Joseph Oros and Betty Thatcher Oros Oral History

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Note to Readers

The Automotive Design Oral History Project, Accession 91.1.1673, consists of over 120 interviews with designers and engineers conducted during the 1980s by David Crippen of The Henry Ford.

This copy was produced from a bound, hard copy final version of the interview.

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AUTOMOTIVE DESIGN
ORAL HISTORY PROJECT

OROS, JOSEPH
&
OROS THATCHER, BETTY

1985

VOL. I

EDSEL B. FORD DESIGN HISTORY CENTER

Henry Ford Museum &
Greenfield Village

The Reminiscences of

JOSEPH OROS

&

BETTY THATCHER OROS

This oral reminiscence is the result of a series of interviews with Joseph and Betty Thatcher Oros by David R. Crippen during the month of April, 1985. These interviews were held under the auspices of the Edsel B. Ford Design History Center, Archives & Library Collections, The Edison Institute.

The questioning was primarily in the form of topics suggested to Mr. & Mrs. Oros concerning their careers.

The language of the narrataive is entirely that of the interviewees. They have reviewed and corrected the manuscript and by their signatures below indicated that it is a correct copy of their reminiscences.

This transcript and the recorded tape are deposited in the Archives at The Edison Institute with the understanding that they may be used by qualified researchers for scholarly purposes. The undersigned does release to The Edison Institute republication rights to this interview.

Joseph Oros 3-30-1987
(Joseph Oros)

Betty Thatcher Oros 4-1-87
(Betty Thatcher Oros)

_____
(Date)

OROS, JOSEPH (JOE)

April 17, 1985

Q This is David Crippen of the Edsel B. Ford Design History Center of The Edison Institute and we are in beautiful Santa Barbara on April 17, 1985, interviewing Joseph Oros, who is known almost universally to his friends and colleagues as Joe. Joe is a key figure in automotive design history and certainly a very key figure in Ford automotive design history. Mr. Oros has contributed a manuscript to our collection. We are in Santa Barbara today to talk with him about various events in his career which he felt were key episodes in both his professional development and his design history career, and we will be asking Mr. Oros about interesting and important episodes in Ford design history such as the 1949 Ford, the Mustang, and others. Mr. Oros, as head of the Ford studio for many years, was instrumental in guiding Ford design history into many key design decisions which illuminate automotive design history. We will ask Mr. Oros to begin at the beginning to illustrate and to illuminate areas of his personal professional life which he felt impacted on design history. If we could ask you, Mr. Oros, to start with the earliest influences that you can recall of which guided you toward a career in industrial design. The interview with Mr. Oros today is another in our series of oral interviews with seminal figures in automotive design history sponsored by The Edison Institute's (Henry Ford Museum & Greenfield Village) center for the study of the history of industrial and automotive design.

A Thank you Dave, in regards to some of my earliest influences, I

will have to go back to the influences of my early childhood years that were developing in Detroit. To my earliest recollections in Detroit I was always interested in drawing, painting and the arts. I joined a community center in Detroit which was the Franklin Street Settlement on Franklin Street in Detroit. In this settlement, there was a man that headed the carving section for the people that were interested in carving. Sidney S. Kopp was the man in charge of this group. He was a graduate of Yale University in sculpture. At the time he was the chief restorer for the Museum of Art in Detroit. One of the benefactors and chief supporters of Franklin Street Settlement was Mrs. Edsel B. Ford, and little did I realize that some day I would be associated with Ford Motor. But Sidney Kopp gave me special instruction in drawing--charcoal drawing from still life, and he gave me all kinds of information relative to drawing and rendering. He then got me interested in wood carving, and soon I was wood carving with the men. I was the only young person there, and I believe I was about 13 years old, and the rest of the people were much older than I. They were men in their early 20's, late 30's, doing carving. Sidney was one of the my first influences, and naturally, in school, I was constantly drawing, and the teachers in school finally decided that they ought to try to get me into Cass Technical High School before my time. So I was double promoted from my intermediate school, which was called Miller Intermediate School. My art teacher and the counsellor for the school, Mr. Kaufman, had me double promoted from the eighth grade to the tenth grade at Cass Tech.

Q Already a tough school to get into.

A It was a very difficult school to get into because you had to have

certain qualifications to get into Cass Tech at the time--both scholastically and a special aptitude in either science, architecture, music or the arts. I was accepted at Cass Tech as a tenth grader after finishing my eighth grade. I was pleased to be admitted, needless to say, and at Cass Tech I had one of my basic foundations laid in drawing and design, and I just had a marvelous time there in the art department. I became very close friends with all my teachers. I did have a difficult time in bypassing the ninth grade and going to Cass Tech as a tenth grader because I had to pick up my tenth grade academics. I had missed the full year of algebra and a full year of English, and these proved to be difficult problems for me at Cass, but I wound up as a tenth grader taking ninth grade math subjects in addition to my tenth grade subjects, and ninth grade English in addition to my tenth grade English, so I doubled up. But with my art work, I was right at home and right in there with all of the tenth graders in all of their art capabilities. I was then asked to join the Museum of Art Saturday morning special art classes.

Q By invitation?

A By invitation from Cass Tech, and I spent all my Saturdays, of course, then at the Museum. I did not finish the Cass Tech high school because the family moved to Cleveland. I finished my high school at East Tech in Cleveland, Ohio, which again was a school very similar to Cass Tech in respect that it concentrated in the sciences and the arts. The only difference between East Tech and Cass Tech was that the school in Cleveland was coeducational--I'm sorry--was all boys, and Cass Tech was coeducational.

Q You missed that?

A So I missed, of course, the coeducational part in the final schooling--high school in Cleveland. After graduating from Cleveland, I received a scholarship to Cleveland Institute of Art, which was just fine because I came from a very poor family, and that helped me tremendously to get started. While I was at East Tech, I again, by invitation was asked to go to the Saturday morning classes to the Cleveland Institute of Art to pick up additional art training from Cleveland Institute of Art while I was still in high school at East Tech. So I was very much involved in drawing all my life. My design career really began not knowingly back in Detroit as a thirteen year old where I was so impressed with the automobiles, and I frequented all of the showrooms I could find. I was frequenting the Lincoln showroom on Jefferson near the U.S. Royal Rubber Plant and asked the dealers all kinds of questions about the Lincoln cars and the Zephyrs, and I also frequented the Chrysler showrooms, and, of course, the showrooms of Packard and the Cord, and the dealers and the people in the showrooms were always so obliging in answering all of my questions regarding the cars. In addition to all this, I found a small place near Detroit River on Atwater Street in Detroit that was putting together an airplane, and I watched this plane's development almost on a daily basis--watching the draftsmen and engineers working on this plane. I would shinny up the window and watch the engineer working at his drafting, talking with him, and so my interest in cars and planes started from the time I was thirteen not knowing that eventually I would be doing car design work myself. Now at the Cleveland

Institute I was not quite totally geared to design when I started the Cleveland Institute, but I had strong inclinations toward design, and by the end of the sophomore year I had made up my mind I that I was going to go into industrial design and minor in automotive design.

Q Unusual to have that available to you.

A It was available to me at Cleveland Institute Institute of Art. It was one of the better schools at the time for teaching industrial design in the United States, where I also prepared some automotive design work. My chief design instructors at Cleveland Institute were Mr. Bates and Victor Schreckengost. Victor Schreckengost was my mentor in design in my junior and senior years. All through my years at Cleveland Institute of Art, I managed to go through my schooling with scholarship assistance, either a working scholarship or an outright scholarship, and it helped me greatly throughout my whole time at the Cleveland Institute which was a four year course. After finishing the Cleveland Institute Industrial Design curriculum, I was very fortunate to receive the Agnes Gund European Travelling Scholarship for Design. I took this scholarship and went to Europe in 1939, to Sweden where I studied Swedish design and its influence on design history. I also spent a full month at the University of Stockholm studying design and spent a lot of time travelling to the various firms that dealt in the furniture design, product design, Orefors glass design and pottery design in Sweden. The war was drawing near--I could sense it in '39, and I had to cut my trip in Europe short. I cut my stay in Sweden short and took a fast trip all the way into Rumania and back home to the States before the war was really on in full earnest. It had started before I had reached Holland on my return trip to the States.

Germany had invaded Poland, and I was told by the lady manager of the small pension, "that I was so fortunate to be in Holland at this time because Holland was not going to be in the war at all, but that United States would be in the war since, historically, U.S. would enter the war." I listened to all this and left for the States shortly afterwards on the Rotterdam. We did pick up survivors that were torpedoed by the Germans--these were survivors from a lumber freighter, and we finally docked in New York unscathed.

Q It must have been a rough trip.

A It was a rough trip, and the boat was laden with a lot of people who were fleeing from Europe. Upon arriving in the States, the first thing I did was call my girl friend Betty Thatcher, who was a graduate of the Cleveland Institute of Art, and had been in my design class.

Q Fortunately, the Cleveland Institute of Art was coeducational.

A Fortunately, the Cleveland Institute was coeducational. It was a very fine school where I met my future wife. I called Elyria, Ohio, and I was told that Betty was in Detroit working for Hudson Motor Car Company.

Q What were her duties?

A Her duties at Hudson Motor were as a designer, and she was hired by Frank Spring, who was chief of design for Hudson Motor. He wanted the woman's influence, and, to my knowledge, Betty Thatcher was the first woman automotive designer in the United States. She worked for Frank Spring on the Hudson car. She designed the interiors for the Hudson cars. This was for the 1941 car. She designed the instrument panel for this car, and she designed several of the exterior chrome appointments

for the car as well. She worked with such designers as: Bob Thomas, Bob Koto, and Art Kibbiger, who was in charge of the studio. So, she had a marvelous career, but when I found out she was in Detroit and I was slated to work for Howard Ketcham in Radio City in New York, I instantly made up my mind that this was going to be a terrible problem for me commuting from New York to Detroit every weekend to visit with Betty Thatcher, so I decided at the time to give up my job in New York with Howard Ketcham and go to Detroit. When I had graduated from Cleveland Institute of Art, I had three job openings. One was with Howard Ketcham in New York. Howard offered me a job in his design organization to develop the industrial design portion of his office. I had another offer with designers for industry in Cleveland, Ohio, and I had a third offer to work for General Motors in design.

Q Was Mr. Ketcham a well-known color and design specialist?

A Howard Ketcham was a well-known color specialist, and he did the color and the interiors for Pan American [transoceanic] Clippers. He wanted to get into the industrial design business. He came to Cleveland Institute of Art, interviewed me for the possibility of joining his staff and to develop the industrial design business for the office. He said, at the time, he realized that I had other offers, but why don't I go to Europe and think about it, and the job would be there if I wanted it when I came back from Europe. So when I came back from Europe, I had to disappoint Howard and tell him that I was terribly sorry but I couldn't see how I was going to work it out in that I should really go to Detroit because of my relationship with Betty. With that I left Howard, who was very much disappointed, but he did tell me earlier not to consider it binding in

any way, so I went to Detroit and, to my surprise, when I arrived at General Motors, I was told, yes, they would be happy to hire me, but that I would have to join their school. At this point, I was a little disappointed because I had thought I'd be joining the design department. But, in fact, I was joining the design school as a trainee for the design department, and in this schooling we were promoted every three months or given our pink slips every three months. In the school there were many people who made their mark in the automotive field--such people as: Elwood Engel, Frank Bianchi, Dick Hitchcock, Richard Arbib, who finally opened his own offices for industrial design in New York, and, of course, Eugene Bordinat, and I also attended. Gene Bordinat, I believe, was three or six months ahead of me in rotation, and Elwood Engel and I were in the same rotation. Both Elwood and I graduated from the school and joined the design staff at General Motors.

The first studio I joined after completing my G.M. school training was in the Industrial Design section. From the Industrial Design studio I was transferred to a Special Development studio that was headed by two people: Julio Agramonte and Tom Hibbard. Shortly after joining Tom Hibbard and Agramonte, I was further evaluated for my potential and slotting in the design office at General Motors, and one day I was told to pack up all my belongings in the studio that I was being transferred to the Cadillac studio to work with Bill Mitchell. So, my automotive career started with Bill Mitchell in the Cadillac studio. But, I do have to retrace a little bit with Howard Ketcham from New York. Howard Ketcham didn't show how furious he was that I didn't join up with him. I did mention to Howard, I said, "Howard, you did say that this would not

necessarily be binding, so I'm assuming that you will accept [my refusal] in good faith, for the reason I'm going to Detroit." I told Howard that I was going to go to General Motors to join its design office. But, Howard wrote General Motors a letter, in his anger, saying that I had thrown up his job offer in New York and that I wasn't really a fit person for General Motors to hire. He also wrote a similar letter to Cleveland Institute of Art saying to Cleveland Institute that their grad-uate threw up his design job offer that he had held open for me. I wasn't aware of that, but Howard O'Leary, who was the design administrative manager for Harley Earl at G.M., came over to the school one day specifically to see me, and he said, "Joe, I want to tell you something." He said, "Harley Earl's on vacation, and I'm opening all of Harley's mail, of course, and I opened up a letter from Howard Ketcham addressed to Harley Earl, and Howard Ketcham said all these terrible things about you, and I kept thinking this is not the Joe [Oros] that we have--this is not him at all. I want to tell you what I did with that letter. I simply crumpled it up in a ball and threw it in the wastebasket," and I said, "That's not Joe at all. I wanted to come over and tell you about it." I said, "Howard, I'm so pleased that you told me this. I didn't realize that Ketcham might do this." And, I explained to O'Leary what the arrangement was and that it wasn't really binding, and I said, "I'm so pleased that you did throw the letter away, Howard."

