



Smithsonian
Archives of American Art

Oral history interview with Niels Diffrient,
2010 July 28-August 31

Funding for this interview was provided by the Nanette L. Laitman Documentation Project for Craft and Decorative Arts in America.

Contact Information
Reference Department
Archives of American Art
Smithsonian Institution
Washington, D.C. 20560
www.aaa.si.edu/askus

Transcript

Preface

The following oral history transcript is the result of a recorded interview with Niels Diffrient on July 28 and August 30, 2010. The interview took place in Ridgefield, Connecticut, and was conducted by Matilda McQuaid for the Archives of American Art, Smithsonian Institution. This interview is part of the Nanette L. Laitman Documentation Project for Craft and Decorative Arts in America.

Niels Diffrient has reviewed the transcript and has made corrections and emendations. The reader should bear in mind that they are reading a transcript of spoken, rather than written, prose.

Interview

MATILDA MCQUAID: So this is Matilda McQuaid. I'm interviewing Niels Diffrient at the artist's home and studio in Ridgefield, Connecticut, on July 28 [2010]. And this is for the Archives of American Art, Smithsonian Institution. And this is card number one.

So Niels, I wanted to just see if you could just establish or sort of begin talking about your childhood, where you were born, when you were born. And what specific things in your childhood helped you to get to where you are now — if there was anything or if it happened later. But let's just start at the very beginning.

NIELS DIFFRIENT: Well, I was born in Mississippi in 1928, a year before the Great Depression, a small town called Star and the population was, at the time I was born, something like 264. I think it is today about 240.

MS. MCQUAID: [Laughs.]

MR. DIFFRIENT: And it is not a fast growth area. It was all rural farmland. My father was trying to be a farmer at the time and not making a very good job of it. And he worked in a saw mill. And we were having difficulty surviving as most poor people in those years were.

When I was about five or six, he decided that it wasn't really working out and had heard that there were jobs to be had up north. Up north, in this case, meant Detroit. So he went in quest of a job at an automobile company in Detroit where he felt that he could make more money and better support his family. He did get a job with a Chevrolet company and worked in Detroit for a while on his own and he eventually sent for us.

MS. MCQUAID: And how large was your family? How many — did you have —

MR. DIFFRIENT: Just me, as the only child at the time; I did not have a brother or sister until 14 and 16 years later. So at that time, I essentially was in the midst of the Deep South and all the pleasures it offered for a youngster such as having been given my own rifle at age six and told to go shoot something to eat and going barefoot all the time and the usual things.

We went — my mother and I — to Detroit by train the first time because my father had not made enough money to buy an automobile, which he had not owned while he was in the South; we went everywhere in a wagon pulled by a mule. And, of course, on the small farm we had — there was no farm equipment, no tractors or anything of that. It was all Middle Ages and general farming advancements. You had to either pull it yourself or get the mule to pull.

And so I arrived in Detroit with this as my background and was, at the time, put into school. I immediately flunked kindergarten —

MS. MCQUAID: [Laughs.]

MR. DIFFRIENT: — not just because I was a poor, ignorant Southern boy, but because I also got pneumonia. And I was quite ill so I didn't attend school very much that first year we were there. But I got well and went back and they kindly let me skip the balance of kindergarten and go in the first grade. So that actually was the start of a new life for me.

At the time, I didn't know it. I missed the South and its kind of freedom. I wasn't allowed to carry a gun to school as I might have if I'd stayed in Mississippi. But the saving grace from that standpoint was that I and my mother went every vacation — that is, the summer and Christmas — back south and stayed with relatives, so that I spent until the Second World War, when I was 12 years old, every summer and winter for some weeks still in the South, so that I did graduate to a larger-bore rifle —

MS. MCQUAID: [Laughs.]

MR. DIFFRIENT: — and I did learn how to shoot a lot of small animals for us to eat — namely, squirrels. And I spent a good deal of my time and I enjoyed very much farm life.

The main value of being on a farm at that age was, I had not been exposed to what hard work it was. I did — when I got a little older, I did have to pick cotton and cut sugar cane and do a variety of chores, but it was not heavy duty as it was for the grown-ups. Therefore, I've always had a good feeling about it. And I've heard it said by a number of people that have studied farm-raised kids that they are embedded with a sense of very practical outlook on life — getting things done and making sure that the basics are served. And I'm not too sure that is inaccurate. I've always had a certain attitude that I've got to make things work.

MS. MCQUAID: Do you consider yourself a Southerner? Or is that —

MR. DIFFRIENT: Well, I don't think of it that way particularly because I was 12 years old when I left off going at all to the South, and it was many, many years later that I went back.

And I, of course, got very entranced with my life as a youngster growing up in Detroit. I enjoyed Detroit. It was wonderful town in those years, one might say working class, but yet there was a lot of pride in that kind of work in those years. And it was great melting pot of many ethnic types, Detroit. And they all got along very well up until the race riots. But I enjoyed it even though we had no money and there was very little we could do before air conditioning; it was the — it was still harshly the Middle Ages.

But by the time I got to high school, I began to realize that there was another way of life. I met some youngsters from better neighborhoods and I began to see my way towards living a different life than I had up to that point. I think it was only then that I could say I stopped thinking like a farm boy. Up to that point, not only did I still use my life on the farm as a reference, I was surrounded by a lot of Southerners who had done the same thing. Detroit was, at that time, a white place where, if you were poor, you could get work. So we were there.

Probably the most important thing was exposure to things that I would never have seen had I stayed on the farm: of course, city life, being one. The area where we lived was not far from a cultural center in Detroit. I was just a few blocks from the art museum [Detroit Institute of Arts, Detroit, MI] and the library, which I discovered was a kind of extension of my playground.

And also, where we lived had another important factor that I had no notion of until it came to be, and that was that I was within the neighborhood of a very consequential high school. It was a technical high school called Cass — C-A-S-S — Technical High School and was quite famous throughout the Middle West because it taught college-level subjects in art, in music, science, engineering and a variety of things. It was not heavy on academics, which was very fortunate for me because I was not very heavy on academics either. And I didn't do terribly well in academics.

But the one thing that I could do, which I never thought a great deal about, was, from the earliest times, I could draw. And it first showed itself when, in our house still in Mississippi, we had two books. One was the Bible and the other was a Sears and Roebuck catalog. I was so entranced with the catalog because it had illustrations of another world from the one I knew. And to get closer to it, I would draw them. And I still remember neighbor farmers coming around, my parents showing them my drawings, and they didn't believe that a four-year-old could draw that well. So it was just a talent that I got through the ether or something.

MS. MCQUAID: Right. [Laughs.]

MR. DIFFRIENT: Well, it began to show up, when I went to high school, that I had — at the time, the most advanced technical thing was an airplane. I loved airplanes as a youngster. So I drew airplanes all the time. So when I looked at the list I was handed at the school, I of course chose aeronautical engineering because I loved the airplanes. I got into the first year course —

MS. MCQUAID: And what year was this? It's in ninth grade? Or —

MR. DIFFRIENT: Nineteen forty-three. It was a three-year high school. Ninth — no, wait a minute —

MS. MCQUAID: Tenth.

MR. DIFFRIENT: You finished at 12. Eleven, 10 — yeah, at the end of ninth grade.

There was an intermediate high school we went to first — seventh and eighth, and then we started — is that right? Or maybe it was four —

MS. MCQUAID: Seventh, eighth and ninth were put —

MR. DIFFRIENT: No, it must have been a four-year high school.

Anyway, I had gotten to an intermediate school. Or actually, I won a scholarship for the highest grades in manual arts, which sort of also showed itself up as related to my ability to draw. And that was an interesting story as well which I'll tell related to going to Cass Tech.

And that was, it was the Henry Ford Trade School scholarship. I had — I was called in by the principal. He said, "You lucky boy, you're going to Henry Ford Trade School scholarship." I went home with the piece of paper and my father looked at it and he was overjoyed. And he said, "Do you know what this means?" And I said, "Well, I don't have any idea." And he said, "When you graduate from this school, you're automatically a foreman at the factory." Now, foreman was as high as he could see in the hierarchy of advancement; he was still working on the assembly line.

So I didn't know what that meant, but I went to the school on the day I was assigned. And it was at the River Rouge Plant, the original plant of Ford, which, at that time — and still, I supposed — was a mega-city of its own: everything from raw iron ore to making steel to making cars. And I walked and passed the guard and then into this huge hangar-like structure where the school was situated. And as I walked in, I saw row upon row of young boys my age and a little older standing in a machine learning how to run all the different machines — lathes and drill presses and everything. And there were hundreds of them.

And at that point, walking past all this, we went — ushered up a stairway to what was the — I guess they called it the dispensary — the in-house hospital, in fact. Went in; we all sat down. There were a number of us — about a dozen, I suppose. And a nurse comes around. First thing she says: Okay, boys, strip. We were going to get a physical examination.

Well, this didn't appeal to me on top of having seen all these automatons at their machines. I got up, I walked out the door, down the stairs and went straight home.

And after I got home, of course, I broke and started crying, told my mother what I'd done. And my father, I thought was going to an epileptic fit over it.

But anyway, I realized, in retrospect, that it was an important turning point in my life. I may have been practical and I may have been capable in manual arts and the like, but I didn't have the spirit to stand in a machine.

At any rate, Cass Tech was another matter. I had gotten into the aeronautical engineering course. And I realized that it was a lot of mathematics, a lot of physics and various shop practices and all kinds of technical stuff.

And one day, I was sitting in that class. And the teacher was lecturing us on some abstract subject that I didn't appreciate. And I was drawing an airplane, which I was doing most of the time anyway. Another boy looked over my shoulder, at the drawing, and said, "You can really draw well." And I said, "Yeah, a lot of good it's going to do me here. And nobody's ever asked me to draw an airplane even though I'm in aeronautical engineering." And he says, "Well, you could shift to the art department. There, they — there, they want you to draw." I said, "Why would I do that?" And he said, "Well, for one thing, there are more girls there."

MS. MCQUAID: [Laughs.]

MR. DIFFRIENT: And sure enough, I switched and —

MS. MCQUAID: You were definitely — [inaudible].

MR. DIFFRIENT: — started studying art, which was another turning point in my life — again, another accident I could have never foreseen.

And it worked out well. At first, I was hesitant, but eventually, before I got through, I had done fairly well.

And I built up quite a portfolio, as a matter of fact, because in those years, they taught it entirely on the basis of skills. And I had a whole semester of charcoal drawing, a whole semester of pencil drawing, watercolor, gouache, oil paints, poster paints — I knew every technique. We had had letterform design, we had had printing of various sorts, you know, etching and lithography. It was a complete college-level course, and I built quite a portfolio.

And more than that, I began a social life with educated kids from good families who were also artistically inclined. And it was my first real relationship, socially, with a cohort of like people, which, I must say, turned my head considerably. I think at that point I pretty well gave up my Southern accent.

MS. MCQUAID: [Laughs.]

MR. DIFFRIENT: And I graduated from that school reasonably well, except for academics. My grades weren't so good and they sort of kept my average lower. But I then had from somewhere the urge to go to college, but I had no money.

I had continued my interest in airplanes by building model airplanes, which was a very big hobby in those years, and I'd won a couple model airplane competitions. So I had maybe a hundred dollars saved, which was pretty big money for that time — 1946.

But it wasn't nearly enough, so I went to work. I got a job painting safety posters at the Dodge Company. And then I got another job which was much better, and that was in the art department — art and advertising department of the J.L. Hudson Department Store, which was a really big deal in Detroit — big, big store, whole block. It must be the equivalent of Macy's or something of that sort.

So that was another exposure of considerable interest because I had gotten the job because of the techniques I'd learned was airbrushing. And airbrushing was a much bigger thing in those years than it is now. Most posters were done by airbrush technique — the artists who did them were very accomplished in that.

I don't know if you've ever seen the old Wrigley chewing gum posters that are done by airbrush style?

MS. MCQUAID: Oh, yeah, yeah. Yeah. Yeah. Yeah. [Laughs.]

MR. DIFFRIENT: Well, I knew all of that stuff. And I was very good at airbrush. And it wasn't that they wanted posters, but what they decided — what they thought I could do, since I was handy with all techniques, was photo retouching. So I was taught — I was asked to be a photo retoucher. And I didn't know a thing about it except that they gave me 8-by-10 glossies of pots and pans and I was to airbrush out the bad shadows or reflections. And I still remember one of the more interesting aspects of it was that they photographed all the ladies in negligees and the like, but they didn't wear undergarments. So there were dark areas showing through the negligees, which I also had to photo retouch out.

MS. MCQUAID: [Laughs.]

MR. DIFFRIENT: So it was all in all an interesting job. But turns out I wasn't terribly good at it. I would have to rub it off and start over a lot more times, and so they decided that they could get it done better professionally. And they would switch me over into illustrating. So I started illustrating, first of all pots and pans and then later on furniture. And I was good at that. So I drew that. And to make a long story short, this job went by fairly quickly. I earned a fair amount of money. And I had been advised that a school I might like, considering my practical bent, was Pratt [Institute, Brooklyn, NY] in New York.

Well, that didn't mean a thing to me. But I thought as long as I go somewhere, that's all I need. So I applied to Pratt — this was 1948; I worked two years after high school — and I got a very nice letter back from them saying, we're impressed with your work, we would normally accept you in a moment, but we are giving precedence to the veterans. And they were returning in great numbers, you know, hundreds of thousands of these young men coming back from the war. And they had GI bill. So they said we cannot take you now. Try again in a year or two. So I was a bit depressed about that.

And I talked to some of the people I knew there. And they said, well you know, there's a good school right outside Detroit named Cranbrook [Academy, Bloomfield Hills, MI]. And I found out the address for it, I packed up my portfolio, sent it off. I'd never been to the place — it was sight unseen. I really didn't care as long as I got in. And I was accepted. I went, and of course my portfolio full of art — I was accepted into painting. Well, that wasn't where I wanted to be. But I thought, well, it's a starting point.

And the minute I got there I saw architecture and design. And I was a little torn which one I'd like best. But I signed up for design. And after — from that point on, I never did another painting. So they flunked me in painting. But I got going in design. And then later I switched to architecture, and so I had both.

It wasn't until I was there two years that I found out that it was a graduate-level school. And I had come in straight from high school. And they found this out at the same time.

MS. MCQUAID: Oh, that's so funny. That it took — totally forgot that —

MR. DIFFRIENT: Well, I got — well, I got in totally on the basis of my portfolio, which was probably better than most college-level art portfolios. And they didn't check my transcripts.

MS. MCQUAID: And how long — this was after two years?

MR. DIFFRIENT: Between one and two years — somewhere like that.

MS. MCQUAID: Oh, my god.

