SCIENCE HISTORY INSTITUTE

HERBERT T. PRATT

The Bolton Society

Transcript of an Interview
Conducted by

James J. Bohning

at

Chemical Heritage Foundation and Pratt's home
Philadelphia, Pennsylvania and New Castle, Delaware

on

13 and 14 June 2006

(With Subsequent Corrections and Additions)

ACKNOWLEDGMENT

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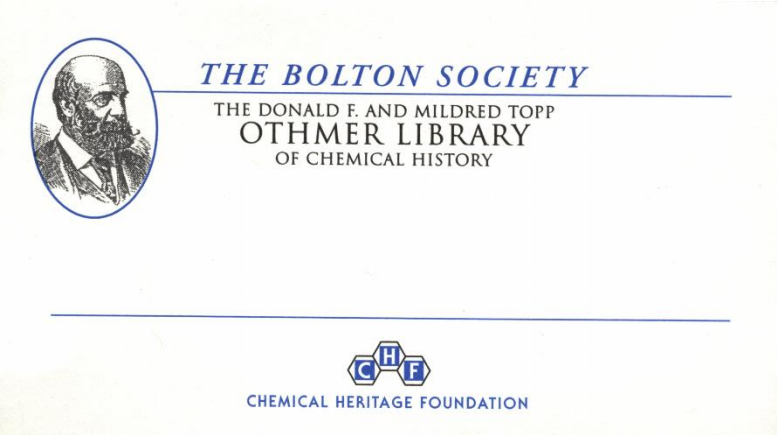

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HERBERT T. PRATT

1926	Born in Eden, North Carolina on 19 January
2014	Died in Newark, Delaware on 23 January

Education

1945	BS, Tri-State College (now Trine University), Chemical Engineering
1987	MA, Goddard College, History

Professional Experience

	King-Seeley Corporation
1945-1946	Development Engineer
	Fieldcrest Mills
1946-1948	Textile Chemist
1948-1952	Head of Analytical and Applied Chemistry
	E.I. du Pont de Nemours & Company
1952-1963	Customer Service Representative
1963-1966	Research Engineer
1966-1972	Technical Representative
1972-1976	Technical Specialist
1976-1980	Senior Technical Specialist
1980-1985	Technical Marketing Associate

Honors

1993	American Association of Textile Chemists and Colorists' Olney Medal
1997	Harold C. Chapin Award

ABSTRACT

Herbert T. Pratt was born in Leaksville, North Carolina (now Eden, North Carolina) in 1926. An only child, Pratt grew up surrounded by books. His parents valued history, and he relays stories of his grandfather, Josiah Smith, and his great-grandfather Pratt. He mentions the role of education in his life and discusses growing up in a textile mill town. Pratt notes that his family was better off than most during the Great Depression due in part to his parents' thriftiness. His early schooling was in a school four blocks from his home, and he reflects on his teachers in the first seven grades. When Pratt got to eighth grade, he became very interested in science. He remembers tinkering with his uncle when he was a child, but eighth grade was his first real exposure to science. He loved his chemistry and physics classes but does not remember much from his math class. Pratt graduated from high school in 1942 at the age of sixteen and started working at the local textile mill, Fieldcrest Mills. He relates a story in which he was burned by hot pyridine. He also worked as a "devil," an apprentice for a local printer, Francis Slate. In that role, Pratt learned about layout and aesthetics of the printed page, knowledge that benefitted him the rest of his life. He next went to college at Tri-State College (now Triune University) in Angola, Indiana, because it allowed one to earn a college degree in twenty-seven months. At Tri-State, he worked hard, majoring in chemical engineering. He discusses chemical engineering, the lab environment at Tri-State, and the curriculum. Upon graduation, he took a position at the King-Seeley Corporation in Ann Arbor, Michigan, where he worked primarily on electroplating development. He worked there for one year before moving back to North Carolina to work at Fieldcrest where he set up quality control for chemicals.

While at Fieldcrest, Pratt met his wife Mary who worked in a lab set up by the Institute of Textile Technology based in Charlottesville, Virginia. When that project ended, she took a job at Fieldcrest. When they were considering getting married, the company would not let spouses work together, so Mary became a high school chemistry teacher instead. They started a family, and Pratt realized he needed a higher salary. He applied for a position at DuPont in Wilmington, Delaware, which he received. He started working on how to process Dacron in the Textiles Department. He reflects on work travel, his coworkers and supervisors, and the company culture at DuPont. Pratt also provides a broad overview of his work at DuPont, including mentioning serving as an adjunct professor at North Carolina State University. In one of his roles, he was in charge of quality management and helped to standardize definitions to make the company more open and honest. He also mentions becoming a certified chemical engineer. While he was at DuPont, Pratt got involved in forensic work. One case was in Atlanta, Georgia, and the other was in Delaware. He discusses the two cases in detail and mentions his role as an expert witness. He also speaks about his involvement in the American Association of Textile Chemists and Colorists (AATCC), editing *Dyeing for a Living*, written by Mark Clark, and the "I Remember When" column.

During the second session of the interview, Pratt discuss his collections. He recalls that he purchased the first book of his book collection in 1940 or 1941 and discusses building his collection, which consists primarily of chemistry books and hymnals. He mentions stores where he purchased books and brings out several chemistry-related books in his collection, including William Enfield's *Institutes of Natural Philosophy, Theoretical and Experimental* and Henry A.

Mott's manuals. He discusses cataloging his books and insurance before mentioning his research on James Curtis Booth. He also compares *The American Chemist* and *Chemical News*. Pratt then moves to discussing his other collections of hymnals and coat hangers. He does not collect periodicals because they are an "ongoing thing." He concludes by discussing his analysis of a vacuum cleaner bag.

INTERVIEWER

James J. Bohning was professor emeritus of chemistry at Wilkes University, where he had been a faculty member from 1959 to 1990. He served there as chemistry department chair from 1970 to 1986 and environmental science department chair from 1987 to 1990. Bohning was chair of the American Chemical Society's Division of the History of Chemistry in 1986; he received the division's Outstanding Paper Award in 1989 and presented more than forty papers at national meetings of the society. Bohning was on the advisory committee of the society's National Historic Chemical Landmarks Program from its inception in 1992 through 2001 and is currently a consultant to the committee. He developed the oral history program of the Chemical Heritage Foundation, and he was CHF's director of oral history from 1990 to 1995. From 1995 to 1998, Bohning was a science writer for the News Service group of the American Chemical Society. In May 2005, he received the Joseph Priestley Service Award from the Susquehanna Valley Section of the American Chemical Society. Bohning passed away in September 2011.

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INTERVIEWER: **James J. Bohning**

LOCATION: **Chemical Heritage Foundation**
Philadelphia, Pennsylvania

DATE: **13 June 2006**

PRATT: [. . .] Do you want to start any place?

BOHNING: Yes, I do. I have a structure to this. I didn't want to interrupt your spinneret story, [but] we will come back to [that later]. [. . .] Herb, when I said I wanted to do it chronologically, I want to go all the way back to the beginning, [because it's a little easier to remember things if they are done chronologically]. I know you were born in Eden, North Carolina, but I don't know when.

PRATT: [. . .] January 19, 1926.

BOHNING: Can you tell me a little bit about your mother and father and your family background?

PRATT: I was born in [Leaksville, now Eden], North Carolina, as you just said. Many times this was called the Tri-Cities, which actually was three contiguous towns, Leaksville, Spray, and Draper. Leaksville was named for John Leak, who was one of the early settlers there. Leaksville was the main town, and Spray was an offshoot. There is an odd reason as to how it became Spray. They had waterwheels there. There was a twenty-nine-foot fall on the Smith River, and it generated a lot of power. The water—the spray—would come up from these falls, and so it was named Spray. At one time, it was known as Splashy. [laughter] That might have been an apocryphal story, but it was believed to be true. The [third town] was a textile mill town, Draper. I don't know where the name Draper came from—probably from somebody's name.

[. . .] I always had a sense of history because both my parents were interested in history, my mother in particular. So it rubbed off on me. My mother was very bookish. When there was virtually nothing moving during the 1930s, she and my dad would buy books [for me]. In 1935 they bought a set of encyclopedias, *Compton's* [*Pictured*]

Encyclopedia.[1] I still have those books and I still use them, amazingly enough, because they are so old now that I can find stuff in them that you can't find any place else.

My grandfather [Josiah Smith] on one side was a poor dirt farmer after the Civil War. His health was bad, and he had a house full of kids. My grandparents lived in two log houses. What I mean by that is you had a [one room] log house that was about [perhaps twenty] feet square with a little loft overhead, and another log house [nearby], where the kitchen was, with [a dug well] between the two. Just six months ago, I was there with my daughter. It [is] an isolated place. [It was in] the foothills of the mountains, [and] was very rocky. One [cabin] had fallen down but one was still there, and it was still useable. [. . .] It had no windows in it. I remember my mother said that when you needed light at night, you used [an oil lamp] or a fire [in the fireplace]. [During] the day, you could just push the door open and let the light in. It was sort of interesting because my grandfather, who was a grown man at the time of the Civil War, was bookish. I have a number of his books. I have his Bible. I have a law book that he had. There was [a] book on the great San Francisco earthquake. I think he died in 1911.

We had a bookcase [that] was packed with books. I used to go [into the parlor] and ramble around to see what they [. . .] were. One of the books that [my grandfather] had was a book which had to do with the trade of young women in Chicago, [Illinois]. I don't remember the exact title of the book. It had pictures, [but] I could never quite understand what was going on—this is the end of the Victorian Era, you see. I had to wonder about these things. But I never could find out. My parents never told me what that was all about. [laughter]

BOHNING: What did your father do?

PRATT: My dad worked in a textile mill. Like so many other guys, he had been in World War I. He needed a job and ended up working in a textile mill. Hundreds of times he would tell me, "I want you to have a college education. I want you to get the schooling that I missed." My mother was the same way.

BOHNING: Do you have any brothers or sisters?

PRATT: No. I was the only child. Education was very, very important to them, particularly for me, to make sure that I would get the education that they did not have. The educational system in North Carolina at that time was [only for] four months [a year] and went through to age twelve, I believe. So children didn't have a lot of [formal] education. But what they got was excellent. I have a picture of the log schoolhouse that my mother attended. As an older woman she thought enough about it to take a snapshot

[1] Guy Stanton Ford, *Compton's Pictured Encyclopedia.* 15 vols. (Chicago: F. E. Compton & Company, 1935).

of it. It was just a small [one room] house with wooden shutters. I wish I knew where that schoolhouse was. I remember when I was a child she pointed it [out] to me but I have no earthly idea where it is.

Education was very important to both my parents. They were determined that I would go as far as they could take me. In my hometown, a textile mill town, the people that lived there came from [. . .] the mountains. These people were poor. They were of English [and Scottish] ancestry. They [found] a way of life that they had probably never known before. [. . .] They grew corn [. . .] [but often] turned it into whiskey. [. . .]

When the textile mills came from New England, moving south around 1900 because there was a lot of waterpower, people flocked in to have a steady income. These people were by and large poor and uneducated. They had recruiters that went into the foothills of the mountains to find people to come in and work in [the] textile mills. After a period of time, people began to realize that there was something good [about this way of life]. There was education, and the mill people had steady work. They also probably had better health care than they'd ever had before. But steady income was very important. Children [could] go into the textile mills when they were nine years old. There were things they could do. They would be paid a very small amount of money. My mother's parents made sure that all their children went [to school] as far as they could go, [say age] twelve or fourteen. They used the educational facilities to the extent that they were able to do it.

My grandparents saw that their children were educated. But a lot of children never got any education at all. A lot of people that I [knew when I was growing up] were like that. For example, there was a man [who] was an elder in our church, an extremely bright man, and he loved hunting, and my dad did too. There were a bunch of guys that would hunt together. This man had zero education. He couldn't even write his own name as far as I know. But he had the mental ability to see through situations, to figure out what needed to be done in a common sense way. There were a lot of people like that. No formal education but good common sense just abounded. I knew these people through our church, and all these people I knew were religious people. There were about five hundred people in our church congregation, and only one person there had been to college, and he was a lawyer. Nobody else had any education, except the minister of course. I was the third person in our church to have any formal education beyond twelve years old.

BOHNING: I said you were born in Eden, North Carolina, but you [also] said you were born in Leaksville.

PRATT: There were three towns [actually]. There was one on the headwaters for the Dan River which sort of parallels the Roanoke River [to] the ocean. These were the headwaters, and we had the Smith River coming into town, [at the] confluence of Smith River and Dan River, with pole boat navigation. There were these shallow boats that one would push with [. . .] big poles to get it up to the headwaters, where there were these

waterfalls. Then they couldn't go further. The three towns became little municipalities, and the municipalities were separate at the beginning but over a period of time they grew together. They could never get any agreement on a central town government up until the early 1960s. At that time, the federal government said, "You have to have a sewage plant." We would have had to have three sewage plants, one on each of two rivers, and then one further downstream. It just made economic sense that if you're going to build a sewer plant you don't build three, you build one. At that time, they decided to go from three towns to one—Leaksville, Spray, and Draper, and they came up with a new name which was Eden.

The name Eden came because of William Byrd of West Hanover, Virginia, [who] in the 1700s, was hired to survey the North Carolina/Virginia line. He [went West] as far as he [could] until he got to the foothills of the mountains. I don't think he went beyond that, but for his payment he took a large acreage at the confluence of these Smith and Dan Rivers, and in his writings, he said this was virtually "a land of Eden, flowing with milk and honey." I believe he wrote that to somebody. So the name Eden stuck.

BOHNING: You mentioned the Dan River. Years ago, there was a clothing company called Dan River.

PRATT: That was the next town down the river. You had these three textile mill towns, and about fifteen or eighteen miles down the river where there were waterfalls and waterpower. This was the Dan River Mills. These were huge textile mills. It was a very large company. They had a research organization and their own chemical company for [products used] in their mills. When you had a drought, the streams were depleted because of runoff and all sorts of reasons, and the lands were not being managed properly. [. . .]

[END OF AUDIO, FILE 1.1]

BOHNING: What effect did the Depression have on your family?

PRATT: We were better off than most. My [mother's parents] were very poor. My Grandfather Smith had about [two] hundred acres of ground. The land was very hilly and rocky. He was sickly. He had five kids. [. . .] It just made sense for him to move to town so that the kids could get [a better] education.

On the other side, my great-grandfather [Pratt] was a man of means. He had no education, but he owned more than a thousand acres of [very fertile] land, [. . .] and my great-grandfather was very well off, He was a very staunch, missionary Baptist. He had all this land. It was sort of funny. I heard my dad say one time that his father—my

grandfather—said that his father, my great-grandfather, wanted to own all the land that adjoined him. [laughter] In other words, he would never stop [buying land]. That's a good way of putting it.

My [great-grandfather Pratt] did very well. He had a blacksmith [shop] and a gristmill. He had gotten well-off enough that [he] owned a rubber-tired buggy. He had no [formal] education, but his wife was well educated. It's interesting because I think when they were married he had to sign his name with an "X." But when he wrote his will [years later], he signed it, so she [had] probably taught him to read and write.

[Both] that family and my [Grandfather Smith's family] on the other side came into the area in the late 1700s. One had prospered in terms of land and money. On the other side, my great-grandfather he didn't have any education at all, but his children did better from that standpoint. My great-grandfather [Pratt] died in 1898, I think. I never knew him, but I knew his wife. She died when she was in her nineties. I can remember her [. . .] as a little boy.

BOHNING: When the Depression came, was your father still employed in the mills?

PRATT: Yes. The mills were doing what they called "short-time," meaning you didn't have enough work for five days a week. So they would do short-time. Sometimes they'd work one day a week or two or three days a week. My parents always were thrifty. They were able to save money when other people couldn't. They didn't squander money. They lived within their income. Most of the stuff that they bought came from a store that was close by. I remember my parents—and it was unusual—shared everything. In other words, they shared the burden of the house and what needed to be done. I remember as a child my dad would sometimes have to work half-days on Saturdays. I don't know exactly why. He would come home with his pay envelope, not a check but money in a little paper [envelope], and they would put the money out on the table. They would say, "Now, we need to pay this, we need to do that."

If they didn't have the money, they'd have to wait until they did have the money. They managed to live on that. As poor as it was, they made do with what they had. [. . .] We had the first radio in our neighborhood. We [had] an automobile, a Model A Ford. That was the going thing. They also owned their own home. My dad loved to garden; he had a large garden. We had chickens which I looked after. They always had a hog which they would slaughter in the fall, so we had meat. We had gardens so my mother would can stuff.

I can remember as a child always having a great sense of security that I wasn't going to go hungry. I say that because I remember my mother often talking about the children next door; there were six. [. . .] And she used to say, "I often wonder if those children have enough [to eat]." Well, these people were poor, but they were very proud people. Everybody in that town was proud. If they didn't have something, you'd never

know it. I can remember my mother one time talking about a woman that she knew that had grown children. The woman had [asked] their church for money; she needed a handout. But I remember my mother saying, "I can remember a time when she would have been too proud to ask for money." It just shows what happened in the 1930s when all the giveaway programs started with [President Franklin Delano] Roosevelt.

You just have to recognize the change in how people lived, etc. [. . .] You did what you could. People were scrupulously honest. [They] knew what was right and what was wrong.

BOHNING: Your early schooling then was in Leaksville?

PRATT: It was in Leaksville. We lived about four blocks from the school that I attended. They had just added onto the old school. The first school was a three-story brick building. Over a period of time, with growth, they put two large wings [onto] the school. There was plenty of room for new pupils to come in. My mother home-schooled me to some extent, and she made sure that this new school would have a place for me. I was born on the nineteenth day of January. I wasn't old enough to go in with my peers because I was only five years old. [. . .] But [my mother] must have worked out some kind of deal because she got me into school. So I started when I was five, [so] I was always a year [younger than] all my classmates. That helped tremendously because both my parents pushed me [. . .] to work hard. They counted on me to do good work.

BOHNING: Did you feel that as pressure on you?

PRATT: In a loving way, you might say. No, I wouldn't call it "pressuring" me. They wanted me to do my best, and I think I did pretty well, at least for the first seven years. After seventh grade, [I] went to a four-year high school. [In fact] all the students in North Carolina only went through the eleventh grade. [But] I always felt we learned just as much in those eleven years as all the other [students] did in twelve years.

BOHNING: So there wasn't a twelfth grade?

PRATT: No. That's what the state would pay for. Can I deviate for just a moment, talking about education?

BOHNING: Sure.

PRATT: I talked about my Grandfather Smith and his house full of five kids. He pushed hard for education to his children because he loved books. I found a book that my aunt [used] that was called "Mental Arithmetic."[2] It was copyrighted about 1890, somewhere along there. And when it said, "Mental Arithmetic," it meant mental arithmetic. You start at the front of this book, and you start to add and subtract, all in your head. As you go through the book, you find [such exercises as] "give me the sum of one-quarter, one-third, [and] two-eighths," a long [problem], and do all of this in your head! I'm sure they stood the children up and made sure they could actually do these things in their head. It was mental arithmetic.

That's one book that I will never get rid of because it's just amazing to me. Kids with computers and everything else today, and here is a family of kids being educated in a [one room] log [schoolhouse] and yet they were learning things. For example, when I was starting to do high school algebra, my mother knew enough about algebra that she could help me with my problems. I was twelve years old. Schools have definitely changed. I don't know whether they've deteriorated or not, but it was drilled into [me that I was] going to do well.

BOHNING: Did you have any teachers in that first seven grades that influenced you?

PRATT: Oh yes. I remember all my teachers. Mrs. Moyer. She had just married, and I think it was her first or second year of teaching. As I said, we had a new school. There were chairs around this table. We didn't have desks, per se. My teacher said, "Now children, these are brand new tables. [. . .] We want to make sure [that you] don't write on them." I was somewhat of a rebel, [so] I wrote my name on it. I [soon] heard about it back at home. [laughter]

Classes were graded, A, B, and C. I was in [the] A class, B class was a little bit further down, and C class was [for real slow learners]. I was always in the upper echelons of whatever grade I was in.

My second-grade teacher was old enough to have a grown daughter. She was mean as a snake. I can remember I was terrified of that woman. I remember her breaking a wooden [pencil] over a guy's head! A fellow named Homer Williams. The thing actually broke, and she broke it right over his head! If she didn't think things were going right, she'd say, "Stick out your hand," and she'd paddle that hand [with a ruler] because you were not doing right. I was terrified of her. But I made good grades. My third-grade teacher was a woman by the name of Claudia O'Brien. She was a woman my mother's age, I guess.

Incidentally, you knew everybody, and they knew you. If you didn't do well, it would get back to your parents. You had to walk a ["chalk line"]. My [fifth-grade] teacher was Mamie Wren. My [fourth-grade] teacher was a young woman, I think it was

[2] William J. Milne, *A Mental Arithmetic* (New York: American Book Company, 1897).

her first year of teaching or maybe her second year, who was married to a [local] druggist. She played piano, and she had the piano moved into her room because apparently she was the only person [in our school who could play]. We had a high old time singing and playing.

My sixth-grade teacher was Mrs. Carl Weatherly. She was the wife of the high school principal. Her forte was history. I could excel in history because I loved history. When children got to the sixth grade, they would study North Carolina history. Since Mrs. Weatherly's class were the A students, [we] were allowed to go to Raleigh, [North Carolina], for a day and go through the government buildings. I remember [that the governor was] named Clyde Hoey. Governor Hoey wore a wing-tipped collar and he had long gray hair. I remember standing someplace in the capital building and [Governor Hoey] came by. There was a man with him who had a bag of money. The governor said to this man who was with him, "Show these children the state's money." [laughter] So we held the money—a big bag of coins—poor kids who had never seen that much money before. [laughter] That was part of my sixth-grade trip.

The other thing I remember [well] is that they also took us to the state prison. [After we] toured the place [the guide] said, "Now look, if you kids don't behave right, you're going to be behind bars just like these people on the other side." [laughter] Then they took us to the death house (not inside)—the place where they executed criminals by electrocution. There was [one window] high from the ground. They took us around [to see it] and told us, "This is [the] place of execution. This is where you'll get electrocuted." I came away with one [keepsake]. I still have a little piece of flat stone which I picked up right below the window [of] the death house.

[END OF AUDIO, FILE 1.2]

PRATT: One of the only kids [from sixth grade] that I remember really well was a girl named Mary O'Dell. She would bring her lunch to school from home. Quite often she would share with me one of the things she had learned how to cook, and these were fried apple pies. A fried apple pie was a piece of dough, half-moon-shaped, and you'd put the cooked apples inside it, tuck that over, and then you'd [fry] it. Boy, those were good. [laughter] I can remember her sharing her fried apple pies with me.

I remember another guy from the [sixth] grade, a fellow named Franklin Coon. Franklin had been a C student, but apparently, he had started to work hard and had gotten up into the A grade. I remember Mrs. Weatherly. If Franklin didn't know something, she would say, "Franklin, what do you know about this?" She would always say, "Franklin, if you don't do better than that, we're going to put you back in the C grade." I always remember her being so cruel to that boy. He dropped out of school somewhere along the line. He got a brain tumor when he was about fifteen and died. That was the end of Franklin.

The seventh grade was the end of my grade school education. The teacher was excellent. She was a young woman who had arthritis, and that was maybe the last year she taught. She was totally arthritic, but she was an excellent teacher. Her specialty was English. She was not necessarily a specialist, but she wanted us to learn how to spell and use good grammar, and she hammered on that.

The other thing I remember about that [grade] was a little blonde girl named Virginia Allen. I just thought that she was "something on a stick," so to speak. [laughter] She was first in the class, and I was second in the class. Everybody was rated. I saw Virginia about three or four years ago at one of our high school reunions, and she still looks really good. [laughter] Then I went on to high school.

BOHNING: Was this nearby?

PRATT: It was within walking distance. Most everybody walked to school. The kids outside of the town limits might have had to walk for maybe two miles. Beyond that, the bus would pick them up and take them home. One unusual situation—the older boys in this high school were just old enough to drive. They could drive at sixteen, so the state hired students to drive [the] buses. They never had any accidents with them. They [. . .] kept the bus at their home, picked up the kids, and brought them to school and back. I don't know how long that had been going on or how long it lasted, but you couldn't do that today. [laughter]

BOHNING: No.

PRATT: When I got to the eighth grade, I really got into science. I just thought [that] the greatest thing on earth was science. I would jump up out of my seat because I was so excited to participate. [laughter] And the teacher would say, "Sit down!"

BOHNING: Was this just general science?

PRATT: Yes, it was just general science. [. . .] My science teacher was a woman named Myrtle Wagner. I was sort of her favorite because I was real eager. She would let me do things on the side. I would have done anything for her. She'd let me write something on the board for her. That really turned me on to science. I don't remember the [textbooks, but Ms. Wagner gave me a massive Central Scientific Company Catalog, which I would browse endlessly]. [. . .]

BOHNING: This was your first exposure to science?

PRATT: Yes, it was my first exposure to science. I said we had a radio, and [I] had a lot of input from radio. I had an uncle [who] was a tinkerer. He owned at least one US patent. He'd worked in [a] textile mill, [owned a farm], and he could make anything. He'd take a piece of junk and make something out of it. He had five or six children. I remember my mother telling his little boy, [. . .] "Eldridge, don't do that because you're liable to put your eye out." Eldridge turned around and he said, "My papa could make me some more." [laughter] I worshipped this uncle because he knew a lot about electrical stuff. He made the first radio in the whole county, I think. I really adored him. I looked up to him because he could do things with his hands, [so I learned to tinker]. [This] was during the Depression. He had a little farm, about twenty-five acres [and he introduced crop terracing to local farmers]. [. . .]

I was an only child. I learned how to make things and do things on my own. I've always given a great deal of credit to my uncle because he and I just had [things in common]. I don't think his own son did any tinkering. My uncle [gave me] a set of [out-of-date] "Audel's Electrical Guide." I don't know if you remember Audel or not, but at one time they had mechanical, electrical—I don't know what all they had—but he had a set of Audel's Electrical Guide. When I was about fourteen, I discovered that through this Audel Guide you could make little crystal radios. Did you ever make a crystal radio?

BOHNING: No, I never built one.

PRATT: A crystal radio was just this simple. You had a little piece of lead sulfide, galena, and what they called a "cat whisker," which actually just a little metal wire that [would touch the galena]. One end went to an aerial [wire], and the other end went to the ground, a [long metal stob] that you could drive down [into] the ground where it was moist. Right below where the crystal hooked into that circuit, you had a headphone. I could get great reception from those things. I had managed to get the headphones [from a high school friend], and I had bought a crystal through Allied Radio [in Chicago]. I had a lot of fun making things like that, just learning how to do them. I still like to tinker, but I don't have as much time as I need.

BOHNING: You had general science in what would have been eighth grade?

PRATT: Yes.

BOHNING: Did you move on to more science later?

PRATT: Yes, [biology in ninth grade]. [. . .] [My sophomore year, the teacher was Herman Coble. I got all As but was not interested in the subject]. [In junior year] I had a fellow that taught just chemistry, as far as I know. He had five levels of chemistry, I guess. His name was Homer Ergle, and he was a real character. He took no quarters with anybody that was going to misbehave. I had a cousin who was a year older than I was. He was a very smart young guy, but he was acting up [one day]. Mr. Ergle called him down and said, "For being out of your seat, [go] into the hallway!" I don't know what happened, but that kid straightened out.

I loved chemistry. We had a lab, and my lab partner was a girl named Shirley Dickinson. The two of us worked at a table in the chemistry lab. I was always sort of struck on Shirley, but I would never have done anything about that because she lived on the gentry-side of town, and I lived on the middle-class side of town. In other words, I was too shy to try to ask her out on a date.

I would try to draw [pictures of chemical] apparatus [during class]. I had some grid paper, and I would draw things in class. I always hoped that Ergle would look at what I had drawn, but he never paid one bit of attention to what I was doing. I just thought he was really a great individual. He would walk down the aisle and flip a piece of chalk into the air and grab it back. Everybody looked at him as being eccentric, but I really [admired] him.

BOHNING: What about math? Were you taking math at the same time?

