



Transcript for

AUTOMOTIVE DESIGN ORAL HISTORY PROJECT

INTERVIEW WITH GAIL HALDERMAN, 1984

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NOTE TO READERS

This PDF-format version of the Gail Halderman 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 Gail Halderman

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

This is Dave Crippen continuing our series of reminiscences of design executives at Ford Motor Company for the Edsel Ford Design History Center. This is the 4th day of June in 1984, and we're at the Ford Archives of the Henry Ford Museum, and we're speaking today with Mr. Gail Halderman who is currently Director of Small Car Exteriors and Truck Design at Ford Motor Company. We'd like to ask Gail to review his career in design and styling, with particular emphasis of his career at Ford Motor Company.

A: Thank you Dave. I guess my career in design started back in Dayton, Ohio, where I was going to art school and was studying art with Jonathan Winters, of all people -- one of our leading comics -- and hadn't really made up my mind yet whether I wanted to be a commercial artist or a car designer, but the further I studied, and the more I learned, I made up my mind that cars was really more intriguing, more a challenge and something that I can spend my lifetime doing and be satisfied with it. I left school two months before graduation and came to Ford Motor to look for a job. I was hired at Ford by Gene Bordinat, who, at that time, was head of Lincoln-Mercury and hired me as a Lincoln-Mercury designer. I then went back to Dayton and told the school that I had received my job, and I wanted to leave immediately and come to Detroit, and the Dean said, "Wait a minute, you can't do that, there's still two months of school left." So, I took my portfolio over to his office, he looked at it and said, "I'm quite impressed. It looks good to me, and I can understand why you're anxious to get up there." He said, "If you're willing to spend another four weeks with us, I'll leave you go four weeks early." So, I came up and started to work, and Mr. Bordinat said, "Well, why don't you go upstairs. We have a little advanced group upstairs, learn to find -- get your pencils and your desk, and get organized, and in about a week or two I'll bring you down to Lincoln-Mercury studio and put you to work. Well, believe it or not, in that week and a half, I think, there was a crisis in Ford studio. I was sent to Ford studio instead and never went to Lincoln-Mercury until I was named director of it! So, most of my career up until that time was spent on the Ford cars and not the Lincoln-Mercury cars.

The first big assignment I had at Ford was working on the '57 new car, and it was just beginning. We were doing a few things for the '56, but that was another studio, and we were assigned the brand new '57 Ford, and we also designed the Mystere show car at the same time. We kind of did that on overtime, and then we worked on the '57 car during the day, but we were developing two clay models, I believe, at the time. We had one that was to the engineering package in size; one that was to our designers' liking, and it, naturally, was wider, lower and a little bit longer, and at showtime we took both of these models out, and, naturally, the management picked the designers choice because it looked better.

Q: That brings up a pertinent point. I hate to interrupt your narrative, but you spoke of the engineering package and being on package and the designers concept. Was there, in the late 'Fifties, still a competition between engineering and styling?

A: Back in the 'Fifties we were actually reporting to engineering.

Our reporting line of command was through the engineers, and, naturally, they had the man sitting up a little straighter in the car, a little more chair height, and we loved to lay him down, sitting back in a little more relaxed atmosphere so we could lower the roof, and we also wanted to speed the windshield angle up a little bit and make the car a little bit more racy. That was the biggest single difference.

So, we worked on the '57 Ford, got it approved, got it into production, and then I continued on working on the Ford cars all the way through. We did the retractable hardtop....

Q: Can you tell us about the retractable hardtop?

A: The retractable hardtop -- the mechanism and some of the key folding parts of it was done at the Continental Division at that time but was then brought into us in our studio for final adaptation of this system to the Ford car which was a tremendous job. It really, in all fairness, didn't fit that well, but we forced it to fit, and it turned out to be quite a wondrous day. So, from then on I worked on the '58 and the '59. The '58 was, by the way, a difficult car to design.

Q: Why?

A: We had a beautiful '57, and we really didn't know what to do to it in the '58 line, so we really made it worse. We put in two taillights instead of one, we put in two headlamps instead of one, we chromed the side. Remember we put the corrugated gold aluminum on the side? We really messed that car up pretty bad. But, then in '59 we changed to another all-new car and cleaned it up again somewhat, kept the general form of the '57, and that car was very successful.

Q: Why?

A: It had a very sturdy look, it looked like it would do the job, and we fixed all of the mistakes we made in '58. But, one of the most exciting cars we did in the era was the '60. We started really from scratch with a clean sheet of paper on the 1960 Ford car. We took an all-new approach to its theme, we cleaned up the car completely. The side we didn't put the bulges in the concave sections. We kept it clean and sleek, and we thought that was the designers' type car, but, unfortunately, the public didn't like it as well as the '57 and the '59. But, we worked on that car pretty hard, and we modified it for '61. In this era of the time, we changed the cars drastically every year. We didn't carry them like we do today, but we were changing them considerably every year. And, in 1960, we made the '60 car look heavier, and it looked like it had much more trunk space, it appeared to have much more interior space, but it really didn't. We just made it look that way.

Those were some pretty trying times back then. In order to design for those car lines, we would create as many as a dozen clay models and take them all out for the show at the same time and pick and choose parts: this corner, that corner, this roof, that grille, this wheel opening, and then try to put them all together, and sometimes we'd end up with a camel, and then we'd have to start over. But, that's the way it was done back then. The management of the company liked to see a lot of proposals, they enjoyed letting the designers have their freedom, and then they liked to come over and pick and choose and marry together these components that didn't fit. That was a task that we had to contend with, and then once we got the basic shapes approved for any one particular car, then we had the derivative models to work on, like the station wagons, or four-doors, or the two-doors, or the convertibles. And, some- times, the original theme that was approved or selected wouldn't always lend itself very well to the station wagon or lend itself to the convertible, so we really earned our money back then trying to make these things happen.

We went through some periods through this time where we were putting a lot of chrome on the cars. We were capping all the edges with moldings, we were surrounding everything with chrome, and we run through two-tones and even three-tones of colors that sometimes didn't always go together that well. But, we thought it was the right thing for the time, and they were exciting, and we had some car moldings that were crossing over highlights and all kinds of funny things. But, those were the days that you look back and say, "Gosh, why did we do those?" but at the time they seemed like the right thing to do.

From the end of the 'Sixties, the thing that really impressed me, and I spent a lot of time on -- seemed to me like it was the highlight of my career when we were assigned by Mr. Iacocca to take on a personal car, and we started doing a 2+2 kind of seating arrangement where the rear seat of the car was more of a jumpseat for children or, maybe, a little bit more cramped than what we were at that time used to even thinking about putting back there. And, we worked on many, many cars -- theme designs, along this line, and, at that time, we didn't know what it was [or] what it was going to be called, but, after a couple of years and many trial and error, this car became the Mustang.

Q: I wonder if you could take us through that episode step by step so that we could get a good picture from your experience as to how the Mustang evolved and who was involved in its creation and how it became a styling and marketing success?

A: The car actually started out on the product planners' dream pad as a new entry in the market for a segment that really nobody was selling to at that time. We called it back then a personal car -- something that you may just want to buy and drive to work or just drive to the grocery and not necessarily use it as a family or a weekend type of vehicle. There were many trial errors put together and changed and modified on the seating positions because we'd never done a car that did not have a full rear seat. It was very difficult for the company to even think about doing something that was less than that. We had tried them without rear seats, but none had a compromised rear seat. This car had a compromised rear seat, and, of course, putting that together, the length of the wheelbase, and how wide should it be, and how high it should be was a major, major concern. We did lots and lots of studies, and we worked, by the way, with -- product planning at that time was almost a single-handed project by Hal Sperlich, and he was almost a one-man show on that -- did most of the work himself -- by himself, and I really, at that

time, can't remember if there were any engineers assigned to it. I think, it was Hal and a couple of us in design that took this on as a special, little pro-ject that we did in a corner for awhile.

There were, I believe, about twelve various vehicles all the same design but of various dimensions looked at to try to settle down on what size the car should be. And, out of the study, we finally ended up with the one that was chosen. But that was a major decision in the program, plus the fact that the company really didn't want to build this car. It was frowned upon by the Board of Directors. Top management didn't think we needed it, we really didn't have a place to build it at the time, and so it was really a battle for Hal Sperlich and his people and Mr. Iacocca to get the thing even onto the agenda at that time because they didn't want to talk about it. As the program progressed and we did get more serious about it, we realized that the car really didn't look good enough, and so Mr. Bordinat, who at that time was in charge of design, called everybody together, and he said that we were now serious about the program, that we were going to spend more time on the design of it, and everybody in the building was to give it a try. So, we divided up into groups, and we ended up with three or four different groups, and we each took this project on. And, at the time, I was in the Ford studio, and we were so busy doing Ford cars that the only design time that I had to work on it was at home. So I went home, and I sketched on this project. And, actually, the car was clay modeled from a sketch I did on my porch, so I feel a little bit like I had some basic part in the final design.

We showed these cars to the management. They were excited about them, and, until that last show day when Mr. Ford came over and was really enthused about the looks of it, I think, the car would not have made it. It was only because of its appearance that inspired the whole project. And, we had also, during that period of time, an awful lot of rules of engineering's restrictions on what they could achieve, and I remember I kept tab that the original Mustang broke seventy-seven of the company's rules at that time in order to manufacture it. There was another new thought on the car. We -- Hal Sperlich, Joe Oros and I and Iacocca -- thought that for once the car had to be sold as a complete automobile. We couldn't sell it as a base model and have a stripped-down model and then end up charging more for carpeting, more for wheel covers, more for good seat trim, more for the best engine, and this car was done really with wheel covers as base. We had carpet throughout, we offered a convertible, it was a full line of car. It was the very first time that that had ever been done. So, that was a new era, in my opinion, in car design at Ford.

Q: Do you have any thoughts about the -- you've described in some detail the process as it went from Hal Sperlich's original concept as a product planner to where it went from there in terms of the competition that you entered in, who won the competition, and some of the names of the players involved in the whole operation. We've had a number of people saying that they were involved at the beginning of the Mustang. This would be a good time set the record straight.

A: Dave, that's true. There were a lot of people that were involved in this, and, I think, the ones that were in the competition that didn't win probably deserve as much credit as those few of us that did work on it that did. At the time, I was working for Dave Ash, who was working for Joe Oros, and Joe was really assigned this project to do. He put together a very small design team of about three or four of us to take on the design task. At the same time, Buzz Grissinger, who at that time was head of the Lincoln-Mercury studio, was given the same assignment. He put

together a small team, and I can't remember -- it might have been [Don] DeLaRossa working for him at the time, and they did a car that was very nice, by the way. In fact, it would have been an excellent car, but out of the cars that were -- I can't believe if there's a third car or not. I don't recall if there were two or three, but the car that was chosen was the car from Joe Oros' area that Dave Ash and I and Charlie Phaneuf did at that time.

We worked on it, and we really did it on a crash basis. We did it on weekends -- Saturday, Sundays and a few all-nighters -- just to pull this thing together. And, it was interesting because we actually didn't know at the time what an impact this car was going to make. We didn't have any competition at the time in the market. As the time grew nearer and nearer for production and introduction, naturally, the public relations people kept saying, "Hey, now, we want your original sketches you did, we want to see the car as it started, we want to see the models that were rejected." We didn't have them, so we created some. We actually went back and started and did some sketching, we did some tapes. We ended up taking a full-size metal car and covered it with clay and put it into the styling bridge and scraped it down to the metal car, and they filmed it in that manner so it looked like we created this car, and it worked fantastically, by the way.