MR. DIFFRIENT: I was well into the second year before it was discovered. And they said, well, you're doing so well. And I had won the — I had won the top medal in design. So they could hardly throw me out. And I was

getting a higher grade than anybody else. And so they said, well, the only way we can give you a degree is if you go to university and get credits. You'll only have to go two years though and that'll be enough. But we can only give you a BFA. Well, that didn't mean anything to me particularly so after that I stopped for two years and went to Wayne University in Detroit [MI], and came back and finished off.

So I did that with two years at Wayne and four years at Cranbrook for my BFA. And I had won top awards in every — every semester.

MS. MCQUAID: That's so funny.

MR. DIFFRIENT: But I got a BFA — [laughs] — instead of an MMA. But —

MS. MCQUAID: They should have given you both. I — did you — I can't remember if you have an honorary something from them.

MR. DIFFRIENT: Well, they can't give honorary degrees. But they gave me the equivalent a few years back. Anyway, that was my education. But it wasn't the most important part of my education.

MS. MCQUAID: Well, who was — were any — who were your classmates? Anything — anybody that is —

MR. DIFFRIENT: Yeah, David Rowland, who did the stacking chair things [40/4].

MS. MCQUAID: Right.

MR. DIFFRIENT: Stacking chair was one of my classmates. The architect — the Japanese architect Fumihiko Maki was a classmate at the time. He wasn't quite there — well, no, Jack Larsen was there while I was there. And just before I arrived — or just as I arrived, Chuck Bassett, who had been head of Skidmore, Owings and Merrill in San Francisco, had been there.

MS. MCQUAID: Interesting.

MR. DIFFRIENT: Some others whose names don't come to me right now — it wasn't as rich an environment as it had been four, five, six years earlier with [Charles] Eames and [Eliel] Saarinen and Harry Bertoia and Billy Baldwin [ph] and Florence Knoll and that group. They preceded me by at least six years, I think — something like that. They were there in the earlier — early '40s — '42, [194]3, something like that.

MS. MCQUAID: And who was head at the Cranbrook at the time that you were going through?

MR. DIFFRIENT: When I started Eliel was.

MS. MCQUAID: Okay. He still was.

MR. DIFFRIENT: But he died two years later in 1950. My first architectural classes — if you can call them classes, just doing some architectural work — was under him. And then after that, nobody of any great significance remained except Carl Milles was still teaching sculpture. Now, Cranbrook at that time had this wonderful open program in which it — you chose your major, but you were free to go into any of the other disciplines and take your hand —

MS. MCQUAID: Take classes?

MR. DIFFRIENT: Well, they weren't classes; that was the thing.

MS. MCQUAID: Just cut loose.

MR. DIFFRIENT: You had resident artists — it's the same today —

MS. MCQUAID: Yeah.

MR. DIFFRIENT: And you were assumed to know some of the basics because you had already graduated from college.

MS. MCQUAID: Right.

MR. DIFFRIENT: And so I went. And Maija Grotell — you may remember her name — was a great ceramicist that taught me how to throw a pot. And Marianne Strengell taught me how to weave. And others taught me the various disciplines. And the casting assistant — or assistant to Carl Milles in sculpture — taught me how to do work in clay and make plaster casts and all the fundamental techniques I picked up as I needed them from just dipping into these various things.

And that was the nature of the school. And I thought it was wonderful, and I loved all of it. And it's — you know, at one level it might have certainly been designated as manual arts.

MS. MCQUAID: Uh-huh, uh-huh, uh-huh. [Affirmative.]

MR. DIFFRIENT: [Laughs.] But with a difference, you know, aesthetically and from a standpoint of accomplishment and technique. So it really was the opening of the door on the cage in which I've been in up to that time. And I saw a bigger world.

But probably the one most fortunate event came as a result of my own ignorance. And that is, I had never heard of a scholarship. I didn't know what they were, nor did I know they existed. So I just assumed I had to work. And so I had part-time work. The first year I tended the house of an old lady that lived in the neighborhood and did all her yard work and everything and she gave me a room. But I won a couple of big competitions and earned enough money to pay my way the next year.

But at the same time the head of design at that time, an ex-architect — or an ex-employee of Eero Saarinen named Ted Larofsky [ph] had taken over the design program and said, "I'll talk to Eero and see if he can use somebody part-time." So I had an interview with Eero and it turns out he was about to start the work on his second design — chair design after he had just finished the big womb chair that came out in '48. And this was 1949.

So he saw me as a good hand at the models and everything. And I got the job. So for the next four years I worked for Eero —

MS. MCQUAID: That's amazing.

MR. DIFFRIENT: — which was just pure luck and leads me to think that some of the best things in life are accidents that you cannot foresee. As a result I've never made a plan in my life. [They laugh.]

MS. MCQUAID: I think you're absolutely right about that. I think you just have to — there's certain things that you — well, you can't control.

MR. DIFFRIENT: That's right.

MS. MCQUAID: And you just leave yourself open to those things. And it's amazing where they can lead you.

MR. DIFFRIENT: Yeah. They're not pure accidents though. An accident takes two sides — you know, the event and the receptor. You have to somehow be able to deal with what's presented to you in the accident. And I realized that years later, but at the time I just thought, well, this is pure luck. But, again, my ignorance was such that I had no idea what I was getting into in the Saarinen office. I knew it was an architectural office and that he was the brilliant son of Eliel Saarinen, who had been the president of Cranbrook. And I thought I was very lucky.

But it was certainly equal if not well beyond the education experience that I was getting at Cranbrook itself. But the two enhanced each other because all the work that he wanted me to do — which was largely model making; I had to sculpt his whole chair in clay; I had to make dozens of little models — all of that was easy for me. And he appreciated it. So he worked me all the hours I'd give him. And fortunately, he paid overtime. [They laugh.]

So in summer I worked double hours, made enough that from then on I had my tuition, room and board paid. And that was the other lucky part of the whole thing.

MS. MCQUAID: Amazing.

MR. DIFFRIENT: And it was good work. It was being paid to be educated in effect.

MS. MCQUAID: Right, right.

MR. DIFFRIENT: So that was extremely fortunate. And I, in retrospect, realize what a lucky break it was. So at school I was fortunate enough to meet other architects, designers, and of course, all the skill — or the craft-based people and everything and learn a lot from all of them, including Jack Larsen who kept criticizing what I was doing in weaving. And others who were guiding me in things I had not — no knowledge of. And I must say also that the young men coming back from the war — it's just — sorry, I get emotional about it.

MS. MCQUAID: No, no, no. No. Do you want me to turn this off?

MR. DIFFRIENT: It's okay. All of us wanted to go to be a soldier during the war. It was a different attitude we had.

MS. MCQUAID: Yeah, yeah.

MR. DIFFRIENT: We were, in a way, disappointed when we got out of school there was no war.

MS. MCQUAID: Yeah.

MR. DIFFRIENT: Sounds silly in retrospect. But it was another world.

MS. MCQUAID: Yes. Did there — were there many GIs that came to Cranbrook?

MR. DIFFRIENT: Well, that's what I was about to say — that they had such spirit.

MS. MCQUAID: Mm-hmm. [Affirmative.]

MR. DIFFRIENT: You know, they were lucky to be alive.

MS. MCQUAID: Yeah. And they took advantage of it in terms of the education?

MR. DIFFRIENT: Well, it changed my life to meet these guys. I feel silly getting emotional here, but —

MS. MCQUAID: No. No, no. I mean, it's obviously something that, you know, affected you. I'm very — I'm curious, like, who some of these people are and did you — do you keep up with any of them now? I mean, that they were —

MR. DIFFRIENT: I talk to one of them regularly, Dave Rowland.

MS. MCQUAID: Huh.

MR. DIFFRIENT: Did you never meet David Rowland?

MS. MCQUAID: No; I know his name.

MR. DIFFRIENT: He designed this 40/4 chair — the stacker chair. And it's been the source of his living for 40 years or more. I mean, a great design. He didn't do many, but he sure hit a ringer. But David had been a captain of a bomber. And these experiences that these young guys had had —

MS. MCQUAID: Did they talk about that a lot?

MR. DIFFRIENT: No. No —

MS. MCQUAID: That's what I was — what I was wondering, if it was so —

MR. DIFFRIENT: No, I had to pry it out of them because I had always felt I'd missed out on a great adventure. And of course, I was of the age where the — where the — where the terrible side of it wasn't embedded in my brain as it was in these young guys. But actually, I tried to join the Naval Air Corps just at the end of high school because they had a program called V-5 program in which you could join. And if you were accepted they'd pay two years of your college. And then you had to go and take two or four years of naval training — flying school. And then you could go back and finish high school.

Well, that was when I discovered that my eyesight was not very good. I should have known it, but — on the farm we had no doctors or anything to tell us. And so it never occurred to me that because I had one bad eye — I don't know if anybody could believe I was so naïve that I thought everybody did. It never occurred to me that everybody else had two good eyes. [They laugh.] But I had what I always called a lazy eye; it just didn't develop. And if they put a patch over my good eye it would have, but nobody knew. At any rate, I was flunked out of that. And that's when I started looking for colleges.

So these young guys had been through everything. And they didn't come back whining or crying.

MS. MCQUAID: Or bitter.

MR. DIFFRIENT: They had a spirit that to this day I realize, you just don't dare complain about things.

MS. MCQUAID: Yeah, yeah. That's amazing.

MR. DIFFRIENT: But that was very important. And one of them, a guy named Tony Moody who had been in the — who was in the architectural program and graduated before me and came back to visit. And he had gotten a Fulbright grant to Italy. And he talked to me about it. And it sounded just wonderful. And I wanted to do that. So he helped me fill out the program — the form for it. I applied and got it.

And then in 19 — I had to — I had to work for a while. By that time I'd married, actually, my first wife. And I was

awarded the grant in 1954, which was little over a year after I graduated. And I moved to Milan [Italy]. And the stipulation of the grant was, I was to go to the university — well, two universities. The first one was Università per Stranieri in Perugia, to — for language studies and the like. And then after that in Milan I was supposed to go to the Brera Institute [Academy of Fine Arts of Brera, Milan, Italy].

Well, I went. And it — I looked all around for studios and shops. And there weren't any. And I realized it was entirely a lecture course of study. There was no place to do any physical work. So I went and sat in a few lectures. And my Italian wasn't all that good, so — I thought it was one big bore. And I wasn't sure what to do. But I had the name of a man named Giò Ponti who — where I'd gotten it, I can't remember.

Oh, I'd worked part-time before going with Walter B. Ford in Detroit, Wally Ford, who had an industrial design office right in downtown Detroit, and I worked freelance for him.

MS. MCQUAID: Yeah.

MR. DIFFRIENT: And then I got a letter of introduction to — he wasn't of the Ford family, but he had married Josephine Ford, so that they both had — shared the same name; she didn't have to change the initials —

MS. MCQUAID: Right.

MR. DIFFRIENT: — on her linen or anything.

MS. MCQUAID: [Laughs.]

MR. DIFFRIENT: And he gave me a couple of names; he may have given me Ponti's name, too. I went to see Giò Ponti, and I showed him my work. And he was quite excited about it; he published some of it in *Domus* [Magazine], that my class project — work — and —

MS. MCQUAID: What year was this?

MR. DIFFRIENT: — and it was 1954. I got two names from him. The first was Marcello Nizzoli, who had designed all the Borletti and some of the Olivetti machines. And the other was Marco Zanuso, an architect, who had designed some furniture.

MS. MCQUAID: Okay.

MR. DIFFRIENT: Neither of them — well, I'd heard of Nizzoli, but I hadn't heard of Zanuso. And I went to see Nizzoli, who was my first choice; but it turned out he was a sculptor. And he simply left his sculpturing off and did a sewing machine and some of the most beautiful stuff in the world. And he didn't want to work with anybody; he was a single —

MS. MCQUAID: Right.

MR. DIFFRIENT: — person; he worked by himself. And then I went to see Zanuso. He looked at my work, and he was impressed, and he said, "Do you think you can design a sewing machine?" And I said, "I'm sure I can" — and never having done one, of course. But it didn't seem hard, and he said, "Well, I've been offered a job by the Borletti Company, and I've been waiting because I wasn't sure if I could do it." At that time, in 1954, they still didn't have any industry going to speak of, and they — all — everybody was trained as an architect, and the — and their skill at doing products was still in formation.

So he took the job, and I did the machine for him in the course of the year I worked there. And that was wonderful. I learned a lot about life and design in Italy. I learned what good coffee was.

MS. MCQUAID: [Laughs.]

MR. DIFFRIENT: I learned that there were more important things than working. And yet working was, in some ways, more important than here. And also I learned that there was another way of designing, which would never have occurred to me, and that's — it relates back to the fact that there were only lecture halls at the Brera Academy, and that is that there was a whole subculture of artisans in Italy; I'm sure just a continuation of what had always been there —

MS. MCQUAID: Right.

MR. DIFFRIENT: — in all the great arts and crafts of the country. And as an architect, the reason they didn't really have to know a great deal about product design was that they only had to have a concept of what they wanted to do and general direction, and then hand the project over to an artisan of one sort of another.

MS. MCQUAID: [Inaudible.]

MR. DIFFRIENT: Even the engineers fell into the category of artisanal thinking. They were not like American engineers; they — a young kid like me they called "il maestro," for instance. They thought the talent I had was something they could respect, and they'd have done anything to make the mechanism work the way I had asked them to make it work instead of having a big fight with me as many of the engineers here did.

So this substructure of support gave the Italians a foundation that we couldn't have equaled except many years later because we all still had these divisions of development. And I learned a great deal about the need to always work with people who had an aesthetic idea, an aesthetic sensibility. And I knew from that, when I came back, that I didn't want a job in a corporation.

So, while I was there, towards the end of my stay, I got a letter from Henry Dreyfuss, because a friend of mine had given him my name, and he said, "When you come back, stop in New York for a job interview." So I had no other plans, and I did, and he offered me a job. And only as I was leaving, did I find out it wasn't for New York; it was for California. [They laugh.]

So another accident. I thought, well, what the hell; haven't got any settled place. I might as well go to California, which I did for the next 14 years, ending up buying my share of his company with my partners. So I ended up as a junior-grade designer and ended up owning the company. He retired at —

MS. MCQUAID: How soon after you came on board did he retire?

MR. DIFFRIENT: Oh, quite a bit later. I worked there for — from '55 till '68. And then he announced his retirement. And by 1969, we had bought the company and closed the California office and centered ourselves in Manhattan.

About the same time — as a matter of fact, almost exactly the same time as that, my wife decided she was in love with our pediatrician —

MS. MCQUAID: [Laughs.]

MR. DIFFRIENT: — and announced her intention, and so my marriage broke up. And therefore I moved to New York as a single bachelor — [inaudible] —

MS. MCQUAID: And your wife — and your ex-wife stayed in California?

