



Transcript for

AUTOMOTIVE DESIGN ORAL HISTORY PROJECT

INTERVIEW WITH WILLEMINA J. VANDERMOLEN, 1986

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NOTE TO READERS

This PDF-format version of the Willemina J. Vandermolen interview transcript was created from a Word document, created in turn from the transcript available on the *Automobile in American Life and Society* Web site (<http://www.autolife.umd.umich.edu>).

The Automotive Design Oral History Project, Accession 91.1.1673, consists of over 120 interviews with designers and engineers conducted by David Crippen of The Henry Ford during the 1980s. For more information, please contact staff at the Benson Ford Research Center (research.center@thehenryford.org).

Staff of the Benson Ford Research Center
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AUTOMOTIVE DESIGN ORAL HISTORY PROJECT

The Reminiscences of Willemina J. Vandermolen

Reminiscence from the 1985 Interview with Willemina J. Vandermolen. Automotive Design Oral History, Accession 1673. Benson Ford Research Center. The Henry Ford.

This is Dave Crippen of the Edsel Ford Design History Center at the Henry Ford Museum, and today in Dearborn, January 6, 1986, we are talking with Willemina J. Vandermolen. Ms. Vandermolen is currently a designer with the Ford Motor Company and is one of the relatively few female design managers in the industry, and she is going to talk about her experiences in the industry, and we would like to zero in specifically on her experiences as a female designer as well. [We'll examine] some of the reasons [why] there are so few female industrial designers, so we'll ask Ms. Vandermolen to tell her story in her own words.

A: Thank you, Dave, and I'll start with the beginning. I was born in Holland in 1946 [and] why I've always liked cars really relates back to my father. He used to race motorbikes, and I can always recall my father tearing them apart and putting them back together. I guess this was something you had to do when you raced bikes to make them go faster.

Q: Where in Holland was that?

A: That would have been in the southern part of Holland which is Geleen near the German border or near Maastricht . The one incident I do recall that ended my Dad's career as far as motorbike racing was [that] he had the bike apart one time, and he was heating up the oil that was going into the crankshaft. Why he was doing that I'll never know, but I was walking behind him from in the house and outside, and as he opened the door, the temperature change exploded the can he was carrying and covered his arm and part of his body. I remembered that was it. I think Mother put an end to his [bike racing]. But as a little girl he used to take me everywhere on that bike. It was just part of us. I can recall growing up there was always an old, black Citroen which was the first car that I'd ever seen, because this is in 1947/1948. There weren't many cars in Europe . My parents didn't own a car, and I don't think they even thought they would own a car at that time, too, so this car was always parked [out front of the house], and it was owned by one of our neighbors. To me this was just beautiful. Finally, one of my uncles owned a car. It was a Fiat, but what model it was, I'm not familiar with. He finally gave me a ride in it, and that was just a tremendous trip for me. From Holland , we emigrated to Canada in 1951. We went to Toronto.

Q: Any particular reason?

A: During the war my parents had both met a lot of American and Canadian soldiers...

Q: And particularly Canadian in that part of [Holland].

A: Yes. English, but a lot of Canadian. Europe was going very socialistic, and Dad didn't like that and he wanted to start out over again. They had lost a lot during the war. So they decided that they'd come over to Canada , and...

Q: Maastricht was right in the midst of the bombing, and the [Battle of the] Bulge wasn't too far away.

A: The V-2's were rather frightening to my mother. She remembers a lot of that. As a matter of fact, they were bombed out of three homes. Mother would gather everything up and go to the shelters, but Dad just....

Q: He wouldn't go?

A: Well, they had to work in the coal mines. If you remember, that's the area where the Germans had taken over the coal mines -- where

now they're getting all the gas from. So they'd had to work a lot of heavy duties.

Q: It was a valuable resource for the occupation forces.

A: Yes. Their memories of the war weren't that great, so they wanted to start over again. My dad, in those days, didn't know about countries as much as we do today. He looked at a map and said, "Okay, Rome is here, and if I go straight across, Windsor is there which means the weather's got to be nice." Little did he know that that wasn't the case at all. We can get quite a heavy winter here, Windsor being so close to Detroit . We never got to Windsor because when we stopped in Toronto , you had to go to an employment office. You landed -- okay, here's your social security. They told my father it was better to stay in Toronto . The work was better, the employment was better, so, fine, Dad stayed there. He was an engineer, and he got his degrees back, because once you leave a foreign country, you've got to start over again, and he studied at night. Now, he was in his forties. He had given everything up. There is a photograph of the three of us in a little flat in Toronto with no furniture, the clothes on our back, a map of Toronto , and a dollar bill! That's as low as we got. I mean that was it, that was the last dollar. You could only bring so much. You were restricted.

Q: You'd depleted your savings by then?

A: Yes, because I was very little. I think by the time you put down a rental payment on a house and bought yourself some food, that was it. You were wiped out. So both Ma and Dad worked. Mother worked at a Woolworth's, and later on she worked at a bank. Dad kept his career going as an engineer and kept moving up, moving around Toronto . She also worked as a dental assistant. I always saw her working, so I grew up not only liking cars, but I also saw my mother working which had to influence me to think that it's okay for a woman to work.

I went through the regular public schools and high schools, but while I was growing up, I always liked to paint. I was always into water colors, and my dad, by the way, was an oil painter. [He

was] very good, but, as years went by, he stopped painting, sadly enough. I was always painting. When I got to high school, something happened that was kind of disappointing. I wanted to take this particular course which had art in it, but they were filled up so they said, "It's too bad, you've got to go to school and we can only give you music." I had to take music. I did that for about two years and finally got back into art. They finally agreed that, yes, I could do the music. I had the aptitude for it, but what I really wanted was the art. If I did not get the art, I knew I couldn't go further in my career because you get to the age to go to college, and they say, "You didn't have enough hours of art time." So I could see everything going down the tubes. But they finally agreed and put me back into the [art] class, and, when I graduated, the big question was where do I go, [to] what school, and what do I take?

The Ontario College of Art is in Toronto . It's a pretty good school. It's on McCall Street downtown in the Chinatown area of Toronto . I didn't know anybody that had gone to that particular school, but Dad had met a gentleman through his career [who] had spoken very highly of it, so he said, "Okay, let's take a look at it." We did, and what I really liked about the school was that the first year you took every- thing. So the first year you weren't right away into industrial design or advertising. You had a chance to make up your mind. The first year they just gave you everything, and then they found out what you were good at. I had to do an entrance exam, naturally, which wasn't a big deal. It was easy enough, [and] I got in. The first year was a lot of fun, mainly because it was freer, and they really wanted to just see what you could do. And [after] talking to the professors there, they decided that I was very strong in the product end.

Q: How did that come about?

A: I don't know. Maybe the relationship of how I deal with things. I was not strong in advertising or figure drawing.

Q: Or fashion drawing?

A: Or fashion. Maybe it's because I'm more organized. Whatever the character is, they said, "Why don't you try ID now." I was one of the first women to go into industrial design.

Q: When was that?

A: That had to be in 1965.

Q: The first year you were there?

A: Yes, because it was a four-year course. I graduated in 1969. We started with a class of almost fifty people of which there were three women. After the first year, I was the only [woman] left. It was very tough.

Q: Competitive?

A: Yes. If you failed one course in any term, you were finished. You couldn't go back to the school. So you didn't take it very lightly. You had to really stick it out. There was no automotive

training. That was the only thing that disappointed me about this school. The head professor, who was in charge of the industrial design didn't care for automotive. He had this [notion], "That's silly, that's unnecessary." So we were taught product design. [There was] nothing wrong with that. You learn a tremendous amount.

Q: What kind of products did they zero in on?

A: My goodness, anything from snowblowers to screwdrivers to furniture to gas heaters. Almost everything you use daily. Which is good.

We did a lot of experimental things like this one little thing we had to do and that was drop an egg, a raw egg, from the top of the school roof, which was three stories, onto cement. When it fell, the shell had to touch the surface of the cement [and not break]. That was part of it. So you can imagine [with] these thirty or forty people, there were a lot of disasters, but there were a lot of interesting resolutions, and that's part of industrial design.

Q: How did you resolve the splattering?

A: I'm trying to think of [how] I did it! What I'd done was I had a ring of Styrofoam. It was offset so that when I sailed it, it went like a saucer and hit the Styrofoam first and then rolled on to the side. Mind you, there were some failures. You had to experiment. There were people who had ideas like they had it in cotton and they lit a match to it and hoped that it would burn. By the time it hit the cement, the egg would explode. Nobody thought about the heat. That was interesting, things like that which make your mind work, and, again, it can relate to anything whether it's a car or product design. The last year, a professor joined us from England. He had worked for Ford of England, and he'd worked on the Cortina. His name was Claude Gidman. He had a design office in Montreal, but he commuted to Toronto twice a week to do rendering classes which we badly needed. The rendering techniques are tough, and people in automotive, if you've gone to the Art Center, and this gentleman had, are really good.

So when he came and started to show [us] how he would render.

[It was] just wow! It was such a tremendous step forward for most of us. I had been sketching or drawing cars on my own time. What I would do was I'd take a photograph out of Life or Time magazine. In those times, they [had] some beautiful ads that were rendered, and all I would do [was] try to copy it to see if I could get the technique down.

Q: Tell us the difference between a sketch and a rendering.

A: A sketch can take many forms, but, usually, a sketch is something very quick. It can be just in pencil, it can be an outline, it can be pencil with a slight bit of coloring in the same tone, but when you get to a rendering, that's when you get into the fine line paint whether it's oil or magic markers or water colors. It's more a very finished piece of art work.

Q: You'd call it close to the final.

A: Yes.

Q: The sketch would be in the beginning [of the] process?

A: Yes. A sketch could be the beginning or sketch is something you do when you don't have a lot of time but you want to get an idea across.

Q: It's an easy way for a designer to....

A: Quickly communicate, right. And we have to do that a lot today. If you're working with a modeler and say, "This is what I meant," you just take a pencil, and you can shade it in, but that's not what you call a sketch versus the renderings. Claude Gidman, he was very good.

Q: He'd left Ford of England and came back to Canada ?

A: He'd come back.

Q: And opened a design firm?

A: Yes, in Montreal . He'd worked in England on the Cortina which to me, at that time, was kind of like wow! It was very exciting. And he was very nice. He also realized that, generally, the school did not approve of people spending their time rendering cars or doing car design per se. There were two of us at this time -- by now the class is really small. We're down to sixteen. Really got weeded down. And he found out that this one fellow and myself were very interested [in car design]. So he'd stay late some evenings, and we'd bring our stuff in. He'd look at it, give us suggestions on what to do and bring his work in. He also did a lot of architectural renderings at that time. When graduation came around, which was in 1969, I don't know how the economy was here, but in Canada we were going through a recession. It was not a good time to leave school and try and get a job. I remember it was one of the last weeks, and he turned to us and he said, "How's it going? Have you got a job yet?" "No, we've been trying, honestly trying?" We weren't getting anywhere, so he said, "I know some people at Ford. Are you interested?" Sure we were. He didn't have ask that question twice.

Q: [Who was] the one who survived with you?

A: His name was Glen, and we both graduated that final year. I graduated fourth in the class that year. But I can't remember where he ended up. He was very good. But [Gidman] he gave us some names here at the Design Center .

Q: Do you remember any of them?

A: [One was] Atwater . He was in personnel. He did not give us a designer's name, but he knew this personnel fellow, and he said, "Look, go on down, and take those sketches that you've been doing on your own.

We came down to Dearborn in an old beatup Volkswagon [and] scared to death. The two of us, like country bumpkins coming to Dearborn . [It was] just the idea of leaving home. We came there, and we both thought, "What are we doing?" We knew that these other art schools were out there that taught automotive design. And we just thought we'll give it a shot. What have we got to lose? So, we had the interview with the personnel people. They looked at our work and said...

Q: You came down here to the then new Design Center ?

A: Yes. Our first interview was just with Design Center personnel -- this Atwater gentleman and another fellow. We were here probably an hour and a half for the interview. It was very short, really. They looked at what we'd done and....

Q: Had you worked up a special design portfolio?

A: Yes. I brought all the stuff I'd been working with, and some of my other product designs because I might as well. But they suggested that we go back and do a little more work, and then they would set up an interview with some design people. Okay, no problem. We went back and did our thing, and, in the meantime, I was still trying to find a job at home.

I finally found a job working with an interior firm that did malls -- mainly, the malls' interiors, how they looked and the different stores inside -- for an American subsidiary. But I was only getting \$60 a week, which was a little rough. We added some more stuff to our portfolio, got together, and made the trip again. This time I met John Najjar and Steve Schere.

Q: Who had just formed the Industrial Design Group?

A: Right. And I remember John seemed so delighted to see me for some reason. I think he was happy to finally meet a woman that was interested [in automotive design]. John had two daughters, so he was extremely helpful, really. He was just beautiful, and he showed me this industrial design area which was on the third floor of the design center.

Q: This is in...?

A: That would still be '69. I met Steve Schere, and I met a gentleman by the name of Bob Puffer, who was not a designer, but he was a liaison man for Steve and John, at that time, in the industrial design area. Puffer now works for Lou Veraldi in product planning.

When I saw this studio, it was just something else. It was really exciting for me to see something like that, because, being a student and always working with just the little pieces of scrap paper that you have, and, suddenly, you see this beautiful place, and, wow, do I want to work here! And, I got hired. But then the difficulty came in --how do we get you from Canada to the U.S. ?

Q: Your work permit? Your green card?

A: Yes. The other fellow, Glen, also got hired but decided not to come because of the Vietnam War. He was married and had a child, and he said he really would like to, but he didn't want to take the chance of going into the Army.

Q: Would he be drafted?

A: That was his fear. But, he didn't do it, which was a shame, because he was very good. He would have done very well. So I started the proceedings, and Ford Motor Company had to write a letter to the American Embassy saying, "Yes, we've hired Miss Vandermolen, and here's the salary, and it's a guaranteed job." Otherwise, you can't even start the proceedings. I started in Toronto at the embassy. The whole process took about nine months. As John Najjar says, "Getting to work for Ford Motor Company was like having a baby." They play little games with you, in some respects, but we finally got it all cleared up.

