way in the Urban League at this point. I give to the Schomburg Center in New York, though I can't say I'm "active" in its activities; I think it's an important dimension. And I give to the Southern Poverty Law Center, I think it's been doing some very interesting things over the years. I've been giving over a decade because of the impact it's had in very specific cases involving black people in this country. I

think Morris Dees and company have done a very nice job. In terms of external organizations, those are some that come to mind immediately. There may be others that I can mention but I'd have to go back and check my records.

7-00:06:18

**Wilmot:**

Is there a thread or a philosophy behind the way that you contribute in either time or money?

7-00:06:21

**Lester:**

Very much so. In terms of what the organization has been able to achieve. And the realities of that as opposed to aspects which become very diffuse when identifying what the benefit is more realistically as opposed to rhetoric around the issues. That's a driver for me.

For example, NAACP, I think Mfume and Bond have done a nice job of moving things out of a difficult situation earlier. But in terms of where things are going and how they will get there, it's not so clear from the information that I receive about their more recent activities. It will be interesting to see what happens with the Urban League with the change of leadership there, with Morial becoming the new head of it, with Hugh Price moving on. Two aspects of national organizations I examine and pay attention to.

I have not been involved in the local NAACP organizations, just based on a number of commitments and what they focus on. This is tied to an issue of how one spends one's time. It seems to me that if relevant local issues are being addressed by people, I see no reason, myself, to go that way if my time is already tight in terms of the agenda I have established personally and professionally. That's philosophically where I'm coming from.

7-00:07:52

**Wilmot:**

I wanted to move back to IBM. There was something I was trying to understand better that had to do with the postdocs that worked for you as part of your research group. I wanted to understand better how they functioned in relation to you and the work as well.

7-00:08:14

**Lester:**

Yeah, well, in many instances these people, though they are described as post-docs, were assistants in the institutions where they worked. The analogue here to a great extent is that they were assistant professors based upon the structure in Europe. And we worked in a relationship where they basically, almost without exception, pursued problems that I had proposed for us to pursue. The critical issue, the question to ask to begin with, after my first experience along these lines, was, "Do you want to work on this particular problem?" If they don't, there's no reason in considering this individual further with regards to coming to the laboratory. Because the idea is to advance the research program that I've established. And so, for those who have come, we did the things that I suggested. Some have been very appreciative of the particular problems that I recommended that we pursue. I think almost without exception at IBM these studies were important and had value in the research community, that we were both advanced in terms of recognition of capability based on the research that I had proposed that we pursue.

7-00:09:23

**Wilmot:**

Theoretically speaking, at the time that you were at IBM, how did one advance, as a theoretical chemist there?

7-00:09:43

**Lester:**

Well, we're talking about theoretical chemistry in my case and in the case of the department I was in, initially called Large Scale Scientific Computations, as I may have mentioned, under Dr. Enrico Clementi, subsequently under Dr. Frank Herman, advancement was really predicated on scientific contributions. That is, publications, and the impact that the publications had in the field more generally, as measured by people visiting, giving seminars, and management asking these people, "Well, what about somebody's work who's in the group," which is relevant or connected to the work of the visitor, this kind of thing. What the laboratory did was to rate the entire scientific professional staff. That is, starting with number one, "Who is number one?" and right on down to the bottom. Broke these numbers in the three tiers—don't remember what the colors were—but in any event the—

7-00:10:33

**Wilmot:**

It was color-coded?

7-00:10:36

**Lester:**

Oh, yes. The upper third, the middle third, and the bottom third. I used to know what the color-coding was but I can't remember off-hand. And you got salary increases based on which segment you were in. So, you wanted to be as productive as you could in terms of publications, invitations to give talks, the usual measures of merit that are associated with academic research as a matter of fact. And some people used to say that being in IBM's research laboratory was like being in academe without having to teach. It was the same situation more or less at Bell Labs at the time. No longer true at either place. The world has changed dramatically such that basic research is not really occurring in industry as it did in the time I was there and say, the decade following.

7-00:11:26

**Wilmot:**

My next question then, is how did you advance at IBM?

7-00:11:32

**Lester:**

Oh, by my work dealing with scattering of atoms by molecules. The problem area was rotational and vibrational, and some electronic, excitation of molecules by collision with atoms. Computing both the potential energy surface or surfaces of interaction. In the case of surfaces, what we called nonadiabatic coupling matrix elements that connected the surfaces to one another and then using these in scattering formulations, exact quantum mechanical formulations, should enable you to compute as accurately as is possible under these circumstances the cross-sections for the processes of interest. And so I became recognized for this, eventually won an IBM outstanding contribution award in 1974 for rotational energy transfer. And oh, what else? There were some other things. I'd have to go back and look through my CV to identify other benefits which came of that, service on national committees, things of this sort.

And then I was identified as being on the fast-track. So, being on the fast track, it was suggested that I spend a year at Yorktown Heights which was the headquarters for the Research Division. This I did in 1975, '76. Moved the family back for a year to White Plains, New York. The Lab was located in Yorktown Heights, New York. Very enjoyable year.

7-00:13:02

**Wilmot:**

Professor Lester, when you describe those three tiers, which tier were you in, do you remember?

7-00:13:06

**Lester:**

I don't think I ever really knew.

7-00:13:10

**Wilmot:**

Was it kind of like private information?

7-00:13:11

**Lester:**

Oh, yes! Held by management.

7-00:13:14

**Wilmot:**

It wasn't like open—

7-00:13:17

**Lester:**

And it was high level management, the top tier in the laboratory. Because it went across all layers of the laboratory. Even second and third level managers were part of this mix in terms of the total professional staff at the laboratory.

7-00:13:36

**Wilmot:**

So, you didn't have a sense of where you placed in relation to everyone else?

7-00:13:40

**Lester:**

Well, I thought I placed high just based upon how I was treated. And also, my independent assessment of salary increases, it seemed to me quite reasonable, so obviously, I was doing okay. I think I mentioned before that I had separately gotten this grant which was somewhat unusual from the Office of Naval Research. So that was helpful. From my perspective, that enabled these postdocs to come and work with me though management indicated or stated that there was a disconnect between having a grant and having a postdoc. The reality of it was that it wasn't that way as far as I could see. [chuckles]

7-00:14:19

**Wilmot:**

I think one other thing I was trying to clarify for myself is hierarchy and management structure at IBM. You've said, "Well, you know I was an independent operator and my boss was Clementi."

7-00:14:43

**Lester:**  
Yes.

7-00:14:47

**Wilmot:**  
But was it like being part of a think tank?

7-00:14:48

**Lester:**  
Well, Clementi was head of the department, but within that structure there were first-level managers. Typically the first-level manager position rotated among people in the group. Because being a first-level manager meant you had to write the appraisals for everybody else in the group.

7-00:15:06

**Wilmot:**  
So it wasn't a coveted position.

7-00:15:22

**Lester:**  
No it was not. Because what it did was take time away from the things you had been doing. Maybe you did it for a while to gain experience at the position, but very quickly, most people after a year, year and a half, said, "Let me out of this!" Because you had to learn the research activities of all the other people, be able to talk about those knowledgeably to the next level of management upwards, and to handle all issues related to them. And you had no control over what they did! We were independent operators, as I described. So, no, it was not a particularly coveted position as far as I could see.

7-00:15:49

**Wilmot:**  
Did you take a turn doing that?

7-00:15:50

**Lester:**  
Yes. When I came back from Yorktown Heights being on the Technical Planning staff, I became manager of the group.

7-00:16:01

**Wilmot:**  
Did you and your colleagues, did you socialize outside of work? Were your families' friends?

7-00:16:07

**Lester:**  
Oh, there wasn't too much of that. There were some people, for example, a fellow named Doug McLean, who we knew very well, from my days as an undergraduate at the University of Chicago, an Australian who interacted with the family from time to time. Paul Bagus who was at the University of Chicago with me. We were in freshman physics together. He lived around the corner from us in San Jose. We'd socialize from time to time. The other people in the group? No, not really. It was not a major focus of social activity in the Lester family to interact with my IBM colleagues, no.

7-00:16:45

**Wilmot:**

The culture in the lab, was it a culture of colleagues really interacting and hanging out and having beers together?

7-00:16:53

**Lester:**

I would have beers every Friday with the group. We would routinely go to the neighborhood dive and have a beer after work on Friday. That's something we routinely did, the four of us. It was Bagus, for a while, Bowen Liu, Doug McLean, Megumu Yoshimine, and whoever else we had visiting who would be interested in drinking beer. Visitors meaning other postdocs who were associated with one or more of us.

I'm reminded of the days of Schlitz, but anyway.

7-00:17:19

**Wilmot:**

What is Schlitz?

7-00:17:20

**Lester:**

It's a beer, a Milwaukee beer, you've never heard of it? [laughs]

7-00:17:27

**Wilmot:**

I'm not much of a beer drinker.

7-00:17:29

**Lester:**

Nor am I, as far that's concerned, but on Friday nights, I would have a beer.

7-00:17:34

**Wilmot:**

You know I'm talking about Heineken, I'm talking about Miller, I'm talking about Corona, But Schlitz I hadn't heard of.

7-00:17:40

**Lester:**

Well, you don't find it anymore. Miller and Budweiser were around, but—and Budweiser was awful then, is awful now. This is on tape? [laughs] I just don't care for it. Heineken's became popular but at that time, there were other foreign beers. There were Grolsch, a great Dutch Beer, and you can get that presently. That's very nice. We were drinking primarily American products back in that timeframe.

Oh, interesting thing, the second guy to come work with me, Joaquin Schaefer, from Munich, the entire time he was in California, he never drank wine. So when I saw him in Munich some years later, I discovered that he was a great wine connoisseur. I said, "Why didn't you drink any wine?" He said, "Oh, it gave me gas, American wine." [laughs] I cracked up. I said, "Wow! This is interesting." In any event, he was a very interesting guy, we had a lot of fun together. He worked in the coal mines in his youth in the German area. He was a little older than me.

7-00:18:54

**Wilmot:**

Was this the one whose father owned a vineyard?

7-00:19:03

**Lester:**

Oh no, that fellow was an associate of a fellow named Peter Toennies. I'd have to look up the papers to find out who I'm talking about. I can see him in front of me but I can't remember his name. But he brought a bottle of German white to the lab to give to me in light of our collaborative effort. Oh, it was great. German whites can be very good. The reds are a little weak. [laughs] His name was Manfred Faubel.

7-00:19:27

**Wilmot:**

Was Joaquin was actually the one who—how did he make the leap from being in a coal mine to being a chemist?

7-00:19:34

**Lester:**

Oh, just education, going on to the university—oh, no he was a physicist. My collaborators from Europe almost exclusively were physicists.

7-00:19:41

**Wilmot:**

Why was that?

7-00:19:44

**Lester:**

Because the kind of work I was doing was not done in chemistry departments in Europe. It was done in physics departments. So this is an aspect of the culture, in terms of science, that you find in the respective places. In the U.S., you don't find molecules studied in physics departments; molecules are studied in chemistry departments. In Europe, they were still studying molecules in physics departments. In terms of theory, and in terms also of high level physical chemistry experiments, in Germany, in France, most of these places, theory was done in physics departments; chemistry departments basically were doing molecular synthesis, making molecules, that sort of thing. A different focus interests are found in the respective departments in the different countries.

7-00:20:35

**Wilmot:**

Did that practice of socializing on Fridays extend out of your group that you headed in IBM? I did not head this group. The group I headed was made up of some other as well as other of the theory bunch. Did it move out beyond the four of you?

7-00:20:49

**Lester:**

I don't know what other groups may have been doing. I have no idea. This was just our own little group of theorists.

7-00:20:57

**Wilmot:**

[pause] One of the people I spoke to, I think his name is Alan Aspuru-Guzik?

7-00:21:21

**Lester:**

Oh yes, Alan?

7-00:21:25

**Wilmot:**

He mentioned that while you were at IBM, you worked with a group of UC Berkeley students period.

7-00:21:32

**Lester:**

I worked with some, yes.

7-00:21:32

**Wilmot:**

Can you tell me a little bit about that? What did you do with the students?

7-00:21:36

**Lester:**

They came to work with me on research projects. And so, a good deal in both cases. There were only two. What they did for their PhDs was done with me at IBM Research.

7-00:21:45

**Wilmot:**

How did that come to happen?

7-00:21:46

**Lester:**

Oh, interactions with faculty here. My neighbor across the hall, William Miller, joined the Berkeley chemistry faculty in about '66 or '67. And another person who came about the same time was Henry F. Schaefer, Fritz Schaefer, who is now at the University of Georgia. And they were interested in what I was doing. Miller is also a scattering theorist. He was building an approach to what we call semi-classical scattering whereas I was doing full quantum scattering. So the kind of thing I was doing was relevant to his work insofar as it provided a test against the approximations which were being made in terms of what he had in mind to do. So, the two students—Barbara Garrison was one and Andrew Razkowski was the other—on a daily basis, they would commute to San Jose from Berkeley to work with me.

We published papers together. It was clear to me, two bright young people, who were in many respects as sharp as the postdocs I was getting from Europe. So it also became clear to me that, 'Gee, that's why those guys are so productive up at Berkeley. They also have students who are exceedingly capable.' In that respect, Berkeley does very well in terms of good students applying and being accepted to the program. Barbara is actually a past Chair of the Department of Chemistry at Penn State University. Andy went into, I think, defense studies. I don't know where he is. I think he went to work for TRW, but I'm not certain about that.

7-00:23:38

**Wilmot:**

TRW, what does that stand for?

7-00:23:41

**Lester:**

I think it's Thompson-Ramo-Wooldridge, but I'm not certain. It's a company.

7-00:23:56

**Wilmot:**

I thought it was an acronym for a defense section of the government—

7-00:23:59

**Lester:**

It does defense work, yes. It's not an agency, it's a private company that does research like Raytheon, Inc.

7-00:24:11

**Wilmot:**

Understood, Lockheed, et cetera. Well, my question for you is what did it mean to you—what was the company kind of saying to you when they said, "We want you to go to our headquarters in New York?"

7-00:24:47

**Lester:**

No, the research lab was based in Yorktown Heights, New York. The company headquarters was in Armonk, New York. Different locations.

7-00:25:02

**Wilmot:**

Rockport, don't know where I got that from. But in any event, so what did that mean for you in terms of your career, what was the company saying to you when they said, "We want you to go to the research headquarters."

7-00:25:12

**Lester:**

Oh, I was on the fast track, I needed to learn more about the company, how I might contribute to the company. That's when I discovered, after that year, I really didn't want to marry this company. Because it would have meant moving out of research into other branches, divisions of the company. And quite frankly, self-examination told me I was not interested in doing that. I was interested in the professional directions that I had chosen to pursue, to do research in theoretical chemistry. Beginning with collision theory and then changing later on.

7-00:25:41

**Wilmot:**

What about that experience kind of illuminated that for you, in Yorktown?

7-00:25:54

**Lester:**

Oh, just the other kinds of considerations and issues we would discuss. I can't put my finger on any particular aspects of it, but none of it struck my fancy, as making me excited about doing

things. Furthermore, once we hit five o'clock there, I would switch over to my research program which I was maintaining through the period I was on a technical planning staff. When you go on leave like that, you have to keep research going or else it will dry up. At that time I was at IBM, the only research being done connected with my program would be done by me. I didn't have anyone—I guess, actually there may have been Frank Rebertross working with me at that point but he may have returned to Germany by then. I'm not certain. I'd have to look that up and let you know. But I was continuing to work on my scientific projects, you know, after hours and so forth. That was more of a driver for me than the issues of IBM at that time.

7-00:27:01

**Wilmot:**

Sounds like a very exacting lifestyle if you were both working your nine to five and then also basically having another job on top of that, concerned with sustaining your research.

7-00:27:15

**Lester:**

Yeah, that's the way it works over here. [chuckles] In that sense that when I went on leave in the nineties, too, NSF, it was the same thing. Five o'clock came, I finished my activities for NSF and then, with the time change of three hours, plenty of time to interact with my research group sending materials back and forth, to move the agenda in that regard.

7-00:27:35

**Wilmot:**

What did that mean for your family to move to New York? What was that like?

7-00:27:39

**Lester:**

Oh, they thoroughly enjoyed it! We rented this big old house. I think I may have mentioned this. 99 Soundview Avenue. Now, Soundview, in White Plains, was a terrific street, at least that block. Because the trees overarched the street and met. So, it was like a picture of a New England or New York Street. This big old house, I think I may have mentioned was one which we think was one owned by Stieglitz, the famous photographer. We found some works in the basement. The house was in various levels of decay, depending upon what part of the house you looked at. There was a servant's area in the back. Some of the doors couldn't be locked. I told you about seeing someone coming up the stairs one day, who said, oh, are some other people here? The house was formerly a commune we learned from one of the neighbors. It had more entrances and exits than you could shake a fist at. But it was a grand old house with wonderful parlors and porches and living rooms, dining rooms, kitchen, all sorts of—I've never lived in a house quite like that before or since. It's a house of the lifestyle of the rich and famous once upon a time, on this very block.

The kids went to White Plains schools, for my daughter it was the middle school or the junior high. My son definitely went to the middle school at that time. And they enjoyed it.

7-00:29:11

**Wilmot:**

The prints, the work you found in the basement, what were they?

7-00:29:19

**Lester:**

Just pictures. We saw the name, just hung it on the wall. There they remained.

7-00:29:25

**Wilmot:**

Do you still have them?

7-00:29:27

**Lester:**

No, I don't have them. They were just there, part of the house.

7-00:29:30

**Wilmot:**

I understand now. While you were there, what did you do with your house in San Jose? Did you rent it out?

7-00:29:37

**Lester:**

What did we do with our house in San Jose? I don't remember.

7-00:29:44

**Wilmot:**

Okay. It was there when you came back, you still had that house?

7-00:29:47

**Lester:**

Oh yes, yes, yes. Did we rent it out? I don't think we rented it out. No. I mean the company took care of you in that sense, unlike the university. You had a living supplement for living in New York and so the income taxes at the end of that year were interesting—federal, state of New York, state of California, and all of that. The additional funds provided for living in New York of course would go into income, so you'd get shot up another bracket and all that. So that was the first time we got professional tax help. I said, "Help me, somebody, out of this morass." That was two years running, since we overlapped from fall of '75 through the following summer of '76. So, I can't say for sure that we rented the house out. Somehow I don't recall that we did. We had been loath to do that sort of thing.

7-00:30:54

**Wilmot:**

You came back then in 1977?

7-00:30:56

**Lester:**

'76. Fall of '76.

7-00:30:59

**Wilmot:**

And so you had another four years at IBM before you came to Berkeley?

7-00:31:03

**Lester:**

No, no, no, no. I went on leave in '78 to head the NRCC. I came back to IBM Research in San Jose and it had basically been said by the second level manager, two managers above me, that, "Gee, things didn't go well in Yorktown Heights." I said, "Well, what do you mean?" He'd heard and so forth. This really grated at me in the sense that obviously there were these discussions going on with respect to my performance at Yorktown Heights. I was not a person attuned to do the things that it may have been that the Director of Research might have thought he would have liked to have done, which was the sort of exercise my counterparts were carrying through. And maybe that was also a comment on my desire to pursue IBM as my ultimate professional direction. Nevertheless, to say that I did not perform well, I thought, was totally wrong and inappropriate. It bothered me to no end after I came back. And I was antsy from that point on. I really needed to think about my future—I did not think that it existed in IBM—and to think about an academic alternative. And when the NRCC proposition came up, then I threw my name in the ring for Director.

7-00:32:28

**Wilmot:**

I have a question. What did your horizon look like at that time, when you became antsy being at IBM?

7-00:32:35

**Lester:**

I was at that point—you know, I returned as a manager of the group. But if you look around, where are you going? Maybe to be second level manager? And after second level manager, third level manager is head of a principal division of that laboratory. And then the next level up is director of that laboratory, which is a department of IBM Research in total, under the director in Yorktown Heights. It also became clear to me that the particular department, which was created for Clementi, was not something that the then director of IBM Research really valued that much. He was an outstanding mathematician, operations research person. But that was irrelevant to somebody doing molecular scattering, to the IBM mission, you might say.

7-00:33:24

**Wilmot:**

What was his name?

7-00:33:26

**Lester:**

Ralph Gomory, present head of the Sloane Foundation who I know quite well. [pause] About as well as one can know somebody quite well with those relationships. We've met and interacted on a number of occasions since then, in particular, around support for PDP, Professional Development Program, along with Frank Morrison.

7-00:34:31

**Wilmot:**

Okay. When I asked the question about what did your horizon look like, what were your options looking like outside of IBM before the position came along with Lawrence Berkeley Lab?

7-00:34:46

**Lester:**

Oh, I hadn't set my sights on anything in particular. I came back to drive the department—

7-00:34:59

**Wilmot:**

“Maybe I'll go to another corporation—?”

7-00:35:02

**Lester:**

No, I had no thought about going to another corporation. There were only two principal research corporations. There was IBM and Bell Labs, two excellent companies to work for. But in light of what I was seeing, I was just antsy, “Gee, guy, what are you going to do?” Not going to marry the corporation. The idea to a great extent is that you bring smart young people into IBM and you appreciate the problems of the company then you move in those directions to address those issues. And not everybody does that. So, some people come and some leave, some stay, and some rise in the system, and some head out and go other places.

7-00:35:40

**Wilmot:**

It's interesting also because you really were there in that transitional time when the whole idea of what it meant to be a “company man” and really be married to the corporation was really changing. Right before you were there is when people were married to corporations and stayed married for their life time, and it was really during this time that this really changed.

7-00:36:01

**Lester:**

Well, I think we have to differentiate aspects of the company. The Research Division is rather different from other parts of the company. I think in other parts of the company, that was the case to a great extent and to a great extent probably continued to a fair extent, though that has been dissipated over time by nature of mores of society, nowadays, in terms of peoples' independence and all of that sort of thing. But there was always more independence in the Research Division than you would find elsewhere, by nature of the animal. That's what we do. We do certain things of our choosing. We do things that we believe will be of value. And those are identified by us, the researchers. So, it's a very different kind of mindset than you would find in sales and marketing and various other areas.

7-00:36:44

**Wilmot:**

Very interesting. Okay, well, can you talk to me a little bit about how you learned about the National Resource for Computation in Chemistry? How you learned about that organization? It's formation?

7-00:37:01

**Lester:**

Yes, yes. It dates back to the mid-sixties, the first study I learned about when I was a postdoc and I had just joined the staff of the Theoretical Chemistry Institute in Madison, Wisconsin. The first study was an outgrowth of a National Academy of Science's study of what the field of chemistry needed in terms of computation. That was followed in the early seventies by another study which discussed what form this particular activity should take. So there was a blueprint for how it

should operate, what it should do. And then the National Science Board, I guess, decided in '75-'76 that they would go ahead with an experiment to look at this concept. So the NRCC was born as an organization in October 1977. Afterwards there was a competition to site the facility that involved Lawrence Berkeley Lab, Argonne National Lab, and Brookhaven National Lab, Oakridge National Lab. LBL won and the then director, Andrew Sessler, was charged with actually finding a director for this activity. A policy board was created, which included some Berkeley folks. Actually Miller across the way was on the policy board of the NRCC. A number of folks from a number of other major institutions from across the country.

And I think I did mention that the heads of the top ten chemistry departments in the country were against the notion of the creation of a national organization for computation in chemistry. I knew about the politics of this. So they wrote the National Science Board asking that this experiment not be run.

7-00:38:36

**Wilmot:**

You may have mentioned it but I don't remember that. Can you tell me what were they against?

7-00:38:42

**Lester:**

Well, after all, from their perspective, what role had computation played in the development of chemical concepts as far as they were concerned vis a vis other areas? So they felt it was not the place to put a certain amount of money—in this case it must have been three million dollars—for a three year experiment, to see what the benefits might be of such an organization. It's a zero-sum issue. You're taking monies out of the pot for chemistry to be used in this way, which they were not supportive of.

7-00:39:10

**Wilmot:**

What are the arguments for the use of funds in that way, for computational techniques in chemistry?

7-00:39:18

**Lester:**

That they can assist all areas of chemistry in a wide range of ways, in terms of the development of software which was a part of the *raison d'être* for the NRCC, how it is you provide software, document software which enables chemists to start from a vantage point far beyond where many could start because these codes had been written and had been tested and would be robust. The other aspect was a workshop program which, in essence, would bring together key people in given areas of chemistry to respond to the question, "How can computation advance the development of this particular area?" To a great extent, people in my area, in theory, had been using computers routinely for many years. In other areas, they had not been. The range of subject matter which the studies had established that conceivably could be advanced by computation, included crystallography, chemical kinetics, quantum chemistry, physical organic chemistry—these are just topics included in the early NRCC studies as to how computation might assist the development of chemistry.

So, I actually organized workshops with my staff in the first year in four areas, the second year I think maybe in five, in which we brought together key people in these areas for workshops of roughly a week's duration for which a report was written. Remember I mentioned to you those reports up on my shelf, were actually reports of those workshops. And so, those were key aspects. In addition, of course, I had a staff of young people who needed to do research themselves in order to advance their own careers while at the same time helping to organize these workshops and helping to enhance the software that the group was putting out for use by chemists across the country. Also a critical dimension of this time period was to inform chemists that this organization was active and was going about these tasks. I actually have a time line of what we did from day one when I arrived up until the time of the review in 19—this must have been early '81. I don't really remember now, for sure, exactly what we did during the time available.

It was still a very difficult situation because of the attitudes expressed earlier regarding whether or not this organization should go forth and whether or not it was a good investment and so on. So we had this review and the review report said, "Well, it's not totally clear, we should continue for two years and review you again, but in the meantime you should lose all of your people, and just sit in Berkeley and give grants to people to develop software outside." Then the new LBL Director, David Shirley, and I agreed that this was nonsensical, that it made no sense whatsoever, that the successes of NRCC were predicated upon having a knowledgeable and capable young staff and to continue in the mode which had been suggested by the review made no sense whatsoever.

An aside here was that NRCC—and maybe not so much an aside—was a jointly funded activity by the National Science Foundation and the Department of Energy. It was said by some that had it been solely supported by the Department of Energy, it would have continued because the Department of Energy was used to supporting major facilities such as the multi-purpose laboratories: Argonne, Lawrence Berkeley, and so forth. Whereas NSF made a lot of its judgments based on panel reviews, and that's where a lot of the mix of sentiment existed you might say.

7-00:42:49

**Wilmot:**

That's really interesting. What did you learn about the way that kind of popular knowledge and value systems change in scientific communities?

7-00:43:01

**Lester:**

What did I learn? I mean, it was clear, right in front of me! That we were driven and governed more by the NSF side of things, in terms of the panel review and so forth, than the Department of Energy side. And this came out in subsequent discussions I had with major program players at the Department of Energy. I gave—I don't even have a listing of them, maybe I have to go back and look it up—what talks I gave at various meetings. I was on the circuit about two years or so, going to almost any meeting where there might be a forum to talk about the contributions that NRCC could make to researchers activities. Crystallography meeting at the University of Oklahoma, I'd never been to Norman, Oklahoma before. At all kinds of meetings, there would be a session devoted to the NRCC. Also, actually I was invited to Japan to give a talk on NRCC and one hosted by a counterpart organization created in England, based on the NRC (National

Research Council) studies which led to the creation of the NRCC. We signed mutual support agreements with—this was the Darsebury Laboratory in Darsebury, England. Signed an agreement with them and also with the Institute for Molecular Sciences in Okazaki, Japan. So we had a strong multinational effort underway with a very small group. The funding was only three million and I had a staff of maybe twelve scientists and three or four staff persons.

And I should add, when I arrived in February of 1978, there was one person opening mail for the organization at LBL. We had two rooms. So, I had to get space and hire people and run ads and so forth. Hire people to come and do the work of the organization. It had been heard about so there were a number of young people who were very excited about the prospect of working in the organization. I remember one in particular who was involved with graphics, a quantum chemist who came from University of Illinois, Chicago, who had done graphics for the original Star Wars film. He came—his actual interview was showing a video of how indeed, he had programmed the sequences of planes flying down channels, which was the rave at the time. Coming out of his work and that of another guy, a Harvard crystallographer (Arthur Olson) who wrote some of the early general protein crystallography software, which was a real plus of our activity because we had a workshop subsequently in which software was written to assist protein crystallographers in doing their kind of analysis. This was strictly an NRCC funded activity, which was a real feather, I think, in our development.

We attempted the same thing in my field of quantum chemistry and it went down to defeat because people had such strong points of view with respect to how indeed such programs should be written. A critical aspect of portability and of interchangeability was that indeed, you'd have protocols, subroutine protocols that were agreed upon among the various groups. Participants could not agree to that as they pursued their various avenues. So that particular activity went down to a flaming defeat in the sense that nothing came out of it from the meeting. There was no agreement, so nothing positive except to bring people to the table. That was about it.

7-00:46:33

**Wilmot:**

Were there some kind of prevailing schools of thought about how programs should be written? Did you just tell me the answer to that question?

7-00:46:39

**Lester:**

Yeah, each had their own, and subsequently people began to develop their own software to sell as a program product. The code in itself was a more important aspect of quantum chemistry than it was of protein crystallography. It was just a tool for protein crystallographers but it was the research tool for quantum chemists. So I think that underlying difference was the reason why indeed we were not successful in quantum chemistry to have generalized software like that.

7-00:47:13

**Wilmot:**

If you were to speak of kind of the legacies of the NRCC in the field, what would you point to or would you point to some legacy?

7-00:47:22

**Lester:**

Yeah, I would point to the workshop reports. I would point towards one particular piece of software in quantum chemistry which was written by my staff at that time, GAMESS, the name, persists to this day though the code has been modified greatly.

7-00:47:40

**Wilmot:**

Games?

7-00:47:36

**Lester:**

G-A-M-E-S-S, Generalized—I can't remember what it stands for but I would have to get the software catalogue down. It had its beginning in our organization, was modified both in the U.S. and in England separately. It's still in high demand. It's actually handled by a researcher (Mark Gordon) at Iowa State University at the Ames Laboratory, part of the Department of Energy multi-purpose laboratory community at this point. I think also just the whole philosophy of such a center and what it can provide.