MR. DIFFRIENT: Yeah, well, I gave her everything. She had the house, she had the kids, she had the cars — she had the whole works. I had seven suitcases and that was it. Then I went to New York and got an apartment, and that was the start of my New York life as a bachelor.

MS. MCQUAID: And that was in sixty —

MR. DIFFRIENT: That was 1969 —

MS. MCQUAID: Sixty-nine.

MR. DIFFRIENT: — July of 1969, I moved.

Henry stayed involved in some — with clients because they asked him to, strictly as a consultant. He didn't look over our shoulder or anything; we were on our own.

But at that time, we probably had the most envied list of clients in the country. You know, we had Polaroid, we had John Deere, we had Bell Telephone and all — we designed all the telephones at that point — and Teletype and Hyster Company — oh, God, I can't even think about all of what — airplane interiors — I did airplane interiors for Lockheed, and then I was in charge of American Airlines airplanes for 17 years.

MS. MCQUAID: And how did it change when you first joined Dreyfuss and then when you took it — and when you sort of bought it out with your partners in 13, 14, 15 years later? What — was there a shift that then happened at that point, too, in terms of what kind of work you did or Dreyfuss did — Dreyfuss Associates did?

MR. DIFFRIENT: No.

MS. MCQUAID: Or was it more of a continuation of what you had done?

MR. DIFFRIENT: It was — it was a continuation and therein lay the seed of my unhappiness with the organization. I didn't know it at first, but I was of a mind of doing something more.

Henry was very successful, but we weren't Henry. And in some ways we were better than Henry because Henry was what I would have called an executive designer. He was highly respected by all his clients; he used to be proud of being — of calling himself, "vice president of design." But he never made a drawing except maybe a rough sketch, and he knew very little about mechanics or mechanisms. I mean, he knew enough; but what Henry liked to do is sit across the table at a lunch at Sardi's or somewhere with a client, and the client would tell him about what he wanted in the way of product design. And Henry would pull a little stub of a pencil out of his pocket, which he very carefully had placed there, and took the napkin and drew —

MS. MCQUAID: [Laughs.]

MR. DIFFRIENT: — the idea upside down so — to the client. Well, the client, of course, was wowed by this skill —

MS. MCQUAID: [Laughs.]

MR. DIFFRIENT: — and thought anybody who can draw upside down must be good.

MS. MCQUAID: [Laughs.]

MR. DIFFRIENT: And this is kind of the way he got a lot of his jobs — was just from respect. That's not to say he wasn't extremely competent in his approach to design, but it was design from 1930, design from 1940, 1950, when designs were still pretty straightforward and not all that complex. And the competition was all of the same ilk.

Raymond Loewy was not much different; Raymond didn't make all those drawings he signed his name on. And Walter Teague had been an advertising guy. So these things were different then.

I saw another way to design because of my skill level for one thing, and so I gradually began to get unhappy and eventually it came to a head. My partners didn't want to change, and I did; so I left. And that was in 1980, or at least I announced my departure in '80; and then '81, I left for good.

Up to that point, the company didn't change a lot. It was successful. It grew. When I started, we had something like 30 people; it grew up to 40. When I — by the time I — no, shortly after I was — I left, they'd taken on graphics as a — as one of their specialties, and they grew to 60 people. But they didn't have anywhere to go, and eventually it began to fizzle, especially when the — my other partners of my era left, the next level hadn't learned anything. It was — we were making no advancements.

It was in those years that I had to fulfill some of my notions of interest, and that's when I took on the development of projects like Humanscale, these selectors — and, I mean, I did this. [Sounds of materials moving.]

MS. MCQUAID: Right.

MR. DIFFRIENT: And I would — joined all the boards I could, and I was invited. And I ran the Aspen conference [The International Design Conference in Aspen, CO]; I was on their board; I did publications; I got grants. I dug one out after I'd been sent that stuff; you know, I'd forgotten about this — was a fulfillment of a National Endowment [for the Arts] grant that I had. I had already gotten two or three grants and was on their — on their panels — policy panel and grant panels.

MS. MCQUAID: But it was when you were working at Dreyfuss that the Humanscale , you began to kind of —

MR. DIFFRIENT: I'd visit — I began Humanscale. Also, in my spare time, not in office at the time, I started fooling around with chair design. Because I had — I had, first of all, Eero's experience, which I hadn't made use of for decades — well, a decade.

MS. MCQUAID: And Dreyfuss was — were they any —

MR. DIFFRIENT: We were not in furniture. But we did seating. We did airplane seating, we did seats on tractors, we did all kinds of seating —

MS. MCQUAID: Right.

MR. DIFFRIENT: — truck - train seating, all kinds of machinery —

MS. MCQUAID: Interesting.

MR. DIFFRIENT: — in which the operators sat. So — and that had exposed me to a lot of expertise in this area. And Henry himself had the brilliance, after the Second World War, in which he had done some wartime work of

carrying on what he'd learned about human factors engineering.

You see, a lot of the war equipment had gotten so complex that people didn't fit into things and couldn't operate things well, like fighter planes, all the controls and everything.

MS. MCQUAID: Yeah.

MR. DIFFRIENT: So a specialty grew up — it had been there, but hadn't gone very far — called human factors engineering. And this was —

MS. MCQUAID: Who dubbed that term?

MR. DIFFRIENT: I'm sorry?

MS. MCQUAID: Who dubbed that term? I mean, how did that —

MR. DIFFRIENT: I'm not too sure; that's what it was called before ergonomics.

MS. MCQUAID: Okay. Yeah, yeah.

MR. DIFFRIENT: "Ergonomics" came from Europe. Human factors engineering has always been there and, as a matter of fact, the society is called the Human Factors Society, to which they've added the subtitle "ergonomics." But that's what it was always called, and I think there was work in this direction prior to the Second World War in Switzerland and Germany and, to some degree, Sweden; but I didn't know about it. And I don't think Henry did either until, during the war, he was asked to design the interior of a — an armored personnel carrier, which was like a tank, only it didn't have a —

MS. MCQUAID: Right. A gun.

MR. DIFFRIENT: — a big gun on it. And it was a tight space, and you had to know about people. So we found out about these people who were accumulating data on the sizes of people and began to get a storehouse, a file, on data pulled together from Army records, the biggest of which, by the way, and the start of a lot of human factors data, was the information they had for doing uniforms because they had people of all sizes and shapes.

So they had — they'd developed a camera — orthographic camera for photographing people to get proportional sizes straight from photographic negatives. And so there was a lot of data there, and Henry hired a man named Al Tilley, who himself was an engineer, and he began to be — keep the files on all this data. And the minute I got involved in it, I thought it was fantastic. I loved the idea of knowing about the things — there's one of the selectors of the — no, it isn't. Somewhere in here, the selectors of the Humanscale things — you've seen the Humanscale publication, I think.

MS. MCQUAID: Yeah, no, I have — we have it in the Cooper-Hewitt [National Design Museum, Smithsonian Institution].

MR. DIFFRIENT: Yeah.

Well, Henry had done a publication in the '50s — '57, I think, called *The Measure of Man* [Henry Dreyfuss. New York: Whitney School of Design, 1960.] —

MS. MCQUAID: Yeah, right, right. I remember that.

MR. DIFFRIENT: — which was the precedent — was a precedent to my publication. But it hadn't been terribly successful because the problem with it was, it was fairly expensive, and it had these two full-size, fold-out profiles of a man and a woman —

MS. MCQUAID: Yeah.

MR. DIFFRIENT: — in outline. And then it had a bunch of separate sheets with data on each sheet.

MS. MCQUAID: Right, yeah.

MR. DIFFRIENT: Well, what would happen is every university bought one copy, and every student copied the sheets on the XEROX machine. And so he end up — didn't sell many. But it did — it opened a lot of people's eyes to it.

Well, I had always felt that that was an incomplete vision, and then that's when I came up with the idea of, first of all, inventing a form — aside from a big, thick textbook, which, you can see, I've got dozens of them, from

which it's very hard to extract the data you want — inventing a form that you could copy. And that's when I came up with the idea of the rotary selector, which was common in those days. If you remember, if you wanted to know something about who had — what batting average somebody had —

MS. MCQUAID: Right.

MR. DIFFRIENT: — you turned a little wheel and —

MS. MCQUAID: Right, I loved those. I loved those. [Laughs.]

MR. DIFFRIENT: — yeah. Well, they were big before computers, and it was an analog computer device.

MS. MCQUAID: Yeah, yeah, yeah. No, they're great.

MR. DIFFRIENT: Well, I thought that could be adapted, and we did. And thanks to Al Tilley, who had an engineer's mind, he worked out all the layouts so that the data appeared in the right windows and everything.

MS. MCQUAID: Right, right.

MR. DIFFRIENT: And then we had a young woman named Valerie Pettis [ph], who was our graphic designer at the time, and she did the graphics for it. And between the two of them, and my guidance on — I named it, I decided on all of the fundamentals; but they provided the backup work on it. And they did a very good job, and it has been immensely successful for that kind of thing.

MS. MCQUAID: Now were they — but — so that — were they in Dreyfuss' office or —

MR. DIFFRIENT: Yeah, they worked for me.

MS. MCQUAID: Okay, yeah.

MR. DIFFRIENT: And so I was taking time out of the office, which my partners resented no end. So after the first year — the first publication — the first volume, which we paid for ourselves, through the work of these young people, I acquired the publisher, MIT Press [Massachusetts Institute of Technology Press, Cambridge, MA].

I went to see them, and they were willing to take it on. This was sort of their manifesto — was to publish off-beat things in design and arts and things. And I said, "Well, there are more of these possible, but we don't have any money." And so we agreed we'd go to the National Endowment for a grant, which I couldn't get as a profit institution —

MS. MCQUAID: Right.

MR. DIFFRIENT: — but they could. So I went with a guy named Frank Lamboski [ph] — [inaudible] — a Polish name. We went to Washington [D.C.], and they gave us a grant. So we did the next two volumes on their nickel and ended up with the three volumes.

Well, that was saving my soul at Dreyfuss because I was aching at the fact that we were — there they are — I was aching at the fact that we weren't inventing anything. We were still work on call and paid by the hour, which I also resented, not because I was out to make a lot of money, but simply that it was unfair. We designed a Polaroid camera that made millions upon millions of dollars and we were paid maybe 50 [thousand dollars], \$100,000 total. I thought, that's no way to work. And I recalled Eero working on royalty.

So this began to stew around. And I met a man while I was still in California because I had a job of doing interiors for a bank, United California Bank, and it was a big bank in California. And I specified, of course, Eero's chairs and Knoll furniture. So the local head of the Knoll sales organization was a man named Bobby Cadwallader, who then later became president of Knoll, moved to New York and called me up one day and said, "Would you like to do a chair?"

I was then about two years from leaving Dreyfuss. And I said, "Well, I'll have to do it on the side because we don't take this kind of job." And so I started working at home on it. And at the time I started, I was still a bachelor, so I had evenings often without nothing to do, and I designed it all at home. And as I designed it, I realized, if I can make this one pay, I'm going to leave.

And then I met Helena. We got together. And I felt like moving on. And that's when I quit. I had the idea of my furniture being made — chairs — and me getting a royalty to support the next project. And that's where it all started.

MS. MCQUAID: And how many chairs did you end up doing for Knoll after that first one?

MR. DIFFRIENT: Well, basically, two lines. It started with the fact that, at the time, I was in charge of American Airlines' design. And I knew they needed a new airport seating — the waiting room seating. And I had a good idea of how to design a really good chair, which is basically this chair. These are early prototypes. It's steel. [Sound of knocking on surface.] It's stamped the same way that we made tractor seats. It has no stitching. It's all stretch fabric. So it was an automated process — a virtually automated process of making it.

I had no idea of doing an office chair at the time. My design was these shells, which are moderately comfortable, on a beam for waiting room seating. And that's the principal thing that it was designed for, and that's where it would've stayed except that everybody at Knoll said, "Well, gee, this is more comfortable than most of the other office chairs; why don't we put it on a pedestal?" And I said, "Well, it wasn't designed for that kind of thing." And they said, "Oh, it's still better than everybody else's." So I acquiesced and put it on a pedestal.

But at the same time, I said, "Look, I've got a much better design." Most office chairs, when you tilt, like this one, lift your feet off the floor. And I said, "That's no good." And I can design a chair that doesn't. And so I did. And that became their executive chair. So I had the two lines, the one that started this way and the other one which took some mechanism, which they weren't too keen about because they'd never done a chair with mechanism before, except the tilt mechanism which they bought from a specialty shop that made them.

So here they were confronted with a mechanism and they said, "Oh boy, well this is going to be expensive." And that became a self-fulfilling prophecy and it ended up expensive, which I didn't want, but that's the way it ended up. And so those were the first two chair lines I did with Knoll. And that's all I did with Knoll, actually, at that point.

MS. MCQUAID: And then, after Knoll, so what happened after that?

MR. DIFFRIENT: Well, Knoll was bought. Florence Knoll — well, do you know the story of Hans and Florence?

MS. MCQUAID: Yeah, yeah.

MR. DIFFRIENT: You know, Hans was a big lothario around the company, and she knew it. And then he was killed while sitting in a car with one of his love interests in South America. He had — they put out the story he was sitting with a business associate, but it wasn't — it was one of his girls. And so he was killed and Florence ended up with the company.

Well, as I've since been told, she really was sort of the brains behind it anyway. She — Hans was not a good businessman. He was a great personality. I loved Hans. He was a marvelous man in many ways, but he had his faults.

And so Florence, I don't know why, decided to sell the company — maybe financially that she needed the money — and sold it to a company that owned a bank or bought a bank. Well, in those years, you couldn't have a manufacturing business and own a bank. So she had — they had to divest themselves of Knoll. And they — Bobby Cadwallader wanted to buy it, but he didn't have the money, so he was busy raising money.

Unknown to him, a couple of sharp Wall Street types named [Marshall] Cogan and [Stephen] Swid found out about it and wanted to move into manufacturing and went to — I think the company's name was Heller [ph] who owned them — and said, "Look, we know Bobby Cadwallader is trying to buy this company. We'll give you 10 percent more than his highest bid."

So Heller, very scurilously, kept telling Bob, "You know, you have to come up with more money. You're going to have to come up with more money." And Bobby didn't know this and he was breaking his neck for a lost cause. Anyway, Cogan and Swid ended up at the company.

And for a while, it seemed like a good thing. They were willing to put money in tooling and everything. But it just got to the point where they were hiring people I didn't like and I left doing any further work with them, except for one guy named — well, no, there were actually a handful — quite a number of them that were good, but one guy still in New York who — his name is not coming to me right away. Jeff Osborne —

MS. MCQUAID: Oh, right.