Another story about the Mustang, which I think is interesting, [is] for the first time in design center, we elected to build one that had an engine in it. Now, we never do this, but back then, for some reason, we had to have one, so we took a small car on a chassis and created a Mustang with an engine in it, and Joe Oros kept asking me, day after day, "When will that car be ready, when are we going to get it, is it out of the shop yet?" and, naturally, it wasn't. And the day that it came out of the shop, which was on a Friday, nearly finished, Ford Division came over in a panic, and they said, "We need to borrow a car this weekend for some early photography of the Mustang," and I didn't, at the time, have a car that was available other than this one that just came out of the shop. So, I gave it to them with the promise that I would have it back Monday morning because I was so sure that Oros was just anxious to see it. Well, they took that car, they sent it to Arizona, it was used in the original Mustang commercials, they cut the roof off, and they made a convertible out of it, they painted it about five times, and I never got that car back. And the amazing thing was that Joe never asked me where it was! But, that was an exciting time in my period of design.

Q: Once Iacocca decided to go ahead with Sperlich's original concept, and then your team came up with the final styling and design concept, where did it go from there in terms of acceptance by the corporation?

A: After we had [been] given the nod for the general appearance, we still didn't know at that time how much the car cost, we didn't know where it was going to be built, we didn't even really know for sure whether it could be built, so we had to spend a considerable amount of time redoing the car -- what we call going through the feasibility stage making sure that it was feasible, could be manufactured, was on cost -- something we could afford. And I would guess that it took three months to do that. After those days when we got to that stage, it went before the final approval committee, because they didn't have enough information to deal with the facts.

Q: Who was on that committee?

A: I'm guessing, but I would have to say Ernie Breech.

Q: And Crusoe's still there?

A: Crusoe -- I'm not sure about Crusoe.

Q: No, he'd departed by then.

A: And, I think, McNamara. Charlie Beacham was in the marketing area at that time. And, of course, Iacocca [and] Don Frey. That's all I can think of. Chase Morsey, maybe.

Q: You mentioned a moment ago that Henry Ford II finally came in. Were you at that session when he gave his final approval?

A: You know, Dave, I don't think I was.

Q: But, it would have had to have been he and Iacocca?

A: No, it was Mr. Ford, definitely, who gave us the okay to go further at that time. And, the unbelievable thing is that car cost the company, I understand, about \$60,000,000 to build, and that seemed like a lot of money back then, but comparing that to today, we can't even tool four doors for that. It's amazing how cheap things were back then.

Q: To bring you through your career with the later Mustangs after the success of the '64, there was considerable fiddling with the basic design concept, and, I believe, you had a very large hand in the Mustangs that came a year or two later.

A: Yes, I did. I worked on probably all the Mustangs up through the '60, and I'm still working on them. The dilemma that the designers and the company had after the first one was that they didn't know what to do with it. They didn't really want to change it, they didn't want to touch it, but they also knew they had to. It had to be modified -- be refreshed. We had heard by then that G.M. and Chrysler both were doing cars that might compete against it, so we had to freshen the Mustang. We had started two or three models on various degrees of change: some quite radical, some were very conservative, and I was being directed then by Joe Oros who wanted to change it considerably, and he wanted to take the concave off the side and make it a convex shape, and I wanted to make the side deeper and take a feature that we'd started and make it more so the next time. We had quite a controversy over that, and he didn't want to give, and, of course, naturally, I didn't, but, since he was the boss, I would have done what he wanted, but we had a two-sided car back then.

One side was the way he wanted it, and one side was the way I preferred it, and Sperlich was very dead [set] against the direction Joe wanted to go. He wanted to go the way I wanted to go and make the features stronger the second time out. So, he called Iacocca on the phone, and he said that we had a dilemma on the design. He thought we needed a meeting with him to come over and review the options, and so Lee came over with Charlie Patterson one night about 5 o'clock, who was, at that time, in charge of manufacturing, [but] I'm not positive. I know Don

Frey was there. So, we were looking at the two sides, and the two sides of the roof and all kinds of things, and, naturally, we looked at the convex side first. Instead of taking air in and let the air out, supposedly, and Iacocca said that he really didn't care much for that. He didn't think that resembled the Mustang, and it was a different car. Then we walked around, and Lee saw the side that I was trying to sell, and he loved it, liked it, approved it on the spot, and so then we moved on to the roof design, and we also had two designs on that. And, he said, "I definitely like the side that's on the side that I just liked," and so, again, they chose my design. From then on, I guess, I was tagged as being the Mustang designer, and I've been working on them mostly ever since.

Q: What was that model?

A: That was the '67. We took the features of the original car, and we tried to make them stronger. We tried to make the front end stronger with a little bigger mouth -- stronger grille area -- we tried to strengthen the lamps, we tried to strengthen the side, we made the C Pillar a little bit bigger, we made the taillamps a little larger so it looked like a little bit more car, and that was the philosophy behind it was to give the same car but just a little more. When we started the ['69] change -- we sort of used the same philosophy, [which] was, again, to try to continue the cues that had been established but make them more modern -- update them a little bit. And in '69, I believe, we eliminated the big 5x7 headlamp, and we went with two small ones. We elected to put one in the fender and one in the grille, and we then elected to change the body side from a concave section to something that was more of a convex or a flush section. That car -- telling a little bit about Mustangs -- that model was approved by Bunkie Knudsen in a snowstorm outside.

Q: Is this the '70 design?

A: Yeah -- '69 or '70.

Q: You're quoted in a magazine article saying it's the 1970.

A: Okay, it might have been. When Mr. Knudsen came, he was quite impressed with the Mustang car. He talked about the fact that G.M. had never really hit that market. That we were fortunate that we had it, and we should never lose it. And, so he put a lot of time and effort into the Mustang lineup, and, of course, he had his own theories as to what the car should be and what could be done to make it even better. But, he never really changed its [design] philosophy. He thought the original philosophy was right -- that we should just continue it.

Q: What was that philosophy?

A: A personalized car that was really -- even the base model was complete. You didn't have to buy your way up to make it a good car for you. You didn't have to buy wheel covers separate in those days. You didn't have to buy the deluxe trim to get a decent seat trim. Even though we were starting to get a higher grade interior -- like we had performance packages, and we had options in engines and things to be better, but the base car was still a very good car.

Q: About this time you are quoted as saying that you're beginning to be a little restive about the changes in the original car -- the changes that were coming on after 1968. Did you find yourself a little out of sync with some of the changes that were ongoing?

A: I think that's true, Dave. We found that there was a different approach being done by G.M. and a little different approach being done by Chrysler, and some of even the foreign cars in this market were probably a little more modern, in some aspects, so we wanted to really take on an all-new car and start from scratch and get some of the features that would make it smoother, slicker, faster windshields that had folding seats and hatchbacks and would bring it really up to speed. So, that's when we got off into some advanced projects that developed that then turned into the '80 car. But, the basic principles really never -- and are still intact.

Q: You've described the Knudsen era as having a beneficial effect.

Did he accelerate the growth of the Mustang into a much different kind of car than you had -- what was called, I believe, you called it a secretary's car?

A: Well, a secretary's or a personal car, yeah. I think Bunkie Knudsen saw greater things for the Mustang. He thought that the Ford Motor Company wasn't taking advantage of it, and he was trying to promote it into a different segment -- broaden its appeal. Do anything he could, because, really, yet today, it's the best name we have in the company, and, I think, he made us all sit back and take a second look at it and do a better job. We've got some of that with us yet today. I think we're still trying to broaden that.

Q: [With] the later Mustangs, in which you were heavily involved, were you working with the designer/stylist that Mr. Knudsen brought in -- Larry Shinoda?

A: Larry, yes. His job at the time was to -- after the theme was approved, Larry took it through the feasibility part and, unfortunately, Larry, at that time, had some different ideas, and he didn't want to continue the original theme, and he'd try to change it, and being a good friend of Mr. Knudsen's, he'd call him at night and talk about it, and we'd come in the next morning, and the side of the car would be changed, and then we'd have to go back and get that all sorted out. And, a couple times we won, and a couple times he won. He convinced Mr. Knudsen that his way was better. But I think it was an honest effort, really, to try to be helpful and to get across what Larry Shinoda thought was more the G.M. way of doing business, and we weren't used to it. Larry's still a good friend of mine. I see him occasionally. I think he's a good designer. Tough to work with, but....

Q: On the whole, the reactions we've gotten from other interviewees that the Knudsen/Shinoda era had sort of a negative effect on Ford design, but that's not necessarily the case?

A: Well, the Knudsen/Shinoda era was different, I think, from my side of it, I think Mr. Knudsen did Ford Motor Company a lot of good. I think, he came in -- he told us from the very beginning that looking across town at Ford that we had excellent designs, we had good product plans, we had good products. The only biggest single factor was that we approved our designs

too late and that we played with them too long and changed them too many times before production. And, he was going to help make the design approval and be there and help make it stick and not change it every week and keep it on track, and, I think, he had a very good point. He also told us a few things about how G.M. was planning to do hatch hoods -- putting a grille panel in front of the hood so when you want to change your car, you can just change the grille panel, and you then don't have to change the fender and hood all the time to get a difference. And, that was, I think, one of the biggest single things in design that he came and showed us how to do it. And, he also had some G.M. rules on how high the front fender ought to be in relationship to the rear quarter, and he would measure 'em with his belt line as he would walk along the car, and if it didn't match this guideline, why he would reject it. But, I think, they were good rules really, and I found him to be inspirational as much as Iacocca, but they were just different.

Q: Obviously, at this time there was a rather vicious power struggle going on between he and Iacocca.

A: Well, I was going to mention that, Dave. We had in our building, at the time, Iacocca cars, and we had Knudsen cars for the same program: designs similar but different just for the character of these two men, and when we knew that one was coming, we'd show one car, and when the other one was coming, we'd show his car. And, you know, I don't recall, but what we would have done if they came together! But, that's actually true. They really -- as different as the two men were, when I did see them together, they didn't disagree. They seemed to have a general good philosophy about cars. And, I think, it was unfortunate we lost both of them. If we could have kept both of those men working together, we'd have had a terrific team. Knudsen was a super engineer -- a good product man. And, I think Lee was really the best as far as salesmen go.

Q: Before we leave the Mustang, of which you played a large part, can you tell us a bit about the evolution of the very popular Boss Mustang -- the so-called 302's and 489's, and maybe you could take us step by step through that process?

A: The person who can tell most about the Boss Mustang was Larry Shinoda because the Boss name was his idea. He created the Boss Mustang really from an idea that he wanted to do on all cars, and I don't know whether he personally elected to change the design to that, but he had modified a car to this configuration, and it was somewhat rejected by the committee, in general, but he convinced Mr. Knudsen that it was good and that it should be called something special, and he said, "I think it ought to be the Boss." From that, the Boss name appeared.

Q: It was a buzz word of the 'Sixties?

A: It was a buzz word of the 'Sixties.

Q: Especially among the youth.

A: It had a hot engine, it performed well, and, by the way, I thought it looked pretty good, but that's how it happened. It was a kind of a shock to us at the time that it happened that way. It wasn't the normal way of doing business at Ford.

Q: At this time, you're the design executive. First, you're the executive stylist at the Ford studio, and your main responsibility is getting out the Ford models each year. The Mustang was sort of an interlude for you, but an interesting and pleasant one, of which you contributed quite a bit of input, and then in the late 'Sixties you are design executive with the vehicle design group, and by this time you have a design center. Can you tell us a bit about how the styling office evolved into the design center in the the early 'Sixties?