And what was strange is one of the major points of me coming here was the quota for the Canadian designers. There's a certain quota for each professional. You can only let so many people in if you're an engineer from Canada. It turned up that that one had closed, and they said, "Sorry, no more designers." But, the [clerk] said, "Aren't you also a Dutch citizen?" I said, "Yes." You know, Dutch stays with you. She said, "We'll do it that way." She was helpful. One of the people that goes through all your paperwork and decides you finally got everything right, and she said, "We can give it to you." And then in February, 1970, I finally made it to the Design Center, and I [can] still see John Najjar and Steve Schere. John was not a very tall person, but Steve was very tall, and there they were waiting for me. And then I started with John.

Q: What did he have you do?

A: He had the Philco line, which was TV's, radios, stereos, refrigerators, and he also had, and I think he was even working on a snowblower project then and he also had a project going on that involved -- like an interior of an apartment--a modular setup that he was working on. He had a lot of things going.

Q: I've seen some of them, and he's described some of them.

A: John always had a lot of things going on. He never sat still. So I started. The agreement was I was hired as a trainee, which most designers are, and what you do is you stay in a studio for roughly six months for the first two and a half years as a trainee, and then you move to a C designer, then a B, and then an A. I think that's the way it goes.

So my first experience was product design, which was a natural for me. I already had that.

Q: Working on certain Philco consumer products?

A: Yes. I remember the first project we had was this little modular radio that had separate speakers, and you can do little things with. But [John] also asked me if I would mind going to night school.

Q: To do what?

A: To take up more car design, which was no problem for me. That was great.

Q: Where did you go?

A: I went down to Arts & Crafts, the Center for Creative Study, with Homer LaGassey.

Q: He was there then?

A: I have a feeling he was just beginning.

So at night, twice a week, I would go down there and try to catch up because, like he said, "You've got the background to do product". But, let's face it, I was not really ready to jump into an exterior studio because I didn't have the full experience which he wanted to make sure I had. So he gave me that opportunity.

Q: Did the company pay for your tuition?

A: Yes. I'm sure they did. Now, just before I got hired, they hired another woman by the name of Judy Iler. She came from Auburn University, and was in almost the same boat I was. She did not have very much automotive rendering [experience], as a matter of fact, she had nothing in her portfolio. Even though I had some in my own, she'd hadn't done that at all. She'd just done basic. Her real portfolio was really a thesis, just words with very [few] [renderings], but they hired her at the same time, which was just before I got there. So we went to school together. Which was nice--being together.

Q: You were both single ladies?

A: Yes. Her mother came up here to live with her. They rented a house very close to the design center, so they asked me if I would live with them. So that worked out great. Seven minutes from work. It was so close, it was ridiculous. We went together to night school which was nice--at least, you have somebody with you, because at night in Detroit wasn't the coolest [place] to always be by yourself. But the sad thing about that is she got laid off within five months.

Q: Where was she working?

A: She was working in an interior studio with Howard Payne, Phil Payne's brother. I don't know if you know Phil Payne, he's now at AMC/Renault. I'm trying to think who her manager was at that time, but I can't remember. She was having a hard time. The reasons I don't remember. I don't think she was totally turned on by the business, so she got laid off and that caused some problems. They moved away one time when I went to Toronto without telling me, and that was just a silly little experience there. But I was sad to see her go. So, Judy left somewhere in March, and I missed that because now I was totally alone within the Design Center with just men.

Q: You were the only woman?

A: Yes, except for the secretaries. Now, I add this little touch, it was kind of funny. When I first got to the Design Center, I found that the secretaries were kind of standoffish. Why, I don't know, but maybe because they felt she's probably making a lot of money, and she's really only a woman, and why is she there? Maybe they had some feeling of resentment.

Q: [Was] that about fifteen years ago?

A: Yes, a good fifteen years ago.

Q: We might explore that for a moment. Do you think that the secretaries -- I think what you've said is pertinent -- [were] loyal to their bosses, loyal to the Design Center, and they felt that a woman going beyond the secretarial limit, even though you were paving the way for others, and you were pioneering, was somehow not quite cricket?

A: Yes. I have a feeling there was a little bit of jealousy or envy, maybe more envy, thinking, wow, she's out there -- a designer --and she's a woman, and she's working with all these men. Because I find that most of the secretaries over the years that I've talked to them really hated to go into the studios.

Q: Why?

A: It's intimidating. If you have a group of twenty men working on a car, and I'm talking a lot more about the modeling 7d of it, which they're all in, and you've engineers, you've got modelers, and you've got designers. Designers, in general, are quieter guys. The modelers can be a little wild at times.

Q: The nature of the profession?

A: Yes. They're having a good time, but for a woman isolated in an office and who's never had to deal with this, somebody suddenly walks into a studio, and, to the guys who've been there for twelve hours a day because they're working overtime like crazy in those years, they see this lady walk in, they make cat calls and cute little remarks. So, there's a lot of that. So it had to be a combination of things. I don't think it was directed at me, personally. It was more this thought of, "Gee." But over the years, I've made some very good friends [among] in the secretaries.

Q: Some of them are quite knowledgeable. Some of the old timers who work for the top men.

A: Yes, very nice. Extremely nice ladies, I want to say that.

They're super helpful, super supportive now. Now, the men, at the same time, I also found were very supportive. I think I was very lucky.

Q: Starting with John Najjar?

A: Starting with John and Steve and just everybody.

Q: Did you know Walt Gollwitzer?

A: Yes. I have to add this, this is a cute thing. This was up in the Industrial Design Studio. The first time I met Walt was when I saw this table going crashing across the studio. It was Walt throwing it.

Q: Why was he doing that?

A: It wasn't a big table, but it just something he could--I guess he was having a tough moment or something, and everybody said, "That's

Walt." I said, "Oh, I'm going to stay away from him."

Q: Who said "That's Walt?"

A: One of the designers that I was working with, but, as you know, Walt is just a super person and is a delightful person. I really like Walt. But that was my [first] meeting with Walt.

Q: Was Bill Shenk over there at the time, or did he come in later on special assignment?

A: I don't know if he was in Europe at that time or went to Europe just after I got there, but I don't remember him right at the beginning. He came later, so he might have been in Europe, which a lot of people were. There was a lot of rotation going on.

Q: Najjar had been asked to set this up, the Industrial Design

Section, get it off the ground? With the Philco acquisition [by the Ford Motor Company]?

A: He was in charge of it. He was the Director, and Steve Schere was the Executive. The gentleman I worked for was Jon [Morgan], and I don't remember Jon's last name because he only lasted about another two or three years after I got there, and he moved to Chicago. I remember him specifically because he never reminded me of a designer. He reminded me much more of an engineering type, and I don't think he was that happy, and he was happy to go to Chicago and do something else. I think he went to a furniture design firm when he moved away. Though, again, [the] support of the men was great. In the industrial design end of it, I was pretty well okay. I knew what I was doing. I had had enough schooling. After the six months were up, they said, "Okay, now you have to go to a studio." And then I went to an interior studio with Homer LaGasse. I'm sure, yes, it was Homer, and it was at the time they were doing the big Marks and the big Lincolns, and it was an interior studio. Now, I'd been going to classes with him, so now I was going down to work with him. So that made me feel...

Q: He was moonlighting even in those days at CCS?

A: Yes. And I'm sure they'd worked that out that I could go down there with him, so I still had a bit of a chance to adapt.

Q: It made your transition from industrial design to automotive design a little easier?

A: A: little easier. And, Jim Sherburne was there, too, and Jim is another super guy. He's now in California working for Toyota. Jim's a nice, nice guy. If you want to find a person that can--he can pick up any scrap of anything and do a little portrait or sketch in the most beautiful colors. His color sensitivity is absolutely the best, just beautiful. I was lucky to get to work with him. Just watching him doing his renderings or working with color. Sometimes when you think about it, you wished you'd had more time to watch them. So, there I spent another six months.

Q: What were you doing?

A: Interiors for the large Marks. This is in 1970/1971. I forget what car lines they were, but it was the big ones.

Q: What kind of duties did they assign you initially?

A: You'd get involved in sketching seats, door panels, instrument panels. I do remember when I was there, the instrument panel was already approved, so I didn't have to get into sketching my piece. I do remember that you do have to build parts for the instrument panel--parts being like a cluster, the graphics and how the cluster is. You'd put that into clay, and you'd build radios, and the designers actually build all these little parts and then set [them] in the clay so it looks real.

Q: I've always been fascinated by that.

A: So I had to learn how to do all this stuff, because that was new to me. And that's my first opportunity to work with modelers--a wild and crazy bunch. There were some real good fellows. Now this is the first time I'm in a real live car studio, and everybody was just super. In that studio, I didn't get any feeling of resentment, or like why is she here or anything, they were great. They helped me out, they showed me how to do things, nobody ignored you. I think the important thing here is as a woman that didn't I just walk in and say, "Well, I don't how to do it" and just sat there. I tried, and, sure, I made mistakes, so what. Then they were willing to help me, and they knew I was making progress. I was learning, and I was showing I could do it, so they had no problem with that.

Q: You were probably the first, full-fledged female designer at Ford.

A: Yes, that made it that far. They had Judy [Ilen] in a studio, but she did not survive as long.

Q: Who, at this point, are helping you along when you got into the interior studio?

A: Jim Sherburne would help me, Homer [LaGassey], and there was another fellow by the name of Howard Mook. He had been there two or three years with Ford, gone into the Army, been in Vietnam and just come back, so he felt like he was starting up again, too. There was a lot

of closeness with all the trainees [who] were there because we were all in the same boat--were you going to survive or not? In those days, there was almost a 5% cut, mainly in the training group every year, so you never knew were you going to be the one that year, because you had to really keep your performance up. So competition was great, but, at the same time, everybody was pretty close, which was nice.

Q: Can you describe in a brief way, but with some detail, on how your performance was gauged. How they rated you? Were there semi-annual performance reviews, and how did those work, or was it based on your general ability to adapt to the system and work with it?

A: I think it's a combination of everything. You have to adapt, naturally, and yet sometime you have to learn things on your own without help because there wouldn't be time for somebody to help you, so they want to know if you can do the job. You received a review, as a trainee, every six months, whereas once you're out of training, you receive a review every year. But being a trainee and since you move around, each manager would get his or her opportunity to evaluate your work. Now, your evaluation was usually gauged against the other trainees; whatever level you were at, that's where they would gauge you to. So they didn't gauge you to a super senior.

Q: That might have helped?

A: Yes, because if you're just thrown in there the first year and somebody's gauging you to a senior, that's a little tough because they're way ahead of you. So they gauged you--everybody has a general idea of what a trainee can do and what they're expected to do. You end up with a lot of funny little jobs or crummy jobs, too--running prints and [that] kind of the gofor jobs. But, but at the same time, you get a lot of chances to do sketches and renderings because, usually, the trainee was the one that had more time. He or she was not expected to go to a lot of meetings, so you had more time to do sketches. You could, if you wanted to, really do a lot of neat stuff and get your stuff picked, because you had so much time to get it done.

Q: It was really competition?

A: Oh, yes.

Q: They gave the assignments to several different people.

A: It's always competitive.

Q: Is it still?

A: Oh, yes.

Q: So, if you were to do a dashboard, you'd have five other people doing the same project?

A: Oh, sure.

Q: And they would say, "Okay, Mimi, we like yours," and that's the way you would go up to the next level.

A: Right, and in interiors and exteriors you might have a studio of one manager, five designers. Out of the five designers, one is a senior, or in those days they used to call them a super senior right under the manager who took over in case the manager was not there. The manager ran all the agenda meetings, gave you all the information, the super senior would keep the studio rolling, and see that all the projects the people were doing the work that was required.

Q: Who handed out the assignments?

A: The manager usually did. The super senior might give out some, but usually it came through the manager. Now, if you had five people, the manager might say, "Everybody, we've got a 1985 door program for a Mustang, and we've got to start sketching. There's three series of doors--a low, a mid and a high. We need formed doors, and we need some dialetric doors," which are really flat. So, away you'd go. In those days, that's about all the information you got. It was a bit different than today. Today we--I'll get into that later--do a lot more work. But, so here you have five people, and you all want to win--I mean your ego--that's one thing about a designer. What you put down on paper--whether it's a sketch or words, whether it's a writer or once you stick that up, everybody can look at it and criticize the heck out of you.

Q: Are there critiques as well?

A: Oh, yes.

Q: Everybody joins in?

A: Yes. Usually, on a program you'd probably sketch two weeks at the most, and then the manager would say, "Okay, let's everybody get together and let's take a look at what we have." And he'll go through it and say, "Yeah, it's going the right way," or he'll say, "Jeez, no, I don't see anything, we're not in the right direction, so let's start over." Usually, though, it was going along okay. And then he might ask the group to pick what they like. So you'd get a red pin, and everybody would just stick up one or two pins, and from there you usually got a trend of what people might... One of those push pins. We'd color the top red, so when you stuck it in a sketch, you could really pick it out. If five people liked the same sketch, there would be five pins.

Q: That was their way of approving it?

A: Yes.

Q: If you got four pins, you were in?

A: You were doing great. Now [it was] not always that the manager would say, "Okay, that's great, that's what I like." But usually they'd take the consensus, and from there the manager would take it to the executive and the director. They'd look at it, concur, and then, if you'd won

or you got one of the sketches, you would take your sketch and you'd go to the engineering staff and say, "I'm ready to do a tape drawing of this sketch."

Q: Could you describe a ,tape drawing?

A: A: tape drawing is a drawing that's done over a full-sized engineering drawing. Let's take a door--you ask the engineers for a door drawing that has all the information on it--the size of the door, where...

Q: That's known as the engineering package?

A: Yes, could be.

Q: Or sub-package?

A: Sub-package or you'd have to know the locations on the door release handles, the window crank, you'd have to know information like where the armrest zone would be. There's certain zones that are comfort zones. If there's a vent window, you'd have to know where the vent window crank is or the release, where the lock buttons are. Especially, if it's a carry-over car, which usually is the case.

Q: Carry-over is what?

A: Carry-over is a car that's already been in production.

Q: It needs only a facelift?