MR. DIFFRIENT: — was vice president of design. And I got along well with him. And he left too because Cogan and Swid were really not out to do the right thing, ultimately. They made the appearance of it, but they didn't, ultimately.

But then I went up with other companies. I first went with a company called Sunar, which Bobby Cadwallader had arranged to take over through the purchasing power of Bill Hauserman, who had the Hauserman Company. So we convinced Hauserman to buy Sunar in Canada. And Doug Ball — you may know that name — was their

designer, one of the top designers but had never been discovered.

And so Bobby got that company going and got me to do a variety of things for them, some of which got made and others that didn't, so that was the next job that I — that went bankrupt due to Hauserman's ignorance, but that's another story.

Then I went on to a local company called Howe Table [Company]. I liked small companies. I hadn't — it hadn't occurred to me, but I realized that they needed me more than I needed them. But I liked the idea of taking a company that was unknown and making it into something. That had never really occurred to me much before, but I did that with Howe and they did very well. But then they'd made mistake themselves and sold their manufacturing and decided that they would farm it out. And then, of course, the minute they had no manufacturing, all the people they would farm it out to began to raise prices and bankrupted them.

Then came along Bob King at Humanscale [Corporation]. And out of nowhere, someone had recommended me to do a chair for him, which he looked on as an ergonomic aid for the office. And Bob came in my studio one day and told me what he wanted. We talked a while. And I thought, this is a guy, a young man I can work with. He's got the right attitude. I think we can coordinate our interests.

As it happened, I'd already started designing a chair. I had taken the original program to Knoll. Carl Magnusson was there at that time, and I knew Carl quite well. I went to Carl. I didn't show him anything of the design; I just said, "Look, this is what I'm aiming to do." And he said, "Well, we can't take it on right now." And I said, "Oh, I didn't — I forgot about that." And I took up Bob King on it. And that, again, was a very small company, and it's now quite a big company. So the formula worked.

And, of course, I haven't touched on the things that I had decided were the reason — the absence of which were the reason I left Dreyfuss. And I had to prove to them — and this represented the beginning of what I wanted to prove, and that was that I was not going to design anything that I could not prove its usability on my own before I had a client to color my thinking or anything or give me a deadline, and that I would go far enough in it to such a stage as this in which I could show myself and others how it worked, even if it had nothing to do with appearance.

The lower part is borrowed from Freedom, but — the Freedom Chair — but the upper part, all of this is brand new. And that's the way the chair looked at the time I showed it to Bob King, only that all of it was crudely put together like this and became the Freedom Chair. He took one look at it and just went, "Zowie," you know? "This is what I want." And that's what we did.

But before I did it, you see, what I did was —

MS. MCQUAID: And this was in —

MR. DIFFRIENT: It would've been — 1998 was our first meeting. And then 1999, we got the chair going and brought it out.

But I show you what I do — what I did. I had decided from the Knoll experience that I was going to stay in office furniture because it offered everything I wanted. It offered me a close association with people — that is, physically, I had to support a body which appealed to me. Secondly, it was an important piece of equipment. More and more people were using it. And thirdly, it was an advanced field. There had been a lot of design in furniture and especially chair — every architect of Knoll — of note —

MS. MCQUAID: Chairs — I know — has designed a chair.

MR. DIFFRIENT: — had to prove himself — [laughs] — in front of the chair, so —

MS. MCQUAID: — I know — with a chair. It's very interesting.

MR. DIFFRIENT: Isn't it? It is fascinating.

MS. MCQUAID: It is. And why? Is it because — I mean, for architects, is it a — it's — because it's a small scale and they can — I mean, unlike — I mean, you are — I think, there are people who are exceptions because you spent years just, you know, kind of formulating, you know, facts about chairs and all of that.

MR. DIFFRIENT: The technicalities of it.

MS. MCQUAID: But for architects, I think sometimes they feel that design objects are much smaller than a building, which can take years and years and years and may not ever get built — that somehow, an object, because of its size, they can — they can make their mark with it. I don't know. I don't know if that's —

MR. DIFFRIENT: There is some mystery in it as to why they're so motivated to do it. But I think it's because most of them of any note were intelligent enough to realize that it was a hidden challenge there, that is, for — they were not challenged to create space and façade and a large-scale thing, but they were challenged to fit the human body and come up with something equally impressive, though totally different in scale.

And I think the scale and its use presented a challenge. It certainly did in my mind. That's why I pursued it. I thought I can live with this kind of work and I think I can do the whole thing myself. I don't — I didn't want to work with some corporate engineer or a group of engineers. I knew at that point I didn't have to hire a human factors specialist because I already knew it all, at least to the degree I needed to know it, and so it just appealed to me.

But I was not going to start office furniture design without first knowing everything I needed to know about it technically. So I went to some — a couple of associates I knew. I had a young man who worked for me named Chuck Mauro. And he got entranced with the human factors work at Dreyfuss and went on to get higher degrees, [and then ?] and now is a specialist in New York on it.

And he had a good library of — that's M-A-U-R-O — I think his business his called Mauro & Mauro — he had a better library than I did at the time, so I got a bibliography from him. And I started buying books and reading up on the things that pertained.

And then I tried — then I did, in a way, what I wanted — what I had set out to do for Humanscale, which was to encapsulate what I learned in another form. So I created a whole series of drawings like this. And these are all dated in 1980 or thereabouts. And this contains all of the fundamental information of — now, bear in mind, computers were just coming in; the first IBM computer had shown up — of how to support the body, how to use a keyboard, where the screens should be relative to seeing distances and eye angles and head tilt, and everything that was basic physiological information for a working position, because I knew the chair was only one part of a full workstation.

And that, then, took various other forms which were small to large people, reach patterns — looking down on it, how far could you reach, where are the screen locations, keyboard — now, bear in mind, this is 30 years ago — [sound of pages turning].

MS. MCQUAID: Wow.

MR. DIFFRIENT: — and back views, small woman, large man —

This was my basic data reference. Actually, I didn't have to go back to it because this has always — since I — I do everything by drawing; once I['ve] drawn it, it was there.

MS. MCQUAID: You knew it.

MR. DIFFRIENT: Yeah. I don't remember facts and figures very well, but I remember anything that I've drawn, always. And so this was my reference. And then that's repeated onto some designs. This, for instance, was for Bobby. This was after he'd gotten the Sunar company, and I said, "bear in mind that drawing I showed you."

Now, here's a small woman that I knew, a very nice young lady that worked for me for a while, not quite five feet tall. So I designed a work — these are prototypes — a work chair that would reduce in scale, a table that would drop, and all the equipment could be set up for her — and here it shows the chair will allow her to recline. [Sound of pages turning.] And then I took an average-size guy, about my size, put him in, adjusted the table and chair so it fit him. And I then I found another friend of mine, a big guy that I put in, and the same setup would work. So those — you know, it was a novelty at the time. That sort of thing was perhaps going on to some degree in Germany and other places.

MS. MCQUAID: Yeah it was one — that was one of the questions I had, like, where else was this kind of work being done? I mean, who else was working in human factor engineering and applying it?

MR. DIFFRIENT: Well, in terms of furniture, I would have to say the Germans, the Swedes, to some degree the French and English. But even to this day, the Germans lead the pack. In those years, however, they were too strict on standards. They put out a standard called DIN [Deutsches Institut für Normung, German Institute for Standardization] standard — Deutsche something or other. And it was such a restricted standard, it almost told you how to design the thing. So that was no good.

And yet, you know, the products they put out were the best in the world as far as actual usability goes. The Italians, of course, were way ahead of them in terms of form, and some of their products began to be quite useful as well. But yeah, the Europeans were probably where I looked in the early days. And they were — they were more along the lines I was after.

But that sort of thing — and then I moved on to another kind of workstation, which I began to study, which was how people reclined. And I thought if you could recline appropriately, you could work while reclined. Somewhere along here I show — these are the prototypes.

MS. MCQUAID: Oh, yeah, I think it was — yeah.

MR. DIFFRIENT: Yeah. And so I began to mock up ways to work while you're reclined and embraced this.

MS. MCQUAID: Yeah, yeah.

MR. DIFFRIENT: That's the prototype sitting right there —

MS. MCQUAID: [Inaudible.]

MR. DIFFRIENT: — that I use to this day for my reading. And then it moved on. This is all still for Bobby. And he was — he was interested in everything. And then I —

MS. MCQUAID: And so what did — yeah, I'm curious about this; I saw this before. How did this work?

MR. DIFFRIENT: When you sit on a chair, it provides support for certain parts of your body: Inappropriate support in certain areas — like lumbar, of the spine, under your tailbone and the like, if the pressure is too extreme — and in due time it causes discomfort or even trauma of the muscles and the spine and other things.

So I wanted to know more about pressure distribution. At the time there was nothing else to find anything out. So I went to my brother, who was the next child after me, 14 years my junior, who was an advanced electronic engineer. And I said, "I've got an idea, Roy [ph], in which I can put probes into cushions, which when you lean against them, the probe depresses through the cushion and gives me a pattern of the —" now, I don't know where it is, but I have a section of the cushion showing the probe — it gives a pattern of the contour of the person's backside.

Since I know the density of the cushion, the amount of compression of the cushion tells me what the force is. And I wanted to distribute as much force as possible so that there was no concentration of forces, because that's what bothers you. And so my brother wrote me a program, and then the very earliest computer — that same IBM — he worked out this program showing the seat and the back with the probes and a measurement of — in reclined position. And these are the values of compression from which I could evaluate how my cushion shapes and angles and everything were actually being used — I mean, affecting the body.

This was the accumulator that was necessary for it. And here it is. That's the cross section for a cushion. I took knitting needles with the head here at the front place where you'd lean against. And the knitting needle pushed — was attached to a little clip that rode on a potentiometer. And the potentiometer, which is the same thing that makes your radio go up and down — [inaudible] — noise, had a readout, which was in turn computed into the program my brother had written so that I got an X, Y, Z — an X, Y pattern of pressure of the back and seat of the chair.

MS. MCQUAID: And did it matter what size person sat in it —

MR. DIFFRIENT: Oh, sure. Yeah.

MS. MCQUAID: — in terms of where the pressure was?

MR. DIFFRIENT: Well, it was proportionate to the weight of the person.

MS. MCQUAID: Right.

MR. DIFFRIENT: So I had to extrapolate from the weight of the person to the amount of compression to find out if the pressure was excessive for any part of the body.

Well, to be perfectly honest, it told me pretty much what I already knew. But I learned a lot in doing it. And it confirmed my assumptions, which is of course what most scientific method is about. And it wasn't long after this that they began to make pressure mats with one-inch squares — little potentiometers — I mean, not potentiometers —

MS. MCQUAID: Sensors, or —

MR. DIFFRIENT: No, it's called load cell in each one, so that you got a true pressure picture — pressure map. But even so, before those existed, this was something that I wanted to — without knowing it, what I wanted to do was make all this data inherent in my thinking because I trusted my aesthetic skills. I knew enough about at

least the physiological aspects of people. I thought if I — all of that was a part of my reasoning, I could take us a step further in things because the way it had been done up to that point is you drew a picture of a chair —

MS. MCQUAID: Right — [inaudible] —

MR. DIFFRIENT: — and you sold everybody on the way it looked, and then from there on in you tried to stuff all the function into it.

MS. MCQUAID: Right.

MR. DIFFRIENT: And I knew that wasn't the way that I wanted to work, and this was another way. So as I say, it resulted in me putting together a chair that looked similar to this, showing it to Bob King at Humanscale, and he could see the potential. And we took it from there.

So that —

MS. MCQUAID: Have you — have — I mean, I know chairs has been your focus. But what about any other type of furniture?

MR. DIFFRIENT: Well, it would have been work furniture. I don't —

MS. MCQUAID: So, I mean, office furniture, I guess.

MR. DIFFRIENT: Yeah.

MS. MCQUAID: What about desks or —

MR. DIFFRIENT: Well, that's what I'm about to show you.

MS. MCQUAID: — or —

MR. DIFFRIENT: I did a whole office system.

MS. MCQUAID: Computer screen?

MR. DIFFRIENT: The office system looked like — these are not very good reproductions — this. At the time, screens were such that, from the Herman Miller Action Office — which you hung everything on them.

MS. MCQUAID: Right.

MR. DIFFRIENT: I didn't think that was very good. I wanted the screens to be separate and you just stood them up behind — my thoughts.

And this was furniture, which you could build up modularly. And it was height adjustable, which you couldn't do very readily when you hung it on the screen. So this was a variety of workstations built with that system. Oh, and this was the chair I had done for Sunar, which by the way used exactly the same recline principles as on the Aeron chair.

MS. MCQUAID: Interesting.

MR. DIFFRIENT: And I have a patent on it, which I could have exercised but I didn't. And this was that prototype chair. Oh, and this — these were prototypes — [inaudible] —

MS. MCQUAID: So did this — did these desks go into production?

MR. DIFFRIENT: No, that was the problem. What happened was that as long as Bobby was running Sunar on his own, it was doing great. He gave Michael Graves his first job.

MS. MCQUAID: Wow.

MR. DIFFRIENT: — as — in the public realm, I'll say. Michael had done some small work, but Michael designed Sunar's showrooms, which were a big hit and made Michael really quite a star. So we — Bobby had gotten these fantastic showrooms going and we had all this new furniture going, and at that point Hauserman decided that he wanted to merge with Sunar — in other words, reflected glory.

And the merger killed the whole thing because Bobby was naïve enough to think that, well, the strength of our design capability will carry it forward. But I learned a basic rule, and that is in any such merger, the weakest, least desirable force wins out because it is more understood by more people. It takes a certain inner vision to

run something that — well, we can call it the Steve Jobs vision. Nobody else could run that company.

MS. MCQUAID: Yeah, I know. I know.

MR. DIFFRIENT: That's what happened with Sunar Hauserman. It killed it.

MS. MCQUAID: Interesting, yeah.

MR. DIFFRIENT: So we never got to production.

MS. MCQUAID: But what about Humanscale? Would they ever consider doing something like that? Do an office —

MR. DIFFRIENT: Well, they don't make tables but they've actually bought a mechanical system for an adjustable table. But it's not something I'm designing at the moment. They have an in-house design group that are doing it. And I haven't asked to do it.

MS. MCQUAID: Is that something you'd want to do?

MR. DIFFRIENT: Under the right circumstances — I'd have to think of it myself. [Laughs.]

MS. MCQUAID: No, but actually it's interesting because I know — I think that Bill has talked with — I don't know if they used to talk with Humanscale, maybe — because we're in the process of trying to retrofit our new offices and curatorial areas.

MR. DIFFRIENT: Oh, yeah.