A: Let me step back and think. The design department when I joined the company really reported to body engineering or to the engineering group, and we were called stylists, and they were called engineers, and we had George Walker, and he had two people: one was Elwood Engel, and one was Joe Oros who worked for him as consultants, and we really desperately needed a leader. And, I think, Mr. Ford realized that and Mr. Breech, so they appointed George Walker, then, about a year and a half after I joined the company to be vice-president in charge of design. At that time, he brought Elwood Engel and Joe Oros into the company, and Joe Oros was in charge of Ford cars and the Ford studio, and Elwood Engel was kind of a staff designer, and, I guess, you'd call him a consultant. He just worked on any project that seemed to be hot and needed work or needed help, and George Walker would ask him his opinion, and he didn't have a staff at that time other than maybe one or two people.

During the George Walker days we were still known as stylists. He retired [in 1960]. Gene Bordinat became vice-president, and the role of the designer really changed. Instead of just doing pretty sheet metal around givens, we became more involved in the size of the car, and what the package should be, and the kind of car it should be, and we became, probably, more of marketers and engineers and salesmen and designers. We really took on a more broader role. We thought then that our name was wrong. From stylists, we wanted to be called designers that accomplished a bigger role, so we actually got our building and our names and everything changed from the styling center to the design center. I don't remember the year that happened, but....

Q: The early 'Sixties?

A: I think so.

Q: You attribute some of this change to Gene Bordinat -- his efforts along that line?

A: I do. I really do. I think we decided that our role was more --

if we had a bigger role in the product planning, and we could help make those decisions for the planner by being able to show not only something on paper that was graphic, but a three-dimensional tool to work with and help decide what products and what market we should be doing that nobody else in the company could do. And, you can type this out on paper, but until you actually see it and can touch it, it's very difficult to determine whether you like it or not, and, so, we really felt our role was a bigger role than we'd ever, maybe, had imagined at one time. We were also able to, I think, help engineering. We did a lot of things that were at their guidance. We did things at their request that could make their job easier. Different types of bumpers and different ways of doing windshields, and we would take on these requests and try to

make them look good and also make them better for the company. We could save money, and we're still doing that today, by the way. We have the lead role in determining how cars are put together and how cars are assembled/made.

Q: You're still taking that role today?

A: Yes, very much.

Q: You spoke of Hal Sperlich as a prime example of a product planner. Can you give us some idea of how the product planner fitted into this design process and how it evolved?

A: The product planner's role is a funny role in the company. Their role is anywhere from maybe a dreamer to a final policeman that makes sure that everything is going on schedule. But, basically, they plan the vehicle, plan the project, plan the price it ought to be, plan the market it should be aimed for. It needs to be determined whether we can make it, where it should be made, and how many series and colors and options it should have to end up, naturally, to make money. That's the product planners role.

Hal Sperlich, back in the early days when I worked with him very closely, was probably one of the most brilliant planners that I've ever dealt with. Hal could dream up more ideas and more ways of doing any single problem that you can dream of. He could come in with twenty-five ideas, and I would guess out of the twenty-five, twenty-three were lousy, but there were two or three that were just brilliant, and they were fabulous. And, I hate to say this, but Hal didn't know the difference, but there were other people that did, and one of them was Iacocca. Hal -- not only was he very inspiring, he had a lot of inspiring ideas to a designer. He would come in and look at your creation that was being done and say, "Gosh, that gives me an idea." He would take off and come back the next day with ten variations of that, which not only was good, but it gave you then some variations of some additional thoughts that you could do. So, he worked very well with the creative person, and, I think he looked at designers as a challenge. We were creative, and he was creative. And, although we were doing in three-dimension and in clay, he was doing it in writing, and he took it on as a challenge. I think, he was still one of the most creative.

Right now our planners are doing excellent planning, but they're basically being told what to do, and then they implement. They're becoming implementers and not creative.

Q: You have then the body engineers, and could you explain how this process worked at Ford? Was Don Frey an engineer or a product planner?

A: Don Frey is a doctor in chemistry, I believe, and his career started, I believe, in research. But, yes, basically, he's an engineer, and a very good one. He thoroughly understands all the aspects of engineering. I believe he crossed over and became a planner almost by accident. And Don and I worked together very closely on a few projects, and he kept admitting to me that he was sure glad that he had someone around who knew the aesthetics of cars, because he didn't. But, after about a week or two, he soon decided that he knew as much as we did, so Don....

Q: Not an untypical experience?

A: Right. Don Frey was responsible for the shaker-hood Mustang, and he was responsible for, I believe, the Shelby. Those were some of his ideas/concepts to broaden the car and make it a more exciting car. And, I was with him the day he decided not to do the Shelby but to do it in-house -- take it away from [Carroll] Shelby and call it something else. So, we called it then the GT and dropped the name Cobra, and that was a tough decision for Don.

Q: Did you have any input into the Shelby episode?

A: I had input, Dave, only on the last couple models of the Shelby .

In all fairness, the Shelby was done, probably correctly, where a car was given to Shelby, and he did his own version to begin with. And, the car was then brought in and shown, and Carroll Shelby presented it, and he said, "Here's what I think you should do," and the company said, "Fine, we'll do that." In the latter years, when the Shelby then actually became popular, we decided that we wanted to design the Shelby ourselves. So, we would do some proposals for the Shelby version, and then have him come in and look at our versions and, hopefully, he would agree. So, we were doing them in reverse after that. So, yeah, I worked on the last couple models and went up to -- the last ones were built in Ionia, Michigan .

Q: Why was that?

A: They were built by A.O. Smith in Ionia, and I went up there with DeLaRossa a couple times to look at the progress on the cars, and they had an assembly line, they had an old, old factory that is, I'm sure, torn down by now. But, that's where the last ones were done.

Q: Shelby has been a charismatic character in -- if not styling --automotive concepts of certain sporty cars. Did he have an impact on the later Mustangs in terms of the derivative...?

A: I think Carroll Shelby had a big influence, not only on the Mustang but other cars we were doing. He was probably a pretty shrewd busi-nessman. I think he was nothing more than a hot rod/race car driver who found out that he could sell his talent to a big corporation, and, I think, we probably ended up making him a lot of money, and he, in turn, helped Ford Motor Company. I think we learned some things from him, and maybe the timing was right. And, I think in all fairness, that when he left, we probably used all we could from him. But, he's now doing a good job for Chrysler. He's making their car something different.

Q: Interesting that Shelby and Sperlich ended up at Chrysler and are now working for Iacocca.

The chronology of your career, we've got you now in the mid-'Sixties. The Mustang is a success, and the successors are coming along beautifully, and you're working on those. In the mid-'Sixties and up to about the decade of the 'Seventies, what else are you working on at this point?

A: We were working on all the Ford cars as well. We went through a period through there where we had Fairmonts, and Falcons, Fairlane 500's, and Galaxies, and there was a matrix of Ford cars that all seemed to come and go and were all there at the same time. I was working on all those during that period, and the one year that really rang a bell with me was -- let me make this story a little bit shorter. At one time I was promoted to director of truck design, and I was only there about six months. I was then, I think by Bunkie Knudsen's direction, moved to be head of Lincoln-Mercury studio, and after a couple years there, Bordinat said, "Well, Gail," he said, "I want you now back to Ford studio to head up the Ford cars."

They were working on, I believe, the '73 or '74 model year at that time, and they couldn't seem to get a car design that management liked. Iacocca didn't like it. There was a dilemma of what really what the car should be. We didn't know what Chevrolet was doing for sure. It was a terrible indecision period, and so I was moved to Ford studio and was given the task that, in three weeks, we had to have a car approved by the design committee or we were not going to have a new car. The time had passed, and we were either going to have to continue with what we had or get a car in three weeks. So, I spent some time with Bordinat, and we discussed the car a little bit, and he outlined what he felt it should be, and I talked a little bit about what I thought it should be, and we went down and reviewed the progress of what had been started, and he told me two things. He said, "You've got three weeks to come up with a design. I don't like anything we've just seen, and, by the way, I'm going to Europe, and when I get back, which happens to be the day of the meeting, I expect you to have two models" -- one, a base model which we call a control model and then a high series version, "ready for approval, and, I think, it should be something that could be approved, and we can get this car in production." So, naturally, we worked day and night and went through a ton of designs and alterations and worked long hours, and, on the day of the meeting, we were finished, we had our two cars. I was waiting patiently to show the cars to Bordinat. He saw me in the hall, and he said, "Gail, I know you want to show me what you've got, but I'm late already for another meeting, and I can't see them." So, we had them in the showroom, and they were ready for show, and he did not see those cars until everybody walked in together, and we got both cars approved. Q: And they were?

A: The '73 Ford.

Q: And what distinguished those models from previous models?

A: Well, what we did, we took on the approach, basically, that they should look like Ford products. What was being done prior to that were strange-looking cars that looked, probably, more like G.M. cars than Ford cars, and that was one thing that Bordinat said, "We've got to make these cars appear to be -- they've got to look like Fords." A little bit of the old Ford cues and little bit of the Ford look. And, believe me, there is a Ford look, and so we just took this in hand and just decided to make 'em -- have all those features that we could, and they never changed. I can't remember whether Bordinat told me he liked them after that or even said I did a good job, but, anyway, it was kind of a miracle job.

Q: What were some of the distinctive series names of this period that you employed?

A: The biggest single name that came along was when we had Galaxie, which was a big name, but, I think, the biggest one was LTD. When we introduced the LTD, I believe, in the early part of the 'Sixties, it was primarily a distinction for the interior, and we put in really a luxury interior that was probably better than we put in the Lincolns at the time. We called it our Limited Series, and it sold like gangbusters, and it wasn't long before G.M. had to follow suit, and that's when they came along and called the car [Chevrolet] Caprice at the same time. And, we haven't really dropped LTD yet.

Q: It's become a bread and butter item for you?

A: Right.

the seasoning process -- you were briefly at truck and tractor and a little longer at the Lincoln-Mercury design office, was that a deliberate attempt to give you a broader experience?

A: I guess so, Dave. I think that all of us are taken through the chairs, as they call it, and my tour of duty back then in truck studio

Q: I would like to ask you a couple questions about [whether] this was was really relatively short, and I was working with Phil Caldwell. He was then head of trucks.

Q: How did you find him as a person to work for?

A: Phil was fine. He was delightful to work with. A little indecisive. He pondered longer over decisions than, say, Iacocca, he wanted more facts. He wanted to know more about it before he made a decision. Iacocca would say, "We've got to do it. That's it. Let's go." Phil had a couple [of] rules, by the way, that I got changed. He had a rule that in truck operations he was to be shown nothing that wasn't already gone through the planning process, the engineering process, the cost and the marketing. He wanted to know exactly what part of the market it was going to be in. He wanted all the homework done and then show it to [him], and this was the rules that they followed, and I said to Phil that I thought he was being short-changed in our area. That he wasn't given the opportunity to even see the alternatives. That maybe something was being worked on all through these stages of a choice that one of his guys would make that he didn't agree with, and he said, "I didn't realize that, and I'll change the rule." So, he did. But, we got along fine. Unfortunately, in that little bit of time I was in trucks, I was given an assignment by Mr. Knudsen, and he asked me to do two cars.

Q: What were they?

A: They were Torinos, I believe. But, Phil Caldwell didn't like the

idea that I was supposed to be paid to do trucks and, instead, I was doing two automobiles. And, then shortly after that, I was moved from trucks to Lincoln-Mercury.

Q: How did your sojourn at Lincoln-Mercury turn out?

A: I'll tell you one more thing about my assignment at trucks. When Mr. Bordinat told me I was going to trucks, I said to him, "What should I -- how do I work now through you? In other words, what do you want me to bring to you, what do you want to see, what decisions can I make?" And, Bordinat's comment was, "I only have one request, that is don't ever let Phil Caldwell call me," and that was my direction. Then, after all that happened, I said to Bordinat one day, "Do you remember back when I was given the truck job, you gave me that statement," I said, "did Phil Caldwell ever call?" And, he said, "Yes, he did." And, I said, "Really, what on? I thought I did a good job." He said, "He called me when he found out you were being transferred out of trucks." So, I thought that was a compliment.