A: Right. You've got an inner sheetmetal, all the hardware's in there, they know everything, they know where the arms for the window crank are, so they know everything you have to work with that. So then you take this information, and you take your sketch, and usually what you do is you just staple it on a wall, and you take this black masking tape which is very flexible. By flexible, I mean when you're putting on the paper you can make radiuses very easy without it crimping.

Q: Does it have a special name?

A: We called it masking tape. It's black. You see a lot of beige masking tape, but we used the black because it really shows up.

Q: Not reflective?

A: No, and so you'd make a couple of proposals. Now, here's where a designer really has his job cut out for him. It's easy to do a sketch and cheat the heck out of it and make it look good.

Q: How can you do that?

A: When you're doing a sketch, you're just going by the way it looks. Now, put it in the real world. Now, your job gets a little tougher, because now you want to make it look better than your sketch because you're competing with a couple of other designers that have got the same door. So now your work's really cut out for you. Now you've got the real world, you've got all the package, you've got all the hardware, you've got your armrest zones, and now you do your tape drawing. From there, you take this drawing and you do an overlay. You put another plain sheet of paper over that tape drawing, and you do a full-size rendering.

Q: The tape shows you the zones that you...?

A: Yes. It'll show you the outline of everything--the armrest, the moldings, the pleats, the sew lines.

Q: Which is your creation?

A: Yes. Whether it's a formed door, or this dialetric door, which is a flatter door.

Q: Dialetric?

A: Yes. Dialetric is a bonding system, and it's done electrically. Basically, you get a very thin board of cardboard [in the] shape of the door, and you get a thin sheet of vinyl, and then a thin bit of foam depending on how thick the door can be, depending on its level. It might be a half inch or a quarter of an inch. This has to do with cost and what they can afford, and there's this process where this bonding, whether it's a line or stitch line, it just comes right down and bonds the vinyl and the foam right to that board, and you get these little bond lines, and they have the puff in between. So that's what we refer to as a dialetric door, which is usually a lower level door than the more expensive formed door. You've seen them, I'm sure, on some Mustang doors, and today we use them on Lincoln Continental doors where they can afford them.

Q: The formed doors?

A: Totally formed, it has more section to it, and it's very soft.

Q: It's not a rendering, it's an actual mockup?

A: Yes, that's the process. It's formed in a die--a mold--and it has a lot of soft foam in it, and it has more shape, and it looks more luxurious, usually. So, after we've done the tape drawing, we do a full-size rendering. And, then again, you'd have a review with your bosses. Usually, what you'd do is you'd cut out your rendering and put it on an armature that's in a buck.

Q: An armature is a...?

A: It's just a piece of wood.

Q: It's in a buck?

A: Yes, just a half buck--like an instrument panel buck where the instrument panel is, part of the windshield, and the seats, and put it on, and you can see what it looks like. You get a very quick picture of how it relates with the instrument panel and how it looks within the environment.

Q: Do you make that inside out or outside in?

A: The interior people would just do the interior and the outside would be whatever it was. It would be just flat wood. The exterior people do the whole outside, they don't do half bucks like that. And today we tend to use some of the exterior parts. We actually put hoods on it, and door skins. So, if you were still in the running at this time, then you'd take the next step where you...

Q: That's happened to you?

A: Oh, yes.

Q: Even in those earlier days?

A: Yes. In some ways, I guess I was lucky or I worked at it.

Q: Can you tell us about it?

A: The Mustang II, which I worked on with Jim Arnold, who's one of my favorite people.

Q: Who's just left, unfortunately.

A: I know, I just talked to him today. He's in England .

Q: He is? How is he doing?

A: Great. I think he's a little lonely.

Q: Oh, he's in England , not Japan ?

A: Yes, he's in England . He sounded a little lonely. He was asking, "How is everybody?" Oh, he's a super person. So I worked with Jim there, and I remember I did a lot of nice things there with Jim, like the doors, for instance. That's why I was thinking about that. If you got that far, you get the challenge of working with the modelers and with the engineering staff real closely, because now there're putting it in clay. They (the engineering staff) have to work with you to make sure it's feasible, and, naturally, a lot of things you'll just try. Let's face it, if you can't produce it that way or it's not going to fit right, you have to make a lot of compromises.

Q: So the modelers would assist you in making a clay of your finished drawing and your finished buck?

A: Yes. What they would do is, I would have, on the original tape drawing, not the rendering, done some engineering sections that would have had the approval of the engineers as far as--can I make the armrest this section? Can I take the surface of the door this far outboard of the car? Things like that. So I would give those sections [to the modelers], and they could drag, in clay, this shape. And then you sit with them and help them out with certain shapes and work it out because now you're making a transition from a rendering into three-dimensional, and, believe it or not, it changes. Sometimes you say, "Jeez, that worked nice there, but it's not working here, what can we do here?", plus the engineering input that you get. So, here's where a designer really has to make some compromises, and, again, you have to try to make your design work and save it, so it becomes very challenging. I was lucky in that Mustang studio with Jim Arnold when I worked there.

Q: Which year was that?

A: I think it was somewhere in 1974.

Q: The Mustang studio?

A: Yes. Had to be in that era.

Q: In '72, what type of Mustang were you working on?

A: That was the little one--Mustang II.

Q: Iacocca's personal project?

A: Right, because the studio before that, I'd worked with Don DeLaRossa and Ray Everts on the Mustang II exterior as a trainee. Now that is the last era in the exterior studio where we must have, my God, pumped out a hundred full-size models on that car.

Q: They had lots of time and money?

A: That was an era where you had the time, you had the people where you could really experiment. I was still a trainee at that time, [and] I still remember thinking, "Wow, all all these models, and they were having a very hard time picking the next generation Mustang. You know, Mustang had made such a bold statement. We were downsizing the car, and it was having a hard time. But I do remember I worked with Don DeLaRossa, and I worked with Ray Everts.

Q: Interesting people.

A: Yes, very interesting. Ray had worked for some truck company, and I can't think of who they were, because he told me some of his career. Now, Ray has just finished the Taurus/Sable program, so I worked with him again. In the meantime, he'd been in Germany for awhile. But that was an interesting studio, mainly because of these people like Don DeLaRossa and Gene Bordinat and because you would see both of them come in their flamboyant way in those years. I

mean, that was an era. It was just amazing. Especially, I guess, when you're younger like that, you just sit back...

Q: Impressionable?

A: Yes, wow! You know all they had to do was wave their hands, and everything changed instantly. But I do remember that in that program we did an awful lot of clay models. An awful lot of research was done before they finally picked a car.

Q: Why do think that was? Do you think it was because they had the money or they felt that refinements could only be done by making another clay model?

A: I think certain cars, like a T-Bird, Mustang, Riviera from GM, or Eldorado, have a very strong statement, and everybody sees something in these cars really strongly. There's a lot of strong feelings because I can recall when you'd start to talk about it (with a group of people), "What do you think it should look like?", you would get extremely strong remarks. Whereas, if you took an LTD or a Mercury, people knew it was a sedan, and it was a family car, and it had to be functional. But when you got into these ends of the business, the little sports car, the elegant cars, people really [feel], "No, it has to be this", or "No, it has to be that", because they remembered the last one they had, and it impressed them in a certain way, and that's what they wanted it to be. So, my feeling was that we were all having a tough time getting that Mustang II to be what everybody thought it [should] be. So they had to keep doing the models over, and they did some surveys, and it just took them a bit longer.

Q: A: consumer survey?

A: Yes.

Q: Do you think this was because it was Iacocca's personal project, and he wanted to succeed?

A: Oh, yes. I'm sure everybody did. The Mustang had been very successful, and here you're doing a whole new car, so everybody was a little bit nervous about it. They wanted to make it good. So that probably was the last time that that was done on that scale that I can remember. From there on in everything...

Q: A: prodigal use of time, manpower and resources?

A: We had the people. It was easy to do a model every week, and say, "Oh, no, we don't like it, let's do it over." Whereas today, you know...

Q: Would it take a week to do a good, finished full-size clay, or did you do scale models?

A: We did full size. To do a full size in a week, that's rough. I think you need four. And even at that, you won't get the full detail you need. To drag in a body section, you can do that relatively quickly, but it's the detail of the front end and rear end that takes you a little bit longer,

especially if the body has a lot shape to it. If it's not a straight drag, you're into--maybe it's got a Coke shape, or if you've got a very sweeping boattail, that takes work, and then the highlights.

Q: Modelers are the unsung heroes of the business?

A: Yes. They do a lot of hard work, and there's some extremely good people around that are all leaving now--retiring. We've been losing some extremely good people in the last few years.

Q: We've talked to Fred Hoadley. Do you remember Fred [as a master modeler]?

A: Oh, yes, I remember Fred. Gil Trewick is another good modeler. He's out in California . He's working for a design company that we hire to do work for us [California Concepts].

Q: At this point, you've gotten into it very nicely--you're into the exterior under Don DeLaRossa, and now you're into Mustang II interior working with whom, specifically?

A: Jim Arnold, as my manager, with Steve Schere as my exec, and then Dave Ash as the director. There was somebody [with] a lot of character--Dave Ash. Oh, God, he was something else.

Q: In these early efforts of yours, as a beginning designer working on the fairly important Mustang II interior and exterior, aren't you in a rather unique position to look back and comment on just how conditions were at Ford in the early '70's in terms of (1) you're being the only female designer, with obviously good industrial design background and (2) if there were any personality problems that you had either with your fellow designers or with the administration in terms of advancement [as well as] general observations about your experiences with [an important] design studio in -a major automotive firm? Would it be instructive to mention some of the problems you may have had?

A: Dave, as far as problems, I don't think I can say I had any problems. Again, I think it's the people that I worked with. They were just great. In this particular studio that we were just talking about --the Mustang II -- I had Jim Arnold as my manager, and the designer that I worked closely with was Howard Payne, and we had a rather hectic schedule. The car, I believe, was a bit late as always, our timing was tight. Howard was a senior [designer] at that time, and both of us worked together just super. When I first joined the studio, he'd never worked with me before, and he told me when I first came in, he thought, "Oh, no. Now I'm going to have to carry this person." Because we talked about it later, and said...

Q: This person or this female?

A: This female. He said, "Oh, God, here I get a woman. Just what I need!" But as it turned out...

Q: Because there was a general feeling at that time that you couldn't carry your own weight?

A: Oh, I'm sure, because most of the guys had never worked with a woman, so, yes, how many women do you meet that know how to talk about cars, know what's going on in cars? So their impression is probably of their girlfriends, their wives, or the women that they knew. So, here I come, big program, and they've got to depend on me to help them out. So, yes, I can understand that. You get some hesitation, some wondering. But, Howard was a very organized designer. I learned a lot from working with him. He had a very nice habit of leaving a list always on his desk of everything that had to be done during the day or the week.

Q: What would some of these tasks be?

A: Well, things like go the shop and check if this console got painted the right color, check the trim shop to see if the seats are being done correctly, if the trim's right, if the fabric is right, make sure the modelers are working on the billboards, the formed items.

Q: What's a billboard?

A: A: billboard--that would be an armature that's half of an inside of a car, and on this armature would be things like the A pillar garnish all the way across to the back, where you get you angel wing and all the items that cover up the sheetmetal for the inside.

Q: The angel wing?

A: That's the C pillar area, the back area of the car where you get the back light. We call that an angel wing.

Q: Because they vaguely resemble a spread wing?

A: Yes, there's a lot of like "belt line."

Q: A lot of imagery?

A: A: lot of strange terminology, I mean, that's something else. When you join the company, they give you a little [paperback] glossary of the design terms, because if somebody uses the term "backlight," what is a backlight? For most people who have been in the business for awhile, the words just fall out like crazy, and when you're standing there as a little trainee, you're going, "What is he saying." So you have some weird moments until you catch all the phrases. So, Howard [Payne] was very organized, he was a good designer, he knew how to get the job done. Since we were extremely busy and there were just the two of us -- I think there was also Joe West, who retired about six years ago, myself and Howard on this program. He has a brother Phil who left Ford about six or seven years ago, went to work for AMC, and got a very good position. Howard is still with Ford, presently.

Q: What studio is he in?

A: He's working for what we call the staff division, and he's working under Don Kopka in the advanced studio. So, I got Howard's trust, and he helped me. And. Jim Arnold, he was always

very understanding, and he was the kind of person that said, "Do the job, here it is, go do it." And he was great, and he always had a lot of good trust. As a matter of fact, under Jim, I got my first promotion, and every other promotion was with Jim Arnold. He's just that kind of person. You bring up a problem and with the resolution, and he says, "Oh, go for it! Go do it."

Q: Was there any male chauvinism that bothered you at this point, or were they fairly enlightened?

A: No.

Q: There wasn't any?

A: Like I say, I had a lot of good support, a lot of good help,

and, sure, you've got the problems where you're trying to solve a problem with an engineering person, and they may not agree with what you're doing, and you might get cute little remarks, but they're just funny.

Q: There was no overt sexual harassment?

A: No, not at all. I can honestly say that, overall, everybody was really great, and I enjoyed it. I enjoyed the work. The more the merrier. It was fine.

Q: You were still single at this time?

A: Oh, yes. But I did get married at this stage in 1974.

Q: You don't have to recount that, but it would be interesting to know about it. You met a fellow designer?

A: Right. I met Al Ornes, who was a manager at that time. I think we went out for about two years, and we decided to get married. We got married in Toronto and didn't have time for a honeymoon. It was kind of a tough time because we were all so busy. We went to Toronto and got married on the weekend and came back and started work that Monday and took our honeymoon later, so that was a little bit rough, but that was alright. Everybody was busy, you just couldn't take the time. I stayed with Jim a little while longer and got promoted and then went to an exterior studio.

Q: You got promoted to a senior designer from an A?

A: Yes.

Q: And what, specifically, did that mean? You might explain briefly C, B, A and senior.

A: Okay. You start with the training level. Your first promotion, even during that time in training, was a C. C meant that you were pretty well...

Q: You'd gotten beyond the trainee level?

A: You were still trainee, but you were safer. They decided that you, yes--I think that happened within the first year. If you didn't get that, you were usually already laid off, so normally that was almost a natural thing to happen. From there you went to a B. It just basically means that you got a bit more responsibility, you knew your job better. An A, again, you're just moving up, you're getting more work, and then a senior, it's responsibility, how much they can give you. You're in charge of modeling, but you're not in charge of any other designer at that time. You might have more of a project, more responsibility. You will probably end up going to more meetings [as] you have to know what's going on at this stage.