PRATT: Yes. I had math, but the teachers weren't good. It was not their fault. It was mine. I remember a woman named Emma McKinney. She tried to teach algebra, but either she couldn't teach, or I couldn't learn—I don't know which. [laughter] Maybe a little bit of both. I really don't remember much about math. It certainly was not anything that would cause one to excel. I just don't remember much about the math that I had. You had to have four years of classes in order to graduate: English, science, math, and something else which I can't remember. So you had to have sixteen credits in order to graduate. I probably was the only person who ever graduated with twenty-two credits. I took Glee Club [for one credit] which was an extracurricular activity. I liked history but I had a conflict one [year], so I said, "If you'll let me take history, I'll study at home, and you can test me." I got an A in that because I just loved history so much.

BOHNING: What about athletics?

PRATT: Let's skip to the next subject. [laughter] I said that because I never had any interest at all in sports. No way, shape, form, or fashion. My dad loved to hunt. I can remember him showing me how to skin a rabbit. He would also fox hunt at night and hunt for wild turkeys. He didn't hunt squirrels. I don't know why, because they were all

around. We had hound dogs, and one of my jobs was to look after the dogs—to make sure they had water and food. There's an old saying in the South that if you go to somebody's house and there's at least five hound dogs coming out from under the house then you'd know something about that individual. [laughter] That was true. It was true except that the hound dogs didn't go under our house because it was bricked in at the bottom. It didn't have a basement, but it was bricked in. The poorer homes didn't have brick [underpinnings]. [. . .] [If they were on a steep hillside] you'd have a two-story house, but the bottom story was down under the top story.

I never did go in for anything in the way of sports. [As I said] my dad loved hunting, but I could never get interested in it. He was wise enough not to push me to do it. Basically, I think I felt sorry for the animals. I just could not stand to see people shoot a rabbit and see him flip. I just couldn't do that. In a sense, I think I felt that if people went into sports they were in some way beneath me or something. [laughter] I don't know. I never had any interest in sports and still don't. I couldn't tell you [one game from another]. Fortunately, my wife and I agree on that, but then we agree on most things. My children love sports, and that's fine; I'm glad they do. At least three of them do, but the other one doesn't care.

BOHNING: What happened after chemistry in your [junior] year? Was there more science after that?

PRATT: Yes. I had physics [in my senior year], and Myrtle Wagner was my teacher. I don't think she knew [much] about physics. However, the war was coming on and it was hard to get [science] teachers. Homer Ergle [had] left. He had been the chemistry and physics teacher. Myrtle Wagner had to take [on both] general science and physics. I think I knew more than Myrtle did. [laughter] She even let me have the key to the lab, and I could go into the lab and do anything. She'd have me set-up experiments and do all that kind of stuff for her. So I was in pig heaven.

I enjoyed physics. The demonstration stuff was great. I can remember they had [demonstration] apparatus that you wouldn't have today. I remember one of the experiments we had. There was a [rod] of iron [running through] something shaped like [a metal Liebig] condenser except you had an iron [rod] running through a [metal] cylinder. Steam would go through that thing and one end was rigid so you couldn't move it, but the other [end] could move. As the steam went through, the one side would move out, and the hand would move like this. You could just see the iron expanding [in length]. It's a very simple experiment. [Pratt draws a sketch of the apparatus as he is describing it.]

We had lots of that kind of stuff. You go through catalogs today, and it's hard to find stuff like that. [The experiments] were simple, and yet they taught you [a lot]. They just don't make them anymore. Mary [my wife] taught chemistry and physics and [we

often] talked about the good apparatus that we cut our teeth on, [which] they just don't make anymore. And I don't know why.

The other thing that I remember, which really has nothing to do with physics, is that I had a key to go into the physics lab. [The school principal] had purchased a skeleton for the biology class—a human skeleton, not molded plastic. I thought, "Well, this is [in] a box. I'm supposed to open it." I guess it was already put together, so I could hang it up by the head. Well, the school principal had decided we weren't going to keep that skeleton, but [the box] had already been opened. I guess he decided it was probably much better to just keep it than have to ship it back. He gave me a scolding for [doing what I thought I] was supposed to have been doing. So I got a skeleton for the school. [laughter]

[END OF AUDIO, FILE 1.3]

BOHNING: What year did you graduate?

PRATT: Nineteen forty-two. The war was on.

BOHNING: You went some distance away. How did you make that decision?

PRATT: Well, I was going to go to NC [North Carolina] State [University]. Everyplace I wanted to go to school required an athletic program, and I wasn't going to do that. No way was I going to do that. I was not going to do it if I could get out of it. Traditionally, that was four years of college, nine months [on] and three months off. I thought, "Four years. I just don't want to do that." I found in the back of the *National Geographic* magazine, which my parents took, a little ad which said, "College degree in twenty-seven months." That got me interested. So I wrote to them. Nobody had a telephone then. There wasn't a telephone in our whole area at the time. I wrote to Tri-State College [now Trine University] which is in Northern Indiana [Angola], and they sent me a catalog. I thought that I had died and gone to heaven.

The reason being that this was a school that had very strict standards, but yet they worked you so hard you didn't have time for foolishness. They were on a quarter system, and you went all year. The school itself had started as a teachers' college in 1884. It had gone into science and engineering around 1900, and the engineering part of it grew like crazy. They had dropped the law school, the pharmacy school, and other parts of the curriculum to concentrate on [engineering and business administration]. Back then we called them Jewish engineers. Most of the student body were engineering students. They taught chemical engineering, mechanical engineering, electrical engineering, radio engineering, which now would be in with something else, and civil engineering. Cecil

Hallrow was the head of the department. When they said twenty-seven months, they meant twenty-seven months if you keep your grades up and go "around the clock." You'd finish up the quarter [one] day and you would enroll for the next quarter the next day. Every class met every day. And you had to do your homework.

BOHNING: That's demanding.

PRATT: Yes, it was demanding. However, a lot of guys couldn't do that, so they would let you go at whatever pace you could handle. Guys that I had started out with were way back. During the war everything was accelerated. There were guys who finished in three years. Some took three or four courses instead of five, but they had to slide back. I took five courses. I had five subjects every quarter. I didn't have any time for foolishness. I just kept busy.

BOHNING: Was there any chance of your being drafted?

PRATT: I want to tell you about my experience with the draft [later on]. I graduated [from] high school when I was sixteen. [. . .] I went to work in a textile mill. A friend of the family gave me a job doing quality studies. Actually, what I was doing is that every time a thread would break on a spinning frame or a [winding] frame, the woman [operator] would have to [tie the yarn ends] together. And I'd make a mark. That gave some idea of whether the cotton [yarn] was good, and whether the woman [was] doing a good job and so forth. So they just gave me a job [compiling in-breakage statistics].

Across the railroad, Fieldcrest Mills had a large textile laboratory. At that time, Fieldcrest probably had five thousand employees in different mills at different places. They had a [lace] mill in [Illinois] and a [hosiery] mill in middle Virginia, and [seven mills in Eden making sheets, blankets, carpets, and woolen suiting]. So this was a large textile complex.

Somebody knew that I wanted to go to work in a lab, so I went to work in their chem lab. Again, I was in pig heaven. I was working hard, doing "grunt work," you might say. But I loved it. I loved it. Every opportunity I had I would expand my horizon to do something else. The money I made, of course, was to help to pay for my education. My dad was going to help some, which he did. In fact, he made sure that I would always have money for college. I learned the hard way working in a lab. [A week or so] after I had gotten started there, the man I was working for, an NC State graduate in [textile chemistry], said, "Now, this is another part of your job. You have to go [run] to the mixing plant."

We were in a great big old factory building that was no longer used [for textiles]. I had to go to the far end of the building, and he said, "This is what we're going to do

[one day a week], and you'll have a helper down there." [My helper was a Black man]. And we made chemicals [by] blending various and sundry detergents, sulfonated castor oil, things of that sort, [. . .] make them into chemicals. We were making them in anywhere from 50-gallon drums to 500-gallon [batches]. These would be sold off to the various manufacturing plants that we had. I learned a lot about how you do chemical manufacturing. I remember several times that we had mess-ups. We had a great big tank. It was about a 600-gallon tank [that] had a steam jacket on it. We were making what was a called a "sizing" compound, which was actually a fat, like tallow, and we'd mix a gum into that tallow. As long as these vegetable gums stayed dry, they were okay. But if you got water into them, you were in bad shape.

I remember once we had this big tank full of this [tallow], melted [by] the steam jacket. We started to work the gum into it. Somehow, there was a steam valve leaking and that gum swelled up. And all those [gum] particles just became a solid mass. We eventually had to get down [into the tank] with shovels and take it out and put it in drums and haul it [off] someplace. What I'm saying is that I learned by doing. That was a good experience for me.

I don't know if you have ever worked around pyridine or not. We had a three-level [plant]. The trucks would unload our raw chemicals on the top floor. Then [by] gravity it would flow down below. I remember [once], my helper had raised a 50-gallon drum of pyridine. It was in a hot warehouse. We'd pull the drum up with [a] chain hoist [to pour the pyridine into a three-foot wide] funnel. He'd taken the bung out [of the barrel, but] the vapor pressure behind that [hot] pyridine [sent it across] the floor in a whoosh. I was working without a shirt. You talk about something that burns. I mean, it burned! We didn't have a safety shower, so I guess they took a hosepipe or something and washed me off. Fortunately, [the pyridine] did not get in my eyes because nobody messed around with goggles and anything like that. I learned a tremendous amount in that process.

Talking about my education, there's one other thing I need to talk about. When I was around twelve, maybe earlier than that, I mowed lawns. All the kids did that. I worked for a grocery store shelling peas. There were a number of women [in town], "the higher ups," [who] didn't shell peas. Their cooks didn't even shell peas. So I and another fellow would shell peas to make money.

I [then] got a job working for a little printing plant, just a job printer, a family-owned business. The man [Francis Slater] was in his late eighties, and he was a Seventh-day Adventist. He had this [large] newspaper in Turnersville, North Carolina, which is in the western part. Like so many other things, it [had gone] bankrupt. So he opened up a little job printing plant [in Leaksville]. And so he said, "Come to work with me and I'll teach you everything I know about printing." I had heard that you could get jobs in printing plants in schools, like at NC State. I thought, "Boy, it would be ideal to go to work in this printing plant." [Mr. Slate] said, "Come to work for me and we'll see how it goes." So I became an apprentice. In fact, in technical terms, like Benjamin Franklin was working for somebody else, the kids were called "devils." The devil was the helper. So I

was the devil. The first two weeks, I didn't get a salary. I didn't get any money at all. I didn't know if I was ever going to get any money or not. [laughter]

After two weeks of eight hours a day, five days a week, I earned one dollar. The second week I got two dollars. I made it up to five dollars. To put that in context, [men] working [at] the minimum wage which had started at thirty cents an hour in the 1930s and had come up to forty cents an hour [by 1940]. So people working in factories forty hours a week made forty cents an hour. I was doing well. Five dollars a week versus sixteen dollars.

I learned how to do a lot of stuff. I started out by learning how you would clean type. When you'd get the type, you would set it. Mr. Slate would say, "All right, tear this stuff down and clean all this type up." Do you know what Varsol is? It's a petroleum distillate. I would have to take a big old rag and clean all that type, so it would shine and not stick together. That was one of my first jobs, cleaning the type. Then I learned how to start on a small printing press. It was a little printing press. He had several different motor drives on it, so [Mr. Slate] could start me off very slowly. And then he'd work me up, increasing the speed as I got better at it. Then I began to earn some money, you might say. I went from the little press to the big press. I don't know how many impressions it would make. You put [. . .] [a clean sheet of paper in with your right hand, print and remove it with your left hand. At the same time, you would insert a new sheet.] You had to have a rhythm to it, otherwise you'd get your fingers cut off, because when those [ink rollers] came up, you'd better have your hands out [of the press] or you would have no fingers. [laughter]

Then he taught me just a little bit about [running a linotype machine], which I thought was absolutely marvelous. It was the first piece of automated equipment that I had ever seen. You're probably not old enough to ever have worked around a linotype. You had these little keys [of type] which were serrated, and they ran along a track at the top of the linotype. And when the little key [came] to the right place, [it would] drop off into [its] appropriate slot for A, B, C, D, whatever. I was just amazed by that thing. [. . .] So he let me work on the linotype a little bit. You had to have some speed, but I was knowledgeable enough [. . .] to know what to do.

The thing that I really learned from [Mr. Slate] was layout [and aesthetics of the printed page]. With 8 ½ by 11 sheets, you would have a handbill and you'd try to make a nice layout. He taught me a lot about using different sizes of type, and whether you should indent or not indent, and so forth. How [to] use color. You could put in red in if you wanted to. The secretaries at [E. I.] DuPont [de Nemours and Company] always said I gave them a hard time [about layout], but my sense of perspective from what I had learned in that print shop made it so that I just could not let something go out that was not laid out right. I just wouldn't do it. I'd send [it] back. What I did in that print shop has lasted all my life. [. . .]

Then I went to college. I remember the first assembly that they had for the new students. The president of the school [Burton Handy] took us into a small auditorium and

said, “Men.” That was the thing that got my attention. “I want you to know that we have no rules or regulations in this college. We expect you to do what is right and if you ever get in trouble with the law in any way, you’re out of here.” It was just that simple. And he left. [laughter] We didn’t have any problems with that because everybody had to work so hard that there was just no time to do anything else.

The other thing was that this little college had started the idea of living in private homes. Schools today could learn a lot. You did not have dorms. You lived in a private home. You were paying rent to the landlady who had one or two students. And if [she] didn’t like what you’re doing, “You’re out of here.” If you couldn’t find a place to live, forget it. That was another interesting aspect of what they did in that college.

BOHNING: Why did you select chemical engineering as opposed to any other branch engineering?

PRATT: I’ve alluded to this already. I loved chemistry. I loved mechanics. Somewhere along the line I had gone from mechanics to mechanical engineering. I realized that there was something out there called chemical engineering. I didn’t know much about it, but I came up with a little bit of stuff in the catalogs and so forth. I didn’t know whether I would want to go into mechanical engineering or chemical engineering. I was also interested in history. I wanted to [do] something in history, but I thought, “I can’t make a living at history.” So I said, “I’m going to look at chemical engineering because now I’ve got sort of a cross between chemistry and engineering. And I’ll do history for a hobby.” And here I am, still doing it.

[END OF AUDIO, FILE 1.4]

PRATT: I want you to read this.

BOHNING: [“My Experiences with the World War II Draft and Military Service”]. Let me make a copy of this and we’ll include it as an appendix to the transcript [Appendix 1].

[Recording paused]

PRATT: Well, you’ve read this. That’s how I survived World War II. Like our beloved President [George W. Bush], I joined the National Guard. [laughter]

BOHNING: This was after you got back to North Carolina?

PRATT: Yes. I had graduated from Tri-State. I was hoping to go to [the] University of Michigan to do some graduate work. People [at] Michigan knew Tri-State. [. . .] [Dr. John J. McKetta, a Tri-State graduate who became dean] of engineering at the University of Texas, did his graduate work at Michigan, and he's known all over.

BOHNING: Before we get there, let's talk a little bit about Tri-State and what chemical engineering was like at Tri-State. It's in the northeast corner of the state in Angola, Indiana?

PRATT: That's right. Ohio, Indiana, Michigan. It was started in 1884 as a teacher's college. I mentioned this before. By 1900 they had a pharmacy school, they had a law school, and then they started to put in engineering somewhere along the line. In the early 1900s, they added chemical engineering as a course. I didn't know much about chemical engineering. I guess I learned a little bit one way or another, but I still thought of it as glorified chemistry. At least that was in my mind and that was what a lot of people thought. But of course, chemical engineering [as a discipline] has grown since 1900. It was not much of anything back then. It was called other things. The whole idea of chemical engineering came from the people at MIT [Massachusetts Institute of Technology in the 1920s]. They called it the "School of Practice," [officially, the School of Chemical Engineering Practice] I believe. That really was just engineering plus chemistry.

But all of a sudden, they began to [develop the] math behind the engineering. So all of a sudden, [chemical engineering] bloomed as its own discipline. One of the things that I have collected were the McGraw-Hill books that came out of that school. There were two famous books on chemical engineering. The first one that came out was much more theoretical than the second, but the one I used was the less quantified, you might say, from the standpoint of math and everything. I remember [Professor Moore] saying, "You can do all this. You can make these curves [mathematically] if you want to, and you can integrate all this. But the easiest way to do this is just to take the [drawn] curve, cut [it to shape] and [. . .] figure out from the weight of the paper what is the percentage [. . .] of whatever the product is." We did more things like that than trying to do all the theoretical stuff.

I remember [doing an engineering study] which had to do with the amount of power that it would take to grind some kind of a powder. There were two [published papers on the subject]. The value from one study was exactly twice [that] of the other one. And so our professor said, "Just take all that with a grain of salt because it'll be somewhere in this range or maybe slightly outside." [. . .]

[At the beginning of] World War II, [there were] about twelve hundred students on campus, and probably a thousand of those were engineering majors. Then we had a

very rapid call-up of men, and it just devastated the school. I mean, all you had were people that were music majors and the like. [. . .] There was still a business school, but those guys were getting drafted too. There were a lot of women in that. All of this sort of held the school together. Then all of a sudden, after the war, people began to flock in, and they didn't have space to put anybody. There were people everywhere, so then they began to build dormitories. I'm getting ahead of the story, I guess.

We had one very unusual thing at Tri-State. Like [most] colleges, they always put the chem labs on the top floor. Does that make any sense to you? [laughter]

BOHNING: At Wilkes University, they were on the middle floor—biology, then chemistry, then physics.

PRATT: There was always this thing about spills. Chemistry was on the top floor. So we were sort of up under the rafters. The last time I was there they had gutted that chem lab out, and, in fact, the president's office was up there. [laughter] I think he's someplace else now. That was only a temporary thing. But what was really unusual about the top floor of this building was that it was divided in half. In one end were the labs for qualitative analysis. Everybody [had to do] the mandatory chemistry classes. At the other end of the building were little individual labs—so if you were going to go into chemical engineering you had your own private lab. It was sort of up under the rafters. My lab had a window, but not all of them did. But we all had a little [drying] oven, [water connections], and gas connections. We could do anything in that lab that we wanted to do. If we wanted to start an experiment, we could just walk out and leave it. We didn't have to put anything away. Down at the other end of the building they had to put everything in their lockers. But not us. We had a nice lab. They were small labs, not too well supervised, but it really worked well. It's [. . .] the only school I've ever heard about that had labs for bachelor level [students].

BOHNING: What was the curriculum like?

PRATT: It was just about the same as any other school except that it was very accelerated. As I said earlier, you had to keep [your] grades up. If the grades didn't stay up, then you had to reduce the number of classes that you were taking. As far as the textbooks were concerned, they were just the normal engineering textbooks. We used the McGraw-Hill [Chemical Engineering] Series books. Probably the worst book I ever had, during freshman chemistry, was written by a man in Arkansas. I always thought, "Gee, this is a pretty low-class book." I don't know why they picked that book. But I look back at it now—I [still] have all my textbooks—and that particular book just it didn't fit in. The other books were just routine books by well-known authors.

The thing that we were really short on was [engineering] laboratory equipment. A lot of the stuff was jerry-rigged. The school of engineering didn't have money so [professors] improvised with what they had. They had some good experiments, as I recall. We had a lab manual for chemical engineering. But it wasn't very well equipped like the University of Michigan. Michigan had a fantastic chemical engineering laboratory. It was probably ten shoulders above anybody else. When I went to Michigan to see my possibilities of getting in there, the campuses were swamped. So I didn't go to a graduate school, not the way I intended.

BOHNING: So you had thought of going on further?

PRATT: Oh yes. My major professor, a fellow by the name of Jerry Moore, pushed me very hard. There were two of us that he pushed to go to the University of Michigan. The other guy that was with me got drafted three months before he could graduate. He was drafted and went through World War II. I don't know what he did [during] the war, but he went to Michigan and got a PhD in atomic physics. Then he went to work for one of the think-tanks in LA [Los Angeles, California], but I don't remember now [where] it was. I went to see him when I was in California once on business, and we started talking a little bit. We quickly realized that we really didn't have a lot to talk about. [laughter] This happens often, you're closely knit and then all of a sudden you lose your common interests.

BOHNING: You graduated from Tri-State in 1945, but then you got a job in Ann Arbor, [Michigan].

PRATT: There were two reasons. The second-in-command at the King-Seeley Corporation was a Tri-State [graduate], and he [offered] me a job [so] I went there to work. My second thought was that I could get in that school if I was in Ann Arbor, [I] could claim residency or something like that. Well, that didn't work out either. Another reason for going to Ann Arbor was that I'd gotten struck on a nice young woman. That didn't pan out either, so I was being defeated at every turn. [laughter] It made sense [for me] to go back to North Carolina where [Fieldcrest Mills] wanted to offer me another job. So I went back to North Carolina.

I did some good engineering work [at the] King-Seeley Corporation. I was primarily [working at electroplating development]. Electroplating is a fascinating subject. I've [now forgotten most of what I knew], but a lot of it had to do with plating [. . .] automobile parts and tools—[King-Seeley made a lot of different products]. But plating was sort of essential to all of [these]. The way you did plating was sort of empirical, up to a point. Let's say you had a nickel sulfate [plating] bath going, and you were trying to plate parts. Well, for some unknown reason, the nickel would go from [silvery] bright to black. I don't remember why, but I know I had to live with the consequences because as

soon as the plating was not shiny, I was in trouble. [laughter] I had to change the pH and keep fiddling around. All of a sudden, something I did or maybe it was something that just happened, it came back to the bright plating again. So that was one of my jobs, to make sure that all the plating baths were at top efficiency.

Also, I had an opportunity to do a little work in true engineering. I built a little machine [to] electroplate copper strip. It was [made of] spring brass [about $\frac{1}{32}$ of an inch thick and ½ an inch wide]. This would come in big coils. The way it was being done in the plant, they'd take these big coils of [. . .] spring stock and loosen it up [so that nickel sulfates would percolate between the coils]. Then they would dunk it in a plating bath. I don't [recall] exactly what kind of [device] they had to agitate it. [. . .] But I thought there ought to be an easier way of doing it. So I built a little piece of apparatus that would do [the plating] continuously. It was called the "little giant." I think the boss said, "That's a little giant" or something like that. Anyway, it stuck. [The Little Giant Plating Machine worked beautifully]. I [built] the show model, [then the machine shop] built up the big machine. Somebody built that, although not with scrap pieces like I did.

I had another interesting project. We did a lot of work for Ford Motors and other companies. Stainless steel was just coming on the market. Stainless steel began being popular I think around the 1930s. Eventually, somebody was making a stainless steel windshield wiper arm, and they wanted it shiny. Well, the steel that you had—I don't know if you would call it burnished or not—but there were enough [surface] irregularities in the steel [so] that it didn't sparkle. My job was to figure out how you could do this by some chemical means. So [I] came up with an electrolytic [method]. There are [infinitesimal] variations in the surface of steel. [. . .] But the amperage that you have in a situation like that varies [from] infinitesimally low between the high places, the humps, and the little ravines, you might say. [If the electron current density was just low enough the metal would] dissolve and flatten out. So I started fiddling around, doing this in little glass tanks and it worked beautifully.

Then we had to scale up. The solution was 60/40, as I recall, a 60/40 solution of concentrated sulfuric acid and phosphoric acid. Can you imagine? [laughter] It worked, but I don't know how they finally scaled that thing up. We were still fiddling with it when I left [the company], but the model worked well. But [how] are you going to [handle] concentrated acids like that?

BOHNING: That's potent. [laughter]

PRATT: I remember I had gotten up to a point that we had an electrolytic bath [gives dimensions by pointing "from here to there"—approximately three feet by six feet and two feet deep], and we were scaling up. We had all this acid, and we had a low current on it. We were fiddling around. If somebody had an accident, it would not have been a good place to be. One day [. . .] the head of the plating department came in [to check on] an exhaust fan over the [electrolyzing] bath. He [stood] up on top of this [tank]. He had on

rubber soled [boots], but he was standing up on the two horizontal bars [onto which] you lowered [the] windshield wiper arms down into the bath. He was standing up on [those bars] and [one] foot slipped off. He grabbed onto something, but one leg went down maybe up to his calf. He jumped down, soaked in sulfuric [and phosphoric] acid, and somebody turned a fire hose on him. The other thing was that all the [workers] in the plating department [wore bicycle-type] clips that fit around their legs. So he had on a heavy boot, and his leg went down inside that boot with that bicycle clamp. And that's what saved his leg because that solution was [warm]. I don't know what the temperature was but I'm sure just the [electrical] resistance alone would have heated it after a while. But I do remember [his leg] slipping down in that [acid] bath, and I thought, "Oh, Lord." People didn't think [much] about safety.

Sodium cyanide was used in [electroplating]. We [used] a tremendous amount of sodium cyanide. I don't know why [the hydrogen cyanide] didn't kill us! My dad had given me a [wristwatch] for graduation, and I wore it everywhere in the plant. It wasn't a cheap watch, but enough cyanide had gotten inside that the [gold plating on the numbers] came off. Enough cyanide got in there that it took the plating right off. I've often wondered how in the world we lived like that, but I never thought anything about it. It was just there. You could always catch a hint of [hydrogen cyanide] odor. Certainly, it wasn't enough to kill us, but I'm sure that these guys that were working in there all day long, day-in and day-out—I'm sure that their insides must have been affected. It's the same thing with people who work with chlorine.

[END OF AUDIO, FILE 1.5]

BOHNING: You only stayed there a year. You've indicated that things weren't going the way you wanted them to go in Ann Arbor. Did you go looking back home, or did they come and get you?

PRATT: It was a matter of two things really. My mother's health went bad, and I wasn't saving any money. And my mother said, "I wish you would come home." I'd broken up with another young lady that I was interested in, so I just thought, "Now is a good time to go back, stay with my parents, and find a job." When I got there, Fieldcrest had just [modernized the big lab that I had worked in before]. But now they were offering me a real job. I was making some money at it. I believe I was making seventy dollars a month. That was big money for the times.

I went to work at Fieldcrest, and they said, "Anything you want to do, you can do it." I believe my title was Director of Analytical and Applied Chemistry. I was doing pretty much the same thing as before, but now I had some background. They wanted to set up a quality control program for all the chemicals that they [used in] manufacturing. I [mentioned] earlier that they had a little [chemical] manufacturing plant. We must have had at least a hundred different chemicals that we bought. This was back when an awful

lot of skulduggery went on in chemicals, particularly the compounded stuff. [Suppliers] could add more water to it or do this, that, and the other, [to reduce the price].

One of the things that they wanted me to do was set up [quality] control for all these chemicals, which I did. It wasn't all that difficult. At the same time, they finally decided the view wasn't worth the climb. [laughter] So about the time I left, they decided they'd get rid of that. But it was a nice experience to know exactly [the composition of the chemicals we were actually using].

[The] fellow that I worked for, who was an NC State graduate, and he prided himself on his ability to [detect] compounds by his nose. In fact, that's the way all of us did it. [We] didn't have any instrumentation at all. He would sort of blow across the [mouth of the bottle], so he didn't ruin his olfactory nerves. He liked to come around and see what I was [analyzing]. He'd say, "Herb." Then he'd take a whiff of it. "I think there's a little hexalin or little tetralin in here, one or the other or both." That was what he would always say. Of course, he was dead when I got around to writing the "I Remember When" articles [for *Textile Chemist and Colorist*]. But I put him in [one article], telling about this hexalin and tetralin.[3] My wife, Mary, eventually ended up working in that same lab, and she remembered him doing the same thing. It was just a thing he [was proud of].

Most of my work was probably more analytical than [. . .] anything else. I can't really think of any kind of an engineering project. I did a lot of troubleshooting because in a textile situation you always had things like dyes that would go off [standard] for whatever reason. They'd probably call up Sunday night, "Hey, college boy, come down here. Get us out of this problem." There was a guy who was an old-line foreman that used to call me that. [. . .] I'm not sure exactly what he did. [On one occasion] they were making a [rayon] warp. When you have threads running along the width of a beam, about sixty threads per inch, those unwind and they go through what's called a sizing bath, a [mixture of] fatty material and starch usually, to protect these threads so they don't get beaten up during the up and down motions that they encounter [during weaving]. [An operator] was having trouble with foam in the sizing box. For some reason, it was frothing up and running over the sides of the box.