I also went on record shortly thereafter with regards to the point that I didn't think a similar disciplinary center should exist in that a center should always be multi-disciplinary after that simply because otherwise it becomes such a target for the discipline as such. People band together who have a common research dimension in terms of computation and bring together sufficient strength to withstand others in their given community who may be against the notion.

7-00:48:40

**Wilmot:**

So that was an argument for—?

7-00:48:41

**Lester:**

Multi-purpose supercomputer center?

7-00:48:44

**Wilmot:**

Interdisciplinary?

7-00:48:44

**Lester:**

—centers, computation centers, which were born at NSF within a year or two after the close of NRCC. In that regard, in the first year, I was not asked to participate in the advisory committee. A friend of mine told me later, “Oh no, they couldn't have you involved since your “skirts were dirty”, since you were part of an organization that closed.” So, the next year I was asked to serve on the advisory committee, bearing in mind that I had more experience in such activities than anybody else in the country, in the country, based upon what we had been dealing with. So I found it interesting, the politics of science, how these things operate.

7-00:49:20

**Wilmot:**

And there are lots of politics.

7-00:49:21

**Lester:**

Oh, there are politics.

7-00:49:22

**Wilmot:**

Yeah, people think there is some kind of universalist approach to science—

7-00:49:30

**Lester:**

A lay view.

7-00:49:37

**Wilmot:**

—that they are pure and removed from any kind of jockeying around or being political and there's always a whole political terrain as well.

7-00:49:43

**Lester:**

Yeah, I think in our review process, as a matter of fact, the committee came with a given point of view. Some of the early reviews along the way, at NSF, when I would report on our directions to the NSF chemistry advisory committee, they would say, "Well, looks like you're doing great things! But still don't like the idea, the notion of the organization." This kind of thing. Some people went so far as to say, "Well, it's got a great director, but I don't like the notion, I don't like the idea, the set aside for theory." It was the model that you would have a principal investigator and his or her associated students, postdocs, and so forth, the cottage industry, you see. This was changing the cottage industry concept into one of a national organization with bureaucracy and all that sort of thing. This model was anathema to the chemistry community at that time.

7-00:50:33

**Wilmot:**

To that cottage industry model?

7-00:50:36

**Lester:**

It was the one that was preferred. This was the way chemistry had operated for many years.

7-00:50:44

**Wilmot:**

Can I ask you a little bit about who hired on to work with you, your twelve scientists?

7-00:50:48

**Lester:**

It's all well documented, I can pull out stuff.

7-00:50:51

**Wilmot:**

Maybe I should ask you first, what were your hiring priorities and then how the people came and fulfilled those priorities?

7-00:51:01

**Lester:**

Yeah, well, basically from the second document in terms of areas to be covered, I knew what areas of science, of chemistry that we wanted to deal with. So the main point was to find people with expertise in these areas who were good scientists and had good programming skills. So, one of the people had been associated with me as a postdoc at IBM, Michel Dupuis, came and joined the group, originally from France, gotten his PhD in the States at State University of New York at Buffalo. Then a fellow by the name of Darryl Spangler, he was also a quantum chemist, came from University of Kansas. John Wendelowski was also a quantum chemist, came from Yale. David Ceperley, the fellow who introduced me to quantum Monte Carlo came from a post doc at the Courant Institute, had his PhD in physics from Cornell. Oh, Stan Hagstrom, who was a senior faculty member from Indiana University, sort of came as an overseer of the software development aspects we had in mind. Terrence O'Donnell came from the University of Illinois at Chicago, he was the guy in graphics, I had also previously mentioned. Arthur Olsen, who worked with O'Donnell on the development of a graphics capability for protein crystallography. He was a crystallographer from Harvard who had gotten his PhD from Berkeley and postdoced at Harvard. Do I have everyone? The last year of the organization, Peter Reynolds joined us to actually work on this quantum Monte Carlo project that I've been talking about. He was a research professor from Boston University who had gotten his bachelor's degree from Berkeley physics and his PhD from MIT. He was on the staff of Boston University as a research professor when he came. He wanted to get back to the West Coast. Anyone else? I think that was the group but I could check that. I have reports on this stuff which tells you exactly what people did and so on.

7-00:53:31

**Wilmot:**

Were there any women on your staff?

7-00:53:33

**Lester:**

Only the support staff. There were no women scientists.

7-00:53:36

**Wilmot:**

There were no women scientists in your group?

7-00:53:40

**Lester:**

In the NRCC, no.

7-00:53:40

**Wilmot:**

If there was like a vision for who your audience was, for the NRCC, in terms of who you were serving, who your research would benefit, who would that be?

7-00:53:57

**Lester:**

That's the research and the software. The chemistry community. The national academic—well, the academic and the industrial community, by nature of the software we were developing. It was a broad field.

A difficult aspect which occurred was a major survey that the committee sent out to chemists all over the country, “How do you use NRCC.” And almost two thirds hadn’t! I mean, in two years. “And if so, what was the product and what was the experience, and blah, blah, blah.” Those numbers came back. Hey, you live with it. But I view that as a certain short sightedness on the part of academic scientists for the most part, regarding how to grow an organization, how to appreciate these things. One of the reasons or impetuses for me to put my hat into the ring is that I had managed in an industrial lab; this was my field. So it seemed like a natural sort of thing to pursue.

I should add that there weren’t that many good candidates from my understanding for the position because of the politics related to it and its creation that I’ve described to you. Another candidate, who is an outstanding scientist from the immediate area, was Bernie Alder. The story is—Bernie’s a good friend, at that time I didn’t know him well—according to a good buddy on the policy committee, he said, “They chose you because they felt they really couldn’t handle Bernie.” He’s a much stronger personality if you ever meet this fellow. You do things his way and that was it. So, it became clear afterwards that from selected people—maybe not so clear, but a certain point of view was expressed, “Well, you have to have some major scientific breakthrough from the organization in order for people to be supportive of it,” which was not the *raison d’être*. I mean you could do that sort of thing, not necessarily needing a national organization like this. But wasn’t it the case that one should assist and advance the research efforts of others in the field, with the software and the workshops and identifying issues and so forth. So there was all this sort of mixed point of view which began to exist maybe about a year or so or better into the organization. More than a year, because it took about a year to get to the—I’m slowing down—were the first workshops in ’79 or ’78? No, actually I think we put the first workshops on in ’78. I’ll have to check that. And if that’s the case, that means I arrived in February and we had workshops going by June. So we hit the ground running.

Oh, I should add another important aspect. Based upon the review cycle, I would have been reviewed in a year had I not asked for an extension. I got an extension in time so the review was delayed until the second year, enabling us in the last year to close shop. So this was a whirlwind activity in many ways.

7-00:56:39

**Wilmot:**

When you say reviewed, “I”, do you mean you, personally, or NRCC?

7-00:56:42

**Lester:**

NRCC.

7-00:56:43

**Wilmot:**

Who did you answer to? You were director of the organization.

7-00:56:48

**Lester:**

But I was also an Associate Director of the Lab. So I answered to the Director of the Lab.

7-00:56:52

**Wilmot:**

The Director of the Lawrence Berkeley Lab. Well, that brings me to this other question which who was the Director of the lab at that time?

7-00:56:58

**Lester:**

Andrew Sessler. But I think it was during the time in NRCC that the leadership changed. Because by the time of the review, David Shirley was the Director of the lab.

7-00:57:12

**Wilmot:**

How did NRCC kind of fit in with Lawrence Berkeley Lab?

7-00:57:17

**Lester:**

Oh, it existed. It was a very different animal from the other divisions in terms of the tremendous service dimension associated with it. The other divisions of the laboratory were big science in selected areas. Nuclear physics was and still is a division. Molecular and Materials science, which has now been broken up, many faculty in physics and chemistry were in that particular division. Accelerator division was another one. That is, the big accelerators, that was a separate division of the laboratory. Then they had a support division and so forth. So, it (NRCC) was atypical, and very much smaller, in terms of budget. These other divisions had multi-million dollar budgets, very different in that sense.

7-00:58:03

**Wilmot:**

Was there a strategy for fitting into that kind of a larger umbrella organization?

7-00:58:08

**Lester:**

That was the least of my worries. The idea was to get out and hit the chemistry community with some impact in order to establish our existence. Internal issues? Not really. The main internal issue dealt with getting the salary committee to buy into a requirement that I had, from my vantage point, of being able to pay higher salaries than they were used to. If I'm going to compete with the outside on hiring young people, then I had to be competitive with the best that's out there.

7-00:58:34

**Wilmot:**

They were compliant with that?

7-00:58:38

**Lester:**

Yeah, after I went before them and told them about the need for it. I had to argue that point to the salary committee and they eventually said, "Okay, we'll make this exception," with the hires that I had, but that was unusual. You should just be happy to come to Berkeley, you know.

7-00:58:51

**Wilmot:**

At that time, what was your relationship like with Berkeley's Department of Chemistry?

7-00:59:00

**Lester:**

Well, as I mentioned, one person, my neighbor across the hall, was a member of the policy board. But aside from that there was relatively little. A number of people talked about that as being a problem downstream, that is towards the review process, because in a sense, there had been a hands-off role by the Department of Chemistry in terms of NRCC. That's from a certain perspective. But from another perspective, it was the thing to do, otherwise it would appear that the Berkeley Chemistry Department had taken over NRCC. So what is this national entity if the Berkeley folks own it? So, you are caught on the horns on this dilemma in terms of involvement of the Department as such with this effort. And that still exists in terms of national activities at Lawrence Berkeley Lab, something called the Advanced Light Source which is a photon facility at Lawrence Berkeley Lab today. It's a national organization; senior management is done by Chemistry Department faculty who are also LBL staff members. The Director is right across the Leone Hall, Steve Leone. They have to have a major outward vision or focus in terms of the communities they serve. This is always the case. This is one of the major arguments for LBL being a place for siting this effort because of its past experience with national organizations, research organizations in chemistry and physics, primarily physics, not chemistry. I should change that.

7-01:00:20

**Wilmot:**

How did you make the transition into becoming a faculty member here at Berkeley?

7-01:00:27

**Lester:**

How did I make it?

7-01:00:30

**Wilmot:**

Yeah, how did that happen? How did you come to Berkeley as a faculty person?

7-01:00:34

**Lester:**

Well, when NRCC was closing, some faculty expressed interest in my staying on. I indicated that there was only one way I would stay. Some thought, "Well, staying on at LBL." That was not something I viewed that I wanted to do as such because of what I viewed to be the instability associated with the smaller support base that existed there and the uncertainty of it. Since you are solely dependent upon grants from the agency. Well, it turns out there's a long history, that maybe some of my concerns should have been less of an issue but the only way that I felt that I really wanted to do it was to come as a faculty member. And it was expressed by some—some were very supportive, in particular, Yuan Lee was, and others, as I later learned, were very supportive, too, mainly the physical chemists and theoretical chemists here. But it was also expressed at the faculty meeting in which such decisions were made, that you never knew what the outcome might be. I know that from my earlier experience at the University of Wisconsin when I wanted to go on the academic step ladder.

7-01:01:46

**Wilmot:**

Let's stop for one minute.

[interview interruption]

7-01:01:52

**Lester:**

Okay, the issue that you are asking a question about is one of whether or not the faculty would vote to have me join the faculty. I think Lee went on to say he wasn't sure—this is a very private conversation, you know—what his colleagues might decide.

7-01:02:09

**Wilmot:**

Lee?

7-01:02:10

**Lester:**

Yuan Lee. He won the Nobel Prize in chemistry in '86. We're talking '81 at this point. He was very supportive. I had known him, oh, for many years, visited him at the University of Chicago when he was there in the early seventies. And that was funny because he said, "Gee!" Yuan's a very regular guy. He talked to Stuart Rice who was my Master's advisor at Chicago and Rice said, "I know that name, Bill Lester, he played basketball!" Or, "plays basketball," he said. This was hilarious to Yuan, you know, because I was known for science at this point, and the only thing that Rice recalled was the basketball.

In any event, so the question was open regarding whether or not the faculty would vote to have me join. This had also been an issue at the University of Wisconsin, where I wanted to join the faculty. And I went to IBM because it became clear that the director of the laboratory—I had mentioned this earlier, the Theoretical Chemistry Institute—was not supportive of my joining the faculty there. So my mentor, Bernstein, suggested I find a position elsewhere. And I took that to heart. It was about that process. "And don't tell Hirschfelder until the job had been cemented," because Hirschfelder had—I mentioned this—the capability of being very strongly for you or against you depending on the situation. And that was a significant variable.

7-01:03:30

**Wilmot:**

Who needs friends like that? [laughs]

7-01:03:33

**Lester:**

Yeah, yeah. Later on, Hirschfelder did come back and invite me to come and visit and possibly join the faculty. Would I be interested in this possibility? Quite frankly, I was at IBM, things had gone very well in terms of publishing and so forth. Well, the notion of going back to Madison in the wintertime—I mean, my daughter had suffered frostbite in kindergarten, has a slightly curved little finger from frostbite. Did I mention that? So, spending another winter in Madison was not something that appealed. Madison during the other months of the year was not bad. Summers could get to be kind of tough with all the lakes around, because the mosquitoes and other buggies. It was a very interesting place to be. I think I did mention some of the experiences that we had in Madison.

In any event, around the appointment at Berkeley, it was one of “Will it happen or won’t it happen?” And many of the folks were very supportive, and indeed, I was appointed a faculty member in July of 1981.

7-01:04:31

**Wilmot:**

Who was carrying your case? Who was carrying the baton for you?

7-01:04:37

**Lester:**

Can’t say, wasn’t there. This is something you never know for sure. But I know that—

7-01:04:40

**Wilmot:**

Did you come and give a talk or an interview?

7-01:04:43

**Lester:**

Oh yeah, absolutely!

7-01:04:45

**Wilmot:**

I’m sorry I interrupted you. “But you know that—?”

7-01:04:47

**Lester:**

I know from David Shirley that Brad Moore was very supportive, Miller, Schaefer, and theoretical and physical chemists besides Lee. And so that’s a very persuasive group, very strong scientists.

7-01:05:04

**Wilmot:**

And these were people that you knew in what capacity from where?

7-01:05:07

**Lester:**

As researchers, from being at IBM and their being up here. Actually, I had organized or was co-chair of a meeting in 1971 held at UC Santa Cruz. It was a joint Santa Cruz-IBM meeting that Clementi had started. And when I came, because of my experience in organizing things, he decided that I should take this over. So, I was stuck with being the co-chair of this thing. I had invited Moore to be a speaker. Yuan Lee had actually come. I didn’t know him at that point. But it was the big meeting at that point. IBM had high visibility in research on molecules. It was very successful. And so I got to know these people early on. And in terms of energy transfer I was involved with, I learned about Moore’s work when I was a graduate student at the Bureau of Standards. I met Miller when we both went to the Sanibel meeting about 1965. He was still a graduate student, it was the first year of my postdoc, we were doing some similar kinds of things. It was out of that interaction that these graduate students from Berkeley later came to work with me. So, on that basis, I knew these people, they knew my work quite well, more so than the standard situation.

7-01:06:25

**Wilmot:**

Did you come as an associate professor or as a full professor?

7-01:06:29

**Lester:**

No, I came as a full professor, full professor with tenure. That was the only way. I had run the national organization in computation in chemistry in the country. That's the only way I would come on board. Anything else would be ridiculous in my opinion. I was a competitor, in terms of senior appointments in this country, from my vantage point. And you have to know what your value is. If I'm being selected by a national committee to head NRCC, then nothing short of a full professor makes sense.

7-01:06:59

**Wilmot:**

Is there anything that was remarkable or significant that you want to tell me about your job negotiations?

7-01:07:06

**Lester:**

No. What negotiations?

7-01:07:08

**Wilmot:**

Alright!

7-01:07:13

**Lester:**

What do you mean?

7-01:07:11

**Wilmot:**

I mean alright! That's great.

7-01:07:19

**Lester:**

The level appointment, that was a step five, was the only reasonable thing at that point. You'd have to be here for a while for higher steps. No, that's not really true. But that's what I was able to generate. And negotiated with LBL for a significant research budget. Which has gone down every year since. [laughs] Started up here. [demonstrates] So, now I'm struggling research-wise in terms of the budget from the Department of Energy, LBL. But that's a personal thing in terms of how, indeed, the management views my work. That's the reality.

7-01:07:58

**Wilmot:**

We'll talk about that more later.

7-01:08:01

**Lester:**

Can't let this out before I finish my professional career. [laughs] Is that clear to you?

7-01:08:09

**Wilmot:**

Yes. Okay. At that point, was your family living here or were they still in San Jose? Were you still living in San Jose?

7-01:08:22

**Lester:**

Oh! That's another chapter of the story. When I started in February of 1978, I was living in San Jose, commuting to Berkeley to start this organization, staying overnight one night a week. Funds were available to do that, I stayed in every hotel in the area, in the Claremont before it was remodeled. You could stay at the Claremont for \$29.00 a night. These big old rooms, which had patched carpeting. [laughs] You should have seen the Claremont in those days. Stayed at the Durant. Where else? I've stayed at the Shattuck Hotel. I've eaten at most hotels and restaurants in the area.

7-01:08:59

**Wilmot:**

So, you were a hotel dweller.

7-01:09:00

**Lester:**

Well, for one night a week, for the one night a week, I would stay over. And then by June, I had a discussion with my wife, I said, "I can't take it." I was driving home. I had an amplified antenna put on my little old Toyota because I'd lose the radio signal going through Milpitas. [laughs] I mean, little stuff. And when I'd get home, I'd be like this [demonstrates] because of driving and be tired. The one night a week helped. So, we decided, well, we'd move to Oakland. Well, not to Oakland, we started in Berkeley. "Gee, I'm not coming here to do my job at the hill and buy a fixer-upper." Prices compared to San Jose were sky high. So we began to move further and further from Berkeley, crossed into Oakland. We had actually a pretty good realtor. And he identified this one house and we saw it and said, "Yeah, this would be it." It was a house owned by an ex-Oakland Raider—

7-01:09:53

**Wilmot:**

Okay.

7-01:09:57

**Lester:**

—who was moving his family up to Grass Valley somewhere. We really liked it. We live in a real California house. We lived in an Eichler—I think I may have mentioned that—with the glass and so forth.

7-01:10:04

**Wilmot:**

That was in San Jose, yeah?

7-01:10:05

**Lester:**

Right. And our living room has maybe sixteen foot glass dropping from the ceiling down, pitched in that direction.

7-01:10:13

**Wilmot:**

Currently.

7-01:10:13

**Lester:**

Currently, yeah.

7-01:10:14

**Wilmot:**

So this was house you moved into in 1978 and you're still there?

7-01:10:20

**Lester:**

Still there.

7-01:10:22

**Wilmot:**

And what part of Oakland are you in?

7-01:10:23

**Lester:**

It's called Sequoah Hills. If you turn the corner on Mountain and Sequoah, there's a little sign. As you work your way up, you know where the Sequoah Country Club is?

7-01:10:34

**Wilmot:**

Is this by Skyline high school?

7-01:10:36

**Lester:**

No, you have to drop down from Skyline and go further south. In other words, if you leave Skyline high school, continue on Skyline, to Keller, until you run into Sequoah. Looking out my living room, then you see, at one point before they built Ridgemont, all that was mine, because it was all undeveloped, and then they built Ridgemont, developed those hills over there, I said, "Destroying my vista!" [chuckles] But in any event, it's the country in the city, I thoroughly love it, I really do. I like where I live. The house isn't that old, the early sixties, but considering it's 2003, things are being done to keep it going.

So I moved then, in June, for the reason I indicated. The notion was I would move back if I went back to IBM. In point of fact, because of the appointment to UC Berkeley faculty, that never happened. That's where we are.

7-01:11:38

**Wilmot:**

Did you sell your Eichler home?

7-01:11:40

**Lester:**

Oh yeah, we sold the Eichler home to move into the house in Oakland. Sure.

7-01:11:46

**Wilmot:**

Let's close for today, is that alright?

7-01:11:48

**Lester:**

That's fine. "Is that alright?"

[End Audio File 7]

**Interview 5: August 19, 2003**

[Begin Audio File 8]

8-00:00:52

**Wilmot:**

Professor William A. Lester Jr. Interview five, August 19<sup>th</sup>, 2003 with Nadine Wilmot, Regional Oral History Office. Okay. Was there anything that you remembered that you wanted to add or modify from our last interview? Was there anything?

8-00:01:10

**Lester:**

All I know we had the last interview, but I can't remember exactly what we talked about. [laughter] No, I don't think there's anything I want to change at this point, but as we get into this one, thoughts may come.

8-00:01:22

**Wilmot:**

Okay, great. So at our last interview, we had you arriving at Berkeley with tenure. I wanted to ask you some questions about the lay of the land in the chemistry department at that time, in the early eighties. You came in 1981.

8-00:01:43

**Lester:**

Beginning of my appointment, yes.

8-00:01:45

**Wilmot:**

Just to start, what did the lay of the land look like in terms of theoretical chemistry here at Berkeley?

8-00:01:54

**Lester:**

Okay. Theoretical chemistry at Berkeley at the time actually was quite strong. William Miller had joined in the late '60s along with Fritz Schaefer. That's Henry F. Schaefer and William Miller. And even previous to that, Robert Harris had been appointed a faculty member here. He was someone I knew from University of Chicago since we overlapped; he arrived as graduate student my last year of undergraduate. And Miller and Schaefer I knew from interactions with me and my colleagues at IBM Research in San Jose, California. So, theory at Berkeley was solid. Those were the main people in theory at that time, so it was in good shape.

8-00:02:49

**Wilmot:**

And how did your work fit into the work of the theoretical chemists already here?

8-00:02:58

**Lester:**

Oh well, yes, well, my work was somewhat different. I think that probably the conception was that I would continue my scattering studies. I had given a seminar, which is a standard procedure for someone coming into the department and talked about work I had done over the years involving heavy particle, that is, atom-molecule collisional energy transfer, chemical reaction

and calculation of potential energy surfaces for these processes. And I was told that my talk went very well, told this by David Shirley, former Chair of the Department who at that time had become the Director of Lawrence Berkeley National Laboratory who I knew. And who expressed the view—by the way, it was primarily from Dave that I learned some of the dynamics of my appointment. He said the physical chemists were very strongly supportive of my appointment, more so than he had seen them in terms of appointments for people in the past. I'm referring here to C. Bradley Moore, Miller, and Schaefer and also Yuan Lee.

8-00:04:04

**Wilmot:**

These were the physical chemists or the theoretical chemists?

8-00:04:10

**Lester:**

Well, I'm not distinguishing. Miller and Schaefer are theorists, Moore is an experimentalist, Yuan Lee, experimentalist who won the Nobel Prize subsequently, who was very supportive in my conversations with him. We were both on the hill at LBL during the period I was head of NRCC and we were in buildings which were a short distance from each other. We'd see each other periodically. He would come over from time to time and talk about problems, even suggesting some that we might carry out related to experiments that he was engaged in. There were actually a couple of projects that we pursued on that basis. A theme of the work that I do theoretically, is to be of value to experimentalists, that the theory that does have value often say something about the experiments that are going on. So, I thoroughly enjoyed those interactions at the time. And I look for that sort of thing nowadays and have some projects that are geared toward assisting experiments to better understand what their results show or demonstrate. Okay?

8-00:05:13

**Wilmot:**

Why—when you made that distinction because now I'm used to thinking about theoretical chemists and physical chemists as two separate discrete bodies.

8-00:05:31

**Lester:**

Oh, theoretical chemistry was born out of the rib of physical chemistry is one way of putting it. In the sense that it's a term which arose only, I guess, in the seventies as such. It's broader than a theorist who does quantum chemistry. I mean, there are various terms. It became a popularized term, I guess in the late '70s, early '80s, being a theoretical chemist as opposed to a physical chemist, to separate the theory from the experimental to some extent. But always within the general classification—let me put it this way, in ACS surveys, at one point—theoretical may or may not have even existed. So you can check physical or check other and write down theoretical to bring the ACS into the modern day. But so, that's how I do it. It's a term which has come about more recently. And now, there's no question, it's very commonly used.

8-00:06:28

**Wilmot:**

So it's a distinction that is not totally meaningful to you?

8-00:06:31

**Lester:**

Oh, it is, absolutely.

8-00:06:34

**Wilmot:**

Well, this is my question. You said the physical chemists were very much more in favor, more in favor than they'd been for anyone.

8-00:06:44

**Lester:**

Not anyone, just more in favor than—

8-00:06:46

**Wilmot:**

Than usual.

8-00:06:47

**Lester:**

Than usual, I guess would be the point.

8-00:06:51

**Wilmot:**

Why do you think that was?

8-00:06:54

**Lester:**

Well, I knew all of these individuals. I've known them for a number of years. They knew my work and very possibly that had something to do with it. I think for a junior faculty member, it may be more difficult because one doesn't have as long a track record in terms of appointing a junior member. But I think primarily because I'd known these folks for a long time; they knew my work; and as a consequence of that, I think, the support came about.

8-00:07:21

**Wilmot:**

Right. When you came in the Chemistry Department as a faculty member in 1981, how did you go about learning the lay of the land in terms of who had the power or what did it mean to have power and how does one gain it? How did this information—how did you learn this?

8-00:07:39

**Lester:**

Well, it's not something that I learned nor it was something that I pursued, in that way. Joining the faculty meant simply that I needed to get my research work done and publish papers. I mean, the issue of power was not one which played a role in my thinking at the time. The point was there was a Dean. We have a special situation here at Berkeley in which we have a College of Chemistry comprising two departments, Chemistry and Chemical Engineering. And there's a Chair of Chemistry and that's who I needed to see regarding administrative issues. But the main point was to do what I do, professionally, as best as I could in terms of research support, publishing, giving talks, these kinds of things. But to pursue power, in some sense, was not something which was high on my agenda or even crossed my mind at the time. Clearly some people seemed to be able to get some things done more easily than others and some people are

more vocal than others—that's always the case—and some personalities are stronger than others. So, to some extent, some people maybe were paid more attention to than others were in certain circumstances.

And, yes, power is associated with those kinds of activities, but I didn't really think in terms of somebody having the power to get something done and so forth and so on. No, not really. That would not have been something that I would've cared for, quite frankly. When you've got to deal with the power structures here in academe when indeed we're supposed to be all in pursuit of new knowledge, unrestricted and unbiased in that respect. A pecking order? That would've been, to me, inconsistent with the sort of institution we are supposed to be and department. That is not to say that such things don't arise or exist.

8-00:09:25

**Wilmot:**

That's my question, I understand that you personally, that wasn't your motivation or interest here, but I think what I'm trying to get a sense of is what the landscape was like in terms of the chemistry department and if there was an axis of power or—.

8-00:09:42

**Lester:**

Well, in general, physical chemists have run the department. Mostly all the chairs came out of physical chemistry. So the physical chemistry division of people carried a certain amount strength in the department overall, and I think to a certain extent still do. Not as strongly as before, because almost everything is going bio in some way, form, or manner. And so biology and nano-technology nowadays are big buzzwords and folks who work in those areas, therefore, quite often are able to achieve more in terms of financial support, organization of research units, this sort of thing. So with that, naturally, comes power to do certain things or to have people respond to you faster than others who lack these resources and visibility.

8-00:10:35

**Wilmot:**

How would you say that things are different now than they were when you first came in the faculty, here in the Department or the College?

8-00:10:44

**Lester:**

Oh, I guess my biggest axe to grind is I think the support staff was more supportive in those days than they are nowadays. It seems like in the last year or two, because of the money constraints conceivably, it could be that the accounting people, some of the support staff seems to be throwing out more barriers than in the past. Possibly because they've been getting marching orders not to have people go over budget and this sort of thing. People occasionally go over budget. So, as a consequence, trying to get some things done, on occasion, you run into all this red tape, which upon closer examination, a lot of it doesn't have merit. It's simply that the person involved doesn't fully appreciate how things can be done in terms of some of the agencies. Like, the National Science Foundation has carryover. It also has flexibility in terms of funding over boundaries of limitation of one grant running out, another one starting, these kinds of things. I'm dealing with some issues of that sort right at the moment. And there was a time that this would have been unheard of. So it's very annoying, because this means sometimes financial

requirements are not met on time because of the transaction in terms of movement of funds from agency to university to department has not occurred on the time scale it should've. It's just a problem. So leave it at that. [chuckles]

8-00:12:14

**Wilmot:**

Have you ever served as Department Chair?

8-00:12:16

**Lester:**

No, I've never served as Department Chair. [pause] Okay?

8-00:12:31

**Wilmot:**

Have you ever served on a hiring or admissions committee within the chemistry department?

8-00:12:37

**Lester:**

Oh, I've been on the recruitment committee a few times. Sure. More recently, simply to assist with affirmative action efforts that the department chair was very much interested in. But I think the consequence of that is of no real significance.

8-00:12:59

**Wilmot:**

You mean, you don't feel like your recruitment efforts were successful or—?

8-00:13:02

**Lester:**

Well, that one has to keep raising the point regarding, well—there is a clash to some extent—maybe that's too strong of a word—around the issue of affirmative action and quality in this department. I should add that I was told explicitly I was not an affirmative action hire. And this was back in the days when one had target of opportunity appointments. That is, if you could identify a woman or a minority, you did not lose the FTE associated with whatever opening you had; you had that in addition. But more recently, it has come up that some people—well, it was a specialized case. There are some people very supportive of diversifying the department in that respect, in terms of women. And some people feel, 'Well, it's not so clear that we should be looking at anyone with respect to gender, that the issue should be strictly the quality of their research.' It's a problem. It's a problem in the sense that if it is a female who is good and who comes up, then some people are confused whether or not the consideration is for this individual because it's a female or is it the work. And clearly the work is first rate, even to be considered at this place, let me tell you, there's no if, ands, or buts that this person is good. But then it's in the fine points of examining one candidate versus another when you run into this issue. 'Well, I'm not so sure,' and so on.