Q You never saw the letter?

A I never saw the letter. Finally, as I've said before, I was transferred into Cadillac studio all smiles from ear to ear, to work with Bill Mitchell.

Q Tell us a little about Bill Mitchell.

A Bill Mitchell was a very outgoing person, a marvelous designer, and he would sit down with the designers in the studio, and he, himself, would design for the car. He was such a peppy person, an enthusiastic designer, you could just feel the studio vibrate with him. He was the youngest head of a studio at G.M. at the time. But, before I get started on my design career in General Motors, I would like to backtrack a little bit, if I may, Dave. As an automotive designer, I have a very peculiar background, in a sense. Nobody at General Motors knew this or at Ford, but my family never owned an automobile, and I was always so terribly interested in cars, and also I never owned my own automobile until after I was married. First of all, I couldn't afford it, and the family never had one, so during the time that I was in school at General Motors, I had my boarding with a family in Detroit where the oldest son was doing commercial artwork and worked in the General Motors Building. I went to school, of course, in the same area, and he taught me how to drive for the first time while I was going to the G.M. School of Design. So, that is a very unusual circumstance to have a person not having had an automobile, yet to be so enveloped with the automobile.

Q Do you remember the make of automobile?

A It was a Ford car. So, if I can now continue with Bill Mitchell. In the studio with Bill Mitchell there were about three or four designers, and I was the youngest. They soon found out that I had just been married two weeks, and all hell broke loose in the studio, and they even got me a gift. I had a marvelous time in the studio. Bill Mitchell, when I first came into the studio all smiles, did bring me [back] to

reality and told me that I could stay in the [Cadillac] studio, if I had the proper credentials as a designer. Well, that wiped off my smile for a second, but I couldn't help but smile continually that whole day. I worked with Art Ross in the studio, who was a senior designer in the studio; Victor Froelich, who was in the studio; and, I believe, another designer by the name of Wyman who wasn't in the studio much--he was ill at the time. Our chief blackboard man in the studio was Matty Schumacher, and we called him Matty Schumercat. We did such crazy things as spraying his head, which was totally bald, with an airbrush and putting tape down the center of his head just to give him a part, and he'd go from studio to studio and, believe it or not, people didn't even recognize him. We were cutting up constantly, and, of course, we were very much involved with the Cadillac car and the models, plus the engineers that would come over from Cadillac to view our products. We were also involved in the studio with developing special cars in competition with the advance studios at General Motors, and we were actually [split up] into teams, and I recall one time I was on a team with Bill Mitchell, and we were competing with another team that was being headed by another designer--I forget his name now--and we were asked to go up on the roof on the building to give a critique to these cars. Harley Earl had a special car developed as a coupe and four door sedan. I specifically remember Harley Earl saying that we should all give our critiques and not be embarrassed, not hold back, and not to be reserved, particularly the new designers, and to step right up and say what we had on our mind. So at this time, after reviewing the cars, I decided that I would go directly to Harley Earl with something that troubled me about the two

cars with my suggestion. What bothered me was that the four door sedan was so boxy and lacked the sleekness of the two door sedan with its sleeker greenhouse, and I went up to Harley Earl, Isaid, "Mr. Earl, what bothers me about the two cars is that the four door sedan is so boxy. I wish it could have more of the two door sedan flavor in its greenhouse, if that were possible, to make it a little sleeker." Well, with that, Harley Earl looked down at me, he was a tall man, and pulled himself right up to his full height, and I believe he was at least 6'4" or 6'5", and I was only 5'11", and he looked at me, kind of glared, and didn't say anything to me, but he called for Jules [Julio] Andrade, who was the chief body designer for General Motors at the time. He said, "Jules, who is this?" and he didn't even ask my name. I recall that I was totally chagrined and nonplused, and I thought my career had come to an end. I saw Jules Andrade talk to Harley Earl and kind of smooth things over and explain that I was one of the green designers that just graduated from the G.M. school and that I was in the Cadillac studio and so on. I got by that one--that hurdle--but later in the studio, Bill Mitchell was quite put out with what had happened on the roof, and Bill Mitchell told me that should not have happened. Harley Earl did visit the Cadillac studio occasionally, and I specifically remember a short time after the episode on the roof he came into the studio, and I was working on a full-size blackboard design for the Cadillac. He was interested in what I was doing, and he was trying to make conversation with me, and I was being very cautious. I do recall he was quite pleased with what I was doing. He said, "Well, that's an interesting workout of that problem. I guess there are other ways to skin the cat than just one

way, isn't it so Joe?" And, I said, "Yes, Mr. Earl, I guess there are many ways to skin the cat." I decided right then and there that I wasn't going to enter into too much conversation with Harley Earl because I was still chafing and felt quite burned from my episode on the roof.

Q At this point it might be a good time to give us your recollective description of Mr. Earl and his techniques at General Motors. He was quite a giant even in those times.

A He was a giant in those times, and my recollections of Harley Earl were awesome, from the standpoint of what he had accomplished at General Motors. Harley Earl started the car styling business at General Motors. I knew that Harley Earl had a lot to do with the original LaSalle that was so popular. I believe it was the 1939 LaSalle that was so popular. It was awesome also when I realized he had such a strong influence and made such a tremendous mark in the automotive design business, and he was overwhelming with his size. He was a tremendously tall and powerfully-built man, very outspoken, but he had a very short fuse, extremely short fuse, and he was very outspoken.

Q And profanely so?

A He also said things that he wished he hadn't said, and I was becoming aware of this, and, in addition to all this, I was also, of course, aware of my episode with him on the roof, and I was very conscious that he had a short fuse. I also was aware, and was told by designers, that he made the trips around the studios from studio to studio, and he could just arbitrarily let a designer go that he didn't like or he felt wasn't contributing enough--just arbitrarily let him go. I knew of all of these things, yet I admired the man. I was quite con-

cerned about his personality and his short fuse. But the other thing that I was aware of about Harley Earl that happened during my tenure in the design office was that I was there when the war broke out, and the design office was informed that it was no longer going to do design work for the cars, that the design office was ending and that the last ones hired would be the first ones fired. Shortly after that I was told that I would be getting my separation allowance, and they felt so sorry that this had to happen. I did receive my separation allowance and returned to the studio, and Bill Mitchell, I know, was quite upset, and he said, "This should not have happened to you at all." He instantly got on the telephone and called the chief engineer at Cadillac engineering and said, "You know Joe Oros in our studio?" Of course the chief engineer knew me because he'd been in and out of the studio, and I'd conversed with him, and Bill Mitchell asked him if he could do something for me in the engineering end of the business, and he said, " Of course, he's a designer and knows about drafting because he's a designer. Send him right over." So with that, I was given my separation allowance in the morning, and that afternoon I had my interview at Cadillac engineering, and I was hired as a draftsman for Cadillac engineering. My experience at General Motors as a beginning designer laid the groundwork for my whole career. By that, I mean, I learned the techniques, how to design the car from the sketch phase to the full-size phase, to the modeling phase. The groundwork was absolutely excellent, and even the groundwork in the school--the one year prior to joining the design department--was excellent because in the school we were grounded in the handling of the car design as a total. Both inside and out, and both the trucks and the cars, and, in my case as

a special case in school, they gave me an opportunity to do a lot of industrial design work as well as car design work. I was one of the few, or probably the only one, in the school that was given this chance. In the design-structured organization of General Motors, the studios were laid out so that each studio was comprised of about three to four designers and about a half a dozen modelers, and the blackboard man, who was responsible for the drafting of the full-size car in the studio, and, of course, the chief of the studio, who was Bill Mitchell.

Q At Cadillac?

A At Cadillac. That was the general makeup of the studio, but we were not permitted to start clay work in the studio until the sketch phase had been completed, and from the sketch phase to the full-size renderings of our intended models. From this full-size rendering it went into the full-size sectional drawing of the model to support the model being developed in clay. So, it was an organized, structured design approach to the car design problem. The whole General Motors organization, all of the studios followed the same pattern. When a body design was created, and the body design was to be used by the large cars, such as the Buick, Oldsmobile, Cadillac, other body designs to be used and shared with Chevrolet, Pontiac studios, all these proposals would be wheeled into the showroom at General Motors and discussed with the designers.

Q What form would they take?

A They were full-size renderings. And from these full-size renderings, a direction would be derived. Then these bodies would be developed in their specific body studios. After the bodies would be

developed in these studios, which were not the production studios, they were approved by management at General Motors to be given to the production studios to develop as the Cadillac, Buick or Oldsmobile or Chevrolet or Pontiac car lines. Each studio contributing its quarter panels, hoods, and sharing the greenhouse, or the door panels, and developing their unique character that way. We received our bodies in the Cadillac studio, and we added our own hoods, fenders and decks and quarter panels, and grilles, and appointments to the exterior.

Q Had this structure been developed by Harley Earl?

A This had been a Harley Earl development, and this procedure then permeated throughout the industry, both at Ford Motor, Chrysler and American Motors eventually.

Q Mr. Earl had come in the late '20's and had really set up what was probably--check me if I'm correct--one of the first, if not the first, styling/design studios in the industry.

A It was the first automotive styling/design studio in the whole industry, and he was hired by Sloan and came from an automotive family. His father, I believe, was a Buick or [Cadillac] dealer.

Q He also worked with Murphy.

A I believe he worked with Murphy on the West Coast and did special body work there. Sloan hired him for General Motors to give his flair to the G.M. car lines. Of course, the star that he was hired to develop was the LaSalle. The LaSalle was one of the hallmarks of the design industry.

Q Is it still so regarded?

A And it is still one of the hallmarks of its time. I remember the

LaSalle when I was in art school. I was so much impressed with the LaSalle, and although I was in art school at the time doing industrial design, my main outlook was to join an industrial design firm. I submajored in automotive not really knowing that that was really going to be my major.

Q The organization of which Mr. Earl filled out dovetailed with the existing Fisher Brothers body....

A Yes, it dovetailed with the Fisher body work.

Q And this structure of the body engineers coming up with the package and then the designers, the stylists....

A Working around that package. This structure held and permeated to the other car companies, which proved so successful. General Motors benefitted through this system and became so competitive in the industry that it soon was number one and stayed number one to this day.

Q That's very good. So, at this point the industry rapidly converted to war production?

A The industry was rapidly converted to war production, and as I mentioned, I was let go in the morning, and I was hired in the afternoon, but I have to say that what happened to me was another hallmark, which was shortly after I started working for Cadillac engineering just a few days, in fact--the industrial relations man from Cadillac came up to see me and said, "Joe, I'm pleased to tell you that you were never ever let go from General Motors, never. And that separation allowance that you got this past week, we're going to take back from your salary on a very minimal basis. You will never, ever feel it or know it."

Q Your employment record did not show it?

A My employment record never showed that I was ever let go from General Motors because I was in the General Motors family from the time I left school all the way through the war years. And, of course, during the war years at Cadillac engineering I rapidly progressed from a minor draftsman on the board to a senior draftsman that same year, and within the year I was also doing minor layout work. By the end of my time at Cadillac engineering I was doing senior layout work. Just before my time to return back to the design office at General Motors, I was asked by Cadillac to help with the detailing of the first post-war Cadillac that was just being put together.

Q Was that Mitchell doing that?

A Bill Mitchell, of course, had been involved with this Cadillac and other cars, but Bill Mitchell was also involved with the service [U.S. Navy], and he had been, I believe, in the service with the design illustration end of the service. Before going back, Cadillac engineering said, "Before going upstairs to work on this Cadillac, we want you to give serious consideration in staying with Cadillac engineering and become one of our engineers." At that time I was a senior layout man at Cadillac engineering, and I'd worked all the war years in engineering which I was very grateful for because it was rounding out my career as an automotive designer and a product designer. The engineering experience contributed to my capability to convert my designs into drawings that could be handled by the engineers and the modelers to develop into the full-size products. But, I said no to Cadillac engineering. To Jim Becker, at the time who was in charge of the drafting area, and DeMoss, his assistant. I said, "No, I had trained as a designer," and I was so

anxious to get back to design that there was no question in my mind that I wanted to go back into the design business.

Q But does it enter into your mind of these war years with the engineering department what type of war products you worked on?