So my boss said, "Go over to the mill," which was over on the other side of the [railroad] tracks, "with a gallon of alcohol, just regular isopropanol, and have them [pour] it in the sizing box." So I took the gallon jug and gave it to the foreman, and he in turn gave it to one of his workers—a lot of hierarchy. The guy took this gallon, and he poured it [out] in a bucket, and he just [splashed] it like that across the [sizing] box. Well, this was not rayon as they'd told [me]. It was some of the early experiments with [cellulose] acetate. [laughter] So when this gallon of [alcohol sloshed across the] tank, the acetate softened and every thread in that [warp] elongated and broke [. . .] and they went every which way. You could have heard this [foreman curse a half mile away]. He would never let me live that down. [. . .] [laughter]

[3] Herbert T. Pratt, "I Remember When…" *Textile Chemist and Colorist* 23 (1991): 15.

These were the kinds of problems that we would have. They were just run of the mill problems. Most of the time, I'd do all right, but that particular time I didn't. [. . .]

BOHNING: Were you the only chemist there at the company?

PRATT: I was the only [analytical] chemist. The fellow I worked for [was a textile chemistry and dyeing] major. But he had forgotten most of [the chemistry] he knew. [laughter] He was an older guy. There was one other guy who had also gone through NC State, and he had been a plant superintendent over in Virginia. Those were the only technically trained people that we had. [We also had three chemical engineers doing product development.]

BOHNING: NC State had specific programs for people going into the textile industry?

PRATT: Yes. And that's still going on. In fact, they have a new building and everything.

BOHNING: Do they have a separate school?

PRATT: Yes. The school of textiles was started around 1920, I would say.

I can't think of anyone else with a chemical background. We had a lot of engineering people, a whole engineering department, but those guys were all mechanical engineers. There was one [other] guy who might have been a chemical engineer out of NC State, but at [the] time when I knew him, he was more into safety and that kind of thing. The company had a program for trying to keep its workers safe, which [was] most unusual.

I remember a situation where he was called on. We had a lab that had been set up by the Institute of Textile Technology in our building. The Institute was in Charlottesville, [Virginia]. I don't think it's there anymore, but it was tied in with University of Virginia. That lab closed down, and they just sort of left everything in the lab. It wasn't a very big lab, maybe twice the size of this room. But they left everything in it because they didn't want to haul it back to Charlottesville. They didn't pour anything out or anything. I went in there one day for something, and [noticed that] there was a [large] bottle of perchloric acid, [potentially] very explosive, that had been sitting in bright sunlight for probably two or three years. I said [to myself], "This has got to be [removed] and destroyed." I went to [the] man who was the safety guy, who was an engineer, either chemical or mechanical. And I said, "I'm not going to fool with it." And he said, "I'll take care of it." What he did was get a Black fellow [who] was a janitor, and

he said, “Take this gallon of stuff down here, and drop it off the river bridge,” which he did. [laughter] Fortunately, it broke into a thousand pieces, diluted with the river water, and that was the end of it. But that’s how [he] handled it.

BOHNING: That’s a great story. [laughter]

PRATT: Isn’t that a great story? But the thing was, there was enough [perchloric acid] in that [. . .] bottle that if it had been jarred or something like that, the whole end of the town would have gone up. In the early days [of] *C&E News* [*Chemical & Engineering News*], they used to tell a lot of stories in there, “Don’t do this, don’t do that” because you might blow something up. There was some [type of] oxygenated compound that somebody had an extremely small quantity of and it needed refrigeration. It had been shaken and jarred, and I don’t know if the person was killed or not, but it blew the refrigerator totally apart. And I had this whole gallon of [perchloric] acid.

BOHNING: You met your wife while you were there?

PRATT: Yes, I did. I mentioned this lab that was going to be started up by [the] Institute of [Textile] Technology. She was going to be studying stream pollution with a fellow that had gotten his doctorate at [. . .] the University of North Carolina. [. . .] She had been one of his [chemistry majors] at Georgia [State] College for Women. He invited her to come [work for him at ITT]. So [Mary] came down and worked in one lab, and I was down the hall in another lab. A bunch of us would eat lunch together in the cafeteria, and we got to know one another. So [one day, one of the women] asked me, “Are you going to the church picnic?” I said, “I don’t know anything about it.” She said, “Well, it’s up at Natural Bridge, Virginia. We’re going to take a bus up there, have lunch, and come back.” And the woman said, “Why don’t you ask Mary to come along?” So I turned around and said to Mary, “Would you like to go?” She said, “Are you asking?” And I said, “Yes.” [laughter] And we’re still together. So that’s how we got to know one another. She was a good chemist.

When we got married, she was working at the Institute, and I was working at Fieldcrest. Then the Institute finished its project, [. . .] she wrote her reports, [and took a job in the chemistry lab at Fieldcrest]. [. . .] [Later on, when we decided] to get married, we were told, “You can’t get married because a man and his wife cannot [both] work [here in] the same [lab]. We won’t allow that.” And I said, “Well, we’ve been working together all day. What could happen if we were married and working together all day?” “Can’t do it, can’t do it.” Mary would stand up for her rights, so she went high up the line, but they said no. So she said, “They need a chemistry teacher over at the high school.” She went over there and became a chemistry teacher, [and we got married]. Not too long after that [our] family started, so she didn’t go back to teaching for quite a while.

BOHNING: What year were you married?

PRATT: Nineteen forty-seven. We had a simple honeymoon. We worked to the end of the day and got married at seven o'clock. We went to Roanoke, Virginia for two nights, and Mary went back to school. [laughter] She started [teaching] on Monday. The reason she wanted to do that is because we were going to do it later, but she said we'd have a situation where [she] had one name and the students would know [her] by another name and she just wanted to get it settled. Nobody would worry about that today. My daughter uses her maiden name.

We have four children, two boys and two girls. One lives in California, and one lives on Long Island, [New York]. The other two live in Wilmington, [Delaware]. One son was in Philadelphia, [Pennsylvania], but now he's a lawyer in Wilmington.

BOHNING: Are any of them chemists?

PRATT: No. Nobody has any interest in science at all. One lawyer, one arts [major], one psychologist, and one works in a clothing store, Macy's. [. . .] We have grandchildren.

BOHNING: How many grandchildren?

PRATT: [Four]. I have a grandchild that's seven. And a grandchild that's thirty-two.

BOHNING: Oh, my. [laughter]

PRATT: The youngest daughter didn't think she would ever have any children. She was forty, and all of a sudden, she got pregnant. Of course, this seven-year-old is the light of their lives. You might say that about the grandparents, also. [laughter] We have two grandsons by the other daughter.

One son was in the Marines, [in Iran]. [. . .] [The oldest granddaughter majored in Russian at Dickinson College and has had a variety of jobs: archaeological, advertising executive, assistant to the president of a small college, media consultant, etc. One is an artist.]

BOHNING: You seemed to have settled into a comfortable life. You had a good job, you were married. Did you think you were going to stay at Fieldcrest for a long time?

PRATT: After we started having children, we bought a house. I realized I needed more money. So I answered an ad in *C&E News*. In fact, I just pulled it out the other day. I was looking for some of this stuff, and I have a little folder about when I hired on at DuPont. The ad said, "Wanted: chemical engineers with at least five years textile experience." It hit me right on the button. So I answered the ad and I heard from DuPont saying, "We'd like to see you in Wilmington and have an interview." I went through six or seven different people.

BOHNING: This was in textiles?

PRATT: Yes, I was in the [Textile Fibers] Department. Back then it was called the Rayon Department, [even though we also sold acetate and nylon]. [. . .] That became the Textile Fibers Department because we had new fibers coming. We had Orlon and Dacron coming, and then there was a whole host of stuff after that—[Lycra, spun-bonded products, Kevlar, and Teflon], but they [came] much later. I was hired sometime in mid-December of 1951. I reported for work on February 1, 1952. Between the time I was hired and the time I reported for work, there'd been a tremendous shakeup in DuPont. They had gone from the old Rayon Department to the Textile Fibers department. They had moved the building that we were in, seven stories up in the Nemours Building, [. . .] into a [two-story] satellite building which has since been torn down. There's a big bank there now. I went in and the fellow I was supposed to be working for [had moved] someplace else by that time. So this [new supervisor] didn't know what to do with me. He said, "Look, until we sort of get straightened out, and know who's going be doing what, [. . .] go down to Seaford, [Delaware] for a few weeks and see how [we make nylon fibers]." I thought it would be a nice little escapade, so I went down and spent maybe three weeks in the nylon plant, just to learn what [this was] all about.

Then I went back to Wilmington, and they said, "Okay, we want you to be involved with this new polyester fiber that we have [named] Dacron." Then they gave me an assignment. As DuPont often does, they threw me into the water just to see if I could swim out. From the textile mills that I [knew about], [Fieldcrest] had every kind of textile manufacturing [I] could think of except one, and that was worsted processing. We had woolen but not worsted. Worsted was totally different. They said, "Okay, we want you to figure out how to [process] Dacron staple [fiber] on the worsted system." And I said, "I don't know anything about the worsted system." They said, "Well, you can learn." [laughter] That's how I got started at DuPont, and it worked out very well.

[END OF AUDIO, FILE 1.6]

PRATT: When I came to work, we had GIs coming from all sorts of places. [They had] all kinds of backgrounds, [but] mostly in chemistry and chemical engineering in the technical service organization that I was involved in. Back then it was called customer service. We had all these people coming in, and there was tremendous chaos. People coming in like I did, and [management] didn't know what they were going to do with all these people. Somebody was hiring them, [but] they didn't know what to do with them. But one thing that was very obvious was that DuPont had plenty of money. Plenty of money. They would throw money away. There was a term that they used, and it was true in the sense, they called it "big business and quick decisions." Spend the money, and don't worry about it.

That was just the way it was. A lot of people were going on big trips. It was the early days, and we still took the train everywhere. I went on the train one time from Wilmington to New Orleans, [Louisiana]. We'd go to Chicago on the train. We'd leave around four o'clock in the afternoon, go into Union Station in Chicago, get off the train at eight o'clock, and go on about your business. We used train travel almost completely. And then a few of us began to break the habit and started flying, and that became a big thing. It became a status symbol. For example, I think it was United Airlines who gave out a plaque, and it said something about flying 30,000 miles. The next would be 40,000 miles. People would put [such plates] up on their [office] walls, and it was a big status symbol. If you had gone 40,000 miles, you were better off than the guy who had only been 20,000 miles or someone who [couldn't] travel at all.

We had a guy that worked with us. And after a while this [practice] had gotten pretty well ingrained, and so he thought, "I'll really do something that's different." We all had these big leather briefcases. This is the third one [I've] had. [. . .] We all carried those. It was a status symbol. Everybody had a leather briefcase. So he decided that he would do something that would be different. He went over to the [machine] shop, and he had a plastic tag [made] about this long [two inches by four inches]. It was [. . .] yellow and black, and it fit on a little strap for your briefcase. And the message on it was, "Yellow Cab, 43,000 miles." [laughter] I think that sort of broke [the chain]. But it made a good story.

BOHNING: I think there's some story, maybe it was Carl [S.] Marvel, who estimated how many years he had stayed at the Hotel DuPont on his consulting trips.[4] I don't know what the number is, but he added it all up and it was so many years.

PRATT: I was just looking the other night at my hotel bill from when I stayed at DuPont when I first came to interview. The room rent for that night [at the Hotel DuPont] was seven dollars.

[4] Carl S. Marvel, interview by Leon Gortler and Charles Price at Du Pont Hotel in Wilmington, Delaware, 13 July 1983 (Philadelphia: Chemical Heritage Foundation, Oral History Transcript # 0003).

BOHNING: How much of increase in salary did you get when you joined DuPont? You said you needed more money.

PRATT: I was getting two hundred and some dollars at Fieldcrest. They found out that I was going to leave, and they said, "We can push it up to three hundred dollars." And I said, "I'm going to go anyway." They did not know that I had been offered four hundred dollars a month. I had that piece of paper in my hand the other night. It's interesting to me that I saved all that stuff.

BOHNING: That's a significant increase.

PRATT: Oh yes.

BOHNING: Twenty-five percent.

PRATT: Yes.

BOHNING: Even though the cost of living I assume would be more expensive here than it was in North Carolina.

PRATT: No, I don't think so. Wilmington was contained. You didn't have a farm starting at the edge of town. The first two or three housing developments, one was on the north side of town and two were on the south side of town. And I needed a bus line because we did not own a car at the time. So I needed to ride the bus. There were good bus lines from New Castle, [Delaware], into Wilmington, a bus every twenty minutes from New Castle to Wilmington. Until we got around to getting a car, I rode the bus. But the cost of living wasn't all that much different between Wilmington and the South. It was a nice increase for me, and, fortunately, we had more increases over time.

BOHNING: You sent me a document that lists some of your accomplishments at DuPont [Appendix 2].

PRATT: Yes, I did this in 1993.

BOHNING: What was your very first job when you got to DuPont, after you went down to Seaford and figured out what they were doing there?

PRATT: The first job was to work on Dacron staple on the worsted system.

BOHNING: I don't really know what that means.

PRATT: Worsted is a type of [yarn] spinning that you do with long stapled fibers [say one to two inches]. It's done on machines more like you were making cotton as opposed to woolen. Woolen [spinning] uses entirely different type of equipment. When you're making woolen fabrics, you don't actually spin the yarns as you do with cotton. They are spun but at the same time they're very loosely put together. Like a woolen blanket, the fabric gets felted together. It's tight, but not tightly spun. It's twisted into yarns like you would have with a [fine] worsted suiting fabric. It's a much more expensive process. Woolen [system processing] is much cheaper than [worsted processing].

My assignment was to make polyester staple spin on worsted equipment. Of course, we had a fantastically good textile lab which was replaced and has since been replaced again. It no longer exists. We had excellent labs. We also had plenty of money to do anything we wanted to do. So I started on worsted equipment, and we got it to the point that I could make a [fairly good worsted fabric]. There were changes we had to make. [. . .] [We] had to adapt [the] fiber to the machinery and vice versa. We started out, for example, with a two-inch fiber [for worsted] down to one-and-a-half inch and finally down to one-and-an-eighth inch [for cotton], depending on [the fabric] we were trying to make—how much twist, diameter of the fiber. All these [factors] are interrelated. That's what I worked on for a while.

BOHNING: You had to learn all of this at the same time?

PRATT: You were given the responsibility, and how you figured it out was up to you. How much money [you] spent was up to you. We had a lot of things going for us. Thinking back, [. . .] we got away with stuff that you just couldn't do today because of [changes] in the marketplace. I wrote about a six-page report about what had happened in Dacron staple. There were other people working on other aspects of this. I was doing the worsted spinning, and other guys were doing other things. [. . .]

BOHNING: How new was polyester at this time?

PRATT: From a standpoint of a marketable product, it was about the time that I got to thinking very seriously about leaving Fieldcrest. I remember in *C&E News* it talked about a fiber that DuPont was going to market, and it was called Amelar. And it got in *C&E News* as Amelar. But somebody [at DuPont] discovered that [there was a very similar] word in Japanese. So [DuPont] had to cancel that and come up with a new name, [which] was Dacron. It had gone from the so-called pot cell [fiber spinning] at the experimental station to scale-up at Seaford to the new plant that was going to be built in Kinston, North Carolina. I remember on [the] three-week interlude that I had in Seaford, they were just showing me stuff. There were three guys coming towards me and the guy I was with. They stopped and he said, "We want you to meet Herb Pratt. He's new." I remember two of the three guys that were there. One of them was Russ [Russell W.] Peterson who was plant superintendent. Russ Peterson left DuPont and became the governor of the state of Delaware. [Then he was involved with the federal Environmental Protection Agency.] After leaving that he became head of the American or National Audubon Society. He's been involved in everything.

The younger guy with [Peterson] was a fellow named Bob [Robert] Forney. [Bob] was a guy who was going to be going places. He looked the part. Bob Fourney is also involved in the Chemical Heritage Foundation. He'll show up at meetings. I don't know if he's in any kind of a leadership role, but he got up to be high enough in the DuPont Company that his name was bantered around as being the next president. He had every right to think that. All of a sudden somebody beat him to the draw, and he retired. He didn't have to work anymore. I can't think of the third guy of the trio. I've always remembered that [incident].

BOHNING: Who were you first working for at DuPont? Who was your boss?

PRATT: I was working for a guy named Gus Deshoemaker. He was Dutch—Deshoemaker, the shoemaker. [laughter] Everybody was in turmoil. You'd have a supervisor one day, and then he'd be gone someplace else. You didn't have to think too much about the supervisor, as long as you didn't make a mess in some way or get somebody in trouble. The next guy I had after that was a fellow named Don Schlerf. Don Schlerf was short and very cocky. Do you know what the "ruptured duck" was?

BOHNING: It's familiar.

PRATT: It was a little [lapel] pin that every veteran [who served honorably in Federal military service between 1925 and 1946 was given] and it looked like an eagle, or [what] somebody said along the way it looked like a ruptured duck. That stuck, and [most] veterans wouldn't wear them anymore. But Schlerf wore his. That was one of the things I remembered about him. [. . .]

BOHNING: Did DuPont have a company culture and were you aware of that when you joined?

PRATT: In the organization that I was in, we had from the old rayon and nylon days maybe fifty or sixty people. When these veterans kept coming in and DuPont was hiring left and right, we had probably one hundred and twenty-five people working in technical marketing. Back then it was called customer service. There were a lot of DuPont family people—younger people—in the DuPont Company, in-laws, etc. of people whose fathers had been high up in the company somewhere or other. We had those people. That was part of the corporate culture. There was a lot of partying in that culture [. . .] [among people who wanted] to get to know people and know how the system operated.

In fact, at DuPont, we had a course, "HOBSO," [on] "How Our Business System Operates." [. . .] I remember when I was working with Gus Deshoemaker everybody would get slap happy [by] the end of the week, and [Gus] would pull out [a little] book which had a lot of [pithy sayings from former presidents]. He would read [them and] he would say, "Now, I want you to hear the word." [laughter] He would read this [book] and it was just fun. There were also people who really enjoyed what they were doing, and they didn't want to go anywhere. I guess I was part of that culture.

I'll give you one illustration of the corporate culture. When [Fibers] moved all these people out of the [eleven-story] Nemours Building down to this little two-story [and] basement building, we had like "bullpens" in there with little [walled-in] cubicles. A lot of times people would stand up, [so] they could see all over [the wall] and they'd call and talk to each other. We had a young guy, Dick [Richard H.] Dent, that had come out of the [military]. He'd come to work for DuPont, and he'd gotten to know a few of the people. One day he jumped up from the little cubicle area that he was in and ran out of the building.

Nobody knew exactly what had happened to him, but in an hour or two he came back in. There was a tall guy that could see over this cubicle, and he said, "Dick, what in the world happened? Why'd you run out of the building?" [And Dick] said, "The maid called. The baby had fallen into the swimming pool, and my wife was gone with her car. I had to go home and take [the baby] to the doctor." So there was a maid, a swimming pool, and a second car. [. . .] None of the rest of us could afford that. Well, it turned out his mother [Victorine DuPont Dent] had been a DuPont, and he lived in Westover Hills, [an area of very large homes].

That was just the way it happens. So there were two [cultures]. [Many of] those people that [were on] the upper end of the echelon would move [on]. They moved on to someplace else, [or another company, became stockbrokers and other jobs] like that.

BOHNING: Were there many PhDs in this group that you were with?

PRATT: [In] supervision, maybe half the people, because a lot of these people had come [from research]. I would say maybe more than half. Thinking about the people I worked for, after this immediate period I was just talking about, my direct management or [the] next level up, everybody [had] a PhD. That settled out after a period of time. Then there began to be people switching from one career to another, not suitable for one reason or another, and they would move out, but the number of PhDs in technical marketing might have been 30 percent. I could find out.

[END OF AUDIO, FILE 1.7]

PRATT: In talking about corporate culture, one thing that I had a very hard time with when I was [at Fieldcrest] you had maybe a much stronger culture in the South than you did up here. I really never thought about this before, exactly. When I came to work for DuPont everybody was on a first name basis. [. . .] The one that I had the most trouble with was [my boss at the time, a little rotund, sawed off] man, known as "Shorty" [Seymour] Brainard. Shorty had a lot of experience in DuPont, [in] various and sundry jobs. I don't remember where he got his PhD. [But] it was very difficult for me to call him "Shorty." Although I was expected to use people's first names [because] they were trying to sort of mix it up. Not like in academia, where everybody has a fixed title, and they must be known as Dr. So-and-So. That's just the way it was. At Fieldcrest, in my first job in supervision, the older women that I had known all my life had to call me "mister." I had a hard time doing that but yet I was expected to be known as "mister." Everybody knew that when I got a little promotion.

BOHNING: That's interesting.

PRATT: But there was a sense of respect in a small town like that too. The people that attained something would be called "mister." But I did have a hard time [when] these older women had to call me "mister." Of course, we had in the Eden area where I lived and grew up in, I guess about 30 percent of the population were Black people. We had a janitor in our lab, [who] washed our lab dishes and [cleaned]. He would come in like at ten o'clock in the morning and stay late in order to clean up everything around the lab. But he always called me "Mr. Herb," and I'd call him Matt. It just didn't seem right to call him Mr. Broadnax. He didn't expect to call me anything but Mr. Herb. That was just the way the times were back then.

BOHNING: I'm wondering whether you could go through this [Appendix 2], in terms of the things that you've done at DuPont and the different titles you had over a period of time.

PRATT: I think somewhere in this write-up or another one, I talk about polyester dyeing and finishing. A lot of things that I worked on didn't amount to a hill of beans, so to speak. Some things I got a lot of recognition for worked out very well. I had a lot of fun doing it. I was probably best known in the textile trade for my work on textured polyester dyeing and finishing. It was sort of happenstance. I was in research for about four years. Just to give you about three or four sentences on that, we had a new products line. [We] were trying to make unusual new products. The product that I was working on, not only just me but there were about fifty people on this research project, to develop a thing that looked like a bed blanket. It was a beautiful fabric. It was just gorgeous stuff. My job was to develop the dyeing procedures, the printing procedures, but it wasn't panning out. Technically, it was going to work all right. But it got to the point that the [DuPont] Board of Directors, or whoever made these decisions, would have maybe ten projects that they had to choose from, and this just happened not to be one of them. They spent a lot of money on it. Technically, it was nearly a success, but it was like we were always having to go a little bit further. It needed something a little bit more than what we had. So they just finally dropped that. In fact, they sold the process to a textile outfit, Cone Mills, in fact.

I really did a lot of work on that and well, right in here, it says, "published eighty-four journal articles and technical bulletins, gave fifty or more college or university lectures, and forty-eight or more lectures on talks to trade associations, gave no fewer than forty-five mill seminars," and I've done that. We were talking about textured polyester because [that development] just came out of the blue. It exploded. Somewhere in my files, I have [the date on the] the amount of [textured] polyester that was made from 1974 to 1975 [or] 1976, somewhere along there. It quadrupled almost each time. I had moved out of research and moved back to technical marketing. A guy wanted me to work in dyeing and finishing. I liked the man. He was a great fellow to work for. He said, "Come on over and let's go." So I went over and started doing work with him. All of a sudden, this textured polyester [business took] off. There were about ten people in this organization. You have about ten people in a supervisory group. They didn't have any expertise at all in knitting. They didn't have any expertise in filament yarns, and I had both. So I began to pick up [customer] calls. Somebody would call in for this, that and the other and so you [would] try to help them. And all of a sudden, [the business] was growing like gangbusters. So [for] six or seven years there was just no end to it, it looked like. I had a lot of publicity from that. "Made one-on-one calls with hundreds of individuals," and that's true.

BOHNING: What's a mill seminar?

PRATT: You'd have [textile mill management] and all their foremen. They'd bring all their foremen. [One or two DuPont people] would come in. I would go [by myself] or maybe sometimes [. . .] two or three or four of us would go. And you'd just really spend a

day or two getting them to realize how [textured] polyester worked [mechanically], how you do the dyeing and finishing, and so forth. So that was just a mill seminar. In other words, we went to them rather than their coming to us. But that was a big thing.

And then another thing came in somewhere. I'd [become] so involved with textured polyester that NC State asked me to [teach] there.

BOHNING: Yes, you were an adjunct professor, beginning in 1974.

PRATT: Yes, that was for five years, but I'd already been doing that anyway. Dame Hamby, who was [dean down of textiles], said, "You stay on this campus so much, we're going to give you a title." I'd be there sometimes one and two days every week because [we could get] textile people to come [to] NC State. They got some revenue out of it, plus the fact there was a lot of interchange. You could get people to talking and share a little bit of what they were doing. This one over here is doing this, and how do you think we should do this? They wouldn't give up any trade secrets, but we did a great job I think of educating the trade. So that was one of the things that I was doing.

That lasted for about seven or eight years. I'd heard it all before. I had done it all. I had given the same talks dozens of times. Finally, I knew it was time to move. So I was given a staff job, sort of doing jobs that nobody else could do or would do. I had a ball with that.

BOHNING: What kind of jobs?

PRATT: It's just like I said. There were jobs that other people either couldn't do or wouldn't do. Without trying to make a long story out of this thing, I was by myself. I had an office, and [telephone] calls would come out of the blue many times. And many times, I could answer them in one sentence. Sometimes I'd have to do some research. I had the ability to go, if I needed to get something done, to a lab [where people would] do work for you. In other words, I could write a test outline, and say, "This is what I want done." [I would] give it to the people over [in the lab] and they [would] do the work for [me]. Then [I could] analyze the results. Fortunately, I could go back and forth and see that they were doing okay.

Well, this job was [fascinating]. I spent a lot of time with college groups. We had a variety of problems. I had a woman one day call from downtown somewhere or another, and said, "I need to talk to you right away." This woman said, "I have a woman on the other end of the telephone—I think it was in Alabama someplace—and she's threatening to blow up one of our plants. I don't know what to do or what to say to this woman. What do you do?" I said, "Let me think about it for a minute and I'll call [her] back." I called this woman, and she was off the wall. It was very obvious she was

[distraught]. In talking to her, I learned that her husband worked in a DuPont plant. It wasn't a fibers plant. It was some other plant. So I called him, and I said, "This is a private and personal matter. However, your wife has called our head office and is threatening to blow up one of our buildings." And he said, "She does that periodically. Don't worry about it." [laughter] He was nice, and he said he would see about her. I don't know how much time I spent on it, but it was probably off and on during the day I had to make a lot of other phone calls along with that [one].

Then I had this little girl [call] in on the phone. [She was perhaps five or so.] She said her mother was being eaten by some kind of bugs on her. This was on a Friday afternoon, and I had to go to a meeting at 3:00 in the afternoon, and it was snowing. The woman was in Pittsburgh, [Pennsylvania]. So I said, "Look, I'll have to get back to you." And I did call back. The woman's husband had just come home, and I talked to him. I had asked the little girl, because the little girl was still on the phone, an hour later. I [asked], "Is anybody at home that I can talk to? Is your daddy at home?" She said he had just come home, so I said, "Could you let me talk to him, please?" So I told him the situation. And he said, "Yes, I've had this problem from time-to-time." I left out part of the story. The woman had gotten in the bathtub. And she said she was being eaten by [bugs], all over her. The little girl had said, "I don't see any bugs, but she thinks there are bugs on her." The husband said, "Yes, she's had this problem from time to time." I said, "Do you have medication?" "Yes, I can get out to get medication, but the snowstorm [is] howling." So I ended it. That was Friday afternoon, late.

On Monday morning I called this lady at home. She answered. She was a very nice lady, and I talked to her for a while. She had been a home-ec teacher, very smart lady, obviously. She lived in the neighborhood near Carnegie Mellon University. My son had gone to Carnegie Mellon so I could mix it up with her a little bit. She said, "I still believe I had those bugs. I know. I saw them. Those bugs were on me. Is there some way I could find out what these bugs are?" I said, "If you go down to the Carnegie Library, you can find a book on [textile] fibers. (I don't remember what the book was.) You probably can find what was eating you." And so she said, "Fine, fine."

About two hours later, she called back, and she said, "I found the bugs in a picture in this book." It turned out that they were some kind of moth. [. . .] She was claiming that these were [eating] polyester. I left that part out. But bugs won't eat polyester. So I ended [the] conversation. Well, six months later [this woman from Pittsburgh] was in [Houston, Texas attending] some kind of a home-ec trade show. [She] went up to the DuPont booth, and had written a letter [to say], "I want Mr. Pratt to know how much help he gave me about these bugs." I'm paraphrasing, you know. But you had stuff like that you would never know what [to expect]. You'd pick up the phone and you just never knew who was going to be on the other end, [or] what you had to respond to. A lot of times it was just routine things, but you'd try to help them as best you could.