Q: Was Bordinat more or less orchestrating your movements at this point? He was V.P. for design after George Walker had left and the overall styling/design chief.

A: I think, Bordinat and Iacocca were orchestrating.

Q: Caldwell -- you mentioned him as head of truck. Is that the head of the whole division at that time?

A: Director of truck operations.

Q: How did your experience at Lincoln-Mercury turn out?

A: I liked Lincoln-Mercury because, number one, I'd never worked on the Lincoln-Mercury cars, and it's fun, by the way, for a designer to work on some cars that can afford to do things. When you're working on the Ford Division cars, you're restricted a lot by what they can afford. It's kind of neat to be able to do Lincolns and Marks, for instance, and able to spend some money. My first assignment there was, I think, the Montego car line. When we were introducing the intermediate car line series, and we were doing some intermediates. We also did some new Mercurys. We did some new Lincolns, and the most exciting, really -- there's another exciting adventure along with the Mustang was -- I was responsible for doing the Mark VI, which, I think, is one of the best Marks we ever did. That car started out as a smaller car. It was being planned and programmed to be much smaller in length and width than it turned out. It was going to be built on the A body, and, instead, they had to put it on the X because of Wixom [Michigan]. Because of the plant problem, it got bigger. And, it really went from what I thought was a really cute, small car into a nice, but a big, car.

Q: This is in what year or years?

A: When was the Mark VI? '79? '78?

Q: How many years were you planning it?

A: I'd say at least three or four. So, that was really one of the highlights in my Lincoln-Mercury experience. Of course, we did some Cougars which were exciting.

Q: You worked on the original Cougar?

A: Didn't work on the original one, Dave. That was done by Buzz Grissinger, and he had been the Lincoln-Mercury designer for a long time and had established the Lincoln-Mercury -- the Mercury's, anyway -- "look" back through the 'Fifties and 'Sixties and early part of the 'Seventies. So, I continued his job, and he really then ended up replacing me in truck before he retired. And when I went to Lincoln-Mercury, we switched jobs.

Q: Gene Bordinat wanted you to come back to the Ford design office in the early 'Seventies, and he said, "We need you back there." For about three years you were the chief Ford design executive?

A: Right.

Q: What resulted from that?

A: That's when we did -- the '73 Ford was the first project I did, and, of course, from then on we did all the '73's, the '75's, '76's, '77's. Those were tough years. They really were, because we were then doing Fairmonts, Torinos. When Bill Innes was head of North American operations, and G.M. came out with their Monte Carlo, we did not have a Monte Carlo. So, Bill Innes came over, and he talked to Mr. Bordinat and myself, and he said, "We have got to have a Monte Carlo car. We're losing too much market, so what can you do to develop a Monte Carlo?" And, he said, "You look at the spectrum that we have and pick a car that you think we should build it from, but I really think it should either be a Montego or Torino. Now," he said, "after you think about that, let me tell you that you've only got a few weeks to do something, because we got to go fast."

So, we elected to redesign a Torino car, and we put together an all-new front end, and we put together new quarters and new rears and some roof treatment. He came over, looked at the car and thought it was great. He called Matt McLaughlin, who was head of sales, and he said, "Hey, Matt, I want to show you this vehicle. It's fantastic. This is exactly our fighter for Monte Carlo." And, Matt came over and says, "I don't like it," and Bill couldn't believe it. So, anyway, parts of that car were incorporated into the next year's change for Torino. Innes then came back about a couple months later, and he said, "We still got to do a Monte Carlo car. We don't have time to do an all-new one. Now, I know, you did the one before, but we got to do it again. Now, I've got sales. They understand my problem." So, this time we took a Montego instead of a Torino and did it all over again. We had a little more of an extensive change, but we then called it the Torino Elite, I believe, and we did that car almost overnight. It was done in just a couple weeks. But, those were some really pressure days, I would say.

Q: How did the Elite fare?

A: It really did very well.

Q: Did it help counter the Monte Carlo success?

A: I don't know if it countered the Monte Carlo. I think the market out there was so big for that kind of car. We did real well with the car. I don't think we hurt them, but we got a big chunk of it.

Q: At this point you seem to have a switch in your career. Bordinat, [who] is still orchestrating your movements, has asked you to go into the advanced vehicle design office. How did that come about, and what did it entail?

A: I went over to advanced, and I was working then for Don DeLaRossa for a short time, and we worked on all cars. Bordinat felt that somebody should be designing the vehicles and letting the production for the Ford studio and the Lincoln-Mercury studio be more [involved] in all the production problems at hand. When they were doing most of the grilles, ornamentation, and taillights, and we were really responsible for designing the all-new shapes and configurations of the cars. So, we took on some of the new Thunderbirds. We did the new Thunderbirds over there.

Q: What years were those?

A: '72, '73's, '74's, maybe. But, we did a lot of Thunderbird projects. We did some Lincoln projects. We designed Mustang again. We really developed the bodies for most of all the car lines, and that was, I think, a highlight in my day, too, because that was exciting because we really had a big hand in the product planning. We, naturally, didn't always agree, and so we'd do pretty much what we wanted, and they'd come over and say, "I think that looks better than what we had in mind." And, so, we were really working with Iacocca doing, I think, the company's planning and design in one action.

Q: This was a novel concept at Ford, was it not, at that time? Had there been an advanced design studio before?

A: Yeah, there had been, but they weren't very successful. We, at one time, created a separate studio that was headed by Dave Ash as what Bordinat then called "Let's take a third look," and he used that as his third look. But, it really wasn't what this studio was. This studio was designed to really do the body shapes and the main bodies for all the cars in the company. So, that's what we did, and those were good days.

Q: What stage in the design process did this come? Were you you visionaries reaching out for advanced concepts?

A: I'd call it more preproduction -- advanced but not beyond reality. So, they were reasonable, they were something we could afford, and they were on the books to be done the next time around.

Q: You enjoyed this because it gave you a certain freedom from the day-to-day operations of putting together a car line?

A: In all fairness, I was getting tired doing wheel covers and taillights, plus the fact that it was more creative, more enjoyable, we talked to the top planners who were planning the ten-year cycle plans daily, and we influenced their thinking quite a bit. And, unfortunately, we don't have that today -- we're not doing that.

Q: Apparently, this was reasonably successful because you became director of the advanced international vehicles design office.

A: Right.

Q: How did that operate as opposed to what you'd done a couple of years previous?

A: Well, it was about the same, Dave, except I got the international assignment, which was dealing with, not only Canada, but how these cars would relate to the Ford products in the world, and we did some proposals for Australia. We did an Australian car, and during this period, we sent some designs to Ford of Europe for their consideration, and I don't think

we really influenced their designs much, but, anyway, we were involved. We might of turned them a little bit.

Q: That brings up an interesting point. At this [time], Ford of Europe is beginning to come into its own in terms of having influenced not only American styling, but you've had some pretty good successes in the foreign field as well. Did you work as a team, or was that pretty much a separate organization before you added this to your portfolio?

A: It was a separate organization, but it fell under Mr. Bordinat's authorization, and, even though the cars in Europe and other countries should be somewhat designed for their market, we still had some influences to trends -- that we were doing things manufacturing-wise, and we were doing things design-wise that they should be picking up. And, so, we influenced them that way. We, I think, taught them curved glass, and hardtop door construction, and some of this that you learn from -- well, they taught us a few things, too. But having an exchange of ideas is good for the company.

Q: [Were] things like the Capri brought over from Ford of Europe?

A: Now, the Capri is one that we did here. The original Capri was designed here in Dearborn, sent to Ford of Europe, and then, naturally, they reconstructed the car and then designed it for their engineering and manufacturing. But the theme came from here. There might have been a couple more, but that's one -- a good example. I'm glad you mentioned that.

Q: You're in the mid-'Seventies, and you've got a crisis looming on the horizon. The downsizing principle has begun to...?

A: Before that, the bumpers came.

Q: Fine. Let's talk about the federal bumper regulations.

A: The federal bumper rulings came in, and we really, in all fairness, did not know how to handle it. There were a lot of ideas on what the company could do and what we could do as designers to make these regulations not only work, but also look good. So, we went through piles and piles of ideas -- a lot of drawings. We took Mr. Iacocca through sections and rule and what we had to do to meet the rules, and we showed him drawings of what were required, and every time he would say, "That looks good. I think that's no problem at all. We should be able to live with that. Now, when can I come back and see it on the car?" And, we'd have him come back in a couple weeks, and he would say, "That's not what you showed me. That looks like hell. That's terrible," so then we decided we couldn't show drawings to upper management. That we had to then start actually putting bumpers on the cars, and from where we were back in those early days, these bumpers looked like truck bumpers, they looked heavy, they didn't fit, they weren't built into the designs, and so we had some very terrible, tough, long nights, believe me, on fixing bumpers, and some of them were not very good, I'll have to admit. And, it's nobody's real fault. I think, that we, as the company, didn't know how to meet the regulations any other way.

So, that was a tough one. And, then from there we got into another tough one on the government regulations, and that's called seatbelts. I would guess that the company has spent millions of dollars trying to do a decent seatbelt system, and I don't think we have it yet.

Q: Ford was a pioneer in the safety package?

A: Back in '56, we pioneered a safety package. It had deep-dish steering wheels and seatbelts and safety controls and a lot of features, but the public was not willing to sacrifice -- didn't want belts on the seats to sit on, and we didn't know then how to stow them out of the way, so, we suffered through that. I worked with Bill Burnett on that project.

Q: And he was?

A: Bill Burnett, at that time, was chief vehicle engineer -- an old Cadillac engineer -- came from Cadillac to Ford, and I worked with him on the safety projects. Then, you asked me [about] the downsizing!

Q: Yes, the whole downsizing principle. I'm sure you had a large role in that.

A: Downsizing was really almost a disaster to the designers because for years the way we made our cars look better was to make them longer and lower, and for someone to make 'em arbitrarily taller and shorter was almost the -- we didn't know how to handle that. So, we -- I would have to admit our first trials were pretty bad. They looked like cars that had been clipped, chopped, and we had to learn how to handle this. Now it's funny. We're all in favor of downsizing. We think it's almost easier now to do smaller cars than it is to make 'em bigger. They get heavy and clumsy now, and we've also learned how to cope with downsizing. You then have to invent more glass, lower belt lines, you get lower cowl and hood lines to offset the shorter lengths, and once you start learning how to play the proportions, it's no problem, but we struggled for a couple of years on that to make it successful.

Q: Interesting that; you chopped rather than sculpt in those days.

A: Well, we thought; we were sculpting, but, looking back, I guess, we chopped. As you're doing this, you've got to remember that you tend to want to keep a ground or a base to work from, and you don't want to take the car and totally destroy it, so you then take it in bits and pieces. You say, "Okay, I'll take six inches, it won't hurt it that much." You convince yourself, and then you say, "I'll take six off the front, six off the back. It doesn't look that bad." And, you look back, they're pretty bad.

Q: Hal Sperlich, at this point, was an outspoken advocate of down- sizing at Ford, was he not?

A: Yes.

Q: And, he experienced some rather odd vicissitudes?

A: I think Hal Sperlich had the foresight, probably more so than any other single person, that downsizing was a way that we had to go and was the way the times were going to go and that we could really design smaller cars that had the same amount of volume that would be less weight, cheaper to produce, and more beneficial to us, and he had one, tough struggle to convince, not only his management, but upper manage- ment, in this theory. And I think the higher in the company you get, the more difficult it is for you to recognize somebody else's ideas, maybe, and I think Hal is really one of the pioneers that believed this, and, unfortunately, he lost his job over it. He was very strong in recom- mending that we look into smaller cars right from the very beginning; and in all fairness to the company, we probably launched the very first, downsizing action in the whole domestic line called Fairmont/Zephyr, and we forget that we really were the first in that market, but in fairness, it was the first family sedan in a smaller size, and that was a Hal Sperlich project, and I worked with Hal on that, and we had many battles but many triumphs through that program.