A Yes, of course. During the war years I only worked on tanks and engineering problems related to the tanks from Cadillac engineering; but I also moonlighted during the end of the war years. I moonlighted for the designers Sundberg and Ferar. I did design work for Sundberg and Ferar in Detroit, and I was considering joining Sundberg and Ferar; and I was considering having an interview with George W. Walker. I was also considering, of course, going back to General Motors; but finally I decided that I would leave General Motors and join an industrial design firm for two years. I figured that I had already worked in the automotive end in design in the Cadillac studio with Bill Mitchell for some time. And, I had spent four years in engineering at Cadillac. I had done some moonlighting with Sundberg and Ferar, and I thought I would join a design firm for two years and then open up my own industrial design office, and that was what I wanted to do. I finally gave Cadillac engineering a two week notice, and I left General Motors. Prior to doing this, of course, I had my interview with George W. Walker, industrial designer in Detroit. Ted Ornas, my friend who was in school with me at Cleveland Institute, was a designer with George W. Walker, and he'd spoken to George about me. I had my interview with George, and I showed him all my products (refrigerators, radios, and stoves, etc.). George said, "Aren't you the Joe Oros that worked in the Cadillac studio with the Cadillacs?" I said, "That's right, I worked in the Cadillac studio with

Bill Mitchell. I just didn't bring any car designs over because I wanted to show you industrial design products. I worked on so many cars I decided I'd like to try my hand at the products." Needless to say, I struck a very close rapport instantly with George W. Walker. I was hired right then and there with a salary increase. I started as one of the designers for George W. Walker; but what finally helped change my mind for me to get into the industrial design business were two or three things: During the war years, I reflected over my time at General Motors in the design office there, and I thought of the way the designers were all let go when the war began. This, I thought, was a terrible error on General Motors' part to let highly-trained, capable people go arbitrarily just because they were switching gears from peace time to war time engineering. I thought many of the men could have fitted instantly into the war-time engineering, because designers as a whole are highly creative and very capable of fitting into engineering and so forth. So, that stuck in my mind, and I never forgot it. The other thing that I didn't forget was although General Motors design office was a wonderful place to get the training in automotive design, I was aware of the giant machine, and I was very impatient. I knew I'd have to go through the steps through the ladder system and through the studio system and finally work, if I was successful, as a head of a studio. I knew that the time would be dragged out, and particularly since I had started through the system from the General Motors School. I knew it would take a certain number of years, and I was rather impatient. I decided that I would try my hand at industrial design because that's where I had really trained in school in industrial design, and although I liked cars, I still had in my

mind that it would be wonderful to design products and automobiles, so I decided to join George W. Walker where I knew both of them were available, and he had established himself as a national designer with world repute.

Q Can you elaborate on that? Mr. Walker by this time in 1945 had established, as you say, a national reputation. What were his products and what were his strengths?

A His products that he had worked on, had a national repute. He had the Packard account.

Q In what respect?

A He helped design the Packard Clipper--the original Packard Clipper which was a tremendous success.

Q Both artistically and....

A Both artistically the inside and the outside--appearance of the Packard Clipper. Now he did have working for him a designer that worked on his team of designers at the time that was doing the major design input for the George W. Walker's office, and his name was Don Mortrude. Don Mortrude at a different time was a General Motors studio head, and Don Mortrude had one of the special product studios. He was a very capable, qualified automobile designer, but he was also a very capable and qualified product man as well. Don Mortrude also later on had the Chris-Craft account for many years.

Q As an industrial designer?

A As an industrial designer.

Q What special studio was he in? Head of?

A Well, I don't know the exact name of the studio that Don Mortrude

headed, but it was one of the special project studios, advanced studios at General Motors at the time. But, Don Mortrude worked for George W. Walker, and he also worked for George W. Walker when George received the Nash Kelvinator account which included all of the white goods, and, of course, the Nash car. Don Mortrude also worked for George on this account. When I joined George W. Walker, I didn't realize it until my first interview with George W. Walker that he too had graduated from the same high school in Cleveland that I had, which was East Technical High School. He had graduated from the Cleveland School of Art. I believe he majored in illustration and commercial art--and then he finally opened up his own office and got into the design business.

Q I recall that he had both proximity to the G.M.....

A Yes, he had close proximity to the G.M. building and became close friends with G.M. personnel--Ernie Breech, in particular--and other General Motors' people, and he was a highly successful designer. He belonged to Bloomfield Hills Country Club and knew the General Motors' people and knew all of the automotive people. I thought that his would be the firm to join with. He later told me when I joined, that he too graduated from Cleveland Art, and, of course, that just cemented our foundation all the more solidly, and we were very close from the first day I joined 'till the day he retired as vice president of the design section at Ford Motor Company. Ted Ornas, a designer with Walker who graduated from Cleveland Institute of Art in my industrial design class, helped cement my bonds with George W. Walker. Then, while I was at the office with George W. Walker, I introduced Elwood Engel to George Walker.

Q Where had you come across Mr. Engel?

A Engel and I were in the G.M. school together, and we graduated together. I was Elwood Engel's best man at his wedding, and during the years that Elwood was in the [U.S.] service, I was corresponding with Elwood. Incidentally I too was called up for military service near the end of the war period, but I was deferred from the service as a 4F because I had just had an operation in that same year, and I was considered 4F due to the surgery that I had. But, I kept up a correspondence with Elwood all the time that he was in the service. One time he wrote and said that he was considering going back to General Motors or going back into industrial design, and I hurriedly wrote him a letter and told him that if he was interested, I would do my utmost to get him onto the George W. Walker staff and what a wonderful outfit it was, and it was, indeed, for both Elwood Engel and myself. Now, the operation at George W. Walker with me was: George Walker would take me to the clients, introduce me to the clients, and then I would service the account. I would deal directly with the people responsible for the products--the chief engineer, the vice president or the president of the company--and I would return to the office and get the information as to what the product was to be and so forth from both my boss, George Walker, and the chief engineer or the vice president, and I would prepare designs and service the designs with the client. Prepare the working drawings, and this is where my four years of engineering came in as a real assist because, not only was I able to prepare my design work--my final renderings--but give the engineering department working drawings so that they could build their models. In addition to that, with my engineering background, I was able to look at the final tools and give a critique on the tools for the high-

lights and so forth prior to their going into production with their tools. I serviced several accounts that way for George Walker.

Q Do you remember some of them?

A Oh yes. they were the Eureka Vacuum Sweeper, and I serviced Baker Raulang in Cleveland, Ohio. They handled industrial tractors and all kinds of tractor equipment, and all kinds of truck equipment, and I serviced also Cockshut from Canada.

Q Farm equipment?

A Farm equipment, tractors, and farm equipment that needed aesthetic work done, and refrigerators with Admiral. But shortly after joining George W. Walker, I would watch the designers that were working on the Nash account, and, of course, they knew that I had been with Cadillac design and Cadillac engineering, and they would ask what I thought of this or that in their proposals for Nash-Kelvinator, and occasionally I would say, "No, I don't think I would do it that way. I would do it this way." I would sit down and knock out a sketch. This is what I would do, or I would knock out some sketches and crumple them up and just roughly throw them in the wastebasket not knowing that George Walker was watching my conversation with the designers as to what I would do with the Nash car line, and I wasn't aware that he was going to the wastbasket and dragging out my sketches from the wastebasket or from the designs that I'd just thrown around. Pretty soon he put me to work on the Nash account, and before long Nash-Kelvinator asked that they retain me on the Nash account as their chief car liason from the office. So, soon after joining George W. Walker to do products, I was totally involved with the Nash-Kelvinator account, and I was up to my ears in car design again!

Q In this instance, the smaller automotive companies relied on contract design work.

A The smaller companies like Nash-Kelvinator relied on George W. Walker--Packard, also, for a lot of their design input; and, of course, George Walker had a tremendous design staff, and he did a tremendous job for Packard and Nash-Kelvinator at different times. Now, when I serviced the Nash account, I also brought in to the George W. Walker group or team, both Elwood Engel and the Stobar brothers. The Stobar brothers were modelers at General Motors at the time, and Charlie Stobar I knew from working at Cadillac prior to the war as one of the lead modelers at General Motors. He was the star modeler at General Motors with his brother Leonard Stobar.

Q The clay modelers?

A Yes. I talked to George about them and soon they were doing our products. They were moonlighting for George W. Walker at night and on weekends; and during the week, of course, they worked for General Motors.

Q There was no conflict of interest?

A No conflict of interest whatsoever because all the designs that we prepared at George W. Walker's were unique to our office, and they were unique for Nash-Kelvinator at the time; and again, I was just there at the right time because my four years engineering came into such good stead it just supplemented all of my previous training that I had at Cadillac design center--it all dovetailed together, and I was able to give Nash-Kelvinator the sketches--the full-size drawings--the detailed drawings, and I was able to give the Stobar modeling brothers the right

drawings so that they could make the models. Now, strangely aside, the account, which I'll get to a little later--George W. Walker did get the Ford account after the Nash account, and I remember as one of the projects we worked on for the Ford account, was the small bus that was used around Greenfield Village. Ford wanted to update their bus, and the bus people from Ford Motor came over, and they wanted to meet the designer of the bus that they had approved at Ford Motor. They came over to see the designer and to talk to Walker about the bus as it was progressing at the office. The chief engineer, the person responsible for the bus at Ford Motor said to George Walker, "You mean that young kid is the designer of our bus," and George Walker said, "Well, he's not a young kid, he's in his thirties, but he also worked four years in engineering at Cadillac during the war so he knows what he's doing." They were flabbergasted.

Q Had they contracted the bus design out to George W. Walker Associates?

A Yes they did, and we designed the bus for them, and also we, of course, were instrumental in designing the first '49 Ford for them.

Q Which we'll get to in some detail later.

A Right.

Q You mention that this relationship became an enduring one--the triumvirate of George Walker, Elwood Engel and Joe Oros. What was Mr. Engel doing at this time at the Walker firm?

A When Elwood Engel joined the George W. Walker design group, he, too, was a designer and was responsible for various accounts, and George Walker had, I would venture, probably twenty odd accounts that he was

servicing.

Q An incredible variety of products.

A A variety of products, and there were a total of about--I'd have to add them up fast here--about half a dozen or so designers on the staff of George W. Walker. The designers came up with the design in the office. We dovetailed these designs with George Walker, and George Walker then serviced these designs with us with the clients or he would turn over the accounts to the individual designers, and they would service their own accounts with the firms. But, George W. Walker was the head, of course, of the design firm with the national and international name. He was similar to Raymond Loewy and Donald Deskey.

Q At this point you talk about a sort of an introduction to Ford, or at least a partial one, in servicing the Ferguson Tractor account.

A Well, yes. Prior to George Walker receiving the Ford account, one of his accounts was a Ferguson Tractor account, and I serviced this account.

Q At this time was Ferguson connected with Ford?

A Ferguson was not connected with Ford Motor at this time. He had left Ford. He was connected with Ford Motor prior to the time we had the Ferguson Tractor account, and he was hired by the elder Mr. Ford. Mr. Ferguson had certain ideas relative to what the tractor should be and relative to what the supplementary tractor components should be for farming. He had his own ideas. Mr. Ford and Ferguson dovetailed together with the Ford Tractor.

Q Seemed to be a natural alliance.

A It was a natural alliance, but it didn't last--Mr. Ferguson left

Ford Motor and went to England where he had his own Ferguson Tractor. Then with that opening, we also serviced the first Ferguson Tractor that he wanted facelifted, and George W. Walker received the Ferguson account from England, but I prepared all of the tractor design drawings, the preliminary modeling drawings, and I prepared all the prep drawings for the model making. Leonard Stobar and Charlie Stobar made the final model for the Ferguson Tractor, and I also recruited engineers--my friends from Cadillac engineering--to do the final detailing of the surface development for the Ferguson Tractor. The gentleman that did the final engineering detailing for the Ferguson Tractor was Walter Kirsten. He was a Cadillac engineer who did the final surface development for the Cadillac cars at Cadillac engineering, so I made close friends both in engineering and design. I utilized all the help I could get. It was very interesting, but when George Walker went to Europe with the proposal to present to Ferguson Tractor, the tractor had preceded George, it was sent to England.

Q You sent a fully operational...?

A A fully operational tractor was sent to England. George was received with indifference, I would say mildly. Ferguson was totally disenchanted with the tractor design that I had prepared for our office and totally disenchanted with George W. Walker's effort, and he said, "George, we want you to come to our meeting and listen to our board and hear what they think this tractor should look like versus the tractor you sent us." Ferguson headed the meeting at the end of the table I recall George telling me. George told me that Ferguson stood up as chairman and asked each member around the table what they thought of this tractor, and

they all said that it should look like a Rolls Royce. Ferguson's Rolls Royce had just driven in with his wife, and "It should have that kind of an appearance for his tractor," he said, at which time George W. Walker was so infuriated with this charade going around the table that George W. Walker said, "They didn't really need his services as a designer, and he was sorry but if they wanted a Rolls Royce front end to their tractor, they should hire an English designer, and they could probably get that, or why don't they copy the Rolls Royce front end and put it on their tractor." With that, he left the meeting and went back to the States. Of course, I was disappointed that the tractor wasn't accepted by Ferguson, and I felt a bit chagrined that all my effort went down the drain and also felt embarrassed that the office design was not accepted.

Q But, it didn't faze George W. Walker?

A It didn't faze George W. Walker at all, but interestingly enough as an aside, this theme, which was the center spinner, eventually became the theme for the first tractor that we, as consultants, did for Ford Motor. I used that same theme that I used on Ferguson Tractor which was not accepted by Ferguson, and I modified, varied it and used it as the theme for the Ford Tractor. It was a highly-successful tractor and became a benchmark amongst the tractors of the time.

Q That's interesting. Oddly, Mr. Ferguson's products in later years adhered fairly closely to your original design.

A I don't know if it did or didn't, but all I know is they didn't accept our theme, and he said it should look like a Rolls Royce.

Q Well, it never did.

A George Walker left in a hurry and came back to the States totally

disgruntled and with jet lag. Soon after the Ferguson account problem with the tractor in England, George W. Walker's office received the Ford Motor account to come up with designs for the 1949 Ford.

Q Can you elaborate on how that came about?

A Yes. It came about because at the time Ford Motor had a product to go as the 1949 Ford, but the new management at Ford Motor--Mr. [Ernest] Breech, and Mr. [Henry] Ford II, Mr. [Lewis] Crusoe and [Harold] Youngren--all thought that the product was too heavy and too large for a Ford car. It would have been prohibitive from a cost point of view to produce this car as a Ford.

Q This was 1945, and the then head of design....