BOHNING: That's a far cry from doing textile fiber research and doing chemistry.

PRATT: Well, yes. I guess these are just the things that I remember. But that moved into other things though. [In] a staff job, you had to do a lot of things that the boss wanted you to do.

BOHNING: Who were you reporting to?

PRATT: [After my R&D and dyeing and finishing days, I worked on just about anything. I was involved with different managers, depending in the project I was working on. One was John Hoscheit, who was Manager of Technical Marketing; others were Jim Bercaw and Lee Bice. The last guy was Ed Gates. These all had different personalities, but the left me alone to set my own agenda. A lot of my projects were self-generated, for example, forensics relating to textile fibers and standardization of textile terminology. Others were assigned projects, such as my work with ASTM, American Society of Testing Materials.] [. . .] What I did, after talking about all these things seemed far afield. If I wanted to do some kind of a piddling job, just because I was interested in it, that was fine, [. . .] [but I would always try to do something that would mean something to the company].

BOHNING: You were still in textile fibers.

PRATT: I was still in textile fibers. But I had gone from sort of the peon level up to as far as I could go, working for the person who was head of the technical service organization. [. . .] [My last title was Senior Technical Marketing Associate]. That was as far as I could go. But then another situation came in that had to do with quality management. [. . .]

Quality management was a buzz word throughout industry, particularly people who wanted to make better products. This was done usually through very detailed, statistical analyses. DuPont had in [its] engineering department [ten or twelve] people that did nothing but statistical analysis of very complicated procedures [and data] which I can't even remember anymore. What I can remember about [statistical analysis] is standard deviation but here they were all PhDs. So I got into that. John Hoscheit [the tech serve manager] had said, "I know that there's a lot of work going on in this idea of quality. And I want a piece of this action. I don't care how you do it. I want a piece of this action." I said, "Okay. Let me see." He just sort of gave me carte blanche to go and see what I could do. I went to [my first quality] meeting. I wasn't invited. I just went. [The attendees] didn't seem to [know] exactly who [I was] or what I was supposed to be doing. I just listened. Then [over time] I began to see if I could open up some areas.

I mentioned in here [Appendix 2] the ASTM, American Society of Testing Materials. In 1974, I [had been] assigned to be the tech representative from [DuPont

Fibers] to ASTM. My slot was to be [chair of textile] terminology. [. . .] That job [had] always "belonged" to DuPont. What I mean is, [ASTM] expected somebody to [. . .] to cover [textile] terminology. I was it. [DuPont assigned me] to that job. What I did with it from that [time on] was up to me. So I got very much involved in it.

But how I worked into [quality management] was through [my expertise in] terminology. I was listening to these guys sitting around the table arguing about this, that, and the other, and I finally said, "[Look], you're fighting over something that really, you don't have to do. We need to sit down and come up with some standard definitions." These were definitions I had already had [information] on. So they were amenable to that. Then, I set up a terminology [committee] for the quality people. We did it all by [the] consensus process [just like ASTM]. It worked very well. But what happened is that when you started [writing] standardized definitions, you had to come up with something that everybody [could] agree with, and that was not quite so easy, the reason being is that there was a lot of skulduggery that went on [in the fibers industry].

[END OF AUDIO, FILE 1.8]

PRATT: [. . .] What it boiled down to was unethical practices. A young man came to me from another office, and he said, "I'd like to talk to you because there's something that I've been asked to do that I can't agree with because I don't think it's right." So I said, "Let's talk about it." It turned out [. . .] there were just all sorts of things going on [which, in my opinion] were just not [ethical].

BOHNING: Can you give me an example?

PRATT: They were not exactly subtle things. You can always have controversies over something like [for example, billed weight]. That was another thing that I had got very much involved in from the standpoint the whole textile industry. What do you charge for the finish that you have on the fiber? You have so much fiber, so much polyester [or rayon, or nylon], and when you have to put a lubricant on [it], is that part of it? Do you charge for the lubricant [or not]? [. . .]

There was just skulduggery going on, particularly in the manufacturing plants. It wasn't company-wide. They had learned how to do things—sort of on the sly. There's a lot of that stuff going on. This is not an example of this, but for example, [one of our plants would] burn [its] waste at night. You don't want [to see] smoke coming out of a plant. It's always done at night. That was just the way they did it. It's not quite [ethical, in my opinion]. But they had something to hide. [Also], there was a [practice] called "truck blending." I started to write [a definition] around truck blending. What is truck blending? People couldn't agree on what the definition was. But we [kept changing it until everyone agreed. Feelings ran high at the time.]

[. . .] I remember one [one committee member] wouldn't even sign his name [on the ballot because] "I would hate for the legal department to know about this [definition]." A lot of people [. . .] realized it. Truck blending was that you had two different qualities of product, differing slightly from each other. For the better product, the quality control test would show something being at level X. And there would be another [batch] over here that was like X minus two, not quite as good. What the plants would do [on the advice of marketing] would be to take [small amounts of] the not so good product, and they would ship that [to small, less discerning customers, who would not detect or care about the difference, or] [. . .] wouldn't be smart enough to pick up on it. They weren't sophisticated enough in their [analytical] procedures and so forth. That's what they would do. It was rampant on things of that sort.

So [by relying on standardized consensus] definitions [we were] able to change the corporate culture [to one] being open and [. . .] above board, from one that was [in my opinion] very devious. We did it through [consensus] definitions.

BOHNING: This was not just in DuPont? This is within the industry?

PRATT: No, [as far as I know] this was just within DuPont [textile fibers]. [. . .] Some of the major companies, like [. . .] [Milliken & Company, were very sophisticated in their quality control procedures]. Roger Milliken [reportedly] owned the whole corporation by himself. So he could do whatever he wanted to do without anybody asking or questioning or anything. But when he got into things, [they] leaped ahead of even DuPont. So we had to catch up in a hurry, to get things right.

BOHNING: Did you have much trouble selling this within DuPont?

PRATT: I was told from the highest levels to work on this a little more. [Corporate management wanted every employee] to buy into [this] process [not just because the corporate brass said so]. Man, that was just draining. I remember telling somebody the other day about going to Akron to one of our sales offices. The [marketing manager] there I had known ever since I had joined DuPont. I [explained to] him what I wanted him to do as part of this whole procedure, that we were going to do certain things as far as it relates to [his] customers, quality, and so forth. He laughed at me. He said, "I'm not going to do that." I had no authority to make him do it, [but it was my job to persuade him. Little by little though, the corporate culture changed.] [. . .]

Middle management was one of the biggest problems that you had because these people wanted to make jobs for themselves and they wanted the status quo to stay. But we were able to get through it. I was just laughing with a fellow I had lunch with the other day. Well, there were several of us. We were doing all these procedures between

coming up with these definitions and how we're going to [shape] quality policy. Here's what we mean by quality and so forth. We would get this from the high management people. They'd write it. We'd look at it. We'd write all over it, send it back up [the line], and they'd change it. I remember one of the guys that was in my [committee] got so frustrated one day [after a document had been returned], [. . .] he tore it in shreds, threw it on the floor, and stomped on it. [laughter] [. . .] But it was so frustrating.

All you could do was to get people to see that we needed to do this from a business standpoint, that [we could no longer be unfair to] the customer. [We had] to be above board. And we made that [concept] stick all the way to a quality policy which was published and put up on the walls everywhere where [everybody] knew exactly where DuPont was coming from. We would not ship any kind of product that was out of specifications. [. . .] That was [a very frustrating assignment], but it was a lot of fun at the same time. I was on that like ten years, I guess.

BOHNING: The ASTM has a Herbert T. Pratt Award for excellence in terminology. Is that an outgrowth of what you were doing?

PRATT: Yes. I don't really know how that came about. I had gotten to be known as "Mr. Terminology." I had worked in terminology with [the entire ASTM organization], and then with the D1392 [subcommittee], which was just textiles. Then we had all of ASTM pushing along the same types of standard definitions. We [also] had an international organization on definitions. I was involved with that for about five years. But [when] you've got French and English, and [everyone] else, trying to get people to come together, it was just almost impossible. I knew I wouldn't live long enough to see it, so I backed out of that [organization]. [. . .]

For example, with the Canadian government in Quebec. Quebec you know, is going its own way with [the French language]. So they [appointed] a commission to put standardized definitions in French for some of these [English words and concepts] we were talking about, and sometimes [they are] just not translatable. So we had people come from Quebec down to ASTM, and I worked with them for a while but here again that was a thanks but no thanks type thing. You just couldn't translate. You can't go from one to the other. So I just dropped out on that too. But ASTM was a good [organization]. You had to work very hard, but they gave you a lot of awards, deserved or not. This particular one, though, was a special award. I've been to the award ceremonies several times. It's nice to have your name on an award like that.

BOHNING: I have that you received an Award of Merit, Fellow of the Society, and the Frank W. Rinehart Award.

PRATT: I don't [recall] what Frank Rinehart's [technical] field was. It wasn't textiles. [ASTM] had an award named for Frank for his constant push on having good definitions. I was pushing that way, and so my name got put [on], the Frank W. Rinehart Award. He's been dead for a number of years, but the award goes on as far as I know.

BOHNING: At some point along the line, you became a certified chemical engineer. I wanted to know what that means, and how do you become one?

PRATT: The American Institute of Chemists started this. I don't know how far back. It really is a professional certification which says that each year you [must have] sufficient proof of your involvement with the technology and science, particularly technology, of [your] field. Your involvement could be like attending meetings, doing short courses, anything that will enhance your ability to be a professional, to upgrade you might say, knowing what's going on in your field. Somewhere along the line I thought it would be sort of interesting to see if I could pass that exam. Well, that's not a good way of putting it. Could I qualify to be a certified engineer? So I tried it, and I made it. Now they recertify every three years. But you have to come up with the data of what you've done every year. And then at the end of three years you get a certificate, like a sheepskin, and it's nice.

I do it for two reasons. First of all, it's an honor, I guess. But also, I'm always interested in knowing what I have [accomplished]. Did I do anything this year that was important? I like to do that. A lot of these things here, I guess somebody had asked me somewhere along the line to find out what I had done. I don't know. I don't see anything on it. This mentions specialized terminology [Appendix 2]. In ASTM, as head of the terminology subcommittee, DuPont management in particular wanted to know something about what went on in the burning behavior of textiles. At that particular time, there was a lot of tremendously bad publicity about children's pajamas catching on fire. [. . .] DuPont did a tremendous amount of [such] research. We had [body-size] mannequins that had [small] sensors in the mannequin, [which] would be integrated on a chart [to show] what percentage of the body received first-degree burns, second-degree burns, third-degree burns, etc. [. . .]

Then I got into it from the standpoint of the terminology. This was important because when you get lawsuits, lawyers can twist things every which way you can think of to make a point. Whichever lawyer has better words than the other one is the one that wins out. Again, my management said, "We want part of this action. Let's get in there and find out about it." But I got into that, and then I recruited some guys from the federal government that had some responsibility in this area. They were doing research primarily, but my interest was to see what they [could] do in definitions. So we put together a terminology standard called the "Terminology of Burning Behavior." The [goal] was that you never used [one] word in two different ways. I can't think of [any] good words at the moment. One [reason] was that you never used the word twice so it becomes ambiguous. We worked on that standard. It was about two pages, [but] it took us about ten years to

get [consensus] definitions that everybody would agree upon: [manufacturers, marketing, research, and the public].

Today I'm very proud of those [definitions] because as far as I know they've never been changed. [After I retired from DuPont] I dropped out of ASTM [. . .] because I wasn't keeping up on the technology. [. . .] But that standard lives. I'm very proud of having been a part of it. [Here is] an example. "I assure you that you did right when you ensured that the package was insured." In other words, "assure" is making you aware that this is going to happen. Ensure, "en" obviously is [that] you're going to make it happen. And "insure" would be the legal applications of insurance. It's a homonym. You do [that] so that the meanings are clear. It's fascinating to be able to do that.

I remember a friend of mine who has a PhD in [theology]. And he said, "I'll bet you can't write a [one sentence] definition of scissors." I said, "I think I can. [. . .]" So in about a week I came up with one that would fit all the criteria that you [need] to make a definition. It works out very well. You [start with] what's called a delimiting term. The first thing you say is [. . .] "What is it?" "It's a tool." Then you [ask], "What is this tool used for?" And then, "Can you give me an application of that?" [Scissors—a tool for cutting hair in a barber shop.] But you have to do that, though, in one sentence. You cannot [use] a paragraph to explain. It has to come out in one sentence. It's not easy.

BOHNING: That's interesting.

[END OF AUDIO, FILE 1.9]

PRATT: Are you interested in the AATCC [American Association of Textile Chemists and Colorists]?

BOHNING: Yes. But I would like to go to your forensic work first.

PRATT: Okay.

BOHNING: And then we'll finish up with AATCC. How does that sound?

PRATT: That's fine. The forensic stuff goes back before this. Again, when I [was given a] staff job, I was free to do whatever I wanted to do, or whatever I thought needed to be done. The federal government had started [. . .] programs to try to beef up law enforcement people to [buy] more equipment, [to establish] crime labs, and so forth. And they were trying to do something to make that happen.

DuPont being one of the best-known names in the textile business, we began to have telephone calls coming in from police departments, and all sorts of places wanting to know this, that, and the other. “What do we need to do to identify [textile] fibers?” [. . .] They might not know anything [about textile fibers] or they might be fairly sophisticated in their knowledge. [As] I began to listen to some of these [questions], I finally decided that what I needed to do [was to] have all the telephone calls on that kind of stuff, no matter where they came from in fibers, shunted to me. [. . .] Before [that, different DuPont people in Product Development might give] short answers, doing nothing at all maybe at times, [while] others [were] doing more than they needed to do. So anyway, I had [all of these] shunted off to me.

It was something that I wanted to do, and so I got to know quite a few people in [the forensics] area. Meanwhile, I had been working at NC State with a professor [on a seminar entitled] “Textiles for law enforcement personnel.” We did [the first seminar] at NC State. Then some of the crime labs began to pick up on it. I [made talks for several crime labs, for example, the State of Michigan and the Federal Bureau of Investigation lab in Virginia]. Sometimes they’d have seminars for [two or three] days, and bring all the people in. So I got to know some of these crime people, and I realized that many of them were pretty sophisticated in their ability to do analyses.

In 1981 or 1982 the whole business began to really pick up. I found that I was spending more time in this area. As I said, I’d worked with NC State. We developed a “short course.” The whole idea was that if you do for this lab and that lab and another lab, you need to do it [only] one time, once and for all. Meanwhile, in Atlanta [Georgia], Black children were being murdered. It was in the papers, and it kept happening. Ultimately, I think [twenty-three children were] identified. At least, two or three of those might not have been involved with [one] particular killer.

I told my wife, “This thing has been going on now for a long time. I feel like I should call [the State crime lab in Atlanta], to see if there’s anything that I could do to help them.” And they were glad to hear from me. They would try to explain to me what kind of fibers they were finding on the bodies. Since I knew textiles I’d say, “The diameter of this particular fiber is too large to just be a regular clothing textile. This must be [from] a carpet because carpet fibers are larger in diameter, different lengths.” And all these kinds of things. You had old fibers. You had acetate. Acetate had just about gone out of business, but they were finding acetate fibers stuck on some of these corpses. There were a lot of things that we just did not understand about what was going on.

The more I learned about it, the more I wanted to know. So the FBI [asked for DuPont’s help]. We met twice at the experimental station. The FBI guys came, and they said, “Give us some help.” They had determined that it was a 66-nylon fiber, but it had an odd cross-sectional shape. So they asked DuPont, “Do you have a fiber like that?” “No. We don’t have a nylon fiber like that.” They said, “Monsanto has a nylon fiber.” “No. We know it’s not Monsanto.” When you get up to the point of maybe twenty kids being murdered over a relatively short period of time, everybody’s up in arms. All the

government people. [Governor] Jimmy [James Earl] Carter [Jr.] was pushing, "We've got to get this done."

So there was a tremendous amount of pressure on this thing. A friend of mine [Mary Sawyer] and I went to a funeral one day [and afterwards had lunch]. She worked in a [DuPont Fibers] laboratory. I said, "Mary, let's have some lunch." The funeral was over, and we'd gone back to the office. I [drew] on a napkin the cross-sectional shape of this fiber. It was almost a delta shape, almost like that. [During the conversation I asked her], "Have you ever seen a fiber like that? We've been looking all over creation. We know its 66-nylon, but we can't find anything." We [. . .] knew that Georgia Tech had [fiber] spinning equipment. But it wasn't there; this [cross section] was too sophisticated for them. They're [only] doing round cross-sections. So I asked Mary Sawyer, "Mary, have you ever seen a fiber like that?" She squirreled away everything. She said, "I think I have a [picture of a fiber with a cross-section like that in my desk]. If I can find it, I'll bring it over to you." She was in another building. She came [in about a half hour] and she brought the thing in, and I looked at it.

On the back of that picture there was a trademark. [. . .] So I called our library and I said, "Tell me who this trademark belongs to." It was a company someplace in Boston, [Massachusetts]. So I picked up the phone, and I called up the company and I said, "We're looking for this crazy shaped fiber, and [are] wondering if you could help us out" The guy sort of hesitated, and said, "Why do you need to know? And I said, "The FBI is looking for this [fiber], and I was hoping you could help me." And [he said], "We'll cooperate with the FBI," and I said, "Fine." So I got the FBI guy on the phone, and he said, "We'll look into it right away."

It so happened I was going to Atlanta on [the next] morning to meet with a huge group of forensic people that were being brought in by the Atlanta Police Department to see if we could find anything at all that would pin this fiber to any suspect at all. They had a suspect, but they didn't know where to pick him up. They couldn't do anything about picking him up until they really had [more] knowledge of the fibers themselves.

[One attendee] was a fellow named Walter McCrone; he's dead now. But he was the leading world authority on [fiber microscopy]. He was the expert that worked on the Turin Shroud [among other things]. He had a little company in Chicago. He was by far the best-known guy in the field. He had a protégé, Skip Palenik. I have never known what Skip stood for, but he always signs his name, Skip Palenik. So Skip Palenik was there with Walter McCrone, and they were trying to come up with how we were going to identify this material. [. . .] And somebody asked Skip Palenik, "What is the smallest amount of material that you can detect by some kind of [chemical] analysis." I don't remember what the analysis was, [but] he said, "Like four or five molecules." That's not quite right. If you have lead, maybe, but that was [the answer] he came out with. That sort of blew my mind. The sophistication of analysis as [I had not known] before.

At that meeting though, it was decided that one suspect was a Black [man] named Wayne Williams who had been arrested after crossing a bridge in Atlanta somewhere or

other and had [caused] a splash down below. It so happened that two detectives were down below expecting that somebody was going to throw something off the bridge. The [suspect] went past, went across the bridge, and [. . .] was apprehended topside.

I don't know why they suspected him. [. . .] He said he'd thrown garbage [off the bridge]. Well, maybe. But he took the garbage all the way across the city of Atlanta to throw it out. I can't recall the sequence exactly, but I think they got a search warrant to go into Williams's home to see what they [came] up with, [such as unusual, odd] cross-sectional shaped fibers, like a yellow bath mat, or yellow toilet seat cover, [and] a blue bath mat. I think those were the three. Going in with a search warrant, you have to go in there and look for [specific] things. You can't just come in and take out what you want. It so happened that they found some acetate fibers [. . .] which were most unusual [. . .] because there's such a small amount of acetate sold anymore. Based on what they were able to find [by] searching that home, they arrested this man, Wayne Williams, who, of course, would not admit to anything. The FBI and the Georgia Bureau worked on [the evidence] for quite a while. Finally, they arrested him. [. . .]

Then it came up to the trial.[5] Meanwhile, the acetate fiber that they could find on bodies I knew was rare because just not much acetate fiber is sold. Plus, the fact that it was dyed acetate which [greatly narrowed] the pool of [possibilities]. And the diameter of the fiber also reduced the number of possibilities. Then we had this green, cross-sectional shaped fiber. So when they got in the house, here was the green fiber in a carpet on his floor. Also in his bathroom was a blue bath mat with the fiber that seemed to fit in. They hadn't done any forensic work at that point, but they had taken the samples as they were allowed to do. Then they found dog hair in his house. This was a half-breed Malamute dog; an unusual dog because it's from Alaska, and just an unusual fiber. So that seems to fit. Some upholstery that came out of his car seemed to fit, so all of these things had begun to build up. [It appeared that they had enough evidence to try Williams.]

Meanwhile, I had been in touch with [the] FBI [and the Georgia Crime Bureau]. They said, "We would like for you to testify in this trial as an expert witness." And I said, "Okay, I'll do whatever I can." So I went down to Atlanta. I arrived on a Sunday afternoon. And what these guys were doing was just off the wall. [. . .] They didn't know anything about textiles. It was just going to be a disaster if the defense attorney got in there and it was just going to [be] based on that. I told the Georgia Bureau people, "I'll come up with what I think should be done if you will [get] the defense attorneys to agree to a presentation that I might give so that I can be above-board, open, honest, etc. I'll just give them the facts as I see them." Both sides agreed to that. I spent a good part of the afternoon and night writing what I was going to say. [Fortunately, I had carried my NC State notes and slideshow with me.] You want to see the real thing?

I have some of my props. In that place was an old bedspread and here's a picture of it. This was the bedspread that was on [Williams's] bed. I recognize this because at Fieldcrest [Mills] we made spreads just like this. I said, "This is an old bedspread." Obviously, it was worn. You can see here you've got the black holes in it. But I said,

[5] Williams v. State, 251 Ga. 749, 749, 312 S.E.2d 40, 48 (1983).

"This is old. It's like ten years old." That's one type of thing I did. One thing I tried to do was I stood up in front of the court, which I was allowed to do, and [gave] a lecture about fibers and how they're used in textiles. [. . .] I had an overhead projector. I had charts I had made up. And the judge came down [off his bench], and he sat down at the end of the jury box and just let me lecture. I don't know how long I lectured, but some accounts in the paper said, "four hours."

BOHNING: My gosh.

PRATT: Some [papers said] two-and-a-half. I imagine it was probably around three hours. We got started at 9:00 in the morning. And it was around noontime or there about when I ended up. But you had to deal in simple ways to this jury because they didn't know anything about it. For example, if you talked about fibers, you'd say, "This fiber stiffness is very important. This is a fiber. This is very stiff, but it's only stiff in [one] direction. If you do that then the stiffness is different." So I brought this down in the simplest terms that [I] could possible think of.

These are my notes which say 1/19; that was my birthday, 1/19/82. "Ladies and gentlemen, I want to give you a bird's eye view of the textile industry. This technology is complex. There are a lot of parts and I hope to show you how these parts fit together, and by necessity, simplified. I will start with generalities and get more specific. I'll peel off layers of the onion, as I get more specific. On the average, each person in the United States uses about sixty pounds of textiles fibers per year in all uses—apparel, carpets, automobile tire cord, awning textiles, wigs, what have you. Of all the fibers used in the US, about 75 percent are man-made or synthetic fibers, 24 percent are cotton and 1 percent is wool, flax, silk, and so forth. In other words of a hundred pounds, 75 percent will be man-made." I haven't looked at these notes [in a long time].

[END OF AUDIO, FILE 1.10]

PRATT: That's how I went about it, and the jury bought it hook, line, and sinker. When I got through with that, and after lunch, the [defense attorney] started to cross-examine me. The cross-examination lasted about three hours. I was on a high. I knew that this was going well. I could just feel it. You know, you sit in a classroom, and you know kids are listening to you. You know that. And I knew that these people were listening to me. I knew the jury was listening to me.

By that time, [I had had lunch and] I was in good shape. I was cocky. I've got reams of this kind of stuff. I just pulled out some of it. Let me see, what do I have? "DuPont expert testifies in Atlanta trial." That's the *Evening Journal*. *Washington Post*, *Atlanta Constitution*, *New York Times*, you name it, every newspaper in the country and

every TV station covered this.[6] Here's what it said about me. [. . .] It says, "Herbert T. Pratt, 55, of Wilmington, Delaware, is the Senior Technical Service Specialist," that's not quite right, "in the DuPont Company, Textile Fibers Department in Wilmington, and is involved in textile fiber product development analysis." That's not quite true. It talks about "Williams, 23, a Black, freelance photographer is charged with murdering Jimmy Ray Payne, 21, and Nathaniel Cater, 27." Now these [prosecutors] were smart. They only came up with two [of the victims]. These guys were the two that had the [strongest] evidence on them, around them and so forth. If [the prosecution] lost [the first] trial and wanted to pursue it, they could take the next [victim]. They had twenty [or more victims] to put [Williams] away.

"Pratt testified Tuesday that FBI agents showed him a photograph last summer of an extremely unusual fiber. The fiber size indicated it came from a carpet, he said, but its unique shape stumped him at first. Then Pratt said he sketched the shape on a napkin for a DuPont technician who recognized it." Actually, she was a chemist. "The technician had saved a picture from a similar fiber because of its unusual [cross-sectional] shape, he said. Through the picture, the fiber was traced to Wellman Incorporated, a Boston textile firm, Pratt said. During a lengthy cross-examination of Pratt, defense lawyer Alvin Binder contended that heat may change the characteristics of fibers and that a minimum sample would be necessary to identify certain fibers. Pratt conceded that it would be very difficult to differentiate between two similar fibers produced by different manufacturers." This was the cross-examination.

I remember one situation [in particular]. The [defense attorney] was trying to get me to say something that would go counter [to the evidence] and ball me up. He said, "Tell me, Mr. Pratt, what is the very first thing you would do to identify such a fiber as this." I thought for a second and I said, "First thing I would do would be to send it to a lab that knows what they're doing." [laughter] This was the kind of exchange the two of us had. In these newspaper clippings different people picked up different things. But I did my job well, I think, at least according to the newspapers. Was [it] Andy Warhol that talked about fifteen minutes of fame? That was mine. [. . .]

BOHNING: So your testimony then did what?

PRATT: It broke the whole case. From there on out there was no stopping. This was the first time that man-made fibers had ever been used to identify [a specific fiber]. Cotton and wool had been done by microscopy for years. But when you start on man-made fibers, [they have] a definite chemical composition, a definite diameter, a definite shape. For example, I talked about the shape of fibers and how important those were from the standpoint of a manufacturer because if you have a round fiber, it will cool at the same rate, assuming that air is around it. But if you get something like this, it'll cool differently

[6] See David B. Hilder, "Fibers Match, Atlanta Trial Is Told," *Washington Post*, 22 January, 1982, A7 and "Expert on Fibers Testifies in Atlanta Murder Trial," *The New York Times*, 20 January 1982, accessed July 23, 2013, http://www nytimes.com/1982/01/20/us/expert-on-fibers-testifies-in-atlanta-murder-trial html.

on these lobes than, say, in the middle. The problem is that these people that were trying to make this [unusually shaped] fiber couldn't get around DuPont's patent. They tried every way [but could never do it], so they just stopped their R&D.

The R&D had been started about ten years before that. They had made some small samples of carpet and dyed the carpet in ten colors. That [carpet] had been [test marketed in only] two or three southern states. [. . .] That green fiber had shown up in Wayne Williams's bedroom. It was ten years old. It was dirty. Carpet that cheaply made would probably have been thrown out many years before. Once they knew the manufacturer, the manufacturer said they sold that to someone, [. . .] I forget now who bought the fiber. The [color lines were] so much in green, and so much in brown, and so much in this. [Wellman, Inc.] knew from their [production records] how much they had made in this [variety of colors]. Then you could say, "All right, this is ten years old. How much of that's left?" They knew how much they had sold. How much of it is left? The probability of something like that, if you take, just as I said, 10 percent probability that this happened, that happened, and another happened, you're soon ten by ten, by a hundred, to a hundred to a thousand. I think there were six or seven fibers in [Williams's] bedroom. So the probability was like one in four billion. This was a rare ability to look at what you had. Four billion chances to one that this would not have come out of this guy's bedroom. So that made my day.

BOHNING: I can imagine. How did the spinnerets play into this?

PRATT: I wanted the spinnerets to show the jury what the spinneret was like. It so happened that they gave me an overhead projector that I could put the spinneret on, and I could see these cross-sectional [fiber] shapes just beautifully. I don't know why that particular projector worked [so] very well. I've tried a similar type projector other times, and it wouldn't work at all. I passed the [spinneret around to the jury] so they could see [the] small holes, and then I could show them [the differences between round fibers and trilobal fibers].

BOHNING: So the fiber shapes are a function of the hole in the spinneret?