Q: You're moving up in terms of responsibility, not necessarily authority?

A: Right. It's more responsibility. So when I became a senior, I...

Q: What studio was that?

A: This was called the LTD Mercury studio--Ford/Mercury studio. They were combined. Paul Wong was in there, but he was not my manager. I'm trying to think who the gentleman was. I can see it in my mind, and

I can't say. I want to say that Bob Zokas was the exec. Anyway, that was the era that we did the Granada and Monarch.

Q: They'd brought that over from England ? Or was the Granada platform developed here?

A: The Granada platform was developed here. The name, yes, you're right, it comes from England .

Q: And they used it for years afterward.

A: It was at this time that I remember the studio wanted to make that car look like a Mercedes. I think you will remember the ads, "My Granada looks just like your Mercedes." That was that era.

Q: That was your main intermediate platform?

A: Yes. It turned out to be a bit of a sad studio, because that's the studio that I got laid off from. That was, you know, in '74.

Q: Because of the work in that studio?

A: No, that's when the economy went bad. Everything really got bad then. The oil crisis started. We were very busy with a lot of work, but all of a sudden it all went bad, and I can

remember that day very well. It's one of those miserable days you wish you could forget because there were just so many people involved.

Q: What happened?

A: The rumor mill, as you know, is great everywhere, so everybody knows "Oh, something's going to happen, it's going to be tragic," and my bosses tried to tell me, "Don't worry. It'll be okay." And I was getting excellent and outstanding reviews, so I figured it's the old work ethic, you work good in school, you get good marks, you pass, you go to work, you do well, and, no problem, right? So the morning went by, and a lot of my fellow employees got laid off, and my boss kept coming to me saying, "Don't worry." They didn't know themselves, but they were trying to keep your spirits up.

Q: There wasn't any advance information?

A: No, so somewhere after lunch he had to come and tell me, "I'm sorry."

Q: Was this Bob Zokas?

A: No, it was my manager George Schumaker. He had to tell me, and everybody was standing in the hallways consoling each other. It was a major, major cut. There was an awful lot of people that went out.

Q: In retrospect, it doesn't seem to be justified. I thought at the time they were cutting their own throat by letting these talented people go.

A: Later on they admitted they'd cut a little bit too deep. It was over-reaction. It was tragic for a lot of people--a lot of demotions. It went on for...

Q: Promotions for the senior people and layoffs for the junior people?

A: My ex-husband, he got the word he was demoted. It's a strange feeling. I believe in hard work, and I enjoy my work, so suddenly I'm being told that "Sorry, this is it." You sit there and you start saying, "Well, what did I do wrong?" Which, of course, has nothing to do with it.

You've got to accept the fact that the economy got you, and you were one of the numbers. I was sad to leave that studio, it was a very good studio. Everybody packed up and left. From there, when I got home, I started to immediately think, "What am I going to do next." I'm afraid I wasn't the kind of person that could sit at home and just be happy. My parents tried to convince me of that. They said, "Oh well, you're married, you don't really have to worry about money." Yes, that's true, but I wasn't happy just sitting at home.

Q: You were off almost two years?

A: Two and a half years. I had almost five years with Ford at the time of the layoff, and I then got laid off, and Joe Oros, by the way, was the last person to interview me for the layoff. I mean, you had to go through this cycle.

Q: What did he say?

A: He was not a very emotional person, at least, openly. He was very nice. He invited me into his office, and he tried to explain to me, "It's not your fault, you've always had outstanding reviews, but the economy is such that I'm sorry we have to cut people, and you are one of them." It was rather brief, to the point, and that was that.

Q: It was devastating?

A: Yes, it is for a lot of people, not only myself. It was very tough.

Q: But you had a working husband which helped a bit.

A: Yes, that did. Maybe I would have been smarter to just settle back and say, "No, I won't go to work. I'll stay home." But, in retro-spect, I'm glad I did continue to work because it was very tough on Al Ornes, my ex-husband. He took it extremely hard and got very depressed because of his demotion. He was very career-oriented--extremely career-oriented, and it was a very tough blow. He's the kind of person that eats, sleeps, and lives cars. I mean, absolutely, very dedicated, very hard worker, and it was an extremely heavy blow for him--one he could not put into perspective, I think, in his own mind very well. So, outwardly he kind of blamed everybody around him. I was lucky enough that I immediately started to look for work because everybody--there was a lot of people out, not only from Ford. GM was doing something similar, Chrysler, AMC.

Q: So you were an army of ex-designers looking for jobs?

A: The market was great, they could get us cheap. I got the job at Auto. I went and interviewed at....

Q: Autodynamics. Tell us about Autodynamics. What kind of a firm was it?

A: Autodynamics [Corp. of America] is way out on Stephenson Hwy. I think it's in Madison Heights, just off I-75. They're mainly a job shop/ vendor setup that either Ford, GM, Chrysler will go to for specific jobs that they can't do in-house, whether it's an engineering job, a design job, or whatever they do. They also do a lot of manuals for the factories. They do the little descriptions of how things go together. They do all the drawings and the wood layouts.

Q: What about prototypes?

A: They do prototypes. They do one of a kind like ambulances, or limousines, they'll do some of that kind of work, or they'll repair some of these fancy cars people have--do you remember the

Panther, that special Panther car? I remember there being one of those that they were refurbishing, so they'll do a lot of that kind of work.

Q: What sort of work did they ask you to do there?

A: I interviewed with a fellow by the name of Paul Kawsky. He was a designer, and when I got there, the first job we had was a taxi done by U.S. Steel. We were to try to come up with a metal breakformed taxi where you just breakform the steel. Very simple, no stamping dies needed or anything.

Q: This was at the behest of John Reinhart?

A: Part of that. He'd set part of that up, right. So we just carried on with that. As a matter of fact, John's son worked with us. At Auto-Dynamics. And, I remember it was John's son and another fellow by the name of Paul, who's last name I don't remember, and myself. Then we hired Al Gerstenberger, who'd worked at Ford just about the same time I had, and another fellow [Manoogian] from GM came later. We did a lot of sketching on the taxi, and then all of a sudden we got this big program from Mexico --a bus--a cross-country bus, not an inter-city bus. It was Mesa . They asked us to do a bus.

Q: When you say "do a bus," do you mean a concept vehicle for them?

A: They had an old bus. It was already there. All the structure was there, they just wanted it refurbished. So, naturally, we go through the same process. You always do. You decide on what they're looking for, what kind of bus, and we did a lot of sketching, and showed it to the Mesa people. They picked the bus that they'd like to have, and they actually drove this old bus up to Autodynamics, tore off all the old sheetmetal and cleaned the inside, and then we literally mocked up in foam core the new proposal.

Q: That's a trade name for a fabric or substance that you used?

A: Yes. It's about a quarter-inch thick, two sheets of heavy gauge paper, and inside is a foam so you could actually squish it. But it would take quite a bit of pressure because it's a high-density foam, but it was very light. And you could score it or bend it and make some sha-pes out of it. It does have some restrictions. You can't do compound curves. but you can do simple breakforming very easily. So we, Al Gerstenberger and myself -- at this time, Paul Kawsky had put me in charge of that studio, and we started to physically build this bus. It's in the summertime, there was no air conditioning, and we must have bought out all of Detroit on glue guns. The glue gun actually looks like a gun --you put in these little glue pellets which heat up and then melt, and then as you put this along two pieces of foam core, it would cool down and stick them together.

Q: Weld them?

A: Yes, right, like a weld. These things--the only trouble with them was is, occasionally, you'd use them so long and they'd get so hot that the glue would run out, and you would get it on

yourself. You could really get a mean burn with them. When I think back on it, building this huge bus was really...

Q: Full size?

A: Full size. We'd done our tape drawings, so we knew all the sections, and we just went away and did it, the two of us. We put it together.

Q: Working how many hours a day?

A: We were working overtime, so we usually worked 'till about 7:00 or 8:00 p.m. , and started around 8:00 a.m.

Q: Were you living in Dearborn at the time and driving way out to Madison Heights ?

A: Yes, so I was driving a good half an hour back and forth. It was fun. When we got the bus together...

Q: The marvelous thing was that you could see it when you finished.

A: Yes, and you could make changes. The foam core was flexible enough that you could change it, and we even painted it and decorated it by then. By that I mean, we put on tape striping.

Q: You're working from the frame of the bus that you stripped down?

A: Yes. We also-did some interior work. We retrimmed some seats, and we put in the overhead storage bins very similar to what you see in the airlines today, the kind that flip down, because they really had nothing. They had some wire mesh up there or something very crude. If you can imagine, it was a fairly crude bus at that time. The new bus actually looked like the present GM. It was a pretty darned good looking bus, if I say so myself.

Q: The end result was that you would present a mocked-up prototype that would impress the [Mesa] bus people, and they would accept it?

A: Yes, you're right. We showed it to them in foam core, and they loved it. They were very happy with it. We then took that and actually cast the foam core.

Q: How did you do that?

A: You can cast right over it with fiberglass--do a fiberglass cast and just pull it off and then lay up a fiberglass shell within that, and then they went ahead and rebuilt the bus. At that stage, we don't get involved with it, it's the guys in the shops that do all that work. From there, some of the engineering work's being done to support Mesa back in Mexico as far as how it fits, how its construction is going to be, how the bumpers are going to be made. But we rebuilt the bus, put

everything back together so it was driveable, and they drove it back to Mexico . It was very exciting at that point to see.

Q: So the Mesa people were impressed?

A: Oh, very happy. About this time I was doing my interviewing with GM.

Q: Autodynamics was a way stop for you?

A: Yes. Again, there were a lot of designers, so it was very easy to get us cheap.

Q: And you were working for slave wages?

A: Yes. Five dollars an hour was tough at that time, especially, when you've been used to the Ford salary. I was making less than half of what I was at Ford, plus you didn't get the benefits. If you were sick, you didn't get paid. If you had to take a business day, you just didn't get it paid. So, yes, you get spoiled very quickly, and, naturally, you want to continue your career in the automotive end, so I decided....

Q: GM. having more money, probably were able to take the pick of the available, young designers?

A: Strangely enough, they laid off, too. As I said, there was one fellow [Manoogian] from GM working with us. They had their little lay off, too. So, I started to look for work. Ford wasn't calling me back, and the years were ticking away. Now, there's this policy, you've got to remember, Ford will only call you back the years you've been there. In other words, if you've been there two years, you have two years to get called back; three years, you have three; I had five years. By that year, that's it, you're off their list. They don't have to call you back. They might want to, but, usually, you feel.... So, time is going on--I'm getting around two years here, and things aren't getting that much better at that time. It was not still going great. Autodynamics was good. I had work and was learning a lot, but it wasn't where I wanted to stay for my career. I wanted something better, so I started to interview with GM, which was very good.

Q: Out at the Tech Center in the personnel office?

A: Yes. There was a gentleman there who also taught industrial design--Mr. Veryser [not sure of spelling]. He retired about two or three years ago. During these interviews, and there were three or four, it came very close. They were talking salary, and they were deciding, so it sounded just so great, but he did have to call me all of a sudden and say, "Sorry, our budget's been cut. I was trying to hire you plus two of my students, and I can't even hire them." But he was very nice. He gave me a gentleman's [name] at Chrysler to call and said, "I want you to go there. I think you have a very good chance."

So, okay, off I go with my little portfolio over to Chrysler, and, sure enough, I got hired that day, which, when you think about it, he didn't have to go through that effort, but he did. He had it set up. He was extremely nice. So, I ended up working in the truck exterior studio at Chrysler with

Chuck Mitchell, who was a manager at that time. Super guy, he was just wild. He's the kind of the guy that if he went to a restaurant, all the girls would hug and kiss him. The fellows just used to groan because Chuck had to be 52/53, and an attractive enough man, but here are these younger guys in their thirties, and when you go out to lunch with Chuck, all the girls went to Chuck. There was no way to explain it except that he had that charisma about him. They're so easy going and so friendly that everybody just gravitates to them. But, while I was there, we worked on the last big van--the big van front end. As a matter of fact, that's my van.

Q: What year was that?

A: Oh, goodness, it had to be in 1980-1981.

Q: That's early in '77, so you're working about three years ahead?

A: Yes. So it would be 1980. It's the one with the two rec-tangular headlights on top of one another. I remember it very clearly because I was competing with three other guys, and I was the only female there.

Q: They used the competition system in those days, too?

A: Oh, yes, and we did the sketching routine and the overlays. What you do is you make an overlay on an actual truck of your sketch. You make a quick mock-up--just flat--with tape and chrome tape, and you put it on an actual truck and stand back. And, I remember the sketching program took awhile, and then, finally, they picked it, and, finally, they did the mock-ups, and finally we went through picking the final one, and mine was picked by the then vice-president in design, who was Dick McAdam. Another very nice gentleman. God, was he nice. He was the kind of man that would come and talk to anybody, and he wanted the designer to present his or her project, not the manager.

Q: He had succeeded Elwood Engel?

A: Yes, super person. So, he picked mine. I remember a couple of the guys were kind of down about that, but it worked out great, and from there I took it into clay. Chrysler works quicker than Ford, that's one thing I noticed. Yes, it was a quicker reaction. We went really quick into clay. The engineer almost worked right beside you, whereas at Ford, you sometimes had to walk with it. And just about the time that I got that done, I get my call from Ford.

Q: So you were torn?

A: Yes. It was a tough decision.

Q: Were you making the same kind of money?

A: No, I wasn't. That was part of the problem. The other thing, I'd already worked five years at Ford, and you're only about six [months] at Chrysler's, and the people were fantastic. In some

ways, the people were nicer there. I don't know why, but there was more camaraderie. We were closer as far as they went to lunch with you. There was a lot of good feelings, and it was tough.

Q: You were all in it together. You were No. 3 and had to work hard and fast.

A: I don't know why that is, but they were very close. So, it was a tough decision, but I left and came back to Ford in March, 1977.

Q: You've been called back at Ford, and, although you'd been there five years, you've been away two and a half years, and you have to, in their eyes, become an apprentice again?

A: Almost, right. Because here I came back into the interior studio working on the Panthers, which are the present day Grand Marquis and Ford Victoria --the big cars.