MS. MCQUAID: And we're looking at — I mean, originally we were going to do kind of, you know, millwork and built-ins and all that. It's just too expensive. And when Bill came on board, you know, the idea of trying to kind of work together collaboratively and have more open, flexible spaces is of course very much in his interest.

And so now we're working with the idea of trying to, you know, go to certain companies and seeing about their interest in either — I mean, ideally it'd be a gift to — you know, to kind of — of furniture — but to kind of, you know, see what kinds of arrangements they would make with these different types of office and work needs.

MR. DIFFRIENT: Yeah. Well, at the moment Humanscale's not set up to do the whole thing. They may be in time. But then of course you know as well as I do that his ex-partner, David Kelley was vice president of design for Steelcase.

MS. MCQUAID: Yeah.

MR. DIFFRIENT: And of course Steelcase owns IDEO.

MS. MCQUAID: Right.

MR. DIFFRIENT: They have a very good line of furniture.

MS. MCQUAID: [Inaudible.] Yeah, yeah.

MR. DIFFRIENT: I would be hard to imagine not giving them a shot at it.

MS. MCQUAID: [Inaudible.] Right, no, that — I mean, they are one of the people.

MR. DIFFRIENT: Yeah, and they'll give it all to you probably.

MS. MCQUAID: Right.

MR. DIFFRIENT: I mean, they're wealthy enough.

MS. MCQUAID: Right, right. Yeah.

MR. DIFFRIENT: And if you time it right so they're putting out of the slump — [they laugh] — but, no, you can get very good furniture from Steelcase. That's probably your best bet because I don't think Humanscale can supply the whole thing.

MS. MCQUAID: Right.

MR. DIFFERENT: I'd love to have you have our chairs there. But it's going to be hard to do if you get Steelcase.

MS. MCQUAID: Right. Well, I have to say, I'm still using the chair that was in the —

MR. DIFFRIENT: Oh yeah.

MS. MCQUAID: — in the triennial. And it's my preferred chair.

MR. DIFFRIENT: Oh, I'm glad to hear it.

MS. MCQUAID: I love it.

MR. DIFFRIENT: Well —

MS. MCQUAID: I mean, it's like — it's my workhorse.

MR. DIFFRIENT: — something I want to give you to reinforce your feelings —

MS. MCQUAID: And I — yeah, and I've tried — you know, I've tried the Aeron chair. In fact, I think I may have told you I had the Aeron chair in my office before the triennial.

MR. DIFFRIENT: Oh, yeah.

MS. MCQUAID: I should — I don't know if this should be on tape. [Laughs.]

MR. DIFFRIENT: Well, the Aeron is —

MS. MCQUAID: And it was just — it was too complicated and just not, frankly, as comfortable. I felt I was being forced forward and I wasn't —

MR. DIFFRIENT: Well, it's not a terribly comfortable chair. Did I give you one of these?

MS. MCQUAID: Yes, I do have one of those, yeah.

MR. DIFFRIENT: Okay — [inaudible] — if you look at that, you'll see that all of the awards and recognition and more than that — the number of movies and television — [inaudible] —

MS. MCQUAID: I know, I know. That's incredible.

MR. DIFFRIENT: Yeah.

MS. MCQUAID: So you've kind of —

MR. DIFFRIENT: Well, it's got that futuristic look, you know, so —

MS. MCQUAID: Right, right.

MR. DIFFRIENT: And of course, it's not to say Aeron hasn't been —

MS. MCQUAID: Right.

MR. DIFFRIENT: — equally successful in that kind of thing. So that in a nutshell is pretty much where I am today.

MS. MCQUAID: Yeah. Yeah. I'm wondering if we should — because what I'd like to do is talk a little bit more about — I mean, you've covered a lot of kind of questions that were on here. And I think, you know, maybe next time I would love to kind of discuss more about your ideas on design in general, I mean, which I know we've talked about before when I was here several years ago.

But you know, kind of — you know, just more kind of generalities about your ideas on design —

MR. DIFFRIENT: Yeah.

MS. MCQUAID: — and also a little bit about kind of your collaboration between sort of client and designer; how that sort of works. I mean, I find it interesting because I think a lot of — it seems like you have sort of the answer in mind before you even have a client.

MR. DIFFRIENT: That's the idea.

MS. MCQUAID: — which is very interesting because that's not always — that's not usually —

MR. DIFFRIENT: Well, as I said, that's why I left Dreyfuss. I could see that the — most of the connections with

clients were detrimental to achieving what you wanted to achieve. And I just didn't want to turn all of my energies to a big fight with a client to get what I wanted. And I thought if I chose furniture, I could get most of it done before I even showed it to a client.

MS. MCQUAID: Mm-hmm. [Affirmative.] But how does it work with someone like Bob King, for example? You just — we need a task chair and so that — you sort of design whatever you want?

MR. DIFFRIENT: No, uh-uh. [Negative.] No. [Inaudible.]

[Audio break.]

MR. DIFFRIENT: [In progress] — 10 years. So we've got a more reciprocal sort of thing going. But I come up with the initial area in which I think we can make some headway. And I pretty well do it on my own until I reach something like this. This is where Bob sees it the first time. I don't make any appearance sketches at all. I never sketch the way these things are going to look. I may have ideas about it. Here, step over here a minute. This chair — wait for you to come over — you're looking at it and seeing how improved it is. I am now in parallel working that into forms.

MS. MCQUAID: Oh, wow.

MR. DIFFRIENT: You see? And this is a rough sketch in my mind, but it has to show everything. It has to show where the mechanisms are, where every screw is; it's got to be complete. I just do not want to move ahead on a form until I know that all the pieces fall into place.

MS. MCQUAID: Right.

MR. DIFFRIENT: And it's a fully articulated chair. And it does something chairs have never done before. Now, it may look in some ways similar to other chairs, but it's not. I have taken from my own designs — the operation of the arm, for instance, which Freedom has, simply because so far it's the best arm situation I've ever come up with. And I've not thought of anything better. So I'll use it.

MS. MCQUAID: Right. [Laughs.]

MR. DIFFRIENT: It's the same like the three-part mesh backrest of Liberty.

MS. MCQUAID: Right, right. True.

MR. DIFFRIENT: I've done nothing better so I put it on the new World chair.

MS. MCQUAID: Right, right.

MR. DIFFRIENT: So, see, these things are basic, they're not style. So in my book you use the best thing you can come up with.

MS. MCQUAID: Right.

MR. DIFFRIENT: But this is the way I work. Underneath is another design, a previous stage. So I layer it. You know where I first saw that? It's the way Eero did his designs. He would layer — he would get out this orange tissue paper —

MS. MCQUAID: Oh, yeah, I know it —

MR. DIFFRIENT: Like this kind of stuff?

MS. MCQUAID: Uh-huh. [Affirmative.]

MR. DIFFRIENT: Layer on top of layer, each one being a revision of the form. And he built — so I think that if you went back to the beginning and took the top layer and looked they were totally different. But they went through successive stages. And I still work that way. But different than architecture — so you were working with form and overall concept.

MS. MCQUAID: It's so amazing.

MR. DIFFRIENT: With a product, I feel I have to go into every detail because a detail that won't work can spoil the whole thing. And if something doesn't work in one part, I adjust matters so that I can get it to working where I want it.

MS. MCQUAID: But what scale is this drawing?

MR. DIFFRIENT: Full scale. That's — I draw everything full-scale. And then I work — well, I only once in a while will I do a reduced scale or something or other. But it has to be all — fully worked out. And I have shown that prototype to Bob, not in this form — it was an earlier form which didn't do quite as well as this one. And he liked the approach, and so I keep going.

MS. MCQUAID: So what — so what chair is this?

MR. DIFFRIENT: It's a brand new one. No name, no program at this moment, no deadline. It's as I can make it work.

MS. MCQUAID: And so when you design — when you chose kind of the next chair to design, do you — is there a particular challenge that you're looking at that new chair?

MR. DIFFRIENT: Something better.

MS. MCQUAID: And in a particular area? Like what did you — when you did the Freedom chair, what was — what did you want to make better when you made the Liberty chair?

MR. DIFFRIENT: Well, I do chairs in separate increments. Part of the first driving idea in this chair was that instead of like Aeron, where you had to turn a knob dozens of times to adjust it, it would be self-adjusting. The recline would work — well, you use one.

MS. MCQUAID: Right.

MR. DIFFRIENT: And so I invented a mechanism that would do that. I had already done it partially in the chair that I'd done for Sunar, but that chair — when Sunar failed, so did that chair. So I started with — at that point and I advanced it and got that. Then I sort of — with the kind of work that people are going to be doing with computers, basing it on what I showed you in those drawings I did in 1980, the arms have to get out of the way. So I wanted arms that you just moved out of the way and put them in place. And now I'm adding arms that go in and out too.

So I work these things out separately. They're separate mechanisms. They sit on a table top test unit and I keep fussing with them until they work properly. Then with the headrest — that was another one. And it ended up looking sort of like this on the test chair. I get all these separate components or functional elements working the way they should, mechanism is developed in concept form and so on, and then I put them together. And I start saying, what does this chair want to look like? And then comes the form.

MS. MCQUAID: Oh, it's so interesting.

MR. DIFFRIENT: It's a backwards way of working it. But it's the way they design — all really functional machinery gets designed by increments of each component part working. You know the rage for the Mini automobile, for instance? The Mini, in its original form, was designed by an engineer named Alec Issigonis. He was Greek but an expatriate living in London. And he designed it with one idea in mind, and that was that he wanted the smallest outside package with the most room inside. That was his motive. And he had already designed —

[Audio break.]

MS. MCQUAID: Okay, this is disc two. This is Matilda McQuaid interviewing Niels Diffrient for the Archives of American Art. And we are at his lovely studio here in Ridgefield, Connecticut. And this is continuing from our previous interview.

And I wanted you to begin talking about your ultimate location here, in Ridgefield, and I know that you were very instrumental in the design of both your studio and Helena's studio, and to talk about that and sort of your working — kind of your — this is your — I assume, your ideal working environment. So just talk a little bit about that, describing it. I have the luxury of being in it. So if you could describe it to our listeners that would be great.

MR. DIFFRIENT: Well, the environment we're in is a byproduct of how I wanted to change my working life. And as you know, I was in an office in Manhattan and Helena was working in our loft in SoHo in Manhattan.

And the SoHo loft presented us with such a nice and different environment than my business circumstance, which was with Henry Dreyfuss Associates as a partner. And I had been working 25 years with very high-profile clients, very practical, mass-produced products like cameras and tractors and lift trucks and sewing machines and things of this sort, but always with a large client.

And I began to feel that there was something missing when you accept a project from a client who has predetermined what that project will be and most of the parameters — technical, sales, sales volumes, distribution, the whole thing. I felt that design had more to offer than just being a decorative addendum to a

client's predetermined framework in which you had to work. Basically said in the crudest sense, somebody else was making all the important decisions in product design, not the designer.

And I thought that had the possibility to change. And to change, I felt I had to move from that circumstance. And at the same time, Helena and I had been living in SoHo for five years. And it was a kind — it indicated a different kind of life: one in which our daily lives and our work — or her work, in this case — were a part of the way we lived and the space and the simplicity of it all, and not so many people around. I had the — I was responsible for 40 people and a dozen clients. So this rarely left one any time to do anything creative other than just guiding the projects.

We had talked about what to do. And I had — I had, of course, told Helena I was unhappy with the basis of the work in a large consultancy. And I still remember sitting in Venice at a sidewalk café at a meeting we had to attend there. And it suddenly occurred to me: when we return, I'm going to leave the practice; I'm going to go to sell out my shares in the partnership and the Dreyfuss office and do something else.

Now, I had already started, in my spare time, designing some commercial furniture. My first client was Knoll International. And I was getting close to summing up that design. And I thought, this is as good a time to change as any. So when I came back I resigned and Helena got busy and said, "I'll find a place for us, even if it's temporary."

And we knew this area in Ridgefield. And she came here. And the day she arrived, she found a big old house in downtown that had — that is the middle of Ridgefield — that had 6,500 square feet in it. And that provided a big — a large living room for her to set up a weaving studio and a large master bedroom for me to set up a design studio.

So six months after I announced my departure, we were living here. I was 52 years old. This was 1980. And I started a new life. The intent was to — basically, to run it as more or less an experiment. The experiment would be: I'll decide what the product is that I'm going to design, I'll determine its value structure, what it will do, and I'll design it up to the point where I know it works and I have physical proof of that, then I'll sell the idea to somebody and license whatever patents I get, and become an independent inventor/designer.

I chose commercial furniture and in particular seating — so it was more than that — because there was a good history in it, there was standards already developed — I mean, every architect on earth had felt they had to do a chair at one time or another. So there were some pretty high standards, some good history, some backup. It was like — and this is an odious comparison — but it was like as though I was Mozart, but I had Bach's shoulders to build on.

And so I could grow from something. And that's what I did. I finished the Knoll chair. It sold. And I began to collect royalties which supported my operation for the next chair. Helena had an ongoing list of clients — or commissions to proceed with. And we started a new life.

I was not into this very far before I realized if I'm going to assume the generic decision role of my past clients, in which they determined the product and the market and the whole business, I'm going to have to know more — not about the way they work, but about something of equal value and substance on which to base a proposed product.

And my approach was, I'm going to base the design on performance. For years we had designed the way something looked. And, of course, we were somewhat different in my prior work at the Dreyfuss office, in that we also did human factors work studies and got into a fair amount of depth in the way something functioned. But it was still within the parameters we were handed from the engineers and the marketing people and so on.

I was going to go deeper into performance in a product and find ways to make it a good deal, even uniquely better, through research and testing. And that research and testing would be based on human compliance — not from an altruistic standpoint, making people feel better or anything like that, but simply serving the purpose to a better degree. It occurred to me that when we designers talk about function, what we're really saying is the function is not — from our standpoint — the working of gears or the path of electrons; it's how it functions with the user. That's what we — is implied in most designers use of the term function.

I also realized that, aside from an inherent sympathy for human compliance, designers really didn't go much deeper in understanding this functional connection with human beings. So I started studying. I started producing background material. I essentially plotted the nature of human effort in a — in an — in an office situation. How do people work in offices? What is the physiological, the sociological, the emotional relationships? And what kinds of things would improve them? Appearance being one of them, but not a starting point.

MS. MCQUAID: Right.

MR. DIFFRIENT: And I got grants from the National Endowment to study this. And I produced a variety of prototypes of a new way to do office work. And I had for the first time in, I think, not only my career but probably 99 percent of all designers' careers, a body of research from which to start my designs. The first thing it told me was that if human compliance was the motivating factor, then it had to guide all the engineering development.