A This was 1946, and the car was intended for 1949 and had Ford Motor, we were told, have come out with that original product that was designed at the time under the original Ford design team headed by Mr. [Eugene T.] Bob Gregorie, the car would have been too costly to produce and would have cost Ford Motor a lot of money. So, we were asked to contribute ideas for the 1949 Ford. George Walker opened up the design problem to the whole office, and we all contributed ideas for this car. In addition to that, George W. Walker's office also had some outside designers that were not on the George Walker's office direct payroll contributing ideas to the design office of George W. Walker so we could evaluate and submit along with our ideas to Ford Motor for the 1949 Ford. I do recall some were submitted by a design team that was composed of [Buzz] Grissinger and his partner. There were some designs that were contributed by a designer named Dick Caleal, and his ideas were also put into the hopper. Mr. Walker prepared a large portfolio that he submitted to the Ford management--very professionally done--and a theme was picked from the set

of drawings to start the full-size clay development. This theme was primarily the 1949 Ford beginning. Now the car body main theme was derived from the renderings and the models that were submitted from the office, and when the car was finally approved, the Ford car from George Walker's office was approved with a proviso that additional work be done to the car's front end and back end, which after approval was done. If I could go back now and give you the details a little bit more in sequence: After the approval of the Walker car theme, Elwood Engel and I were assigned to the development studio that was set up in the original design section at Ford's, right across the street from Greenfield Village.

Q This was the engineering laboratory?

A This was the engineering laboratory, and we were given a separate area to develop our model. We had a guard posted outside our studio door so that no other person in design from the original Ford design staff could see what we were doing, and they, in turn, had guards posted at their end so we could not see what they were doing. We progressed with our model, and I handled the development of the model for George Walker's office to insure that the model was going as to the theme that was selected. I kept George Walker informed of changes that were required due to package or mechanical or manufacturing reasons as adjustments had to be made, and I worked very closely with the engineers that were assigned to us from Ford Motor in the studio to interpret the design properly--the body engineers--and to insure that the clay work was representative of the theme as was intended. George Walker was completely aware of every detail that was happening to the car, and although I spent the full day and late into the evenings on the car at Ford Motor, I'd

also have enough time to brief George in the morning or late afternoon and return back to Ford to continue the operations.

Q Excuse me. Prior to the approval, there had been set up, perhaps by Mr. Breech and Mr. Ford--young Henry Ford, Henry Ford II--a sort of a competition, was there not?

A Yes. The competition was set up between George W. Walker's staff versus the Ford Motor group headed by Gregorie--Bob Gregorie's group.

Q He was the resident designer.

A Who was the resident chief designer for Ford Motor, and the instructions were given that neither group would see the other's work. The only person that would travel between the two studios was the chief engineer and vice president of engineering, Harold Youngren. Now, I felt towards the end that this was violated a little in respect that Harold Youngren did bring in Bob Gregorie to see our model just before we were going to paint it. It was finishing up time, and Bob Gregorie must have been in about the same position because we were both going for the same completion date. But, I felt that in as much as we didn't get a chance to see their model, that Harold Youngren having brought Bob Gregorie in gave him a preview of our effort and [that was] a violation of the original pact that was set up between the Ford designers and George W. Walker's group.

Q Do you think there was any, not only intention, but do you think there was any way that Mr. Gregorie could alter his clay model to conform more closely to yours?

A Well, at the time I thought of that, whether he could adjust his model, but I reported this to Mr. Walker at the time. I felt that there

probably wasn't any way that radical adjustments could be made due to the time element involved. It would be too much of a change and most likely it totally couldn't be accommodated. As it turned out, the models were dramatically different in concept, and the Ford management group (Mr. Ford, Mr. Breech and L. D. Crusoe, Mr. Youngren) on the final analysis approved the George W. Walker proposed 1949 Ford.

Q What were the differences between the two proposals?

A The major difference between the two cars were primarily that the 1949 Ford eliminated the heavy belt line, where the hood wrapped around into the doors, as a first roll from the window down, and then the main body roll began. That was the traditional General Motors approach to body design. This was an industry general body design approach at the time. But the '49 Ford eliminated the heavy belt line of the hood wrap around the A pillar which had been a hold-over from previous years and was still prevalent when the '49 Ford was introduced. Now when the '49 Ford was introduced, shortly afterwards, Studebaker came out with a similar approach to the body where the hood was washed out before it wrapped around the A pillar, and there was just a small belt wrapping around the A pillar primarily as a molding for window frames. That was the big difference between the two car lines. Of course, there were other differences, the plan view of the Gregorie model was more squared off, and the Ford model was more aerodynamic in the sense that the back end pulled in a little bit, and the front end pulled in a little bit. The body sides were a little more aerodynamic than the Gregorie's model. The Gregorie model was more traditional in its approach, and it also appeared heavier. The other main difference was that our model with the

hood the way it was designed blended down into the front end of the horizontal grille work, and integrated into the grille a lot more thoroughly than the traditional grilles and hoods of the time. It was a forerunner of aerodynamics in a sense.

Q Yes. Your's was the first car, with the exception of certain one or two classic cars, to first make a mass production model to utilize a rounded, soft approach.

A Right. It was a less boxy car. It was more aerodynamic, but, by the same token, we had some very stringent requirements in the package. One of the peculiarities of the 1949 Ford was that we had to design the deck lid and the trunk to be able to accommodate the milk cans in the vertical position, and that was our criteria for setting up the interior space of the trunk as a request from engineering. To be able to stack the milk cans vertically just as much as the golf bag has always been a criteria to make sure that the golf bag fit into a trunk.

Q Well, you did an admirable job. As you well remember, the step up is quite low.

A Right. Now I do remember [the elder] Mr. Henry Ford came into the studio when our model was approved, and looked at our model, and it had been painted a beautiful beige, tan beige, color. Very light, and Mr. Ford walked around the car with his wife and Ford management. He seemed to approve of the car very much. I was quite concerned wondering if he would really like the new approach to the Ford car, that he had fathered. When the '49 Ford clay model was approved, it was approved with two contingencies: that additional work be done to the taillights and additional work and new thoughts be given to the grille. So the grille was

not approved, nor was the taillight approved.

Q Before we get into that in some detail which I'd like to, and this may not be the place to ask you, but I want to throw you a curve. The original plaster model, there have been two or three accounts of exactly who fabricated this or, perhaps, it's the first model you did for the production car, but I have read accounts by Mr. Holden Koto who talks about his being approached by Richard Caleal to assist him in making a three-eighths model....

A A quarter size model.

Q A quarter model for the car, and Mr. Koto says that he was at the time at Studebaker, Mr. Caleal was on your staff--the Walker's staff--and he brought him some design [package] sketches.

A Who brought them?

Q Mr. Caleal brought them to Mr. Koto and said, "I need help in putting together a plaster model," and according to Mr. Koto's account, he and Mr. Caleal worked on Mr. Caleal's kitchen table several nights to complete this scale model. Can you expand or elaborate or confirm that in any way?

A Well, first of all, I don't know what Mr. Caleal presented to Bob Koto, and, additionally, I don't know what Bob Koto contributed. I can only tell you that as one of the designers on Walker's staff, we prepared our own designs, and I can tell you, yes, Dick Caleal came in with a model. The model was very similar to some of the ideas we too had been submitting in design form, and this was a strong consideration. I can tell you that the body work of that model was in a similar vein to the development of the '49 Ford. Now, I'm saying the body work, which

includes from the belt down, the sheet metal, and the greenhouse might have been similar, but I can't affix it that tightly because the greenhouse we did have additional work to be done with the four-door entry part of it, and I don't believe that the quarter-size model that Dick brought in was that representative.

Q It was at a very early stage in the development of the....

A And so I would say yes, the Caleal model was a strong contributor to helping formulate the theme of the main body sections, but that's where it ended, and the '49 Ford utilized that model plus other designs that were similar, as a composite to develop the '49 Ford. I kept Mr. Walker informed of the model's development that Ford management had selected with Mr. Walker. And, I was requested at the time by Mr. Walker to insure the development of the model reflecting what management had picked out as a theme for the '49 Ford. Now, does this answer your question?

Q Yes.

A Other than that, I really do not know where the model came from or whether Dick Caleal produced it, or if he had collaborated on it or to what extent. I have never asked Bob Koto about his direct contribution to that car model. I don't think he's asked me, and Dick Caleal never told me per se how the model got to the office or whether he had developed it. I understood he had developed it or may have developed it in collaboration with somebody else, but as I mentioned before, Mr. Walker did hire from the outside other designers, and Dick Caleal was one of them, and also Buzz Grissinger and his partner contributed some ideas.

Q They were independent?

A Yes, to the design effort. But it does boil down to the main point which is: that the contributions from George W. Walker's office were the ones that were selected to be developed in competition with the proposal from the Ford group, and when the two full-size models were completed, George W. Walker's model was selected as the '49 Ford with additional work to be done to the back end and to the front end. With that charge we then proceded after approval to modify the back end and to do considerable work to the front end to make it more acceptable to Ford management.

Q I think you clarified that judiciously to the point where we can conclude that the Caleal/Koto collaboration was very early in the design process.

A Was very early prior to the full-size development, but I will say that that little model that was submitted by Dick Caleal was a strong factor in determining the original concept or to help determine the original concept of the '49 Ford body design, along with similar concepts that George W. Walker submitted to Ford in design form. There weren't many models. There were two or three models submitted, and Caleal's model was one of them.

Q Oh, you had other clay models?

A Oh yes. There were other models.

Q They were a collaborative effort as well among the staff?

A They were primarily from the George W. Walker's design office.

Q Now you're being rather modest about your own input. Can you sketch exactly what contributions you made to the final design? Mr. Walker gave you very much credit for the design, I would think?

A First of all, the model theme was selected by the Ford management

group along with Mr. Walker. Mr. Walker then asked me to guide the full size development of the '49 Ford car, and to insure that it would be to package and to insure that it would be properly worked out for engineering reasons, manufacturing reasons, and cost reasons. Of course, most importantly, to adhere to the selected theme. To that theme of body work, yes, I, too, submitted along with Elwood Engel and other designers from the office many designs pertaining to the Ford '49 car.

Q It was a team effort?

A It was team effort, and Dick Caleal also was present at the time in the studio while this car was being developed, and I do recall that Dick did once or twice want to increase, for instance, the length of the car, and immediately I alerted George W. Walker that this shouldn't be done because we'd be falling into the same trap that the original Ford proposal fell into which was mainly size, because with each inch that you added, you added weight and cost. And so I tenaciously held to the 195 inch overall length which was the original package.

Q Now, when you say package, of course, you understand, and I'm beginning to understand, that this was the body engineering....

A The body engineering package, but, of course, it had nothing to do with the aesthetics around the package, and the only part of the package that was the engineering contribution that was mandatory was this milk can deal, and we had to hold to that; but after the car was approved, Elwood Engel did contribute then his theme for the taillights. The original Ford approved 1949 Ford model had a vertical taillight. The original front end was a horizontal theme which was changed to the spinner type.

Q I wonder if you could develop for us, Mr. Oros, the reason for the dramatic breakthrough in automotive styling that you and your associates with the George W. Walker firm accomplished with the '49 Ford. It had been quite a break with tradition, had it not?

A Yes it had, and in a sense, the '49 Ford was also derived and influenced by the aircraft of World War II, and that is evident, of course, in the front end. It is also evident in the clean lines of the '49 Ford car. It was different in respect that it didn't have a lot of bulbous sections. It had a nice tumblehome and a smooth line to it.

Q What does tumblehome mean?

A It means the curvature of the boat's hull in section--the way a sailboat rolls under and over, and that is called the tumblehome.

Q Is that a nautical term?

A It's a nautical term, but the aircraft industry had its effect on the whole automotive industry, of course, and with the Ford car and with the start of the 1949 Ford spinner front end. Now Ford management on approving the '49 Ford originally wanted something more destinctive that would give it an instant hallmark so that it could cry out to the world "This is a new Ford car." So, we then went to work, and all my tenure at Cadillac engineering, this time came to good assistance because I had spent a lot of time designing venturi sections for the tanks to repel shells from entering the engine compartment yet permitting all of the air to go in. So, with the venturi concept we decided to let air volume into the core. I started with the aircraft concept, and I picked up the engine cowling idea around the radial Pratt and Whitney engine, with the prop spinner in the center, and that set our theme then for the '49 Ford

front end. Now, when the engineers saw this theme developing, and particularly the Ford body engineer at the time, the body engineer, felt that this absolutely was wrong as far as permitting air to get to the engine and to get to the core because there was too much blockage, he thought, by the front-end spinner cowling, and he said it positively would not work. But, I told George Walker that, in my judgement, it would work very well because the spinner front end, the spinner center piece which was cone shaped into the cowl, the round drum around the center hub, was designed as a venturi section, and the wing from the cowl out was also designed to facilitate the venturi. So, I said it should be very good for the wind tunnel requirement. What happend was, this spinner front end being so radical we decided not to put it on to the main car itself. We put a more conservative front on the main car with a new horizontal theme only, and we put the spinner front end on a front end buck which was a model from the cowl forward only of clay. We developed this aside so that we wouldn't aggravate the engineering people too much, and it was a controversial front end in my judgement as well, whether it would be bought. I was all for it. I thought it was great, and it was right in the groove for the time because the war had just ended, and people were aware of the aircraft industry and its effect on everything, and so we developed the spinner [theme] on this side buck.

Q When you say we, really it was your innovation.

A It was my personal design for the front end.

Q It had your signature on the car.