I think one of the things which has bothered me over the years is the conflict between the religious dimension of judge not, then, on the other hand, judge, judge, judge, which is what we do in an operation like this or any university as far as that's concerned. And I always have to step back and say, "Well, this is interesting." But what is, to me, to some extent annoying on occasion is to hear from colleagues that they think that is really not good enough, and then will not back it

up with data. “What’s the basis of the judgment?” regarding some judgments that they have presented. And they’ll just say, “Well, I just don’t think the person is good enough,” and that’s the end of it for them, which I think is the height of arrogance quite frankly. In terms of communicating to a group of your peers the basis of your judgment.

8-00:15:29

**Wilmot:**

And also significant in terms of if hiring decisions are made kind of one on one, or in an informal kind of forum.

8-00:15:44

**Lester:**

Hiring decisions are not made on that basis, but people begin to develop a point of view. At some point, there’s always a department vote regarding a candidate who has made it up through the ranks. And typically, by that point, there have been discussions within the divisions—organic, or inorganic, physical, as the case may be—regarding the individual. So that, the general consensus will arise before getting to a vote and if the consensus isn’t there, typically, the candidate isn’t brought to vote. Because you know it’s not going to fly. And generally, one wants to have some consensus around appointments, that people generally agree that it would be a good idea to add a certain individual to the faculty. Where there’s real controversy, that could be a problem in terms of the esprit of the department, no matter how loosely interactive we may be. People may conceivably dig in their heels and splinter the department in terms of attitudes and mindsets and willingness to work together for the departmental good, this kind of thing.

So there’s an interesting issue here in terms of departmental leadership, that person has to, in some way, provide that leadership but still not carry a big stick in terms of moving folks in line who are academics. I mean, no way anybody’s going to do that sort of thing. So it’s an interesting dimension.

8-00:17:20

**Wilmot:**

Can you talk to me a little bit more about this issue of people kind of confusing issues of quality of work with affirmative action? How does that come up?

8-00:17:34

**Lester:**

Oh, there was a recent meeting we had in which a more senior retired faculty member said he would not hear again a situation in which anything other than the candidate’s research work was mentioned. So the question was begged, “What’s he talking about?” Well, clearly the fact that this candidate was a woman was what he didn’t want to hear. So it plays a role because of where we are at this point. We have done reasonably well in terms of number of women in the faculty. What does that mean? Nowhere near the numbers of women who are coming out with PhD degrees, but if you look at our sister institutions at the top, we’ve done comparably well. A lot more could be done there. And in terms of minority candidates, it’s very unclear.

Unless you know who they are and there’s a willingness on their part to even apply, then there’s no consideration. I can’t recall the last time I’ve seen a black candidate. I remember one in the early ‘90s who applied, first year. He made sort of the final cut and applied the next year and got

an offer. But he didn't accept our offer. He went to UCLA because UCLA had a laboratory that was ready. We didn't have space ready at the time, I think. Since then, he's become tenured at UCLA. But I hear out in the streets, some don't want to come this far west. This is Timbuktu for some people who are from east of the Mississippi. It's even hard to get graduate students from east of the Mississippi to come here, black graduate students, because it's so far away. This is the view I hear expressed. I talk to them about the fact, that, "This is science. The world is your oyster. You can always go home again. There is no reason to think you are confined to the West Coast once you go to graduate school here," this sort of thing. "And since you are talking about a quality department, it would be to your benefit in terms of the size and diversity of research interests that exist at this institution."

Oh, and by the way, I should add we just have a new woman first year graduate student, theorist, black, from Florida A & M who I just met very briefly the other day. So I think an important issue for her, from my vantage point, is that she meet other black graduate students, meet other folks to gain a clearer sense of this place. She was brought to my office by my President's postdoc, Dr. Glake Hill, who got his degree from Jackson State University. It was very helpful in that respect.

8-00:20:20

**Wilmot:**

Your President's postdoc?

8-00:20:23

**Lester:**

Yeah, he holds a president's postdoc.

8-00:20:25

**Wilmot:**

Got you. I understand. Would you say that you have been an advocate or that you have worked towards bringing more minority and women faculty into the department?

8-00:20:42

**Lester:**

I've been an advocate, but in terms of—the big problem is identifying them. I've spent more of my efforts just having graduate students come. As a matter of fact, after the passage of Proposition 209, I made a ten-institution tour across the Southeast to talk to undergraduates about the University of California, Berkeley, and about Proposition 209, to give them a sense of things. And I sat on many committees which involved people of color, institutions of color, HBCUs, and so on, to communicate that kind of interest and to talk to faculty about having their best graduate students apply to our place. No sense having those who were not, because it's a very competitive environment. But to say, "To be an advocate of faculty of color," as such, I don't know exactly what that means. Because, I think I may have told you, in my IBM days, we had this process by which I met with the director and we had Price Cobbs come and the stuff which happened out of that. And I said, "I will never wave the flag on affirmative action in general, but deal with specific cases."

In other words, we can identify someone, and we work on the case. But beyond that—graduate students, that's another issue, there are all sorts of avenues there that one can work at these sorts

of things. But to pound the table about affirmative action hires in chemistry, the first thing I'm going to hear, "Okay Bill, who do you have in mind?" And then I've got a problem. Because I discovered many years ago going back to the '60s right after I became Assistant Director of the Theoretical Chemistry Institute, in reading files of black candidates, postdocs, the kinds of letters that were written, I wouldn't even say that half of them were supportive. There were instances where one faculty member wrote about a candidate, "Well, he's not like a lot of his people, he doesn't have much of a chip on his shoulder." Another case—I mean, just stuff to be contrasted with, by the way, letters which said in essence, "Can jump a lake in a single bound." In other words, the "superman" sort of description that this person "Is the best thing since what, the propeller?" I mean, ludicrous kinds of comparisons.

So after seeing that, I said to myself, "I'm just on my own." I think, in retrospect, for post-doc at Wisconsin, it may have been some sensitivity to the fact that, 'Oh, he's a black candidate,' which may have gotten me over the hump in terms of getting an appointment. It's not totally clear, but I was hired. Then eight months later, I was asked to be Assistant Director of the Institute and I think I mentioned that there had been pressure on the Director to diversify, to add color to his staff. And I was the only thing around. There was nobody else they could turn to. So my research mentor said would I be interested in this. "Yeah, sure, why not?" After two seconds of thought about why I was approached, it became very clear. Then the next day, again, I saw the letter, the correspondence between the NASA program officer and the Director which talked about the need to diversify. It was very clear. So take advantage of opportunities as they come up.

When people say affirmative action is a problem in terms of how you're valued, I just totally discount it. Yes, affirmative action over the years had been abused and misused by putting people sometimes in positions when they weren't qualified for them by some management that didn't have their heads screwed on right. But for the most part, people of color that you see nowadays would not been in a lot of these positions were it not for the affirmative action steps taken back in the '60s and '70s. There's no ifs, ands, or buts about that in my view. Because had things continued as they'd been in the '50s, the small number of people who would have been able to make these transitions, would've been so small as to be miniscule in the whole scheme of things.

So I have real difficulties with people like Ward Connerly in that respect. I think it's just ridiculous. And my view there is simply that if you want to tear down this apparatus, then put something in place which addresses the issue in a better way, which he doesn't do, he didn't do, and shows no signs of doing. So those are my very strong views on that. Affirmative action clearly has a place. Clarence Thomas, my gosh, give me a break. He wouldn't be on the Supreme Court were it not for affirmative action, which he seems to have overlooked now in his decision making. I think it goes to show you.

I talk about people of color speaking of African Americans as a diverse people with the full spectrum of views. You know, in that sense, we are an interesting bunch of folks here, no question about it. I think by nature of experiences, at a certain level, there are commonalities, no question about it. I think that's important. And there's no reason why we should be lock-step in our thinking about any issue. But I think that is based upon one's educational and life experience, there are some things that clearly we should recognize as being in the common good, in my view. A lot that is not original with me, but you can go back historically and read from the old

readings, [Frederick] Douglass, [W.E.B.] DuBois, just any number of folks who have written on these issues historically. You are not writing about something new or talking about something new.

8-00:26:20

**Wilmot:**

I realized as soon as I said advocate, that that was the wrong language, and then I said “work towards” those issues, “work towards” diversity in the department.

8-00:26:32

**Lester:**

Oh yes, yes.

8-00:26:34

**Wilmot:**

One of the things I’m thinking about is if one were to work towards bringing more faculty of color and women faculty into this department, what would that look like?

8-00:26:50

**Lester:**

What do you mean what would it look like?

8-00:26:51

**Wilmot:**

What would those efforts look like?

8-00:26:55

**Lester:**

I think it’s basically: identify candidates of quality. I think this department is a fairly, reasonably enlightened bunch—reasonably, I didn’t say fully—that they can recognize quality in individuals. So I think the real issue is one of identifying folks. And that’s a complex process. I say it in the following sense. In conversation with Willie Pearson early on when he interviewed me way back when—had to be the mid-nineties, ’95, ’96 when I was in DC, because we talked in Arlington, Virginia—about some folks who had all the right pedigree. You know, Harvard PhD or let’s say, Harvard undergrad, MIT PhD and so forth, who didn’t write the drafts for the papers from the group, and so forth. As opposed to many of their white counterparts, they sort of run into ceilings at some point. They haven’t had comparable kinds of learning experiences as others in these so called “Top Research Institutions,” in their research programs. And then wonder why they are having difficulties breaking through the ceiling. That could be a complex mix of things: in terms of racism, in terms of maybe not being able to perform as well in some of these educational activities or skill activities, which had they had a different graduate school experience would be different or even postdoc kind of experience.

And this is a question of how you train or educate your graduate students. Who writes the drafts and so forth? Well, this for me has always been a situation where the graduate student who is the primary contributor on a project writes the first draft, and then we go from there. Because you’ve got to learn how to do this. I mean, if you can do research and then can’t write it up or talk about it, you are only one third of the way in terms of being able to compete in the scientific world out there.

I value my educational experience because that's what I had to do. The sort of crazy graduate school experience I had of working at the National Bureau of Standards, it was my thing to write this stuff up. I got reviewed by my NBS mentor. It is vitally important to read and to distinguish between good, medium, mediocre, excellent writings, and to understand what those differences are. And to be able to write clearly. I'm reminded of Professor Mulliken and something he wrote about, how to write good papers. Once you think you've written a good paper, put it in your desk for a week and come back and read it. Sage advice. Sometimes I read something, "Who wrote this? I thought this was done," this sort of thing. So these kinds of thoughts have always stayed with me and when I have relaxed them, I paid the price, because the product has not been where it should've been. I've had to go back and clean it up and so on, may be reviewers caught the difficulties, this sort of thing. But I have had a sufficient number of compliments and reviewer comments regarding papers that I've critiqued and written or reviewed for my graduate students, postdocs. The papers are well written. Because I tell my students and postdocs that "This is your legacy. This will not change from here on. You will live with this paper. It's in print and there it is forever more, as a product of your efforts." It's a legacy of what you do and the quality of that, it's very important to have the best that you can offer at the time.

8-00:30:35

**Wilmot:**

In part, I'm hearing you say that when it comes time to recruit—please tell me if I'm wrong—to recruit faculty of color and women faculty, there just are not people out there. When I hear you say, "Identifying people."

8-00:30:54

**Lester:**

I'm not saying there aren't people out there. What I am saying is the ability to identify such individuals in a climate in which in many instances the research advisors will not say things as positively as they might regarding other graduate students leads to a situation where these folks will not get the visibility nor possibly the recommendation. In a network which says, "Oh, I have this great student," what does it take to bring them to the attention, that is, minority students. I get letters all the time, MIT, you know, "We have an opening in such and such a thing, we're an affirmative action employer and if you have a minority or a woman, let us know." This stuffs goes all over the place. But who is going to write the letter which says, "Hey, I have one I want to recommend to you." That, I haven't seen in terms of a student of color. Even the one that we made that offer to came in without the kind of letter which was as strong as some of the letters I've seen for others. This is what I'm talking about. And in the absence of that, when you get to the point of "Compare this student with some other student that came out of the group some time earlier," and if they don't say "As strong" or what have you, this is a problem. It's very difficult. Okay?

8-00:32:16

**Wilmot:**

Yes, very much so. That's major, you're talking about faculty attitudes all over the country.

8-00:32:29

**Lester:**

I'm not saying that faculty attitudes are homogeneous. I'm just saying that whoever has one, is that a faculty mentor who recognizes and appreciates the value of this individual or who would

then take the necessary steps to be assertive in terms of recommending to the higher level of the community? This kind of thing.

It gets to be complex. “Well, who?” I don’t know all the black graduate students finishing or how good they are! That’s why I’ll be going back to NOBCCChE soon—National Organization for the Professional Advancement of the Black Chemists and Chemical Engineers, which I’ve been a member of since it’s year of creation, about 1972. I haven’t been that active. I’ve been going to meetings more recently simply to see who’s there. And then the question that’s also big is what young black faculty are going to that meeting? Because it’s really a networking organization, which in itself does not advance their professional situation. It’s knowing folks and meeting folks and all that.

8-00:33:35

**Wilmot:**

You’ve been talking a lot also about building the pipeline of faculty of color and women faculty by working with graduate students. Have I understood that correctly?

8-00:33:56

**Lester:**

Oh, help me further.

8-00:33:57

**Wilmot:**

What do you think is key in terms of bringing more persons of color and women into the sciences?

8-00:34:18

**Lester:**

Into the sciences per se? Just in general now? Going back? Are we speaking of faculty? I mean what level are we talking about?

8-00:34:24

**Wilmot:**

Okay, I’m speaking of mostly faculty.

8-00:34:29

**Lester:**

Well, as I say, the identification issue is the first aspect. Then to have more numbers, which means more who are interested or desire to be faculty. And that has to be there. It has to be a burning passion, if you want to deal with the stuff in a lightweight sense, go find a job in industry very likely or government as the case may be. But in many essences, people look at the kind of life that their mentors have had, and they say, “I’m not sure I really want to work that hard.” I have had that said.

So I think the principal thing is that they recognize that this is an avenue that is available to them, to work hard and do what they can do. And that the difficulties one has may or may not be any qualitative difference from those you might have in some other discipline or some other walk of life as far as that’s concerned. And that’s where the passion to pursue it becomes such a critical dimension, to deal with any negatives that might come along, in that sense. Weighing the good against the bad and making the decision, “Yes, I shall go forward and continue in this direction,” or stopping and saying, “Well, I’m not so sure this is really doing it for me. Maybe I need to

think about something else,” whatever that other thing is. A decision which we all face at some point or at various points as far as that’s concerned.

8-00:35:57

**Wilmot:**

Professor Lester, have you ever served on a Tenure Committee for another faculty?

8-00:36:03

**Lester:**

What do you mean Tenure Committee?

8-00:36:06

**Wilmot:**

A committee of people who is reviewing someone’s recommendation for tenure.

8-00:36:10

**Lester:**

Oh, yeah. Well, sure. That’s either an Ad hoc committee or the Recruitment Committee we have.

8-00:36:15

**Wilmot:**

Oh, that’s the same as the Recruitment Committee, i.e. the latter?

8-00:36:19

**Lester:**

Yeah. I mean, when we consider candidates, we read the letters. Then, when we consider a senior-level appointment. The entire department reads the letters, the entire tenured department. The tenured faculty reads the letters because we all have to vote. So we all have to read all of those letters, all those documents associated with an appointment. So that’s done by the full tenured department, not just the committee.

8-00:36:35

**Wilmot:**

I’m actually shifting away from hiring now. I’m just thinking about like tenure when you—

8-00:36:44

**Lester:**

You mean promotion to tenure?

8-00:36:45

**Wilmot:**

Promotion to tenure, yes.

8-00:36:50

**Lester:**

Well, you know, let me say something about the structure in that respect. An ad hoc committee is formed to make the case one way or the other for the individual who’s to come up for consideration. There’s a chair of that committee and two other people who write the document for the Department, which goes to the Planning Committee, which is a committee under the Chair, which helps the Chair in terms of departmental business and especially personnel issues in the Department. See, once the vote is taken, then it goes up through the system especially to the

budget committee in terms of its review of promotions. In that there are—of course letters have been requested by the Chair on an individual's behalf. And in many instances the individuals who receive the letters are asked to review this particular candidate relative to other people in, his or her general field and compare them and to rank them. And that's a critical aspect. If you are not viewed to be on the very top at this institution, then it may not happen that one gets to the next level.

And that has happened on occasion, that people have not gotten tenure. And tenure is the real crossroads. Sometimes it's been questionable at mid-career review; that's about the third year. An assistant professorship heading towards associate professorship, you know, being reviewed for promotion to that level at some later point maybe at the six or seven year point. And so unless there's a breakthrough in that intervening three years or so, sometimes people will make it, sometimes they will not. I have seen instances where people had breakthroughs, widely received by that particular research community, so then it becomes a slam-dunk. In other cases, controversial. And here, it's a very stringent requirement. It's got to be, people have to say he/she is the best or one of the best or ranks with the very best.

8-00:39:01

**Wilmot:**

What does it mean to serve on an ad hoc committee?

8-00:39:07

**Lester:**

Oh, you just help write the report. Three individuals write the report expressing the view of their validity of the promotion looking at the record of teaching, research, and service.

8-00:39:19

**Wilmot:**

Have you served on such a committee?

8-00:39:20

**Lester:**

No. Oh yes, I did years ago. Well, the name I won't mention. Yeah, I served on one.

8-00:39:28

**Wilmot:**

Okay, there's one we were talking off tape that you mentioned that you might have written—

8-00:39:36

**Lester:**

Oh, ad hoc report? That was not for this department. The ad hoc report I was talking about there is one in which somebody is recommended for promotion and an ad hoc committee is formed of people from different departments.

8-00:39:49

**Wilmot:**

Why does that happen?

8-00:39:54

**Lester:**

Oh, I don't know. Maybe the person has been in rank for a long time and the administration felt that a separate group needed to review the case. I can't say for certain. But we are reminded and asked that we must and should serve on ad hoc committees when requested by the administration. Generally, it's the Provost and the Executive Vice Chancellor who make that request. And so one does it, generally. I mentioned off camera the case in which I wrote for the future, so I felt. I disagreed with the other two members of the ad hoc committee and wrote a minority report which talked about the qualities I felt dictated this person being promoted. And then the Provost—this has been some provosts ago—took that and told me at later point that a promotion had taken place.

8-00:40:44

**Wilmot:**

Was this candidate a faculty person of color?

8-00:40:47

**Lester:**

This was a faculty person of color, yes. And I think someone mentioned, I can't remember who, that quite often the structure of the ad hoc committee, if it's a person of color, that typically the university wants to put a person of color on the ad hoc committee for that individual. I can't remember where I got that from, but that's sort of the lore on campus.

8-00:41:06

**Wilmot:**

Have you served on more than one ad hoc committee?

8-00:41:12

**Lester:**

Of that sort?

8-00:41:12

**Wilmot:**

Of any sort.

8-00:41:14

**Lester:**

Yeah, sure.

8-00:41:15

**Wilmot:**

I'm asking from an outsider's perspective, like how many have you served on over the years?

8-00:41:23

**Lester:**

I think I may have served on three, mostly in the eighties. Yeah, late eighties, maybe early nineties. Because my administrative responsibility went up in the nineties when I was Associate Dean, and then on leave. I don't think I did much of that or was asked to do much of that later, after coming back.

8-00:41:42

**Wilmot:**

When you were serving on the ad hoc committees, were they for faculty persons of color generally or not?

8-00:41:47

**Lester:**

Were they what?

8-00:41:48

**Wilmot:**

Did it vary? Was it for faculty persons of color or did it vary?

8-00:41:51

**Lester:**

You mean the makeup of the committee?

8-00:41:52

**Wilmot:**

No, not the makeup of the committee but the—

8-00:41:55

**Lester:**

Oh, was it F-O-R?

8-00:41:56

**Wilmot:**

What's that mean?

8-00:41:58

**Lester:**

As opposed to F-O-U-R? Was it for people of color? And I was confused. I thought you meant f-o-u-r, four people of color. Okay. Yeah. Not in every instance, no. Notwithstanding what I said before. I think there were a couple of cases. One I remember explicitly, the others I don't. I think the others may not have been for a person of color. Okay?

8-00:42:31

**Wilmot:**

Okay. Alright, let's see where we are right now. Where's the time. Okay we have another fifteen minutes and then we can stop or take break. Well, you mentioned NOBCCChE?

8-00:42:58

**Lester:**

NOBCCChE.

8-00:42:59

**Wilmot:**

NOBCCChE, which is an acronym for National Association for —

8-00:43:04

**Lester:**

No. National Organization, N-O For the Professional Advancement. Let me write it for you. It's done that way, lower case h.

8-00:43:32

**Wilmot:**

Okay, that stands for? National Organization for the Professional Advancement of —

8-00:43:37

**Lester:**

Of Black Chemists and Chemical Engineers.

8-00:43:41

**Wilmot:**

Okay.

8-00:43:41

**Lester:**

So you see the professional advancement is not included.

8-00:43:44

**Wilmot:**

N-O-B-C-C-h-E. Okay.

8-00:43:48

**Lester:**

At one point, it was NOBCCChE [with emphasis on first syllable], and now it's said the French way, NOBCCChE [pronounces with emphasis on last syllable]. [chuckles]

8-00:43:53

**Wilmot:**

Everyone got on the French wavelength.

8-00:43:57

**Lester:**

Yes, right, right, right.

8-00:44:02

**Wilmot:**

In any event, when did you become a member of that organization?

8-00:44:24

**Lester:**

'72. It was born in '71. Six guys were at a meeting, decided that there needed to be something of this sort created.

1-8-00:44:32

**Wilmot:**

Were you one of those?

1-8-00:44:32

**Lester:**

No. So a meeting was held the next year. Somehow I got aware of it and so I decided to go. I was at IBM at the time and I could arrange things fairly easily, unlike being at a university, to be away at meetings. It was held in New Orleans, I believe, in conjunction with a Beta Kappa Chi meeting. Are you familiar with Beta Kappa Chi? It's a Southern black science organization. I had never heard of it before. So the founders—oh, Bill Jackson's a founder who is at Davis—Bill Jackson, Bill Guillory, but Bill Guillory is no longer in chemistry. But he's actually a past Chair of Chemistry at the University of Utah, on the faculty at Howard, Drexel in Philadelphia; James Porter, chemical engineer from MIT; Jim is now deceased; Joe Cannon, past Chair of Chemical Engineering at Howard. Who else? Charles Meredith, the past Chancellor of the Atlanta University Center, past President of New York Technical University. I think he's back in Atlanta. How many is that?

8-00:45:45

**Wilmot:**

One, two, three, four, five.

8-00:45:46

**Lester:**

Five, so maybe one or two more. Anyway, I can dig that up if that's pertinent at some point.

8-00:45:54

**Wilmot:**

Okay. What were those early meetings like that you went to?

8-00:45:58

**Lester:**

Oh, primarily getting to know one another, giving scientific presentations, a lot of discussion of program planning. How to make this thing roll, how to make it happen. You know, that sort of thing. And now it's—well, I can show you if it's of interest, the magazine, the web site. Now it's on the radar screen of the American Chemical Society, which makes some funds available to it. I just paid my dues. My dues are \$75.00 a year.

Really marvelous programs for young kids. We used to have competitions at the national meeting, still do, in which teens from various parts of the country come and compete on questions of chemistry. So in the Bay Area, we have a chapter, and our teams compete quite favorably. Generally the local meetings would take place at Cal State Hayward. We have a NOBCChe member who is head of Physics at Cal State of Hayward, Charlie Harper, and a fellow by the name of Chauffe in the Chemistry Department there, subsequently Chemistry Department Chair, PhD from Howard. Then we had James Evans and his wife, Gwen, at Lawrence Livermore, who are very active with us. There are a bunch of names I can dig out for you, Joe Gordon from IBM, Delores Miller who had been at IBM back in the day, Isom Harrison of Lawrence Livermore and Clorox.

It's tough to keep the local organization going. I used to be active in it in my younger days. I don't think there's even an active meeting on a regular basis at present. But still the national organization moves and has a different flavor, young people go to the national meeting and meet people, network. It provides also a useful mechanism for companies to identify black chemistry

and chemical engineering candidates to a great extent. The funds for exhibit booths pay to a great extent the cost of the meeting itself, besides the registration, which is sometimes considerable. So it's maintaining itself.

8-00:48:18

**Wilmot:**

What is your involvement been in the organization over the years?

8-00:48:23

**Lester:**

Well, I was on the national board from '84 through '87, besides attending meetings regularly through the '70s, early '80s. Less involved here in the last decade or so. There are other things I've been doing. But I have students go and also support and inform undergraduates and graduates about the prizes. At the meeting itself, you can go and present a paper, be in a competition for best paper in a smaller arena than a major national meeting. So it provides also an educational outreach or experience for many young people, which I think is helpful, and to meet other black graduate students in chemistry and chemical engineering. I think that's very useful. In terms of the networking, that's important because of the sparse numbers nationally that exist in this country. I still have a notice on my bulletin board out there as a matter of fact for the Rohm and Haas competition of NOBCCHE.

8-00:49:21

**Wilmot:**

Rohm Haas?

8-00:49:23

**Lester:**

Well, one of the companies that supports the effort. They actually give a prize, give awards for various reasons.

8-00:49:41

**Wilmot:**

There's something I wanted to go back to before we get too far away from it. You used this language in describing the Chemistry Department as loosely interactive. How would you characterize the culture of this Chemistry Department? In terms of collegiality and organization?

8-00:50:09

**Lester:**

That's my vantage point. I'm sure there are groups of people who interact more closely, routinely. I mean there are various couplings, triads that exist around the department.[chuckles] But from my vantage point, my interactions are mostly loosely interacting.

8-00:50:32

**Wilmot:**

I wrote that down as something that I could ask you to expand upon, so I appreciate that you did that.

8-00:50:38

**Lester:**

Yeah, okay.

8-00:50:43

**Wilmot:**

Okay, let's take a break.

8-00:50:47

**Lester:**

It's fine with me.

[interview interruption]

8-00:51:10

**Wilmot:**

Moving right along. How did it come about that you became the Associate Dean of the College of Chemistry? Was that something you pursued or was that something that kind of came to you? How did that happen? That was in 1991.

8-00:51:26

**Lester:**

Trying to think, how did that happen? Don't remember.

8-00:51:29

**Wilmot:**

Who was the Dean at the time?

8-00:51:39

**Lester:**

Whoa, I'm not sure. I'm not sure. I have to look that up.

8-00:51:45

**Wilmot:**

Did it mean a lot of extra work? Did you reduce your teaching load?

8-00:51:48

**Lester:**

Reduced teaching load, absolutely.

8-00:51:51

**Wilmot:**

Okay.

8-00:51:54

**Lester:**

Yeah, I received a teaching release for that position. It's Associate Dean for Undergraduate Affairs.

8-00:52:02

**Wilmot:**

In the College of Chemistry?

8-00:52:04

**Lester:**

Yeah. And so the primary activity was to meet with students over issues of behavior, expulsion, awards—the top to the bottom, and a little bit in the middle. My biggest achievement was the replication of the professional development program, PDP, into the College of Chemistry. The College of Chemistry Scholars Program was born during that time. Working with PDP Director, Steve Chin who trained the GSIs, graduate student instructors, for it, we did make significant headway. As a matter of fact, that's well documented in a report I made to the Dreyfus Foundation, which provided funds at one point for the activity.

8-00:52:54

**Wilmot:**

Help me understand how PDP looked in the College of Chemistry. My understanding of the PDP program was that it was basically something like a post-doc that groomed young professionals, not professionals, but young prospective faculty of color.

8-00:53:17

**Lester:**

Not at all.

8-00:53:18

**Wilmot:**

Not at all. So we are talking about two different programs here.

8-00:53:20

**Lester:**

No, we could be talking about the same program. But the role that someone—in the days that Roy Thomas was associated with PDP, he helped folks—he was a primary mover for Michelle Decoteau applying for Rhodes Scholarship and winning that. He prepped her on that.

8-00:53:37

**Wilmot:**

Michelle Decoteau?

8-00:53:39

**Lester:**

Yeah. You know Michelle?

8-00:53:40

**Wilmot:**

No.

8-00:53:42

**Lester:**

Michelle runs CUES, Center for Undergraduate—anyway, a minority program in engineering. And she's a Rhodes Scholar who got a PhD in Mechanical Engineering.

Roy Thomas played a very important role in PDP. PDP, I first became aware of through my son who was in PDP, that's when I first heard of the name Uri Treisman. Uri was very active in that area, but I later learned that there were predecessors to Uri, names I would have to dig out.

Rodney Reed would be somebody who was involved at that time. You know the name Rodney Reed?

8-00:54:26

**Wilmot:**

Yes. [phone rings] Do you want to get your phone?

[interview interruption]

8-00:54:38

**Wilmot:**

We just had an interruption. You mentioned that your biggest achievement when you were Associate Dean was bringing the PDP program into the College of Chemistry.

8-00:54:51

**Lester:**

Yes, mapping the PDP program into the College of Chemistry.

8-00:54:54

**Wilmot:**

What does that mean, "Mapping the PDP program"?

8-00:54:56

**Lester:**

Well, replicating the program in the College of Chemistry. It takes on a somewhat different form. The PDP itself, in terms of its program, had evolved so that they moved from actual sessions over in Stephens [Hall] to so called intensive sessions, which involved more intense discussion and study of the subject matter, which is what we did over here in Chemistry, which was taught by a graduate student instructor who got training in the PDP method from Steve Chin, the Director of PDP. And the results of the study demonstrated that if you were in the College of Chemistry Scholars Program, then the average academic performance was improved over not participating as a student of color. That's basically it.

8-00:55:47

**Wilmot:**

Okay. Can you think of why you would have wanted to be Associate Dean of the College of Chemistry? What would you have found appealing?

8-00:55:55

**Lester:**

Well, I had a fair amount of administrative experience at that point. I can't remember why it was that it came about at that time. I'd have to look at some of my materials and think about that. I think also the administration wanted to use me in some administrative capacity, that may have been it. I remember that being a period where the question of my being involved in this way was something that administration was interested in. It was very peculiar in a sense I have, in a certain sense, more administrative experience and managerial experience than many of my colleagues. I was a manager in a major industrial company in this country, IBM. I'd gone to management school.