PRATT: Yes. And you shape the hole to make the [fiber] come out a certain way. One of the DuPont carpet fibers actually has a hole going through it [lengthwise]. The polymer goes this way. But when the polymer is hardening it comes in like my fingers, like that, and there's a hole left in it. Nobody's ever [asked how DuPont does it]. Well, I don't know whether they do it or not now, because we got out of the fibers business. But anyway, the technology is there, and I know it was very carefully controlled. That was one thing.

Here are some more [newspaper] clippings: "Case is closed in Atlanta." "Did Williams slay 23 people?" I got in a lot of these trials. After this one happened, everybody wanted me to work on their cases. [. . .] [Two in particular], one in Illinois, [and] one in Canada.

BOHNING: Was DuPont supportive of you doing this?

PRATT: Not at the beginning.

BOHNING: DuPont's name is going along with you when you are at those trials.

PRATT: Right. But I tell you, I didn't get any clearance. I didn't [have to] get any clearance to go because when the prosecuting attorney called, he said, "Do you want to just come peaceably, or do we have to subpoena you?" And I said, "I'm from Delaware." He said, "That doesn't make any difference. Your company has offices in Atlanta. And therefore, we can get to you." So I just said well I would go ahead and do it because I have no choice, really. I called [an attorney at] DuPont. I said, "Mary Jo, I'm going to have to go to Atlanta, and I have to go very shortly. I've got to do a lot of work to get this thing done." This was going to be over the weekend, and I was going Sunday night. In the process [. . .] I guess she forgot to tell anybody in her management what was going on. On Monday morning [the story] hit the [Wilmington] press, [before DuPont top management learned about it].

I have, somewhere in all these papers, a [write-up] from the advertising and promotion people that said Pratt is already on the scene, the press is pushing to know more about it, but we are giving only his name and his age. They wouldn't tell them anything. But this [information] just went everywhere. I had people in our Geneva, [Switzerland] office that sent stuff over to me out of [their] newspaper. This was a big deal. It was a real big deal. It was just the way it happened. I could not do what I did then. I had psyched myself up to do this [. . .] the way I thought it should be done. [. . .]

BOHNING: Did you ever hear from upper people in the company saying that you did a great job?

PRATT: No. But you looked at all the publicity that it got, you know that it was okay. Let me see, that was another one. Let's see. Well, this is the *Evening Journal* newspaper, and "Case is closed in Atlanta." And down here it says, "Dupont fiber expert gave key testimony." Then in the "DuPont News" I didn't [fare] quite as well. But there is this. DuPont sent a person to interview me. Here I am sitting on my desk talking about whatever. It's so interesting, I just happened to see this. This is Bob [Robert] Forney.

BOHNING: Oh, okay.

PRATT: You know Bob Forney?

BOHNING: You mentioned him earlier.

PRATT: You can see him at CHF meetings and so forth. He's around. He does not look any different at all. I just thought it was interesting that the two of us should be on the same page. DuPont got plenty of publicity from this, and I think they were glad to be involved, after they got involved.

BOHNING: You didn't leave them much choice, did you?

PRATT: Well, the DA gave me no choice.

BOHNING: You'd have been there one way or the other.

PRATT: Yes. Either that or, if I wouldn't testify, they'd put me in jail until I did testify. He pretty much said that. But that was fun. That was fun while it lasted.

Once [I] got into that, I had [a number of such cases]. [. . .] I also participated in this one [in Delaware].[7] [. . .] This guy here was targeting prostitutes along Route 40, out of Wilmington. These women would be brutalized and left for dead. Through fiber [and other evidence]—I don't know what all the evidence [was that] they had on him now—he was convicted. He was not convicted the first go-round. But they went back over the evidence again, [. . .] went through the van where these women had been held or killed, and they found blood samples. DNA had just been started. They began to find that the blood of these women was in his van. One of the things that they considered in the courts at that time [was] could DNA evidence be admitted? Once it was admitted then [Pennell] could be tried. He had not been convicted in two murders, but he had a whole series of these women. [. . .]

I had called [the prosecutor], and I said, "I have some expertise in this kind of thing and if there's anything I can do to help you I will." So Kathleen [Jennings] said this would be great. I sat in on the trial, at least for the fiber evidence, and [clarified data for] the lawyers. I was sitting in with the lawyers. [. . .]

[7] State of Delaware v. Steven B. Pennell, 584 A.2d 513 (Del. Super., 1989).

BOHNING: What was her last name?

PRATT: Kathleen Jennings. She's still practicing law in Delaware. The newspapers all said about her that she could be a model the way she is. [The prosecution] had a mock-up of [Pennell's] van that he'd throw these women in. And they found blood inside the van and so forth. [The police] had women out patrolling Route 40 hoping that they could pick up [a John] or be picked up by [one]. [A particular woman detective] went out there and [when he stopped, she got in], and was able to [secretly snatch a small amount] of fiber out of [the] van. She couldn't [agree] to deal with the guy on the price, and so she got out. Of course, all around her were other [undercover agents] watching her. They weren't going to leave her out to fend for herself. I saw some of [the] photographs that Jennings [. . .] showed me. This guy was an electrician. He had taken vice grips on these [women's breasts] and just squeezed down. Oh, God, you know how much pain they were in before they died.

One of the key things that convicted this guy was that he was an electrician and he used electricians' tape [to bind the women]. It so happened, [the] tape that he used was one that was specially made for the electrical workers' union. And he was an electrical worker. When I was sitting in on [the trial, a witness for the prosecution] testified about the probability of this tape being found at a crime scene. It was very low. So all that stuff convicted him. [Even so] he was exonerated the first go-around for the first two women. [In a second trial, Pennell was convicted under] something called the Robinson Act. Let's see, how did he put it? If you [try] me and I am convicted, it's not because I was guilty but because [the court] found me guilty. I forget exactly what the wording was. In this case, this man argued that he had not done a killing, and he was not associated [with it, but if convicted, he expected to be exonerated]. This was something for his wife and his kids. He had two young teenage kids, and [a] wife, and apparently [Pennell was] a model citizen, except when he would [pick up prostitutes]. But that was what he did.

BOHNING: Interesting.

[END OF AUDIO, FILE 1.11]

BOHNING: [. . .] I want to talk about your work in history and your books tomorrow.

PRATT: Okay.

BOHNING: Shall we move on to the AATCC? You were very active in that for a long period.

PRATT: The reason I got active is that I did some work on textured polyester [knit fabrics]. Nobody knew how to dye and finish this [fabric]. It was totally new and different. A textured yarn is not just a single yarn. [. . .] If you put kinks [into the yarn] and heat set it, it keeps its configuration. If you untwist it, then it becomes very bulky. Yarn gets twisted and it's hot, and then you untwist it cold, and then it fluffs out. That was the whole polyester scene in the 1970s. They had leisure suits for men, and bellbottoms, and all that kind of stuff. It went the way of all flesh. But I did a lot of work in that field. I published a lot of [the data] that worked out. Some of it was excellent research, some of it not so hot.

How I got into the AATCC is that I had won an award from AATCC. I had never been a member of AATCC. I had won an award called the [American Dyestuff Reporter's] "Best Paper" Award for [1968]. The fellow I was working for said, "I think you ought to become a member of [AATCC]. It seems very odd that you're not a member of something and yet you can receive an award." But he was involved in the AATCC himself.

BOHNING: Who was this?

PRATT: Burt Faris. Now this is history, but I'll have to [tell] you this before I forget it. Burt had worked [on the Manhattan Project] under the stadium at the University of Chicago. He was at University of Chicago when all the work was going on there. He was a well-known, well-respected guy. When he retired, he gave me some of the books he had. One of the books that he gave me had a bookplate inside, and the bookplate said "Metallurgical Lab." [I had] often wondered if that [book] ever picked up any radiation. I never did know how to pick it up.

About three or four years ago, I got to know a fellow through [the] American Chemical Society who had access to that kind of equipment over at [DuPont] in Newark [Delaware]. And he said, "Bring the book over here, and we'll see." Sure enough, it took him a long time to find enough [radiation for detection], but he did find radiation on the top of the book, as you would expect. Nothing at the backside of the book, nothing at the bottom, but on the spine, he found some. I've said several times in talking, it's great to have a book that has radiation that came out of that lab in Chicago.

But Burt got me started in AATCC. And once I get involved in something, I'll probably stick with it as long as I can make some contributions. And so I did that. I got the Olney Medal [1993] which is the highest award AATCC gives. It's named for [Professor] Louis Olney who started AATCC in 1921. I've been very pleased with that.

But also, I was the first person to ever receive the other major award that AATCC gives, which is the [Harold] Chapin Award [1997].

Chapin was the secretary of the Association for ages and ages. At that time AATCC was headquartered [at Lowell Textile School, now known as Lowell Technological Institute, in Massachusetts]. Eventually [AATCC] moved out of Lowell Textile [and built one of the first labs in Research Triangle Park, North Carolina]. I was very pleased and honored also to have received the Chapin Award. Since then [Professor Warren S. Perkins] has also gotten [both] awards. [A lot] of very interesting people [have won the Olney Medal]. One [that every chemist] would know would be Herman Mark.[8] I'm very pleased to be among those to be honored by the organization.

BOHNING: There's some other familiar names here. Milton Harris.

PRATT: Milton Harris was a super guy. What year was that?

BOHNING: Nineteen sixty-five.

PRATT: Ernie [Ernest R.] Kaswell just died. He's the fellow that founded Fabric Research Laboratories in Boston. I'd gotten to know him really well, [but] I hadn't heard anything about him, and I called his home outside of Washington, and his wife had told me that he had died about two years ago. I was really sorry to hear that.

BOHNING: There's somebody by the first name of Bethlehem. I've never heard of that as a first name.

PRATT: Beth Andrews. She [is] a very sharp woman. She [is] an authority on synthetic resins on textiles. Also, she [is an authority on peroxygen compounds used] in textiles. She's a very sharp woman. She's retired now like so many people.

BOHNING: Even though this might be left until tomorrow, but since we're talking about AATCC, you did a lot on the history of that organization. You set up their archives. You wrote a history or edited a history.

[8] Herman Mark, interview by James J. Bohning and Jeffrey L. Sturchio at Polytechnic University, Brooklyn, New York, 3 February, 17 March, and 20 June 1986 (Philadelphia: Chemical Heritage Foundation, Oral History Transcript # 0030).

PRATT: Yes, here's the book right here. There's a copy of this [at CHF because AATCC presented it]. That's a long history of the history.

BOHNING: It's a great title [*Dyeing for a Living*].[9]

PRATT: I put that title on myself because I had used [it in an article I wrote], "Dyeing for a Living," from a man who had a dye house in Baltimore in the early 1800s.[10] [In] his ad in the Baltimore newspaper, I think it was 1806, he [headlined it], "Dyeing for a Living." But that's not unique at all. You find that play on words all over. Once you know it, it's just everywhere. [. . .]

BOHNING: You hired this author, is that correct?

PRATT: Yes, I was asked to find somebody to write this book. I looked all over to try to find somebody that was a reputable historian that could write such a book. I looked all over, and I just couldn't find anybody that wanted to be involved.

I thought Seymour Mauskopf would be great and he would love to do it, but he just didn't have the time to do it. Well, anyway he probably wanted to work on a larger project than that. I just couldn't find [anyone]. I was over at the University [of Delaware] one day talking to John Beer, who's [now retired in the chemistry department]. John said, "There's a young man who has just finished his PhD here at the university through the Hagley Program. He might be interested." Sure enough, he [had] finished his doctorate and in fact [. . .] he'd done some postdoc work. He was living in Newark, [Delaware] because his wife [was] a metallurgist [and she was working] in the field. He was living there, and he was looking for something to do. So I talked to Mark [Clark] about it, and he said he would like to do it.

He went down to North Carolina [to AATCC] and talked to all the people down there, and they agreed that he was very personable and would be a great guy to do this. They gave him a contract with some money up front because he didn't have enough money to live on just normally. The headquarters people said [to me], "Since you live in Delaware and he lives in Delaware, could you be an advisor to him?" I said, "Sure, I could do that." I really liked him. He was so outgoing. I set up a five-person editorial [board] of people I knew well to help in decision-making. They did a great job. Since Mark was not familiar with the textile trade at all, he just had to pick it up as he [went, and] he did a masterful job with this thing.

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[9] Mark Clark, *Dyeing for a Living: A History of the American Association of Textile Chemists and Colorists, 1921-1996*, ed. Herbert T. Pratt (Research Triangle Park, North Carolina: American Association of Textile Colorists and Chemists, 2001). This book is available in the Othmer Library: https://othmerlib.sciencehistory.org/record=b1041012~S6.

[10] Herbert T. Pratt, "Dyeing for a living," *Textile Chemist and Colorist* 22 (1990): 29.

However, one thing he did not like was detail. I knew that up front, but I didn't know how bad it was going [to get]. [. . .] In the first reporting period he missed his deadline. I was concerned about that. But then he missed it again, and again. [. . .] [Eventually he got] the first chapter done, but I don't think he had the second chapter. I couldn't get [him to move] forward. Undoubtedly, he had a classic case of writer's block. I was provoked with him that he wasn't doing this work [and I was catching a lot of flak from AATCC headquarters]. I felt that it wasn't that he couldn't do it; he just didn't want to do it. [However], in retrospect I [believe] it was backwards from that.

I know his wife came to my house and she talked [and cried, and] said, "I don't know. I can't do anything to get him off dead center." And I said, "We've advanced money for this which he has spent on the historical research to put this thing together." So then she said, "I just don't know what to do. Maybe I could get his father to help out." His father was a retired colonel in the army. [laughter]

His father came [from Texas, as I recall], and [. . .] in plain words said, "Get the lead out of your ass and get this thing going." Well, when his father got on him, he wrote non-stop, just beautifully written stuff. I started to say I couldn't have done it better myself, but really, I liked his style. I liked the way he wrote. It was sparse. He made his point. He did a great job with it. Eventually he got it done. He wrote the whole blooming [text] in just about two weeks or something like that. The thing that he did not want to do, and he told me right at the very beginning, "I don't do detailed work. It's not my forte." But this is detailed. These are the appendices that I wanted him to do. So about a third of this work I did myself.

BOHNING: That's all the lists of people, awards, and meetings, [etc.].

PRATT: You can just see, time and time again. I don't know how many tables and appendices there are, [thirty-four] or something like that, which I put together myself. And you check and double-check it. You know how you do that work.

BOHNING: You have all these names that you have to make sure are spelled correctly.

PRATT: Right, all of that.

BOHNING: That's a thankless task.

PRATT: It was a labor of love. I did write the preface [and the appendices]. Rightly so. As the editor, I should have had the preface in there. But he had written the author's

preface. So what I did was I edited his preface [and] put my name in, as doing a great part of the work. [laughter] I knew my name was going to be in there somewhere. Herb Pratt did this, that, and the other. I put that all in as if he had written it. But it's very well done. [. . .] He wrote it. The guy must be a genius to write something like this, and I'm a nitpicker. It was pretty good. [. . .] He was way off base on how we were going to incorporate all the test methods that we had, and it would go on to describe each one. It was just going to be a humongous amount of work. [. . .] I sat down with my editorial [board, all of them were excellent writers]. We decided what to do was to use three of the very early test methods as examples of how test methods are used. We put those in, and we changed all the stuff that [Mark] had put in. The book would have been [three inches] thick if we hadn't used that approach to it. It worked out very well. I was glad that we could get this done.

He talks about Sidney Edelstein in here.[11] "1979, Herbert T. Pratt of the DuPont Company, concerned that much of the history of dyeing was being lost in the rapidly changing industry, proposed that the Association establish a committee on History and Lore." It was [an archives committee that Sidney] had set up, but Sidney hadn't done anything on it in ten years, because [his business took most of his time]. But he still remained as the chairman. "In 1980, AATCC governing Council changed the name of the Archives Committee to History and Archives Committee . . ." So, that took care of that. ". . . and expanded this mission and appointed Pratt as chairman. Pratt was not able to whip up much interest in history during his initial five-year chairmanship, neither was his successor," who was Gary Mock from NC State. Then it talks about "I Remember When." [12]

BOHNING: Which is something you edited for how many years?

PRATT: Ten years. That was a lot of fun. I wanted to show you somewhere in here. I guess it's still in here. No, this might have gotten edited out. I don't think so. I think it's just as I wrote it. Here it is. "James J. Bohning of the Chemical Heritage Foundation was most helpful in his advice on conducting oral interviews."[13]

Here's what I wrote about myself in here. "On acknowledgments, first of all I thank Herbert T. Pratt, my editor. Herb oversaw this entire project from the initial contract through the final editing. He read all of my drafts carefully many times, simplified wording, standardized form and style, reorganized paragraphs, rewrote sections for accuracy, weighed comments from his editorial advisory board, suggested areas for additional research, compiled two-thirds of the appendices, proposed this title, and proved to be the very best judge of what could be left in or out. He is a man of many

[11] Sidney Edelstein, interview by Jeffrey L. Sturchio and Arnold Thackray at New Orleans, Louisiana and West Palm Beach, Florida, 31 August 1987 and 24 February 1988 (Philadelphia: Chemical Heritage Foundation, Oral History Transcript #0075).
[12] *Dyeing for a Living*, xi.
[13] *Dyeing for a Living*, xvi.

and varied talents and he was a real pleasure [to have worked with him].” That’s what I wrote about myself. [laughter] I thought I ought to have something in there.[14]

You know I had to have a heart bypass [. . .] and people down at headquarters were really beating on me to get this thing in print because they wanted [it] for the ninety-fifth anniversary. And here I am, recovering from heart surgery and I’d had a stroke.

BOHNING: I remember. We were supposed to go to the Library of Congress the next week.

PRATT: Yes, that’s right.

BOHNING: You went in to see your doctor and said, “I’ll see you next week, and we’ll go to Washington.”

PRATT: So my good wife helped me keep up the little lists of things that I had to do to finish [off the history]. And we sent that and the [discs] to headquarters, and they turned it into a book. [It] was great to be able to do that. I’m glad it was done because the textile business has totally changed since [the book was published]. [The] textile business has [mostly] moved overseas and what little is left is [moving]. [All] the major textile mills are all gone.

[END OF AUDIO, FILE 1.12]

PRATT: [. . .] We had about five thousand textile employees when I was working with Fieldcrest. Most of those were in Eden, a few of them were in Virginia, and a few in Chicago, but five thousand employees. Every one of those mills today is abandoned. There’s nothing there. A little cotton mill down across the canal has closed its doors. Where this cotton mill was is where the [first carbide and acetylene plant was built in 1892].

BOHNING: In Spray?

PRATT: Spray, right. You didn’t go to the ACS Landmarks designation ceremony?

[14] *Dyeing for a Living*, xiv.

BOHNING: No. I wasn't there.

PRATT: That was a great occasion [because] I'd worked on that project for ages. When I first moved to Wilmington [in 1949], I all of a sudden had the opportunity to find good libraries to work [in]. The culmination was two things. First of all, I published an article about it in the Rockingham County, North Carolina history.[15] And then we did the Chemical Landmark program there. That went very well because I did my homework. [. . .] I managed to get the granddaughter of one of the men that was involved [to help]. So that worked out very well.

BOHNING: What's happening to the AATCC now? If everything in the industry has changed, what's happened to this group?

PRATT: It's been sort of interesting. About ten years ago, [or] a little further back, AATCC had just about ten thousand members, minus maybe two hundred. It began to go downhill, downhill, downhill. I [made] a graph [which I kept calling to] the attention of people in the council. [. . .] "If we don't do something we're going to be out of business in a hurry, because of steep curves like this."

[The graph] didn't get much attention until [it] got down to around six thousand members. [The Council] hired a woman to try to stabilize the membership, [. . .] [and in fact it began to grow a bit]. Then it became obvious [to the Council] with the textile business going overseas that something had to happen. We changed the name of the journal from *Textile Chemists & Colorists* to *AATCC Review*, [which is] nondescript. We never had advertising in the journal, but it was drifting away from a good [peer-reviewed] journal to something that's going to be mediocre. The membership kept dropping, but then [we] began to pick up membership [from] overseas. We now have a chapter in India. We are probably working on one now in China. [. . .] [AATCC is] already sending [staff] people over there to get test methods started in China and in India, being translated from our yearbook with all these test methods in it to the languages where the textile business is now.

So, AATCC has a staff stabilized pretty much at around twenty-five members. That seems to be stable. They've added another salesperson, [. . .] but I don't know whether [the organization is] going to make it or not. What's going to happen will be that the headquarters is in Raleigh, North Carolina, and the people that are going to be the leaders [of AATCC] are going to be in India and China. I don't know whether AATCC will survive in this country. [The Board of Directors has changed the name from] American Association of Textile Chemists & Colorists. Now it's [the nondescript] AATCC. That's it. It doesn't mean anything.

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[15] Herbert T. Pratt, "The History of Wilson Aluminum Company, Spray, North Carolina (1891-1986)," *Journal of Rockingham County History and Genealogy* 17 (1992): 1-26.

BOHNING: Like 3M [Co.].

PRATT: Like 3M, right. So I don't know what will happen. But I think the council members are doing a very good job because the [organization] is turning around. We had a competitive magazine called *American Dyestuff Reporter* that had been around for ages, way back to [1917].

BOHNING: Is that one that Williams Haynes started? He started a bunch of magazines including *Chemical Week*.

PRATT: I don't think so, but it's possible he might have been involved. But the last of that sort is *American Dyestuff Reporter*. It's like a one-man job. A fellow named Herb Stouderman, a fine man. AATCC bought him out. He and his wife had run this magazine for a long while, and then he retired. One day I just happened to think about Herb. I had been very close to him over the years when I was doing all this textured polyester [development] because he was another outlet for me to get published. So I got to know him pretty well.

I realized one day that he was not going to be around much longer, and he might just get rid of his business. I thought it'd be later, but it turned out to be sooner. I'd sent him [short] a note about the fact that I really appreciated how much he had done for the industry, just gave a little short note. And he sent me back a handwritten note. I just happened to run across it the other day. "Talk about making a fellow's day." That's how it started off. Because what happens is you find old people like me, not you, but me. When you get old and you're no longer productive in [R&D], you're out of the mainstream. I've seen that happen so many times with people that tried to be consultants [for] DuPont. In two years, they're obsolete. There's nothing for them to do. So if I'm dabbling in history, I can continue to dabble with history. [. . .]

BOHNING: That's great.

PRATT: In this "I Remember When" column, Jim, it was so fascinating. I started to write these articles myself. Some of them were just little short things, some of them about half a page, and sometimes a page, but that was sort of it. But it became extremely popular. I remember being at a trade show one time, and the guy manning a booth called me over. He said, "You're the guy that does the 'I Remember When.' I want you to know that your column and the want ads for jobs is the only thing that I read." I suspect that was true.

BOHNING: It's like *C&E News*. You first look for Ken Reese's column at the back.

PRATT: Absolutely. I still do that even though Reese is gone.

BOHNING: It's not the same either.

PRATT: No, it's not.

BOHNING: Not at all.

PRATT: But life does pass one by. I found that these older men [have] been long retired and they didn't have anything to publish. You know they would love to publish but life [has] passed them by. I remember there was a guy that had been at DuPont, a well-known fellow named Osborn Bacon. He was in this category. He was way over age in grade you might say, but he tried to publish a paper or two, [but] the editorial board of *Textile Chemists & Colorists* would just [reject his submissions and] tell him there's no point in doing [research on] that anymore. He was very bitter. He just felt that DuPont had let him down and AATCC had let him down. I don't know whether I initiated the dialogue between the two of us, but he was a bitter old man. So I got him to write me a column which he did reluctantly. After he got onto it, talking about history, and about himself primarily, you couldn't shut him up. But this happened in so many cases where people need to have some way to vent their spleen, to be able to say something when you don't have anything to say. And you can do that with history.

I've always tried to explain to people that when you do history like this, oral history or "I Remember When" [articles], it doesn't really make any difference. You want it to be correct, but at the same time you've got to write it the way you remember it, otherwise it's not honest. I think that's worked out well for me, and I think for a lot of [other people] too. I hated to see the "I Remember When" articles stop, but it was difficult to find people to write them, and I had written a lot of them and I was writing more of them, and I finally decided ten years is enough. Here's a little book of the articles.[16]

BOHNING: I didn't know you put them together.

[16] Pratt, ed., *I Remember When: Anecdotes from the Textile Dyeing and Finishing Trades* (Research Triangle Park, North Carolina: American Association of Textile Colorists and Chemists, 1996). This book is available in the Othmer Library: https://othmerlib.sciencehistory.org/record=b1051281~S6.

PRATT: I did all of the ones that we had at the time. That was in 1996. I think there is probably about three or four years more than that. I wish somebody would pick that up again. But the industry is so [nearly] gone we'd have to get somebody that [can] remember what dyeing and finishing [were] like in China or India.

BOHNING: That probably has an old history too.

PRATT: Oh, yes. I'm sure it does. Because you know in biblical literature which I have [studied] for a long time, there's all sorts of subjects like in dyeing, the purple stuff . . .

BOHNING: That was Sidney's thing wasn't it, the old purple dye?

PRATT: Right.

BOHNING: Well, they're closing up shop here, and we've been going six-and-a-half hours. I think we've pretty well covered the AATCC. Tomorrow we'll start with a little bit of your history work and talk about books.

PRATT: [What] do you want to do about these books? I have four thousand books in my basement or thereabouts.

BOHNING: I'm not sure. I have a couple of basic questions I want to ask. I'll try to prompt you with some questions. You aren't going to have trouble talking about it, that's for sure. Since we're doing this for [the] Bolton Society, we want to get some sense of your collection. How you collected it, how you got started . . .

PRATT: What it contains and so forth.

BOHNING: Right.

PRATT: I can do that easily enough.

BOHNING: But I didn't want to just do that. That's why I said I wanted to spend a day with you talking about your career because that's bits and pieces of it too. You can't really separate the two.

PRATT: No, you can't.

BOHNING: Just as with Roy Neville, I couldn't separate the two either. So I did two days with him.[17]

PRATT: Someplace I have a paper here. Let me just read you what I said. This is a biographical sketch I had written. I was talking about my parents. I said, "My parents were middle-class and had more niceties than most. They owned their own home, an automobile, a radio. They were honest, hardworking, and thrifty, not racists, highly valued education, and were staunch members of the Republican Party." That's unusual. I don't think there were but three or four people that I knew when I was in grade school, anyway, that their parents were Republicans. I remember a kid one time, I had on an Alf Landon sunflower button, and he jerked it off, and I mean stomped it. And he and I got into a fight.

Anyway, I said, "They were [straitlaced] (no cursing, smoking, drinking, or card playing, gambling, dancing, or chicken fighting). These were all amusements where I was growing up. They tithed their income such as it was. My mother in particular cared about the downtrodden and loved children of all stripes. My dad loved the outdoors, gardening and hunting with friends." But then I put this in. "My mother enjoyed reading, particularly her Bible. She read to me constantly, so I learned to love and respect books at a very early age. A very large [glass-doored bookcase] was my center of attraction, such as books by Horatio Alger, *Compton's Pictured Encyclopedia*," I mentioned that earlier, "*The Wonder Book of Knowledge*, History of North Carolina, and a 1910 book on the history of the white slave trade."[18] I've often wondered about that. Now why would my mother, strait-laced as she was, allow that book? She knew it was there. Then I said, "I was a child of the Great Depression." Well, this is all stuff I told you earlier.

Books have always been part of my life. I mentioned that my uncle had given me [an obsolete] set of Audel's Electrical Guides. I didn't have many books, but I had those kinds of books. But what really triggered this [interest came] when I was in college. I was [walking] with my roommate, [past this elderly] man's house and he called us over. And he said, "Fellows, I'm giving up housekeeping. I have a lot of books here. If you'd like to have them, take as many as you want." So we went in. I remember I [took] a book on Abraham Lincoln [written while he was still living]. Then I [took a chemistry] book from 1896 or something like that, and I can't remember the guy's name now. I took that

[17] Roy G. Neville, interview by James J. Bohning at Pebble Beach, California, 20 and 21 June 2005 (Philadelphia: Chemical Heritage Foundation, Oral History Transcript # 0317).
[18] *Compton's Pictured Encyclopedia*, 1935; Henry Chase Hill, ed., *The Wonder Book of Knowledge* (Philadelphia: The John C. Winston Co., 1921). *The Wonder Book of Knowledge* is available in the Othmer Library: https://othmerlib.sciencehistory.org/record=b1055443~S6.

chemistry book. It seemed ancient because this was only 1944 or 1945. I've never looked back on buying books since then.