Q: Panther was their design code name?

A: Yes. I walked into that program right away. They put me into that studio with Jim Sherburne and Ed Jacques. Ed Jacques was a manager at that time. No, I take it back, Ed was not the manager, it was Brian Rossi from Australia . He had just been there on a transfer, so, that's right, we started with Brian and Jim Sherburne and a couple of other people--Jim White, Dave Kavalowski, and Joe West were there. That's in the days when the studios were large. And there was another fellow by the name of Bob Sorois. All those people were just geared to this one car line, so it's a big studio, and the car was pretty well designed. By that, I mean, the exterior had been decided on. The instrument panel had been decided on, but they needed doors, seats, and some minor things like dome lamps, detail design, so I got thrown into that end of it. I just started sketching doors and seats, and we worked a lot of hours. At the same time, a new program started which was the new T-Bird.

Q: This was in what year?

A: That's 1977.

Q: Could you tell us about the genesis of that design from your perspective; how it came about?

A: When I came back, I remember going to the exterior studios, walking around, trying to familiarize myself with what was going on, and Toshi Saito, who is now an executive and who is in [Hiroshima] Japan, was working on the new T-Bird with Fritz Mayhew and some other people, and the car looked neat. It was really sleek, and it was nicely detailed. That was before it ended up in the fea studio and the engineering....

Q: In the what studio?

A: What we called the feasibility. I short-formed into fea, and, to me, it lost a lot of its character from what...

Q: It had a better look than it came out with?

A: Oh, yes.

Q: It came out very badly?

A: Yes. It really got destroyed.

Q: How could a feasibility studio do that? They're working with engineers and trying to come to a consensus...?

A: That's a very good question. That car, more than anything, made us all think, "Why did that happen?" There was a transition. Gene Bordinat was leaving at this time, and Jack Telnack was coming on board.

Q: It was a sort of an interregnum?

A: Some of that, but what was really happening, what we discovered was, when you do a car, an exterior or interior, the designer who works with it, babys it, you sit on top of it, you make sure those sections are right, you look at the highlights, you get the modelers to do it just right. Now, it's approved. Now, engineering gets involved, and with all the outside vendors as far as the stamping, how do we make it feasible? Now, this car goes from this studio where you are way across somewhere else and goes into a feasibility studio which is two/three blocks away from you.

Q: Which is made up of body engineers?

A: Yes, and now they're going to make it "feasible." That's great except the designer stays here, the car goes there, which is two or three blocks away. You have modelers that still work on it, and you have engi-neers that did not work on the original car--this is a new car for them-- they really don't know anything about it. Now, they're translating your design into a feasibility design. The subtlest changes--a different sweep, a different crown, lack of crown, too much crown, not the right detailing--can make a tremendous change.

Q: Why are they doing this?

A: That's what they were doing. It's changed, but that's the way we always did it. It always moved like that. It started here, and then they moved it to the feasibility studio, which was a separate studio where all the cars were "feased out."

I think the problem really is--what was happening is first of all the designer--let's say myself at my level--I wasn't a manager, but let's say I was the one that designed the car. I knew the subtleties, the crowns, the accelerations that are needed to make things look good. When it ends up in the feasibility studio, the people that sign off--by that I mean, your executive or director are asked to sign the drawing. They look at the part, and they sign off. Feasibility is done in little parts, like the rear fender, the front fender, the windshield, the roof, and usually what happened

is the director might be walking through the studio, okay? The engineer in charge of feasibility says, "Oh, there's so and so, he's in charge of this car, let's get him to sign off on this, quickly." So, they'd drag him over and say, "Well, what you do think, John, Jim, whatever?" "Oh yeah, that looks good"--signs it and walks away. Well...

Q: It means he's lost complete control of it?

A: What happened is that people [here] that would have said, "Wait a minute, there's something wrong here, I don't see the crown in it, I don't see the sweep," [were not asked]. He wouldn't know that subtlety.

Q: What was his position?

A: Let's say he's an executive designer or a [studio] director.

And even though he saw the car to approve it, he did not do the physical, the section developments, so it's very easy to lose that, and to us, that's what happened. So what we're doing now is, when you fease out an exterior and an interior, it will be done within the studio it was approved in as a theme model plus the engineers that worked with you do the feases plus the [original] designer--it stays there! So you don't lose this sensitivity and the subtlety. The next T-Bird that was done by my ex-husband, Al Ornes, and Dave Turner was done that way. They sat on that car.

Q: Who pushed this [process] through? Was it Telnack?

A: Yes. Jack Telnack said, "What happened?" He had these commit-tee meetings where he asked everybody, "What happened in your [area]?"

He wanted everybody's input, and it, basically, was (A) the distance, (B) the fact that the designer, who was originally involved, never got a chance to say anything, and the person who was rather remote from the original design, just signed off.

Q: Plus the piecemeal sign off?

A: And plus it's piecemeal. It should be total. So that hurt that car, and that one really--I mean it just was not [the same] car.

Q: Have any of the original sketches survived?

A: Oh, I'm sure there are.

Q: It would be interesting to see what one looked like before it went to feasibility.

A: Oh, it was an attractive, sleek car. It had lost it--it became heavy, the moldings became heavy. I got to work on the interior, and so we knew what the exterior looked like, it had just been approved. Now we got the interior stuff, and the car was very late. That was another

problem. It was very late, and we had to work seven days a week, four hours a night, and Saturday and Sunday from, let's see, we started in November, December, January, February, March, April and May. When I finished that program, I didn't know what day it was or cared. It was quite a struggle. It was fun. The only regret I have is I lost a lot of friends at that time, because I never had time to do anything. I was just happy to get home, get some sleep, and turn around. Because a lot of times we'd work right till 11:00 / 11:30 p.m. I remember being there that late. You know, you sit there. It was really pushed through. We were extremely late, but the interesting part was, again I got to work with Jim Sherburne. Then Brian Rossi went back to Australia, and Ed Jacques joined us as the manager.

Q: Is he still there?

A: Yes, he now works for Staff under Don Kopka in the advanced interior group. So, he became my manager, and just before we finished the interior, Jim Sherburne got a job with Toyota.

Q: You were sorry to see him leave?

A: Very sorry. It was kind of a cute day because he'd worn his sweater, and he brought in a cake that said "California." Then he ripped off his sweater, and under it he had a T shirt that said, "You've got it, Toyota." But we were all extremely sorry to see him go. He had been a manager, was demoted during the the 1974 situation, never got back, probably was disappointed with his career, very talented, and Toyota picked him up.

Q: Is he responsible for some of their success?

A: I'm sure he is. He's a very good designer. I was sorry to see him go. Then I was sent to Ghia [Torino, Italy]. I went to work with [Filippo] Sappino.

Q: How did that come about?

A: I have no idea, but they gave me the assignment. By then, again Bob Zokas was my director, and...

Q: Were you still married at this time?

A: No. I was divorced when I was at Chrysler. That was part of the deal, by the way. Chrysler would not hire me as long as I was married to Al Ornes.

Q: You're kidding!

A: And the divorce was just coming through.

Q: That did not precipitate their offer?

A: No, but if I'd still been married, they would not have hired me --conflict of interest.

Q: You might be exchanging secrets.

A: Yes, they were worried about that, so I had to prove that. Then it all worked out good. So, I went off to Ghia to work with Sappino all by myself.

Q: Nice guy?

A: Oh, yes, very Italian. It was quite a long flight. I remember I went from here to Washington, to London, to Frankfurt and into Torino. What a flight that was! I stayed at a beautiful place on the Via Nizza close to the Via Roma, which is the beautiful shopping street which is all covered. It's very pretty, very old. It was fun. The driving is something else! There was many a time that I would have just left the car, got out, and said "Forget it!" They are crazy. They'll use sidewalks, they'll come at you, and go around you on the opposite side. They are crazy but they're...

Q: Ghia has had an interesting past. They had been.... Builders of the Pantera.

Q: Right, under deTomaso.

A: They'd done the Volkswagen Karmann Ghia. We acquired Ghia as almost a vendor situation--a vendor type of setup where they do some of their own design work and make applewood models.

Q: Is that what they make?

A: How do I describe it? It's a funny compound that is like a paste and wood, and it's very light, and very quick for them and very hard once it dries. Sometimes they'll do their own proposals. Let's say we've got a new T-Bird program, they'll be requested to do a model, and we will do one. Then they'll ship it to us, and we'll compare it to our models.

Q: Was this in your design specialist period or just before that--at Ghia?

A: I think it was just before that because when I got back, I got the promotion.

Q: What sort of American projects did you work on at Ghia?

A: We worked on a Grenada replacement, which I had designed, and had got into applewood. It's really quick there. And it had a piece of glass going all the way through the body. It started narrow and grew to the rear and worked into the taillights, and it went through the door.

It was kind of an interesting car, and I didn't see it completed there, but I saw it shipped back because I was only there about three months--very short.

Q: You saw your design coming back to you?'

A: I saw it come back into the studio later on.

Q: What happened to it?

A: It wasn't picked or anything. It was more like a show property, on the package, and then a concept. It was interesting to see how the Italians worked, especially the metal formers.

Q: Was it a complete shop?

A: Oh, yes. They could do anything they wanted. In Torino, the mountain people do a lot of metal work and pottery and vases, so these people are then hired to do the forming of the steel with the hammers. And you watch them work. They are superb craftspeople, and it's a dying art because all the people are leaving the mountains so nobody's doing it any more. Their labor is extremely cheap, but their work is just superb. Whether it's leather work in the seats or the steel, it's just--that was interesting to watch them build them.

Q: Was DeLaRossa...?

A: Don DeLaRossa was gone by that time.

Q: But was [Tom] Tjaarda on the staff at this time?

A: No, he was not. There was a fellow by the name of Delio, and a girl by the name of Marica, and a Greek fellow whose name I forget and myself, and then the engineering staff, which there were three or four of those, and Sappino, and then the shops.

Q: It's a skeleton crew?

A: Yes, very skeleton.

Q: Especially with the number of proposals that came in.

A: Oh, they do a lot of work--very quick.

Q: What would have been your tasks?

A: Basically, I think what they were sending us over there for was to help them out with rendering techniques and our way of doing the sketches because when I got there, the designers were mostly using just pencil sketches--they weren't using color.

Q: This was in the late 70's?

A: Yes. They don't have the training we do--the schools, the woman, I should say. It took me a long time to get close enough to her to even to talk to her. She was a little afraid and intimidated, I think, by me, but I convinced her after awhile to start using color, and she did. As a matter of fact, she came to the U.S. last summer and worked with us here, and I saw she was

using color. Full renderings with color--great! If I did anything, I did that! I learned too. It was interesting to see the process and the country.

Q: Getting closer to the actual fabrication?

A: Yes, very interesting how they build those cars because they make actual running prototypes.

Q: And they ship them across by air?

A: Yes. They're done in sheet metal--beautiful work. So that was fun, it only lasted three months. It was a bit lonely, I'll admit, because nobody spoke English, so the language was a little rough, and I had to eat alone most of the time, but the experience was well worth it. I came back somewhere around Christmas time, and within a couple of weeks, I was promoted to design specialist in 1979.

Q: Design specialist is the next step up from a senior designer?

A: Yes, that's a jump, now you're right under a manager level.

Q: What were you a specialist in?

A: Both exterior and interior.

Q: You've had advanced experience in both?

A: Right. Now, I went to work for an exterior studio on the face-lift of the big LTD and Mercury, the big Panthers.

Q: Which were coming up in the early '80's?

A: Yes. They were already there, but now we were just facelifting them again. I was there a very short time, I want to say six/seven months, and then I got moved into the small car design office under Fritz

Mayhew as manager. Right at the middle of 1980. And here we were doing things like the Escort, the EXP was almost done, and we started on the new Tempo/Topaz exterior.

Q: This was real a revolution, was it not? You may have seen it more as evolution because of the fact that the Thunderbird had gotten so badly botched in the feasibility studio, but to the outside, it seemed like a revolution that Telnack and his talented associates, Fritz Mayhew and others had really imposed on the company.

A: Have you talked to Fritz, by chance?

Q: Yes.

A: Interesting--very talented person, and I remember the car clearly. Fritz was the manager, I was there and Dave Turner was there for the Tempo/Topaz. When we started to design that car, I remember nobody was happy about the first ones, and it got approved.

Q: Approved by?

A: By upper management, the final design.

Q: But, you people were not happy about it?

A: No. Gail Halderman was our director, and I remember the studio, and everybody, including Fritz, and we kept saying, "Fritz, this is not a car you want to put out for the '80's, going into the '90's." It looked like, at that point, an old Fiat. It really did. Hard shapes, the old molding method, nothing looked new, reaching, futuristic. The car could have been out ten years ago. So Fritz thought about it more and more, and we got out all the stuff. I remember looking through all the magazines and finding all the stuff on the Fiats at that time, and putting it up, and Fritz finally got the guts to go to Gail Halderman. It just takes a little bit of doing because it puts your career on the line. A lot of times somebody will just say, "What are you talking about." It gets very personal, [and] even though you might be right, some people don't really want to hear you say, "I don't like this." But he handled it very well. I remember being in the studio, and I remember him going through it with Gail, and, believe it or not, he turned them around.

They began to think, "Yeah, this isn't a car we want to take. No, you're right." So, we started all over again, really! And, here's where we thought of the softer forms, the aerodynamic look, the limousine doors, and got rid of the old heavy molding system, and that's how the Tempo/Topaz came about!

Q: And you had a large hand in that by influencing Mayhew and others?

A: Yes, we really did. We really said, "This is not what you want to do." It also helped that Jack Telnack was on board.

Q: Who accepted it?

A: Right, and Jack and Fritz have a very good relationship, so that helped, I think. It saved us from a car that would not have reached--it would have been sort of an "okay" car.

Q: It never would have gone as well as the Tempo/Topaz?

A: I think it would have only been a car for only one or two years, and everybody would say, "Well, that is that?" So that was very interesting to me because just to have seen the political maneuvering--in a sense to say, "Hey, people, we didn't do the right car, let's rethink it."

Q: What was Halderman's initial reaction?