A It was my personal signature on the '49 Ford. It addition to this, as the front end was being developed, we did get members, of course, of

the manufacturing plus cost people that came in to evaluate what we were doing for the front end and the back end. I had to make sure that all the front ends were within cost and manufacturing feasibility; and particularly, I was most conscious of the spinner front end that I was fathering and bird dogging through. I had talked to Walker about this front end, and George Walker thought it would be great for the Ford car. Now, as the front end developed, an incident happened which was that a person in sales with a very responsible position at Ford at the time, walked through the studio as we were developing the spinner front end. He looked at this model that was going on the buck with this airplane-type front end, and he gave it one look, turned to his people that were with him, and he said, "That is out," and kept on walking out of the studio.

Q The spinner effect?

A Yes. This person said, "We're not going to do that." In other words, he was completely nonplused when he saw this front end, and just kept walking by. But he wanted to say something to indicate his authority or something relative to the '49 Ford's development. The model developed, and it was submitted to the wind tunnel. In the wind tunnel it proved to be exactly as I had predicted. It cooled beautifully, and much to the surprise of the engineer, it worked.

Q At this point, if I could take you back a bit, your clay modeler at the time was so surprised that he--what did he do?

A I'm glad you asked me about that. The car modeler at the time who worked on the spinner front end was Herman Sommers, a German modeler, a very capable person, and when this responsible person walked through and

said, "And that one is out absolutely," he just put his tools down and looked at me as much as to say, "Well, what next, Joe?" I just turned to Herman as the man was leaving the studio, and I said, "Herman, just keep modeling," and Herman proceeded to continue his modeling, and we finished the model. It was submitted to test prior to approval, and in the wind tunnel testing, it worked like a charm, and it proved that the venturi section worked. So, it proved effective, and the engineer that thought it would not work was absolutely surprised. Now, during the show, then management picked the front end that was not on the '49 Ford, but they went to the side buck with the spinner front end and requested that the spinner front end be put on the Ford car, and that was the one that was approved for the 1949 Ford front end. I had kept George Walker apprised of what was happening in its development. At the time, George Walker was in Florida vacationing with Mr. Breech. He was back shortly afterwards to see what the new model looked like after we had put the spinner theme on to the front end of the main model. Also on the back end Elwood Engel contributed his taillight theme which was rather nondescript on the original proposal with the vertical lights built into a vertical theme, he turned the taillights so they would be horizontal, or like aircraft windsplits.

Q On the rear quarter?

A On the rear quarter, and this gave it the distinctive touch to the back end. So, then the '49 Ford was properly launched with a distinctive back and a very dramatic front end, and the only thing left to do after that was the side ornamentation of the bright moldings and to develop the instrument panel and the interiors along with it. Now, in the develop-

ment of the instrument panel, Elwood and I had brainstormed what we should do to the instrument panel. I suggested to Elwood that we ought to concentrate our design effort and make our design of the instrument panel a center cluster theme, because in my judgement, the center cluster theme would be the least expensive way to house all the instruments in one unit so that they would be very easy to assemble for manufacturing and would be the least costly, and it would also be very dramatic. In addition, I said it also would give us the effect of an aircraft feeling in keeping with the front end. So, we proceeded with the center cluster theme with a peaked section through the instrument panel as a wing section. We related the interior instrument panel to the aircraft industry as well with our front end and the back end.

Q So, in effect, you had in one broad stroke--you had brought aerodynamics back to the....

A Without realizing it, we had set, at an early date, some of the first aerodynamic considerations for an automobile which was the aircraft spinner theme with the venturi system for the front end and an aircraft derivative windsplit for the back end, and an aircraft feel for the instrumentation--instrument panel cluster.

Q Plus the very soft, smooth....

A And, of course, the smooth exterior shell-like approach to the car itself.

Q The round look?

A It was a major departure from the original automobiles of the period, and it was not, I understand, a total bang-up accepted design at the very introduction, but it grew in acceptance. It was a new concept

that the people grew to like very much, and it became very very successful, so we continued then....

Q Forgive me, I want to ask one quick question. Back to the instrumental panel, one factor which you designed into it and which I'm sure was under consideration was the convenience of having all of the vital gauges and devices that told the motorist exactly what he needed to know about the operation of the car in a cluster?

A Yes, a center cluster, and this was unique for the time as well, and it proved to be one of the least expensive Ford instrument panels that was ever designed, and I don't believe there's been a less expensive one designed since. In addition to that, I don't think there has been one that was simpler yet as strong in concept as the original '49 Ford instrument panel.

Q And as utilitarian?

A And very utilitarian, with no frills.

Q But very exciting.

A Very exciting.

Q Today, I think, as you may have said, a hallmark in terms of instrument design.

A Right.

Q What is the precise term for the...?

A Instrument panel and the cluster. Now, the theme then of the Ford front end we maintained on the Ford car and developed the spinner front end theme for ensuing models. Heresay has it, I cannot say for sure that this happened, but a friend of mine mentioned to me that had been working at General Motors at the time, that when the Ford front end was about to

be introduced, that in the design section at General Motors they were seriously considering a similar front end for the Pontiac car, but that was not used because the Ford was coming out with almost the identical theme which, in a sense, shows how the car world and design works, namely that the aircraft industry had a tremendous impact on the automotive design world at General Motors, Ford and Chrysler in establishing themes that were related to the aircraft.

Q Certainly you're right.

A It influenced fins and front ends and taillights and so forth.

Q Well, you've completed the design, and it has been approved, what's next? Forgive me, what I meant was, it's gone into production....

A The car went into production, and it was a tremendous success.

Q Tell us something about its reception with the buying public.

A The buying public by and large was very much influenced and very impressed with the Ford car. It was a new statement. It did the job it was required to do. In other words, it took Ford out of the doldrums and put it on a new footing, and this was all in keeping with young Henry Ford's new direction for Ford Motor Company.

Q It won a design award.

A Yes, it won design awards in Europe and France for the concept of the '49 Ford, and it was a new fashion, new trend-setter, and, in addition to that, Ford Motor's design effort from that time on had a more youthful and more spirited approach to car design. In fact, to an extent, we felt at Ford that we pioneered in design aesthetics some very useful, youthful themes and spirited youthful appearances to the Ford cars, and

we were considered by the writers of the 'Fifties as more youthful than even General Motors' approach with the Ford products.

Q It won a fashion design institute award in 1949.

A And it did that too.

Q So, it's successfully launched, and you're, in effect, the toast of your....

A It was successfully launched, and were the toast of the industry, and the car was a total success and just what the doctor wanted, but we did not retain the Ford account. We were not retained as consultants for the 1950 facelift.

Q What happened?

A What happened was something strange that I never could understand, and I guess George Walker couldn't understand. George W. Walker lost the Ford account. I imagine it was felt that we did our job, and we were well paid.

Q "Thanks a lot fellas, we'll go on from here."

A "We'll go on from here." Then what happened, I understand, was that a tremendous effort was made to change the 1950 front end of the Ford car from a spinner type to some other kind of a front end that would not be such a strong mark as the spinner type for what reason, I don't know, and I understood that the design office at Ford Motor Company worked desperately to come up with new front-end ideas, and they were not successful. Finally, Ford management bought only a minor facelift to the '50 Ford which was to change the parking lights from being integrated into the center bar, to a little wrap around pad detailing with the parking light built in. The grille was kept intact because they couldn't

come up with anything that was as good or as dramatic, and Ford management felt that it would be too risky to abandon such a tremendous theme. The Ford design group at the time just added a new hood ornament above the grille on the hood, and they changed the lock detailing on the decklid. That was the extent of the change that they incorporated, and Ford management then invited George W. Walker and his staff back to Ford Motor to continue consulting on the total gamut of the Ford products.

Q Now at this time was this a result of this episode? At times you've described the fact that, well, perhaps, it's been happening over a period of months--someone at Ford--perhaps, Ernie Breech--was importing a phalanx of General Motors design people.

A What had happened was that we left Ford with the '49 Ford after its introduction, and Ford management then hired from General Motors designers--[John] Oswald was hired from General Motors who had been with Oldsmobile to head the department of design for Ford Motor Company, and George Snyder was hired from General Motors who was a special projects designer at General Motors and a very capable designer, and, also, Gene Bordinat was hired.

Q Your old colleague and classmate?

A Who was at Chevrolet studio, and he was also a classmate of mine at the General Motors school along with Elwood [Engel] and others, and we were asked to come back then for the 1951 [model].

Q And Bob McGuire also?

A And Bob McGuire was also hired at that time in this group.

Q Oddly enough, a former studio head, Frank....

A And, of course, then Frank Hershey was there also. So, there were

quite a few people that were hired by Ford people from General Motors. They were Frank Hershey, John Oswald, Gene Bordinat, Bob McGuire and George Snyder.

Q Do you think they were the ones who tried to...?

A They had the full responsibility for facelifting the 1950 Ford, and they spent a tremendous effort to try to change the Ford and leave a mark of distinction as their contribution for this car, but they were totally stopped with the strong theme of the car. They couldn't beat it, and they couldn't come up with anything better than management was happy with, so Ford management then decided to stay with the car theme as it was set by George W. Walker.

Q This is very odd that this high-powered phalanx of imported designers couldn't make any substantive changes in your original design.

A Well, they made a lot of change contributions, but none of them were accepted. Now, I don't know what they looked like because we were not part and parcel to the 1950 theme developments that were occurring, but we heard after we came back that a tremendous effort had been made, and without any avail, they had to resort back to facelifting the original '49.

Q Years later did you ever sit down with maybe Gene Bordinat and say, "Gene, what did you try and do to our design?"

A Well, you know that would have been something pretty interesting to talk about--pull Gene's leg a bit--but I never did.

Q You were too kind. Well, please continue--you're back....

A After we were hired, George Walker asked that I concentrate in the Ford end, and he asked that Elwood concentrate his efforts in the

Lincoln-Mercury end, and that's the way we divided our work, and then we overlapped as well. We concentrated in each area, but we overlapped into each other's areas. In other words, I spent most of my time in the Ford Division lineup of cars and trucks, Elwood spent most of his time in Lincoln-Mercury. But, he, too, would walk into the Ford studio area and talk with me about what we were doing and come up with some suggestions and critiques, and I, too, would walk into the Lincoln-Mercury area, and I, too, would come up with suggestions and critiques that I would pass on to Elwood or we'd talk about with George. That was the beginning of the triumvirate team effort of the George W. Walker and his assistants Joe Oros and Elwood Engel. So, we were called out in the contract and specifically inserted.

Q But it was a consultancy contract?

A It was a consultancy contract. We eventually joined Ford Motor. Now, on May 2nd, 1955, George W. Walker, Elwood Engel and I joined Ford Motor Company officially. We went on Ford Motor's direct salary. Mr. Lewis D. Crusoe hired me directly and Elwood; and I remember George jokingly told me, he said, "You know what Crusoe told me?" I said, "What did he tell you, George?" He said, "That I was a piker all these years."

Q What did he mean by that?

A He meant that he didn't pay us enough money. But he did, really. He was a great guy, So, on May 2nd, 1955, we joined Ford Motor officially, and then on May 12th, 1955, the lineup of the studio heads were as follows: (per blue [management announcement] letter of that date) it was: Ford Styling Studio, R. H. McGuire, Chief Stylist; Mercury Styling Studio was E. Bordinat, Chief Stylist; Lincoln's Styling Studio was John

Najjar, Chief Stylist.

Q Who'd been with the original unit when you came to the company?

A Yes. And Special Products Styling Studio was Roy A. Brown, Jr., Chief Stylist; Staff Advanced and Special Styling Studio was A. S. Tremulis, Chief Stylist, and this was the composition or the complement of the whole styling studio.

Q The lineup?

A The lineup.

Q You've left off two important people on the second page of that blue letter.

A Yes, you might say where is Joe Oros and Elwood Engle? Well, we were still there as we had been during the previous years, mainly as contributors to the Lincoln-Mercury and the Ford end which was divided between Elwood and I.

Q Can you read the actual language of the second page of the blue letter?

A Yes, The second page of the blue letter says

> Elwood Engel and Joseph Oros will serve as staff stylists reporting directly to the Vice President and Director of Styling. They will continue to work with the styling studios on matters relating to exterior and interior styling of all vehicle lines. Further announcement of styling office organization appointments will be made in the near future. Signed George W. Walker, Vice President and Director of Styling.

Q I think you meant 1955.

A Right.

Q Well, that clarifies it very nicely. Now, you're about three or four years ahead of yourself in terms of chronoogy. Could we get back to

the next development which, I think, you said would be the 1951 Ford, and whether or not it was a departure from the '49/'50 Ford or whether it was an extension of it?

A Well, the '51 Ford was an extension of the '49 Ford. The '49 being so highly successful and the '50 equally, we did not want to abandon the theme....

Q The basic theme?

A The basic theme, and it proved so right. So, we continued with the spinner front end and developed the spinner front end as dual spinners for the '51 Ford and....

Q Now, when you say dual spinner, what precisely do you mean?

A Well, by dual spinners, we've taken the center aircraft theme from the center of the grille that was there on the '49 through the '50, and we literally added two pods on the horizontal grille bar, and still in keeping with the aircraft theme of the twin engine. It was still the aircraft's spinner front end derivative. We continued that theme then through '51 with the rest of the car in minor facelifting. Now, of course, what happened at this time and prior to the '51 and in the development period of the '51 Ford car was that we were consultants at this time. We were not officially on the Ford payroll, only as consultants. As consultants, we had a tremendous task which was to meld in properly with the Ford design office. There was, without question, a lot of competitive resistence, to put it mildly, in the respect that it was thought by some of the Ford designers that, maybe, they were not getting a fair shake, and that too many of the products were being influenced by the consultants of George W. Walker, Elwood Engel, and Joe Oros as a

team. We had the ability as consultants and [authority] given to us by Ford management to start new clay models in the studio area in competition with any of the models that might be going. If the consultants felt they could do something better than was currently being done by the Ford group, or if it was felt by the consultants that it was too difficult to incorporate their thinking to a model that was in progress by the Ford group at the time, and to make changes to it which would have radically changed that model, then we had the ability and the power to start our own models as consultants and to give forth with our ideas as to what we thought the models should look like--across the board in Lincoln-Mercury and the Ford end and also the truck end. Now, of course, this caused a lot of tension.