BOHNING: On that note, we'll pick up from there tomorrow. Thank you for spending the afternoon with me.

PRATT: Oh, it was so much fun.

[END OF AUDIO, FILE 1.13]

[END OF INTERVIEW]

INTERVIEWEE: **Herbert T. Pratt**

INTERVIEWER: **James J. Bohning**

ALSO PRESENT: **Steve Beare**

LOCATION: **New Castle, Delaware**

DATE: **14 June 2006**

BOHNING: We spent six-and-a-half hours yesterday talking about Herb's career with DuPont and other things. Today we want to talk about your book collecting and try and emphasize that, and if we have time we can talk a little bit about what you've done in the history of chemistry as well. Yesterday you described how your parents had books, and you described the bookcase in your house. You also told me about the man who stopped you and your friend on the street and said that you can have any of [his] books you [wanted]. When did you first realize that you were really collecting books? What was the first book you bought as part of a real collection?

PRATT: The first book was a technical book. I bought it in North Carolina at a junk furniture store in 1940 or 1941. The book happened to be on dentistry. It was from the 1870s or 1880s. It had a lot of plates in it. I was talking to a man on an airplane once. He was from the University of Pennsylvania Dental School. I was telling him about this book, and you could tell he was just salivating for it. I told him I would send it to him which I did. I never heard from him after that. [laughter]

BOHNING: That's terrible.

PRATT: Well, that's what happens to people.

BOHNING: Bill [William B.] Jensen once told me that at one point in his collecting he would go to furniture stores to look for books because they always had bookcases in their displays, and they just threw anything up there. They didn't care about the books. They were just there for looks. He said he found a number of great books in these furniture stores. "I'd just say, 'Can I buy this one?'" and they'd say, "Sure." And he'd give them a few bucks, and they'd give him the book.

BEARE: Tell Jim about Clements Antiques.

PRATT: Clements Antiques. Goodness. Before that, there is Joe Lynch. Joe Lynch and I have been collecting books for a while. He collects wine books. He was traveling a lot. He had a degree in chemistry. We would look for each other to find books. As I was telling Jim yesterday, people would fan out from Wilmington to wherever the textile mills were. We'd leave on Sunday night or Monday night and be gone all week. We'd usually end up in godforsaken places in the little mill towns. There was really nothing to do, and we'd eat steak every night. [Every town] would have a little steak house. People didn't eat steak very often, I would imagine, but we had a steak, a potato, and a salad. You could really get to the point where you despised steak after a while. [laughter]

Driving along you would find places in North Carolina with little junk shops, and you'd pull in and take a rest and see what kind of books they had. That just became a habit. I used to go to Greenville, South Carolina an awful lot. This was in the very early days of Dacron. There was a woman there that had a little nice bookstore on the main street in Greenville. She had a collection of old books. I don't know how far they went back or how far they went this way. I was looking for chemistry books. They were in the 1800s, in that era. She'd sell them to me for a dollar or two, never more than five dollars, I'm sure. Most of them were used. They were leather, and the bindings were dry and powdery, but I'm a "content" person, not the "nicety" part of it [namely, fine bindings].

I was telling Elsa [Atson] yesterday that Ron [Ronald K.] Smeltzer wants everything pristine. He wants a book to look like it just came out of the bindery. I'd rather have worn, beat up books, something that shows the fact that somebody opened them up sometime. It doesn't bother me for them to be beat up. Going back to Greenville, this woman had a store, and I could never remember her name. I was telling Joe about her. He would go in the store, and he would find something that interested him in wine books. She was a sort of a gourmet cook or something. Neither of us could ever remember her name so we'd just start calling her "sweetie." Not to her face, but "This sweetie in Greenville." That's how we knew her. We had lunch just last week and he said, "Do you remember sweetie?"

But anyway, we went to lots of [. . .] these godforsaken places. We went down to Noah's Ark. Noah's Ark was a place in Abbeville, South Carolina. I used to go to Abbeville before I ever knew about that bookstore. I don't know who told me about it. It primarily was furniture and antiques and this kind of thing. But they had a lot of books, books by the yard you might say, books that nobody really wanted. So I would go in there and just load up. The best thing I ever bought—at a dollar a volume—was [a nineteen volume] set of *Encyclopaedia Britannica,* 1798. Later on, I found a [three] volume addendum to that. In fact, I knew about the addenda before I knew about the books. I wondered what in the world this was and then I saw the big volumes and I realized what they were. These books were 1798.[19]

[19] It seems that Pratt is referring to "the first American edition" of the *Encyclopaedia*—Tomas Dobson, ed. *Encyclopaedia; or, A Dictionary of the Arts, Sciences, and Miscellaneous Literature* (Philadelphia: Printed by Thomas Dobson, 1798)—and Dobson's *Supplement to the Encyclopaedia; or, a Dictionary of Arts, Sciences, and Miscellaneous Literature* (Philadelphia: Printed by Budd and Bartram for Thomas Dobson). It is uncertain how many of the nineteen volumes Pratt references were *Encyclopaedia* volumes and how

BEARE: The supplement was 1803.

PRATT: See, he knows the books better than I do. I lugged those things home [on the plane]. These volumes are big, and they're heavy. I'd maybe get four volumes [at a time]. This is an overhead rack before you had the [overhead] doors.

BEARE: So you'd get [them] over a period of time.

PRATT: Yes. I brought them home, a few at a time. Whenever I'd go down to the Greenville area, I'd pick up some of those books and bring them back. I have them all, and they're fascinating to read. I can hardly read them anymore because it's very, very small type, but there are lots of nice plates in them. They're fascinating from a standpoint of what's in them. Mary was teaching. I guess I mentioned yesterday she was a science teacher and started with chemistry. I'm interested in the idea of the Holy Spirit, the whole concept of that. But in this encyclopedia, it was not the Holy Spirit; it was Holy Ghost. So you begin to look and cross-reference and so forth, and you learned something about ghosts. [There] was a long treatise about ghosts. It tells you about ghosts. A ghost will not appear in your bedroom unless you're on the right-hand side of the bed or something like that. I forget. There's a protocol of how you deal with a ghost. I don't know who wrote these things, but they were real [to] the people that read them and wrote them. [They] believed this, obviously.

Mary used to take these to the school, and she would read this stuff out to the kids. And she'd say, "Look, you can't believe everything that you read in an encyclopedia." So this was what she would do with the ghosts. We've had a lot of fun but haven't used the encyclopedias very much. There's one thing about the encyclopedias. As far as I know they're in pristine condition except for the fact that there was one set of plates that were missing. I said set. I don't know if it was a set or whether it was just one or two. They were plans for a house. So somebody wanted them. Apparently, it was a pretty good set of drawings to go with the text. So we had the text but not the plates. So that was fun.

BOHNING: You made an interesting comment, and what you just described reinforces that. You are a content person rather than having the book because it's one of a kind or whatever. Ronald [Smeltzer] told me one time that he overspent his book budget for

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many were supplement volumes. It is also unclear whether Pratt acquired the supplements published between 1800 and 1803 or the second printing from 1818. The Donald F. And Mildred Topp Othmer Library has processed the book collection that Pratt donated to the Chemical Heritage Foundation. The 1818 printing is available in the Othmer Library: https://othmerlib.sciencehistory.org/record=b1075919~S6.

January of last year. For one month he overspent his book budget. He spent twenty-five thousand dollars.

PRATT: Oh, man. [. . .]

PRATT: Since we're on this subject, I'm going to run down and I'm going to bring a book up because I think I told you about this book yesterday.

[Recording paused]

I'll have to tell you about this book because in a sense it's the most interesting book I have. I was up in the northeast corner of Connecticut. For a while, I would have to go for assorted reasons. There's still a [textile dyeing] business all through Connecticut. I was, of course, looking and I went to a little place called the Book Barn. It was a relatively modern building but small. It was painted red and had [vertical] strips you know over the [cracks between the] weather boarding.

I wandered into this place just looking, and in a corner of the room there was a [waist-high pile] of books. The [owner] was culling his collection, [and] he was just tossing them. They went out into the middle of the floor, just way out. Maybe a thousand books. I don't know. He said, "If there's anything you want, take it, because I'm taking all these to the dump."

BEARE: Wow.

PRATT: So I picked up this book. [It's bound with cowhide and] you can see this book has had a lot of wear. I have carried it around. It's not in as good shape as it was. This book is leather, and you can see how worn it is. And notice the spine.

BEARE: It's been re-spined.

PRATT: Yes, they [had] put a new spine on it. When I got it, some of the spine was [still] on it. But in moving it around, and carrying it around to talks, it's [gotten beat up]. Well, let's see. You can see there are names written all through here. This is a physics book, [or] a natural philosophy book.[20]

[20] William Enfield, *Institutes of Natural Philosophy, Theoretical and Experimental* (London: Printed for J. Johnson, 1785). This book is available in the Othmer Library: https://othmerlib.sciencehistory.org/record=b1083376~S6.

This is just something that I'd [written for Delaware Bibliophiles] and I'd forgotten about it. It's [titled] "On Finding a Worthless Treasure." That was the title I did on this thing. But when you go through this thing, you find names all through it. Now I can find my notes. I said:

> "This book was literally worn out. The calf bindings were worm eaten. The edges of the boards were totally worn away," as you can see. "The feathered corners of boards are rounded by wear to a one-inch radius," like that. "The original spine, worn through ages ago, had been crudely covered with cowhide. And the new spine also was worn out, about a third of its length was missing," and now it's all missing. "One hinge was totally loose and the other holding on by half its length. Although the signatures were shaken, and a few pages were loose, nothing was missing from the text. I've always been interested in who owned a book before I got it, and what they accomplished, etc., etc. But what attracted me to this battered specimen of the printers and binders art, was its treasure trove of names. Written on the inside covers and end-papers were eleven signatures, some appearing more than once. Two annotations, "Yale College" and "1799" were dead giveaways that these were signatures of students and I immediately began to wonder what happened to them after college. Yale alumni records quickly showed that nine of the eleven had graduated between 1797 and 1818. There was no mention of the other two. I have never taken time to trace them all, or to put flesh on their bones, but here are two. Henry [Wabaugh] Baldwin, born in New Haven [Connecticut] in 1780, graduated in 1797 and became a lawyer. From 1815 to 1823, he was a member of the United States Representatives for Pennsylvania. In 1830, he was appointed by President Andrew Jackson as Associate Justice of the U.S. Supreme Court under Chief Justice John Marshall and served on the Court until his death in 1844. He was honored by Yale with an LLD in 1830. One important court decision in which he participated was "Barron vs. Baltimore" in 1833 which held that the Bill of Rights limits only the powers of the federal government and not those of state governments.[21] Edwin Dwight, 1780 to 1849, graduated in 1799 and then studied law with Congressman Fisher Ames, 1755-1808. Dwight also founded the towns of Chicopee Falls and Holyoke, Massachusetts, and was a founder of the American Antiquarian Society, and was president of the Western Railway which connected Wooster, Massachusetts, and Albany, New York. As I recall reading someplace, but can't verify it at the moment, Dwight was responsible for the passage of the Free School Law in Massachusetts. This old physics book was used and passed on and reused for no telling how long before it became outdated and was replaced by one that was more up to date. Yet someone thought enough of it to

[21] Barron v. Baltimore, 32 U.S. (7 Pet.) 243 (1833).

> keep it, perhaps as an heirloom and now I have it, and often say that, "It is a book that has shaped minds that shaped America."[22]

BOHNING: [. . .] It's an interesting comment. I once said what you said, in the reverse to our special collections curator. I picked up this book and it had somebody's signature in it. I was just sort of saying it in a negative way, and he said, "I wish that everybody who ever owned the book had signed their name to it." That's what you just said.

PRATT: Yes.

BEARE: Isn't it interesting that these people went on to all different fields and yet they studied [natural philosophy].

PRATT: Right. Here [is] something that was written in here which I copied out. It said, ["William S. Hersell's property"] and under that it says, ["Newton Skinner."] I haven't looked at this for a long time.

BOHNING: Was there any chemistry in there? It says natural philosophy.

PRATT: I think it's more physics than anything else, but you know we can look and see.

BOHNING: It looks like it was used in a lab.

PRATT: Incidentally, these little plates are glued in here. What [the binder did was to cut out the printed] plates and then they glued them in [to the margins of the text].

BEARE: That's interesting.

PRATT: Yes, you can feel them. Just look through it.

BEARE: I think it's interesting this book was used so long after it was published.

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[22] Pratt, "On Finding a Worthless Treasure," *The Delaware Bibliophile's Endpapers*, September 1992, p. 3.

PRATT: Yes.

BOHNING: What was the date on it?

PRATT: Seventeen ninety-three.

BOHNING: It does say "theoretical and experimental," so I wonder if they did any experiments.

PRATT: It'd be interesting to see. I don't know. That's just a tangent to maybe explore some other time. If somebody really got interested, they could do a small amount of work for a small paper or something for a thesis. It would be ideal because you could learn history like crazy from finding out who these names were. I thought I had more of these names covered. I was up at Yale one time, but I don't think I remembered as much as I thought I did about it.

But here's [another entry] I found. Somebody named N. Skinner, December 2, 1806. "I rode to Hartford in a chase, and saw people making cider at two mills in Windsor [Connecticut]. N. Skinner." All of a sudden, when you see these books, you see that [they] were live people, flesh and bone people, that pored over these books. They obviously were not very wealthy people because they would have had their own copy of the book. But they passed them on, as students do now.

BOHNING: [For] all those people—I think you said eleven—the text part is in remarkably good shape.

PRATT: It is. Well, they took care of the books. And the paper then was obviously acid-free.

BEARE: It really is unusual to see that many signatures in a textbook.

PRATT: Yes.

BEARE: Usually you see one, maybe two.

PRATT: This book had a lot of hard use, and yet it's [still] quite useful.

BOHNING: Fascinating. Look at this plate.

PRATT: Yes.

BEARE: Yeah, it's interesting. I've not seen this edition. The one I've seen has copper plates bound in.

BOHNING: Would that be later than this?

BEARE: Later. I've never seen that before where they pasted the plates in.

BOHNING: There's an insert somewhere back here.

BEARE: You know what I think they did? This probably had the copper plates with all the figures at the back or something like that, and somebody, one of the owners, cut and pasted them.

PRATT: That's probably what they did.

BEARE: Because it's really interesting.

PRATT: It's covered up with something.

BEARE: But it's a very practical thing.

PRATT: There are other names in this somewhere. This [note] says, "Rollin Dickinson of Southington, and Marilla [something] of Berlin"—got to be Connecticut—"are engaged for marriage," or something like that.

BEARE: That's really interesting. I can see why you treasure it.

PRATT: It says a lot about people and people's love of books, and the amount of money involved [when] people could not buy books.

[END OF AUDIO, FILE 2.1]

PRATT: That was an interlude, Jim.

BOHNING: Have you cataloged your books? You said, yesterday you had something like five thousand.

PRATT: Yes, Mary has cataloged them. She's my cataloger. Over there, the second shelf up, you see these stacks of binders.

BOHNING: Make I take one out?

PRATT: Yes, just grab one.

BOHNING: Actually, let's get "E."

PRATT: "E?"

BOHNING: Yes, let's see what you have on your Enfield book.

PRATT: I don't have a copy of it. I don't have anything on it. There's an awful lot of books I don't have [cataloged], like those encyclopedias. I've never put anything about those in there.

BOHNING: So you indicate where it came from or how you got it, and then it looks like you made some notes about the author.

PRATT: When I started this [catalog], about all I had was the title, and the publisher, how much I paid for it, and where I bought it. But some of these are a little bit better.

BOHNING: You don't have it on a computer.

PRATT: Yes, it's on the computer. Mary did all of that.

BOHNING: Oh, it is on the computer.

PRATT: Oh yes.

BOHNING: Have you ever printed out a copy?

PRATT: Yes, just recently. We have an older Mac computer, but I don't really pay much attention to the thing. After my stroke, a lot of my memory just went. I've had to regain it one way or another.

BOHNING: You did very well yesterday, believe me. [laughter]

PRATT: Considering where I started from five-and-a-half years ago, it is remarkable.

BOHNING: I just wonder how many members of the Bolton Society have a catalog of their books?

PRATT: That's really a good point.

BOHNING: Our [Bolton Society] directory sort of says how many volumes are in a collection but that's about all we say. It might be interesting to get a copy of anybody who has cataloged their books.

BEARE: I'd say except for the Smeltzer collection, none. [laughter]

PRATT: You have to remember that Steve's wife says that Steve really doesn't know he has any books. What he has are the cards.

BEARE: Index cards, 3" by 5".

PRATT: He's always working with the index cards, and she said if she moved all the books out of the house that he wouldn't know it.

BEARE: As long as I had my cards [laughter].

BOHNING: I recently started to try and catalog mine.

PRATT: It's a pain.

BOHNING: I set up my own database, and then I went looking to see if there's stuff out there, and I found one, but I could tell they used the same software I did—Filemaker. It was very similar to what I had put in—the fields and everything. It was produced by the husband of the owner of the local rare bookstore in Bethlehem, [Pennsylvania], which I go to often enough that they give me a volume discount every time I go there. But now they're telling me they're selling more books off the internet than the walk-in traffic.

PRATT: I think it won't be too much longer until you won't have book catalogs at all. Book prices have gone up. Jim Presgraves, whom you know, is the guy who speaks with a good southern accent. He's had a place, Bookworm & Silverfish, in southwestern Virginia.

BEARE: Wytheville, [Virginia].

PRATT: Wytheville, yes. Do you still get his catalogs?

BEARE: Only through you.

PRATT: His prices have just gone up, up, up, and I think they're overpriced. But it's interesting what people do. There's a fellow in New York State used to send me a catalog with fine type. He sold books having to do with chemistry and physics. It could be modern or all the way back. Most of the times the oldest book you'd find would be like maybe 1930. He didn't fool with anything that was much earlier than that. But it was an interesting thing. He would have at least a thousand entries in his catalog. Every price in there was like twenty-five dollars and fifty cents, or sixty-five dollars and fifty cents. Everything had fifty cents added onto it. Nobody's going to be excited over adding fifty

cents to the price of a book. But then you have a catalog of a thousand books, fifty cents adds up after a while. Book dealers are one of a kind. With the internet and e-Bay and all that, I think we'll have a totally different ball game.

BOHNING: Well Steve's an example of that, right, aren't you?

BEARE: Actually, I had some ads on e-Bay this week, a dozen books, or so. And an optician's trial lens set.

PRATT: Optician's trial lens set?

BEARE: Right.

PRATT: Goodness. Well, if you want to start fitting glasses.

BEARE: No, I'm selling it.

PRATT: Oh, you're selling it, okay. A lot of these dealers I got to know in New York [New York] in the 1950s. They were one of a kind. The Book Row of America, did you ever go to the Book Row of America?

BOHNING: I lived in New York for three years, but I was doing graduate work and had no time or money to do things like that.

PRATT: As long as I had an hour or two to kill, I would almost know how long it would take me to get to Penn Station by walking.

BEARE: You had it timed.

PRATT: Yes, right. There were some marvelous people from about Ninth Street up through Fourteenth Street, and beyond, but I usually stayed between Ninth and Fourteenth.

BOHNING: On what avenue?

PRATT: Between Fifth and Broadway.

BOHNING: Okay.

PRATT: Broadway sort of cuts across, but it was roughly in that area. And the people there, each one of them was a character. I remember a few. There was one guy. I don't remember his name, but he had a book lover's paradise. The building was a high-ceilinged place, and they had [rolling] ladders. You had these ladders that you used to see in old stores, and it'd have a track.

BEARE: They let you climb the ladder?

PRATT: Oh, yes. You'd go up the top and take [anything] down. It was just packed, just absolutely jammed packed full of stuff. I mean on the floors, everywhere. There was virtually no order to it. But the guy knew what he had.

[Recording paused]

This guy would know what he had. I would come in the front door and [even] if I hadn't been there for six months, he would race from way in the back, [and shout, "Chemistry!"]

BEARE: He knew you.

PRATT: He knew who I was. And he knew where to look for stuff. He would say, "Go up here in this general area, and here you'll find it in this area."

BOHNING: If you had a specific title, you were looking for, would he have known where it was?

PRATT: Yes, he might have. In other words, there may be a 50 percent chance that he would know. But there was another store. It was called Dauber & Pine, and Dauber & Pine was on Fifth Avenue between Thirteenth and Fourteenth Streets or maybe between, maybe Twelfth and Thirteenth, I don't remember. The New School [for] Social Research

eventually bought all that land and I guess it went. You'd go in this store, and it was very deceptive in a sense because you'd walk in and it was a little tiny building, just a little building. There were two partners, Dauber and Pine. I never knew Mr. Pine. He was always the front man, and he would be up at the desk. But it was little place, probably not as large as this room. Up here you had all the [expensive stuff, behind] glass doors and everything, and he knew where everything was. But when you go down sort of a flight of stairs, there [Murray] Dauber had sway over everything that was in there.

It was a cavernous place. It went out under the street. It went from one building to another. It was really a rabbit warren down there of books. Some of these [areas] didn't have lights, so he would give you a flashlight. [laughter] You'd go down and look. He was such a nice man. I enjoyed going [there]. He had a pretty good idea of the books he had, and he had little bit of everything. I remember, once he was having a sale of books [written by the] theologian [Karl Paul Reinhold Niebuhr]. [. . .] I bought one [and] I gave it to a friend of mine. He sometimes had just really great stuff. He would put aside stuff for me. I would go in and he would say, "I've got stuff behind the case [for you]." In other words, he had a big glass-doored bookcase, floor to ceiling.

These two men [and their fathers before them] had had that bookstore earlier. So it had been a fixture in New York City for ages. When the New School was going to tear down the building and these men were being evicted (they were both elderly), there was an outcry. "You cannot tear down Dauber & Pine." So that stayed there until both men died or retired. But they were just gems. I didn't know Pine, but I knew Dauber pretty well. In fact, after Alison, my daughter [moved] to New York, I said, "Go down and get to know Murray Dauber." She wasn't that much impressed by Dauber.

BEARE: I met him. You introduced me to him, and he was a nice fellow. He was old at the time I met him. You also introduced me to Sam Orlinik.

PRATT: Orlinik. That was the guy, Sam Orlinik. I found him on Ninth Street. It was interesting. I don't remember, on the block between Fifth Avenue and whatever it was. During the 1960s when the students were raising hell all over about things, there was a row of houses in there that somebody bombed. The fronts just collapsed. I don't remember how many houses it was. They put them back, but not quite the same. They were 1830s houses. I would always know where to find Orlinik because he was just across the street, and up on the fifth floor. There were other bookstores in that building but Orlinik was special. The man had glasses that were this thick. His eyes were little, tiny when you'd look at him through these thick glasses. He and his wife owned this little store.

He was afraid, I guess, of being robbed or whatever, because he had a peephole, and he would look to see who was there. If he didn't know you, you couldn't get in. He would see me, and he'd open the door and let me in. He specialized in two things. One

was music and the other was science. I had a pretty good relationship with him. Steve went to an auction [there].

BEARE: After he died, Swan Galleries auctioned off at first the better stuff which they put it in their auctions. I didn't know about that. Then they had a public auction, and I went up and bought a car full of books.

PRATT: The springs were dragging.

BEARE: I had to rent a car because my coil spring broke the day before. I had to rent a car and I was late to the preview. I think they had already started the auction by the time I picked up the car and got up there. But I still came back with a car full. I had to leave some stuff too.

PRATT: Oh, that's right. I can remember a couple of things about Orlinik. Did I tell you yesterday about the guy you were working [with]?

BOHNING: [Denis] Duveen.

PRATT: Duveen, yes. Mr. Orlinik was talking to the woman that had replaced his wife after she had died, and so I overheard the conversation. The woman was asking about one of the debts that they apparently could not collect from Duveen. Jim has a whole background on Duveen. I heard him tell this woman, "Don't worry about that because we're never going to collect that." I might have paraphrased a little bit, but the thing was that Duveen had given or sold books to both [University of] Wisconsin and Cornell [University] and yet he would not pay his bills. That just bothered me. I don't know that much about him.

BOHNING: He didn't give the collections. He sold them.

PRATT: Yes, he sold them, okay.

BOHNING: The intriguing thing is that Aaron [J.] Ihde wrote about the one that Wisconsin got because when it arrived there were some two hundred titles missing and they were never recovered.[23] Nobody knows what happened to them. Wisconsin had paid

[23] S. A. Ives and A. J. Idhe, "The Duveen Library," *Journal of Chemical Education* 29 (1952): 244-247.

for them, but they didn't show up. Now that you're telling me this story, I'm beginning to wonder a little bit about that.

PRATT: There's another story that I remember about Orlinik. He was just a gentle soul. He just really was. He knew I was interested in John Dalton. One day I went in, and he said, "I have something for you." And I said, "What do you have?" So he pulled out this Dalton letter. I looked at it, and I said, "That's really nice Mr. Orlinik, but I couldn't afford that." And he said, "You can afford this because I'm going to give it to you."

BOHNING: Wow, that's great.

PRATT: That was a great experience.

BOHNING: You must have been a pretty good customer.

PRATT: Well, no, he was old, and he just wanted to do something nice, I think. He had probably not paid very much money for this thing, maybe bought it in a collection, or something like that.

BOHNING: Do you have the letter?

PRATT: Yes, somewhere. But now that I listen to that I might be telling a falsehood about it. I might have it mixed up with somebody else. But that event happened I know, but it might not have been Orlinik, come to think about it. But anyway, that's enough to be said about these book dealers.

BOHNING: Were there any in Philadelphia that you went to?

PRATT: Leary's Book Shop near Sixth and Market. That was, of course, a fixture. But I never found anything much at Leary's.

BOHNING: Were either of you involved when the Franklin Institute broke up their library?

BEARE: Yes.

PRATT: How many tons did you take?

BEARE: I bought many station wagons full of books, at different times. Herb and I went up together for their public auction. Remember Freeman's [Auctioneers & Appraisers] conducted that auction.

PRATT: I don't remember who they were.

BEARE: It was crazy. You had to pay for things as they were delivered. It was the strangest auction I've ever been to.

BOHNING: I know Lehigh [University] bought a lot of books from that.

PRATT: I think everybody did.

BOHNING: Jeff [Jeffrey L.] Sturchio, when he was at Chemical Heritage Foundation, was buying lots. I didn't buy anything from that, but I guess about three years ago I bought a copy of the 1901 twenty-fifth anniversary booklet from the ACS. When I got it, I opened it up and there was a Franklin Institute plate.

BEARE: Those books still keep showing up.

PRATT: Yes, they do.

BEARE: Actually, it's not a bad thing to have ex-Franklin Institute in a book. Normally *ex libris* is not something you want to brag about, but Franklin Institute doesn't seem to have any bad connotations. They had over a hundred thousand books in their sealed bid auction, so everybody got lots of books out of that.

BOHNING: I think I remember Jeff saying that you really couldn't tell exactly what you were getting.

BEARE: You knew what you were getting but there was so much. You'd buy them by Dewey Decimal number. Whatever the Dewey Decimal number was from chemistry, you might buy twenty shelves of chemistry and it might be ranging from 1800s to 1900s.

You knew exactly what you were getting, but since it was sealed bid you didn't know who you were bidding against. You had no idea how much to bid. If you were bidding on many, many lots, it was kind of scary. I scared my wife. I don't think you bid on any of those.

PRATT: No, I didn't.

BEARE: But we went to the public auction that Freeman's held. There were several. There was an auction in New York. Christie's had the really good stuff. Then they had the sealed bid sale which was roughly one hundred thousand volumes. And then they had the public auction that Freeman had with maybe several hundred lots, and there were some interesting things there. You got some interesting things there. Some manuscripts, I think.

PRATT: I don't really remember.

BEARE: I got some interesting things, and I made cards on them all. I lost my cards on those books, and I never re-inventoried. So they don't exist. I have several shelves of books from there that don't exist. [laughter]

PRATT: The only ones that I can remember getting were these books on chemical engineering and they were a dollar a piece or something like that, but no more than that. I remember getting a bunch of those.

BEARE: I kept trying to convince my wife that this was an opportunity of a lifetime, and she never quite believed that.

[END OF AUDIO, FILE 2.2]

BEARE: They've gone from one storage unit to another.