A: I don't think he was overjoyed. He was saying, "Wait a minute, why are you doing this, why are you saying this?" It took some con-vincing, but, I think, he had to feel--he might have felt the same way. His gut feeling might have said, "Am I really happy with this." Let's face it, you don't do everything perfect the first time.

Q: Having interviewed some of these people you're talking about, Halderman is probably one of the most accessible of the senior designers; amenable, if you can present a good case, and Mayhew, and now I see your-self. You people are convincing, sincere, and know what you're talking about.

A: We just felt that that was not what we wanted to do with Ford. We just said, "No", and they changed it, so we were extremely happy.

Q: Even though it meant starting from scratch?

A: So what? I'd rather start from scratch and be a little late and put out something that you can say, "I'm proud of that!"

Q: What you were planning with the Fiat-looking car?

A: It was more like the LTD, the little LTD today, very sheer, breakforming, no aero look to it. The molding system--the heavy moldings around the windows, the doors--like I say, it was a car that was done in the '60's that we were doing in the '80's. It's not new, so then from there I went to a studio--I left Fritz. I think I worked there a year. I went to a specialty studio where they did mainly show cars, and I worked with a gentleman by the name of Ron Perry. He was my manager at that time. It's kind of a fun little area to get into. You just do wild things, and we did a very....

Q: Is this part of the advanced studio?

A: Yes, it's a spinoff. We did some wild concepts on some Mustangs. The most interesting project I did there was the EXP conver-tible, which never flew, sadly enough.

Q: What happened?

A: I don't know.

Q: It would seem like a natural.

A: It was, and the car looked real good. It really did. It actually helped the car. I did the interior. The little bug eyes never did quite make it, but it was a beautiful concept. We even had an out-side vendor signed up to do [the prototype], but, I guess, money ran out. I'm sure it was a money situation, and it died. The car is around somewhere, but it never happened.

Q: Do you think the prototype's around somewhere?

A: Oh, I'm sure it is. They would be crazy to have destroyed it. I hope they didn't, because it functioned and everything. It was a cute car, and I'd wished they had the money. I think they would have sold every one they could have built just like the Mustang. The size was cute, and it's like a little MG. Those cars drive good. They don't look the greatest, but, boy, they're a good handling little car.

So from there I went back to an interior studio for a very short time on the LTD/Marquis--the old car that's slowly being phased out right now.

Q: It's still a bread and butter item from the early '80's?

A: Right. I was there probably for two or three months, and then...

Q: Were you putting the refinements on it?

A: Yes, just facelifting the panel, doing the door trim, and the seat trim.

Q: It's distinctly old-fashioned, but it still strikes a responsive chord.

A: Yes, it fits a market need.

Q: In the older, more conservative markets?

A: Oh, sure. It fits a need, there's no doubt about it. But then I was very happy to be called up by Fritz Mahyew again.

Q: You had a good relationship with him?

A: Oh, yes, very good. Fritz told me about the Taurus/Sable program and asked me to work with the team on the interior.

Q: Now, I don't want you to shortchange this experience.

A: Okay. Because it's an interesting experience.

Q: Why don't we start and develop that at some length, because I'd like to hear about how the Taurus/Sable situation worked out.

A: I've got to say, right at the [ourset], this has to be the most interesting experience at Ford. It was a clean sheet, nothing on it, no old cliches, no old ways of doing business, it was clean. Ray Everts had come back from Europe, so he had had his experience in Europe, his new way of doing business from Europe. Fritz Mayhew was always a delight to work with because he was always a person who reached. "Get out there and reach, don't do what I'm used to, I want to see something new." So, the exterior [team] was already set up, and they were Dave Turner and three designers, one of them which was Jeff Teague, Dick Teague's son.

Q: I know you're viewing this from the design point of view, but when did you first learn of this [program]? You mentioned that you knew it was in the offing, that Fritz Mayhew said, "Mimi, we want you to come back and join this exciting project." Was it something like that?

A: Oh, yeah. I was in my studio, and Fritz says, "Come on into my office." And, so you go into his office and he says, "Well, how would you like to work for me again?" It was something very simple like that! And you say, "Well, what's going on?" And he gives you the explanation of the car that he'd like. Your boss has already been told about it, naturally, so he knows that a transfer is in the offing, and how could you refuse something like that?

Q: Ms. Vandermolen, I wonder if you could take this opportunity to develop, at some length, the experiences you had with Team Taurus and what your contributions were, and from your unique perspective, how the program took shape and how the product evolved into what probably is one of the most important products that the Company has put out in years.

A: It's an involved thing, needless to say, but, first of all, I'd like to explain that it was rather unique when Fritz asked me to join the Taurus Team. There were no interior people yet. His exterior team was set up.

Fritz Mayhew was an executive director by now. He had been pro-moted. So, what you have here is a situation where there are no managers. Dave Turner, who was my counterpart for exterior on the Taurus program, was really not a manager, he was a specialist, but he would do the job as a manager. I was asked to join the team for the interior end of the job.

Q: Which had been largely your forte throughout your career?

A: Yes. So, I would act as a manager, but there would not be an official manager made on this. That's why it's kind of interesting. That's the first part that's interesting about this job. The studio was set up together. By that, I mean the exterior people and the interior people were put in the same studio.

Q: Unusual?

A: Very unusual. There was myself, there was Jim Roberts, Rich Beck, Danny Ellis and Ron Swick. We were the interior team versus the exterior team--all in the same studio. When we first got together, there really wasn't any interior work to be done yet, so we were kind of--I don't want to say in limbo--but we were there to watch what the exterior people were doing and to work along with them, to look at what they were doing, to get the feel of the car and at the same time start the discussion of what we wanted to do with the interior. Now, what is unique about the whole system--the team system that was being set up at this time--was that they didn't want the ideas to come from top down. They wanted all the ideas to come from bottom up, which, let's face it, that's a whole new way of doing business at Ford Motor Company.

Q: And, I suppose, in any automotive design studio?

A: Yes. We've all worked in the autocratic system where the director or the exec says, "This is what I want", and everybody goes away and does it.

Q: Who's responsible for this graphic reordering?

A: I think Lou Veraldi, starting all the way from the assignment from Mr. [Philip] Caldwell about doing this car as a team and to instill this feeling of a team concept and not to leave anybody out, and that works all the way down to the people on the board at Ford, but also to the plants, and through the vendors and all the outside concerns. What an enlightenment for everybody! Very exciting because now, suddenly, you have these people that have been sitting on the board for years and never been heard from who have brilliant ideas. They suddenly can say something....

Q: And free-wheeling discussion was started?

A: Oh, very much so, because we established this process of brainstorming--an old technique, right?--that's been there for years, but we never used it.

Q: Was it a highly structured hierarchy?

A: Yes. It had gotten to the point where I found that people felt they weren't asked to think.

Q: They were asked to execute somebody else's ideas?

A: Yes, which is such a waste of brains, capability and talent. So, Dave Turner had already started some of this thinking on the exterior. Now, we started on the interior and started the brainstorming, but the first thing you do in an interior is the instrument panel because of the lead time.

Q: Because of its complexity?

A: Yes. It takes so much longer to get the vendor on board, to build it, the complexity, the feasibility. An instrument panel probably almost takes you as long as a whole exterior of a car. It's so involved. We had all been to the meetings about the team concept and that everybody should have some input in this car, had a say what did they want this car to be. It was Ford's chance to make quite a bold statement.

Q: Did you, at this point, realize this is a sort of a last chance?

A: Yes, we did. We really did. We all had this feeling as a group that if this car didn't sell with the expenditure (almost 3 billion dollars), if we couldn't see light at the end of the tunnel, that was it. We felt that was it! Didn't know how we'd ever survive. So that made you think a little bit more, too.

But, the interesting thing now was that the designers got together. We already had the assumptions from product planning, which is a paper that says, "We have a family sedan. We

want to seat five/six people comfortably, an instrument panel, the formed doors." It's usually general--it gives you an idea of what is expected, and, in the old days, we would have taken that and then everybody would have sat at their drawing table and quickly started sketching, not even knowing what they were sketching, but just sketching to cover the walls. Now, what we did is we took these assumptions, we all read them, and [with] the four designers I had, we got into a quiet setting away from everybody, put up a piece of paper and said, "Okay, what do we want this panel to be?"

Here, you've read what Dave said, the money that's available, okay, now's our chance, let's us write down what we want it to be." And, of course, the guys had all done their research. They'd looked at the competition, and, naturally, they knew the trends. They read, they know what's going on. So, it wasn't very hard. [The discussion] started, and it just got faster and faster. "Yes, we want roominess, we want flow through panels into the door."

Q: What's a flow through panel?

A: A flow through panel means that the panel doesn't stop abruptly at the door. It actually runs into the doors. The Japanese do a lot of that, and we used to do it on the old T-Birds. Remember the rear seat that used to run right into the quarters? We can't do that today any more, but we could then. So, it was easy. Once the fellows started, there was no stopping them.

Q: They just took off?

A: I let them go. To me, it was great. "It's your thing. Now you tell me what you want." Some of it got off the wall, fine. Don't criti-cize, let's put it up, we can go back later and revise the list. It was just great. So, then we went through it, and we said, "Okay, are we really serious about this, and can we prioritize what we want?" We'd go back into it, prioritize it, and then ask Fritz [Mayhew] and Ray [Everts] to come down and say, "What do you think?" Sure, they'd have a couple of minor inputs, but, basically, they'd say "Great." If you've done your homework, and you've looked at the competition, it should go easy. So, the studio put together the competitive board on all the interior features that we thought were the trends and what we'd like to see in the Taurus. Then we put together the assumption board that we'd done. So, we had a nice, complete story. Here's what's happening out here, here's what we think we should be reaching for, here are some of the trends that we know are going to happen, and here is our assumption for, at this particular time, the instrument panel.

Q: It was really sort of a synthesis of almost every outside influence, inside influence, creative talent within your program, and trying to measure it with whatever marching orders you'd gotten?

A: Right. You had certain things that you had to maintain. That was okay. That's understandable. You have to have something. But, now, at least, we got our act together and said, "Fine."

Q: More quickly and more creatively than you had before?

A: But, this is what we think. So, now it's easy for the fellows to take those ideas, sit down, and start sketching. They know exactly what they've got to do. There's no longer this, "What am I drawing?" It could be anything, and it means nothing, besides the fact that you don't have the people to do that any more.

Q: You have a lean staff?

A: Lean staff. You don't have the time to spend searching a sketch that you're never going to get to. The other amazing thing about this was Ken Kors, the top product planner under Lou Veraldi, was assigned to the Team Taurus. Then we had John Risk, also a product planner, and we had Fred Simon and then Dave Breedlove (he was my direct counterpart). From there on it went up. So, what we did after we sold it to our management, which was Fritz and Ray and then Jack Telnack, everybody was in agreement. I mean everybody felt, "Okay, now, let's take it to product planning, marketing and have them sign up." Which is what we did. We all invited them down. Sometimes I would present it and sometimes Fritz.

Q: What are you showing them at this point?

A: The board with our objectives for the car. Nothing else, no sketches, nothing, we're just saying, "We've done our research, and this is the kind of interior look, instrument panel, this is the trends we've found, and here is our assumptions and go over them one at a time." With this [presentation to] Ken Kors, John Risk, Fred Simon, I don't ever remember them saying, "That sounds kind of strange," or, "No." I think they were almost taken aback by it, in some ways, because they've never been used to us doing that. It was organized. One thing I've learned with product planners is if you can organize it on paper, write it down, they feel at home. When you do a sketch, which is our forte but not theirs, they feel like it's [way] out there, it's loose, I can't grab it! You know what I mean? It's two different ways of working, and you've got to understand their way. Because after we had done that, we heard a comment [which] came back from very high up, and I want to say Lou Ross--somewhere at the [executive vice-president] level said, in effect, "You know something, designers can think!"

Q: You'd finally broken that old cliché.

A: But, you see, the trouble is, we were our own worst enemies. We were, because we kept it all [in] here.

Q: And you were defensive about it?

A: Yes, and it was so easy to sit there and verbalize it, "Oh, yes, I know this trend, and it's going to be soft panels, and it's to be roominess, and it's going to be swept away." And, they'd look at you like, "Sure, what does that all mean?" But, let's face it, it's easy for us to see that because we're creative, but for them, no. So, now we organized ourselves, and this organization saved us, by the way. Not only did they understand what we wanted to achieve, we understood what we wanted to achieve. But there was one instance--we had two different panels, we wanted total differentiation between the Sable and Taurus. We had this what we called "swept away" and "soft look" on the Taurus, and Lou Ross joined the team at a particular time and wanted to

review the panels that we were going well along to their being approved, and he looked at them and felt uncomfortable, felt uneasy. Q: Did he ever verbalize it?

A: Oh, yes, immediately.

Q: How did he feel, uncomfortable?

A: He didn't understand our look.

Q: Was this close to the final?

A: Very close. And, I realize now why, because we'd made one mistake--we did not take Lou Ross through the assumptions. See, usually when that level came in, it was in the showroom, and they'd just look at the models. They usually have no time, they're always in a hurry.

Q: You almost got lost in the old technique?

A: Almost, because he looked at them, and I was there, and I remember he always has a cigar, and he was puffing away, and the ashes were kind of falling on my property, and Fritz was there, and Ray was there, and he said, "No, no, no, no. You've got to get this big, massive square, you've got to square this panel up."--totally contradictory to everything we'd set up as our objective. We were destroyed, you know. I remember it was a Friday, and Saturday I came in to work, and we were starting this new panel, and, naturally, directions were, "Get that, get on with it." And, I'm sitting there thinking about it. Again, it was the old Fiat/Tempo/Topaz thing--I said, "No, no way." And Monday, Fritz came in, and we started to talk about it. I said, "Fritz, no. This is not what we want to do. Come on, remember our objectives?" He said, "Okay, I'll tell you what, we've made a mistake, we took that board down [our objectives board]. We'll never do that again."

Q: You'd taken the board down?

A: Yes. You see, so much time had elapsed that that had disappeared. So, he said, "Find all that stuff--put it back." I said, "No problem." We did--we put it all back up, what we could find, and got it all organized again. That same week it so happened we couldn't get hold of Lou Ross, but we got hold of Mr. ["Red"] Poling, Ken Kors, John Risk and [Lou] Veraldi; and Fritz Mayhew and Ray Everts then proceeded to take them through our stuff again. Sure enough, they got to the end and said, "Yes, why did we do that?" Of course, it was a shame Lou Ross was not there to defend himself, he was in Europe, but it was very clear to all of them: "Wait a minute, we signed up to this, why are we doing this," which was the old look, square, you couldn't see over it, it would have been intimidating.