Q: That worked very well. That [fox] platform served you for many years?

A: We're still using it.

Q: Why would that have -- what happened to [make] Sperlich lose favor?

A: He wanted to go further. His point was that that was just the very beginning, that you not only had to do that action, but you had to do it in the smaller -- below that series -- and you also had to bring the big cars down with it. And, I think, Mr. Ford and a few others thought that you bring out one or two of these, and that should be it --you shouldn't have to do them all, and you can look back now and say they were both right.

Q: Iacocca was sort of caught in the middle in that argument? He was a Sperlich advocate, and yet he had to please Henry Ford II in terms of design decisions?

A: From my viewpoint, I didn't see Mr. Iacocca in the middle of that one. He pretty much sided with Mr. Ford. I believe they both agreed that they shouldn't move too quickly. It was mostly Bill Bourke and Sperlich who wanted to downsize, and Lee, especially, did not want to downsize Lincolns. He was very adamant about keeping a big, luxury car, and if you wanted to do Falcons and Fairmonts, okay, but don't touch the big ones. So, I really don't believe that there was any major problem between them on that one. But, I was present at a meeting where the big turnaround in the decision was made where we elected to not downsize when Mr. Ford left the meeting. The next day Sperlich left the company.

Q: At this point you've been assigned the intermediate, compact exterior design portfolio. Did that presage a movement to smaller cars in the company's design decisions?

A: Yes, it did. That's when we were at full gear into the small car syndrome, and we were just doing everything we could, as fast as we could, and we were downsizing and lightening. And, maybe, downsizing isn't the right word. I think, lightening -- taking the weight out is really the correct term we should use, because sometimes we didn't really shorten or change the dimensions as much as we took the weight out. Here again, as a designer, they were tough times because those chunks come hard, and we were forced to do a lot of things and doing a lot of investigation and trial and error that many of them didn't work. Some did, some didn't. Some didn't look good, but, anyway, those were tough days. Yeah, we went through a busy, busy time in downsizing our small cars.

Q: And, trying to hold on until you could get something out of the market?

A: Hold on until front-wheel drive. See, we didn't have a front-wheel drive package at the time or front-wheel drive engines.

Q: You'd had an transaxle package back in the 'Sixties and had considered it briefly?

A: Yeah. Experiment for Thunderbird.

Q: But, somehow they got lost by the wayside.

A: They were expensive. Remember, our plants weren't designed to do front-wheel drive engines and transmissions, and there wasn't any real need to do it, so, we didn't.

Q: You've taken full hold of the light car section of the design studio by this time. Is there a change in direction in terms of the establishment of the North American design project here in the design center?

A: As you remember, North American operations was losing money. We weren't making money for several years. We weren't breaking even -- losing money -- and Ford of Europe was making money and seemed to be doing everything correctly, not only in the market but their products, and they seemed to have hit on the right way of doing it. And, along with Mr. Iacocca leaving the company, the new team in management decided that what would be best for all of us product-wise would be to go European--copy the things that were successful in Europe. So, they

were putting people in the key jobs that had European and overseas experience so that they could work together better as a team, they knew what needed to be done, and how it was done. And, that's when the design activity was really divided so that -- well, that was another thing that "Red" Poling insisted upon was that the design group or people doing his cars reported directly to him and not to the president. When he was in Europe, that's the way it was. He felt that was a better teamwork approach. He didn't want to come over and run North American operations and have the design activity reporting to another group, because he couldn't see that ever becoming successful. And, maybe, it was a dilemma, but I thought it was a plus. I still think you need to have the opportunity to do your own thinking a little bit.

The design office was divided so that North American operations had its own design group, and it's been that way since -- what, three years now?

Q: You mentioned Bill Bourke. Was he brought along to head up, about this time, the North American automotive operations?

A: Bill Bourke came from Ford of Europe in 1977, because the first cars he worked on were the '79 Ford/Mercurys, and I worked on those for him, and he had some very strong opinions about what those cars should be. He was a little bit torn between whether they should be European or American, and, I think, we probably hit it about right. They weren't quite as American as the Americans were before that, but they were not as European as, I think, he would have liked them in the beginning. Unfortunately, the '79 or '80 -- we also did the Lincolns and the Mark then, too. We downsized. See, these were all downsized cars. This was some of the very beginning downsized years, and his goal was you downsize the Lincoln, you don't lose any of its cues, you don't let the buyer realize that you've shortened and changed it, and the rear seat had to be bigger than it was the year before. Now, that's a tough assignment.

He wanted to sell a car that weighed less, got better fuel economy, but was larger than the car he had before that -- in interior dimension, which was a tough assignment. And that's a little bit why the roof on today's Lincoln is so big. It's longer, and it's got a short deck and a short hood. That's how it happened.

Q: After a short period of working with mid-sized cars, you are firmly back into the small car design area, and that appears to have been your area up to the present day. Let's take you from about 1978 and bring you forward slowly as to exactly what projects you worked on during that period.

A: Well, I worked on the '79 and '80 Ford/Mercurys and Lincolns and Marks. We did those all for Bill Bourke, and then shortly after that I was assigned doing all the small cars and mid-sized cars and trucks, and we were downsizing them all, including trucks. The biggest truck project at the time was the Ranger program, and I worked on the downsizing of the big F-series, but the biggest project I worked on was the Ranger. And, by the way, the company was very apprehensive about that because the plans called for, if you read the projected buying scope, that nobody would ever buy big trucks again in the next five years. We would just stop building those, and, so, the whole plan on the Ranger was to make that truck look as beefy and strong and as brother-like to the big one as could make it. So, that we didn't want this man to come from the

big one down and be unhappy. And, we also had to get the foreign guy who was buying the smaller ones to want something a little bit bigger, so it was a tough assignment. That was a very interesting assignment.

And, then on the car side, we were heavily into Escort. That was probably our biggest project.

Q: It had been a success in Europe, had it not?

A: Well, we were working together on it. Ford of Europe was working on Escort -- so were we. Don Petersen couldn't understand why we needed two cars that, really, we could do one and answer both markets. We tried desperately to make it one car for awhile, and, I guess, it was proven that it really didn't pay out, and, in the end, I think, we have only two common parts between us and Europe ?

Q: It sounds like Petersen was following the McNamara principle? Interrelated components -- models?

A: Yes, somewhat the same philosophy, and, I guess, there's some good in all that. But, the thing that brought that on, Dave, was that he [Petersen] looked across at Honda, and he said, "You know, Honda doesn't do two cars, one for Europe and one for America. They sell the same car, so why can't we?" And, we're trying to do more of that now. We're trying to get down to, basically, one common car if we can between countries. So, we were doing Escorts, and then, after the Escort, the need to do a car a little bit bigger than Escort -- front-wheel drive -- we designed the Tempo/Topaz program.

Q: I'd like to go back to the Escort. Apparently, it was a break [from] previous Ford products and presaged a period of what seemed to the buying public a rather experimental period for Ford. Can you give us some of the background in terms of design decisions that were made in that era?

A: We were trying to get the public to look at Ford as a different new company that was doing more aerodynamic cars, cars that were more European-influenced in appearance, better fuel economy, better engi- neered, better fit and finish, and we really did. We designed our cars from the very beginning stage to do a better job manufacturing. Less requirements for precision fits and so forth. But, we took on a new look in our cars. We thought the box -- the stiff look of the late 'Seventies and 'Eighties was over. We wanted to get the public to realize that a new era had taken over in the company, and, I think, we've done that with our projects/ programs. I think, the very first car -- maybe, there was a little bit in the Escort, but not a lot. But, the Thunderbird was our very first car that we concentrated heavily on that in that manner. And, of course, the Cougar.

Q: The Thunderbird is one of your biggest recent success stories, can you give us a bit on how that developed in the late 'Seventies? Am I correct in that Gene Bordinat had a hand in that just before he left?

A: Yes.

Q: Could you wrap that up in a package like you did with the Mustang?

A: The Thunderbird was interesting because we didn't really want to go through the same process that we'd used when we did the '80. The 1980 Thunderbird was designed on a completely different package. It was smaller, and along came marketing at the last minute and decided that it had to be more of a formal car. They wanted to get the premium buyer in the Ford Division store, and so we had to formalize the car almost at the last minute. We had to put the grille in straight, we had to put a formal roof on it, we had to increase the deck height and increase the luggage compartment, and it became boxy almost overnight, and we definitely didn't want to go through that.

Q: A slide into disaster?

A: It almost did, really. And, it happens to you so gradual, so slow you don't really see it. Maybe that's all of our faults for not catching it. But when we started this Thunderbird, we elected to really set those parameters at the beginning and inform everybody the type of car we wanted to do and start designing the aerodynamic look and change from box to flow lines and shapes, and we wanted to make this car look dramatically different, attract a different buyer and get back into an exciting Thunderbird again. So, that's how that happened, and, I think, it was a good move that we made.

In fact, the Tempo/Topaz, which really didn't come out until a year later, was preceding the Thunderbird in design and influenced the Thunderbird a lot. But, we were really working on the Tempo/Topaz before the Bird, and we're the ones that put the limousine type doors on it, and then they picked it up for the Thunderbird. We continued the same aerodynamic look on the Topaz even though our market research didn't really tell us that it was the right thing to do in that market, because that market segment is very status conscious. Their goal in life, basically, is to drive an Olds 88 or an Olds Cutlass, and so they're looking for a formal-looking car, but the padded C-pillar and plush, big seats. So, this market research really didn't make us feel too comfortable, but we thought we were right, and we thought we should introduce this look that we did, and we're quite happy we did now. That was the beginning of this new series.

And, then, of course, the Mark VII picked it up, and our new Ford/Mercury replacement cars are picking it up. They'll be called '86's.

Q: Will they completely supplant the Topaz/Tempo series?

A: No, they're planned to replace the big Ford/Mercury, but now we're going to keep the big Ford/Mercury for another year or two.

Q: You've decided to do that because it's doing so well?

A: Yes.

Q: And, that is the Fairmont platform?

A: That's right.

Q: Let's move back to administration at this point. You've had a change of concept in terms of splitting up the North American design and the design staff, I believe. And, Gene Bordinat is still V.P. for design, but there are some problems developing. Would you like to address those in terms of staff and administration? You have a new crop of young men coming up, and...?

A: In all fairness, the management of the company wanted to get our products to take on a different environment, a different look, not only design, but an engineering and manufacturing standpoint, and they felt that the old team weren't really capable to do it quickly enough -- not that they weren't good guys, but, I think, they just felt that starting with a team that had mostly been to Europe, understood it, had worked together there, could do it quicker and achieve it, and so the whole company took, not only in our area, but in marketing, sales and in manufacturing, and, I believe that that's the basic reason for doing it.

When the design staff part in our area was formulated, it was done to take a look at far-out trends, work on projects that we couldn't do on a day-to-day basis, and to get a -- it's an education process in design, and there's a lot of need to do some education along the way with our top management. And, you may think that you can sell them a new thought in one minute, but you can't. You got to let them look at it and look at it day after day and get familiar with, and, I think, design staff's biggest, single role is to do that, and that is they can weed out and help set the trends. I tried to do that a long time ago with Iacocca. To get him to be more familiar or receptive, we decided to put some advanced cars in an area that he would have to walk by, and Bordinat thought that was a great idea. So, we put these three cars there, and he walked by and said, "I don't like any of those cars, get them out." So, they lasted five minutes!