PRATT: I guess this is pretty well-known, but Steve has about what thirty thousand books, [perhaps] thirty-five thousand.

BEARE: Probably close to fifty thousand.

PRATT: Fifty thousand!

BEARE: I don't know.

PRATT: Can you imagine?

BEARE: But chemistry-wise, probably five thousand at the most.

PRATT: You make my little collection . . .

BEARE: That includes periodicals.

PRATT: No, I don't collect periodicals. It's just [that] I don't have enough space for them.

BEARE: I don't either.

BOHNING: You mentioned a storage unit because I have storage units.

BEARE: I knew you had some too.

PRATT: You had storage down near the Potomac River someplace, didn't you?

BOHNING: Still do.

PRATT: Still do!

BOHNING: Pay the bill every month.

BEARE: How big is it?

BOHNING: Ten by ten.

BEARE: I have three ten by tens. Two of them are filled literally with boxes. I had them stacked as high as I could and they got to about eight feet, and solid, two ten by ten, solid, and a third one with a little bit of walking space.

BOHNING: I have a storage unit in Oregon, and I have one in Maryland, and I have a couple in Wilkes-Barre, [Pennsylvania]. I've told my kids that their inheritance is the key to the storage units and they're on their own [laughter].

BEARE: It can happen.

PRATT: How do you get to stuff in Oregon? I know you have a sister that lives there.

BOHNING: [She] has things that were left after my father died. Mostly family heirlooms that I don't have room for where I'm living now, so they're still in a storage unit.

BEARE: That gets expensive to pay these bills.

BOHNING: I think my rent isn't bad but I if I really add all those storage units where I'm paying rent then I realize it's not.

BEARE: I want to get back to Clements, because you introduced me to Clements, in addition to Noah's Ark. So tell Jim about Clements Antiques.

PRATT: Oh goodness, I'd forgotten all about Clements. Goodness. What kind of a story you want me to tell?

BEARE: Remember, furniture filled with antique leather bindings.

PRATT: Oh, yes. I remember that. They had moved. The first time, he had a little tiny store someplace out in the edge of not Greenville, not Abbeville, but another little town down there. This was a guy whose major collections had to do with theology.

BEARE: You're talking about Noah's Ark, the fellow that ran Noah's Ark. I was thinking about Clements Antiques which was a huge antique furniture store mainly for decorators and they filled all these old breakfronts with thousands and thousands of books.

PRATT: That was at Old Hickory.

BEARE: Exactly. Well, Chattanooga, [Tennessee].

PRATT: Yes, Chattanooga. I'd forgotten about that. I went into this place, and they really were selling furniture. They had all these huge breakfronts and in order to sell them they put in volumes, leather bindings, and so forth, [to keep] all the dust off the books, and off the cases and everything. So it really looked nice. One day I wandered in. I was going to catch a plane but I had an extra hour or something, so I pulled into this place. Here are all these bookcases with these leather-covered volumes. So I started walking through and just looking, looking. And then I spotted one volume.[24] Who was the author? Do you recall? I have the book, if I could find it.

BEARE: Black. Wasn't it Black? *Black's Chemistry*.

PRATT: No. I don't think so.

BEARE: Was it a chemistry book though?

PRATT: It was a chemistry book. For some reason or other I pulled that particular book out, whatever it was. I don't know whether it was the author or just what. But I opened it up. The book was five dollars. Every book in there was five dollars. So I pulled this out and I looked. It was a book of tables having to do with molecular weights, table after table, after table, after table. But it had annotations written in the margins, between the lines, everywhere I could think of having [annotations]. I couldn't make much sense out

[24] Frank Wigglesworth Clarke, *The constants of nature, Parts 1-5 and Part 1 Supplement* (Washington, D.C.: Smithsonian Institution, 1873-1876). This book is available in the Othmer Library: https://othmerlib.sciencehistory.org/record=b1075238~S6.

of it, except the man that owned the book [Thomas Carnelley], [put his name in there]. In fact, there were two letters sticking in the [book] from somebody to this man having to do with teaching a class or something. This was about 1870. What this guy had done, this was his notebook where he looked through the literature to find [citations about changes] in molecular weights, after the second or third decimal place. So this was what this was all about. Then I found that this man [Carnelley] had published a periodic table.[25] I [don't] have a picture of the periodic table. But I have the book, which is [what] all the data was collected for. It's a priceless item in a sense.

BOHNING: How old is it?

PRATT: Eighteen-sixties or 1870s.

BEARE: I can't remember the author. I've seen the book.

PRATT: I'll have to find where I've stuck it.

BEARE: It was a manuscript for the book, and here it was being used for a decorative binding. Just incredible.

PRATT: I can get that. I'll just run and get that.

BOHNING: Where would they have gotten that?

BEARE: England. Herb introduced me to Clements. I used to go to Chattanooga once a week. I'd have time to kill at the end of the day, and this place was a fifteen-minute ride from the airport. So before I'd go back to the airport, I'd know how much time I'd have to zip over there. It was north of the dam at Chattanooga. Sometimes I'd even spend a weekend there. If I had business on Friday and had to come back Monday, I'd spend all day Saturday going through it. It took me four or five hours to go through it all. By the time I went there, they were no longer selling books because they couldn't get them. They'd buy all the furniture in England and ship them [to the US] on a container and, since they have empty drawers, they would fill up the drawers with books. They paid a pound or two per book. But they couldn't find the books anymore. The books weren't for sale by the [last] time I was there.

[25] Thomas Carnelley, "Suggestions as to the cause of the Periodic Law and the Nature of the Chemical Elements," *The Chemical News and Journal of Physical Science* 53 (1886): 197-200.

PRATT: This is one of two volumes.[26]

BOHNING: You got this at Clements?

PRATT: No. I didn't get that from Clements. I got this from a woman up in Connecticut someplace.

BEARE: This is from Carry Back Books in Franconia, New Hampshire.

BOHNING: This is the one that has all the handwritten notes to the book?

BEARE: [No, this is] the Mott book, but not from Clements. There must have been another one from Clements. This is a two-volume set. [It's] got all the text but look at how beautiful that it is.

BOHNING: That's incredible.

PRATT: They had professional amanuenses.

BEARE: I would guess the type would be set from this book.

PRATT: Yes. I had the published [volumes]. I just happened to find it. In fact, I think this was property of Verplanck Colvin. I never thought about looking him up. It was [first published in] 1877. The preface is dated April 1, 1888 by Henry A. Mott, Jr.[27]

BOHNING: This is the year the ACS was formed, 1876.

PRATT: This man, Mott, became a member of the ACS before the end of the year.

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[26] Henry A. Mott, Jr., *The Scientific Manual. A Practical Treatise on Chemistry*, Vol. 1 (handwritten, 1876).

[27] Mott, *The Chemists' Manual: The chemist's manual: a practical treatise on chemistry, qualitative and quantitative analysis, stoichiometry, blowpipe analysis, mineralogy, assaying, toxicology, etc.*, 2nd revised edition (New York: D. Van Nostrand, 1883). This book is available in the Othmer Library: https://othmerlib.sciencehistory.org/record=b1071555~S6.

BOHNING: This is dated August 29 and it says "Member of the American Chemical Society" under the inscription so therefore he had to have joined between April and August.

BEARE: That's a very early member, isn't it?

PRATT: Yes.

BEARE: Did that show up in the book?

PRATT: I don't know. You can look.

BEARE: Was this in the preface?

BOHNING: It was on the title page, under his name. He's just saying who he is—mining engineer, analytical chemist, member of the American Chemical Society, fellow of the New York Academy of Sciences, fellow of the Geographical Society, etc., etc.

PRATT: And that's written out: et cetera, et cetera . . .

BOHNING: Yes, three et ceteras.

PRATT: I didn't remember that.

BEARE: Member of the American, Berlin, and Paris Chemical Societies. That's interesting.

BOHNING: Doesn't it just say American Chemical Society?

BEARE: American, Berlin, and Paris Chemical Societies.

BOHNING: He must have joined more societies.

BEARE: This is the second revised edition. Now, he may have changed it. The preface is by Charles F. Chandler.

BOHNING: Oh, my, that's interesting. Now where was Mott? Was he at Columbia [University]?

PRATT: Mott was an MD that dabbled in chemistry. A pretty good dabbler, apparently.

BEARE: His address is Wall Street in 1877 when he published this.

BOHNING: This is a treasure. It's absolutely incredible. It's beautifully bound.

BEARE: I've never seen anything like that.

PRATT: The two volumes have the same layout, paper, and binding. You might want to look at them both.

BOHNING: Potassium dioxide? I didn't know that there was a potassium dioxide. K_2O_2 is the formula [laughter].

PRATT: I don't know how good a chemist he was.

BOHNING: What also intrigues me is he says he was a mining engineer. You said he was an MD.

PRATT: Maybe I'm confusing him. I think I am. His grandfather was Valentine Mott. He was a doctor and was very well known, at least in medical circles.

BOHNING: I just started working on a new paper which involves the history of mining engineering education in the nineteenth century. Lehigh was one of the early mining schools, and the degree that the mining engineers got was EM, for engineer of mines. Mott has an EM degree.

PRATT: Right. That was what they gave at Columbia.

BOHNING: That's intriguing because I hadn't reached the point to find out how common an EM degree was. Lehigh had an AC degree for their chemists, which was Analytical Chemist. But Columbia gave an EM as well. That's intriguing. There was a lot of confusion because the mechanical engineers got an ME degree, and the mining engineers got an EM. That created a lot of confusion.

BEARE: You have the first edition, too, Herb.[28] You have the second edition and the first edition of this.

BOHNING: Have you ever made a comparison of the first edition with the second edition?

BEARE: Yes, he did. It's in his notes: "Mining engineering, analytical chemist, member of the American Chemical Society." The wording of the volumes in the New York Public Library is identical in the sections I checked. Then later you got the first edition yourself, just three years ago.

PRATT: I sure am glad you came here! [laughter]

BEARE: You got the first edition—1877—from Rocks of Ages.

PRATT: Rocks of Ages. This is another book dealer, a man and his wife. They live in Tustin, California which is down south of LA somewhere or other, I think. They send me their catalogs. Apparently, they do not sell on e-Bay but they have a good book trade for mining books. It seems, just looking at the prices, that they sell some pretty good stuff.

[28] Mott, *The Chemist's Manual: A Practical Treatise on Chemistry, Qualitative and Quantitative Analysis, Stoichiometry, Blowpipe Analysis, Mineralogy, Assaying, Toxicology, Etc., Etc., Etc*. (New York: D. Van Nostrand, 1877). This book is available in the Othmer Library: https://othmerlib.sciencehistory.org/record=b1059485~S6.

BOHNING: I should check them out. I've been trying to find a copy of Eckley [B.] Coxe's 1871 manual, which is about 1,500 pages.[29] Lehigh has a lot of copies. I'd just like to have my own.

PRATT: They might have it or know how to get it because they specialize in those types of books.

BEARE: All they sell is mining, mineralogy, geology, books of that nature. Herb gives me all his old catalogs. I don't recall that title, but it might have been in there.

PRATT: In fact, I think I have one down there for you now. But that would be a good source. They're really nice people.

BOHNING: They probably don't have a web page.

BEARE: I think they sell only by catalog.

PRATT: I think I have one of the catalogs.

BOHNING: Could I borrow a copy so that I could at least see how to contact them?

PRATT: Of course. I probably have a telephone number too, but I think I have one of their catalogs.

BEARE: This is a treasure. I haven't seen it in a while. But you also have a book, the one you got at Clements, by the guy that wrote the stuff on the periodic table. Who was the author of that?

PRATT: I don't remember.

BEARE: It was a manuscript book. *Constants of Nature*.

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[29] Julius Ludwig Weisbach and Eckley B. Coxe, *A manual of the mechanics of engineering and of the construction of machines, with an introduction to the calculus. Designed as a text-book for technical schools and colleges, and for the use of engineers, architects, etc*. (New York: D. Van Nostrand, 1872).

PRATT: *Constants of Nature*, that's it.

BEARE: Who wrote *Constants of Nature*? He has a manuscript book for the *Constants of Nature*.

BOHNING: Was this common, to do this in manuscript form?

PRATT: No. This is most unusual.

BOHNING: Obviously Mott didn't write this. Somebody took Mott's notes and wrote this.

PRATT: Yes, in other words they were professional amanuenses, who made their living by writing stuff like this, copied off his notes.

BOHNING: Why would they do that before they set the type in the book?

BEARE: He may have had really bad penmanship and they couldn't read it. I just don't know.

BOHNING: Did Mott look at this before it went to print? Just glancing through it there are no notations of any kind.

PRATT: Maybe I need to get the other volume.

BEARE: I think what's interesting is the book was published in 1877. And this is dated August 29, 1876. So it's very close to the publication date.

BOHNING: I wonder if that date is when they finished writing it or when they began writing it because they didn't do it in one day that's for sure.

BEARE: His second volume might have separate dates. This is Volume 1, actually. It looks like a "2" because they used a wide pen, but I have to believe a professional scribe did this. It's so neat.

BOHNING: One of the things that happened when the typewriter came into being is that people who made their living with their penmanship couldn't adapt to the new technology. It was totally foreign to somebody whose penmanship was their living, and they lost their jobs.

BEARE: Just look at these tables. It's incredible.

BOHNING: If he's got another one that just raises this whole issue of late 1870s before the typewriter. The typewriter is coming soon after.

BEARE: Very close to this time, actually.

BOHNING: Do you know where the inventor of the typewriter was born?

BEARE: Connecticut, I think.

BOHNING: A little town up near Lewisburg, Pennsylvania, [Mooresburg, Pennsylvania]. There's a historical marker out on a back road somewhere.

BEARE: His name was [Christopher] Sholes.

PRATT: [returning from basement] This is all Motts' stuff.

BOHNING: Yes, this would be the first edition.

BEARE: This is Volume 2. It's the same date, August 29. So that must have been, for whatever reason, some preselected date.

BOHNING: Again, there's just no annotation of any kind to indicate somebody was proofreading it.

BEARE: No, which is kind of surprising. There are some blank pages too. It almost makes you wonder if it was first bound and then written in. All the pages are done in pencil, and somebody's erased them. Here's one change in pencil. There's a marginal note in the middle.

BOHNING: With a check mark.

BEARE: So Mott may have seen this.

PRATT: I'm sure I have a folder on him.

BEARE: It has the preface by Chandler, and it mentions [Mott being] a member of the American Chemical Society.

BOHNING: I have a copy of this. It's dawning on me all of [a] sudden.

BEARE: But that brings up a question now, Herb. You just got these books from downstairs very fast. How are they arranged? How were you able to find the books so fast? Are they alphabetical?

PRATT: No. I just sort of know where they are.

BEARE: I didn't know if you had them by size or by subject or alphabet.

PRATT: Size is one because if I have a lot of books of this size I just put them in one bookcase. My books are just scattered everywhere, but if you give me a title, I can probably go find it in a hurry.

BOHNING: You're like the booksellers. They know where they are.

PRATT: Yes, but I tell you, I have more books than I have space. So then, I have to move something here in order to put something else there. And first thing you know, everything is scattered. I have books back from this wall over to there, you can see that

later. I had a water problem in a hurricane. Water came and it was running out through a cellar window. I had to move books in a hurry. Those books got scattered all over creation. I can't find a lot of them.

BOHNING: Do you have special insurance on them?

PRATT: No. I tried any number of times to talk to insurance agents about them and nobody really knows how to appraise them. I finally just stopped thinking about it. Mary's very concerned about this and has been concerned for a long while. Books can be a lot of fun, owning the books, touching the books, holding the books, knowing who had the books at some time. All of that is part of the love of having books. If you have to put the books in a bank vault somewhere, the view now is clouded by the climb. For a long, long time I had stuff just sticking out, didn't know exactly where the things were, and I didn't have a catalog. Mary has now cataloged [everything]. But if books become a burden, in other words the maintenance of the books in keeping them up and being afraid of knowing whether somebody's going to break in and steal, it's no fun. I used to have everything in the house here. Some of the rare stuff now is in a bank vault. But that's not as much fun because I have it, but I don't have it.

BOHNING: I went to a bookstore in Saratoga, New York, called the Lyrical Ballad. It was in an old bank, and they indeed had their rare books in the vault in the old bank building. And it was open. You could walk in and look, but I suppose at night they could close the vault door and know that their rare books were going to be protected.

PRATT: You know CHF has a vault in the basement.

BOHNING: I've never seen it.

PRATT: I haven't either.

[END OF AUDIO, FILE 2.3]

PRATT: I did a lot of work trying to find some information. I can't think of his name. Who was the fellow that did the first analytical laboratory anywhere in the world? It was in Philadelphia.

BEARE: Booth.

PRATT: Yes, his name is James Curtis Booth. I was working on a biographical sketch on Booth, [Thomas H.] Garrett, and [Andrew A.] Blair. I was doing that for the series that Win [Wyndham] Miles was putting together.[30] So I did a biographical sketch for him. It was very difficult to find anything out about him, not Booth but [Thomas H.] Garrett.[31] The company, Booth, Garrett & Blair, started with Booth and then he took on partners. In the 1850s, or maybe post-Civil War, that company was advertised. ASTM would always have an ad for Booth, Garrett & Blair. All three of these people [are dead and] long gone. But [the company] still used the name Booth, Garrett & Blair, which was great to have a company name.

They were in Philadelphia at several different locations. Then they moved out to the suburbs. The train comes into the station there. It's a commuter train. I can't remember the name of the little town. But anyway, this Booth, Garrett & Blair laboratory was there. Someway or other I learned that they had material in their laboratory about these individuals. I went there to look at the material and it was just great to [see]. I was able to come up with information I needed at least to write a biographical sketch about Garrett. But one of the things the owner had in his office was a case about this [three feet] wide, and maybe seven feet high. The shelving was laid this way. There were little cubicles about so big, and there were mineral specimens in it. [In the mid-1800s], good chemists always had their own mineral collection. When a professor would go from college A to college B he took [his] mineral collection with him, and in doing so enhanced his stature as a scientist and teacher because he had the minerals that they were going to be talking about.

Booth's collection of minerals was in the office of the man that owned this company. They were still working with wet chemistry. I remember they showed me around the lab. I was there maybe three times. My contact showed me around. They had a "gold mine" of platinum dishes for doing quantitative analysis. I don't know what platinum must be worth. All of a sudden, the name of the company disappeared out of the ASTM [*Standardization News*] journal. Apparently, they went out of business. I was in the town, so I made phone calls to find out what happened to the company, but nobody seemed to know what happened to them. I talked to the Chamber of Commerce, but they couldn't give me any information. I'd love to know what happened to that cabinet of minerals because it definitely was Booth's stuff. But it's just lost. I don't know where to find them.

BOHNING: Probably just thrown away.

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[30] Wyndham D. Miles, *American Chemists and Chemical Engineers* (Washington, DC: American Chemical Society, 1976).

[31] Pratt, "Thomas Hall Garrett," in *American Chemists and Chemical Engineers*, vol. 2, eds. W. D. Miles and Robert S. Gould (Guildford, Connecticut: Gould Books, 1994).

PRATT: What I started to say was, [I came to look at all the] analytical notebooks, page after page of stuff that Garrett had. Later I guess he was no longer a working chemist but moved up into management. They had all those books, so I came and got a lot of notes from them. I went back one day, and the guy said, "Oh man, we're so glad that you gave us some idea about this material. We put it in the vault." Lo and behold, there was no humidity control. We went down there, and he opened the vault because he was going to show me what he had done. And every one of those things was almost soaking wet.

BEARE: Oh, no.

PRATT: Condensation. So I said, "Obviously this is not the right thing to do." I mean, you wouldn't want to call him a dumb klutz, because he was a nice guy, and he was trying to do his job right. So I said, "We need to get these dried out very slowly. I don't really know what exactly to do." But all of a sudden, I lost contact with this man. I don't know what happened to [the material]. I've tried to find out.

BEARE: I'll bet those are all thrown out.

BOHNING: Sure.

PRATT: I'll bet they were because this man was about getting ready to retire. And I'll bet they just went. It's unfortunate.

BOHNING: There's so little known about Booth and that company.

PRATT: Fortunately, I think I did pretty good note taking, at least on Garrett. Steve, do you know the name Garrett Snuff mill?

BEARE: Yes.

PRATT: Garrett was part of the family that owned Garrett's Snuff over on the west side of [Wilmington] here. Apparently, he'd never been tied in with the business or anything like that. He stayed in Philadelphia and was a chemist there, entrepreneur.

BOHNING: So you're saying that the CHF vault should have temperature control?

PRATT: Well, I would think so. This was downstairs, and you had wet chemistry going on upstairs, so the place was just laden with moisture. I would not want to put anything like that in a vault unless it [had controlled humidity].

BOHNING: This is what happened at the Priestley house. When [Edgar Fahs] Smith and [Charles A.] Browne gave all their Priestley materials to that little museum that was built [for the] Priestley house, Browne came back about two years later and was appalled because everything was covered with mildew. He was furious. I've got copies of his letters. He was just irate. Then Penn State took everything to State College [Pennsylvania], and immediately slapped the Penn State Library label inside of it. Browne was furious because he and Smith had not given the material to Penn State. They gave it to the Priestley house. It was the same thing. There was this nice little building but there was no provision made for any kind of humidity or temperature control. In several years' time, sealed up, everything had really gotten bad.

PRATT: Spores like that grow exponentially. Maintenance of collections is important, especially if you don't know what you're doing. I tried one time to preserve the spine on a book, and I made such a mess of it. I thought this was ridiculous to oil the bindings and all that, unless you really know what you're doing. I've never done anything except that one item.

BOHNING: Are there people who still do this for a living?

PRATT: Yes.

BOHNING: Years ago, I can imagine it was pretty common.

PRATT: Who was that guy in the Delaware Bibliophiles over in Pennsylvania, coming north towards [Longwood Gardens, Pennsylvania]? Steve somebody. He just had a rat's nest of old books in an old grocery store or something.

BEARE: Oh, I know what you mean. Mendenhall.

PRATT: Mendenhall, yes. He had a woman that bound books for him.

BEARE: She was Russian or Ukrainian.

PRATT: Yes, that's right. He probably had her squirreled away doing these books.

BEARE: She did a nice job.

PRATT: Very well done. They're not overly expensive I wouldn't think, at least if you get into major cities, but somebody like that, they do a nice job, and it preserved the binding.

BEARE: I love the way book dealers talk about "my binder." They always say, "my binder." I wonder how the binders feel about that?

Herb has book collections beyond chemistry. Did you tell him about some of your other collections?

BOHNING: No. That was one thing I wanted to do was to get some idea of the scope of your collection.

PRATT: I do collect hymnals. I grew up in what's called a Christian Church [Disciples of Christ]. There are not any organizations in this part of the country with that title, or anything like it. There were liberals and there were middle-of-the-roaders, and people who were very conservative people. When [we] came to Delaware there was no Christian Church around, so we started out going to a Church of Christ which was a conservative wing of the Christian Church. They did not believe in [using] instrumental music and still don't. They have beautiful singing though. Once you get into it, you see that they had a lot of good sense with what they did. Since they did not believe in instrumental music, I started trying to find out a little bit more about what their beliefs were and how they happened to get into it. So I ended up with about five shelves of books over there in that far corner. The oldest book [there on religion], that was published in 1600 or thereabouts [1682].[32] [. . .] [I particularly like Psalm books], just like the [Old Testament's] Book of Psalms, word-by-word. I think the longest Psalm is one hundred and fifty verses—I don't remember which one it is—down to short ones.[33] The fathers of Christianity, like the archconservative people like John Calvin, had nothing to do with any kind of [song in worship] other than the Book of Psalms. In other words, people did not believe in what they called "man-written words," [such as hymns]. You had to [use] the Psalms out of the King James Version of the Bible [published in 1611], and you had to sing every verse. It

[32] William Cave, *Primitive Christianity, or The Religion of the Ancient Christians in the First Ages of the Gospel: in three parts*,4th ed. (London: R. Chiswel, 1682).
[33] The longest Psalm is Psalm 119, which is 176 verses long.

was sinful to skip verses. Once you get into that kind of thing, you start [collecting] books. So that sort of gets you into the whole scenery of songs.

Now I don't read a note of music. But I've been buying those hymnals and Psalm books. And the shapes [of the] little books are interesting. I moved out a lot of the stuff upstairs. I'm looking for a very small one. I have a little tiny one here. On this one is the binding is torn.

BEARE: There's a name on it. *Psalms of David*, Hartford, 1817.[34]

PRATT: Here's a different one.

BEARE: Timothy Dwight.[35]

PRATT: I told you [Dr.] Dwight was the father of the [student Edmund Dwight, whose name is inscribed in the Enfield book].[36] Here's a smaller one. I have another one upstairs.

BOHNING: They must have had good eyes. That print is so small.

PRATT: I know. There might have been bifocals [by that time] because they came in Benjamin Franklin's time. Now Steve is looking at the binding.

BEARE: I'm seeing if it was signed.

BOHNING: *The Mother's Hymn Book, compiled from various authors and private manuscripts for the use of maternal associations, and the social family and private worship*, by Thomas Hastings, 1849.[37]

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[34] I. Watts, *Psalms of David* (Hartford: George Goodwin and Sons, 1817).
[35] Timothy Dwight (1752-1817) wrote many hymns. In 1795, he became a president of Yale University. See TheCyberHymnal, "Timothy Dwight," accessed September 7, 2023, http://www hymntime.com/tch/bio/d/w/i/g/dwight_t.htm. "A man for all seasons: an ordained Congregational minister, grandson of preacher Jonathan Edwards, personal friend of American President George Washington, and Army chaplain."
[36] *Institutes of Natural Philosophy, Theoretical and Experimental*.
[37] Thomas Hastings, *The Mother's Hymn Book* (New York: Myron Finch, 1849).

PRATT: That's probably enough of that. I've collected hymnals and they take on a fascination of their own. And church history. I'm very much interested in church history. I'm very much interested in theology. I guess those are the three major areas. [But I have also been into archaeology since about 1956.]

BOHNING: Steve mentioned periodicals earlier. Do you collect periodicals?

BEARE: I collect periodicals. Herb, wisely, does not.

PRATT: I have a few. I would definitely not collect anything that is an ongoing thing because there's no end. It's like people buying stamps. You can break the back of anybody that's collecting because as long as you [have] printing, there's just no end to it.

BOHNING: Do you have *The American Chemist*, The Chandlers' journal which was only seven volumes?

PRATT: Yes, I have that.

BEARE: I'm trying to get Lehigh to digitize it and make it available on the web.

PRATT: Yes, I have that I'm pretty sure. I'm going to keep running downstairs.

BOHNING: Later I'd like to get a picture of him downstairs. While he's down there, I was in Milwaukee, [Wisconsin], a number of years back and found a used bookstore in the Milwaukee airport.

BEARE: Really.

BOHNING: I got to talking to the guy because I've never seen a used bookstore in an airport. He said, "Our main store is downtown, and we did this just on speculation. Business has been superb."

BEARE: Because people have time to kill.

BOHNING: And especially used books. A lot of people who are traveling are people who might be interested in that kind of thing. He said they had done a lot of good business at the airport store.

PRATT: There it is. I had the whole set—seven volumes—or something like that.

BEARE: It doesn't exist because it's not in your book. [laughter]

PRATT: Is that it, Jim?

BOHNING: No. This is *Chemical News.* [38] *The American Chemist* was the Chandlers' journal. It's interesting because this is a little bit early—1867—and Chandlers' started 1872. So this is a little early.

PRATT: That's Crookes, okay.

BOHNING: This is from the University of the State of Missouri Library.

PRATT: Oh yes.

BOHNING: I always like to look at the binder's stamp. This was bound in St. Louis, [Missouri]. Yes, this is Crookes.

BEARE: There were American editions to that. Is that the American edition or the British?

BOHNING: No, this is New York. Townsend and Adams Publishers, Volume 1, American Reprint, Being parts of Volumes 15, 16, 17 of the English Edition.

PRATT: Okay.

[38] Sir William Crookes, *Chemical News and Journal of Physical Science*, Vol. 1 (New York: W. A. Townsend and Adams, 1867).

BOHNING: It's interesting because it looks exactly like the *American Chemist*, the layout and everything.

BEARE: Right.

BOHNING: Chandler took this over. When this stopped, that's when the Chandlers started. I've never looked at this before. I've never seen what preceded the Chandlers.