Q: It would have looked like GM?

A: Oh, yes. Yes, it would have been just like what we've done before, so why bother! So, we were all so happy, and we all said, "Now see how that works?"

Q: Poling gave the okay at that point?

A: Yes.

Q: He was [car and truck executive] vice-president?

A: He was involved in Team Taurus. So, that was one saving grace there. I mean, we had a sigh of relief, because I can honestly say I think if we hadn't had that material, we wouldn't have won. I don't think we would have won our argument. They could see it very clearly once we went through it. And, we used this concept of brainstorming for the objectives on every part of the interior, whether it was a door, or whether it was a heater, ac? Whatever it was, we brainstormed it--same method--and I got to the point where I photographed everything and kept a binder on all the assumptions, the sketches and the finished clay. As a matter of fact, that book was used for our advertising. The advertising people got hold of it. It had the right words. I mean all the words you wanted to use. They could just use it. It was all there. We saved them a lot of work, plus, of course, ourselves. It generally just fell into place besides the fact that they used everybody's ideas. You got a new look, you got a new car, that's why it was so successful. The differentiation was one of the hardest things to sell, but they did go with it. Everybody wanted it. On the instrument panel and the doors, both are unique for both car lines.

Q: The instrument panel is unique, isn't it? How were you able to sell that? That must have been quite a battle?

A: The difference between the Taurus and Sable are quite noticeable, I mean, to even the most uncreative person. The Ford Taurus is, I want to say "driver oriented"--more cockpit-friendlier because the panels are more canted towards you, whereas the Sable is a little more open and includes the passenger--has a little more linear feel to it, and it gives you a lower theme. Everything is more horizontal.

Q: You call it Team Taurus, but it was really Team Taurus/Sable?

A: Yes.

Q: And, you were able to work out these differentiations among yourselves, which is unique. It wasn't separate studios.

A: No, no. It actually happened with the exterior and interior people. I want to make a comment here because I think the car totally was successful because of this. The fact that the exterior and interior people were together in the same room, gave you a consentaneity throughout the whole car, because you felt what the exterior was, therefore, how could you not make that pass on into the interior? I think we make a mistake by having the studio a block down the road do a car, and then another studio trying to create this interior and not understand what the exterior was. So the whole [process] was just beautiful.

Q: Physically, did you have a Team Taurus studio?

A: Yes.

Q: You must have pulled down some walls, literally, as well as figuratively?

A: No, not really. We had the room. We did break away from the exterior studio after the panel got whittled down, because at that stage you pretty well knew your direction. So, instead of breaking down walls, we found a whole new studio which had been Lou Veraldi's old office. So, we just walked into there and took it over. He wasn't there any more, he'd moved out. It was kind of unique because the studio was all carpeted. It was really, literally, an office for engineers. No clay work had ever been done [there]. I can still see the four of us--no, there was three at that time--three designers, about three modelers and maybe two engineers. We moved into this huge studio. I'm thinking, "Wow, we really don't need all this room, but great, let's start here." Within months, we had every nook and cranny full of these two car lines. It's really two car lines--two unique. So, the team grew. It started from a core, and after awhile I had four people working with me, and it just grew. The modeling staff came down, and then more engineers joined us. But the fact that we started together, with the exterior [people], I think still was a benefit that they should exploit more.

Q: Have they gone back to their old ways now?

A: I'm afraid so, yes. Isn't that a shame?

Q: Why? It worked so beautifully!

A: I don't know. I don't know why the resistance is for that. It's funny. I mean, I've been at both ends--I've been an interior designer and I've been an exterior. I understand the excitement of the exterior. Most people are turned on by the exterior, and that's what they want to work on, and that gets actually the most attention from upper management. And interiors, I guess, was always kind of an afterthought. [Which is a shame], because where do you spend most of your time?

Q: You're not sitting on the fenders of the car.

A: You spend a good 95% of the time inside the car, and if that doesn't satisfy you--if the ergonomics aren't right or the seat isn't right, you're not going to be happy with the car after a while, and you won't buy it again. So, there's this--I don't want to say stigmatism--but there's this feeling sometimes that interior isn't that important. But, I think it's changing, I really do.

Q: In the '70's, didn't you really come up with something I want to talk to you about--I don't want to interrupt your flow of the conversation with Team Taurus--is that revolution in fabrics and ergonomics. So, about Taurus: were there some unkind remarks about the fact that you took over the Audi 100 and simply elaborated on it?

A: We didn't, really. I've heard the remarks, and strangely enough, we didn't even know what that car was going to look like. We had no idea yet, but, you see, there again, I feel that [with] any good team, if they start to look at trends and can anticipate, some of you are going to end up

with a rather similar answer. If you put the cars side by side, they are quite different--they really are.

Q: And in this sense, it was, as you say, a bit of this and a piece of that, and you were taking shapes rather than actual models?

A: Oh, yes. I remember the image cars or the competitive cars we chose for the tours were the Chevrolet Celebrity, the Oldsmobile Ciera, the Honda Accord. There was a Mazda, and there was a couple of other cars--there was the Opel Senator (the European GM car), we looked at Mercedes (definitely one of our objectives as far as quality, fit and finish), but we never said, "Copy that car." It was, "Take the best, make it even better or find out why they used that process. Why is it so good." We must have tore apart cars by the dozens. Ray Everts was the kind of person that said, "Go get a car, take a look at it, get it in here." Before, everybody was always saying, "You don't need to do that." He was the other way. "Get it in here, take a look at it." Or he'd say to you, "You really happy with that?" He always made you think. It's so easy to design something and not think about it. [But], he'd say, "You really happy with that?" Even though he might be pleased, he wanted to know, "Are you happy?" Very unusual, because he really [made you think about what you were doing, and I've] got to give him credit for that. I think he made everybody think again, "Yes, are you happy with this? Are you ready to go into the 90's with this car? Let's face it, it's going to be around for awhile."

Q: That marvelous band of light across the Sable, who came up with that?

A: The Lexan treatment? I think I have to give Dave Turner credit for that concept.

Q: That's a beauty.

A: Yes, it really makes the car distinctive.

Q: I saw one on the road the other night, and I almost drove off the road.

A: Yes. The other one that's interesting is the Ford oval on the Taurus. Oddly enough, nobody else [felt that comfortable with it at first].

Q: Why not?

A: Again, it's something new, right, it's not the old traditional grille that we're used to; and I remember when they started the propo-sals, they had a grille theme, the base grille was just going to be like the Tempo/Topaz, which is just a couple of slots, a typical black grille with some louvers. And, again, here is Ray's influence, "Let's do something different." And, they came up with the Ford oval, and then around it the opening to take in the air. That is so distinctive. When they first did that, everybody was afraid of it. Nobody liked it.

Q: Because of the tradition?

A: Maybe. I think it's mostly because they're just not used to it. The designers were just very uncomfortable with it, and finally Mr. Veraldi decided that was the only grille he wanted, and he's really happy he did, because I see the other grille, occasionally, on models, and it's so ho hum! When you see this front end on the assembly line, it really looks good. I was in Atlanta two or three months ago watching the start-up of the line, and they were all coming down with the oval on that front end, and I said, "God, am I happy they did that." It's just so distinctive.

Q: Whose idea was that?

A: That's definitely Ray Evert's.

Q: It certainly came up beautifully. I'm really amazed at how well it went, and in talking to some of the people who were involved, it's incredible that they don't continue that [process].

A: It's a shame, isn't it? It's funny, at the time that Taurus started, let's face it, we were in trouble. We were in trouble in the marketplace, we weren't making money--we were losing it, and I really feel that upper management was saying, "How are we going to get out of this?" And, I think they said, "Okay, let's do the best we can, get this concept going." Now, we're making money. We're again comfortable. We're lean, we're very lean, some places too lean, it's becoming a problem. And, now I feel everybody's comfortable again, so they pull back just when you shouldn't. I know that GM has seen our Taurus/Sable. When we introduced them in L.A., it was on the video network. They picked it up here while we were showing it. I got more phone calls from friends of mine at the Tech Center congratulating me on that car and saying, "How did you pull that one over on us? We thought it was for Europe, you weren't supposed to do that for here." To get a congratulation from a GM designer on a Ford product, is incredible, because as far as they are concerned, we're nobody. I know, because when I was trying to get a job there, they just said, "Ford who?" They absolutely think [we're] nothing...

Q: You really [scored] a ten strike.

A: They are so scared that they are going to change all their '88 intermediates because they've seen ours. What I'm worried about now is we may be pulling back, which I feel is happening, and I regret it--GM has seen our '86's, they're going to reach, and they are going to pass that '86--nobody's going to copy. If you copy, you're wasting your time, so you've got to go further. They're going to leapfrog us again, and we're going to go the other way?

Q: You mean retrogress?

A: Yes. What a mistake!

Q: You've seen the '87 facelifts on the Taurus/Sable? Since this will be coming out long after their introduction, what have they done?

A: It's becoming a little more traditional. I know the interior and they're pulling away, very sadly, I mean, it hurts. I just wonder why. It's the old system Ford does. Now, all of a sudden, they want to save money everywhere--save it, save it here, take it out. Now, suddenly, "Oh,

man, that door, we're never going to sell a Sable, that door..." Nobody worries that much about just the door panel, but they're worried about little things. They're getting into second-guessing, and nitpicking it to death, and taking money out. They're thinking of taking out differentiation, the difference between the Taurus and Sable. You know, they're doing all the market surveys, and, of course, you get people that say, "I don't really care for that." There's a problem at Ford that I've always noticed, and it's always bothered me--when we build a car, it's got to make everybody from age 2 to 99 happy. Sorry folks, you can't do that! You can't.

Q: You're talking about consumer surveys?

A: Right. You've got to hit a market and make them happy and stay with it, and hit another area, and make them happy. We want to make everybody happy. We want to build the Mustang for the teenager to the person that's retired and sixty--almost impossible! What you end up doing then is making a car that nobody likes.

Q: It's a blur?

A: Yes. It doesn't make me happy because I'm young, and it doesn't make somebody else happy because they're older. It's a nothing! And my worry is that GM is no fool, and neither are the Japanese. They were so enthralled with our Taurus/Sable in the Tokyo auto show that they kept the two cars.

Q: That's a compliment.

A: Yes. So, they're not going to just sit on it. They're going to go further--they're going to reach more, they're going to see what we did as far as features, as far as the look, and I'm seeing us get more conservative and more woodgrain, stop the differentiation, get flat doors, and can't find them all of a sudden.

Q: You can't go to Fritz Mayhew now and say, "Look, Fritz..."

A: Fritz is out of the program, he's been transferred, he's a director. I was put off the program about four months ago, and am now following FN9 and EN25, which are luxury car derivatives off the Taurus/Sable. And, of course, occasionally, I get involved in a meeting because Mr. Veraldi, he's the kind of gentleman that once he knows your name and knows you've been involved in something, he just picks up the phone and says, "Mimi, I got this problem over here."

Q: He realizes that your level is where it's at.

A: He just calls you up and drags you off to Atlanta or wherever he's going, and I know a couple of times I've been on the Company plane with him, and Jack Telnack's come along and looked at me like, "Why are you here?" And my feeling is, I'm not a very political person, I guess. I like to put out a good product--I'm interested in Ford Motor. I want it to survive, and I'd like it to be number one. I'm not happy with GM being number one. I think they do some terrible stuff right now, and if we could stick it to them, all the more better, and we could, you know, because we have something going that's really, really good.

Q: What's happening? Is there a little ossification at the top?

A: I don't know. I just think it's the old, comfortable thing, you know, the old comfortable shoe. Doesn't it happen to a lot of people? The more money they make, the less they spend. The more comfortable they are, the less willing they are to take a risk! We took a tremendous risk, and I think Lou Veraldi would say to Mr. Caldwell, "That three billion dollars was a big risk to take." We really didn't even really have that kind of money at the time. And, now they're making money, so, "Let's see if we can make more money."

Q: They're tinkering with it?

A: Yes, and not only with that, but other things. I see the trend, and I hope...

Q: They've shut down the creative flow, and [it's] just business as usual?

A: Oh, yes. It is, really. It has gone a little bit back to that, and I hope somebody will start waking them up and saying, "Hey, we keep that up, and in another few years, the Japanese..." The big trick is "can", you know. I mean, Jack is in an awkward position at times I think. He's not truly a vice president, which I think is very regretful. That just shouldn't be like that--he should have that title, he should be able function as a vice president. He's below Lou Veraldi, below Stu Frey. * His hands are tied sometimes, and I do not envy him, I really don't.

Q: His heart's in the right place. He wants to move ahead, creatively.

A: Oh, yes. Very creative. I think if he had the position, the power, it would go much smoother. It's just--Dave Turner and I have talked about this, while Dave and I were both working as specialists with the position as manager but not the title, it was harder to get things done.

Q: The title is all?

A: It is so strange. I mean, neither of us changed from the day they said, "Now you're a manager," but everything changed overnight. Now people will do what we ask, whereas before it was like you had to plead or people would look at you like "who are you?" Hey, I'm just trying to do my job, and I think he's in the same boat. I'm sure he is, and that's why some of this happens.

* Editor's Note: As of 1990, Jack Telnack is Vice-President of Design. Messrs. Veraldi and Frey have retired.

Q: The coordinating of creativity and the creative thrust with the marketplace and with the advanced studio under Kopka, is that a little closer than it used to be?

A: Yes. I think they're trying harder and harder to put it closer. Advanced used to be totally on its own under Gene Bordinat. We also had an advanced studio. It was always under one person

though, which I think worked a bit better at times. Like the Taurus, it really did start in the advanced area.

Q: Did the Taurus start in the advanced studio?

A: It did start there, yes. They did do models, they did do interiors, but sadly enough, they have a tendency not to stick to package or not to be as feasible as you would hope. There is a handover at a certain stage in the program, staff advanced studio hands it over to the production studio. Then the production studio takes the program from there right to job "1". Yes, there are some very good ideas, but a lot of times you just have to start all over, and I think Don [Kopka] is trying harder to bridge that, and I think they're making some improvements.