Q With the regulars?

A With the regular staff, and every effort was made to impede, subtly of course, any design contributions that we may have had that would be in competition with what they were at Ford trying to sell Ford management. So, it was a terrible way to work in that way because of the competition between the regular Ford staff versus the consultants.

Q Well, the stress and the tension must have been terrific.

A The stress and the tension were tremendous, and it was unbelieveable. After we joined Ford Motor, officially, and George W. Walker became Vice President, Elwood and I were his staff consultants, then the tensions eased and were completely eliminated excepting that some of the underlying tensions were still there in subtle ways. As newly hired at Ford design and to make sure that we all did the right things, we as staff consultants to George W. Walker had it difficult even then to

insure that we did meld properly with the designers, not to ruffle too many feathers. Yet, if needed, to change the products because now they were our direct responsibility. In other words, we had the direct responsibility--George W. Walker and his staff--to insure that all the products were to the highest quality.

Q You make a point in your manuscript which, I think, you may have been about to make here that, in spite of this, there was a benefit to this tension and competitiveness?

A Yes. In spite of it, there was a benefit in respect that it insured Ford management that every effort was being made to come up with the maximum effort in designing the Ford products, so the tension was good in that sense, but by the same token, it was quite wearing in another way.

Q But the company got a maximum return.

A It got its maximum return. Of course, along with this in top management, specifically in product planning, there were many young people that were in product planning that also wanted to make sure that everything was exactly right and going to be right for the marketplace, and sometimes we duplicated our efforts more than once just to please everybody. This also was a strain.

Q I can imagine. One possible obstacle was George Snyder, you mentioned....

A George Snyder, shortly before George W. Walker took his Vice Presidency, was assigned to Ford of Europe, and he remained then in Ford of Europe and looked over all of the Ford European car products and the design effort.

Q This is kind of an interesting development. Normally, in those years, you weren't in the habit of sending, or were you, overseers to the international design studio?

A Not too much prior to that time, to my knowledge. George Snyder was one of the first that went to Europe, and he did a good job, but eventually George Snyder returned to the United States with medical problems and shortly afterwards passed away, unfortunately. Now, as the cars developed from '52 on and starting with the '52 car another theme was set that was a hallmark. I set the theme of the round taillight for the Ford car. Mr. L. D. Crusoe thought that the round taillight on the '52 Ford was too big, and he was concerned about its size.

Q Why?

A Well, he just thought it was just too large, and really it wasn't.

Q Was he concerned about the effect a red light would have on the...?

A No, he was concerned that the taillight diameter was too large.

Q Out of proportion?

A Out of proportion in his judgement, and he wondered if it could be reduced. We did reduce it for Mr. Crusoe, I believe, something like a half inch or thereabouts, or three-quarters of an inch in diameter, but oddly enough, that taillight on the '52 Ford finally grew in size to the size of the 1959 Ford taillight which was, oh, several times the diameter of the original 1952 Ford taillight, and it was a continuing theme through those years with many detail variations. Again, the original '52 Ford taillight was a derivative theme of the aircraft jet exhaust system. So, it proved apropos to the Ford car as we continued with the spinner front end and with the round taillight as hallmarks of the Ford car products

through the years.

Q I note here something I'd not noted before that on the '52 Ford you have got, in effect, a tri-motor effect.

A Yes, that's right. We were spinner happy.

Q But it worked.

A Right, it did. Now, along with the '55 Ford car development, an interesting aside, at the time the '55 Ford was being approved, the 1955 Thunderbird was being developed in the Ford studio area.

Q Which was your responsibility?

A Which at the time the '55 was being developed, we were not yet officially in Ford Motor as Ford Motor employees--we were still consultants, but the '55 Ford had an effect on the original '55 Thunderbird; namely, that we used the headlight bezels.

Q Which are the outer cowling?

A Outer cowling of the headlights from the '55 Ford for the start of the Thunderbird front end plus the '55 Ford taillights. The Ford studios chief was Frank Hershey, and under Frank Hershey, Bob McGuire was his exec [executive designer] for the cars; and for Bob McGuire, Bill Boyer as manager of the Thunderbird special studio, which, at that time, was set up as a special area to develop the Thunderbird.

Q It had not yet been named?

A It had not been named. Now at that time, again, we were consultants, and I was in on the early beginnings working, consulting, not only on the Ford cars, but, of course, on all of the Ford line of cars including the '55 Thunderbird and the trucks. And so the '55 Thunderbird was really an inspirational beginning to try to counteract the [effect of

the] Corvette from General Motors.

Q Which had been introduced 1952?

A Something like that. Frank Hershey thought it would be a good thing to try to come up with a specialty type car that was being developed in the special studio which was managed at the time by Bill Boyer who worked for Bob McGuire, chief stylist.

Q Before we get into that, I wonder if I might bring you back a couple of years, or a year or two? You're largely credited with developing the hardtop effect for Ford. Can you describe that briefly?

A The hardtop effect for Ford?

Q Yes.

A Well, yes, the Ford hardtops--the greenhouses--were developed on the Ford cars as a reaction to efforts by General Motors with some of their hardtops that they were introducing, and the Ford hardtops were unique from G.M., and they were in addition to the sedan lineup. In other words, the greenhouses were assembled on the line along with the two door, four door sedans, with the specialty greenhouses added. Now, actually some of the work of the early Ford such as the precursor to the hardtops was, of course, the 1950 Crestliner. A new roof treatment was added to the 1950 car and a unique two-tone was added delineated with body molding--a swept-back design on the body side.

Q Almost an air foil look?

A And with the greenhouse with the vinyl top. This was the least expensive way to get to the feeling of some kind of a hardtop appearance, on a specialty model. This original model of the Crestliner is attributable to Bob McGuire's efforts as the chief stylist for the Ford studio,

and his designers were responsible for this appearance. It proved very successful in the marketplace. It was an effort of, again, Hershey, McGuire, and their team, and it was primarily a Ford design effort. We, as consultants, consulted with the Ford group as our contribution.

Q You meant Hershey and McGuire?

A Yes, Hershey and McGuire. And, again, it was a successful stopgap. Then, of course, in 1951 we added the hardtop version to the '51 lineup in the car body design.

Q Thanks for that. I wonder if we might then consider the story of the, if you think its apropos at this point, the story of the development of the Thunderbird that you were beginning to do?

A Yes, the Thunderbird developed in the specialty place with Bill Boyer being the manager of the studio working for McGuire under Hershey, and then as consultants, myself, in and out, contributing to the car's development, and specifically things that I can consider I had influence on was the development, of course, of the '55 Thunderbird. The bezels, ironically, strictly for cost reasons, came from the '55 Ford which I had developed. Then, in addition to that, I had made a suggestion to add the louvers and the continuation of the round taillight from the 1955 Ford. The character line through the door into the louver area. I made that recommendation working with the designers and Bill Boyer. The front end was developed by the studio. Again, it was team effort. You have to realize that all of the design work on the cars has never been a sole, one-man operation, never, because it's team effort. There are a lot of designers. A designer may have the germ of the idea of what the front end should look like. He may set the pattern, but by the time he's

through, other designers will have added recommendations and suggestions and so forth to improve it. So, it's a team effort in that respect, and, additionally the whole car, all of its appointments, takes a lot of effort where physically it would be too much for one person, so one person cannot say, "I did the car." It's just too much. Lay people always ask this question, "Who was the man who designed such and such a car?"

Q Especially the Thunderbird.

A And especially the Thunderbird. Well, it isn't one man, it's a group of men that have pooled their ideas together and brainstormed the ideas and put it all together. That's generally the way it works. Now, Bill Boyer remained in the Thunderbird end of the business for me for most of the years, in fact, almost all of the years, I kept Bill Boyer with the smaller, sportier type cars. I kept him as my manager in the Thunderbird studio. Now, I'm ahead of myself. If I may retrogress just a step?

Q Please do.

A I've got to get back to basics. On March 19, 1956, the styling office reorganization occurred, and I was appointed chief stylist of the Ford styling studio officially. The blue letter read:

> Mr. Oros was formerly special staff assistant to the vice president and director of styling. The appointment of Mr. R. H. McGuire as chief stylist of the newly expanded staff advanced studio is being covered in a separate communication.

Bob McGuire took over as chief stylist of the special advanced studio, and I then formally took over as chief stylist of Ford studio and the trucks which included also the interiors at that time. It was both the inside and the outside. Having been given this responsibility, I main-

tained Bill Boyer as continuing with the Thunderbird studio because he was associated with the development of the first '55 Thunderbird, and did a remarkably good job as a manger, and pulled it together, and worked well with the management group, and was liked by everybody, and I liked him because he had a certain verve about himself, and I liked him because--I believe he had an aircraft background--and I just liked his young flyer approach. So, I thought it good just to retain Bill Boyer in that spot. As the T-Birds developed, the next big thing that happend was that the '55 T-Bird had a criticism. The criticism was that there was a blind spot inside of the T-Bird if you looked over your right shoulder because the wide C-pillar of the greenhouse. Mr. Crusoe asked us to fix it so we wouldn't have any damaging lawsuits against Ford Motor because of that blind spot. I added personally the round porthole then to the '56 T-Bird, and then, of course, the back end received the Continental kit, if you will recall. Then in '57 the T-Bird was modified again, this time in a historic way relative to the '55 as the '55 T-Bird borrowed from the '55 Ford, the '57 T-Bird borrowed from the 1957 Ford car with the rear quarter panel fin-like development which was to keep it in the Ford family styling design.

Q In other words, it was called Thunderbird styling?

A It was Thunderbird styling, but it had a Ford family look. It picked up some of the Ford 1957 charactertistics.

Q It gave the broad, homogenous look?

A It gave the flaired fin taillight look, and, again, we borrowed the 1957 taillight assembly, and put it on the 1957 T-Bird. In keeping to what we did to the '55 T-Bird which borrowed from the '55 Ford.

Q Interesting juxtaposition of marketing and design working together.

A Exactly. Now, this was in the sense very important in order to establish a Ford family look, and, again, a spirited look, and our cars were being written as being youthful, and the '57 Thunderbird assisted in this.

Q The Ford family of fine cars?

A Of fine cars, right. And youthful cars at that time. In addition, the '57 T-Bird maximum sales were only about 17,000 units that year, and it was felt that the '58, as a four-seater, should increase sales, and it did. It made a dramatic increase in sales with the four-seater introduction, as the '58 four-seater.

Q Let me interrupt you at this point. One small, historical point which you may feel is not too important, but I think it is. When Mr. Crusoe reported that he had heard complaints about the hind, rear quarter of the '55 Thunderbird....

A Of the greenhouse?

Q Greenhouse, yes. You decided to open it up by using, as you described, as a porthole effect?

A Right.

Q Where did you get this inspiration from?

A I have to tell you that I was influenced by the Raymond Loewy specialty car or something that was at one time introduced in some show.

Q One of his advance design cars?

A One of his ideas--I believe it came from that. I don't know positively. I thought it would be an excellent thing to add to the

greenhouse because as a porthole, it would not be in conflict being totally round with anything on the greenhouse, and it would be a hallmark and something that could carry.

Q You probably were also instinctively aware that in the carriage industry, one of the earlier cabriolets also included, what, I guess, they called an opera window at that time, did they not?

A They called it an opera window, and a further hallmarked derivative from the carriage industry was the landau bar which I had added. My suggestion was to add the landau bars to the Thunderbird lineup as a continuing hallmark.

Q A motif?

A Motif for the Thunderbird car, and this was added, we continued with the landau bars for several models, as the models developed, the '58, the '59, and '60's. We made a break in 1960.

Q Let me ask one question please, forgive me. Was the four-seater concept of the '58 Thunderbird acceptable to you as a logical development?

A It was primarily a development and an analysis arrived at by the product planning staff of Ford Motor that a sporty four seater would be far better for the return on investment than continuing with the two door, and they were right.

Q More acceptable to the buying public as well?

A Yes. Bob McNamara was vice president of Ford Division when the four seater was being developed, and I remember attending many meetings at Bob McNamara's office regarding the original strategy and thinking about the reasons and what this car should look like in Bob McNamara's

small strategy group. There were complaints from the two-seater T-Bird owners that they could not use their T-Birds in double dating. This complaint began to increase and Ford Division, under Bob McNamara's direction with the Ford Division product planners, sold the idea of replacing the original two-seater concept to a personal, sporty, four-seater concept. This decision was very correct.

The maximum sales of the 1957 two seater was 17,000 units, whereas the 1958 four-seater T-Bird jumped to approximately 57,000 units, if I recall correctly, for the first year's introduction.

I should take a moment now to clarify the method I used to operate the entire Ford studio for cars and trucks. In the beginning it included the interiors as well, which later were divested into a single studio to serve all the Ford Motor products which I will cover later in more detail.