Q: In essence, you're saying that as the 'Seventies wound down, there's a feeling that the old design group is getting a bit stodgy --not as imaginative as they should be?

A: Well, that's probably true, although that's a little bit harsh to say that, because we really didn't -- we don't have any new designers. We still have the same basic people doing the new stuff that did the [models] prior to the 'Eighties [and] including the 'Eighties. I think it was the philosophy that changed in the very top level of the company. I think Mr. Ford's philosophy changed. I think he agreed that we should change our products to be more international. I think Petersen definitely wanted to change them. And, in all fairness, I think, Iacocca felt strongly that cars with a more formal look about them was easier to track -- to get the top dollar. And he was probably instrumental in making them boxier, and....

Q: Was Bordinat an Iacocca advocate at this point?

A: Definitely. But I'll tell you, Bordinat is as flexible as any of us, and he's worked for a lot of regimes. I don't know how many presidents he worked for, but he could design as flexible as anybody. And, I think, that they, really, in fairness to Gene, didn't give him a chance. He just didn't work in Europe, he did not fit into the way of doing business.

Q: Which was developing then?

A: Right. And, I think, Bordinat would have been a little bit argumentative, and they didn't want somebody to be that. They wanted someone who would say, "I agree. Let's go. Let's do it," and not sit back and say, "Well, I'm not so sure," So, I think, that that was the biggest criteria.

Q: So, Bordinat saw the handwriting on the wall and decided to leave at that point?

A: Right. Well, he did a lot of cars. You know, [for] as many years as he was in charge -- what was it, eighteen or nineteen years, I think, he was growing tired. But, I think, he was a very commercial designer. There's probably not a more commercial designer living who seemed to be able to know exactly what the public wanted at that time.

Q: At that point, we have the Caldwell/Poling European group?

A: And Petersen.

Q: And Petersen, who have come into the ascendancy in terms of product planning and product designs. Presumably, you were very much in sympathy with this approach?

A: I thought it was time for a new look. I wasn't looked upon as being European, because I'd spent too many years with Iacocca and worked on too many cars with him. In fact, I have never worked overseas. So, I was not looked upon as being the European designer that they were looking for at the moment, but I didn't disagree at all that we needed to get a new look, whatever it may be. That we needed to get some fresh thinking, and so I joined in and said, "Let's go, and we try some things." And, by the way, Bordinat did too.

Q: He was in on the very early discussions and decisions, was he not?

A: Oh, yeah, sure. I think the biggest problem between Bordinat, Poling and Petersen was with the degree you do it -- whether you go here or somewhere between, and, I think, if we look back in ten years, we may find that Bordinat was right. You never know!

Q: In this period, you had much to do with the small car and truck design of the mid-'Eighties. In spite of the misgivings over the Ranger, it's been an incredible success, and you've slightly downsized the F- series, although you've kept the good, solid features of them.

A: We sure have. We're currently redoing it now almost entirely for '87, and we're making it dramatically newer and fresher in appearance and not losing the twin I-beam and all the strong points of it. We're looking at an all-new van called Aerostar.

Q: How is that coming?

A: It's coming along slower than I would like, but it's coming along well. As far as I'm concerned, the design work's all done. It'll be on the road in about year -- less than year -- and, it's a big departure from the vans that we have on the road today.

We're doing some exciting car things. We've got all-new Thunderbirds and Cougars for the late 'Eighties and 'Nineties that are just fantastic.

Q: I'm fascinated by this dichotomy between the NAD and the staff approach. Don Kopka had come about ten years later than you had.

A: Don came from Chrysler. He was in charge of the Plymouth studio at Chrysler and joined Ford in what I called the third look studio and corporate projects and was hired in as supervisor. And, Don and I worked closely. We went through the Ford studio and through interiors almost side by side, so I know his work, and he knows mine very well, and Don's an excellent choice for that job, by the way. He may be a little more flexible than I am for dealing with all this that gets thrown at you.

Q: But, at that point you found yourselves on divergent paths in a sense. That you were heading up -- you were working with the day-to-day decisions in NAD and Don, taking a staff position and being asked to take Bordinat's job when he left, became, in effect, the advanced design chief.

A: Right.

Q: How does that operate?

A: On the chart they do all projects prior to 54 months, so that's out in the area where they determine the philosophy, what the car/the project should be, what market segment it's after. He helps establish size, package, some shapes and forms. He does some, they look at them for concept, he has a studio in Italy, and they do some of the same things with some Italian influence.

Q: Is that Ghia?

A: The Ghia operation. They're all brought in and reviewed. At 54 months we take them over, and then we, hopefully, take what they have and use it. Sometimes we can't. Sometimes we can. Aerostar was one where his studio started it, and the theme generally has stayed. A lot changed on it, but it was pretty much the same thing.

Q: Aerostar would seem to be a perfect example of what the advanced planning studio, or the advanced design studio, where you'd come up with a completely different concept, and although Chrysler and Volkswagen has beaten you to the market...?

A: Chrysler's closer than what we are to the market with us. And the reason, by the way, they did it so fast at Chrysler is because we did it a couple times for Iacocca and Sperlich, and so they knew pretty much what the package should be, the type of vehicle it should be, they had our market research results that all said that the first guy out's going to sell a ton of them. The second guy will sell fewer, and the third guy will sell less. So they were bound and determined to be first. And, Lee even mentioned it, by the way, in an article. He said, "It was very easy to go to Chrysler and do it because I'd done it a couple of times at Ford." So, we are aiming really at the same market with that vehicle.

But, that's what the staff function really is. Now we really don't have a good advanced in NAAO design. We tend to almost go directly into production problems. But fifty-four months gives us a little bit of time, and if the staff cars and the early projects are done well and the company is all behind it, they're really not that big a problem.

Q: Could you tell us what the direction of Ford styling in the next, say, fifteen/ twenty years?

A: That's a tough one, Dave. I wish I knew what it was going to be.

Q: Do you see the outlines of it?

A: I wish I knew what it was going to be for 1990, but we do have some 1990 designs going that are going to be more aerodynamic, not as severe in change from where we were to where we're going from today to there,

but it's simpler forms, beautiful, smooth forms that are flowing and faster windshields, shorter hoods, with the emphasis moved forward on the car, better aerodynamics, better stability, better package. The roofs are getting longer and stretched this way and not this way. And, the bodies are being filled out more. We're going about the business now in a new manner. We're using the computers to help us get there quicker by taking our sketches and putting all that information right in the computer, and then we can then mill a clay model. We can also send the information to body engineering for them to check it. We can also get studies on weight, and we can get some aero estimates from our computers now, rather than needing the wind tunnel for everything. So, we're moving rapidly into a new way of doing business, and we're also trying to - instead of doing a lot of various models and letting management come over and look and pick and choose and piece together, we're now trying to narrow this down earlier into the program so that we can get there with one or two good ones and end up with the decision almost as a flip of the coin so you don't have to compromise.

Q: I wonder if we could elaborate on that? I think that future students of design would be most interested in how the technical aspects of design evolve from the earlier [more] primitive days to the modern days of the computer design. Could you bring us forward step by step as you saw it in the industry?

A: The general ideas that all designers create on paper still have to be done by the designer. He has to do his own thinking and come up with the initial design. But, going from that into a larger scale --in going from a sheet of paper into the three-dimensional model, will now be done a lot easier by computer. Because you can feed the points from your sketch or drawing onto the computer, and it will then take that and project it into a silhouette of a car that can be rotated and used as control points. So, rather than starting your design in a big chunk of clay, and then you have to then carve it out, you can now feed this to the computer, and the computer will then, in a sense, carve it out for you, and you can watch it and disagree with it and change it as it's doing it. It will make corrections for you. If it sees you've got a bad line, it will fix it. Now, you have to be careful because sometimes we put in bad lines purposely, but we're really into this, and it's looking like it's going to save us hours of time. And then the other single biggest factor is

once you've got the model created that you like, getting that information from the model back on paper is all done by computer now, and the draftsmen don't even draw. It will scan the model, take its own points, put it on computer tape, and it will automatically draw a complete car in about a day's time where it used to take weeks and weeks.

Q: What will happen to the clay modelers?

A: The clay modelers are still needed because you still have to pre-prepare the clay, but what this machine does for you is it puts in its control lines, so then you don't have to then get the dimensions from a drawing, and then you point them into the model. It does this for you automatically, so you then really become a clay modeler and not just a scale and dimension taker. So, the modelers are needed but not as many, and we can do a - clay car in a matter of four or five days.

Q: You mentioned the wind tunnel. It's my recollection that Ford has never had a formal wind tunnel. You've had to contract it out over the years. Has that been a disadvantage?

A: It's true. It is a disadvantage. We test our cars in two dimensions. We test in 3/8th size -- scale size -- and we do those in two places: [at the] University of Maryland, or in Texas, and then we also test full size at Lockheed in Georgia. And, in all fairness, the full-size test is really the one that counts, but the scale-model tests are very, very close. They give you an awfully good indication of where you're at. So, we can do a lot of scale-model testing and know within just a tenth or two of where we're at. It is a disadvantage, because to take a model and ship it, say, to Georgia, and the only way to get it there is by truck, and to leave it there for about a week and back again, you've lost a lot of time. And, if we had one next door like G.M., we could do that on a weekend or overnight and lose no time at all.

Q: I remember some years ago there was a very concerted beginning for a wind tunnel, but it seemed that the budget office got to it.

A: Well, our wind tunnel plans at the moment are now active again. We're going to have a wind tunnel, I guess, in about three years or so, but the original plans were discontinued for a couple of reasons --mostly money. But, I think, now we're re-examining those plans. We're going to end up with a better tunnel. We're going to move it from its original site to another location, and, I think, it's going to be better. So, maybe, the delay was worth it, I don't know.

Q: In terms of your career in design, what effect does design have on the public's buying habits? Are they pretty much influenced by what they see or by what they've been told by the advertising people?

A: As a designer, I can't tell you anything but that they definitely have the biggest influence. It's really a total combination of a lot of factors. It has to be a good car. You can have the best design in the world, but if the car itself doesn't perform, doesn't drive, doesn't sit well, you don't sell too many. You can also take the best car in all those aspects, [and] if it's ugly, it doesn't do well either. So, it takes a lot of concentrated efforts to put together a total vehicle that's pleasing, that's priced right. But, we're of the opinion, and I believe very firmly, that you sell the car first by

appearance. You got to get them into the car, and you got to get them to sit down before they can drive it. And, I think, cars are sold on the highway. When you see one go by you say, "I like that car. I'm going to go look at them. I'm going to buy one." You don't know at that stage whether it's got a good engine, a bad engine, rides good, handles good or anything about it. I'm a firm believer that appearance is the number one, biggest, single fac-tor, and during the days when we thought we didn't have to change our vehicles from year to year, [it seemed] they could last forever. Some of the Japanese didn't change. Some of the Europeans didn't change. We found that we couldn't live that way. And, by the way, the Japanese are changing their cars more rapidly than we used to. Some of them are changing their models in six months.

Q: The aerodynamic look, which seems very fresh and appealing today, is not really a new concept in automobiles.

A: No, Chrysler did it way back in the 30's. 1933 they introduced the aerodynamic airflow.

Q: They certainly came out with the Airflow in the early 'Thirties, right, and it got nowhere. And yet I can remember that car as being pro-bably the most exciting thing I'd seen on the streets in those days.

A: In any new concept in design, you have to be very careful that you don't do too much too quick. Good or bad. You could have the ultimate final solution, but you can't give it to the American public in one, big, giant step. Whether it goes [to] boxes or goes smooth aerodynamically or somewhere between that, you've got to do it gracefully, and, I think, we did a better job of it this time than the Chrysler people did, and, I think, there's a lot of good ways.