Q: But, overall though, this tremendous achievement shouldn't be allowed to tarnish....

A: I don't think so. I just see subtleties happen, and I just hope that doesn't accelerate, that's all. There was an element there with Mr. Caldwell and Mr. Veraldi and everybody and Don Petersen. Mr. Peterson, definitely, he loves a car. They believed in it. They believed in everybody, which is the nicest feeling of all: that no matter what level you are in the company, if somebody has trust in what your doing, you're going to put a 100% in. If suddenly you get the feeling, no trust, you don't get it out of your people, naturally. If you have to tell everybody what to do, then they're going to say, "Why am I here?" They may not say it out loud, but inside they're feeling, "why bother."

*Editor's Note: Donald F. Petersen, whom many believe caused the successful resurgence of Ford in the 'Eighties by giving designers a freer hand in decision-making, retired as chairman in March, 1990.

Q: I suspect, and you know this much better than I, that the current trend of the industry toward fiscal conservatism and the movement into outsourcing is taking a toll, as you suggest, on creativity.

A: Yes, that has a lot of negative feedback. We do need them, the outside sources, because we are so lean, but at the same time I can feel that with the designers, "What does that mean in my future?" They get worried, and when you start to make a very creative person concerned, that creativity goes right out the window. I mean, it's another thing to be a clerk and be worried, but you can still do the routine, the mechanical, but I feel if you start to mess around a creative person's mind to make them concerned about their future, the creativity goes away, they're a different [person]. The only trouble that's happening right now is this: I don't know if you've heard about it, there's this improvement [factor] every year, and they want [a certain percentage] out of the company. It's across the board, so they want [a certain percentage] improvement in employment, which means that people that retire, leave for medical reasons. That's it, or quit, we don't replace them.

Q: They call it improvement, but it's really attrition.

A: Attrition. There's something wrong with that, I mean, it sounds good, and I know what they're trying to achieve--the company was fat and happy, everybody knew that; but after awhile, your mix gets into trouble, right? All of a sudden there aren't engineers to do the job, but there might still be ten sweepers out there that you really don't need.

They're not taking a good look at their mix of professionals that they need to do a job to get the cars out that they're still going to do, to get the fit and finish in the quality. I mean we're doing all these big ad campaigns about Ford and quality is job one and all that. Suddenly, you don't have the people to do that for you. That's going to fall, and that's a concern I have right now that nobody is sitting back and taking a look down the road five to ten years and saying where are our people going to be? Do we have enough to do this job? Nobody's doing that. And it's getting harder and harder to do what everybody wants. If you can't see over that hill, the mound of work gets tough. So I hope some-body's got to sit down and say, "Where's Ford going to be."

Q: I suppose, it's simplistic of me to say [the] bean counters have taken over [at Ford]?

A: Yes. You've said it.

Q: I might ask you how is your feelings about what you worked on, and what you have projected for the next five years?

A: You mean my feelings as far as the Taurus and Sable?

Q: And of your luxury and mid-sized products that you've seen on the boards?

A: The Taurus and Sable, I'm extremely proud of. Yes, there are areas I would feel I wouldn't mind getting back into. There are some results of some market surveys I wish we hadn't done, but we had no choice.

Q: There is an odd dependence on this [marketing tool] at Ford. They regard it as some sort of sacred oracle?

A: I don't believe it, I'm afraid I don't. The Japanese don't do it, so why do we do it? I think if you know what to do and you know what's needed out there, you don't need to listen to somebody in Toledo or Houston, Texas, saying it's right. So, I am extremely happy with them, I feel good about them, I feel good to say, "Gee, that's a Ford, I worked on that [Taurus/Sable]." Whereas a couple of years before that, nobody was too proud to say, "I work for Ford Motor Company." Usually, you didn't want to say anything if you went out to a party and somebody asked you, "Where do you work?" Now you feel good! I feel good about some of the luxury cars we're coming out with, yes. But, I still have a little bit of a concern about our conservatism that creeping back. I'd like to see that go back to the Taurus system of reaching, taking the risk. Yes, take the risk and reach out because we can do it. And the response back on the Taurus/Sable in the press, and not only [them, but] the people! [This] tells me we've done a good job. Otherwise, you wouldn't hear from it from a man on the street--you just wouldn't. You might get it from the car magazine buffs, but when you start to hear it from the guy on the street, that is exciting. Now you feel like you've [accomplished something].

Q: Do you feel a downward trend in the next three or four years for the Taurus/Sable program?

A: Yes. I feel they're pulling back a little bit, yes. I could be wrong, and I hope I am. I hope that what I'm seeing isn't going to hap-pen, and they do go ahead with the differentiation and stick with the trend. I'll keep my fingers crossed.

Q: There's one thing I especially want to ask you about is my impression that in the early '70's, somebody said, "Look, the interiors have too long been a sort of second-class citizen, the driver's been ignored, the female buyer has been ignored, and we've been choosing colors and fabrics to suit our own tastes, and we've been shaving the cockpit to what we think it should be. Why don't we start thinking about the actual driver?" Did that happen at Ford?

A: Oh, yes. The most interest is usually on exterior--everybody's involved with that, and interiors kind of happened. It's also an area where we took out most of the money when money had to be taken out of a car to make money. Oh, yes, it's the easiest area to take money out. Let's say you start a T-Bird, and you spend X dollars on it, then you get it on the road the first year, the next year product planning comes in and says, "This year we want to take out 120 bucks, a 100 of it is interior, 20 is exterior." It's usually the easiest place for them to go. You know, you go to the flat doors, the dialetric doors, you may take out a trim series or may take out a feature, you're always good at taking out good features. And, it really hurt us. I think that was part of the reason our market sales went down, because our interiors began to be shoddy in appearance, fit and finish, but it was just overall. We were just taking out too much money, and then the ergonomics, which is something else you mentioned.

Q: Tell us about that?

A: Ergonomics, or human factors, to me means that if I situate myself in the car where my legs are at the pedals correctly--the gas pedal and the brake pedal--got a good hold of the steering wheel, I feel good. I'm sitting comfortable in the seat. I can reach and see the controls with ease without getting off the seat. By that I mean my back -- leaving the seat back and always reaching. If you do that a few dozen times on your trip home, it's aggravating, fatiguing.

On the LTD project I was on before I moved to the Taurus, I got involved with that seat with Linda Cristage, the designer, she was there with me. We both worked extremely hard trying to get them to do a good ergonomics seat. We were trying to make our engineers understand that the human body is not straight in the back, it really does have a curve, and, believe it or not, the dummy they used to test the seat is dead straight.

Q: The famous "Oscar" is straight?

A: Yes, dead straight. We went through all kinds of things to show them what orthopedic surgeons have said, and how the body is built, and we get a little bit out of them. It was very frustrating because by the time we developed the seat with enough lumbar support, it gets handed over to body engineering, not feasibility. They then decide by the time they've done their

mannequin study, their "H" point to the package, and to and behold, you get that seat back, and it's dead straight with no back support.

Q: It kills you on a long trip.

A: Yes. I mean, this old routine of the showroom feel should be like your sofa, is wrong, dead wrong, because that's great for the first five minutes, but after an hour, guess what?--your back is going to hurt. So when we got to the Taurus, we were able to change that around because of the support there.

Q: You had, however, worked on the inflatable lumbar seat.

A: Yes, we had done that.

Q: How did that come about? It became something that people talked about.

A: It was, it was, but that became an option, not standard. So, they're willing to put that in because they can charge for it, but, in the base seat, there should be enough support, too, for the individual that buys that. And now everybody's finally paying attention to ergonomics as far as the controls, and can you see the cluster, can you see everything you need to see within easy reach?

Q: Did you do the studies of the shifting of eye movement?

A: Oh yes. We've always done that, really. If you're sitting in the car, there's something about the 95th and 99 percentile where the eye's located. Does the rim block? You can do slight head movements, and you can see things, but, basically, when you're driving a car, the one thing you want to see is the speedometer and your most important instruments which are fuel and oil. If those are being blocked--I'm sure you've sat [looking at an instrument] cluster where the main things are the fuel gauge and warning lights--dead center--that's where you're looking. I don't want to see those, I don't want to see those unless I have, too.

Q: They should be peripheral?

A: And you'll find that the tach and the speedometer are out on the outer rim. I mean, basics, you know? Why did we do stuff like that? Why did we let them get away with that for years?

Q: Were ergonomics or ergometrics a European innovation? Did they [pioneer] that?

A: I think they paid more attention to it.

Q: Also called anthropometrics.

A: Yes. You know, that's one thing when we did all of our comparative studies of the competition cars, like the Audi, the Porsche, the Mercedes, the BMW, where was the speedometer?--centerline! Where did our engineers want to put the speedometer--to the side! Do

you know that was a major, major battle to get them to put it on the centerline? They had to rework the bracing of the panel to allow it. They said, "We've done it for years on the side, why should we change now?" "Yes, but it's not best in class, you know, we are trying to be best in class, and look at the cars that are driver-oriented, best in class." No. they just couldn't believe we wanted to do that. They're basic to me.

Q: Was that [dashboard backlighting] a fairly easy innovation to get accepted?

A: Again, a little bit of a struggle, but not too bad. We were able to find competitive cars. If we can find competitive cars, we have a little bit of an edge with our engineering and product planning willing to spend the money. If somebody's done it, then they feel better. If nobody's done it, it's like moving Mount Vesuvius over, you know? So, I think it was the Toyota Celica that had the backlit cluster, which we brought in as our objective--image car for the cluster. Instead of the old way of doing a mask, floodlighting the graphics, we wanted everything to come through the back, which is really basic and simple, but it's new technology, so...

Q: It had been done in a crude [way] back in the '50's, but it had been discarded for some reason.

A: Strange how everything cycles back.

Q: What about the revolution in fabrics in the last decade.

They've gotten away from those ghastly, junky things. Did you finally get the suppliers to come around and work with you on that?

A: Yes. The trim and color people always get involved with Collins and Aikens, and I'm trying to think of some of the other makes. They always called them in. They always asked us what do we want, what are we looking for? Way early in the program on the Taurus/Sable, I had said, "I don't want to see the typical velours, I want something different." We were looking for a new look. I wanted the material to be exciting. I wanted interest with little flecks--not shouting--I wanted interest. So color and trim helped us [to] find the new look. Sadly enough, some of it surveyed badly, so we lost some of it. There again, I kind of find the surveys bad because it's new and people are going to react differently right away. They're not going to embrace it right away, it's different. You've got to give things a chance. We didn't lose it all, thank goodness, we did maintain some of it. But we had a survey in Houston, Texas, which, I think, is very conservative/traditional--we had what I thought was some beautiful fabric on the Taurus LX. It had three colors in it--it had a red, a dark red, and a grey fleck. That's if you had red, if you had blue, it would be blue and dark blue with grey, and it was really pretty. It was a nice pattern. It wasn't over the whole seat, it was just in an interest area like in the center. They had some plain fabric going around it. They didn't understand it.

Q: They were shot down?

A: Oh, yes.

Q: On the basis of about ten or twelve housewives...?

A: Yes, that's right, you know. In a conservative end of the country, so naturally....

Q: Did they re-survey it in a more progressive market like California ?

A: Oh, Californians would love it, but nobody wanted to hear that then. So, then you try to reason with them, and, you know, it's too late. Then if somebody's got these survey results, it's like--simply stated, "The people in the survey did not like the fabric."

Q: Did you ever work with [Trevor] Creed on the interiors a lot?

A: Oh, yes. Trevor joined us just about the time the [instrument] panels were approved, and we were into the doors. At that stage, he came on board. He's very good.

Q: Is he? What sort of an input did he have at that time?

A: Didn't have much design change on the Taurus/Sable, per se, because it was pretty well approved, but he backed the way we were working. He understood the car, and I think because it had a lot of European flair or feeling--to me, it's a world car--I don't think he had any problems with it at all. His regret and my regret, too, is the woodgrain, that's one that we also--that was a market survey result. It was a dealer by the name of Taska from New York , and a market survey from Houston , Texas . And now we're getting all kinds of letters asking us why did we do that. [Don] Petersen's even bucked down notes to Lou Veraldi and myself saying, "Why did we do that?" I thought, "You've got to be kidding." We tried. Both Trevor and I tried to tell them, "That's not really what we'd like to do." But, they were at the stage that this is what we've got to do to make the car acceptable for EVERYBODY. I don't think you can do that any more. I think people are too segmented. I think once you start that, you lose that segment you were after.

Q: Were there compromises that were made on the final that you wished they hadn't made in terms of [the wood grain dash] one?

A: That's definitely one of them. The fabric was a compromise. The fact that I lost that pattern cloth in the seat and the door insert area, I think, was a mistake because it livened it up. Now it's just all velour.

Q: Made it a tiny bit plain?

A: Yes, it did. But, see, when we were designing the car, the

idea was to make it spacious, simple, clean and elegant and have the fabric carry the design, and you can do that. But, when the market survey went out, and somebody probably said, "Well, you know, I really don't like pattern fabric," so, to and behold, you throw that out, then you put in plain fabric.

Q: That would have been final filip, I think, that would have sent it over the top.

A: If I could show you those photographs, you'd probably [agree], but, you know, it's tough to...

Q: Can you put them in the [new models]? Has it been finalized that far?

A: The '87, you mean?

Q: Yes.

A: It's too late. Oddly enough, everything now is already... If you have to make a change now, you have to be working in 1990. Everything's already approved.

Q: Any final comments about your career in design?

A: I think I've loved it--every minute of it. I have no regrets, I like the business, I hope it will survive, and I like the people.

Q: And you feel you've achieved quite a lot in a short time?

A: Yes. And especially this last program, I can say that was one-of-a kind: Team Taurus. It was a tremendous benefit to have been on it, to have had that opportunity to work with the different individuals--just super!

Q: Thank you, Mimi Vandermolen--one of the few female design managers in the industry.*

A: Thank you.

*Editor's Note: In June, 1987, Ms. Vandermolen was appointed Design Executive, Small Car Exteriors Design, at Ford Motor Company's North American Design Center. This is a first in the automotive industry.

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