Well, I'd worked with enough engineers to know that they are not terribly flexible in the direction of human compliance. Their mantra is cost and efficiency. And the fundamental — let's stop.

[Audio break.]

MR. DIFFRIENT: [In progress] — became probably, by factor of 10, more efficient than any corporation could be. And I know this for a fact because I've worked in enough corporations to know how the separation into specialties of engineering and specialties of marketing, specialties of product planning, then have to get together and make a decision about how to do something unique and valuable. And they always miss the mark to some degree, except for the most well-tuned group.

We bypassed all that business and each specialty — especially in my case, engineering, and wherever it exists as human factors departments in the business — we're looking to make their concerns the most important — [inaudible] — product. So you had to beat each of them down to the point where their value system merged and allowed you to produce a well-balanced product.

I didn't have to do that. I did all those things myself. I had enough experience and background in the human factors, so I was as well-versed as any of the applied human factors people. And I'd picked up enough engineering capability that I did that too.

So I set up, I think, what was a highly efficient system for getting a product done. But you had to make sacrifices. For instance, I didn't have a big staff to go out and beat the bushes and make my name known and get to be a big Raymond Loewy-type star on the field of design. I had to let that pass.

And as Helena will tell you, I — whenever she said, "well, you know, you ought to be keeping a record of what you're doing and all that," and I said, "oh, I don't have the time" — the record of what I'm doing is in the products I do. If people don't see it in the products, then they've missed finding out what I've done. So that was my only presentation of my work was in the products I did.

And we've survived well. I've done some of the best work I've ever done. And we live well, and we're comfortable; we're not starving. So there is enough there to make for a satisfying life.

MS. HERNMARCK: But you had to wait a while for the right client to walk in, so there were some years in between there, in the '80s, when my big commissions were a good thing. They kept rolling. In fact — of course, I've been with Niels soon half of my life, so — [laughs] — I've had the best — most productive part. But the truth of matter is, I had work ever since, actually, '67, and it rolled on continuously, with one year in '85 when I had no commissions. And then, in '92, in '93, it all dropped very severely. But — so I kept us afloat, in a way, in those years when he was waiting and waiting and waiting. He was 70 years old, finally, when this guy walks who allows him to blossom because we all, you know, depend on our clients.

MS. MCQUAID: I know.

MR. DIFFRIENT: Well, the previous clients were not exactly shoddy. It's just that I was working more with bureaucratic organizations that were big like Knoll and others. And they were very fine companies; I enjoyed working with it. But I had to put up with the vagaries of their operations. Even though it was my design, I filed to protect it. I had to be defensive all the time.

When this young man — I'm speaking of Bob King now, with Humanscale Company — when he came in, his company was minuscule by comparison. But I saw in him a sympathetic soul. And I said, "Well, we may not make a lot of money, but I think we'll have fun."

MS. MCQUAID: [Laughs.]

MR. DIFFRIENT: And it's been true. But now he's getting big, so he's confronting the same bigness issues that the other companies have. So we'll see what happens next on that score.

MS. MCQUAID: But in terms of — in terms of — in terms of where you are now, both of you, in this — in this beautiful bucolic place, how did — how did you find this piece of land and, you know, the house?

MR. DIFFRIENT: It was a lot her doing. Tell that story.

MS. HERNMARCK: [Laughs.] Well, we had to leave the loft, which I loved. But at that point Niels was looking to

leave his office. And although the loft was 3,500 square feet, it wasn't big enough for the both of our work. The weaving studio could be in a home setting and it's dusty but not that dusty, it's not — but with his shop downstairs, you couldn't have that in the same place that you lived in. So we looked for a while in New York, and then we decided we'd leave and move out here.

We had gotten married across the hill here at Henry Wolf's property, the photographer and art director Henry Wolf who was a good friend since the Aspen days. And we actually got married in his garden in 1976. So in 1980, I set out to — we decided Ridgefield was a pretty good spot to settle because we had a summer house in Sherman[CT] and we didn't want to go further. We had the house on the lake already, but that was a vacation home and not possible to live full time in.

So I went to — I actually called Molly Noyes, who lives in New Canaan [CT], and I said, "Can I come and stay and look around?" And so it was from New Canaan that I set out for Ridgefield to find a place.

And we pretty quickly located a big old house. It was for rent and we thought, "We'd better do that first so we can look around." So we had a two-year lease on a rental. Big house — how big was it?

MR. DIFFRIENT: Six thousand square feet.

MS. HERNMARCK: — square feet. [Laughs.]

MS. MCQUAID: Huge.

MS. HERNMARCK: So we set up shop. Niels was in the master bedroom with his office, and I was in the living room with my weaving studio. And it worked out. It had 20 rooms.

MS. MCQUAID: Oh my God. [Laughs.]

MS. HERNMARCK: So it was okay for the interim. And then, after a year, we located this property. And it was a pretty decrepit-looking place. And this was 1981 and the prices were very reasonable, so we actually were very fortunate to buy this property with all these beautiful trees and everything for a reasonable amount. And then Niels sold out of Henry Dreyfuss Associates and for that money, we built a studio.

And then we waited for five years to tear down an old house that we had lived in meanwhile with the lime-green carpet — [laughter] — and the —

MR. DIFFRIENT: Shag carpet. [They laugh.]

MS. MCQUAID: Oh, the worst.

MS. HERNMARCK: From the loft —

MS. MCQUAID: You never know what's actually in there.

MR. DIFFRIENT: No.

MS. HERNMARCK: From the loft, it was a bit of a change.

But Niels sat down to design the new house. And of course, we ended up in the summer of 1981. From Easter to Fourth of July, he put out 60 drawings because we went through three house plans before we got the one that seemed right. And so that was 60 sheets of drawings because you have — to get a price in the house, you have to have a complete set of architectural drawings.

And each time — [laughs] — it came in at — it seems now — 700,000 [dollars] seemed very much for us, so Niels started to take \$100,000 out of it every time, but every time he did that, the prices went down, so it always \$700,000. [They laugh.] So we ended up getting a simpler house, but we love what we got.

MS. MCQUAID: Oh, it's fabulous.

MS. HERNMARCK: Yeah. So all that worked out. And, of course, we could — when we tore down the old house and built a new one, we then moved up to our country cottage. We lived for a year on the lake, so that was nice, too — and commuted.

So all in all, I think it's been smart. And, of course — I mean, with my trips to Sweden and everything, it doesn't really matter where I am, except I have a very nice space here. Maybe a disadvantage can be said that I have a hard time finding assistants that can live around here because it's expensive to be around here. So that's, in a way, a problem. But the other problem is that I haven't found too many young people who want to do this. So

I've ended up leaning more and more in the Swedish workshop for the big execution, the big work.

MS. MCQUAID: And so then what you do here is mainly just sort of studies or sketches for those?

MS. HERNMARCK: Yes, and I weave smaller things. And I actually do intend to do a workshop soon with the Westchester guild of weavers, just to find out who is around, because sometimes I wish I had at least one assistant.

I had a Chinese woman for 24 years and she learned to do it. I mean, she had been through the Cultural Revolution and everything else. She was my age — had never studied art or done anything with art, but slowly and surely she learned to read my technique. But she retired at 65 and moved to California, so —

MS. MCQUAID: Have you two collaborated on anything together?

MR. DIFFRIENT: In a way. We're collaborating constantly, but it's sort of behind-the-scenes collaboration. I look at her designs and her weaving and give her reactions; she does the same for me.

MS. HERNMARCK: No, it's — [inaudible] —

MR. DIFFRIENT: It's the right kind of combination because we don't compete, but on the other hand, we're in the same ballpark. And so it's good support.

MS. HERNMARCK: Yeah. It —

MS. MCQUAID: Well, I —

MR. DIFFRIENT: It's definitely support.

MS. MCQUAID: Well, I know, with the Liberty Chair, how important kind of the textile was to the design.

MR. DIFFRIENT: Yes.

MS. HERNMARCK: Oh, yeah.

MS. MCQUAID: And I'm — and I'm curious, like, how — what your — did you have a role in that at all? Or was that —

MS. HERNMARCK: No.

MR. DIFFRIENT: Well, Elizabeth Whelan had did that — of course, is a master of production textiles, and Helena is not. So Elizabeth really drove that program.

MS. HERNMARCK: But it was you who thought about the short seams [ph].

MR. DIFFRIENT: Oh, that sort of thing. All the technical side of it was the — was the program that I'd given her to work within. I gave her the structural limits. I told her how it was going to be used. And so she produced within those restrictions, which, I think, is kind of unusual for a textile designer to be as versatile, to come up with really good-looking stuff that meets very strict performance standards.

MS. HERNMARCK: But I find the same thing, that I also have limitations for my commissions — they have to stay within a certain budget or they have to fit in a room or something. I find — and it happened with Elizabeth, too — it drives you further. It does.

MS. MCQUAID: Right. It's more of a challenge than to have a clean slate.

MS. HERNMARCK: It doesn't stop you; it helps you.

MS. MCQUAID: Yeah. No, I think so too.

MS. HERNMARCK: It really does. And I remember Elizabeth talking wistfully about doing more art-oriented textiles, but she's really become very unique now and has tremendous strength.

MR. DIFFRIENT: Well, yeah. Helena's touching on a fundamental point that I've gradually begun to realize is — maybe the most important thing I've learned as I've approached my work its present form — and that is that the old way we designers did things was with a predetermined vision of what the product should look like. In other words, it's been classic that we make an early sketch because everybody says, "Where are your early sketches? Show me how you came up with this."

I gradually began to give up on that because I — at the time, I would do a sketch; I couldn't know if it was sympathetic to the technical demands I would have. And then I would think, well, I'm going to lose perhaps in the visual end of things. It won't be as exciting as somebody who's just designing a product like a chair with no restraints, any form, you know? And then I began to learn, if you were good enough, you could do just as well within those restraints as if they weren't there.

MS. HERNMARCK: Well, that's real skill.

MR. DIFFRIENT: You have to be a master. And that's — when you say, "You've got to have certain restraints" — it's never stopped you from producing a really good product. And that's the sign, I think, of real maturity in design.

MS. MCQUAID: Right, right.

MS. HERNMARCK: Well, you have to know — you have to have enough skills so that you can forget them. But they have to be there. It's like a clown on skates. He could never be — unless he really knew his stuff, and then he could make a fool of himself.

MR. DIFFRIENT: Yeah. They often skate better than the other ones. [They laugh.]

MS. MCQUAID: That's so true. Yeah, that's —

MR. DIFFRIENT: See, that depicts us — we're clowns on skates. [They laugh.]

MS. HERNMARCK: But it's a good illustration, I think, that — it has to be in the background. And maybe that's why all those early artists who started out classical art and then switched to abstract, they had something underneath.

MS. MCQUAID: They had that skill. Right.

MS. HERNMARCK: And now, you can do abstract art just like that. But it doesn't have the —

MS. MCQUAID: No.

MR. DIFFRIENT: This was an important recognition in these last several years that I've been working is that the restraints you set up are not holding you back. They're adding a new field or a new vision potential. Virtually all the forms I come up with now don't start with my old attitude of aesthetic judgment; it starts — I learned from the technical end of things how something could look different. And that becomes the foundation of a new form.

As a result, I never — other than thumbnail sketches just to think through something, I never draw a picture of the product in the early stages, which is, of course, the way every — all of us started as designers. Most of us went to a design program in an art school and drawing the — and visualizing something was fundamental. I don't do that at all anymore. All my startups — beginnings are technical drawings.

MS. HERNMARCK: So you're veering towards all those anonymous designs that we admire, like canoes and wine bottles and tools that are so beautiful because they've been formed by their need.

MS. MCQUAID: Right. Kind of the — yeah, anonymous designs.

MR. DIFFRIENT: Yeah. It's —

MS. HERNMARCK: That's the Shaker stuff is so beautiful.

MS. MCQUAID: Right, exactly.

MS. HERNMARCK: Less is more.

MR. DIFFRIENT: And that's why some of the most profound product designs did not start in the usual way with the designer. A couple of my most telling examples are, for instance, the Mini automobile, which has now been reborn and made into an icon off of a design that was originally done by an engineer. And that engineer was not pursuing a design; he was pursuing a way to make a small car with a lot of room inside. So —

MS. MCQUAID: But in many ways — you say you don't sketch — but I think you have sort of skipped over kind of those initial sketches because of all the experience and skills that you have under your belt and that you can go almost right to the technical drawing and begin to solve the problem, whatever it is, or the challenge of whatever you make it.

MR. DIFFRIENT: Well, this is the — this is the key, that as I do the engineering, or as I'm working on the human factors, generally the human factors drive the engineering. I want something to perform a certain way for a person. And that way it should perform, then, is what describes the program for the engineering — a mechanism that makes it do that.

As I'm doing those things, I'm not thinking of them entirely as an engineer. I'm thinking, well, this approach to that arrangement will give me an advantage on making it visually more attractive or, let's say, visually more appropriate.

MS. HERNMARCK: Well, as I was saying, you got all these meetings going in one head where everything gets weighed equally. I said to Matilda in the car that you keep these three bowls in there at the same time.

MR. DIFFRIENT: Well, that's been the key to what I do. And —

MS. MCQUAID: Is that you can be — you can be all those people in one.

MR. DIFFRIENT: Yeah. And, of course, it's been successful to the degree that since I engineer the things, I get patents, and the patents are what I license. So I've got 50 patents on chairs alone. And it's not because I aim to do that; it's just — that's the byproduct of working this way.

And so I changed my whole approach. One would think I would have come at that from the standpoint of starting out as an engineer, but I didn't; I started out as an artist. It makes me think there are ways to educate people that were missing in this present climate of improving education. And that is that not everything of value can be arrived at simply by abstract symbolism of mathematics and language and so on. Some things have to be arrived at by what I'll call visual thinking, but more as a generalist than as a specialist. And I think it opens doors.

And I think it also points to a way we can educate young people and broaden the whole scope of education by leaning more towards what we used to call "vocational education." There're just some people who don't think in these abstract terms of mathematics and words and research and all. They think visually and practically and hands on.

MS. MCQUAID: Well, as someone who has taught, did you have that kind of approach in your teaching at the various, you know, places that you've taught?

MR. DIFFRIENT: The longest teaching stint I had —

MS. MCQUAID: Each of us is [ph] —

MR. DIFFRIENT: — was at UCLA —

MS. MCQUAID: Right.

MR. DIFFRIENT: — for nine years, and I taught the techniques that we practiced in the consultant design office, not so much as from a business standpoint, but just simply the development of a product. And it was — [sound of phone ringing] — more open-ended, but I would tell them what we're going to design — [sound of phone ringing] — and then they proceed to design that thing.