8-00:56:45

**Wilmot:**

You had gone to management school?

8-00:56:46

**Lester:**

Oh yeah, sure. All IBM managers go to management school. This was not long. It depended on your level of management, you go to management school, first level, second level, third level. I mean, the company in order to drive its product and have its people perform, you go to school to manage people.

8-00:57:03

**Wilmot:**

I don't think I realized that. Was that something where you had gone away from San Jose?

8-00:57:08

**Lester:**

Oh yeah, sure, sure.

8-00:57:09

**Wilmot:**

Where did they send you?

8-00:57:10

**Lester:**

Oh, where did we go? I can't remember. Even before that, separately, I had participated in a career development clinic where they sent people who they viewed as being on the fast track or what have you to a program with people from other companies. And basically, the guy told me on the QT, "Your company wants you to be a manager." At that time, I didn't want to be one and they shaped their report to indicate that this was not something that should be pursued with me at that time. That took place in Vail, Colorado, out of season from ski season. It was actually the Broadmore, big fancy ski resort in Vail. I mean the carpeting was that thick. And a bunch of guys, but no women—maybe one or two—from various companies who were similarly identified. This was to give them a sense of what you do. You had in-basket tests, you know, how you handle this request, and all that sort of thing. Oh yeah, sure!

8-00:58:13

**Wilmot:**

In-basket tests?

8-00:58:14

**Lester:**

Yeah, you have a in-basket and a knife, okay, now what do you do with this item? You delegate to who or whatever. How do you act on it? Sure. Why do you laugh?

8-00:58:28

**Wilmot:**

That sounds amazing. [laughter]

8-00:58:29

**Lester:**

This is industry in the United States. Other kinds of things. Oh, a lot of role playing. Somebody serves as a CEO and you are the staff person and did all kinds of stuff. You'd role play through it, and then you got critiqued on your performance. They'd film you, for example, making presentations. Did you do good or not so good? All kinds of stuff. Oh yeah, this is the company thing.

But regarding Associate Dean, why was I asked to be associate dean?

8-00:59:05

**Wilmot:**

Or even why you were drawn to it? Why did you accept it?

8-00:59:09

**Lester:**

Oh, why not? I always want to do something new and different. I always valued new and different experiences, quite frankly. Thought I could be of some help there.

8-00:59:20

**Wilmot:**

Okay, I'm going to need to go and do some research and figure out who the Dean was then, so I can ask you a better question about that. Because that's probably pretty key, I'll work on that. Alright.

8-00:59:32

**Lester:**

Brad Moore may have been the dean then, I'm not sure.

8-00:59:39

**Wilmot:**

Okay, I think we should close for today. Is that okay?

8-00:59:42

**Lester:**

Fine.

[End Audio File 8]

**Interview 6: October 03, 2003**

[Begin Audio File 9]

9-00:00:10

**Wilmot:**

Professor William Lester Jr. Interview six, October 3, 2003.

9-00:00:22

**Lester:**

Now, we've got to get to a point where I remember all this.

9-00:00:36

**Wilmot:**

We just returned to Chicago and I had asked you to refresh my memory as to what was the nature of your mother's family's reservations about your father. I was wondering about was it class, was it color, what happened there?

9-00:01:03

**Lester:**

Yeah, I think almost without question that it was a class issue, that at the time that my mother was seeing my father, he had not as yet I think passed the civil service exam to be employed as a letter carrier. He, I think, was still doing various jobs and on that basis was not looked upon favorably by my maternal grandparents as a "suitable suitor" for my mother. Because I remember conversations where it would come up as to whom she was seeing during that time period. These were college men, you know, some guys from Northwestern, Wisconsin and various places. Since my father was not in college and I think was not aspiring to do so, he was looked upon less favorably as a suitor for my mother. I recall at one point, that my maternal grandparents told my father that he shouldn't come around and see my mother anymore and on that particular occasion my mother told her parents that, "Indeed, we are married." But they were living apart, because they couldn't afford to live together. Interesting at the time, in terms of the financial situation. Just when my mother moved out from her parents to join my father, I can't say for sure. Don't know exactly when that was.

9-00:02:38

**Wilmot:**

You mentioned off tape that your grandmother maintained a position in the early day of Chicago African American aristocracy.

9-00:02:53

**Lester:**

Well, I don't know if I phrased it quite that way. [laughs] We discussed it before.

9-00:02:56

**Wilmot:**

Sure, sure, rephrase it.

9-00:02:57

**Lester:**

But she was very much a person concerned about her position in society. There's no question about that. She was described as a businesswoman. And later on it became very clear to me what

that meant in this instance. She would buy houses, a number of them on South Parkway, or Martin Luther King Drive, and cut them up, that is, into kitchenettes and rent them out and made money this way. Because during that period there was a significant migration of black folks from the South to Chicago, seeking housing. And my uncle would work with her, assist her with taking care of the buildings. That's Lawrence Clark we're talking about.

I recall vividly one time when my sisters and I went with my mother to my grandmother's apartment, because my mother was going to prepare a dinner for a party that my grandmother was having. I got very much the sense that this was an older, more established group. Not your sort of neighborhood gathering, but something above that. So we kids, we were in the kitchen, sort of observing my mother prepare. I'll never forget, my father was very unhappy with this particular act, because he felt, "Why are you going over there to do all that work for your mother?" He was not thrilled by it, of course, in terms of the interactions between my father and his mother-in-law.

9-00:04:29

**Wilmot:**

So that was an enduring divide. It lasted well into your parents' marriage. Well after children had come, there still was this kind of sense that—

9-00:04:39

**Lester:**

Yes, there was a separation there.

9-00:04:40

**Wilmot:**

—sense that he was less than—

9-00:04:42

**Lester:**

I don't know if "less than." It's just that there was not a good interaction. Because I think—it seems to me that he had done okay in the sense of, at that time, passing the civil service exam and becoming a mail carrier. Doing so was actually a middle class activity in the black community back in the thirties and through the forties in terms of jobs one can have with security and a decent income. Not a large income, but a decent income. So, what else?

Oh, a classic dimension in terms of this dinner party at my grandmother's apartment: she liked antiques, so we used to look at this apartment as sort of the haunted house because you had these high backed velvet chairs and sofas. I mean, it was really classic antique stuff. I'll never forget this black carved desk, which I learned later was teak. And on top of this desk was a matching set of elephants made from elephant tusks.

She used to take us occasionally to some of these antique stores and I hated this process. You know, "I don't want to go see all this old stuff." She was serious about these items. This was what really turned her on. And so it was a very peculiar sort of apartment. I guess the other point here, one floor above is where the Hansberrys lived, who were also in real estate. It always struck me that the few time that we went up there, that it was a much brighter and airier apartment. [chuckles]

9-00:06:29

**Wilmot:**

What kind of person was your grandmother?

9-00:06:32

**Lester:**

What kind of person? Oh, she was the kind of woman who when she babysat us once she did the entire time with her hat on. [laughs] She stayed dressed during this process. Liked sweets, I'll never forget that. And she believed in appropriate decorum. And she was not a disciplinarian in a strong way. What else do I wish to share here? [laughs] I guess that's about it. The rest of it, I'll let be.

9-00:07:17

**Wilmot:**

I hear that. You mentioned that you did an oral history with your father?

9-00:07:30

**Lester:**

Yeah, a brief one. I interviewed him.

9-00:07:31

**Wilmot:**

What was the occasion?

9-00:07:35

**Lester:**

Oh, just to have his memories of the family, this family.

9-00:07:41

**Wilmot:**

Was he open to that? Was he open to having an oral history with you?

9-00:07:43

**Lester:**

Oh yeah, yeah! Oh sure! Stick a microphone in front of him, he'd talk. My father was a talker. For sure. So I had two or three pages of sort of, "Who were the people who came North?" and so on. I'll never forget the time, too, in the mid-seventies, I guess it was, he got some names of relatives in the Atlanta area to go back and reconnect with family down there. I remember him coming back, very disenchanted, because the reception he got was, basically they thought he was a city slicker coming down to take advantage of the poor Southern folks in Atlanta or something of this sort. This was the sort of picture that emerged from his reaction to what he had said about it.

We are clearly from, on his side of the family, Atlanta. There's some work I had done in the State House in Atlanta, Georgia. I discovered family information in the 1910 census. I might have this information actually in my drawer. Hold the camera, I can go get it.

9-00:08:40

**Wilmot:**

You can go ahead. You can just go.

9-00:08:46

**Lester:**

[gets up to search for records and then returns] I'm collecting other materials for this other oral history and—

9-00:09:16

**Wilmot:**

Has that taken place yet?

9-00:09:18

**Lester:**

No, I'm still completing the paperwork. I think actually I've missed the round that they intended me to be involved in.

9-00:09:39

**Wilmot:**

What was that like, sitting down with your father?

9-00:09:44

**Lester:**

What was it like?

9-00:09:44

**Wilmot:**

Yes, and doing an oral history with him. Do you remember what was that like?

9-00:09:48

**Lester:**

Just listening to him talk was what it was like.

9-00:09:54

**Wilmot:**

Did you learn things that you didn't know before?

9-00:09:56

**Lester:**

Just some of the names of cousins, that sort of thing. Beyond that, not a great deal.

Oh, this is an interesting document. It's a copy. They gave me this blank marriage license and from the information contained in the State House, I wrote down on my mother's side, a copy of the marriage license of my maternal grandfather's parents. [reads] Alfonso P. Clarke, colored, married Elizabeth Francis Proctor, colored, in Chatham County, which is Savannah, on the 21st day of February, 1882.

9-00:10:40

**Wilmot:**

It's so precious to have records that far back. It's so unusual in some ways, I think. A lot of times we don't have our histories.

9-00:10:49

**Lester:**

Yeah. This is a result of my doing some exploration. And then from the 1910 census—this is Fulton County—we find Willie Lester, head of a family. And I think it was just because of the census takers. His name was William Mason Lester, based on my father's oral history, who was married to Deborah Lester, wife. He is listed as a porter; she's listed as having no occupation.

9-00:11:37

**Wilmot:**

A porter? That's a good job. This is your father's father?

9-00:11:42

**Lester:**

Yeah.

9-00:11:43

**Wilmot:**

Did your father tell you about this in his oral history? Talk about his father's work or—?

9-00:11:48

**Lester:**

No. Because my sense of it is that I'm not sure if he was with the family when they came North or not. It's unclear to me. What I subsequently have learned from my father is that he dropped out of high school at the end of his second year to join his father in Cleveland. To my understanding, his father by this point had become a professional gambler. And he was a strikingly handsome guy, this grandfather. And the relationship or interaction didn't work well, so my father came back to Chicago and started high school again. That is, he picked up where he was before. His high school work before that was poor; his high school work after that was excellent. And in growing up, he never ceased to show me his course book for high school work, "This was before, and this was after," this sort of thing.

9-00:12:41

**Wilmot:**

So that was really important to him. Something happened there.

9-00:12:43

**Lester:**

Oh, absolutely. Oh yes, oh yes. There's no question about that. My father was a strong supporter of education, you know, "Education will make a difference." And then in the 1910 census, my aunt, my father's sister, Florence was born. And in this documentation—I guess it's actually not readable on this one—one of these documents actually gives the age of my aunt in 1910. But I'm looking at another document for Illinois, and let's see. it's very tough to read. This is the 1920 census. [long pause] Yes, he's enumerated with James Flanagan. His relationship to James Flanagan is grandson. And this is census taken at 4120 Vineennes Avenue in Chicago.

9-00:14:14

**Wilmot:**

And this is James Flanagan, how is he related to you?

9-00:14:21

**Lester:**

James Flanagan, my father has indicated as being his grandson. That would be my great grandfather.

9-00:14:29

**Wilmot:**

Flanagan is an Irish name?

9-00:14:31

**Lester:**

Yeah, yeah. In that context, I have penciled in a little family tree here. [looking at tree] Yes, James Flanagan is indicated—yeah, Deborah Lester’s maiden name is Flanagan. And there are all kinds of spelling of Flanagan that exist here. [chuckles] Her parents were James Richard Flanagan and a Miss Jackson. And I have parents indicated for my paternal grandfather, William Mason Lester.

9-00:15:08

**Wilmot:**

But he had Mason in his name, and I wonder where that came from?

9-00:15:12

**Lester:**

No idea. Absolutely no idea.

9-00:15:17

**Wilmot:**

Okay. Was anyone in your family a Mason, do you know?

9-00:15:23

**Lester:**

No idea.

9-00:15:24

**Wilmot:**

Or is that something that people—I’m not even sure if people really talk about that. Okay. James Richard Flanagan and Miss Jackson.

9-00:15:31

**Lester:**

So I should indicate that in the document I was talking about a few moments ago where my father’s indicated a grandson to James Flanagan, his age in the 1920 Census is indicated as eight. But he was born in 1911, so his birthday was presumably, let’s see—I can’t imagine that—this may be wrong, because he gives his birth date as January 17<sup>th</sup>.

9-00:15:55

**Wilmot:**

Your father?

9-00:15:56

**Lester:**

Yeah, 1911.

9-00:15:58

**Wilmot:**

What is that document?

9-00:16:01

**Lester:**

This is a sheet out of the census index of 1920.

9-00:16:05

**Wilmot:**

Okay, so somehow, it looks that, so that document seems to throw into confusion your father's birth date? Is that correct?

9-00:16:12

**Lester:**

Not from my father's perspective. [chuckles] So in other words—[pause while he looks at documents]—there's some real confusion that occurs later. I'm jumping around here. You've got to bear with me on this one.

9-00:16:38

**Wilmot:**

What do you mean when you say later? When is the confusion?

9-00:16:42

**Lester:**

Confusion is in the 1900 census of Chatham County. This goes back to my mother's parents, in particular my maternal grandfather. The wife is indicated as Elizabeth Clarke. This is Elizabeth Proctor Clarke who married Alfonso Clarke indicated as being born in October 1865. The indicated age is thirty-four. So presumably that year when the census was taken, she had not had a birthday. Oh, this is July, 1862 when this was done. The address was 714 Duffy in Savannah. And so when I was last in Savannah, a couple of trips ago, my wife and I went to Duffy Street, 700 block. And we were told in that particular 700 block, there never had been a 714. But there's another 714 at another part of town, maybe a North and South Duffy presumably, and the other part had been reconstructed—there was a project there. So I assume that's where the 714 Duffy was or was where my maternal grandfather lived with his parents.

But now, what's unclear here is that in the Census of 1900, there is indicated an infant. The birth of this infant is May, 1900 and that would be too young to be my maternal grandfather, so presumably he had siblings. And I state that as a question. I have no idea. I've never heard of such. So, another part of the puzzle. Let's see, what else do we have here?

Oh, here is something written which I took from the 1910 census. Maybe I could read it back at that time. And by the way, one finds, for example, color is "MU" for mulatto, I presume. In one case it's "B" for black, "MU," and so on. And the 1910 census, Willie Lester, that's William Mason Lester, my paternal grandfather, is indicated as being twenty-one years of age. Deborah is indicated as being twenty. And Florence Azalea, my father's older sister is five months old.

9-00:19:10

**Wilmot:**

And this is in what year again?

9-00:19:11

**Lester:**

1910. She's now deceased as well.

Well, this is material I extracted when I went to an American Physical Society meeting in about 1999.

9-00:19:25

**Wilmot:**

So what was that like for you, finding out this information about your family? Was there new information that you had never found out about before?

9-00:19:30

**Lester:**

Yeah, it's like winning the lottery. Going through the microfiche. Wow! There it is!

9-00:19:36

**Wilmot:**

What was the part that stuck out as being new to you or exciting?

9-00:19:40

**Lester:**

All of it, all of it. Confirmations of stuff you'd heard. Especially to find the address in Fulton County of Willie Lester and Debora Lester, and then Florence as an infant in the 1910 Census. That was really quite something in my view.

9-00:19:58

**Wilmot:**

Did you get a sense of what your ancestors' push factors had been, moving them to Chicago or—

9-00:20:07

**Lester:**

No, just to get out of the South. Everybody wanted to get out of the South, black folks at that time, any which way you can. I guess one of the things which we are still trying to sort out is where they lived—it was some plantation which comes up. The name escapes me at the moment. But my sisters and I wondered, "Where is this plantation?" That was discussed. Now, who lived on that plantation and at what point is unclear to us. And I don't remember the name of it at this juncture (Rosehill Plantation). So the rest of this is material we've already seen. [referring to documents]

9-00:20:47

**Wilmot:**

And that was in Georgia?

9-00:20:49

**Lester:**

That was in Georgia. That was—yeah, in Atlanta, we are speaking of.

9-00:20:59

**Wilmot:**

Did you do an interview with your mother as well? Did you have the opportunity to do that?

9-00:21:05

**Lester:**

No, no, my mother died in 1954.

9-00:21:07

**Wilmot:**

She died when you were very young.

9-00:21:09

**Lester:**

I was seventeen and it didn't cross my mind to do any oral history before that.

9-00:21:16

**Wilmot:**

Yes. Did your father give you any insight about your mother's background? Did he kind of shed new light?

9-00:21:26

**Lester:**

No. But, you know, I don't know he knew much more than what I'm telling you, quite frankly. When they met, he had finished high school and I guess she was still in high school or she was just about to finish. He had gone to Phillips High School; she had gone to Englewood. Different high schools. At that time, it was probably a little better positioned place. And also Hyde Park High School. She went to those two.

I'm looking right now at changing the subject on you again. The 12<sup>th</sup> census of the United States which gets back to Savannah and Chatham County. Why am I looking at this? What's on this page that I thought was particularly noteworthy? [pause] Oh here's the famous family tree. Should I read this? [laughs] These are my father's words.

9-00:22:47

**Wilmot:**

Yeah, please do read it. If you have an extra copy—?

9-00:22:53

**Lester:**

Yeah, you can have that.

“Family tree, William A. Lester. The following is a transcription of an audio tape of William Alexander Lester, recorded during the summer of 1979 at the home of William Alexander Lester, Jr.” I didn't realize it was that long ago. He didn't die until 1990. “The statements that follow represents my father's best recollection at the time. The attempt has been to provide a verbatim transcript with minimal editorial changes.” That sound familiar? [laughs]

9-00:23:22

**Wilmot:**

It is familiar.

9-00:23:25

**Lester:**

“My grandfather was James Richard Flanagan. Two of his brothers I knew were Thomas Flanagan and Clifford Flanagan, the youngest. He had a number of sisters. Those that I remember were Norah, Marylee, and Leila. And from their unions, Norah became a Woodard, Marylee became a Drake, and Leila became a Thomas. My grandfather married a Miss Jackson. I don’t know her first name. From this union were born two children, Deborah,” and here we have an “H” on the end of the name, because I hadn’t seen the census material when I did this transcription. So to the question of whether it’s Deborah or Debora, she was always called Debora. “Debora and Johnson A. Flanagan. Johnson had five boys and one girl. Debora had two children, Florence Azelia Lester and William Alexander Lester. Debora’s husband was William Mason Lester. Florence had two children, Joseph Jr. and Cheryl. Florence married Joseph A. Davis; Joseph Jr. married Ronda and they have two, now three daughters. William, son of Debora, married Elizabeth Frances Clarke. From this union, there were four children: Florence Elizabeth, William Alexander Jr., Judith Belle, and Karen Amelia. Florence married Justin M. Johnson. They have three children, William Oliver, Justin Llewellyn, and Elizabeth Irene. William Jr. married Rochelle Reed. They have two children, William III and Allison. Judith married Donald Clay. They had one child, Darryl. Later, Judith married Jim Wiley. Twin daughters were born, Jeanette and Jeanine. Darryl was adopted and assumed the name Wiley. Karen married William Sponson Lewis. From this union, there were four boys: William Sponson, Brian, Steven, and Richard. My grandmother, Miss Jackson, my mother’s mother, died shortly after the birth of Johnson Flanagan. My grandfather, James, married a Miss Fanny after the death of Miss Jackson,” as Mrs. Flanagan. “And she already had children: Andrew Willie, Romeo, James, Charles, Forest, Charlie Woodard and Johnny who was called JC. These are my uncles by Miss Fanny’s marriage to James. Most are deceased. The only living ones are Romeo, Charles, and JC. Great Aunt Norah and her husband, Robert Woodard, were very close to William Mason Lester. They had sons, Robert and Andrew. Andrew is known as Boss. Andrew was the father of Alice Woodard, Mattie, Ruby and some boys. One was Andrew Jr., but I don’t recall all of their names. She, Great Aunt Norah, also had daughters: Annie Bea, Libby and Lilymae.” And I should add that I met Annie Bea as a little boy. So she’s real to me. And the other people mentioned earlier, I knew none of them.

9-00:26:19

**Wilmot:**

What do you remember about meeting her Annie Bea? Where did this take place?

9-00:26:24

**Lester:**

She lived about six blocks from my grandmother in Chicago. And we’d see Cousin Annie Bea all the time. She was known as Cousin Annie Bea.

9-00:26:32

**Wilmot:**

What was she like?

9-00:26:34

**Lester:**

A nice lady. Light-skinned lady. Color mattered in that time frame. But that’s about what I remember. And obviously, living where she did, their economics were fairly reasonable. This

was about the 6800 block of Champlain back in the day when 71<sup>st</sup> Street was the dividing line between Black and White on the South Side of Chicago. Because Chicago was very much residentially segregated. So where was I?

9-00:27:10

**Wilmot:**

Did you have a sense when you were growing up in Chicago that it was important to observe the lines of residential segregation?

9-00:27:22

**Lester:**

Oh, absolutely. I mean, you knew them. We knew where we lived at 63<sup>rd</sup> and Champlain, that four or five blocks over was Cottage Grove, that across Cottage Grove, that's where white folks lived, later to become the area that the Black Stone Rangers took over. [chuckles] It shows you what happens with the drift and the change of residential segregation in the city of Chicago. When I was growing up, we used to go over in that neighborhood to shop. My mother felt that it was better produce and meat and what have you. That's where most folks shopped because the comparable large stores—there was only one, Kroger's on 63<sup>rd</sup> Street, between Langley and Evans, which was not quite the store as some of the stores east of Cottage, back in those days.

[returns to reading his father's statement] So she, Great Aunt Norah, also had daughters, okay, I've said that. "She had a younger son, Lucius Woodard and another son Dewitt who died early around 1917. Lilymae died around 1918 or '19 to the best of my memory. Leila had a large family. She was a Thomas. She was the mother of JC. Thomas, who had a large family and after the death of her husband, she married a Rogers. Lilymae is the mother Mabel Rogers, who is the baby of that family. Some of her children were Nunnie, George, and Allen. These people are deceased except for Mabel and George. Another sister, very close to my sister Florence, was Doris.

We go to Mary Lee Drake. She had children. Most of them were known by nicknames. But Beulah, who was called Blossom, was the mother of Tony and Leilani Banks. She was later married to Skip." [stops reading]

Now, Tony and Leilani, I knew. They are my peers. Tony also played basketball as I did back in the time we knew each other. He played at Tilden High School and later for Lake Forest College and I played for the University of Chicago. He is currently in Chicago. He has an Afrocentric store on the South side of Chicago now and had previously been the Africa representative for Jet Magazine in continental Africa. He had told me stories about being imprisoned by some monarchs in Africa at various times, just crazy sorts of things that happened at the time he was in Africa when independence was coming. He was representing U.S. black enterprises, interesting guy.

9-00:29:30

**Wilmot:**

Amazing stories. Did you know Blossom? Beulah?

9-00:29:35

**Lester:**

Yeah, yeah, I've met Blossom for a little bit. Very—These sisters are all very beautiful women. Tony and Leilani's mother Blossom was very attractive and I can say this from the perspective of being how old? [chuckles] Twelve, fourteen, fifteen.

And let's see. Yeah, as I read on here, you'll see that—

9-00:30:04

**Wilmot:**

What did they look like?

9-00:30:08

**Lester:**

What did they look like? That's an interesting question.

9-00:30:18

**Wilmot:**

I know, I'm asking your twelve year old, fourteen year old eyes to remember.

9-00:30:26

**Lester:**

If you could think of a really attractive Josephine Baker, that was Blossom, in terms of facial appearance. According to my father at least [returns again to his father's statement], "Mary Lee had a number of beautiful daughters. One was known as Dolly May or Doll, Carol May or Matty Carol Drake. She dropped the Matty and later married Billie Eckstein. She was another one of the pretty ones. One was called Charity, and that's all I can remember off the top of my head." But I remember seeing—I think she appeared in some movies, the one who married Billie Eckstein, Matty Carol Drake. Carol Drake was her stage name. She was a striking lady, no question about it. Moving on, "Tom Flanagan lived in New York. I met him in 1929 when he passed through on a visit. And I met him in Detroit when I was living there. I knew nothing about him."

9-00:31:18

**Wilmot:**

Now, let me think, Tom Flanagan, I have to go back so I can locate him in your family tree.

9-00:31:23

**Lester:**

Yeah, that makes two of us. [laughs] I don't know that name either. You find him?

9-00:31:28

**Wilmot:**

Okay. [referring to notes] Two of his brothers I knew were Thomas and Clifford Flanagan.

9-00:31:31

**Lester:**

Oh, okay.

9-00:31:33

**Wilmot:**

So this is actually your father's uncle, Thomas Flanagan.

9-00:31:41

**Lester:**

"Now the "A" in the name of men on the side of the family is from Alexander"—that should be on this side of the family presumably—"which was taken from Alexander Jackson who was older, an older brother of my mother's mother, Miss Jackson. And the name Alexander has gone down through the line. And Alexander Jackson was the father of Juliet Jackson who married Ross and is the mother of Dr. William Alexander Jackson Ross of Oakland." That's my cousin who is an orthopedic surgeon in Oakland. He was the first black submarine captain in the United States Navy.

9-00:32:24

**Wilmot:**

In which wartime engagement? Nineteen forty—?

9-00:32:31

**Lester:**

No. No war time engagement. He was just the first black submarine captain physician. So he finished medical school around a little after I finished graduate school, so that would've been the late sixties or so. He was on the cover of Ebony back in that day because of that particular circumstance. They had a nice article of him and his family and so forth. From Detroit, Cousin Julia's son—Cousin Julia had a son and a daughter. It's interesting, Cousin Julia's daughter's son, Max, is the number one gown designer for Ralph Lauren. Who designs the gowns for Ralph Lauren? It's Max, who I saw about two weeks ago in New York City. Very interesting young guy.

9-00:33:27

**Wilmot:**

What a life!

9-00:33:28

**Lester:**

Young? He's in his late forties, okay.

9-00:33:30

**Wilmot:**

Yeah, but what a life! Living in New York City designing for Ralph Lauren.

9-00:33:35

**Lester:**

He's thinking about going on his own for reasons—I guess we'll talk about that. But just in terms of ties, what family folks are doing. Cousin Julia used to come from Detroit to Chicago and visit my paternal grandmother (Deborah) on a regular basis. But I didn't meet Jackson—this is what we called William Alexander Jackson Ross—until later when I visited Detroit in the mid-fifties when I had an little piece of car. I said, 'I'll go see my cousins.' So we met at that time. So we were more or less contemporaries in college, I would say, yes. He went to Michigan and to Wayne and then to medical school at Meharry.

9-00:34:20

**Wilmot:**

I want to ask this question about meeting Jackson. Jackson, I need to just be clear on your relationship to him. Is he your cousin?

9-00:34:31

**Lester:**

Yes.

9-00:34:35

**Wilmot:**

So your father's—?

9-00:34:37

**Lester:**

We have to go back up to see where Cousin Julia comes in. It's through Cousin Julia that that connection comes about. So it's a cousin of a cousin.

9-00:34:47

**Wilmot:**

Cousin of a cousin. Okay. Well, let's leave that then.

9-00:34:54

**Lester:**

See, Alexander Jackson, you see, was the father to Julia Jackson. Alexander Jackson was the brother of my mother's mother (my father's words). [laughs] Are you with me?

9-00:35:18

**Wilmot:**

Not anymore.

9-00:35:18

**Lester:**

He was the father, who's the father of Julia Jackson.

9-00:35:21

**Wilmot:**

The reason why I am now confused is because I thought the William Alexander Lester name came through your father's side.

9-00:35:35

**Lester:**

Yeah, right. This is my father's side we are talking about.

9-00:35:37

**Wilmot:**

You said this is the brother of your mother's mother, that gets confusing to me.

9-00:35:41

**Lester:**

No, no, it's not my mother.

9-00:35:43

**Wilmot:**

Okay, his mother's mother.

9-00:35:47

**Lester:**

Okay, my mother, none of her family is involved in this write up. Okay? This is all my father's side. But this is where the Alexander came from. [continues reading]

“Okay, the women with “A” are Azalea. Where Azalea is derived from, I don't know, but my mother's middle name was Azalea. My sister's middle name was Azalea. And this is where I understand that to be. I'll stop here. But this second family where Miss Fanny had all these boys, there was also a girl, Mabel Flanagan. She was Mama's half-sister.” Mama is Deborah. Okay? Are you with me?

9-00:36:20

**Wilmot:**

Yes.

9-00:36:21

**Lester:**

“They lived with us in Georgia. At that time, she was married to Rutherford Hightower and they had a son, James Willie Hightower who we know as JW. Later, she came to Chicago with a man named Sublet and JW took the name of Sublet. Both of these husbands seem to have left for some reason and JW took the name of Flanagan.”[chuckles] I love it.

9-00:36:49

**Wilmot:**

Did you probe further and ask your father what reason he thought that they left or was it just beyond the scope of—?

9-00:36:56

**Lester:**

No, I just left that alone. [laughs] Because I think if he, you know, wanted to share that, he would have. Or if he knew, you know. I don't think he even knew. [continues reading] “Mabel had two or three other children after coming to Chicago, but who their fathers were, I do not know. I spoke about Doris, one of Aunt Leila's children who married a fellow by the name of Ray Gilliam and had a daughter when she married him. Ray's daughter is the mother of Officer, who is now the mayor of St. Louis—” that should be East St. Louis—“Illinois.” Okay?

9-00:37:30

**Wilmot:**

Officer?

9-00:37:32

**Lester:**

That's the last name.

9-00:37:33

**Wilmot:**

Okay.