In the truck area I had Willys P. Wagner as Executive who had the responsibility of bird dogging and watching to make sure that our trucks were in the proper design and proper as far as cost and feasibility. He attended the cost and feasibility meeting. My exec handled that portion of the business for me, and in the Ford studio area it was Damon Woods as Executive who handled the exterior portion of the design directly under me, and my method of operation was that I would always include my executives in a meeting either in my office or their offices to discuss the new requests from management on the car lines and trucks. They, in turn, would have their meetings with their managers in the studios, and they had several managers. Damon Woods had a manager for the light cars, like the Falcon, the Fairlane, and he had a manager for the

Thunderbird area, and Damon Woods had another manager that was on the large cars. In the truck area Wagner would have a manager that was on the light trucks and possibly another manager on the heavy trucks and tractors. That was the general management lineup. I never bypassed my executives without formally letting them know. I would just come to the studio, and on occasion I'd even sit with a designer at a table and talk about the designs as he was developing, just shooting the breeze, and if need be, I, too, would try if I saw that the designer was way off the beam or not in the direction we'd thought we should be going, I might even sit down at a table with a designer and do some sketching. In addition to that, I requested that all my design execs do sketches, and I made them give contributions from their own hand on ideas for the products. They, in turn, requested the same from their managers. In other words, I would not sit still for just edicting and managing without performance. In other words, I wanted my managers to be designers, number one, and to be able to design a car and additionally have the ability to manage the people and manage, of course, working with the manufacturing people that would come to the studio, the cost people and feasibility, product planners and engineers and so forth. We had a continuing Grand Central Station entourage going through the Ford studio, so our design managers had to be able to deal with that--the execs, of course, as well. The managers had to make sure that they could delegate and inspire the young designers to make sure they didn't go off in Timbuktu somehow, and they occasionally had to be brought back to reality. So I, too, would sit down at the drawing table and sketch, and occasionally, even for my execs, I would come into their office, and I would say to them,

"You know, Damon," or, "You know, Bill Wagner, I think that our truck should look like this in my judgement," or, "We should go in this direction." And, I would give them a half-a-dozen or so sketches that I had personally done in my office because in my office I had drawing facilities. I, too, would come up with ideas as to what I thought the product should be because I felt a sketch was worth more than words. You can use all kinds of adjectives in describing a design, but it becomes very difficult to pinpoint the adjectives in reality in three dimensions or on paper. So, you finally have to get down to the crux of it and put down on paper what you are talking about. So many times I would go to my execs and say, "Damon, I believe we ought to go in this direction." I'd have a skull session with them and say, "Now, what do you think and where are some of your ideas?" What would happen, some of my sketches would even get plastered up on the wall with the rest of the designers just as a benchmark for directional thinking to keep in mind. We did this, and then we would also take all our designs on the cars and trucks, individually to the showroom, and in the showroom we would critique, and the designers would be there on the car line, and the managers, and the execs, and I would be there, and we'd talk about our designs that we were proposing for the next car--possibly an all-new Thunderbird or a facelift Thunderbird or a facelift for the cars or a facelift for the interiors or a facelift for the trucks or an all-new truck. We'd talk about it, we'd open it up, and I would make sure that everybody had a say, and I never permitted the youngest designer to get by without saying something in these meetings, whether he thought it was right or wrong, and if he thought it was a wrong direction, that was perfectly

all right. We wanted to know why he thought it was wrong, and after he said why, we also wanted to know what were some of his recommendations? What would you have done? How would you have done it? This way we had a complete dialogue going constantly from the bottom up and from the top down. It was a give and take in both directions, and it was a very lively, competitive spirit in the Ford studio, and I'd say that it really worked.

It worked very well. So, all of the cars were developed generally in this way, including the trucks and in complete detail. Now, eventually my responsibility to the interiors was divested from under my responsibility.

Q What happened there?

A What happened was that Lincoln-Mercury and the Ford studio were hoarding materials. The suppliers would bring in the materials for the interior trim sets, and in their judgement, they would give certain materials to the Lincoln-Mercury, and in their judgement, other material to the Ford end. Generally sometimes the Ford end got the wrong end of the deal because the dealers surmised that maybe they were too costly for the Ford end or maybe this or that, and so a lot of the cloths were being held in storage, and they were not being acted on. So, the full benefit wasn't there. In addition, the trim sets were getting extremely complicated for both Lincoln-Mercury and Ford Division.

Q When you say trim sets you mean...?

A Many trims and many trim options and many colors and many fabrics and many vinyls, and it got to be cumbersome. The exterior

colors were not the same--there were entirely different colors for the Lincoln-Mercury cars, and entirely different colors for the Ford cars. This proved to be very costly for Ford Motor because it was doubling up on painting, doubling up on trims, doubling on a lot of things. So, then it became evident, out of sheer weight, that it would be wiser to pool all of the interiors into one.

Q One department?

A One department. So, at that time Bob McGuire was, again, given the responsibility--from the advanced he was transferred to the interiors, and I was divested of the interior responsibility, and so was Gene Bordinat at the time who was chief stylist of the Lincoln-Mercury end. And I remember Bob McNamara calling me one night late when I was at the office doing some late-hour letter reading, asking me what I really thought of this system--was it a good idea that we do this? I told Bob McNamara that in my judgement it was the best thing for Ford Motor because it would save Ford Motor an awful lot of duplication, and we could simplify our paint systems and save Ford money, and, in addition to that, a lot of the fabrics that were being hoarded in the individual design interior offices of Lincoln-Mercury and Ford could then get total visibility because some of the fabrics I never saw, and Lincoln-Mercury never saw some of the fabrics we had. So, this wasn't right for the Ford products. So, from sheer weight at that time, interiors were centralized under Bob McGuire.

Q That appealed to Mr. McNamara?

A It appealed to Bob McNamara because he was very cost conscious and had a calculating mind, and he was quite regimented and organized.

Q He was a great one for coalescing effort.

A Yes, the whole effort.

Q That's interesting. Did any of this impact on the development of the late '50's Fords? You mentioned a couple of instances that you exercised at the time?

A Yes, one of the later Fords. I will first mention the '57 Ford. The '57 Ford--'52 through '55 Fords were good bread and butter cars, and they had their hardtops and verve, and they were a little bit in need of some new concept changes. The '57 was the Ford that gave us this new rebirth and rekindling. The '57 Ford development, which I had inspired, incidentally, the basic concept of this sheetmetal I had again started as--I was a consultant at the time on the '57. I remember Mr. Walker bringing in Bob McNamara to look at some of my thinking proposals for the '57 Ford in a special area I had up front in my office. When they walked in on me, I was working on a chalk drawing of the '57 Ford car, and it had the wide, double headlights and the very wide front fenders and the quarter panel fin. The quarter panel fin was also partly a derivative from a speciality model that was being developed in the Ford studio area--a speciality show car.

Q Do you remember that particular model?

A I can't recall its name now, but it had a similar fin on it in that same kind of verve--not exact detailing. Using that as a springboard for the new '57 sheetmetal, the front end concept and the taillights and the greenhouse were all on this chalk drawing, and Bob McNamara was quite taken with it. The next day George asked me to begin the model of this proposal that'd I'd shown Bob McNamara the night

before. I'd been working on it as a consultant. Now, at that time, Frank Hershey was the chief stylist of the Ford studio with Bob McGuire as his exec, and this is some of the tension I had reference to as consultant. Now, Frank Hershey either rightly or enviously or, however, he thought the design was just too outlandish a design. He thought it was just too wide a front fender to consider--those double headlights in the wide squat thrusting front fenders with a slowly dropping hood between these two wide thrusting front fenders, as the model started developing in its original conception. As I mentioned before, we had as consultants the ability to start cars as directed by Ford management, so I started the '57 model in the studio. Frank Hershey thought it was just too crazy and gross. He thought it should be stopped. It was exaggerated in its original start-up, and I may have had the fenders just a wee bit too wide, but I was feeling the car, in its development, and I was feeling the front end relationship to the fenders and the quarters and the whole car as an integral piece. Frank was so distraught with the effort that he complained to Ford Division about it, and this he probably should never have done because he called Ford Division and said what an outlandish design was going on in the Ford studio, and his recommendation would be to stop it. This, of course, was what Bob McNamara had requested that we develop, but he didn't know it. This proved to be a boomerang for Frank Hershey because although the car started a little exaggerated in order to bring it in theme and bring it slowly into its final development, he shouldn't have called to stop the model. So, it boomeranged in respect that the car kept developing and improving, and it finally was approved by management, and the Ford management team, as the 1957 Ford

car. This car outsold its competitor that year which was the '57 Chevrolet. Mr. Ford sent the '57 Ford to Russia to the Russian Exposition in Moscow to show what the typical American Ford working man's car was like in United States. Of course, the Russians didn't believe that the '57 Ford was really the working man's Ford car of United States. They thought it was some fantastically luxurious car. Well, the ensuing year, in '58, was the year I was completely overwhelmed. My problem was to what the '58 should look like. Product planning wanted to change the '57 Ford car radically as a facelift from front to back, and they wanted a complete front end change, a dramatic front end change, and a dramatic back end change, but, again, to be as dramatically successful as the '57. This was quite a full basket to request, and this proved to be an error.

Q In this context--excuse me for interrupting--product planning could do this?

A Product planning had a very strong influence at this time, and they did do that. This one boomeranged in the respect that the '58 Ford, although I was still responsible for it, I felt when it was finally approved that it was overworked, and we had tried too hard. It just was not as spontaneous a total theme as the '57. The '58 Ford front end was borrowed now from the Thunderbird front end, but the proportions of the Ford car versus the Thunderbird proportion were radically different. The hood was so much higher than the Thunderbird hood from the ground. The front end theme just didn't come off like a Thunderbird. But, it was recognizable as a Thunderbird derivative. The back end, again, we tried to pick up the theme from the Thunderbird with the dual lights in the wide pod of the Thunderbird at the time, and we incorporated that on the

rear deck, but the detailing of the taillights on the rear deck of the '58 Ford versus the detailing on the Thunderbird were entirely different. We detailed the Thunderbird sheet metal to accommodate that theme of the dual lights deeply inset in this round cowling like a jet exaust with the fin on the side--a gentle fin. Now, on the Ford car, of course, we didn't have the latitude, and we had other restrictions such as the trunk requirements, and the trunk capacity, and we didn't have the depth of taillights and the dramatic quality of the Thunderbird to get some of that quality into the Ford car nor could we get that quality strictly on cost because the Ford car, costwise as far as taillight detailing and the back end, was not in the same league with the Thunderbird that was a luxury, sporty-type car. So, it proved to be a disaster in my judgement. It was a theme that I was never happy with, and even today, I see them rarely, but I cringe every time I see this car. That was one car that I just was never happy with.

Q You termed it a nightmare?

A For me it was a nightmare. It was a nightmare in respect that it was such a tremendous effort to change such a successful theme into something that was supposed to be radically different from the '57, and we didn't quite make it, and, to me, that was a terrible agony.

Q Have you ever tried to analyze why product planning felt they should take a proven success...?

A They didn't know it was going to be such a success.

Q This was much before the fact.

A Sure, before the fact, and had they known, of course, the logic would have been, "My gosh, just continue with the basics of the back end

and the front end modified, adjusted, add some new detailing and some verve to it and continue with the same theme," and we would have been much better off than doing such a radical change that we did on the '58. So, then on the '59 Ford we had our chance again because this was an all-new car, and if I may take time out, I have some of my reference material on hand now just to alert me so I won't forget a detail. The '59 Ford was all new sheetmetal with a very wide front end hood fender appearance, and, again, the hood sunken down between the wide fender similar to the '57, but the back end had a rocket theme derivative, and, again, aircraft influence. And, so the rocket effect from the side beginning with the rear door and ending in the backup light. Underneath the backup light we had these giant taillights which must have been probably about nine inches in diameter approximately including the bright work were very dramatic. We treated the sheet metal, the bright work of the taillights, to give the effect of a jet turbine engine. The car, again, was quite aircraft oriented, and this was the car that in that same year Chevrolet came out with its huge, gull-wing back end that was just too radical for the marketplace, and the people weren't quite ready for it. The Ford sales did have a field day describing this thing in the garage of the G.M. owners wondering whether it was bug or a thing from Mars, and, of course, the '59 Ford that year again outsold Chevrolet. I do remember Jim Wright was so concerned.

Q Jim Wright was...?

A Jim Wright was the vice president of Ford Division, and Charlie Beecham was his direct assistant at that time for the Ford Division, and I do remember Jim Wright querying me before the car's introduction about

the size of those taillights. He was so concerned that they were just too big, and I kept saying, "No, I didn't think so." They were large, "but in total, the taillights hung together very well with the sheet metal, well integrated, it was proportionately okay, and the bumper was all tied with it. From a professional point of view as far as design, there was nothing wrong with the aesthetics of the car. But Jim Wright was nervous all of the way through until after introduction. Prior to introduction, some dealers made Jim Wright nervous because they had seen pictures of the 1959 Ford Ford back end, and they were concerned that maybe the taillights were this or that, or maybe the car wasn't just right, and Jim Wright became a little bit squeamish and remained squeamish until after the introduction. And, of course, after the introduction, all of the dealers were pleased as punch with the car because it was such a great success in sales, and it outsold Chevrolet that year, and the dealers that originally had qualms about it, could never be found. They never owned up to their original feelings about the car, and, of course, that was the design business. But, that year was one of our banner years, and it was a wonderful comeback after the '58. I should take a moment and talk about an infectious way of operating in design, in the design office at Ford Motor that was substantially different from the way General Motors operated that always bothered me, and I tried desperately to circumvent this problem and to work around it. The problem mainly was that the styling office would accommodate all the requests it seemed that were made to the design office by management about changes to models. Extensive changes to models, and rapid re-showing of models to product planning, management, or additional models

for approval consideration. Now, this meant that many models were started in an effort to show management a lot of models, and this shouldn't have been done because many of the models were not [up] to adequate design quality.