At that time — [sound of phone ringing] — my vision was not broad enough — [sound of phone ringing] — to do anything broader than that. And then I taught — [sound of phone ringing] — two years at Yale [University, New Haven, CT] in the architectural school, which — [sound of phone ringing] — was something of a failure because I expected — [sound of phone ringing] — them to do some product design — [sound of phone ringing] — which they were instead expecting some entertaining lectures. [Sound of phone ringing.]

MS. MCQUAID: Aha.

MR. DIFFRIENT: And I didn't do that. [They laugh.]

MS. HERNMARCK: [Sound of phone ringing.] The fax machine seems to be making a noise. Do you — [sound of phone ringing]? You don't want to —

MR. DIFFRIENT: Yeah, that's all right.

MS. MCQUAID: Do you have any desire to teach? [Sound of phone ringing.]

MR. DIFFRIENT: In a way.

MS. MCQUAID: I mean, as — I mean your — [sound of phone ringing] — certain your legacy is going to be the products; but in terms of people — I mean, apprentices — do you ever have students that want to intern or you know, come and learn from you in that way? Is there a desire to kind of make it more formal, as in kind of teaching?

MR. DIFFRIENT: Well, only occasionally. I don't think I put out — build a big enough profile to attract a lot of students. They have to know me or be familiar with my work and want to do the same thing. So I'm not in a position that is making my work known to a broad audience. So, no, I don't get a lot of people. I have a handful who come and go and learn from me. I know even one of the Yale kids ended up realizing that product design was a lot more interesting than architecture, which I learned early on. [They laugh.]

And he dropped architecture and moved into product design, and now he's the lead designer at NASA for space facilities.

MS. MCQUAID: Wow. That's interesting.

MR. DIFFRIENT: Isn't it?

I think that's a — was a wonderful combination of what I had tried to teach these architectural kids, or at least show them, in that you approach products — design for products differently than architecture. Architecture is all about conception, and products is all about application and usability, and that's what he's doing.

He's — I don't talk to him much anymore, but he's doing quite well apparently. But that would be the good by-product of what I did transfer to some of these kids. Also, my UCLA [University of California at Los Angeles] kids — several of them went on to develop very consequential product design consultancies — actually much more prominent in many ways than I was.

You know, I never got a master's degree, even though I went through the master's program at Cranbrook. It — and I think I mentioned earlier, I just went there from high school.

MS. MCQUAID: Right.

MR. DIFFRIENT: So one of the kids at — now, I shouldn't say "kids"; they're all middle-aged —

MS. MCQUAID: [Laughs.]

MS. HERNMARCK: [Laughs.]

MR. DIFFRIENT: — said to me once — I was teaching graduate level at UCLA, and he said, "I don't know that I'm going to think much of this degree. What good can it be if I've only learned from a bachelor's degree guy?" [They laugh.] But he went on to — and did a — and started a good business, and there was a handful of others that did very, very well.

MS. HERNMARCK: Well, that's what one can hope for is that a few people catch the germ, so to speak. [Laughs.]

MS. MCQUAID: Right, right. It's — I mean, I think that's, you know — if you can touch, you know, just a few people, that's better than, you know, not teaching.

MS. HERNMARCK: Yeah.

MR. DIFFRIENT: Any good teacher will say that.

MS. MCQUAID: Yeah.

MS. HERNMARCK: But doesn't — yeah.

MR. DIFFRIENT: If you get 10 percent, you're hitting it high.

MS. MCQUAID: That's huge, you know? And I think, I mean —

MS. HERNMARCK: Yeah, yeah, yeah.

MS. MCQUAID: — what — it sort of works the other way too in terms of, you know, teachers. If you have a couple of good students, I mean, you're lucky, in a class.

MR. DIFFRIENT: Well, I think both Helena and I have one restraining factor that nowadays holds the young people back from wanting to work for us, and that is, the way we work is very difficult.

Helena's technique is such that you've really got to want to do it, to spend the time. And mine requires that you've got to learn a lot of skills that also take a lot of time to develop. And I have — I hate to say it —

MS. HERNMARCK: Everyone's in a hurry now. [Laughs.]

MR. DIFFRIENT: Yeah, I hate to say it, but a lot of the young people just don't want to work that hard.

MS. HERNMARCK: Or that long at low pay because that's what it ends up being.

MS. MCQUAID: Right, I know.

MS. HERNMARCK: The pressure to earn money is just overwhelming these days on the young ones, too. When we were young, we never even thought about it. How we're going to earn a living? Never seemed important. [Laughs.]

MS. MCQUAID: I know. Yeah, no, now it's I mean like where, you know, entry-level jobs are, you know, six-figure salaries. That's what they're expecting; it's just — you know, it's unbelievable.

MS. HERNMARCK: Yeah, yeah, yeah, yeah, yeah.

MR. DIFFRIENT: Yeah, that's a big change over when we were younger.

MS. MCQUAID: Right.

MS. HERNMARCK: And maybe that's why spending too much time on a craft object has sort of been almost embarrassing. But, on the other hand, a beautiful craft object has usually taken a lot of time to do. Otherwise it isn't beautiful.

MS. MCQUAID: Right.

MS. HERNMARCK: So it's interesting.

MS. MCQUAID: One question I can't remember if I asked in our previous conversation, but I don't think we sort of discussed it. But I'd like to now, and — but the question was about what you think design is. But I sort of have reworded it a little bit to, if you had to write a recipe for good design, what would be the ingredients in your recipe, and how would you make it? And I know you have — I know — I have a feeling that yours would be very, very simple, straightforward ingredients —

MR. DIFFRIENT: [Laughs.]

MS. MCQUAID: — but I want to — I want to know what they are. [Laughs.]

MS. HERNMARCK: Oh, God.

MR. DIFFRIENT: Well, to sum it up in any simple form is a little tricky and, as a preamble to answering you, I have to set the format in which the answer exists. And that format revolves around a very basic question of, what kind of design are you talking about?

Design is such a broad term; it's really not even a noun. And so I've had to try and picture the range of design in order to know where it is I'm operating. And the range of design is a spectrum from art at one end and engineering or technical matters at the other end.

At the art end, it's what you in the museum world used to call decorative arts. It's a functional object, refined to such a degree, it comes close to being art. That's because you've got a lot of latitude to shape something without the constraints of technology. At the technological end, it's the reverse. The technological restraints are so severe that there's very little latitude left for ambiguous shaping of an object.

I've always chosen to work towards technology. So speak — thinking of design in that sense, the most important thing that I could define design for is that it is a conscious action that creates experience for other people, and that it employs technology; it employs commerce by nature — the way it's done in this category of design; and it employs some way to measure your performance.

So these are the criteria that — you'll notice I haven't said anything in those criteria that even implies that it has to be consciously done for aesthetic purposes because I think that comes by nature if you've done it properly. Therefore, that would be my notion of how a designer should function.

Having said that, I realize most of our life's artificial surroundings can be done by a designer. And that includes

business; it includes the software programs for electronics; it would include commercial endeavors, the objectives of commercial endeavors. I would say the designer spirit as defined in its generic terms would be the best way to run the world. [They laugh.] In other words, a designer for president!

MS. MCQUAID: Right, right.

MS. HERNMARCK: Well, but I also thought that if you have an art background, especially the kind of art background I did or we - then you can do anything. But you have a perspective on things that you don't get if you're — a useful perspective.

MR. DIFFRIENT: I've always converted that into being a generalist.

MS. HERNMARCK: Yeah.

MR. DIFFRIENT: You can't solve a problem as a specialist. As an old advertising friend of mine used to say — Howard Gossage — I don't think you ever heard of him. But he was a young, upcoming, brilliant advertising guy, and he said a lot of bright things. And he said, "If you go to an architect with a problem, the only thing he can give you in answer is a building, and you might need a divorce." [They laugh.]

So this has always been my feeling about design. You've got to be broad enough in your approach to solving problems — and I've always defined it as being a generalist — if you really want to do something good.

Nowadays, so much of what we design in any category stimulates unintended consequences. And if you don't look into it deeply enough, you'll miss what possibly could be a very negative aspect of what you're designing.

Imagine — this is a bizarre recommendation but — imagine that there is a designer who invents the plastic bag. I think of this because Helena's always beating on me to carry my groceries in a — in a carrying bag myself —

MS. MCQUAID: Yeah.

MR. DIFFRIENT: — instead of getting a plastic bag. Imagine if you'd said to yourself, "oh, I'm going to invent this wonderful cheap bag that could be made for fractions of a cent that everyone can be given to take their groceries home." And I'll make a million dollars on the idea, and I patent it, and I do that bag. It would have never occurred to most of us to look down the road to the fact that we may be destroying very important parts of our whole environment —

MS. MCQUAID: Right.

MR. DIFFRIENT: — for this one product.

So the stakes get awfully high the more intense the circumstance of our society gets with so many people and so much money and so many mass-produced things and the Chinese coming on board producing even more. You've got to be pretty broad-based.

MS. MCQUAID: Yeah, I mean, I think you have to know the kinds of questions to answer in a way, and I'm just wondering for you, do you have like a checklist of questions? As you're designing, do you have a checklist in your head of what you want this product to, you know, contain? I mean, as you said, the plastic bag. I mean, I'm sure whoever invented that plastic bag didn't — wasn't, you know, thinking about the environment at all.

MR. DIFFRIENT: No, and most of us have invented plastic bags without knowing it.

MS. MCQUAID: Right, right.

MR. DIFFRIENT: No, a checklist is too complicated. I had to find a core logic that would somehow gather up all of these unintended consequences into one simple mantra that I could follow, and I think I've found it, not by reasoning, but just by practice, and that is efficiency.

Like, I don't practice my design based on how careful I am at preserving the environment. That's not a number-one concern. If I'm really efficient in what I do — use of materials, simplicity of assembly, all of the factors that go into making a product that is, in its final analysis, very efficient — which, by the way, has the by-product of also being less expensive —

MS. MCQUAID: Right.

MR. DIFFRIENT: — and commercially successful — then I think I encompass most of that stuff, and it's something I can handle; I can deal with that. If I had to look into the checklist of where's this product going to end up, how much landfill is it going to produce, and so on and so forth, like MacDonald [ph] does for instance — I don't

agree with his approach to protecting the environment.

MS. MCQUAID: Interesting.

MR. DIFFRIENT: It's too complicated.

MS. MCQUAID: Yeah.

MR. DIFFRIENT: You have to start at a core position, and that position in my book is efficiency. Efficiency applies to things other than mechanical things. It applies to the social relationships; it applies to the physiological relationships; everything has a level of efficiency.

Efficiency — eventually you'll have to measure also by knowing a lot about the develop — producing experiences for people. Experience has an efficiency level too. So that's the one term that sums up what I've learned.

MS. MCQUAID: That's interesting.

MS. HERNMARCK: As you — as you put it that way, I'm beginning to see that's what — that's what I do too because there's very little waste. The materials I use are all natural — wool, linen and cotton. I don't deviate. I use occasionally plastic strip, but mostly it's the wool — [inaudible] — big jobs, and the hours I spent are efficient because I — they are spent on the thing that will produce a satisfaction for people to look at. I'm not programming computers; I'm not working on auxiliary preparation; I dive right into it and make it right from the start. And I use a hundred colors, and it's all in my head, and I know what I'm doing — or 500 colors. And so my hours, even though they're long or my weavers', it's efficient.

MR. DIFFRIENT: This is the one thing I —

MS. HERNMARCK: We don't take much room. We're carrying on an old, ancient tradition, which we need to balance all this mass production.

MS. MCQUAID: Right, right, right.

MR. DIFFRIENT: This is an influence Helena had on me inadvertently — and when we started living together and working together — is that she conceived of what she would do, and she produced the final product. And I thought how neat that is. She doesn't have to go through a corps of engineers —

MS. MCQUAID: Right. [Laughs.]

MR. DIFFRIENT: — and a mass production process.

MS. MCQUAID: Yeah, it's immediate.

MR. DIFFRIENT: And once you fight your way to get an end-product that's as decent as your concept — and I thought the closer I can get to that end-product before I hand it over to others, the better chance I've got of coming up with a really good design.

MS. MCQUAID: Well, it's about —

MS. HERNMARCK: Yeah.

MR. DIFFRIENT: And I've always envied the fact that she cranks out the final thing. It's done. [They laugh.]

MS. HERNMARCK: Of course I can never make the kind of money you do from mass production. But I always knew that there's only really a choice of two: either you do a zillion of very cheap things or you do very few, very expensive things —

MS. MCQUAID: Right, right.

MS. HERNMARCK: — if you want to try and make ends meet. And I've found that, in all these years, I haven't become rich, but I have carried on, and made ends meet all this time.

MS. MCQUAID: Right, right.

MS. HERNMARCK: So —

MS. MCQUAID: Well, and I think that's what's — one of the questions I had for you, Helena, was just about how to balance — how you can balance sort of the business end with the kind of creative end. And I know it seems like a very sort of natural balance for you. But I think for a lot of artists, it's not, and — but how you can sort of prevail,

how you can support yourself —

MS. HERNMARCK: Well, yeah — [inaudible].

MS. MCQUAID: — in an industry that's — or, it's not an industry; it's in a — in a area that is —

MS. HERNMARCK: Well, I think it is necessity is the mother of invention. If I wanted to do this, I just had to put up with the sales side of it. But because I do them so slowly, I only need to sell one or two a year; so I have to suffer through that part — contracts and that part. There's a small time spent to buy myself the opportunity to have fun for the rest of the time. That's how I see it.

MS. MCQUAID: But in that letter to the tapestry artist, you had some interesting kind of —

MS. HERNMARCK: Yeah. [Laughs.] Yeah.

MS. MCQUAID: — kind of outline of, you know, to someone, to this kind of virtual person how you did it and what you would recommend.

MS. HERNMARCK: I don't remember the exact text of it, but it — what's — ask me if there's something — now I don't remember exactly what I said. [Laughs.]

MS. MCQUAID: Well, there was — you divided — I think you divided it up into three parts. There was —

MS. HERNMARCK: Oh, yes, yes. You have to pursue three avenues: commissions, exhibitions and publicity.

MS. MCQUAID: Right.

MS. HERNMARCK: And that worked. I mean, I focused on that — [inaudible]. And, you know, you have to make the publicity — of course, this was long before computers — but I thought — you had to send something out to these architects so that your little thing would lie on top of his pile on his desk.

MS. MCQUAID: Right, right.

MS. HERNMARCK: So that every so often you sent something, even a piece of yarn with a card or something. So — no, I learned a lot from Astrid Sampe, the Swedish textile designer who carried a bag with — [laughs] —

MS. MCQUAID: Right. Right, right.