9-00:37:35

**Lester:**

What's his first name, I don't know. "I spoke about my grandfather's youngest brother, Phillip Flanagan, his wife's name was Ella. My father died in their home at 6605 Champlain Avenue. They had three sons: Charles, James, and James had two children, and Clifford. I think James is the only one of these three that had children. That's as far as I can get there." So if you want this, leave the burial information here, cut that out.

9-00:38:05

**Wilmot:**

Okay. We'll figure out what we are going to do with it at the end. Is that okay?

9-00:38:09

**Lester:**

Yeah, I just want to take off the burial information.

9-00:38:12

**Wilmot:**

Okay. I have a question for you. Now, you said you also did an oral history with your wife's father, your father-in-law. Was this around the same time? Was this in 1979?

9-00:38:27

**Lester:**

No, it was some time afterwards.

9-00:38:30

**Wilmot:**

What was the occasion there?

9-00:38:31

**Lester:**

Oh, I thought I would, having done this. I said, 'Gee, let's stick an audio device under my father-in-law's [mouth].

9-00:38:40

**Wilmot:**

And how was that?

9-00:38:42

**Lester:**

Oh, it was interesting. Actually I only transcribed it about a year or two ago. I have the tapes in there.

9-00:38:49

**Wilmot:**

How long was that interview?

9-00:38:51

**Lester:**

Oh, not long, you know, half an hour.

9-00:39:00

**Wilmot:**

And what did you learn?

9-00:39:03

**Lester:**

Oh, I learned that he was born in Louisiana, grew up in Arkansas, that his father lost his arm in the wood mill and came north and was successful selling insurance later. My father-in-law was a Pullman porter during the war, WWII. Then he, with his brother-in-law, opened a store on the South side of Chicago, a grocery store. But I don't remember this well—that well at this point. I may have that somewhere.

9-00:39:40

**Wilmot:**

Where did you say your wife's family is originally from?

9-00:39:45

**Lester:**

On her mother's side, from Georgia. Father's side, Louisiana.

9-00:39:49

**Wilmot:**

And when did they come to Chicago?

9-00:39:52

**Lester:**

That I couldn't tell you off-hand.

9-00:39:54

**Wilmot:**

But your wife is from Chicago?

9-00:39:55

**Lester:**

Oh yeah.

9-00:39:56

**Wilmot:**

And she's part of the Chicago family?

9-00:39:59

**Lester:**

Yeah. In other words, my father knew her mother and father from high school, Phillips High School in Chicago. So clearly by that time, they'd been in Chicago for a while. I think they both went to elementary school in the city of Chicago, too. As a matter of fact, when it was mentioned by my wife to her mother that I was coming to see her, William Lester. She said, "Oh, I knew a William Lester." And this was not unique. [laughs] My father got around a bit at Phillips High School, he was a man about town. I've got some pictures that won't wait. He and his buddies with their suits and hats, they were killer bees, you know? As a matter of fact, my father's last wife was someone who remembered my father from when he came back to high school, okay,

and years later, they married and her son—she had a son by the way who was a year or two behind me at the University of Chicago.

9-00:41:01

**Wilmot:**

So it was a very kind of interconnected network.

9-00:41:04

**Lester:**

It turns out, it turns out. Yeah

9-00:41:06

**Wilmot:**

But you said your father was married twice?

9-00:41:09

**Lester:**

Oh no, no, no. He had been married once before my mother. That marriage was annulled, I believe. I think he got married when he finished high school. And then he married my mother. After my mother, there was Norma Starks who he married. They were married maybe a decade. Then after that, he married Mary Saxton—Saxton was her married name from her previous husband who died. And then she married my father, Mary Saxton.

9-00:41:51

**Wilmot:**

You had mentioned also that your wife's family and your family had some ties to Troy Duster's family in Chicago.

9-00:41:58

**Lester:**

Well, simply that my father went to high school at the same time to my understanding, as Troy's mother. As a matter of fact, they were instrumental in establishing or creating the Wendell Phillips Alumni Society, alums of that high school.

9-00:42:15

**Wilmot:**

Was that something you learned from your family or was that something that you and Troy had a conversation and kind of—?

9-00:42:19

**Lester:**

Troy and I had never had conversation on these issues. We never had an occasion where we talked about these sorts of things. In my sense of it, he was not particularly attuned to talking about family. That's my sense of things. I learned of the connection from my father.

9-00:42:38

**Wilmot:**

Let's see, let's turn to—the other thing is that I really learned a lot from was reading this book that you recommended to me. It's a wonderful book about Chicago, called Black Chicago or Autobiography—

9-00:42:55

**Lester:**

*The Autobiography of Black Chicago?*

9-00:42:56

**Wilmot:**

Yes, and it was by Travis Dempsey?

9-00:42:58

**Lester:**

Dempsey Travis.

9-00:43:00

**Wilmot:**

Dempsey Travis. I'm always inverting his name for some reason, because it seems like his first name should be his last name. I think that's what it is.

9-00:43:07

**Lester:**

Yeah, as a matter of fact, it's very true.

9-00:43:12

**Wilmot:**

One of things he also talked about in addition to talking about residential segregation, which is part of why I asked you to tell me further about your sense of the geography of Chicago—

9-00:43:21

**Lester:**

Did we discuss that? The sense of geography of Chicago?

9-00:43:24

**Wilmot:**

To some extent, I just asked you did you have a sense of the different neighborhoods—where you were supposed to go and where you were not supposed to go and you were talking about it.

9-00:43:33

**Lester:**

Oh sure. Anyway, I cut you off. You were headed somewhere.

9-00:43:39

**Wilmot:**

Well, I was actually wondering about graft. I've talked to other people who have a memory of Chicago being this place where politics and affiliation were really important in terms of how people got resources. And I wanted to ask you a little bit about that aspect of Chicago as you may or not know about it.

9-00:44:02

**Lester:**

Oh, I do know about it. Because my father was in the civil service, in the post office, it was never a real issue for us. All around us, this sort of thing was going on. That is, that you would see your local precinct captain if you needed some political favor. The graft in the police was sufficiently bad that I remember one time when I was in college driving my car, my rear lights went out. I

had no taillights. I was pulled over by the police. The policeman, he was feeling the better of things, maybe a little high, said, “Well, you got any change on you? I need a cup of coffee.” So I reached in my pocket, emptied my pocket into his hand. He said, “Okay, get those lights fixed.” [laughs] Or with respect to traffic tickets. In the timeframe my father told me who to go see at the garage across from the courthouse to have my ticket fixed. Okay? I mean, that’s the way it was at that point, if you knew that’s how the system worked, okay? So, many tickets I didn’t have to pay, just give the guy a few bucks and that was it.

That was before all the big exposés in Chicago, you know, where people came in and investigated judges and police and all that sort of thing back in that time frame. And if you needed something done politically, clearly the democratic party, the machine was the thing. I mean back in the days of when my father used to talk about De Priest—I can’t remember what De Priest’s first name was.

9-00:45:30

**Wilmot:**  
Oscar?

9-00:45:30

**Lester:**  
Oscar De Priest, yeah. And later on, the first war, it was Big Bill Dawson, William Dawson.

Oh, I was a campaign manager for a buddy who played on the basketball team with me at the University of Chicago, Fred Hubbard, who ran as an independent for City Council. He got clobbered badly. I was manning the phones at our headquarters close to a precinct. I phoned in a complaint about something to the County Sheriff, whom you’re supposed to call with these complaints. And his response was, “Call me tomorrow,” in other words, nothing was going to be done about any complaints you want to make. After the experience—Fred lost—Fred said, “Well, I think I’ll join the machine and still do what I want to do.” He joined the machine, and was elected the next time. That was Chicago politics. You either fall in line or else. There is some latitude I gather once you are in office, but you know, it was a machine. There is no, ifs, ands, or buts about it. That’s the way it was.

9-00:46:34

**Wilmot:**  
Okay, well, I want to switch tape now. Let’s take a break.

9-00:46:37

**Lester:**  
Okay, very good.

[End Audio File 9]

[Begin Audio File 10]

10-00:00:03

**Wilmot:**  
Professor Lester, how did the post of faculty athletics representative come to you?

10-00:00:13

**Lester:**

Well, I was asked if I would take on the position.

10-00:00:15

**Wilmot:**

By whom?

10-00:00:16

**Lester:**

By Vice Chancellor Horace Mitchell, clearly in consultation with the Chancellor since it's a Chancellor-level appointment. And this occurred the spring of 1999. I observed the meeting of the Pacific Ten Conference in June of 1999. I was appointed the FAR, Faculty Athletics Representative, in July, for July 1, 1999, for a five-year appointment.

10-00:00:44

**Wilmot:**

Why did you accept?

10-00:00:45

**Lester:**

That's a good question. I thought it was another committee. I didn't realize fully what it entailed. But I always take on things that are interesting. I mean, I've been involved in athletics to a good extent over the years, played college basketball, captain of the team for three years, set records and so forth. It seemed to be an interesting alternative, you know. So, only on the proviso that I'd have teaching release based on discussion with the other Faculty Athletics Representatives in the PacTen.

10-00:01:16

**Wilmot:**

Did you get that?

10-00:01:17

**Lester:**

Yes. That's a subject of some question now since I understand the Budget Committee is not excited about faculty who do no teaching. You know what the Budget Committee is, of course. It's the committee that rules on promotions and raises, that sort of thing. So it would be interesting to see what plays out because I'm under consideration for a merit at this point. I'll be coming up next year actually for that consideration. But in any event—

10-00:01:44

**Wilmot:**

And you've had teaching release since 1999 Fall?

10-00:01:49

**Lester:**

Right, right.

10-00:01:50

**Wilmot:**

Wow, so that means you've been teaching no classes—

10-00:01:52

**Lester:**

I have not been teaching a regular scheduled course since that time.

10-00:01:56

**Wilmot:**

Seminars?

10-00:01:58

**Lester:**

Well, I give seminars with my research group.

10-00:02:00

**Wilmot:**

And with your research groups, you continue to work?

10-00:02:02

**Lester:**

Yeah.

10-00:02:03

**Wilmot:**

Interesting. Okay. So what has this work been like for you? What's it been like being Faculty Athletics Representative?

10-00:02:12

**Lester:**

Oh, it's been very, very interesting.

10-00:02:14

**Wilmot:**

Has it illuminated new aspects of the university to you or what have you kind of got—?

10-00:02:18

**Lester:**

Well, it just primarily illuminates intercollegiate athletics. I was appointed during the period that John Kasser was the Athletic Director and Gloria Navarez was the Assistant Athletic Director in charge of Compliance. Those were the people I interacted with mostly along with a few other assistant athletic directors. And that has continued in the new regime under Steve Gladstone as Athletic Director. And now Foti Mellis is the Associate Athletic Director for Compliance.

The big issue in the first year was the question of two student athletes, two ends, receivers whose eligibility was questioned by someone. We don't know exactly who it was, but information went to the NCAA saying that the eligibility of these people—I have to look up the names, I don't remember the names at this point—are in question, or is in question. Do you have it? Let's see. Ainsworth and Davenport, those are the two. Are you with me?

10-00:03:49

**Wilmot:**

Yes, I'm with you. The two names, I do not have here, but yes.

10-00:03:55

**Lester:**

So I asked for the instructor of record for the courses that these young men had taken. All courses were taken with Professor Alex Saragoza. So I contacted Alex, who I had met previously, who responded to concerns of minority students. I felt great respect for him, very articulate, intelligent individual who I enjoyed interacting with. I asked him whether or not these individuals had satisfied the requirements to get the grades that they have received and he told me that they had. So I, after much thought, I ruled these fellows eligible. The Pac Ten Conference came back and asked, "Is this the case?" They asked that an investigation take place, which wasn't a question in my mind since I had asked my colleague, working with an old principle that you can believe what you colleagues said. I said, "No, I had not, but I felt that this was okay." So—

10-00:05:04

**Wilmot:**

You said, "No, I had not."

10-00:05:07

**Lester:**

I had not done a further investigation.

10-00:05:08

**Wilmot:**

You had not? Yes.

10-00:05:10

**Lester:**

Yeah, based upon my conversation with Saragoza, I felt that enough had been done. The whole business of investigating somebody was totally new turf to me. I had never investigated anybody in my how many years as a professional since my Ph.D. So it was not something that I did. If I asked a colleague, I didn't expect to not get a correct answer.

My sense of it is that perhaps Alex didn't appreciate the importance of a clear answer on this. That his efforts always to assist students of color may have led him to do some things that—you know, strike deals and so forth—that for the average student who is not a student athlete would not have been a concern, because the rules are different for student athletes versus students.

And so the Pac Ten investigated and found that they could find no documentation or Saragoza had no documentation of these folks having satisfied the requirements, having done work and so forth. And so we ended up being penalized. The university was placed on probation, there was loss of scholarships for football. And I have the details in my drawer about all of that which transpired thereafter.

But then a year later, the NCAA comes back and says, "We are going to investigate." So we go through the same bloomin' process again, and got further penalties. The Chancellor was successful in getting the number of lost scholarships reduced. Oh, part of the requirement or penalty placed on an institution is that a letter of reprimand go into my personnel file along with that of Gloria Navarez, the Assistant Director for Compliance. So I have a letter from the Chancellor stating that I'm being reprimanded for my actions on that case.

10-00:07:08

**Wilmot:**

Were there any repercussions for Professor Saragoza?

10-00:07:13

**Lester:**

Oh, profound repercussions for Professor Saragoza. Because the bottom line is that he had to resign his job. He had been professor at Ethnic Studies on campus, on the Berkeley campus, and then became vice president at the University of California Office of the President for Outreach. He had a salary of \$200,000 plus a year and a budget, as I understand, at the time of a quarter of a billion dollars.

10-00:07:36

**Wilmot:**

Billion or million?

10-00:07:37

**Lester:**

\$250,000, oh this figure, I am uncertain. Back in that time frame, it was a very different period, and eventually he had to resign. He did resign of his own accord, but I think the alternatives were only to do that. I mean, that was the one course of action he could take. Based upon people that I've talked to since then who were close to the situation, he really had to do it, there was no other recourse. So it was a very unfortunate circumstance, quite frankly. I mean, it profoundly impacted his career.

10-00:08:16

**Wilmot:**

What were the repercussions as far as you knew for Ronny Davenport and Mike Ainsworth, the two students?

10-00:08:25

**Lester:**

Essentially very little. Davenport, I believe, went to San Diego State a year or so later. Ainsworth sort of disappeared off the horizon, I don't know where he is. But it was part of a receiver core, that is there were five receivers—

10-00:08:47

**Wilmot:**

But they didn't finish here?

10-00:08:48

**Lester:**

Oh no, not at all.

10-00:08:51

**Wilmot:**

That's major.

10-00:08:52

**Lester:**

Well, they were already in academic trouble. I mean, the whole business of being able to play that fall in football hinged on their being successful in these courses, which led to their being eligible, for which no evidence had been found to substantiate the grades received.

So where was I headed with that? That's about it. I went through the same process with NCAA I went through with the Pac Ten in terms of appearing before a committee. This time, instead of at the Pac Ten headquarters, it was in Savannah, Georgia. Chatham County where my mother's side of family, at least my maternal grandfather, started. In front of an infractions committee of the NCAA, in which I was asked the same questions as I had been asked a year earlier. Answers don't change in time. "Oh, you didn't investigate?" "No, I did not investigate for the reasons I indicated." This sort of thing. So it would not happen again. One such experience in a lifetime is enough. But I'm very saddened by the impact on Alex. I think it's just tremendously unfortunate, and I would even do things differently.

10-00:10:07

**Wilmot:**

Where is he now?

10-00:10:08

**Lester:**

I think he's here. I think he's teaching some courses here, but I can't say it with certainty. I have not seen him since that time. Because he truly was a role model for Latino and Chicano students. He came from the Valley, worked his way up, professor here on campus, this sort of thing. Yeah, it's a very dissatisfying aspect of my professional career to have been involved with that sort of situation hitting a colleague like that. And I would do that differently, too, in terms of investigation and so forth. I don't know if the effect on him would have been any different, quite frankly, if he had already moved the system on. I mean because of what he did, he was censured by the Academic Senate. So, in a certain sense maybe, nothing would have changed except I would have not been smacked because of not carrying out my job in the appropriate way, that is, investigating. Information that would have been unearthed earlier.

10-00:11:22

**Wilmot:**

And maybe you would have—yeah.

10-00:11:24

**Lester:**

I probably would have saved the institution from probation, possibly. Can't say with certainty. That's a very unusual circumstance, very unusual. So the charge of—I can't remember what exactly what it was called—Academic something or another, which cuts to the quick, sort of like loss of academic integrity of the institution. It was a big thing that the Chancellor was concerned about without question.

10-00:11:58

**Wilmot:**

This is Chancellor Berdahl?

10-00:11:59

**Lester:**

Yes.

10-00:12:00

**Wilmot:**

Did this incident significantly affect the lay of the land in terms of college athletics in the Pac Ten and NCAA?

10-00:12:17

**Lester:**

No, not at all.

10-00:12:18

**Wilmot:**

I mean did it change the way people thought about student athletes?

10-00:12:24

**Lester:**

This is a more local situation by nature of—no, no, no. There are issues that arise all the time. You read about them in the newspaper, violations here, violations there. We deal with them all the time. But involving a faculty member like this, that's rare, very rare. Truly exceptional. It's a very unusual situation.

10-00:12:51

**Wilmot:**

And your sense is that Saragoza did not know what he was kind of doing? He did not understand the broader implications of things?

10-00:12:57

**Lester:**

Yeah, I'm not sure that he necessarily was paying that much attention to it.

10-00:13:02

**Wilmot:**

To?

10-00:13:02

**Lester:**

When he responded to my question. These were student athletes, yes, but the rigor of scrutiny that student athletes undergo, I feel almost certain he had no sense of what the implications of not giving the real situation to me would lead to. But then, he's vulnerable at that point. The real problem fell with me in terms of not investigating. He had already done what he chose to do.

10-00:13:46

**Wilmot:**

So Berkeley is still on probation?

10-00:13:49

**Lester:**

Yes. It's a five-year probation. I think we may be coming off. See, there was another incident that occurred a couple of years ago dealing with bills not being paid on time. What does that

mean? That whenever a student athlete incurs an expense or I should say charges something and doesn't pay it back in a timely fashion, that's known as an extra benefit. We tell all teams in the fall prior to the start of the season about the problems of extra benefits. Whenever a student athlete receives an extra benefit, that is an infraction. Any time a student athlete get something because he or she is a student athlete that other students don't receive, that's an extra benefit and an infraction of the rules. They should get no special treatment. So when we discover a student athlete driving a new car, what have you, the first thing is "Have you registered the car? What's the source of it?" All of that is important.

I don't recall what I intended here.

10-00:14:59

**Wilmot:**

This is—I'll give it to you in just a minute. I was just looking at a different article. This is how I learned about this. [Saragoza Affair] But I want to hear what you talking about in terms of the extra benefits.

10-00:15:18

**Lester:**

This is the Alumni Association.

10-00:15:21

**Wilmot:**

Yeah, it's an article about the Saragoza affair.

10-00:15:24

**Lester:**

Yeah, "Cal Fumbles."

10-00:15:25

**Wilmot:**

But in any event, just to return to the question of the extra benefit issue.

10-00:15:41

**Lester:**

Yeah, what about it?

10-00:15:41

**Wilmot:**

What was the incident that you are speaking of where someone incurred an extra benefit and it was an infraction—.

10-00:15:50

**Lester:**

I wasn't speaking of any particular benefit. I was just speaking generally. I was defining an extra benefit. It's any benefit you get which a standard student would not receive. And you receive it by nature of the fact that you are a student athlete, that's an extra benefit and an infraction, which has to be reported.

10-00:16:06

**Wilmot:**

So in many ways, taking on this job, it was an education for you because there was a whole level of kind of monitoring that you're responsible for.

10-00:16:19

**Lester:**

Yeah. We actually brought in a new level, an additional level of administration to assist us in this respect. And that's why we have now an Associate Athletic Director for Eligibility and Compliance. Before, I was dealing with compliance along with the Assistant AD for Compliance. I have a director of eligibility reporting to me and an eligibility assistant. I still have that, but then between my Director of Eligibility, there's an Associate AD for Eligibility and Compliance reporting to both the Athletic Director and myself.

10-00:16:54

**Wilmot:**

In my understanding of your position, your primary charges are to one, guarantee the assurance of academic integrity of Cal athletics, and two, to monitor academic performance of student athletes. Is that basically your umbrella? Is that what you're responsible for?

10-00:17:15

**Lester:**

What's the second?

10-00:17:16

**Wilmot:**

To monitor the academic performance of student athletes?

10-00:17:20

**Lester:**

Yeah, but there's an overarching responsibility and that is to be concerned about student athlete welfare. That is the dominating aspect of responsibility of the position as defined by the book I just showed you. So therefore you should be involved in a whole range of things. In close association with the Athletic Director so you know what's going on, be involved in searches for new positions in the intercollegiate athletics departments, so that I carry the point of view of the faculty entities in particular arenas. Be cognizant of student athlete experiences, so I go to the Captain's Council—this is the council that meets once a month of the captains of the various teams. We have twenty-seven teams here. I also am involved in passing on the rules and regulations along with the Director of Eligibility and the eligibility assistant. At the beginning of the year, the so-called eligibility or compliance meetings, where they meet me and they are supposed to know who I am and how to reach me should issues arise.

10-00:18:21

**Wilmot:**

Each of the athletes?

10-00:18:22

**Lester:**

Each of the athletes.

10-00:18:24

**Wilmot:**

On the twenty-seven teams?

10-00:18:24

**Lester:**

Close to 900 student athletes.

10-00:18:26

**Wilmot:**

Wow.

10-00:18:27

**Lester:**

So that they are aware that there is an alternative to intercollegiate athletics if issues should arise. That happens very rarely. In some instances where, say, a student athlete feels he or she has been mistreated in some way, then I am the avenue outside of intercollegiate athletics to pursue such issues. So that's my kind of responsibility.

10-00:18:53

**Wilmot:**

So in some way, we've talked about one of the more high profile situations when we talk about the Saragoza affair, but what is the—?

10-00:18:59

**Lester:**

It is the highest profile in my experience, this situation.

10-00:19:02

**Wilmot:**

Yes. But what is the more common day to day experience of your responsibilities in this capacity as Faculty Athletics Representative? What is it like day to day? What do you see the most of in your—what comes up the most for you?

10-00:19:14

**Lester:**

Well, I meet regularly with my office staff around issues of petitions and wavers, eligibility, these kinds of things. All petitions and wavers for reinstatement have to be signed by me. Let's say, if a person, presumably a "red shirt" or has a medical hardship case, those must be signed by me. And then, we the FARs of the PacTen meet on these to make a judgement as to whether or not a person should be reinstated. A lot of these things are done by mail through the PacTen office or periodically when we meet. There's a meeting next Monday and Tuesday of the Pacific Ten Conference. The fact is that the athletics representatives meet separately. The Senior Women Administrators, the Athletic Directors, and the Chief Executive Officers don't attend this particular meeting. And then we meet as a council, that is, the three principals, the AD, SWAs, and FARs. Are you familiar with that jargon now? The athletic directors, the senior woman administrators, and the faculty athletics representatives, to go over any issues based upon—see the green binder, that's the material for that meeting.

10-00:20:25

**Wilmot:**

Okay.

10-00:20:26

**Lester:**

Okay. The three above it are—I'm on a Gordon REsearch Conference Committee too, which means the latter part of next week. So I've got about twelve proposals to review between now and next Friday morning when I go to Montana to Big Sky Ranch, which is one of the proposed new sites for Gordon conferences. This is all an aside, but another activity I'm engaged in. So in that respect, relevant to this discussion.

I'm engaged in a fair number of service-to-the-community sort of activities. I enjoy this sort of thing. I guess probably the most prominent was associated with that big plaque on my wall, the one signed by former President Clinton, which named me to the National Medal of Science Committee. At the same time, I was asked to serve on the Advisory Committee on Advanced Scientific Computation by the Secretary of Energy, Spencer Abraham. So I've been doing that. I was re-appointed in 2002 for another couple of years. This is to set the strategic course in terms of large-scale scientific computation for the Department of Energy.

10-00:21:32

**Wilmot:**

I want to return to the FAR position for one second. I just want to ask you about—there's an ongoing debate—not debate—but there is an ongoing discussion about athletes who are on athletic scholarships who come to schools. What kind of work have you done around making sure these athletes are supported academically? That they are really getting what they need in terms of their academic support so their experience here is not just athletics but is also really very much an academic experience?

10-00:22:19

**Lester:**

Well, we have, I think, an excellent structure in place spearheaded by the Athletic Study Center, currently under the direction of Derek Von Rheenen, in which there are a number of Athletic Study Center advisors who work with student athletes assisting them in a variety of ways, in terms of their academics. There is very close interaction between the Athletic Study Center advisors and the student athletes. I also served on the Advisory Committee for the Athletic Study Center. We meet regularly, once a month in terms of its program and what it's dealing with, what it's finding out, along with the faculty and some other staff people relevant to that area. Also, there's the annual graduation rates report, which is undergoing some change, because for the longest, it did not include walk-ons in the tabulation of graduation rates and so forth.

Graduation rates can be very peculiar in the sense that owing to statistics of small numbers for small teams, such as basketball, the numbers can be atrocious. If you've only got two players who came in in a certain year and neither finished, then you've got a zero graduation rate, or else they may have gone on and transferred to someplace else. But in the old counting procedure, if they left, then they counted against you. Now, if they leave in good standing, it doesn't hurt you. So there are these levels of complication or at least have been.

So I think the infrastructure is good but could be better in the sense of money is tight from what I can see. They've got many student athletes living together and so it really takes the initiative on the part of the student athletes to get out and see what else is going on. Furthermore, I think that, in principle, the rules say that you can spend twenty hours a week in pursuit of intercollegiate athletics and the rest of the time is on your own. This doesn't say that a student athlete might spend more time working out above the twenty, which is unsupervised. It's only twenty hours of supervised practice and instruction.

So it's primarily a problem with the revenue producing sports: football, basketball. Women's basketball is now falling into that category, maybe a little bit of women's volleyball. But in the so-called Olympic Sports, which are all the rest of them, it's a very different ball game. Some of those teams have GPAs better than 3.0. Top team, I think they got 3.75 one year depending upon which team. But then again, we are talking about young people coming from very different strata of society and educational preparation and so forth. You see that it's night and day, a very different situation.

10-00:25:01

**Wilmot:**

Can you talk to me a little bit more about that—how there were young people from different strata of society and different sports?

10-00:25:07

**Lester:**

Well, to the extent that they don't find inner city golfers or lacrosse players or swimmers, and typically in order to participate in these sports, you have to have lived in an environment where you can participate in these sports, which typically means a more affluent segment of society. So it just says as the night to day, I mean, it just follows that you are going to have that distinction. And typically at such places which have these sports, the education preparation is superior to that which you would find in some of the places where you'll find excellent football and basketball players in terms of alternatives.

10-00:25:41

**Wilmot:**

What kind of thinking has gone into supporting the students who come from "disadvantaged" background in that respect?

10-00:25:46

**Lester:**

Oh, well, a lot of thinking has gone into it. In terms of assisting the selection of courses, talking to students about the opportunities that exist here. But it's really tough for students who haven't had good academic preparation because they are coming into a very competitive academic institution, and so it can be tough. I mean, the question is a very serious one. You know, some people would argue that such student athletes shouldn't come here or some others would say, why shouldn't they have the opportunity to get a Berkeley education? Then it's a question of support once you are here, right back to the question you were raising a few moments ago, that that should be up to snuff in that sense, that is, be adequate for the purpose. But it also requires on the part of the student athlete that he or she is committed to the academic dimension or requirements that this place would entail. So one of the questions we always ask in those

instances where there's a student athlete who has come before what is known as the Oversight Committee, is that individual committed to being successful academically. That has to be a given before the committee will say "Yea" with regards to admission.

But on the other hand, you have this very strong, I would say alumni base arguing for "Why aren't we better?" and so forth and "Come what may, do well on the athletic field." It sort of flies in the face of what we are seeing right now. There's something called COIA, Committee On Intercollegiate Athletics, a national group talking about de-emphasizing intercollegiate athletics. And all the presidents generally pay homage to that concept, but yet still we see losing coaches fired; we see stadiums expanded. So I would say a lot of hypocrisy exists there in my view, having seen it up close. Who's going to lead the parade to give up what they have in order to downsize? I see no institution in this country doing that first, to start the movement in this direction.

There is a meeting actually, I guess next week, in Indianapolis at the NCAA. I think it's at the NCAA, I have it on my desk somewhere. I'm unable to go because of the conflict with this other activity. But I didn't concern myself about it really. I mean it sort of just popped up because they've been operating through the academic senates of the major institutions of the big conferences, the Big Six as they are called in the United States. Pac Ten, Big Ten, SCC, ACC, Big Twelve, okay? These are the big conferences, which are BCS related. I can't remember what BCS is. It's a shame to be on tape and not know what BCS means.

10-00:28:33

**Wilmot:**

It's okay. We'll go back and fill it in.

10-00:28:36

**Lester:**

Oh, okay.

10-00:28:38

**Wilmot:**

Sounds like Berkeley Campus something.

10-00:28:45

**Lester:**

No, no, it's not Berkeley; it's national. BCS ratings determines who goes to the top bowl game, second bowl game, and third rated bowl game. It is an organization formed in the absence of playoffs to establish the national leader in football and the ordering of it—the BCS ratings is what they are called. Anyway, so it's not just Berkeley, it's national. Okay?

10-00:29:12

**Wilmot:**

Just trying to make an acronym work. Well, there's a couple questions for you. I asked you this question about balancing athletics and academics knowing full well that you are someone who was a student athlete as well as someone who emerged on the other end of that to plunge into academics. So I wanted to ask you to think about your experience. I'm wondering what are you bringing from that experience to the ways that you view your role with regards to supporting student athletes?

10-00:29:59

**Lester:**

Well, I have a sense of the demands in terms of time. I was not at a Division One-A institution. My institution, University of Chicago, is now considered Division Three, so—.

10-00:30:01

**Wilmot:**

I understand.