PRATT: I know that there are many volumes of it. A dealer had it, and I got it for a price. I was on the ACS lecture circuit. That was always good if you're looking for books. I picked those things up for a low price I guess. One of the things that I wanted to do which I've never done. Who's the English guy that was at CHF for a long time, whose son was around for a while?

BOHNING: Not Ted [O. Theodor] Benfey?[39]

PRATT: Not Ted Benfey. No, this guy was in England, but he published something one time having to do with the origins of these books. There was something that he published, and I thought, "This is not right." I don't even remember now what the problem was all about. Now I can't think of the guy's name. But anyway, he's well known in the history of chemistry circles.

BOHNING: This is so much like the *American Chemist* that it took me a while to realize it wasn't.

BEARE: Yes, same size, the same format.

BOHNING: Yes, even the type is the same. But it's not the same publisher. This is a New York publisher. But it's not the same as what they used. Even at the top, *American Chemist* has the same thing, the layout of the headers with the date of this issue and so on is identical. The two columns, the typeset is the same. Amazing.

PRATT: Well, if they wanted to plagiarize, I guess they were on the right track.

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[39] O. Theodor Benfey, interview by James J. Bohning at the Chemical Heritage Foundation in Philadelphia, Pennsylvania, 24 May and 5 June 1991 (Philadelphia: Chemical Heritage Foundation, Oral History Transcript # 0094).

BEARE: They probably gave the printer this and said, "I want the same format."

BEARE: Chandler's papers exist at Columbia, but they have hardly even been cataloged. Nobody's ever looked at them.

PRATT: I went there one time, to special collections. I was interested in something having to do with dye chemistry. Somebody had done some work in trying to catalog the papers, but this was done I think by a volunteer. As I recall, there was a tremendous amount of material in his papers that had to do with dyed samples of fiber and so forth. And I might not be correct on that.

BOHNING: There are papers in the *American Chemist* in which there are actual swatches of cloth that are dyed and pasted in.

PRATT: Right. That was a common thing to do. The whole idea was still around in the 1950s because I got involved at DuPont with the idea of publishing dyed swatches. We had a guy in Philadelphia that did all that work for us. It was like home industries. Women would take these things home and cut the swatches and so forth and glue them into the book. Orchem [DuPont's Organic Chemistry Department] had a lot of that kind of work done.

[END OF AUDIO, FILE 2.4]

BEARE: What's nice, Herb, is that all the advertisements are included right at the end.

PRATT: I never really looked at those books much.

BEARE: Here's an ad that might spark something here.

PRATT: Oh, yes. How do you pronounce that? Fesque?

BEARE: Fesque, I guess.

PRATT: Chemist and engineer. I know that name. We should find Booth, at least Booth and Garrett are in here.

BEARE: Instruction in chemical analysis and assaying. C.F. Chandler. They're great ads. But normally those would be torn out.

BOHNING: When I was at CHF, they got a whole set of the old *Industrial Engineering & Chemistry*, not bound, in pristine condition with all the original covers of the individual issues, which were really neat. I don't know whatever happened to them, but I told them, "Whatever you do, don't destroy the covers. They're very important."

BEARE: Right.

PRATT: *Chemical News.*

BEARE: That's the same title as this.

PRATT: Yes, but is this the British section? No, New York.

BEARE: American edition. It's an advertisement for the upcoming month.

PRATT: I don't recall ever having looked at this much. Here was another month.

BEARE: Every month, it would run the ads. But often those were just thrown away.

BOHNING: Do you have a run of those?

PRATT: I have all of them.

BOHNING: How many would that be?

PRATT: Seven, I believe.

BOHNING: Okay, what was the date?

BEARE: Eighteen hundred sixty-seven was the first one.

PRATT: Somewhere along the line when we get through talking, don't be afraid to walk around and look at all these.

BEARE: Two volumes per year, so it'd be three-and-a-half years.

BOHNING: That would put it to where the Chandler's start.

BEARE: It started July, so that would put it through 1872, I believe. Yes. It ended in 1872, so that was the Chandler's starting date.

BOHNING: You know how Chandler's material was preserved?

PRATT: Not very well. [laughter]

BOHNING: The librarian at Columbia got a phone call from a man who said, "I'm tearing down this brownstone, and inside are all these papers that say something about Columbia. Do you want them?"

PRATT: Yes, I remember somebody telling me that.

BOHNING: When Chandler died, apparently his widow walked away and never went back, and just left the house. He had his own photographic studio up on the third floor. I didn't realize Chandler edited something called *Anthony's Photographic* [*Bulletin*] in the nineteenth century. That's where [Henry Carrington] Bolton published some of his papers on photography. I went through the microfilm of all of those looking for Bolton's stuff, and Chandler's stuff but Chandler was the editor of that photographic magazine. He was really involved in photography. That was one of the things that he did.

PRATT: The renaissance men got into something and then it really sort of grew on them. Photography came in 1830s or something like that?

BOHNING: Eighteen hundred forty-one was the Daguerre process.

PRATT: The man who did a picture of his sister, [John William] Draper. That ties in.

BOHNING: He was at NYU [New York University].

PRATT: There was a fellow in Philadelphia that did some early photography. Apparently, it was one of the very early photographs. I don't know if it was Draper or not.

BOHNING: That controversy has never been settled as to who took the first photograph of a human being. Draper claims he did, but he claimed it after the fact. And with the guy in Philadelphia there's a historical marker on some street somewhere that claims that he took the first one. They were within months of each other in any respect. They're very close in time. But most critics of Draper claim that he did it after the fact. There's no real proof that what he claims in terms of the timing is true.

PRATT: This Central High School, so called high school. Didn't Booth teach at Central?

BOHNING: Yes.

PRATT: Our granddaughter went to Central. Looking back, they had some really top-notch people. Did I tell you that when she graduated from Central High School she got a degree?

BOHNING: Right.

PRATT: In the charter for what was really Boys' Central High School, I think, they were allowed to give any degree. At Central High School you could give any degree that was done by anybody else in the state of Pennsylvania, is that right?

BEARE: Like a college degree?

PRATT: Yes, a college degree.

BOHNING: Like a bachelor of science degree.

BEARE: Really.

PRATT: So our granddaughter got a degree.

BEARE: Is it recognized as the same as a college degree?

PRATT: Well, no, not really.

BOHNING: The school is a cut above most high schools.

BEARE: I see.

BOHNING: It's had this reputation for a century. It goes way back.

PRATT: They had a Boys' Central, and I guess a Girls' Central. I believe they put those together by the time she was in school, as I recall. But I don't really remember.

BOHNING: What other kinds of things do you collect? We've got religion, chemistry, not periodicals for the most part. You've got some very interesting ones, this one especially. I'd love to spend time looking through it.

PRATT: I mentioned theology and having to do with the whole idea of the Holy Ghost or the Holy Spirit. I don't know Greek, but you say "ghost" and "spirit" all of a sudden when you get to Greek all the ideas can be wrapped into one. I have a two-volume set of Joseph's Priestley's *History of the Corruptions of Christianity*.[40]

[40] Joseph Priestley, *A History of the Corruptions of Christianity* (Keene, New Hampshire: J. and J. W. Prentiss, 1838).

BOHNING: Is that the one he was finished on his deathbed? He read the last page proof just before he died?

PRATT: Oh, that might very well be. I have them in that first section there. Wait a minute. I've moved them. I don't know where they are. I don't know. I moved them.

BOHNING: What I've done on my shelves is I have books behind books. [laughter]

PRATT: I don't know what happened to them. They're somewhere in the collection.

BOHNING: Where did you acquire them?

PRATT: It was a place I used to go to in Springfield, Massachusetts. I used to go up there to a dye house, not really to Springfield. It was over in Connecticut a little, tiny town. I can't think of the name of the town. The fellow that owned this place would go over the line into Massachusetts, to Springfield, to eat lunch, just about five miles, maybe. The fellow that was the owner said, "If you're interested in books there's a book place up there that you might find some interest in." So having a rental car I made it a point to go up there and look. Sure enough every time I would go, I would find something. And one of the things that I found was these two volumes of Priestley's *History of the Corruptions of Christianity*.

Priestley was a Unitarian, but unlike today's Unitarians, he did believe in something. And that's all right. I'm not putting them down. He was very strict in some ways, but he was very liberal as a theologian. If you followed Priestley, then you would throw out most of the stuff that's believed and promulgated by the major religions today. And there's an argument, of course, if you look at what's happening to the major faiths, even the Muslims, they're becoming very fundamental. They don't really know what they're reading. They don't understand it. But Priestley did. It was interesting to see what he believed in, and why he believed it.

So taking books like Priestley's and then trying to find other books that would augment that, that's what's on that side up there, more or less. I have a collection, Jim, [that is] not books. I collect coat hangers. [laughter]

BOHNING: That's unusual.

PRATT: I have about two hundred coat hangers.

BEARE: There are no coats on these coat hangers.

PRATT: Right. [laughter]

BOHNING: What's the history of the coat hanger?

PRATT: Well, it's a complicated history. The Shakers were a very orderly people. They had dowels stuck into the walls in their homes, and they used to hang their suit or pants or whatever over that little knob or whatever [was] sticking out, [like] a spike. And that made sense. Then somebody wanted to improve on that so they took a stick that was slightly curved like this and stuck a little [leather] strap through that up here, and they would hang it up so that the coat wouldn't get all messed up. So that was how the coat hanger started. This was probably in the latter third of the 1800s.

Up until around 1900, men wore their pants wrinkled. There was no crease in them or anything. It's just what you did. Then Prince Edward, who was a very sizable man, the story goes, [had his man servant take the trousers and lay] them down flat. Being wool, they would get a crease. The prince put on his [flattened] trousers and he liked what he saw. So he became a fashion setter and people began to follow his lead. In Theodore Roosevelt's cabinet—and I don't remember where along—it was interesting to see men standing, [some] with [sharply] creased pants, and [others being "barrel legged"]. So you can see the transition coming. Then creasing the pants flat [became] a chore. You had to iron them out, and [risk scorching] and so forth. So somebody came up with the idea of having a steam-heated [pressing] device. This man was named Adon [J.] Hoffman [1878-1934].

BEARE: The Hoffman Press.

PRATT: The Hoffman Press, right. This was around 1915, or somewhere along the line when he actually patented the Hoffman Press.[41] So now you have these pressed pants and what are you going to do with them? You can't hold them out flat. That doesn't make any sense. You would have some kind of crossbar and you would hang [the] pants over the crossbar. Or you might hang then by the cuffs. My dad was in World War I, and he had to keep his dress uniforms sharp [in appearance], so he had two coat hangers that he carried in his gear at camp. One was a folding coat hanger, and another one is done like this. Here's two flat pieces of wood, and you have a spring sticking up like such. Push down on that, and that would clip and put pressure on the cuff. So that's the way you would hang them up.

[41] Adon J. Hoffman. Garment Pressing Machine. U.S. Patent Number 1,881,581, filed on 15 March 1928, and issued on 11 October 1932.

Then you had these wooden coat hangers and people began to improve on the wooden coat hangers. They would make them more expensive. They would put them together with the joints that would be like my finger here.

BEARE: Box joints.

PRATT: Right. Then you'd have a thing that would go down through that, and you'd have to bend the top of the thing, so it would come over. Otherwise, it didn't [hang straight and] it would cock, and the pant would slide off [the hanger]. Then you had things taken from the wooden coat hanger. You'd have a wire sometimes that would go through that. It would flip over so that the pants wouldn't fall off. Wood was very expensive, so they started doing them with formed wire. And then you can look at all the variations of the diameter of the wire, the [number] of twists that it took to put them together. Then the question was, do you want to just let that iron wire go against the crease or do you want to put some kind of a wrapping around that which they did with paper? Then you had combinations of wood and metal. And then finally you get plastic [hangers]. I could very easily do a history of the technology of coat hangers which I plan to do if I live long enough. [laughter]

BOHNING: How did you get interested in this?

PRATT: Because my dad had these two coat hangers.

BEARE: Two is almost a collection. [laughter]

PRATT: That's right. Two is almost a collection. When he died, I didn't want to throw them out, and I thought, "Gee whiz. His would be interesting to have." I had the folding coat hanger that he had, and after I was into collecting, Mary found a really fantastic [hanger] that would totally fold up into a cylinder. It's somewhere downstairs.

BOHNING: Where did you find these?

PRATT: Everybody collects coat hangers. You have your pants pressed. They come from the dry cleaners; they charge you to put your pants on one of these hangers. The hangers are all different. People patented the hangers. One of the funniest stories about this is my daughter Alison went to graduate school near San Francisco, [California]. There was a football coach there by the name of Alonzo Stagg. She worked on her

master's degree there. The fellow that was her [graduate] advisor, Martin Gibson, was a fascinating guy. We got to know him pretty well because he would come east.

Martin's mother died, and he was cleaning out her house. One day a box of stuff came from Martin, and I opened it up. It was a bunch of coat hangers from San Francisco. They were wooden, and some of them had the dry cleaner's name stamped on the wood with two-digit telephone numbers, so this was around 1900. [. . .] I just couldn't contain myself. I called Martin, and I said, "Dr. Gibson, this is Herb Pratt. I really want to thank you for these coat hangers. These mean so much to me. In fact, I am starting a club of coat hanger lovers, and I would really like for you to be a charter member." [laughter] There was the longest silence. Finally, I broke down and told him I was kidding. We've had a lot of fun, though.

BEARE: But there are people that actively collect coat hangers. You're not the only person. The early Shaker coat hangers can be very expensive [in antique stores].

PRATT: Yes, the one I have is a [reproduction]. I got that at one of these Shaker villages [in New England] someplace or other, but I thought well I better get that. I'd never seen one.

BOHNING: There must be an association.

BEARE: I don't think there's actually an association, but there are people that are on the lookout for unusual coat hangers.

PRATT: Yes. In fact, a long time ago I read an article somewhere about coat hangers. Somebody was having an upscale show somewhere in New York City.

BEARE: I think it was an article I clipped for you. *Antique Week,* or something like that. They did a whole show on coat hangers.

PRATT: I have that. After that I got on their mailing list, and I'm still on their mailing list, Steve. [laughter]

BEARE: Sorry.

PRATT: But anyway, that's sort of offbeat.

BOHNING: There was an article years ago about [a] man who collected manhole covers. It's like collecting coins because on the old ones, stamped in the cover, is the name of the company and the year. And they go back to revolutionary war times. He lived in New York, but he rented an empty lot in Yonkers.

PRATT: He didn't have to worry about people stealing them. [laughter]

BOHNING: No, not really.

PRATT: I'm laughing about that because when I was in this DuPont job, which was a jack-of-all-trades thing, a woman called one day, and she was looking for some Tyvek. She was an artist in New York. She said, "I'm doing rubbings in New York on manhole covers." I knew sort of where she was coming from because at one time she had been part of Goddard College in Vermont, which is a far out school, one that I went to. So I started giving her odds and ends of Tyvek. She would make rubbings with those things, and she had a show with her manhole covers. Then I got interested in it, and so when Mary and I were traipsing around Europe at various and sundry times, I began to go off, and somebody on our group said, "What are you looking for?" [laughter]

BEARE: You were looking at manhole covers.

PRATT: That's what I was doing. I took a few pictures of manhole covers, but not many.

BOHNING: This woman was collecting them in a different way. Instead of collecting the real thing, she was taking the rubbings as an image of it. Interesting.

PRATT: There's an awful lot of ways to have fun in life.

BEARE: It's so easy to get distracted. [laughter]

PRATT: Yes, it is.

[END OF AUDIO, FILE 2.5]

BOHNING: That's what I don't like about the internet. It's now so easy to trace things back, and you can get distracted into something else very easily.

BEARE: Herb, did you tell Jim about your analysis of a vacuum cleaner bag?

PRATT: No. I'll tell you, but then you can see the stuff. Steve is a balance collector, and I have an analytical balance. It's about this long, about so high, about that deep, and it has two doors. You can see it later. I can't even remember the name of the maker.

BEARE: Ortling.

PRATT: But anyway, I have that balance. I'm trying to find out as much as I can about the balance, [so] I wrote to Ortling. This thing had two sliding doors. It's a long balance and it has two sliding doors, one for each pan. You have the same thing on the backside as on the front side. And it locks at the top. The key is about this size, and I took out all the dust that was in the keyhole. It was pretty obvious when you looked at it under a microscope that this had been in a textile lab at one time because [there] was very, very fine lint deposited in those key holes. They probably hadn't used it. In fact, I probably had to have those keys made. I'm sure I did. So when I got in there to put the key in, I had to make sure that I got all the lint out of it. But I saved the lint and I have that.

At our church, we bought an old building years ago, and it had a vacuum cleaner. It had to be one of the earliest vacuum cleaners. It looked like a vacuum cleaner, but it didn't have an electric motor or anything on it. You swept with it, and it would pick up the dirt. It [had] a belt drive on it, and you'd [pick up] stuff up with this thing. I did an analysis of the dust that was in the bag. [laughter] When we got rid of it to the Delaware Historical Society, I said, "Now here is the kind of stuff they had in this church." You know, what people dropped and got picked up in this cleaner. People laughed about that but that's good research because at least I think you know sort of the type of people that were going to that church. So there's lots of ways to have fun.

Well, Mary is going to put some lunch on the table, and if you guys want to use the powder room it's right there, and you want to turn your tape off.

[Recording paused]

He's tall. He's like King Kong, just a big guy. Not fat. He's just a big guy. He had a long bushy beard and gray hair. I had a bunch of stuff that I wanted to get rid of, so I just carried all the junk I could carry down [to the Delaware] Historical Society. I had a trunk load of stuff, and I was parked on 5th Street [in Wilmington]. So Tom said, "I'll

help you bring the stuff in." One of the things I had was a little metal wagon, about [thirty inches] long. My dad had backed over my tricycle with the car, and so he said, "I'll get you a wagon." So he got this little wagon. My kids played with it. I still had it in the basement, but it was always in my way. I knew I wasn't going to ride it anymore, so I took it to the Historical Society. Tom just went ape over that thing because he knew this was a transition between wooden wagons to metal wagons. Now, I didn't know that. I knew the date, and he knew that. So here was Tom, this big hulk of a man, coming with this little wagon, up Market Street. And he was just smiling, so happy over that wagon. [laughter]

BEARE: Your wagon is at the historical society then?

PRATT: Yes, I guess it's still there.

BEARE: Along with the Bissell [sweeper]. It was probably a Bissell, made in Grand Rapids, [Michigan].

PRATT: Yes, probably.

BEARE: I remember the hand sweeper. They were wooden. They did a nice job.

PRATT: All of it was wood.

BEARE: They were oak.

PRATT: I never tried it out. But there were hog bristles in the sweeper part. I didn't want it to just tear up. We had another one that was an electric and it was in bad shape, so I think we just junked that because old vacuum cleaners are sort of a dime a dozen, I guess.

BEARE: I bought one of these old Bissells too. It was almost museum quality, almost unused. It just always fascinated me that something like that could be around since the first part of last century and still be in good shape.

PRATT: Things were made well. It was metal. Everything was screwed together.

BEARE: Long as nobody ran over it. [laughter]

PRATT: But you could repair those things. You could take the screws out of them, open them up, and clean them up. We have a vacuum cleaner that we bought right after we married, right after we had [a] house. We still have it and it's still it's in use. We have other vacuum cleaners but that one is still in use [also].

BOHNING: I can remember whacking a carpet hanging on the line out in the backyard with a carpet beater.

PRATT: Yes, it looked like a spring, maybe a loop.

BEARE: Used to be really hard on the carpets too . . .

BOHNING: As a kid, I thought it was great. I think that's why they turned me loose on it. I thought it was fun.

[END OF AUDIO, FILE 2.6]

[END OF INTERVIEW]

Appendix 1

My Experiences with the World War II Draft

and My Military Service

Herbert T. Pratt

I graduated from high school in Leaksville, North Carolina (now Eden) in 1942 at age 16, and by the time I was 18 and eligible far the military draft, I was studying chemical engineering at Tri-State College, Angola, Indiana. When my 18th birthday rolled around on January 19, 1944, I registered with the draft board in Angola and had the papers forwarded to the Leaksville, N.C. draft board. Within six weeks I was classified "I A, available for service," but three months later was reclassified "II A, occupational deferment to last until September 28, 194_," the exact year being left blank. That classification made no sense because I was not working, but going to school. September 28 came and went and every day I opened the mail box fully expecting to find my "Greetings" (so-called from the salutation on the form 1etter informing you of call-up); but nothing came. On April 6, 1945, I was reclassified as IV B. When no one in the college administration knew what the IV B classification meant, I went to the local draft board. The clerk there had not heard of IV B either, but found it is a large official-looking manual. It read, as I recall, "The Vice President of the United States, members of Congress and certain members of the United States military reserve shall be classified IV B."

On hearing that, I did not wait for further details. I had only six months to go to graduate and this classification appeared to give me the opportunity to finish my degree. I graduated in August 1945, and on VJ Day, accepted an engineering job in Ann Arbor,

Michigan. As soon as I was settled, I sent a change of address to the draft board in North Carolina. A year later in August 1946, I returned to North Carolina to live, and duly filed a change of address. Then, about two months later, I was summoned to appear before the draft board in person. Here, a three-man panel who questioned me in detail about my whereabouts since 1944 and asked if I had known anyone who worked for the draft board (no one). Seemingly satisfied with my answers, they finally told me that somewhere along the way, my records had been filed with the deceased, and while consolidating the Leaksville office of the draft board with the one in Reidsville, they had discovered my records. On November 29, 1946, I was reclassified as I A. Since the Selective Service Act was due to expire shortly, I appealed that classification. My appeal letter was never answered.

In April 1948, at the urging of two North Carolina National Guard officers, I joined the Guard as a private. Over the next three years, I attained the rank of Military Occupational Specialty (4812), Chief Operations Sergeant, of the fire control center for 42-inch chemical mortars, a new armament at the time.

In August 1948, I married Mary Stubbs, and we had a son 15 months later. In April 1949, I was classified "II A, registrant with child," and in February 1961, "5 A, over the age of liability for military service." That was my last classification.

11-19-91

Appendix 2

Some Accomplishments
Herbert T. Pratt

E. I. DuPont de Nemours and Company

1. Polyester Dyeing and Finishing

1.1 Through extensive applied research, I developed understanding in five major interrelated problem areas.

1.1.1 Causes of dimensional change in textured polyester knits and conditions required for fabric stabilization. Determined the interaction of yarn texturing conditions, dyeing conditions (temperature, carrier concentration and type, time) and heat setting conditions (time, temperature) for various fabric constructions.

1.1.2 Dyeing conditions required to cover barré (dye "energy level," dyeing temperature, carrier type and concentration, dyeing time).

1.1.3 The effect of the butyl stearate content of coning oils on dye sublimation, crocking, migration, and bleeding during storage and cleaning, of yarn dyed polyester.

1.1.4 Causes of barré (physical, chemical, optical), a visual pattern of stripiness

Systematic methods for analysis of barré.
Terminology for describing barré.

1.2 Dissemination of research results on polyester dyeing and finishing to the textile trade, 1967-1979

1.2.1 Published 84 journal articles and technical bulletins.

1.2.2 Gave 50 or more college/university lectures.

1.2.3 Gave 48 or more lectures/talks for trade associations.

1.2.4 Gave no fewer than 45 mill seminars for customers.

1.2.5 Made countless one-on-one calls with hundreds of individuals.

1.3 Market Impact of Above

The fact that the results of my research became widely known. understood. and used was as important as the research itself. During the years 1965-1974, textured polyester sales grew from two million to nine hundred million pounds annually. I like to believe that my work was at least partially responsible for that growth.

2. Quality Management Systems

2.1 Quality Policy and Business Ethics

2.1.1 Instrumental in gaining acceptance by a largely hostile management of a Quality Policy that told customers "up front" about the quality of product being shipped, thereby ending the questionable practices of "truck blending": and "directed product." (I received an A Bonus for this work.)

2.2 Quality Documentation

2.2.1 To ensure maximum communication about quality, established Departmental consensus on the meanings and usage of about 200 terms relating to quality management.

2.2.2 Developed the Standard Operating Procedure for Complaints, Claims and Product Returns and gained consensus for their use within Marketing, Technical Marketing, and Manufacturing.

2.2.3 Developed the Standard Operating Procedures for writing, approving, and managing both Departmental product specifications, test methods, and standard operating procedures.

2.3 Billed Weight

2.3.1 Developed a uniform test method for billing all DuPont fiber products - at vast savings, particularly for "Orlon" and nylon. (I received an A Bonus for the work on "Orlon.")

2.3.2 Working through ASTM, I got the DuPont test method for billed weight adopted industry-wide.

3. Technical Information Dissemination

3.1 Developed (1956-1958) the Technical Information Bulletin system (writing, revising, approving, mailing, etc.) that was used virtually unchanged until 1985. Hundreds of thousands of such bulletins were distributed to the trade over the years.

American Society for Testing and Materials

1. Terminology Management

In Committee D-13 on Textiles, I developed the concept of terminology management and the systems approach to writing definitions of terms, which brought order to about 1600 textile definitions. Then, working through the Society's Committee on Terminology, I was able to gain acceptance for most of these ideas and for writing them into the ASTM regulations. They are now being implemented throughout the Society. For this work over a period of 16 years, I received eight awards, including the ASTM Award of Merit and the Frank W. Rinehart Award, and I was appointed Fellow of ASTM.

2. Specialized Terminology

Committee D 13.92 on Terminology, which I chaired for 16 years, used the systems approach mentioned above to develop a standard Terminology of the Burning Behavior of Textiles and to bring order to otherwise chaotic usage. These terms and definitions have been adopted almost universally by both industry and government in the United States and Great Britain, and to some extent, by the International Standards Organization (ISO). This terminology not only improves communication, but, if used properly, reduces the possibility of legal liability in advertising claims, labeling, etc.

American Association of Textile Chemists and Colorists

1. Test Method Development

1.1 Proposed to the Executive Committee on Research (ECR) and won acceptance for a Committee on Terminology (RA93) and served as chairman (1977-1963).

1.2 Proposed to ECR and won acceptance for a committee on Technical Manual Editorial Review (RA99) and served as chairman (1963-1986).

1.3 Proposed to ECR and won acceptance for an Advisory Committee on Statistics (RA 102) (1984).

These three committees have had a major impact in raising the technical quality of

individual test methods and the professional quality and usefulness of the AATCC Technical Manual.

2. History

2.1 Proposed and gained acceptance for Committee C-13 on History and Archives, and served two terms (1983-1985 and 1990 to present) as chairman. My goal was and is to build within AATCC an awareness of our history and the influence of past events on what happens today and in the future. Some activities to this end have been: history articles in Textile Chemist and Colorist, "I Remember When" feature column in TC&C, half-day history sessions on history at National Technical Conferences, "Oldest Dyehouse Contest," affiliation with the Chemical Heritage Foundation, etc.

Forensic Science

Witness for the Prosecution

As a key witness in the trial of Atlanta serial killer, Wayne Willams, in 1982, I lectured the jury on fiber and textile manufacture, showing how, in this case anyway, a single fiber could be said with utmost certainty to have come from the suspect's home. Williams was convicted of two of these murders and is still in prison.

Although fiber evidence had been used for many years, this was the first time the outcome of a murder trial hinged on fiber evidence only. Such approaches in trials are common today. I have also assisted the prosecution in other trials, most notably the Hillside Strangler (Los Angeles), Ted Bundy (Florida), and Steven Pennell (Delaware) cases. Pennell was executed for his crimes.

History of the Chemical Sciences

Research and Publication

Since retiring from DuPont in 1965, I have turned my attention to the history of the chemical sciences and technology and through research and publication have begun to gain

some recognition in a field that it is difficult to break into. For example, two papers relating to John Dalton (1766-1644), “father of the atomic theory,” have been published in Ambix, the British Journal for the History of Alchemy and Chemistry, the premier publication of its type. My recent work on Michael Faraday's religion published in the Bulletin for the History of Chemistry is getting world-wide attention. I am the current chairman of the Outstanding Paper Award Committee in the History of Chemistry Division of the American Chemical Society (ACS) and a Director of the Chemical Heritage Foundation, sponsored jointly by the American Chemical Society, the American Institute of Chemical Engineers, and the University of Pennsylvania.

History Library

Over the past thirty years or so, I have built a library of about 4,000 books relating to the history of the chemical sciences and chemical technology, which I use constantly in my research, and which I hope will some day become part of a university collection for graduate studies in the field.

Herbert T. Pratt
April 19, 1993