MS. HERNMARCK: — which was — [inaudible] — office. And also I enjoy — I must say, I do enjoy the interaction with the clients and even — I have — one is very solitary and the other one's very outgoing. And I have that outgoing side to my personality, which perhaps is unusual for an artist. But it's all stimulating enough — you know, the more that goes on, the more stimulated I am.

So — and now, course, I'm spending a lot of time on the computer but it has to do with — for example, I'm — my students who've been workshop people who've only taken like two weeks and then maybe another session of two weeks, so they have — they're amateurs, but they're very enthused about learning my technique, even on that level.

So now I'm involved in having a show with — that we've set up program, and they want weaving a theme, and we found a venue to exhibit it. And —

MS. MCQUAID: Oh, that's great.

MS. HERNMARCK: And it's a way of sort of, say, giving them goals so that they keep doing it.

MS. MCQUAID: So in terms of your own kind of teaching experience, are there particular students that sort of stand out to you? I mean, have — has that been an important part of your career is teaching? Do you feel like —

MS. HERNMARCK: No, I only started it a few — I really only started it in the — after 2000 on a more regular basis. But it's been very little, like a two-week class every other year for a while. But we accumulate, like, 40 or 50 people who have taken my class. Most of them are in Sweden. I've had much more positive reactions in Sweden. But maybe I've looked for it more over there, too.

So it hasn't been many, but it is just — I'm just paying — you know, what's the expression — that you give back —

MS. MCQUAID: Right.

MS. HERNMARCK: — because they are out there, and they want to learn. So you have to try and meet that.

MS. MCQUAID: Well, they're — and the — and the exhibition catalogue *Generations/Transformations: American Fiber Art in 2003* there was — Mollie Fletcher was in there. I mean, was she a student of yours or —

MS. HERNMARCK: No, she was just an assistant.

MS. MCQUAID: Assistant, okay.

MS. HERNMARCK: She went to RISD [Rhode Island School of Design, Providence, RI]. And I had done a tapestry with her father. So they knew about me. But she was great. She was with me for five years. And quite a number in those early days were with me for about five years. And then I got enough — if I spent a year teaching them, then I got, you know, the work as well. So she's then gone on to just be a teacher mostly. But she does her own work too.

MR. DIFFRIENT: That's her piece hanging there.

MS. HERNMARCK: Yeah.

MS. MCQUAID: Oh, wow, yeah.

MS. HERNMARCK: Yeah, it's very good.

MS. MCQUAID: Beautiful.

MR. DIFFRIENT: It's a nice piece. I enjoy having it here.

MS. MCQUAID: Yeah. Beautiful.

MS. HERNMARCK: No, Mollie keeps producing for shows. But she doesn't — she doesn't have that gene in her that likes to go out and push herself. [Laughs.]

MS. MCQUAID: Uh-huh, uh-huh. [Affirmative.]

MS. HERNMARCK: And now that — she's been teaching at CCS [College for Creative Studies, Detroit, MI] in Detroit for many years. And they are kicking and screaming they are forcing her into getting more involved in the computer — [laughs] — and presenting the program and, you know, putting out — she was just telling me on the phone the other day that's she's — understands she has to learn to do more of that sort of thing.

MS. MCQUAID: And how — I mean, in thinking about the computer — the computer, for you, plays less of a role in your work.

MS. HERNMARCK: No, more.

MR. DIFFRIENT: No, it's very, very important. It's just that I don't let the computer — well, I don't allow the computer to dominate the work. I have to produce enough in my early drawings that the computer can only operate within those parameters. And I don't want the creative aspect of the design ever to come straight out of a computer; not because it couldn't. It's just that the computer, as any of you know who run one, is enough of a screen between what you want and what you get that it ultimately, unless you're just a total master of it, it determines which course you follow. It's like something that's so difficult, eventually you give in and go the way the machines wants you to go because it's just too hard to do it otherwise. So I don't allow any latitude for computer creativity.

But I wouldn't — not work without it anymore. Its — it goes directly to the heart of product development in its various aspects and short circuits some of the most torturous paths of old-fashioned design.

MS. MCQUAID: So it fits into kind of that word "efficiency." It helps with the efficiency of —

MS. HERNMARCK: Yes.

MR. DIFFRIENT: That's right. That is a good summation of it. It makes everything more efficient. And it's — and fortunately since I work with computer people that are close to being real masters of the process, I don't have to worry about it. [They laugh.]

MS. HERNMARCK: But you always say, "I don't touch machines." He's never touched machines.

MR. DIFFRIENT: No. Machines have a way of taking over your direction, even a simple machine, say, in a metal shop, a lathe or drill press or something like that. You find yourself — there's a — moving the nature of the work

towards the way the machine wants to work. And I don't want to do that. I don't want to know the machine enough so that it restrains me.

MS. MCQUAID: Interesting.

MR. DIFFRIENT: I want to decide what should be done and then find a way to get a machine to do it, and same with the engineering. Engineering has its own path — from the technical standpoint — has its own path of efficiency. And if you follow it, you'll get something that works for an — on the basis on engineering standards, not necessarily on the base of human standards. So I avoid machines at all — at all levels. I don't want to run a machine. It takes over.

MS. MCQUAID: What about you, Helena?

MS. HERNMARCK: Well, I don't want to run a machine either. [They laugh.] Of course —

MS. MCQUAID: But in terms of the —

MS. HERNMARCK: — I go to the loom.

MS. MCQUAID: But in terms of — you know, in terms of the process in which you work — and maybe we can, you know, talk about this when, you know, more specifically later — but in terms of efficiency, if you carry that over, does it help at all in terms of your work?

MS. HERNMARCK: Yes, in some ways, of course. I don't design on the computer. But I know, interestingly enough, that my designs from the start were in some way influenced — like when I went to Cunard to design tapestries for the QE2, and I asked to get some photographs from the launching ceremony. And they said, well, these prints — we only have these, we're not giving them out. We can Xerox copy them for you.

So I got these Xerox copies. And I thought, hmm, it's not, you know, how —

MR. DIFFRIENT: Early Xerox was pretty crude. [They laugh.]

MS. HERNMARCK: But it was much better to weave from.

MS. MCQUAID: Huh, because of the pixilation?

MS. HERNMARCK: It's simplified, yes. I mean, I never — people always think that I follow the pixilation, but of course I don't do that because I have my own raster which consists of warp and weft and so on. But those two — three, it was a triptych; they turned out very well from those Xerox copies. So then — I've used copy machines over the years and often reflecting where that industry was at that point of time. And then they are not used anymore, then it gets to be something different. So from that way I reflect technology second hand, kind of.

MS. MCQUAID: Right.

MS. HERNMARCK: But I like to work on paper. I like to — you know, often it's — I actually have various ways to design, and maybe we can talk about that separately.

MS. MCQUAID: Okay. Okay.

MS. HERNMARCK: Yeah. But my photorealism, of course, was to do it straight from a photograph without any step in between — like there's no screen in between me and the photograph.

MS. MCQUAID: Right, because a lot of people will manipulate it on the computer.

MS. HERNMARCK: I know, but to me —

MS. MCQUAID: And then — and then sort of transfer it, and then weave from that.

MS. HERNMARCK: Yeah, right. But to me that's not what I want because when — if I'm going to do a realistic thing, I want to do it as realistic as possible. And the camera is pretty good at —

MS. MCQUAID: Right, right.

MS. HERNMARCK: So I'm — even the people who say, oh, you only weave from a photograph, I mean, they don't know what they're talking about. [Laughs.] It's not just "only" because you're in fact looking at a surface thing and making a structure out of it. And the reason the tapestries that are photographically start — you know, that they have that start, by the time I'm through with them, I've added a three dimensionality to it that was never there in the photograph — especially when you see it — when you blow them up.

MS. MCQUAID: Yeah, yeah. No, those are — they're extraordinary. Let me see if I — if there's anything else — couple of just last questions, Niels. What's sort of your biggest motivating factor in terms of continuing your work? I mean, why — what makes you get up in the morning and get to the drawing board and, you know, just get down to business in terms of designing a chair or whatever the challenge is for the day? What is — what's the motivation?

MR. DIFFRIENT: I'd put in two categories. The first is my age and when I grew up and how I grew up, in that — it seems like too strong a word — but I have a great survival instinct because watching my father struggle to support us during the Depression on a Mississippi farm makes you — and following that even when we moved to Detroit, I know the other end of the spectrum; I know how you can fall into poverty and the like. It's ingrained in me because of when I grew up. So that drives me to some degree.

The other degree is that I've never been a great scholar or accomplished anything from the standpoint of what you might categorize as an intellectual accomplishment. I've had only one skill, and that is encompassed within the range of design, although it's pretty far reaching in many ways. And I've always felt I want to show that I could do something important.

More than that — and this sounds awfully Pollyanna-ish — but I want to do something that has real value. I don't want to just be a big star or make a lot of money or any of that stuff. It's a sort of — I'm trying to think of the name of the — Don Quixote attitude. And the end of the book he is — somehow loses a swordfight and he's dying.

And as he dies — I forget the word — but he says something to the effect that this is not a good ending, but I have my white plume. And he always wore a white plume in his hat, which I think Cervantes meant it indicated his virginity. He had maintained his virginity through everything so that when he went he still had his white plume.

And maybe I'm reading something into it Cervantes didn't mean, but that's the way I feel. I don't want to be compromised. And no matter what it takes, at the bottom of it I really want to have done something in which I can say: That's the absolute best I can do. Not that there aren't some pitfalls along the way in commercial activity. But that does motivate me, I must say. What else is there in life if you don't do something that you feel good about?

MS. MCQUAID: Mm-hmm. [Affirmative.] No, I think that's a great answer.

MR. DIFFRIENT: I'm not a great purist, I have to say. [Laughs.] You can't be in a commercial activity and be a real purist. But on the other hand, you know when you cross the line. I look at these politicians, for instance, who take bribes and like. And I think, how stupid can you get?

MS. MCQUAID: Yeah, I know, because you're going to get found out.

MR. DIFFRIENT: Yeah. You can't — you can't get away from that, even if they —

MS. MCQUAID: Sooner or later.

MS. HERNMARCK: Well, it's a borrowed pleasure.

MR. DIFFRIENT: Yeah. You get paid in something that's not real. And, well, it's just something that you either have a resistance — and believe me, over the years working in fields related to big money and commerce, I've had a few people try and tempt me. And I didn't react from a standpoint, oh, that's dirty business; I won't do that. I just had a gut feeling, that's not a part of what I want to do. So I held off, and in a couple cases — one client, the people trying to tempt me ended up in jail. So I know that that saved me, just my intuition. And that's at the core of it. I want to do something that's important, ultimately.

MS. HERNMARCK: You live with your intuition all the time.

MR. DIFFRIENT: Well, I have to because I'm not smart enough to — [laughs] — figure it all out. [They laugh.]

MS. MCQUAID: I mean — and sort of the last question — in kind of looking back over, you know, a very long and successful career in design, I mean, how do you — have you seen a big change in the design field over the years, since you started? And can you kind of summarize that change in a couple of minutes? [They laugh.]

MR. DIFFRIENT: The field of design, as practiced in America and to some degree in Europe, is just about the same age I am. So we're not talking about an old activity. I won't call it a profession, because we haven't reached profession standard. So I've lived, in one sense, through the whole course of what it is I do.

And so therefore, I've seen it all — either by knowing people who did start it, for instance I knew Raymond

Loewy, I knew Henry Dreyfuss very well, and I knew Walter Teague — I knew them all, and I saw that they started it on an intuitive basis and without any prior profession existing — any prior activity that they could call design. They just felt the need.

And therefore, if you start there, yeah, there's a huge advancement in the process. But my feeling is we're still in the formative stages. And with 80 years, it's not asking — I mean, look how old architecture is. So in 80 years what can we have established? My feeling is that we are working ourselves towards what I will — what I have, to myself, summarized as aesthetic engineering. And that's where I think design will go, if we are honest with ourselves. And I have witnessed one beginning phase of it.

MS. MCQUAID: Interesting. I mean, what do you think — and as some who's, as I said, been in the field for so long — what would be advice you would give to young designers now or upcoming designers? I mean, how would they prepare themselves? What is the best way to prepare themselves for the future in design?

If you talk about aesthetic engineering, do you think that it's more — I mean, you talked earlier about this idea of vocational education, that there's much more of a need for that in schooling these days. And I absolutely agree; I think that we've — and maybe part of that's due to the computer — we've kind removed ourselves from the very hands-on making —

MR. DIFFRIENT: And our country has suffered because of this.

MS. MCQUAID: Yeah. And so as — you know, as someone who could mentor so many people that might be interested in design, what would you — what kind of advice would you give them in terms of how to prepare themselves? And maybe it's just simple as experiencing. I mean, you talk your — talk about yourself as a generalist. I mean, is looking back on your own sort of preparation a way that — or is that something you would recommend?

MR. DIFFRIENT: Well, I think somehow or other you'd have to educate yourself beyond what a school can do. And that education would have to focus on a realistic assessment of how to solve human problems. And I also think that it could not happen in any of today's paths of specialization. And this would not be much of a piece of advice, because it's not going to be understood, but I would say educate and practice as a generalist. And generalism, I find, is not that consequential or understood — practiced in life.

Most everybody wants to move towards specialization, because it's easier. But I would just say practice generalism. There are a few good books that are saying this. Not as — not so pointedly as I'm saying it, you know. Various writers are getting closer to this need, you know. So —

MS. MCQUAID: Well, I think anyone who's sort of lived through a period of time when there's been — like with the textile industry, for example, here in the States — where it's in such decline now, and that — what's going to — you know, any of these mills or manufacturers have to find some other way to survive and there has to be kind of a dexterity or a kind of flexibility in how they work and how they see themselves.

And to kind of only see yourself in a particular niche is not going to — you're not going to survive that way, I mean, especially if, you know, certain circumstances come to bear and, you know, you can't make a living off — in that way. So I think you need to have that kind of ability to picture yourself some — in another — not even in another profession, but at least with something that kind of takes your experience but places it in another context, I guess.

MR. DIFFRIENT: Well, you have to be able to turn your back on traditional paths of thinking and start from the other end and say what's the problem and what's the best way to solve that problem — if not solve it, at least understand it? And that's the reason I started studying the extent of understanding how we affect human experience — because that's the bottom line and back up from there, not the specializations that might define, in our current terms, what — generating human experience is caused by, but rather how do you better understand it; and then find the way to solve it using whatever. It's like the stupid Republicans and Democrats — if they would just use some of each thinking to solve the problems instead of being anchored in one or the other path — they'll never solve anything.

MS. MCQUAID: Right, right.

MR. DIFFRIENT: So design is a multiple of paths. And you've got to decide which one to go into for which parts.

MS. MCQUAID: Great. Thank you, Niels, very much. [They laugh.]

[END OF INTERVIEW.]