10-00:30:02

**Lester:**

But I just have that exposure, which is different from most of my colleagues for whom athletics is a foreign territory. It is not for me. I've been in a lot of locker rooms over the years, you know, dealt with coaches, dealt with all of that. So in that respect, some people say I have a better vantage point. I think I do in both instances, both the academic and the athletic. I think one of the big issues nationally—it's a national issue—is the problem we have nationally in terms of the quality of education for students in the inner cities comes to the fore in these instances of students from such educational backgrounds coming to very highly competitive academic institutions. I think it really calls attention to a need. We've really got to do something about education in this country for those who don't have. Okay? Because it seems to me we're headed very solidly towards a have and have-not society in the United States. We're not there yet, but clearly, we're moving in that direction.

And it's also the case, only the truly outstanding student athlete—and this has been said by many—might to some extent not have to worry so much about his or her academics, because they can go to the pros in those couple of sports where this is possible. But even in those instances, my view is that the quality of life is tremendously enhanced by having a solid education. Even beginning with one's own self-esteem, when you are in an environment of this sort to be able to compete and talk to people on an even basis in your own mind in dealing with the society we have within the institution. Both from the perspective of faculty as well as fellow students, much less student athletes. Okay? In terms of how faculty sometimes view students of color. I just think back to my son, at one point, who had a faculty member in Electrical Engineering & Computer Science kid him about "What team do you play on, young man?" They had a sort of running joke about this, because he was the only one. Or one of only two or three. And one of the things he says in the articles that are written about him is that a number of black students entered when he came in, but he was the only one who finished in EECS, in Electronic Engineering & Computer Science. We are talking about a very highly selective major, which he describes as the educational process in that area was really a grind. You're really putting in.

10-00:32:27

**Wilmot:**

A purge, like a trial by fire.

10-00:32:29

**Lester:**

Yeah, that's just the nature of the education, how competitive it is and how many students want to be in it.

10-00:32:34

**Wilmot:**

Let me ask you this question. There was also something that you mentioned kind of apropos to what you are mentioning now, there was an email that you just got, there was an article, do you recall that?

10-00:32:47

**Lester:**

I have to go to my machine and see it again.

10-00:32:48

**Wilmot:**

Can we just take a quick look at it?

10-00:32:50

**Lester:**

Yeah, yeah.

10-00:32:50

**Wilmot:**

It's that the title that I want. We were talking about off camera.

10-00:32:58

**Lester:**

Yes, yes, yes.

10-00:32:59

**Wilmot:**

And the title of that, and if you could just tell me who sent it to you and what's the title.

10-00:33:04

**Lester:**

Yeah, the article was sent by Barbara Davis who was—can't remember what Barbara's title is, we can find that out though—but under Barbara is the Athletic Study Center. So she is very cognizant of aspects which deal with education and athletics. The article is entitled, "Black Athletes and White Professors: A Twilight Zone of Uncertainty." This appeared in the *Chronicle of Higher Education* today. I haven't read the article, but clearly it's one I shall read. Let me just quickly jump down through it, see what it might contain. Oh, I can't do it justice—

10-00:33:47

**Wilmot:**

Let's stop for a minute.

[interview interruption]

10-00:34:03

**Lester:**

Your machine was buzzing and carrying on too while you're away.

10-00:34:05

**Wilmot:**

Yeah, it does that. It just, after a while, if it hasn't been handled, it starts to just turn itself off.

10-00:34:15

**Lester:**

No action.

10-00:34:15

**Wilmot:**

Yeah, basically. Okay, let's see. So we both just took an opportunity to read this really interesting article, "Black Athletes and White Professors: A Twilight Zone of Uncertainty." And some of the themes that were raised here basically about the ways that student athletes are perceived and treated by professors and also the role that race plays in the ways in the interactions between student athletes and often white professors. And I wanted to ask you if you had seen any of those themes cropping in your work?

10-00:34:57

**Lester:**

Oh, absolutely.

10-00:34:57

**Wilmot:**

From the vantage point of the FAR, Faculty Athletics Representative, have you heard of any of those themes cropping up? What are your thoughts on this?

10-00:35:09

**Lester:**

Oh, some student athletes indicating, say, when first coming in that feeling negative vibrations, feeling hated, has been one mode of expression, by fellow students. Because they are student athletes and at a very competitive place like Berkeley, that the issue of, "Well, if you weren't a student athlete, you wouldn't be here," kind of mode of expression. I think that happens in many, many instances where black students who are not student athletes get labeled. And I mentioned off camera about my son being chided about being a student athlete when he was here a number of years ago in Electrical Engineering & Computer Science, that he was asked what sport he played. Of course he didn't play one and this faculty member knew that but because there were so many—how should I put it—of those black athletes or black students who one saw were student athletes, they assumed and made the joke that basically my son probably was one as well, which was not the case. And there are, of course, other black students who are not student athletes, really. But, the stereotype prevails and as a consequence, then, black students can be labeled in that way. So, and all the negatives associated with that.

And one of those is brought out here, I think, very well. And that is the tendency sometimes on the part of white faculty to overlook black students, especially black student athletes, in terms of questions, in terms of calling on them, this sort of thing. So it's a problem. It's still a problem in 2003 at a large public institution of this sort.

10-00:36:59

**Wilmot:**

It's so disappointing really and saddening.

10-00:37:04

**Lester:**

Yes. How prevalent it is? I can't say. I don't have a fair sense of that, but I do know that it occurs based upon the experience that some student athletes indicate and some students indicate, as a matter of fact.

10-00:37:19

**Wilmot:**

Well, it's so difficult to think that in 2003, you can't protect young, matriculating African American students or students from other ethnic backgrounds from those kinds of attitudes from their professors.

10-00:37:34

**Lester:**

Yeah, to a greater extent, in terms of student athletes, it is the African American student athlete who stands out more. Therefore, as an African American, the question is begged or gets raised more often than not, as opposed to Latino or Chicano students. Clearly with Asian students, that stereotype doesn't exist, so that is not an issue in terms of that group, in my experience.

10-00:38:09

**Wilmot:**

Are there numbers which would describe the racial breakdown in the student athlete pool versus the student body in general which would say that there were a higher proportion of African Americans in the student athletic pool?

10-00:38:34

**Lester:**

Yeah, that information is available. I can't give it to you off hand. But in general, the campus keeps information now along those lines. I say now, because if indeed Proposition 54 had passed, then we wouldn't even have that information. But it is also the case, in terms of student athletes—it is been a new procedure that if the number of minority student athletes on a given team falls below a certain number, that number is not given. It's left with an asterisk, because of the ready identifiably on a given team as to who those individuals are. I've seen that sort of thing in the last year.

10-00:39:20

**Wilmot:**

I was wondering also to whom are you responsible? Who is your direct—

10-00:39:28

**Lester:**

I report to the Chancellor.

10-00:39:29

**Wilmot:**

You report to the Chancellor. Okay. If you were kind of describe—

10-00:39:34

**Lester:**

And his agent from time to time is Vice Chancellor Horace Mitchell, for Business and Administrative Services.

10-00:39:41

**Wilmot:**

And if you were to describe the larger pool of stakeholders involved in the work that you do as FAR, what would that look like?

10-00:39:55

**Lester:**

Well, clearly, stakeholders comprise student athletes, intercollegiate athletics as a program, the faculty on the other hand, and in addition, to a certain extent, those alums concerned about intercollegiate athletics. Because occasionally I'm asked to speak before such groups regarding the nature of the responsibilities and concerns that arise in terms of intercollegiate athletics, such as, for example, the Big C society which awards the initial letter to student athletes when they receive it. So that's primarily the range of stakeholders I deal with.

10-00:40:40

**Wilmot:**

You touched on this briefly—

10-00:40:44

**Lester:**

Yeah, let me go ahead and say one thing further. Of course there's the conference and the NCAA in terms of the role we play and who is involved and concerned about the sort of actions that the Faculty Athletic Representatives deal with or are concerned about.

10-00:41:04

**Wilmot:**

One other thing I wanted to ask you your thoughts about is about the idea of industry surrounding student athletes. That they generate income, that they become these bodies that are very much involved in making money one way or another for the institution. Do you have any thoughts about that?

10-00:41:25

**Lester:**

Of course. [laughs] I mean, when I speak of revenue producing sports, those are the sports for which these issues come up: football, men's and women's basketball, and to some extent volleyball, those being the principle ones. Well, especially in men's basketball, fundamental concerns, even rules have been created by the NCAA that deal with that sport specifically because of the big money and monetary dimensions of the sport. And the rules governing interaction between student athletes and agents and the whole extra benefit issue which I talked about earlier, student athletes staying for the full eligibility period instead of leaving to go to the NBA, for example. All these issues play a role. There is the issue of some students being runners for agents. What's a runner? Well, that's a person that represents an agent and will be buddy-buddy with student athletes so at some point if indeed a student athlete has been identified as really someone who will be drafted, who will make big money, then the runner, the buddy of the student athlete, might say, "I think you should talk to so and so." That is, the person to whom this particular runner is obligated or works for as the case may be.

So I don't know if I caught the full sense of your question.

10-00:42:51

**Wilmot:**

I think I asked it in a somewhat vague way. Your saying that just reminded me of the last paragraph in this article that we were just reading where the author talks about the reality that most of the student athletes in those high revenue sports don't go on to high contracts for a life in athletics. And he says, "Finally, I should emphasize that the goals we share are not just making sure that athletes get adequate grades to pass a course and stay eligible to play but that they acquire skills for life and work after college, which for most athletes will be not be professional sports."

10-00:43:40

**Lester:**

Yeah, I think it's a very important, very important issue. And to compete, clearly, at a later point in life, they will have to have done well to be competitive, to even have been considered for movement in the non-athletic arena. It's vitally important in terms of their resumes, credentials, what they've done, that it plays a role. And I think it can be difficult for some student athletes to focus on that at the time when they are really pushing the athletic dimension at the university. So that's where mentoring is a critical issue, something which is discussed a great deal in intercollegiate athletics here when it comes to revenue producing sports; who is involved in helping to shape the thinking to mentor these young people. All of that is vitally important.

And it's also the case in terms of very high profile student athletes that typically they have met agents prior to coming to the university even, I mean, young people of talent are identified very early on. I think one of the major issues here is once having been identified early on whether or not a student athlete continues to prepare him or herself academically since this is such a very satisfying kind of psychological experience, to be appreciated by other people at this early stage for what you do in the athletic arena as contrasted to the academic. And so why should one spend some time over there unless one is very forward thinking in terms of the implications of their academic development over time.

10-00:45:14

**Wilmot:**

Well, I think satisfying is one word, but it could be very confusing to be really appreciated for what you do and not who you are. Do you know what I'm saying? Like, I wonder about how that works for student athletes as well.

10-00:45:37

**Lester:**

Yeah, I guess that the concept which you just enunciated is not totally clear to me in the sense that what you do, being an athlete, clearly, that's identifiable. But who you are? What do you mean by "who you are?" What do you mean? I'm asking a question.

10-00:45:55

**Wilmot:**

I understand. Well, I just meant that it seems to me that it could be difficult if you are kind of surrounded by people who want you to perform in a certain way and that's the dimension for which you are ascribed value. What happens to you when you are no longer the person who's performing in that aspect or that arena? I'm speaking to kind of how to address the wholeness of a human being, and not just kind of supporting them on one level but not the other levels.

10-00:46:32

**Lester:**

But not supporting them on the other levels, yeah, yeah. Clearly, that does happen. That's tied to the article as well in terms of the lack of appreciation of what a individual has to offer outside of his or her athletic endeavor, in the sense of the example of the young lady writing the essay and doing a very good job, that indeed, that should be honed and that should be supported, and that it was a surprise to the professor to know that a black female student athletes could write so well—surprised. Why should it be a surprise? Get quality from wherever.

I think another interesting aspect of the article is the business of the—I just lost my train of thought on that. Was the business of what? Let me just let it go, maybe it will come back to me.

10-00:47:25

**Wilmot:**

Okay.

10-00:47:25

**Lester:**

I really lost that—that was quick.

10-00:47:28

**Wilmot:**

That happens to me frequently too. We'll just hold on a second and let's see if it come back to you.

10-00:47:44

**Lester:**

And what was fascinating also in the article was the discussion about how you can cheer a guy on, African American, on the court and still resent their being next you in the class. Wow.

10-00:47:56

**Wilmot:**

That's what I'm talking about, that kind of odd—

10-00:47:59

**Lester:**

A kind of schizophrenia?

10-00:47:59

**Wilmot:**

Yes, schizophrenia! Really.

10-00:48:04

**Lester:**

But I think that's a reflection of the larger problem we have in American society quite frankly in terms of color and ethnicity. I mean it's been my view over the years that that won't change. When I joined the faculty, as a matter of fact, it wasn't clear to me what kind of students I would get, whether I would get any graduate students, as far as that's concerned, based upon some colleagues who had been in academia longer than I simply because I had spent a decade in industry, and who talked about, "Well, I don't necessarily get the best students, you know." Well, I've gotten some actually very good students, but I don't get many. I get, in many

instances, those who do the perfunctory visit, which is required by the process we have in terms of new students joining the campus—graduate students that is—and then they disappear. That’s fine. But in my heart of hearts, I feel very strongly that the nature of the science that is being done in my group at this time and has been underway for almost a decade, which is increasingly becoming better appreciated in terms of the area I operate in, is the top of the mark. There’s absolutely no question about that. Not that I uniquely identify it as such, but the recognition based on experience when I was exposed to this area, I knew which role. So I just took that and moved with it.

It’s been a long time coming to fruition or to the level it is now where it’s better appreciated, but even that is still an educational process. Now I’m being asked to give talks, as I mentioned earlier, going off to Brazil in November and just got an invite to India in the beginning of December. In the United States, it’s a little slower, you see. [chuckles] Which has always been the case, I mean, this was true when I first went to Europe and discovered that people really were interested in what I was doing. This is—now I’m talking ’71, come back home, and, oh well. It’s an interesting dimension. I view it as the broader marginalization of folks, black folks in particular—I’m not talking about other ethnic groups at this point—in terms of academic endeavors. It triggers my thinking with regards to a conversation I once had with Price Cobbs about black folks having to prove themselves at every level. But others, you know, based upon certain success, move on up. Well, for black folks, we (the broader society) are not sure. You know, the question is vague whether or not you really can do the job at the next level up. And then my observation of situations that have arisen that in my, I think, tendency to step back from situations and look them hopefully in a reasonably objective way. That is really the case all too often. That, “Gee, why haven’t certain things happened?” As I looked at what my peers have done in certain respects, “Oh Gee, there seems to be a sort of a higher requirement dictated in my case.” Now I’m being very personal in this respect. So, you know, “Well, that is the reality. I cannot change that reality; I can do the best I can with what I have.”

I’ve had these discussions with my son, in particular, who is enjoying success in terms of his visibility on the racing circuit, not necessarily so much on the track, but he’s doing very well there. But what he is encountering, which in many ways parallels experiences that I have had that we could talk about, that, “Why do certain things happen? What is it about being black in this country and being involved in certain pursuits can get you some publicity, but still and all, you want to be good at what you do to maximize your potential in that particular direction.” And so you have to work at that and recognize why things are happening to you in particular and then contrast it to other situations where it may be even more difficult to do in other arenas which have less general visibility and appreciation. And I cite various academic arenas in this way.

And I want to distinguish very specifically the separation between those intellectual pursuits which are associated with color and ethnicity as contrasted to those which in some sense are not. I’m speaking of engineering and the sciences and so forth, for which there is a very different general appreciation that’s involved. Because in the instances where one is studying racial dimensions of various subject areas, I think that by nature of being an ethnic minority that the authors, in many instances, do get a platform from which to present ideas. What happens subsequently, of course, remains to be seen, but it’s the platform dimension that I’m referring to here. In that the nature of the competition and what’s involved is I would say more psychologically demanding than, I think, in the other instance. I’m getting a little fuzzy here, I

recognize, but I'm not bringing to the fore a lot of thoughts that I've had. Articulating them is presenting some difficulty. But it's tied to the issue of being valued for what you do.

I've enjoyed some successes in that respect. But for young people, I think it's, "Why should I be engaged in this endeavor?" I talked to, you know, groups here BESSA, Black Engineering Science Student Association, BGEES, the Black Graduate Engineering Science Student group. And I'll be talking to them again. And to some extent, my story has changed over the years in terms of really emphasizing the importance of this being a passion, a burning desire to be involved in it. Because any other way, I think, there's probably a better way to live your life unless you psychically have to do this or feel that this is a very compelling thing for which you will bring something special to the table.

10-00:54:05

**Wilmot:**

Okay. I hear that, okay.

10-00:54:12

**Lester:**

Because at one point, people—there was a lot of effort spent in the seventies and early eighties, in terms of particularly African Americans going into engineering, this great push. And then the numbers at the end not being so great coming out. Because I think you cannot just sell the disciplines. A person has to have experienced them in a certain way that it means something fundamental and intrinsic to them, that it brings value to them, separate from other areas of value in one's life. That for some reason, one may not be able to articulate it or define it fully, but one gets some fundamental benefit from pursuit of that activity. And that's why I still deal with this, what I do. And I think there's a certain craziness about this, but there may be a certain craziness about anything that one is passionate about and wishes to be engaged in. And what you put up with as a consequence of wanting to pursue that particular direction.

Don't come in half stepping or you might as well just give it up, because you will be chewed up if you don't know how to deal with situations or whether it's of value to pursue them, to follow up, to deal with stuff, you know.

10-00:55:25

**Wilmot:**

What has been your strength in doing this work? What has kept you strong in this work?

10-00:55:33

**Lester:**

Oh, I just felt that hey, why not? This was something I was exposed to early on. I achieved some success in the scattering stuff that I did earlier. And we talked about my learning about some results in condensed matter physics and feeling that they had applicability to molecules and moving in that direction and finding out that the results are really very good, which led to my redirecting my research program. The potential coming from it has been slow to come about, but I was really floored by the general view of this area by many theoretical chemists who just felt that, you know, this wasn't going anywhere. I said to myself, "Gee, how myopic can you be?"

Well, I have had the experience of directing the National Resource For Computation In Chemistry and learning that scientists really have significant blind spots themselves regarding

issues, have a certain lack of objectivity like anybody else depending on what the arena is—and this arena is one in which they are professionally involved—not being able to see the benefits of such an organization. That was driven to a great extent by money, zero sum, that my organization took money away from the general pool. So there was less for university folks otherwise. So that the general service provided by such an organization was reborn in some subsequent year. I just find it mind boggling, you know. So I'm not surprised when folks are myopic on issues nowadays. Okay, well, that's their problem. The question is what is my problem and what is their problem. If it's their problem, they've got to deal with it. I will try and identify and carve out what I can do to address the issues that are of concern and importance to me. I think that's vitally important in terms of maintaining your sanity in this business.

10-00:57:23

**Wilmot:**

Let me ask you one last question, then we'll close today.

10-00:57:26

**Lester:**

Yeah.

10-00:57:27

**Wilmot:**

On October 7, there's an election coming up, the recall election. Do you have any thoughts on that and Proposition 54?

10-00:57:34

**Lester:**

No question on Proposition 54. It shouldn't go anywhere. On the recall election, I've been bouncing all over the place on that. I would say this morning's exposé, L.A. Times, on Arnold is such as to be—let me tell you why I think the man ought to go and give it up. Okay, he's given this quasi-apology regarding his behavior towards women. But the thing which made it for me—because I have followed him for many years because of my interest in body building and so forth, and I actually have a couple books by him. So I know other names in that business and a fellow named Robby—I can't remember Robby's last name, Robinson? Whatever. They called him the “Black Prince of Body Building” back in the day, back in the '80s—whose wife came to Gold Gym and got groped by Arnold who then told her husband who because it was Arnold didn't feel up to stepping up on behalf of his wife because of potential implications for his professional career drove me up the ever-loving wall. To me, there is no basis—that is that my career should matter when this guy has done this to my wife? This is, for me, you know, the absolute end. And that's beyond the whole issue we are talking about in terms of the poor behavior that he's demonstrated. But then I quickly extrapolate. Put this guy in a position of power such as governor, who knows what's going to play out under what basis if he has the mindset to feel the license that he did in the circumstances in which he found himself both as an actor and as a body builder. Spare me.

So then the question is recall and no recall. I think as far as I'm concerned that Gray Davis, my gosh, he may have learned something the very hard way, that he may not be the worst alternative under the present circumstances. So on that basis, my thinking, for the record, is that no on the recall and I think I have to go to Cruz for the vote of who would you have otherwise.

McClintock? You can forgive me, conservative right wingers, no way. Who else do we have? I don't think that Camejo has a real chance, quite frankly. Who else was there on the hill engaging in debates? Bustamante, McClintock, Schwarzenegger, who else was there? Arianna Huffington stepped out, she stepped down. Though she may be on the ballot, that's not a real alternative.

10-01:00:06

**Wilmot:**

I think we should just check back the next time we meet and see what's happened in the interim and then we'll be able to have something more—I mean something will be different. So we'll check back then.

10-01:00:16

**Lester:**

Yeah, yeah.

10-01:00:17

**Wilmot:**

Let's close for today.

10-01:00:18

**Lester:**

Okay, very good.

[End Audio File 10]

**Interview 7: October 14, 2003**

[Begin Audio File 11]

11-00:00:02

**Wilmot:**

October 14, William Lester, interview seven. Okay. Well, today, I wanted to start off and trace some events here in university history. And the first one I wanted to ask you about is in the mid-80s, there was the anti-apartheid movement here on campus to encourage the Regents to divest from any holdings that were connected to South African corporations.

11-00:00:43

**Lester:**

Oh yes.

11-00:00:45

**Wilmot:**

Do you recall the events around that?

11-00:00:48

**Lester:**

I remembered the times, it being a very busy time around these issues. Active student and faculty concerns around them. And that was it for the most part. I don't remember details related to what actually transpired on campus except I recall there was a lot of activity connected to them. That's about what I recall most vividly.

11-00:01:16

**Wilmot:**

Did you work with any other faculty or join any kind of faculty coalitions against Apartheid or for divestment?

11-00:01:33

**Lester:**

Yeah, in terms of particular activities, I can't put my finger on them. Though I recall that we black faculty had taken out an ad---I can't recall which of these various movements in the New York Times--expressing our views with regards to the Apartheid movement that it should be removed. Or was it SP one though I can't imagine SP1 and SP2, maybe Prop 209? I can't remember exactly. These things tend to merge in my mind. So without going back and having some records to show how I was involved in these various activities, I have some difficulty pinpointing which is which. So unfortunately that is the reality of the present day.

11-00:02:11

**Wilmot:**

I'm recalling also that you were actually a fairly young and new faculty person.

11-00:02:21

**Lester:**

I was relatively new but I wasn't young. [laughs] Coming on campus, joined the faculty, Gee, I must have--

11-00:02:30

**Wilmot:**  
1980.

11-00:02:31

**Lester:**  
No, 1981. So that means I was forty-four years old as a full professor.

11-00:02:35

**Wilmot:**  
In the mid-80s, you had been around campus around five years. You were a fairly new faculty person. And I'm wondering was there a sense—

11-00:03:05

**Lester:**  
New to Berkeley, that is.

11-00:03:06

**Wilmot:**  
New to Berkeley. Was there a sense that you were kind of learning? Did you feel as if you were learning the kind of interventions that faculty might make in political situations?

11-00:03:19

**Lester:**  
No, not at all. No, I felt that, in light my past history, I had seen enough in various environments and circumstances and arenas that I was clear what one did. One did what one's, oh I think, principles led them to do depending on how active one wished to be. I based this upon my experience in previous academic settings, in Wisconsin in the mid '60s, IBM through the decade of the late '60s through late '70s and heading a national organization in science. It's clear that you had to step up and do what you thought was a reasonable thing to do. It was not an aspect of learning the Berkeley environment. It was really more of what made the most sense to do. What one did was consistent with one's basic philosophy, I feel.

11-00:04:03

**Wilmot:**  
Did you ever kind of feel that there were some kind of inherent contradiction being a member and a citizen of this community and some political commitments that you held close to you?

11-00:04:18

**Lester:**  
No, I can't think of anything in that respect which would be a contradiction. In other words, my being an employee of the university didn't preclude my doing what I thought made sense to do in a variety of situations. And furthermore, being a tenured full professor, I mean there were no principle repercussions to arise out of courses of action that I might take. So I didn't think—I don't think that played a role at any time since I've been on the faculty here. What's happening? You don't like that side? [referring to Nadine adjusting recording equipment]

11-00:04:56

**Wilmot:**  
I decided to move over to the other side. Do you recall in the mid-1990s, 1995, '96 when Ward Connerly sponsor SP1 and SP2? When do you recall first hearing about that?

11-00:05:17

**Lester:**

When it first became public. I can't recall exactly when that was, as a matter of fact. But I just thought it was ridiculous. I don't see Ward Connerly's perspective on these kinds of issues. It seems to me that his concerns and focus don't make much sense in the world that I find myself in where color does matter. The implication is that something that is a reality that one must deal with it in this world. And so in that respect, with regards to SP1 and SP2, a thought which I had at that time was that if indeed he wanted to change or eliminate the consideration of race, ethnicity, and gender in terms of admissions, then you put something in place of it. And lacking that, then I thought it was totally irresponsible on his part to do what he did. And I also find this to be the case with regards to Prop 54, which just went down which we just voted on.

11-00:06:28

**Wilmot:**

Was there an opportunity for faculty to organize against SP1 and SP2?

11-00:06:35

**Lester:**

Oh yes! There were strong movements.

11-00:06:37

**Wilmot:**

What did that look like?

11-00:06:39

**Lester:**

Gee, I can't say what it looked like, but there was a lot of buzz, a lot of talk. There were meetings of one sort or another, the usual rallies on Sproul Plaza and so forth. Jessie Jackson came out and spoke against these issues. So it was the usual sort of thing that happens in Berkeley. But in terms of more refined, detailed sorts of statements as to what transpired, I can't provide those. My memory banks are not where they should be in that respect.

11-00:07:06

**Wilmot:**

That's fine. Do you recall any involvements that you had that were specific around this? Were you involved with any coalition?

11-00:07:15

**Lester:**

Not a coalition as such. And again these aspects are hazy. I mentioned earlier the various ads that were taken out by black faculty. I'm having a tough time remembering exactly which ones were associated with which particular movements. So beyond that, I'm unable to do so without some further material. Indeed only our casual conversation before we started recording reminded me of some of the things that I had been involved in back in that time frame. So, sorry, I'm not able to provide the kind of detail I would like. I mean were it closer to the time, maybe I could have.

11-00:07:51

**Wilmot:**

Maybe some things will come up for you later.

11-00:07:56

**Lester:**  
Yeah.

11-00:07:57

**Wilmot:**

Well, there was another issue that I'm kind of just figuring out the—I'm just trying to understand what happened. As I understand in 1998, there was a whole kind of uproar around ethnic studies, a segment of the faculty had organized to vote for a lack of confidence for the Chancellor?

11-00:08:29

**Lester:**

To vote on lack of confidence regarding his administration, I gather, of the Ethnic Studies issues. In that respect, I believe there was some commitments to a certain number of FTEs to the Ethnic Studies Program. I don't remember the details of how this situation was worked out by the Chancellor, but I do remember that certain faculty who brought to the attention of the Academic Senate the issue of a vote were concerned about confidence in the leadership of the Chancellor.

11-00:08:58

**Wilmot:**

And this was Chancellor Berdahl?

11-00:09:00

**Lester:**

Chancellor Berdahl, right. It was shortly after he was appointed when this occurred—I think about '98. Is that right? Yes, that would've been very early on in his administration, one of the earlier issues he had to deal with campus-wide. And I remember an Academic Senate meeting on this subject. Presenting the case for lack of confidence in the Chancellor was Jack Citrin, my predecessor as the Faculty Athletics Representative here. And the person who really carried the ball in terms of supporting the Chancellor was former Vice Chancellor for Undergraduate Affairs, Russell Ellis. It was a very contentious meeting, a large turn-out of faculty around this very important issue. And well, the bottom line was that the Chancellor stayed in his position. That there was confidence on the part of the faculty that indeed the Chancellor did a worthwhile thing in terms of the actions that he took. And it was some time later that I was approached about being the Faculty Athletics Representative. And in that particular conversation with the Chancellor, who clearly was unhappy with the actions that Jack had taken. He basically stated that he would not have anyone work for him who would take that kind of action against him to be a part of his staff. I fully understood that.

So, when approached to step in that position, after some conversation, I agreed to do so. After going to a meeting and being an observer at a Pac Ten meeting, in June of 1999, I accepted the position and became the Faculty Athletics Representative in July of 1999, a five-year appointment. I think it was the first appointment which was contractual regarding this position. Previously, people just sort of served at the will of the Chancellor for an ongoing period prior to this. And quite often that is the situation in many institutions. Somebody assumes the position and they're just there in perpetuity. So, my appointment actually ends at the end of June 2004, which is the time at which the present Chancellor will step down. He's announced he's resigning his position and returning to the faculty at that point.

11-00:11:29

**Wilmot:**

Can you tell me in brief what was the point issue regarding the Chancellor's decision to support Ethnic Studies or to—

11-00:11:43

**Lester:**

I think the real issue hung on the allotment of FTEs to that department and whether or not that was, from the perspective of those folks and Jack, the sort of thing that should have been done. Was it in the Chancellor's purview? I can't remember exactly in this regard just what the argument hung on. We have to go back and look at the supporting documents connected to the Academic Senate and those are on file. So I think that's an avenue that you could utilize and get the details on this. But basically I think it was the allocation of FTEs to resolve this issue in Ethnic Studies. To say more about that, probably, I'd be on very thin ice.

11-00:12:20

**Wilmot:**

Okay. Let me try and ask one more question, which is how did faculty array themselves around this issue?

11-00:12:29

**Lester:**

Well, I don't know if there was—there wasn't it seemed to me a clear indicator I should say of how faculty more broadly felt about it except to say that there was strong support for the Chancellor in terms of what he did. I think clearly, it was a small subsection or sub-group of the faculty that were supportive of Jack's position. Because were it otherwise, they would have been a very different outcome in terms of the meeting that was held.