By the way, G.M. is advertising aerodynamic cars now, and they don't look it. But, their aero numbers aren't that bad. They've got those squared shapes pretty good aerodynamically. So, you don't have to make them as round as we did to make them aero, but, I think, there's a lot of -- what do I want to say? They almost have to look aero to be convinced they are aero. If they aren't in looks, you don't think you've got it.

Q: In terms of design decisions, let me bring you back to a few years ago when you had the Thunderbird and the Cougar, and someone said to you, "We'd better hedge a bit on this. We'll let the Thunderbird go full blast, but we've got to do something with the Cougar in order to hedge our bets."

A: Well, it wasn't so much hedging the bet. I don't think that that was the factor used. I think it was the fact that we wanted to get a greater difference between Lincoln-Mercury Division and Ford Division. We also thought that the Lincoln-Mercury buyer was a more formal buyer. They're the ones that are probably walking from G.M. -- the Buick and the Olds and the Cadillac -- over to Lincoln-Mercury, and we needed a car that was something more familiar to them, and, I think, that was more the reasoning than just to hedge a bet.

Q: So, it was a divisional thing?

A: Yeah, more divisional. Surprising, at the moment Cougar is out- selling Thunderbird.

Q: In terms of the aerodynamic look, organizationally, it sprang out of the European matrix. You probably sent some designers over there. I believe Jack Telnack was one who went over there to absorb what was happening in the design studios there. Did that work out fairly well?

A: Yes. Well, the Europeans have been doing aerodynamic shapes and forms for a long time because their gasoline prices are so high that they had to do that in order to help get better fuel economy, so they were somewhat forced into it through the years and knew quite a bit about it -- what to do, what not to do, what's acceptable, what isn't acceptable. And, yeah, sending a couple of designers -- we had sent just about all of our designers to Europe for some period, and it was very beneficial. We could almost design a car now from scratch aerodynamically without even sending it to the tunnel, and we can tell you about what it's going to be. So, that is a big learning curve. We probably ought to send some to Japan now, I think.

Q: The wave of the future at Ford and elsewhere is pretty much lower, more rounded...?

A: The biggest thing in the future now for cars is going to be package changing. We're going to end up with lower engines, lower frontal areas, lower cowls and instrument panels, faster and bigger windshields, a lot more glass, doors that wrap into the roof further for better entrance. We're going to be looking at more hatchbacks, bigger opening panels rather than small panels, whether they are decks or whatever they are. We're going to end up with bigger tires, treadier cars with the tread right out there, independent suspensions, and cars that have automatic leveling devices, and devices that allow you to make the car exciting in appearance. You almost need to do that in order to control the car, to get the car down, and so those are the big things that make the designers' role exciting and gives us the opportunity to do better-looking cars.

Q: I wonder if I may throw a curve at you and ask you to comment on various people that you've encountered over the years? You came in in '54. You probably ran into Frank Hershey at that point.

A: I sure did.

Q: Can you tell us about Frank Hershey?

A: I really didn't know Frank Hershey as well as you would think because I was a green designer right out of school, and when he left I was still a green designer. Frank, I thought, knew a lot about automobiles. He seemed to -- as my standing along watching and listening, he seemed to have a perception about cars at that time that some of the others didn't have, then I found out that he was an antique car collector. He was a Christian Scientist, I remember that. He lost a daughter because of it. He was a very argumentative manager and, I don't believe, too well liked.

Q: He left very shortly after this[point]?

A: I believe so.

Q: I'd like you to spend some time on Eugene Bordinat who, apparently, was a seminal figure in the 'Fifties and 'Sixties.

A: I'll talk about Gene. To begin with, Mr. Bordinat hired me. I did not deal that close with him for a long period of time. At the end of his career, I probably spent more time with Bordinat than any other single individual, and we planned and designed a lot of cars together in his office or mine on the table over a cup of coffee. He is, I think, one of the best commercial designers living. He stood for what he thought and argued for it. I think that because of Gene and his efforts, we would not have had the Marks, and we would not have the Versailles, we would not have had two-door Lincolns. There are a lot of car lines, that without his input in the planning and design stage, the company would not have had, and, I think he is probably never given that credit.

Q: In effect, he modernized the design studio at Ford -- brought it forward out of the dark ages.

A: Absolutely, right. He organized it to do the job, and I don't think he over-organized it. He organized it pretty well. He brought in an engineering staff to work with the designers so that we weren't out playing in the clay without knowing where we were, what we were doing. I used him as a sounding board through my career. You could talk to Gene and get a straight answer, and I felt very comfortable and still feel very highly about him.

Q He seems to have brought in most of the creative people that are still going strong today, like yourself.

A: Yes.

Q: So, you could probably credit him with much of the direction that the design center has taken in recent years?

A: I think Gene had a very keen sense for talent. I used to remember we used to witness walking around in the studios that I had my opinion about people who was doing the job and who was either not that qualified, and he would talk to, sometimes, the non-qualified, and I'd say later, "I didn't realize you liked that guy that well." He'd say, "Oh, he's a nice guy to talk to, but he isn't worth a damn on the job." But, I really think that. without Gene, the design center would not be near what it is. He probably didn't get the credit he deserves.

Q: There were some fascinating characters, [such as] Joe Oros.

A: I worked for Joe for years. Joe was probably the hardest working designer that Ford Motor Company ever had. He was, I would say, the Lawrence Welk of the design business, and he didn't design the frills. He was just a good, commercial designer. He probably designed more cars for Ford than any other single person.

Q: Tough to work for?

A: Easy, if you can work with him. I had no trouble with Joe, but....

Q: Why did Oros leave? He seemed to be a fairly solid person.

A: They sent him to Europe, which was a mistake. He is absolutely the worst person' they could have sent to Europe, because he doesn't think European, and he really was a fish out of water in Europe. And they realized that and sent him back, and they didn't have any place for him, and that was too bad. But, here again, the people who he worked with, which was the Ernie Breeches and the George Walkers, in that era were gone. So, it was tough.

Q: How about Elwood Engel? Did you work with him?

A: I knew Elwood very well -- a long time. Elwood is probably one of the most talented designers, but a real character -- a real playboy. He played as hard as he worked, and he worked very hard. But, he would think nothing of stopping and getting everybody together and pitch coins to the wall or -- he did this purposely to relax the atmosphere. And then he'd say, "Okay, guys, get back to work." But, to a lot [of people], that was kind of a playboy image, but he really was thinking all the time.

Q: What were his contributions?

A: He worked on a lot of Mercurys, and he worked on the very first -- in fact, designed the very first Lincoln or Continental that had the grille that was like this -- in the blade sides. That's Elwood. Good. He's in very bad health, by the way.* (see Editor's Note)

Q: John Najjar -- a real old timer who has survived almost to the pre- sent day.

A: John is an old friend of mine -- one of my early bosses. John is probably not as good a designer as a very good manager. He managed very well. He was always trying to do something a little tricky in design by creating a mirror or doing something that was a little bit tricky, so if you could get John to work on the other aspect but leave the appearance and the aesthetics to somebody else, they would have made a great team. If you organized a team, you'd want John on it, but you really wouldn't want him sketching the theme. John ended up working for me in truck when he left.

Q: You and he were working on the Ranger?

* Editor's Note: Elwood Engel died in 1988.

A: Yes. And I used him exactly for that. There was nobody better you could send to an engineering meeting than John.

Q: And, that was important?

A: Oh, yes.

Q: Because you had to convince the engineers.

A: Oh, yeah. Because he thought like [them], and they thought he was one of the them, and it just worked just great.

Q: He tells me that his fondness for the P-51 [Mustang] airplane was the inspiration for naming the Mustangs.

A: I believe that's true, because the name for the Mustang was originally Cougar.

Q: That was the code word?

Another fascinating character from this era is Bob McGuire. Do you remember him?

A: Oh, yeah, very well. Bob was Ken Spencer's uncle, and they were very much alike. McGuire was, in his day, a very talented designer, had very good design feel and sense. He was disliked by a lot of people because he didn't communicate very well, but he did a lot for Ford.

Q: What were his accomplishments?

A: He worked on the '57 Ford, the '59's, I believe, through that era in the late 'Fifties, early 'Sixties.

Q: He worked with you on those?

A: Yes. In fact, McGuire was one of the my early sponsors.

Q: He's well thought of by most of the people we've talked to.

Alex Tremulis. What can you tell me about Alex?

A: Alex is probably an old-time, enthusiastic car nut. He worked for, I think, just about every company, including Duesenberg and Crosley -- there are a lot that aren't in existence. I think he knows the ins and outs of design as well as anybody, but he, personally, never really did it. He was always on the outskirts of the clay development -- did the talking while somebody else was doing the work.

Q: The outer limits?

A: He's an outer limits designer, but he is a charming guy. I don't know if you've ever met him, but he'll charm you to death, and you'll thoroughly enjoy him. I don't think he's a great designer, personally, but when I learned to know him he was, maybe, past his day.

Q: You'd come in on just the tail end of George Walker. Did you get to know him fairly well?

A: Yes, I knew George.

Q: What sort of person was he in the latter stages of his career?

A: Well, George, I believe, was basically a P.R. man. He did the company a lot of good. I believe he did what was needed to do at the time. He came in, he organized the design group and the design center, he gave us stature, which we didn't have at that time.

Q: The first V.P. of design?

A: First V.P. He demanded and got a lot of things that was needed.

As a designer, I don't think he was worth a darn., but, I think he was so political. He would walk around and ask people, "What do think, and what do you like," and he'd recommend what they said. He would only copy what they, said. But, I think, he did a job. He's still living in Arizona .

Q: Don DeLaRossa. You worked with him over several years. What were your impressions of his accomplishments?

A: Don is a fantastic designer. One of the most talented of anybody you've asked about. Unfortunately, Don's talent -- well, his talent really kept him going, because he was, probably, a poor manager. He couldn't seem to get things organized. He had a serious drinking problem.

Q: He'd probably be the first to admit it?

A: Oh, yeah. I think he'd admit that. He is a delightful guy to talk to. And, one of the guys who, when you're really in trouble, you go to Don because he can design you out of it. He's that good.

Q: What were his contributions over the years?

A: He worked on a lot of Mercurys, and he and I designed the Falcon -- the first Falcon -- together.

Q: You hadn't told me that.

A: I didn't tell you that, did I? And, we did that downstairs in the garage.

Q: Tell us about that. That's fascinating.

A: At the time when the company was trying to develop a Falcon, they couldn't get a design. It was one of those that just couldn't get it to be acceptable. So, Bordinat said, "We just got to form a task force, and I'm going to form two. I want one headed by Bob McGuire and one by DeLaRossa," and each of them had three designers and a crew of clay modelers, and I was the lead guy for DeLaRossa at our -- because the building was all full, we had to go down in the basement in the garage, and we set up a bridge, and we had a car down there, and we designed the car that eventually had that sculpture on the side and round taillight on the back. That's the

car we did together. And, I have a lot of respect for Don. I like him. I think that he's one of the premier designers of our time. Unfortunately, he's wrecked his life a little bit.

Q: Was he an Iacocca man?

A: Yes, very much.

Q: He's since joined him at Chrysler?

A: Yes. I turned that job down, by the way.

Q: How did that come about?

A: I was offered that job before DeLaRossa took it.

Q: How did that come about?

A: I don't know. Iacocca remembered me.

Q: And, you decided that you're not to take it?

A: Well, the timing was bad. One thing, the company, at the time, looked like it was going to go under any minute. They didn't want to pay me my current salary. At the time, it looked like one, big risk, and, so, anyway Don had retired from Ford and was ideal. So I even recommended them to get him. Then, there was no budget to work with.