11-00:13:02

**Wilmot:**

Okay.

11-00:13:04

**Lester:**

It was a very unusual circumstance to have that sort of thing take place, unprecedented in my experience.

11-00:13:13

**Wilmot:**

I want to turn now to focus again on your work. An important thing that we have yet to spend time on is when you started--you turned to the quantum Monte Carlo Method? And I wanted to go back to that. I know that was when you were still the head of—as I understand it—it was when you were at Lawrence Berkeley Lab?

11-00:13:47

**Lester:**

That's right, yeah.

11-00:13:48

**Wilmot:**

And you were the head of the NRCC.

11-00:13:54

**Lester:**

I was the director of the National Resource for Computation in Chemistry.

11-00:13:56

**Wilmot:**

Right, right. So I just wanted to talk to you about how you made that shift from what you were working on at that time to the quantum Monte Carlo Method? As I understand it, it was a real departure from the work you were doing.

11-00:14:08

**Lester:**

Yeah, I had been focused since my days as a post-doctoral associate at Wisconsin, beginning in November of 1964, and continuing through the time I was appointed at Lawrence Berkeley Lab, I guess through about 1980 of that period. Over that span of time, my focus had been on heavy particle collisions, that is collisions of atoms with molecules, and computing cross-sections for energy transfer and chemical reaction of atoms and molecules. Also computing the potential energy surfaces which are input into calculations of cross sections, both integral and differential cross sections. Integral being the total (overall angles) cross section for the process, and differential being the scattering into so-called center of mass angles. Anyway, that had been the focus of my research for that length of time, basically twelve years or more. Is that right? No, I did it longer than that, from '64 to about '80. So we are talking about sixteen years or so.

With regards to why I changed was a consequence of one of the people I had hired, David Ceperley, who was a condensed matter physicist who had been strongly supported to join the operation by Bernie Alder, a theoretical chemist/physicist at Lawrence Livermore National Laboratory who had also been a candidate for the position of director of the NRCC. To my understanding, we were the two candidates for NRCC Director. Bernie was an expert in classical Monte Carlo. And the quantum aspects of this were something that he was interested in pursuing and so he mentioned this fellow who applied Ceperley and his letters of support were as good as Bernie had indicated that he was, as a young scientist. So I hired him.

One day he came into my office indicating he had 100 percent of the correlation energy for the electron gas. Electron gas is a model system for condensed matter and I said, "Though that's fine,"—the question of atoms and molecules and their treatment by such a technique was still yet an open issue in part. I say, "in part" because Jim Anderson, a theoretical chemist at Penn State University had embarked along this trail of application and development back in--first paper was published about '75, '76 and I had been aware of his work. But a hundred percent of the correlation energy is something which is vitally important for electronic structure studies because what's defined is the difference in energy between the non-relativistic limit for the energy as the exact energy of the system without consideration of relativistic effects and the energy of the system in something called the Hartree-Fock Approximation. The Hartree-Fock Approximation considers the system as one in which you have one electron in the field of the  $n$  minus one other electrons. You get that energy and consider all  $n$  electrons of the system, you end with the average energy of the system, which does not take into account the important interactions that arise from the instantaneous interactions of electrons with one another. So that's why you refer to this energy difference as the correlation energy, really is the descriptor for that particular energy. So we speak of Hartree-Fock Approximation and post Hartree-Fock, that is, when you go beyond

the Hartree-Fock Approximation. And all techniques used in theoretical chemistry have never approached--that's for atoms and molecules--100 percent of the correlation energy in the sense that techniques would get possibly 20, 30, 40 percent of the correlation energy. The idea of getting more was a fairly interesting one. It's sort of a holy grail kind of issue in theoretical chemistry.

And though Jim Anderson had not been successful in—how should put it, because I don't remember exactly--in getting sufficient correlation energy that it would excite the field, I started a project in which another scientist who was interested in returning to the West Coast, a research professor at Boston University by the name of Peter Reynolds, came to spend a year at NRCC in its last year of existence to assist in the project of application of quantum Monte Carlo to molecules in a joint effort with Dave Ceperley and Bernie Alder and myself, a project which I funded as the NRCC Director to see just how good this approach might be. And because I did electronic structure work as a graduate student many years ago and was fully aware of the development of the area because of work of colleagues at IBM Research over a decade or more, I really had a good feeling and knew this area, and was applying some of these techniques in the calculation of potential energy surfaces. This is the aspect that you treat, that is, the solution to the electronic Schroedinger Equation.

In that respect, the results that were obtained for the cases that were considered that appeared in this 1982 paper in the Journal of Chemical Physics were from my perspective, beyond belief. They were very good in a project of one year. And so this excited me sufficiently, coupled with the fact that I was tired of doing these collision problems in which the target always were hydrogen molecules because of the energy level spacing being large, that is, hydrogen as a target. The size of calculations you considered depended upon two features, not one: the energy spacing of the internal (rotational, vibrational) states of the molecule—in other words, the wider energy level spacing, the easier the calculation can be done, and  $H_2$ , has the widest energy level spacing of any molecule. And the other dimension is how many levels are accessible at a given center-of-mass energy? So that, if indeed you have the situation in which the energy—well, if the energy level spacing is small, then you have to contend with, at a given center-of-mass energy how many energy levels are accessible. The more energy levels that are accessible, the larger the calculation. The energy levels that we are talking about are both rotational and conceivably if you go beyond the first vibrational manifold, vibrational levels as well. And then there is the  $2J+1$  degeneracy associated with rotational energy levels—that is, each of the rotational energy levels under a magnetic field splits into  $2J+1$ , energy levels where  $J$  is the rotational quantum number. So that each of those then has to be counted in the enumeration of the wave functions that must be considered in the expansion of the wave function for calculation, for first of all, solution of the coupled equations that you have to consider. That enumeration is dependent upon the energy of the collision as mentioned before which is directly connected to the number of what we call partial waves required to compute a cross section. You solve the coupled equations for each partial wave. The enumeration of the number of partial waves is tied to aspects of what one calls coupling of angular momenta. And not to get any further into the details of this, this is how I made my living over a span of some sixteen years.

Well, before changing areas, I was fortunate enough to have a couple of graduate students from Berkeley come work with me at IBM Research in San Jose. And one of them actually worked on scattering of a polyatomic molecule (formaldehyde) by an atom, Helium. It was the so called

astrophysical cooling of formaldehyde in the interstellar medium. It had been postulated by Charles Townes, next door in the Physics department, a Nobelist, that it was due to couplings between the lowest two doublets of the formaldehyde system, which caused this interstellar cooling. It was a collisional pumping process. People in Townes' group had done calculations. We looked at the thesis of one his former students in this regard. And it was clear to me based upon our experience in looking at some other systems that their description of the potential energy surface was inadequate. They used a very simple semi-empirical one. We joked when we used to say that that it is what physicists do as opposed to theoretical chemists who look at the detail to be sure that's a well described aspect. And this is the sort of thing I had been doing earlier with these lithium ion hydrogen molecule collision studies which were able to show some inadequacies of experiment back in the old days.

So, this graduate student, Barbara Garrison, took on this project who commuted from Berkeley on a daily basis to work with me. She and a fellow by name of Andy Raskowski were the two students who commuted, who were students of my neighbor across the hall, Bill Miller and a former neighbor Fritz Schaefer, who is now the Perdue Professor at the University of Georgia.

So to make a long story short, what we were able to show, that is, what Barbara was able to show, was that the cooling occurred because of the coupling of the three lowest doublets of formaldehyde. You got no interstellar cooling unless you included the third doublet. We could see this from calculations with the lowest two and then with the lowest three doublets. And you saw the cooling curves take on the appropriate behavior to establish cooling with the three lowest doublets. And cooling did not occur with only the two lowest doublets. And so this got a mild flash in the literature, in *Astrophysical Journal*.

This work was done collaborative with the late Sheldon Greene of the NASA facility in New York who was one of the people who first suggested that this would be an interesting system to study at the time. He was beginning to look into these kinds of problems because of the research he was doing at NASA Goddard. Actually, NASA Goddard is in New York City. And I said "late," because Sheldon died maybe a decade ago now. A young guy, too. I mean, he was a little younger than I am. He died in the early '90s or so as far as I recall.

And Andy Raskowski did a very nice job on the scattering of  $H_2$  by helium vibrational energy transfer. This is an area that Miller was very much interested in his semi-classical approaches to scattering. We were doing full quantum against which you can test semi-classical techniques, which are not as exact as doing full quantum problem. Miller is widely recognized for his work in the development of semi-classical scattering approaches.

So one of the fascinating things for me that I learned from the interaction with these two graduate students from Berkeley is that, my gosh those students are very good. They were as capable as some of the post docs we would see down at IBM. And so when it came time to think about a place to go after NRCC--that is, return to IBM, because I was on a leave basis or go elsewhere--the thought of joining a faculty here was an intriguing one, which I thought very highly of primarily because of the quality of the graduate students and staying in the Bay Area. We liked it in Oakland. Those were the compelling personal reasons for going on the faculty here. Which was not necessarily something that was going to happen.

It was indicated by Brad Moore (C. Bradley Moore) that with the close of NRCC, which was something which came about as the result of the review report which said that continue NRCC for two years and then review it again. But then, the head of Lawrence Berkeley Lab, David Shirley and I, agreed that this didn't make a lot of sense. So on this basis, I was informed by people at NSF that as a consequence of Dave's visit there and the circumstances under which NRCC would be continued--those involved no staff, I would sit in Berkeley and dish grants out across the country--that this was untenable for a research organization such as Lawrence Berkeley Lab. And so we did not go forward. We subsequently discussed that the Department of Energy said, "Well, you know had NSF not been a part of the support of this activity, that they could have gone forward independently." But it is sort of the community dimension related to NSF that led to the closing of NRCC.

So I have a lot of documentation as to the wonderful things that we did during that timeframe. You may recall from earlier discussion that NRCC was born under a cloud because of the unhappiness with the thought of its creation, because of the separate funds that would go towards computational chemistry embodied in the creation of NRCC, that these ten departments heads did not want to see the creation of NRCC, but National Science Board said that the experiment would be run, the creation of NRCC, with the three year time period. I think I did mention earlier that the budget cycle was such that within one year, we would've been reviewed for continuation. And I requested and got an extension for another year at no increase of money and so on, and began hiring. I am recalling something which I've talked about before? Am I right?

11-00:29:16

**Wilmot:**

Yes, to some extent. You are adding another layer to it, but you have talked about this before, yes.

11-00:29:23

**Lester:**

I have? Yeah. So one of the major things was the success of the workshops, the creation of the software library, and what else did we do? We supplied computer time on an aging CDC 7600 computer, which was state of the art once upon a time. It is no longer. One of the more difficult aspects of the review period was a response to the questionnaires that went out across the country to chemists as to whether or not they'd use the facility. And a lot hadn't. Clearly that would be the case in that period of time. But I think also there was clearly unhappiness—oh, change that, let me say that it was known that certain key figures did not like the notion of the NRCC. I mean, this is tied in part to a cultural dimension of chemistry being a cottage industry—

10-11-00:30:11

**Wilmot:**

--that the principal aspects were a director and his or her research group and having a national organization was something which was, I guess, an anathema to the thoughts of people in chemistry, many of them. So, we did not continue.

**Lester:**

This gets to the point I mentioned earlier in terms of some people suggesting I stay and I indicated only one way I would, and that would be as a faculty member. Some, I think, had in mind that I would stay at Lawrence Berkeley Lab as a staff scientist and this was not compelling

to me in light of what I had seen up there vis a vis my return to IBM, which provided a lot more flexibility research-wise at least at the time. I got many offers to become a computer center director at all kinds of institutions, which was not appealing to me since that did not provide the research opportunities that I had in mind for my career. So I avoided all of that. And presented a talk in the usual way to the Chemistry Department at Berkeley. They had a vote. There was pressure to have a response since my date of return to IBM was coming up fairly shortly. It was unclear that the faculty would vote to have me be added to the faculty. But from what I understand, and, in particular, from David Shirley, there was strong support on the part of the physical chemists, people such as Brad Moore, Bill Miller, Fritz Schaefer, Yuan Lee, that they wanted me to be a part of the faculty.

11-00:31:50

**Wilmot:**

May I ask you something?

11-00:31:51

**Lester:**

Yeah, sure.

11-00:31:53

**Wilmot:**

Now it was under C. Brad Moore that you were Assistant Dean. He was the dean when you— was that correct?

11-00:31:59

**Lester:**

No, no. You mean like when I came on faculty?

11-00:32:01

**Wilmot:**

No, when you were Assistant Dean, through the early '90s.

11-00:32:07

**Lester:**

That position was Associate Dean.

11-00:32:09

**Wilmot:**

You were the Associate Dean and the Dean at that time, was that C. Bradley Moore?

11-00:32:12

**Lester:**

I can't recall for sure.

11-00:32:14

**Wilmot:**

I went online to figure it out.

11-00:32:17

**Lester:**

Was it Moore? This was '91 we are talking about.

11-00:32:19

**Wilmot:**

Yeah, I think it was Moore. Does that sound likely?

11-00:32:22

**Lester:**

It could be, yeah, sure. It could be.

11-00:32:24

**Wilmot:**

Would there be anyone else it was?

11-00:32:27

**Lester:**

Well, whoever his predecessor was. Oh, I know when I left, it was Alex Bell. That's when I went on leave.

11-00:32:36

**Wilmot:**

Well, I'm going to check this afterwards, but in any event--.

11-00:32:38

**Lester:**

So it's one of the two, I would guess.

11-00:32:39

**Wilmot:**

Yeah. Okay. We did get into your time here at Berkeley or how you came to Berkeley. We talked about that.

11-00:32:52

**Lester:**

Yeah, that's all I've been talking about.

So, in terms of the quantum Monte Carlo method, I made the full shift in my research program. This was a much, much more exciting direction for me at this point of my career to pursue what one can do in terms of electronic structure with the high accuracy that the technique provided in terms of energies, which is clearly demonstrated in this first paper, this '82 paper. And we went on to do a whole range of things, apply the technique to other kinds of properties without exceptional results as one could get for the energy. As a matter of fact, now, we are in collaboration with another group looking at how indeed one would be able to compute other properties with comparable accuracies. It takes a lot of work. I mean, real fundamental modifications of what one does for the energy in order to have comparable accuracies, that is, for the force, for moments, dipole moments, quadruple moments and also for differential properties. So, that is, properties whose operators correspond to derivatives with respect to position, first and second derivatives, these kinds of things. So that's a once over lightly.

We are now at a point where we can apply the techniques to larger bio systems—larger systems of more chemical and physical interest and now it's a question of identifying what are the important problems that can benefit from this high level of accuracy. One of the things which I

pushed for and we did was to write essentially an introduction to the subject, which appeared in 1994. I had gotten a request from World Scientific—actually in conversation with Professor Delano Chong of the University of British Columbia who I had met when we both were post docs at University of Wisconsin, Theoretical Chemistry Institute.

11-00:34:48

**Wilmot:**

His name is Delano Chong? Delano like Roosevelt Theodore?

11-00:34:52

**Lester:**

Right. Who suggested that I do something of this sort, so I thought about one of my former students, Brian Hammond being engaged in this activity and we agreed to do this. We then later found out that Peter Reynolds, who had worked on this first paper, the '82 paper, also had gotten a similar invitation. So it didn't make sense to have two independent descriptions of the same thing more or less so we combined efforts and that led to the book Hammond, Lester, and Reynolds on Monte Carlo in Ab Initio Quantum Chemistry. It's the title of the book, the '94 book.

There have been other books that I've edited or co-edited on the general subject, one in '97, the other in 2002. And a present student, Alan Aspuru Guzik and I, have published a large review chapter of progress through 2002 and a handbook of numerical analysis with a special edition dealing with computational chemistry, I believe. Let me be sure about that, because we are presently—yeah, I think that's right. [goes away from microphone to look at the volume] A special volume on Computational Chemistry in the Handbook of Numerical Analysis. This is the book.

11-00:36:17

**Wilmot:**

I have a question for you.

11-00:36:18

**Lester:**

Yeah.

11-00:36:20

**Wilmot:**

How have different funding agencies responded to this work over the years? When you first came on the scene with this work in the early '80s, 1982, what was the response?

11-00:36:34

**Lester:**

The response wasn't that good, because the size systems we could treat were not that large. So from the perspective of the applications agencies, DOD and DOE, DOE supported basic research. And we did this over a period of time under that agency's support, which has continued to this day but the level of support has not changed very much. Now they seem more interested in this since we've been able to treat much larger systems. So presently, I am pursuing a variety of other agency support for what we do. But, I think the general community view, and I know this for a fact in some instances is that people thought of it as something which was esoteric and on

the side because of the size of the systems that we could treat. It also is stochastic, which means it's a probabilistic procedure and so properties have a mean, and statistical uncertainty. And this I think presented problems for some people. But in point of fact, there's more information you get using these techniques than you can get from other techniques, the ones which traditionally have been used. And so it begs the question regarding the open-mindedness of scientists which was begged way back when NRCC was being reviewed, quite frankly. So I find this not the least bit surprising that there could be some narrowness of view on the part of some scientists around issues that they did not support. I don't know why they did not support it.

So, the technique has grown tremendously in terms of its appreciation and people's understandings of the accuracies that could be achieved. Now, I think it's really more a point of people learning how to use the techniques. I've been approached a number of times for the software that we have developed. The problem there is that it's not user friendly at this point like the traditional software of ab initio quantum chemistry. So, in that respect, if people have difficulties and come knocking on your door, I don't want to hear that having run an organization which has dealt with providing software to people. What you will say in general is that, you know, "You use this software at your own risk and so forth." But then, if enough people start bad mouthing you, then you have real problems in terms of perception. And so, since I don't have the staff to put out a product, which would make this software easier to use, I am not worried about that issue. I simply indicated to people that we don't have the software in sufficient shape that it can be distributed.

We are thinking now of making some software available when the codes are prepared by the students, Aspuru Guzik with some other students have put together a successor program to our workhorse ("Q MagiC"—Quantum Magic was the name of the code with a Q, capital M and capital C). The subsequent code by Aspuru Guzik and others is called "Zori," which has some meaning other than Japanese sandals. [laughs] Z-O-R-I.

11-00:39:42

**Wilmot:**  
Azori.

11-00:39:45

**Lester:**

So in the next chapter, which is in progress now, I've been asked to write for the *Handbook Of Theoretical And Computational Nanotechnology*. We will include in there probably some output/input kinds of material associated with the present workhorse code and indicate how to obtain the code, probably put it on my website so people can download it, and do what they want with it, with the caveat that you use it at your own risk.

11-00:40:32

**Wilmot:**

I have a question for you which is, what about the technique is the most exciting to you?

11-00:40:35

**Lester:**

The results. It's the only thing that's exciting. In other words, as far as I'm concerned, no technique is really of interest unless it can do some special things, do things better than other

techniques. That's the main driver. How can you learn more? It's the understanding of phenomena that can be addressed by the techniques you have of interest for the particular focus of scientific interest you have. In my case that's atoms and molecules, generally a chemical application. And in that respect, I did not pursue electronic structure after completion of my PhD because I felt it just went into a morass of very technical, computational developments which were not something I was excited about. I was really more science problem driven than I was algorithm development, per se. And I had a good sense of what that involved since, after all, I had been associated in a variety of low level positions through undergraduate school with an electronic structure research group. I had done my PhD in electronic structure, so I knew the game, what the next steps would be, and that's why I proceeded to move into the business of scattering which was a more fertile area from my perspective, closer to more interesting science and how you might do it.

11-00:41:52

**Wilmot:**

When you think about what you and your group are working on now, what are you most excited about? You've described to me some of the things you are doing around software. What are you most excited about?

11-00:42:06

**Lester:**

I'm most excited about the potential application to problems of high scientific interests such as we have a proposal into the National Energy Research Supercomputer Center in response to their request for proposal for exciting scientific problems that can be addressed by large-scale computation. And this is a calculation of single-triplet splittings some very large carotenoids jointly with Professor Graham Fleming here who is an experimentalist dealing with these kinds of systems. His indication is that the only electronic structure technique applicable to these problems, which has only had modest accuracy, is the time dependent density functional theory approach. That bringing the level of accuracy that we can illustrate and demonstrate for porphyrin, which is another project still underway, would be noteworthy.

11-00:43:12

**Wilmot:**

What did you call that?

11-00:43:14

**Lester:**

Porphyrin.

11-00:43:14

**Wilmot:**

How do spell that?

11-00:43:13

**Lester:**

[spells] Porphyrin is a very important molecule. Porphyria is a disease which arises due to the absence of porphyrin, to my understanding, in the blood, in which people who don't have enough can't stand heavy sunlight. So there are a whole set of biological problems. The photosynthetic pathway is the aspect that the carotenoids relate to. These are large enough systems that the

technique that we have been talking about in terms of linear scaling would be directly applicable because these are fairly long chain molecules, that is, linear. That one requires a distance spatial extent of the order of ten angstroms before linear scaling techniques really have an advantage over the standard approaches. So, in that respect, we would offer a test ground for our techniques and the linear scaling regime but we also have the capability of doing the standard approach and so therefore would enable us to see to what extent the benefits that one can derive by the capability of having linear-scaling quantum Monte Carlo be operative, in terms of accuracies that could be applied to systems beyond ten angstroms. Still computationally demanding, but nevertheless with a payback. And the payback is one of more accurate results in less computer time, results that you can hang your hat on as opposed to many instances of great uncertainties because of the fundamental inaccuracies of techniques currently in use. So that's the real driver.

11-00:44:51

**Wilmot:**

Are there any people who you admire in the field? Who are doing this work in the field? Is there anybody whose work you particularly admire in the field at this time?

11-00:45:05

**Lester:**

You mean in terms of Quantum Monte Carlo?

11-00:45:05

**Wilmot:**

Mmm-hmm.

11-00:45:10

**Lester:**

Gee, there are a number of people doing good work. There's absolutely no question in that respect. Dave Ceperley does very nice work but in different areas of applications. He's a condensed matter physicist whose work continues with the electron gas and selected solid systems. Lubos Mitas at North Carolina State who had worked with Ceperley, for example, is also someone who has done some very nice work. Jim Anderson is basically a pioneer at this direction. Cyrus Umrigar at Cornell does very deep and rigorous studies in terms of examining algorithmic improvements and Jules Moskowitz at NYU carries out very accurate calculations that provide very useful benchmarks. A recent post doc of Jim Anderson's is doing some nice work in Germany, name is Arne Luechow.

[knock at the office door]

Come in! Hi.

[interview interruption]

11-00:46:22

**Wilmot:**

Is there anyone else you wanted to mention as doing exciting work?

11-00:46:28

**Lester:**

Yeah, let me look at a book here. Jeff Grossman and the group at Lawrence Livermore National Lab, they're doing nice work. Richard Needs at Cambridge University and his group in condensed matter physics is doing very nice work in this regard. Stuart Rothstein at Brock University in Canada who co-edited this book along with Shiguro Tanaka in Japan. This is the proceedings of a QMC workshop at the last Pacific Chem meeting in 2000. I think I mentioned most of the folks. My colleague across the hall (Brigitta Whaley) does somewhat related sorts of things..

11-00:47:18

**Wilmot:**

Is that your colleague across the hall?

11-00:47:19

**Lester:**

She's one of my colleagues across the hall. She is one who does some work in quantum Monte Carlo as it relates to helium clusters in particular. And excited state, nonelectronic structure calculations, that is, for internal structure of molecules, vibrational motion in particular. But I think I've mentioned—oh, and Mal Kalos I can't leave out, Mal Kalos, is almost a father of this field. Did some early work in the sixties, many-body physics applications and continues a vigorous research program to this day.

And the technique is applicable not just to theoretical chemistry but to condensed matter physics, as already noted, and to nuclear physics and is also used in a range of elementary particle treatment. If you look up quantum Monte Carlo and see what's been published, the majority of the papers don't deal with theoretical chemistry. I think it's only slowly that theoretical chemists have become attuned to the value of quantum Monte Carlo to their field. And I hear from experts who use alternative techniques that they slowly have become knowledgeable. They have become aware of the findings, the developments from this approach over two decades or so, at this point. But people have been very slow to change, "Well, is there a reason why I should? Is there sufficient payback?" And I think that's why there is now more interest in the method.

The technique has not really been embraced by traditional ab initio quantum chemists. At the most recent New York American Chemical Society meeting, we had side-by-side symposia, that is, standard electronic structure techniques on the one hand and quantum Monte Carlo on the other with some mild diffusion across the boundary between the two symposia that took place. [chuckles]

So that's another reason for me staying as interested and active as I am, because it is a point to prove and to establish the quality of this method and what it has to offer. And I think the end of the tunnel is in sight. How long, at least, continue to be involved in this is unclear, but the group is very capable. We're generating very interesting results at this point. One of the key projects is one in which we are looking at the fundamental neutrals and radicals of hydrocarbon chemistry of combustion interest, for which some questions have been raised. We have a project dealing with how you form the first aromatic system along the pathway to forming poly-aromatic hydrocarbons and subsequently soot. How is soot formed? What is the detailed mechanism that leads from a couple of molecules coming together to the formation of particulate fragments?

And there are a whole range of applications that can be addressed using these techniques, for example, the fundamental mechanisms of catalysis, what happens at the molecular level. And this is another reason why indeed it is important to be able to do calculations faster. Because these are larger systems with greater complexity. And then there's the whole regime of reactions and solution, the so-called embedding problem, you take this kind of technique which has the capability of high accuracy, but yet and still, all of the molecular system may or may not be of comparable importance in the calculation so you try to break the system down into parts that you focus on with high accuracy and the surroundings, which you do with less accuracy. In its more common manifestation, this is quantum mechanics and molecular mechanics. We might see that a technique is generally valid using some technique for the quantum mechanical part. And what we would have in mind would be the application of quantum Monte Carlo for that part. Then you could apply molecular mechanics to the outer part or something called effective fragment potential calculations where you actually separate out parts of the molecule to be addressed using less accurate procedures than that of the central part which would be associated with a reactive center.

Another approach which I think may hold some value is to use the diffusion Monte Carlo variant of quantum Monte Carlo, which is what I've been referring to earlier, but loosely as quantum Monte Carlo. What am I saying? quantum Monte Carlo has a couple of very obvious variants: the less accurate variational Monte Carlo and the more accurate diffusion Monte Carlo. And what I was thinking of at this point is that we would treat the reactive center, the more active chemical part of the system by diffusion Monte Carlo and the remaining part by variational Monte Carlo. And this is something that we did some years ago when we introduced so-called damped-core Monte Carlo. So these are techniques which enable one to treat the innermost electrons by a technique which differentiates the valence electrons. So, in that case, the innermost electrons are handled with variational Monte Carlo and diffusion Monte Carlo treated the valence electrons where most of the interesting chemistry takes place.

11-00:52:32

**Wilmot:**

Professor Lester, do you do your work at a computer or in a lab or how does this take place just to help someone who just doesn't--?

11-00:52:40

**Lester:**

These are all computational results we are talking about, but that which leads up to the computation is done with pencil paper and the writing of codes, computer codes, to do what you want to do using the algorithm, which you have mapped out, and gotten improved by looking at how long it took to do calculations. And with the techniques available in software, profilers finding out where you are spending most of your computer time, you can improve those parts of the code. These issues go into consideration of making improved software. But ultimately, it's the running of the software that generates the numbers that we're talking about for comparison with experimental observables.

11-00:53:18

**Wilmot:**

So it's different from my traditional picture of a chemist in a lab with a test tube and all this?

11-00:53:23

**Lester:**

Oh, absolutely. This is clean chemistry.

11-00:53:25

**Wilmot:**

This is different.

11-00:53:27

**Lester:**

Yeah, it is. This is not wet. This is dry and clean, no lab coats, no spillage.

11-00:53:34

**Wilmot:**

Your group, how do you form your group? Do they seek you out or do you kind of woo them and seek them out? How does that happen?

11-00:53:43

**Lester:**

Well, new graduate students come and they visit the various research groups in their areas of interest. And you explain what you do and what you are interested in pursuing and what the problems would be for them if they joined your group. And you see what plays out, every faculty member in the place does that. Some give little parties and what have you. I mean, all sorts of stuff goes on. But now for me, I don't have funding at this point to extend my group this year, and I was debating whether I would anyhow, in light of that fact that it's generally a five to six year period with a graduate student. At this point in my career, I suspect--I know I will not be adding any more graduate students, that in terms of additional folks joining, it would be postdocs. For example, I have a postdoc this year under the President's Postdoc program, to assist with my research.

11-00:54:37

**Wilmot:**

Where is your postdoc from?

11-00:54:38

**Lester:**

He's from Jackson State University. The President's Post-Doc program is geared towards people from historically under-represented groups and women. And he's someone whom I have known for a couple of years through my association with Jackson State as a co-PI on a CREST program. I have to look and see what CREST stands for. That's another thing.

So, I've been through one whole cycle under the CREST program for some five years, and this is the consequence of my interactions with the head of the CREST center, Jerzy Leszczynski, who visited me in about '91 when he came to California and knew of my previous assistance to Jackson State University and the setting up of a joint activity with Jackson State and with the Anna Mendez private institutions of higher education in Puerto Rico. That dates from about 1980 back in the NRCC days. Then, more recently, I provided assistance to the CREST proposal which I guess began in '98. That discussion occurred earlier, and so now, there's a follow-up proposal which was submitted and has been funded. So that's another avenue where I will continue interaction with one of the faculty members at Jackson State, a member of the physics

department, Frank Hagelberg. So there is a certain set of problems we do there. These have primarily been doped silicon systems. Doped meaning that there's a metal included in the molecular system.

11-00:56:19

**Wilmot:**

I have a question for you. We are nearing the end of our time today but not completely. This is a follow-up question from long ago, two interviews ago. We were talking about promotion processes and hiring processes and you had mentioned in passing the culture of "judge, judge, judge," that is, perhaps you were making that reference in relation to here, the academy, the way that administration judges individuals in the promotion process. Does that sound like that might be the way you were using it?

11-00:57:05

**Lester:**

Oh yeah, that we always judge, yeah, that's the nature of the business.

11-00:57:09

**Wilmot:**

Let me ask you about that, do you see any possibilities for change of that culture?

11-00:57:15

**Lester:**

Well, I think one has to judge to compare the merits. We have a number of applicants for a position. I think back at that time that I raised this point is that the whole business of judging is something depending upon your upbringing and religious bent, is something that—I am reminded of "Judge not" and so forth, it crosses my mind from time to time. I think there's really no alternative. I mean you have to have some basis of deciding on a particular candidate versus another. And that choice is based on judgment of the capabilities of one person versus another.

11-00:57:56

**Wilmot:**

That's in the hiring process but say, in the promotion process and in the way that colleagues might judge each other?

11-00:58:04

**Lester:**

That's still is the reality of it all, in a merit based activity. I've been elsewhere where you don't do things that way. When I was with NSF, and I spent time both in France and in Italy, one of the questions that came up in NSF supporting my trips, was that I find out about the funding procedures in both countries. And that was interesting. In Italy, they would slice the pie equally with everyone. So, you had people who were very productive who get no more than people who hardly do anything. So, productive people are very unhappy in Italy. And France, I can't remember what the story was, but it was something somewhat similar. So, it's a very interesting issue, the "so-called" meritocracy and how you handle this issue, especially in terms of the judgments that your peers might make of you.

For example, I was listening to someone this morning who talked about the whole aspect of perception, how indeed, someone's perception of you drives so much what they think of you and

conceivably of your work. There's a whole business and whole mindset in terms of promotion in the academy. First of all, you've got to be known which means you've got to go to the meetings, you've got to present your work for people to know who you are and what you are bringing to the table. So, there's a lot of energy that needs to be expended if you are to be a success in this business. So it means to be vocal and out there. And also meaning that you have to do good work, as the underpinning of any advancement. So it is a demanding situation which one must fully recognize in terms of improvements in terms of the rise in the system. Besides doing excellent work, one must communicate that work, one must write up that work and talk about it and be perceived so that you are on the radar screen with respect to decisions regarding advancement connected with your future. That's a reality of the situation, especially at the "top institutions," those which are highly recognized and for which there is great competition to be at, of which Berkeley is one.

11-01:00:10

**Wilmot:**

And so you don't see any hope of transforming that culture?

11-01:00:13

**Lester:**

Well, I don't see any hope except—I mean the critical issue here is the recognition that people who could provide development here don't necessarily look like folks who have historically contributed in these fields. That is, white men as contrasted to people of color and to the whole gender issue, that the appearance of people who can contribute may not be those who have done so. It's fairness in the examination of people, and open-mindedness in this respect so that indeed, one's decision-making isn't totally colored by, "That person, I don't know, the way they look, the way they talk." It's important, you have to look at the essence what's being presented, and that still will be the core or crux of decision-making in terms of moving up.

I was just at another meeting of the Gordon Conference Selection and Scheduling Committee meeting where the same issues come up. It comes up all the time, "Gee, is that person good?" What does good mean? You have to have made contributions to the science and so forth. Also in terms of these kinds of meetings, to chair these meetings, there is a kind of personality that can do this. They tell people what to do and give instructions to their discussion leaders on how to operate, all these sorts of issues come up.

11-01:01:39

**Wilmot:**

This is kind of an open question but what does it mean to you to be a citizen of this community, this university?

11-01:01:54

**Lester:**

[pause] Well. What does it mean to me?

11-01:01:58

**Wilmot:**

Yes. [laughter]

11-01:02:01

**Lester:**

I'm pleased to be a member of this community. I can think of other places that I could be at which I think would not be as good.

11-01:02:12

**Wilmot:**

I'm going to ask this question better because I asked it in a vague way. You know, you've served on different committees, different academic senate committees, you're the FAR, Faculty Athletics Representative, there's different ways that you participate in this community in addition to the work you do in your discipline. I was kind of asking you about how you prioritize what you do and where you contribute?

11-01:02:39

**Lester:**

Oh, I see. Well, I mean the fundamental aspect is the teaching and research. Those are basically intertwined. At the moment, because I am the Faculty Athletics Representative and how the position is maintained, I am not teaching a course per se. But the big measure of advancement in this institution is research. No one would disagree with that. Then next comes your teaching, and then finally, there is something called service, which I have done a lot of, historically where I saw that there could be value of my being engaged in an activity which can benefit people of color. And since there are not many faculty of color on this campus, there are a number of avenues where I can be of assistance. And I tend to focus on the areas of science and engineering as being my important dimension, because there are even fewer faculty of color available. So, I choose my activities in that respect, really based upon what I view I can uniquely bring to the table.

11-01:03:38

**Wilmot:**

Have you found that that's been something that when it comes time for promotion and step increases and things of that nature, have you been able to convey that to the people who were making those decisions?

11-01:03:54

**Lester:**

Not clear, not clear. I've gotten merit raises up to this time I think, on the appropriate basis. I feel that in terms of my science, this is what I find bothersome from time to time. I think that it is not as fully appreciated as it could be by faculty here. And this manifests itself really on nomination for prizes and things of this sort which I think has not happened to the extent I would think reasonable. And I have come to this conclusion in part from comments made by others. Some black scientists would say they've talked to folks in the National Academy about my being a member, which I am not, but one of the primary limiting aspects is a lack of push from the Berkeley folks. A very interesting dimension.

So when does this come out? [laughs] Because I guess I don't want that coming out for another four or five years. Who would read this buried in the inner sanctums of my oral history? But anyway, that's a reality of it all, so that's fine.

11-01:04:49

**Wilmot:**

Yeah, it is.

11-01:05:02

**Lester:**

But that's real in my view. Because I think the body of work that I put together prior to going to quantum Monte Carlo, in its right, which led to my being selected as Director of NRCC, by nature of being selected for that position warranted that kind of elevation. But, you know, it's how people see things.

11-01:05:28

**Wilmot:**

So my question for you is, off-tape before we started today, we were talking. You mentioned that you were slated to give two talks: one to BGESS, and then the other one to BESSA. And that's the graduate and undergraduate African American science students organizations. What do you plan to say?

11-01:05:55

**Lester:**

Well, what BGESS has asked for is essentially the bio bit, how did I become a professor here. But I think the whole question of principles associated with a successful life to me are the more critical issues. Nobody walks the same path in life but the principles, they transcend. That dimension tied to, first of all, pursuing that which is your passion. I think you don't deal with all the ups and downs of this business and enjoy it unless you are passionate about it and wish to be involved in this particular pursuit. And if it's the science or engineering, then there's a question of the excellence in what you do, let that be the driving principle in terms of what you wish to pursue. There are other aspects: balance in one's life and so forth, that I think are important to talk about. I think there's also the very critical issue of maintaining integrity, that when you know that something is coming down that's not fair, to speak to appropriate people about it, which I have done in my career, because you have to live with yourself, in terms of issues, especially as a person of color. I'm speaking particularly of being a person of color in some of the situations you encounter, and that you have to think about the consequences of doing that sort of thing, have to be comfortable with them. Though not always easy, I think, in the longer term, you live better.

So, these basic fundamental principles that I think transcend. Getting a degree here, getting a degree there, going after "the best job," I think are secondary considerations. Yes, you want the best, but you need to examine very carefully as to what best means in going with various companies, especially in terms of more recent history of companies, but even in the old days. You know, what is their culture? What are they like? What is it like for people five or ten years your senior in that organization? And how does it function, in terms of the government, industrial, and academic sectors, of which I've been involved in all of them. What are the kinds of things you need to think about in this regard? So those are the kinds of general things I would talk about in both instances.

So, I have to look back and see what they asked me to talk about as such. I will start both of these talks off with a little bio thing that I do, talking about past educational experience, what it

was like, for me, in undergrad school and in graduate school, issues that I had to deal with and so on, some of the stuff later on that I chose to be involved with, which I think are important in terms of first of all, your own value system is a critical issue and also just being materially successful. What do you really want? What are your priorities? I mean, I went to career development school in the early seventies. Not just in the company, just within IBM, but with people from a variety of companies. And this was associated with my potential, as they saw it, of being a manager at IBM because of people skills I had at that juncture and so forth. And I basically told the organizers I didn't really want to be a manager at that point, the science was more fundamental for me, primarily because I wanted to show what I could do scientifically.

Historically, it seemed to that a lot of black folks who got PhDs ended up all of a sudden doing no more research or they ended up in human resources or they ended up in some educational venue which didn't provide the opportunity to do research. And so for me, that was a driving force. After all, I had seen what these folks did where I worked at the University of Chicago, and I liked that style, that dimension. So, it's a question of what colors your thinking in terms of what your goals are.

11-01:09:52

**Wilmot:**

And where you want your ladder to rest.

11-01:09:55

**Lester:**

Yeah! Exactly. That's fundamental to it.

11-01:10:00

**Wilmot:**

Let's close for today. Is that alright?

11-01:10:01

**Lester:**

Okay.

[End Audio File 11]

**Interview 8: October 24, 2003**

[Begin Audio File 12]

12-00:00:07

**Wilmot:**

October 24th, interview eight, Professor Bill Lester.

12-00:00:10

**Lester:**

William A. Lester, Jr.

12-00:00:14

**Wilmot:**

Excuse me.

12-00:00:13

**Lester:**

Do you know that is sort of a pet peeve of mine? Mail that comes for Professor Bill Lester?

12-00:00:21

**Wilmot:**

No, I didn't know that.

12-00:00:37

**Lester:**

I was over at an undergraduate program, University Coalition, "Here is Professor Bill Lester." And I go Arggggh! to myself, no outward displays but—because if one is going to be formal about the title that carries with it, from my point of view, the formal name. Drop the title, and it's okay, but do you know me well enough?

Reminds me of something that happened at Zellerbach, Maya Angelou gave a talk, a question came from the back, "Maya, something or other—?" Maya said, "You don't know me well enough to call me by my first name." A hush fell over the group. That sort of thing. Moving right along. [laughs]

12-00:01:28

**Wilmot:**

Point taken, point taken. Okay Professor Lester, today there was something I wanted to ask you about in particular. We actually wanted to have this session today in response to a topic that you raised, which was the area of how your wife and family have figured in your professional life and your life in general.

12-00:02:01

**Lester:**

Yes.

12-00:02:03

**Wilmot:**

So I just wanted to start off with a broad question, which is how has your wife figured in your professional life?

12-00:02:15

**Lester:**

Very importantly. We got married during the first year of my doctoral work at Washington University of St. Louis. And so, she's been with me ever since that point, through graduate school at The Catholic University of America and to the post-doc until the present time. And so she has been with me through these decisions as to where to go, moving all the way across country and halfway back again. We got married and lived in St. Louis, where Washington University is located, then to Catholic University which is in Washington, D.C. and then back halfway across the country to Madison Wisconsin, where I was for four years, and then on to San Jose, California. And then to Oakland in 1978. Almost all of that time, with two children. So, it was very important, in terms of the things that I was doing which were very demanding in terms of time, that one have an understanding spouse. That's critically a part of it, and a supportive spouse.

So I think that in contrast to situations I have known of, where the relationship hasn't been as positive, it can be a difficult situation, attempting to push the frontiers of whatever the discipline is with a spouse who is not supportive. I've not had that difficulty. That I value. I want to put that on the record.

12-00:03:49

**Wilmot:**

Did your wife take the lead in raising your children?

12-00:03:51

**Lester:**

Oh, yes, yes. By default, to some extent. In the sense that when I wasn't there, clearly she was there. And during the earlier years, let's say up through even my years at IBM San Jose, say, through elementary school, I would guess, when I was going back to the laboratory in the evening, to a fair extent—and since she was around, she was not working at that point—clearly, she played a dominant role in the raising of our children though I felt I was spending quality time with my children.

Now, an interesting anecdote here is that maybe three or four years ago my daughter said, "You know Dad, you're a pretty nice guy, but I really didn't know you back in the day," something to the effect that there was this man who came at dinner time, put his feet under the table [laughs], and then left and went away and came back. So I had to chuckle about that.

12-00:04:52

**Wilmot:**

How'd you feel about hearing that?

12-00:04:54

**Lester:**

Oh. It sort of crushed my notion of quality time, that's for sure. In the sense that I thought I was spending quality time with her only to find out, "Well, maybe not enough time. Forget the quality issue. How much time should you spend." It's an interesting issue. It's not something one can revisit. What's done is done. And you go from there. But we have a wonderful relationship. But I would dare say that's what she expressed. Very likely, that's her point of view regarding the relationship. And I wouldn't argue with that, how she saw it. Because she is a candid person.

I delight in her ability to communicate on issues. Hopefully you might meet her someday. Stop by the house over Thanksgiving weekend because she's coming with her son.

So, those are aspects that I mention. My family's been very supportive, there's no question about that.

12-00:06:02

**Wilmot:**

Would it be repetitious for me to ask this question which is, how did you balance being, I assume the primary breadwinner and a scholar, a scientist, with being a family man?

12-00:06:19

**Lester:**

Oh, apparently with difficulty, based upon what I've just described to you. But I tried to be always cognizant of family obligations, spending time with family and doing things with family, this sort of thing. We have some wonderful pictures of when we moved from Madison, Wisconsin, to San Jose. We drove through the Badlands and down through Yellowstone.

12-00:06:39

**Wilmot:**

I love the Badlands. Beautiful!

12-00:06:46

**Lester:**

Do you love the Badlands? It's interesting, I wouldn't call it beautiful. It's unusual. And through Yellowstone, through Grand Tetons National Park on to Salt Lake City and over. And so those are very fond memories, a time when we were together in a concentrated way. During that period in general, we did not take vacations as a family. In many instances when trips came up, my wife and I would go—I'm thinking now back to the very early seventies on through the time they were in high school which would have been in the seventies. In many instances we would drop the kids off with my in-laws, my wife's parents, and go off to Europe or wherever. Except one time.

One time, we took them to Europe as well. They were around twelve or thirteen. It was a delightful experience, we lived in this little apartment in Neuilly Sur-Seine, which is a suburb of Paris, an apartment which belonged to an American medical student at the Sorbonne, who took his son, and went gallivanting around Europe. Here we had this little apartment with a little stove and a little refrigerator, little washing machine which could hardly wash anything at all, no television, and only a short wave radio which got us the BBC, and a lot of books. So we became a very close family during that time period, about four or five weeks, when I was chairing a workshop at the University of Paris, South in Orsay. So that was a very memorable time we had together.

But, clearly, there were not many such comparable occasions. As I look back on it. But my children have turned out fine. They're nice people. I like them. [laughs] Great folks, as a matter of fact. I'm being partly facetious there. But they are, they are splendid people.

12-00:08:52

**Wilmot:**

We'll talk more about them. Did you feel like you were missing out on aspects of them growing up?

12-00:08:55

**Lester:**

No, I did not. I don't feel a void that I didn't spend enough time with them from my perspective. That's interesting, too. It might be argued that I did miss out. But from my own—

12-00:09:18

**Wilmot:**

I'm asking from your own experience, not actually from their experience, but from your own. Did you want to be home more?

12-00:09:21

**Lester:**

No, I can't say that I did. I mean I had my agenda and I was pursuing my agenda. Family was a part of that and I thought I was addressing that in a satisfactory way.

12-00:09:37

**Wilmot:**

I understand. I mean there is a way that we think about gender roles in the family and that's very entrenched.

12-00:09:48

**Lester:**

Yes.

12-00:09:47

**Wilmot:**

Well, were you able to be at both of their births?

12-00:09:55

**Lester:**

Oh, yes! Was I able to be at both of their births? Absolutely! But the birth of the first is an interesting story in its own right, because the physician had said I should go home, and he would call me because my wife was having an unproductive labor, and it would take a while.

12-00:10:12

**Wilmot:**

First labor, sure.

12-00:10:17

**Lester:**

Yes, so, he called and I came back and she said, "You went home!?" [laughs] Well, I didn't go home with the second one. "How could you go home?" I said, "Well, the doctor called me." So, my naïveté showed through on that, following the doctor's direction to go home.

Both of our children have been delivered by C-section. Because my son, the first of the two was large, and couldn't pass through the canal. She was in labor for twenty-four hours before

William the 3rd came along. And I saw Allison, my daughter, before my wife did because she had the section, so therefore she had to come out from under anesthesia. So I saw her very early on, being right there.

12-00:11:04

**Wilmot:**

And you were the first person that she saw.

12-00:11:05

**Lester:**

Well, first family member, yeah. And in that case, since family was in Chicago, I was the only family there. There were both born in Washington, D.C. because I was in graduate school at Catholic University at the time. Both were born at Freedman's Hospital on the campus of Howard University.

12-00:11:26

**Wilmot:**

Did you ever wish for your children to go to historically black colleges or universities? Was that ever an interest of yours? This is just following simply on your Freedman's at Howard University.

12-00:11:40

**Lester:**

Oh no, not at all. You know I had not gone to one, my wife had, she went to Howard University. And in terms of steering them in that direction, I had no such inclinations. The one aspect of steering that did occur was with my son who was predisposed to go to Stanford. After Stanford sent me the financial papers and indicated how much I would have to pay out of pocket, I said, "Whoops, son." He won a Regent's scholarship to the University of California, Berkeley as a matter of fact. Berkeley was more appealing and furthermore, because we lived so close, he couldn't live in the dormitories so I said I would help him buy a car so he could commute from the house to Berkeley. And then, very quickly, thereafter, he moved into co-op housing, which was interesting in its own right, in terms of some of the folks that ended up in the apartment. Some of them may or may not have been in school, maybe recently got out of jail and so forth. He said, "I will handle these situations." Which he did. So, I think living in co-op housing was an interesting growth experience for him.

12-00:12:39

**Wilmot:**

What era would that be?

12-00:12:43

**Lester:**

Oh, he was an undergrad here between '78 and '83.

And my daughter started out at UCLA and came back and did community college here and was at Berkeley for a while. She did not finish undergrad, but she was an IBM scholarship winner. She did very well academically in high school and went off to UCLA on a scholarship. Interesting story.

12-00:13:24

**Wilmot:**

What does she do now?

12-00:13:28

**Lester:**

Well, right now, she's raising Tre, Charles William Ramsey. And just recently, took a job as an insurance agent, with Aflac. When she first went to Michigan, they found her a position with an investment company. She had passed the series seven exam and was licensed for selling stocks and bonds in San Francisco and worked for a number of investment houses there. And in particular, when not doing cold calling or selling, she was dealing with preferred stock of executives, looking at the rules as to what they could and could not unload, calling attention to these kinds of issues which she enjoyed. She had decided that she really wanted to involve herself in the stock market.

So, when they moved to Michigan, there was assistance to provide her with a position of this sort, and then after six months or so, I guess, primarily because of the financial situation, they decided—"they" being the company—they wanted her to start selling stock cold, and all this sort of thing, after, by the way, I should say they put her name on the door and gave her an office, and all this sort of stuff, and then six months later—it sounds like they hadn't planned for the situation—they said they couldn't retain her. So that was an eye-opener. But I guess my wife and I felt—maybe I shouldn't speak for her—that her being at home with her son was not the worst thing in the world, during that time period.

12-00:14:53

**Wilmot:**

No, it's very important.

12-00:14:57

**Lester:**

And she is a wonderful mother, there is no question about it. She really handles her son quite well.

12-00:15:04

**Wilmot:**

That's actually something I wanted to talk to you also about. Your wife, you mentioned that there were times in your marriage when she worked outside of the home and then other times when she was primarily parenting, working in the home. I don't have a clear sense of what that looked like.

12-00:15:31

**Lester:**

Well, let's see now. She didn't start to do that sort of thing until after they finished high school.

12-00:15:36

**Wilmot:**

And then what kind of work did she get into?

12-00:15:37

**Lester:**

Oh, well, she and a good friend had a clothing company, they made raincoats. YES Clothing. That was after we moved to Oakland. So that's after both kids had finished high school. Which went on for two or three years. Then she became the West Coast head of A Better Chance, which placed students of color in prep schools across the country.

12-00:16:02

**Wilmot:**

I know about ABC.

12-00:16:01

**Lester:**

Do you? And she was very good at that. As a matter of fact, we've gone to ABC social events because the parents want to see her, the alums want to see her. She really did a fantastic job.

12-00:16:15

**Wilmot:**

How long was she with ABC?

12-00:16:16

**Lester:**

About five years I would guess. The head of the ABC at the time was Judith Berry, who was a year or two behind me at the University of Chicago. That's where I knew her from. So it was interesting to find out. This came about because a good friend of mine had been heading the office and was moving on and suggested Rochelle for this purpose.

12-00:16:54

**Wilmot:**

I want to hear a little bit more about the work that Rochelle did as West Coast head of A better Chance. That's a renowned program. As I understand, it is based on the East Coast, along with Prep For Prep and those kinds of programs.

12-00:17:11

**Lester:**

A fellow by the name of Michael Anderson was the one who handled Los Angeles, I remember that. But you really should talk to Rochelle about A Better Chance if that's something you want more of. Again, I'm off doing my thing. She's doing A Better Chance thing.

12-00:17:25

**Wilmot:**

So she did that for five years and then—?

12-00:17:27

**Lester:**

That's my ball park figure.

12-00:17:29

**Wilmot:**

And then, did she decide it was time to retire or did she find new work or—?

12-00:17:38

**Lester:**

Oh, I don't know exactly. Something happened and she decided that she'd probably had enough of it. But that's where you should talk to her. You really should talk to her.

12-00:17:45

**Wilmot:**

I understand.

12-00:17:48

**Lester:**

We could get her on the phone if you want, talk with her about that. It may be better.

12-00:17:54

**Wilmot:**

I hear that. My question is really just what was her next job after ABC?

12-00:17:59

**Lester:**

Oh, I don't know if there was a next job. She became more involved again with civic activities. One thing to back up to, is that in San Jose when we were there—again, this must be back part at that time when the kids were in high school—she was on the Fine Arts Commission for the City of San Jose. And when we came here, she was on the board of the East bay Symphony that existed at the time, the one that went bankrupt and then they reconstituted it at a later point. She was a past member of the Board of the Museum of California located in Oakland. She's been very involved with a variety of civic activities.

Another dimension of back in the seventies, I spent a year on the staff of the Vice President, Director of Research at Yorktown Heights. This was Ralph Gomory. And during that period that we lived on the East Coast, we lived in White Plains, New York, and that's when my daughter started taking dancing at Dance Theater of Harlem. I think she went back the following summer to dance and she was very good but she finally decided she didn't want to do dance as a career. But Arthur Mitchell wanted her back and so we've actually helped DTH at various points. But again, my wife would have to assist with the details on this business.

My son went to White Plains High at that point. He had been interested in playing football early on, but everyone else grew a great deal more in size and weight. He discovered that he really wasn't big enough for that. He continued to run track, which involved him a great deal during his last year or so at Skyline High, in Oakland. So, it had to be only his last year at Skyline, probably junior year at White Plains, senior year at Skyline High, we came back—is that right? No, it can't be right. If it's '75-'76, this may have been his sophomore year of high school. So we came back to San Jose, as opposed to Oakland at that point.

12-00:20:52

**Wilmot:**

I want to ask you about the choices that you and your wife made around education for kids, specifically at the high school and elementary school level. College is different.

12-00:21:04

**Lester:**

Very important considerations as a matter of fact.

12-00:21:05

**Wilmot:**

Yes, can you describe for how those considerations unfolded and how you chose? Private? Public? What to do?

12-00:21:13

**Lester:**

Oh, public, definitely. I'd moved to San Jose in 1968, from Madison, Wisconsin. Obviously then, '68, son born in '61, so that's seven years later—oh yes, my daughter and son clearly started elementary school in Madison. I'm reminded of my daughter suffering frostbite one winter day because she took her mitten off in a three block walk. She suffered frostbite because it was so cold, has a slightly curved little finger to this day as a consequence of that experience. And so, we went to San Jose where we were going to live. A good friend, Joe Gayles, was at IBM at the time, the only black professional aside from the librarian, Aaron Harris. Joe had sent me this wonderful map of the demographics of San Jose, in terms of income and ethnicity. One of the things which was clear at the time was that Chicanos, Latinos were roughly a third of the population of the Santa Clara Valley. African Americans were less than a percent. So I was telling realtors we'd like to live in a heterogeneous neighborhood. They used to look at me and go, "What? What are you talking about?" [laughter]

12-00:22:41

**Wilmot:**

How did you clarify for them?

12-00:22:43

**Lester:**

Oh, just, you know, a varied cross-section of people from various groups. Black folks are fine but those other folks—and this is what I call the numbers game. If a racial or ethnic approached say, a quarter of the population or possibly more, then it's a problem for the majority population.

12-00:23:06

**Wilmot:**

A non-white ethnic group?

12-00:23:09

**Lester:**

I'm saying non-white ethnic group, yes, which the Chicano, Latino population was down there. Black folks were just a small population and almost all were professionals. There was no indigenous work of any sort that brought black folks to the Santa Clara Valley, I mean, there was a lot of picking of fruit and all that sort of thing.

So the reaction of various homeowners was very different when we'd talk to them about this issue. Black folks lived all over the place. Chicanos and Latinos were mostly concentrated on the East side of San Jose. And then with this map that Gayles had provided, it had a breakdown of income levels in various parts of the city. And as we looked around, we decided on an area called

Willow Glen, which has an Eichler tract there. Eichlers have the glass inside, courtyards. Are you familiar with them?

12-00:24:03

**Wilmot:**

Yes, we've actually had this conversation before. There are several people that I've interviewed as part of the project who lived in Eichlers, some of them in the Stanford, Palo Alto areas. And as the result of that, I've done some research into the design principles of Eichler and how Eichler designed-tracts were some of the few that had unrestricted housing covenants. They weren't restricted racially. That was on purpose, that was part of the design principles. So, that's fascinating to me.

12-00:24:33

**Lester:**

Right, right. Well, this was one that had been around for a while, clearly, by the time we got there. And such was the hospitality that after we decided on the house, we came back to Madison to finish up some things and my neighbor two doors down said he would cut the grass in the meantime. This is a fellow by the name of Sam Richardson. Sam is a now retired faculty member from San Jose State in the Art department, actually a very well-known sculptor. And we got to know him and his wife Adrienne. They live three blocks from us now in Oakland. They moved to Oakland before we did. Interesting.

12-00:25:23

**Wilmot:**

Schools.

12-00:25:25

**Lester:**

Oh, schools, that's where we were going. It was the neighborhood school that they went to, Booksin Elementary, which was a good little public school.

12-00:25:33

**Wilmot:**

And when you moved up to Oakland? Were you thinking public, private for your children?

12-00:25:39

**Lester:**

Oh, public. It never crossed my mind to go private. it was not something I would think about doing unless the education was that bad. I mean, we lived in the district where Skyline High was the Oakland high school, which was a fairly decent high school. When the kids went to Willow Glen High, they were two of five black students in the entire school. So, when we moved to Oakland, they were saying, "Well, why didn't we move sooner?" I said, "Because I worked in San Jose." [chuckles] So they were delighted to move. Absolutely, notwithstanding social activities, Jack and Jill. You're familiar with Jack and Jill?

12-00:26:18

**Wilmot:**

Yes, we talked about it.

12-00:26:21

**Lester:**

Which existed there and was very important in meeting other black families, other black children, this sort of thing.

12-00:26:27

**Wilmot:**

Yes, you told me that your children were part of that.

12-00:26:30

**Lester:**

And also we made a point to spend time in Chicago with our families and that was a very different socialization experience on the South Side of Chicago, to meet the kids in the neighborhood around where my mother-in-law and father-in-law lived.

12-00:26:45

**Wilmot:**

If you were given five words to describe Chicago culture, what would you—?

12-00:26:50

**Lester:**

I don't see how you can describe Chicago culture in five words.

12-00:26:55

**Wilmot:**

Is it Southern, like in Oakland for example?

12-00:26:58

**Lester:**

No, it's a far more cosmopolitan city. It's sophisticated. I mean, black folks are sophisticated on the South Side. You've got the full gamut, from sophisticated to country. I mean, the full spectrum, seriously. Because folks are coming off the trains all the time, even when I was in school, and later. So, you would find that whole range. And folks quickly learned that they needed to become aware and very clear on what was going on very soon. Oakland is small town compared to the South Side of Chicago. I would say that Los Angeles is small town in that respect, in terms of the black community. Which has a long history in Chicago, in terms of politics, business, you name it. We've got some folks doing everything, good and bad. [chuckles]

12-00:27:46

**Wilmot:**

I wanted to turn now to something else, which is your social circle. You mentioned the Richardsons and I was wondering do you spend time with other faculty here, socially, outside of your work?

12-00:28:08

**Lester:**

Oh, simply put, no. [chuckles] There have been occasional departmental functions very infrequently that my wife and I have gone to. I go to receptions we have during the day and so forth. But, in terms of having a tight social community within of the department, that has not been the case

12-00:28:41

**Wilmot:**

How would you describe your social circle? What couples do you and your wife spend time with that are here?

12-00:28:51

**Lester:**

Oh, I guess the closest couple would be the Wilsons, Olly and Eloise Wilson. I'm trying to think who else we interact with on campus with reasonable frequency. When he was here, Rodney Reed, I would see him from time to time. And Reginald Jones from time to time, folks who have left and gone on elsewhere. I'm trying to think now. Who else at this point on campus? I can't think of anyone else in terms of that level of interaction that we had once upon a time with the folks I mentioned.

So, our social life is outside of the campus, very much so.

12-00:29:56

**Wilmot:**

Well, I think that I am at the end of my questions for you today about your family. Is there anything else you wanted to add or say about your family and the role that they've played in your life?

12-00:30:14

**Lester:**

No, I guess that's about it. That was an important role, clearly. And I'm not doing them justice in the brief remarks that I've made.

12-00:30:22

**Wilmot:**

And I'm not sure I could do them justice in terms of the questions that I'm asking either.

12-00:30:25

**Lester:**

But family is very, very important, wife is important, children as well. My wife did a wonderful job with raising our children. I had some small contribution to make there. But I'm very happy and satisfied with how things have worked out, how they have evolved over the course of time. I'm only pleased in that respect.

12-00:30:55

**Wilmot:**

Well, let us close for today.

12-00:30:55

**Lester:**

Okay.

[End of Interview]