Q: Had he worked with Sperlich before?

A: Yes, and they didn't get along. Hal Sperlich did not like DeLaRossa because -- oh, a lot of reasons, but I'm surprised that they're getting along now, but....

Q: A minor, but entertaining, figure in the design pantheon: Roy Brown. Did you work with him?

A: I never worked for him, but he worked for me. Roy is an artist's artist. He's probably one of the best artists, along with Homer LaGasse, in automotive design. He spends a lot of time now doing paintings that are beautiful. He is, again, I think, not a strong designer, but a tremendous P.R. guy. Now, if you lined up all the guys and said, "Pick out the artist," you'd pick Roy because he looks like an artist, and he talks good, and he can tell you all about it. But, when he was working for me in the Ford studio, he did the managing, and I did the designing.

Q: How about Homer LaGasse?

A: Homer, again, is a little bit like Roy. Very talented, extremely good at working with people. By the way, Roy is too. They can work and organize and get the troops all churned up

about it, but as far as coming up with a design that's usable and it's something you could pick that would be a commercial design, neither one can do that for you.

Q: What were his accomplishments?

A: Homer worked at Chrysler, and he was in charge of Plymouth studio in the early 'Fifties. Some of those were his designs. The Plymouth that had the flying front fenders, the strange taillights, those were his designs.

Q: He's now at the Center for Creative Design in Detroit ?

A: Doing a terrific job. He really is.

Q: What about [Art Center in] Pasadena, and how did that come to be a [design] center for almost all the industries?

A: Well, I think, it was organized by a man named Adams who had the philosophy that in order to be able to teach art correctly for the industry, you had to have somebody in the industry teaching it. So, he organized a school in a house out there, and he invited people in various areas of design and photography to come in and teach --part time -- a day or two a week or evenings, and that's the way the school got started. And, therefore, over a period of years, their students were better qualified for the jobs than any of the colleges or universities, because those were being taught by professors that were never in the business.

Q: Quite influential?

A: Oh, yes. Art Center really set the pattern, and now Creative Studies in Detroit and other art schools are following suit. Their classes are being taught now by people in the business.

Q: And the industry has pretty much moved Westward in terms of design theory. Have not almost everyone established a center out there to be near it?

A: Well, there's a mystique that says all trends begin in California and move East. There's a little truth in that, but, I think, a lot of it is mystique. I'm not so sure that just because their coast is closer to Japan, that the cars were unloaded there. I do believe, because of their climate, that they can have a freer life style, and they can go to the beach, and they can wear shorts the year around, and, I think, that is a lot of the mystique. But, I don't believe that they're as far as advanced as most people think. Some people say as much as two to five years. I would say that there may be a year or so doing things that eventually come this way.

Q: And yet [each of] the companies have established a [design] center in [California].

A: Let me tell you why. In my opinion, it's because the Japanese have sold so many cars there that people back here think we must be missing something because we can't sell our cars out there. So, there's something about California we don't know. They think different, they work

differently, they dress differently, so we better get some cars designed there by Californians for California. I think, we ought to wait and see what happens.

Q: Bill Schmidt. Did you work with him when you first came to Ford?

A: I didn't work with Bill when I came to Ford, but I've learned to know Bill in the years since, and I dealt with him recently. Bill is a very articulate, easy-spoken, super-nice guy. He came in and wanted to do some Mustang work for us, and we agreed to let him do it, and he brought in a car or two a couple times that were really not that good. When we showed them to management, they kind of laughed at them. Part of that could be because he's been out of it too long. But, I like Bill. He's doing a lot of outside work here in Detroit.

He'd be a good guy to talk to, by the way. He'd give you a good insight because he had left Ford and went to Packard, I believe. He left Packard and went to Chrysler, and he went to Chrysler in a funny way. He took on a design program, and he did it on the outside. He hired some empty supermarkets, and the contract read that if he sold his designs, he took over design; if he didn't, they kept who they had, and he won. Now, he had some good people.

Q: Another name which pops up and would be close to your era would be Art Querfeld. What can you tell us about him and his career?

A: Art is probably a very heavy contributor to the Ford cars. He did, probably, all the interiors for years and years, and no one has worked harder than Art has, and his only fault, I believe, in his later years was he didn't shift. He didn't change, and he wasn't willing to shift off of the old patterns into the new thinking as well, and that was one of his problems. And, I'm not so sure he was totally wrong, but in this business you got to be very flexible.

Q: Interiors changed, not as radically, but....

A: Well, they are.

Q: They are now, but, I mean, the change in the 'Seventies and the early....

A: Well, things are going like from velours to more like knits and wools and different kinds of fabrics and different kinds of seating, and Art was very reluctant to change. He just thought that this was junk, and he couldn't believe it. But, he really worked hard and deserves a great deal of credit. I like him.

Q: Another fascinating character from this era is Bill Boyer. Did you work with Bill?

A: Bill works in the truck area for me today. Bill is probably credited for doing most of the Thunderbird designs through the years, and Bill's a very talented designer -- very low-key guy, soft-spoken, does as he's told, doesn't create waves, a nice reliable guy, a good man to have on the staff.

Q: In terms of cross-pollination within the industry, did design direction and theory -- was it complemented by what was going on in other segments of the industry? Take a man like Gordon Buehrig or his later successors at General Motors -- were you and your counterparts at Ford much interested in what was going on at the other companies?

A: Well, we always are, and we still are. But, from a designer's standpoint, I guess, we are as interested as what's going on as, say, the product planners are and, maybe, the top management from an investment standpoint. They don't want to be spending a lot of money on the wrong product and be completely off base. Let's face it, G.M. sets the trend mostly. If they're going one way, and we find we're going the opposite, once in awhile it's good for us, but most of the time it isn't. So, we watch it from that standpoint. And we're interested, too. Don't get me wrong, but we're not as keen on trying to copy or follow. I personally don't believe in following. I like to do my own thinking and try to do it my way and not just copy the Europeans or the G.M. trend. And, I think right now we're leading. I think that Ford Motor Company has the newest, freshest, and that will become the most copied designs on the road, and it's just going to take a couple years to do it. I think at G.M. their philosophy is different, but they have a much [more] restrained group leading the company, and they're more timid about changing their cars. They do it slower. But, once in awhile they let you know that they're pretty good when they do Firebirds and Camaros, and Corvettes and Fieros and some of those. So they tell you occasionally that we're still the best, but they are a little bit timid in the Cadillacs and the Buicks.

Q: The committee approach to design at General Motors, it makes them a little less flexible, does it not?

A: Design by committee always does. When Iacocca was at Ford we were really just designing for Iacocca, and I'm sure that's in spades in Chrysler. We have a design by committee at Ford more than you'd believe. We have too many channels you got to walk it through. Too many product-planning groups, too many committees. Better than, I think, it used to be, though. But, at G.M. it may be even more horrendous, and, maybe, that's why they're a little bit slow. And, I'm not so sure they're right or wrong yet. It remains to be seen.

Q: I'd like very much for you to sort of relax and tell us about your thoughts about Henry Ford II; obviously, the key figure in all this.

What influence he had on design decisions, how his decisions affected the final product.

A: In my communication with Mr. Ford, he really never caused any problem unless he saw something he absolutely didn't like, and then he would say so, and you would very rapidly change it, and he never forgot. There's one thing about Mr. Ford is if he saw something once that he didn't like or something that he really did like, the next time he was over he would remember that. But, I hardly ever saw him really voice a strong opinion about design, per se. A program, yes, or some other fac-tor, but not too much on design. He had an opinion but no more so than anybody else.

Q: Do you think part of this was due to the fact that he trusted Gene Bordinat's judgment during this period.

A: Yes. Very much. I think very much.

Q: And that they seemed to have a certain rapport and a similar way of thinking?

A: Yes, I think so. Gene designed cars that Mr. Ford was comfortable with.

Q: There was a point in the mid-to-late 'Seventies where Henry Ford II seemed a bit out of step with the times. Was there an uncomfortable [feeling] there?

A: I think that he was going through a bad period in his life. I think that he was not completely happy with his management, he was not happy at home or in his marriage, and it seems like he tires of management as fast as he does his wife. And, if I were to fault Mr. Ford, I think that's one thing I'd fault him on is that, you know, he never really gave his Bunkie Knudsen's and the Iacocca's and those guys, a fair run at it. And, I really believe the minute that he thought that they were becoming too powerful, he took them away. He let them get to their role to do their job only to a point, and he watched that point very carefully, and that was very unfortunate.

Q: The interim management, in terms of Phil Caldwell, has stabilized things nicely, but you got an exciting period ahead with Harold Poling and Don Petersen. How does it look in terms of management? How will management impact on design decisions in the next decade?

A: That's a tough question, Dave. I think that Poling, for example, is not a designer. One good thing about him is he admits that he's not, that he leaves that to somebody else. He does voice an opinion when he feels strongly or if he sees something he doesn't like. A little bit of the Mr. Ford thing. And, he'll say so. But, most of the time in meetings, Red doesn't say much. He just sort of stands there and listens.

Q: What has been his strong points?

A: He's a finance man. He's a bottom-line, get return on the product, and that's the key thing, and he works at it hard and makes it work. I feel that in the future of Ford Motor Company there's a potential problem of the grandchildren coming up. I don't believe that they're going to be as amenable to let one of them go to the top as easily as Bill and Benson did with Henry.

Q: Henry [was] the eldest son.

A: I understand that was a family agreement. [Mrs. Edsel Ford] dictated that.

Q: Both Edsel and Bill, Jr. seem to have some promise in terms of development and [talent].

A: Yes, very much so.

Q: Do you see William Clay moving into a bigger role in company affairs at this point?

A: Yes. Bill, could become a temporary chairman for a short period of time and smooth things out. It's a logical move. Maybe if Poling becomes president, Petersen becomes vice chairman or something and everything would go tic, tic, tic.

Q: And, Bill would be chairman?

A: Yes. Petersen, then, would act as chairman. But, I don't know what's going to happen, I really don't. *

Q: In terms of a product, is the product line going to expand in terms of variety, or are you really contracting in the next ten years?

A: Let me tell you, the plans are to contract, but the plans, at the moment, are expanding. We are keeping all the cars alive, and we're facelifting and bringing out new versions of the ones that we originally planned to drop. So, we are in a dilemma as far as really following our ten-year plan [which] was to get smaller and aim with a rifle instead of a shotgun.

Q: So, there's been a temporary dislocation on that plan, but, eventually, perhaps, in the next two/three years you'll be able to get back on track?

A: I don't think we will, Dave, until 1990.

Q: It'll take that long?

A: Yeah.

Q: What have been the factors in that derailment?

A: I think two big things: gasoline price and the economy. Everything's bounced back. People don't want to drive little cars like we thought they did. They still want the big Lincolns, they still want the luxury Fords and Mercurys. I think it's just been a turnaround in the economy that no one forecasted, so a lot of these good plans that were all in place are now getting either set aside temporarily or tumbled.

Q: But, eventually, as the decade ends, you'll be back in that area that you envisioned about three or four years ago.

A: But, probably different. I think we'll end up changing our plans and combining from somewhere within with everything we've got. I don't think there is a clear-cut direction at the moment. I really don't.

Q: I'd imagine an exciting time for you?

A: Exciting but a little bit hazy -- a little bit confusing. But, we have a lot of great things going.

Q: There certainly is a Ford in your future.

A: I hope so.

Q: You don't look like you're a man that's going to retire next year.

A: No, I don't think so, Dave.

Q: We've been speaking to Gail L. Halderman who, as of today, is the small car exteriors and truck design executive, and we thank you very much, Gail, for sharing your reminiscences with us.

A: It's been a pleasure. I've enjoyed it.

END

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