Q You're talking about finished models?

A Finished clays. They weren't good quality, and there wasn't enough thinking in the development of the models, so it used an awful lot of effort on worthless proposals that should not have been shown because they were not to the proper degree of quality. Every effort was being made to show a lot of models because they could be ground up in a week or two, or three or four days, or they could be ground out overnight, literally, on occasion, working 24 hours on a model in order to get it ready. This was wrong.

Q Whose idea was that?

A Well, it wasn't any one person's idea. It was a method that had developed slowly over the years and finally got out of hand. So many models were being proposed, so much effort was being utilized, so much overtime was being used, so much money was being expended, and so much spinning of wheels that it became a tremendous handicap. Now, technically, what went wrong would be that some of the steps in developing the model were bypassed. For instance, the sketching time for themes and discussing was bypassed. The full-size drawings of the proposed themes were bypassed. Models were literally started from the trash bin and with spare parts that were around from various other models. Pieces were thrown together and wholesale models assembled, and modelers working furiously on overtime. A tremendous effort was expended, and a tremen-

dous amount of money was used in this effort. It was wrong. Now, the General Motors approach, even during this time, was carefully developing its models through the sketch phase through the full size. Developing from full size drawings to models. Developing their bodies in body studios and having those models given to the individual studios. Very similar to when I was with General Motors. So, I was constantly battling in this paper bag trying to slow down the process, trying to get the designers to exercise their opinions and trying to get the full-size drawings and so forth started. I would say that along with this idea of change for change sake, and the idea of even the '58 that bothered me so terribly, how we changed the '57 to the '58 which wasn't the successful design, was all part and parcel of this overall fever of a radical request for a lot of models for people to review in order to come to a decision, and it proved taxing to the design office. Finally, it ended and slowed down and got more normal through its own weight. It got out of hand, and finally it started to get back into the proper methods again. But, we did go through that phase at Ford Motor. It was a very horrendous experience for me because I would spend literally hours at the office with overtime and being there early in the morning and late at night, plus all my other requirements with the managing of the Ford studios.

Q Did it seem like a deliberate attempt to stir up a competitive spirit?

A It was an attempt to, at the time, by product planning and other people to make sure that they were really getting the right model, the right design for the next year, and it was the method of selection, and

finally it came to a grinding halt.

Q It died of its own weight?

A It died of its own weight. As an after effect to this in the dying moments: the 1960 Thunderbird--this was a unique theme again of aircraft derivative design with the round taillights built into the bumper. I had talked with George Walker about as a possible Thunderbird theme. This theme was started as one of the advance models in Gil Spear's area. Gil Spear was in charge of one of the advanced areas in one of the studios, and he had a model with these large, round Ford-like taillights, and I mentioned to George that that would be an excellent proposal or consideration for the Thunderbird to keep in mind, and they wouldn't be practical for the Ford car because it would be too expensive. That bumper system would be just terribly expensive for the Ford car nor would it be practical as far as the trunk compartment. The 1960 Thunderbird was the rocket theme that I had proposed to George that we continue with, and also in 1960 there was another proposal that was being considered for the Thunderbird which was a very formal car, and I remember in the showroom Mr. [Henry II] Ford asking point-blank, "Joe," he said, "now what's your reaction to these cars?" because both cars were really remarkable in their own themes. With one of the cars I was a little at odds with my boss, George Walker, but since Mr. Ford asked me I had to make a response, and I told Mr. Ford what I had also told George. I said I felt that the more formal car would make a beautiful Continental, and I said the verve and the uniqueness and the sporty quality of this rocket theme is so appropriate as a Thunderbird, and I would recommend that it be considered as a Thunderbird car. Eventually that's just what happened.

That formal car became the formal Lincoln Continental which was so beautiful, and Elwood Engel was very much responsible for this car's development, and again I was responsible for instigating the development of this 1960 Thunderbird. Bill Boyer was my manager on this car. I believe Damon [Woods] was still my exec at the time, and what happened with this Thunderbird was that just prior to introduction the Ford dealers saw photographs of the 1960 Thunderbird, and some of the Chicago dealers thought, "Oh my God, we are going to lose our shirts if this car comes out. This is quite different from the previous Birds." So about two days prior to my long-planned trip, as a vacation with my wife, Betty, to Europe, the thunderbolt hit the Ford studio that we give serious consideration to changing, as much as possible within the time limit, the 1960 Thunderbird front end to make it more acceptable or something for the 1960 Thunderbird and the dealers. Well, I didn't know what to do at that time. We were set to go to Europe, the tickets were bought, the hotels had been booked, and Betty knew of my problem, and it was just like a couple days away, and she kept saying, "Well, Joe, you're such a super manager, you say you've got this wonderful team and this great bunch of designers, why don't you, for heaven's sake, let them do their work and take your vacation. If you don't take it now, you probably won't take it this year." I, incidentally, had lost a few vacation years. So, I finally agreed. All right, we'll try it, and we went to Europe. On the way to the airport I passed the design office, and I was tempted just to turn the car and drive over to my office and say, "All right, Betty please take the car home. I'm not going to Europe." But, I finally gave in, and we boarded the plane and went to Europe, but

I spent every other day from Europe on the telephone talking with Damon Woods and Bill Boyer in respect to the progress on this car, and what happened was that this malaise I had previously talked about of the effort of operation of trying to change a car for change sake, and the method of operation of trying to change a car through rapid changes without proper design consideration. This all was part and parcel to the tremendous effort to change the 1960 Thunderbird. I was aware in Europe that several studios were feverishly changing the fenders, the hoods, [making] radical changes to the car, and, finally, of course, I knew what we were doing, and I was trying to stay on top of it from Europe, and, of course, I wasn't having a vacation at all. I should have stayed in Dearborn. When I finally got home, the change was put on the T-Bird, and it appeased management, and they bought the T-Bird then but also because there wasn't any time left for any major changes. We had gone by our change period for manufacturing and setting up tools and engineering, and so forth and so on, so we were out of time, luckily, on this car, and we got by with just two tiny windsplits that were added on top of the 1960 Thunderbird that were yet not there, they were visible yet not visible; so the change was absolutely a minuscle amount, and this was contributed by a designer in the Thunderbird studio by the name of Bud Kauffman, and this is what I'm referring to as team effort. Bud Kauffman really saved the day for the 1960 T-Bird for having come up with the brainstorm idea that appeased everybody finally by just adding two little, tiny windsplits.

Q Was that the '61?

A 1960.

Q That was the 1960 Thunderbird?

A Let me double check. You were right, Dave, it was not the 1960, it was the 1961 Thunderbird--the all new rocket shape.

Q You had that in your manuscript.

A Yes, and those little welts or windsplits were then taken off on the 1962 Thunderbird.

Q Now, describe where they were placed.

A They were placed right on the hood from the headlights back to the cowl. They were just little ridges about half inch high and about a half inch wide, and they were called windsplits.

Q Incredible that this relatively minor change would appease the anxiety.

A It appeased, and it was enough to get the T-Bird launched. It was a very successful T-Bird, and also Bud Kauffman was responsible for contributing to the development of a special two-seater Thunderbird.

Q Tell us about that.

A With the headrests that were built into the decklid, starting in the decklid on up into the rear seat, and that was a specialty T-Bird.

Q Was that called the Sport Convertible?

A Sport Convertible.

Q Now these were accessories that could be....

A They were accessories used as a two seater really because the headrests took over the whole rear seat compartment.

Q And that was Bud Kauffman's contribution?

A Bud Kauffman was a good contributor to the concept of this theme. We had quite a remarkable group, and I just thought I'd mention

the aches and pains that we went through in some of our design effort for developing these cars and appeasing certain people.

Q At this point, in spite of the triumph of, or because of your career's recent triumphs, you're getting some attention from competing firms?

A Yes, Ford Motor never knew this, and I never advertised it, never once did I ever mention it, but I was asked by American Motors if I would consider to take over the design departments for American Motors as vice president of design for American Motors. This was prior to the time that Dick Teague took over that responsibility, and I evaluated my tenure with Ford Motor, and I evaluated my life-long love with the Ford cars (even as a boy I was always overtaken with the Ford cars, the Model A's and the T's and all of the models), and all the years I've had with Ford Motor had been very, very satisfying to me as a designer. They were frustrating at times, but generally satisfying. I had a very fine relationship with everybody. I tried to retain a real fine relationship with everybody that came in to the studio. I had a nice relationship with vice presidents that were constantly touring our studios and engineers and the manufacturers. Having been in engineering for four years during the war, I respected that end of the profession having worked four years in it myself, and I respected the responsibility of the manufacturers, and I respected the know-how of the people that put the cars together, and I just had a nice relationship with people. I remember, though, as my boss George Walker would say, "Be nice with everyone because you can wash out, and you never know who's going to be your boss some day." But, even so, I always tried to work with everybody.

Q And yet it must have been a very tempting offer because it went beyond automobile design.

A It went beyond automotive design. It was an offer that included stock options, it was an offer that included an increase in salary at the time for me, and it was an offer that included a vice presidency of the cars and the white goods, and this was the Kelvinator end of it. I had several meetings with the American Motors people in a downtown hotel, and, finally, after many painful searchings at home and talking about it with my wife, Betty, I decided that although the salary increase was there, it wasn't really that much more than what I had been earning, and in addition to that, I felt that although the stock options were there, I was very fortunate to have received some myself at Ford, that I was exercising, and could exercise, and, more importantly, I just felt that I had such a feeling of having contributed to the products at Ford Motor over these years that I just couldn't throw that away. I felt that I still had room to grow at Ford, and I'm glad I stayed because on the final analysis it turned out that way. I did have room to grow beyond that point. I did have salary increases, and I had more responsibility added to my work, and it just proved to be a continuing nice relationship at Ford. I have had a wonderful experience at Ford Motor. I feel that I have contributed to the Ford products over the years. I've worked with a bunch of super designers, and I feel that they, in turn, have had an opportunity to express themselves while I was handling the Ford design studio.

Q If I may take you back to one thread which I'd like to develop briefly. What was your input, and what was your feeling about the Falcon project?

A The Falcon project was an enthusiastic car project that just delighted everybody in the Ford studio. All designers were involved with it. It was a unique challenge because the Falcon was a car that was coming out in competition with General Motors' Corvair, and the Chrysler small car and our Falcon. They were all to be introduced approximately at the same time.

Q What was the Chrysler small car at that time?

A I don't know its name right off hand right now [Valiant]. I forget its name, but it also was introduced, and it was a car that Exner had a lot of input--the senior Virgil Exner. The Falcon was developed in the Ford studio with Damon Woods as my exec. It developed very nicely through the system that I learned back in General Motors of let's talk about it first, let's design and talk about the designs that have the input from the designers, and full-size drawings into the model. It proved correct. The car was developed and met its objective in design plus cost. It was a tremendous success at introduction. It's sales approximated a half million cars the first year of introduction, which also was the goal that the Mustang was set to beat.

Q May I also ask you one other question? Was Robert McNamara very enthusiastic about the Falcon?

A Yes, he was very enthusiastic about the Falcon and its concept, and in respect that it was a practical, small, family car with plenty of room and good fuel economy. In a way, the thinking that went into the Falcon is in good measure much of the thinking that has gone into the smaller cars since the oil embargo. It was ahead of its time, really. I had mentioned, concurrently with the 1960 Falcon, the introduction of the

1960 Ford. The 1960 Ford was a unique car from the 1959 in respect that it was sleeker, more dynamic by far than the 1959 Ford, and the predecessor to the 1960 Ford was a show car that we had developed in the Ford studio--advanced part of our Ford studio--that was called the Quicksilver.

Q That was the code name?

A That was the code name. That code name was given to this model by George Walker. George Walker was so taken with the car that he showed the Quicksilver model to Mr. Ford who fell in love with the car. What we had proposed with the Quicksilver model, the original model, was a low profile design car with the least air resistence and good aerodynamics as the next generation Ford that was an entirely different package from the previous Ford, and this would have required all new engineering from the ground up. Mr. Ford was totally taken with the Quicksilver.

Q This is Henry Ford II?

A Henry Ford II--that he wanted to have this car as a 1960 Ford, and so a crash effort was set in motion to develop the 1960 Ford as the derivative model from the Quicksilver. There was a tremendous problem to overcome. The Quicksilver had a unique package. The cowl was closer to the ground. The overall height of the greenhouse to the ground--the car must have been at least two inches lower to the ground, and the cowl was at least two inches lower to the ground, and the whole packaging was radically different from the package that we had as a carryover from the 1959 Ford. So, when the go-ahead was given, we remodeled the Quicksilver onto the old package of the 1959 Ford, and, of course, the package was entirely different from the original concept of the Quicksilver, and we

had a hard time adjusting the proportions of the new package to the carryover package, and so the 1960 Ford, although it was a recognizable derivative model from the Quicksilver, it never quite had the quality of design in it because of the overall package proportions. They were radically different. So, we came into production finally with the 1960 Ford. It never quite made it as well as the original proposal of the Quicksilver model. I remember Jim Wright, who was the vice president of Ford Division at the time, and Charlie Beacham, his direct assistant, were aware of the difficult time we were having adapting the original Quicksilver model to the production version of the 1960 Ford car. Jim Wright kept saying to me, "Joe, where are the people that did the original Quicksilver? Why don't you put them on the finishing of the 1960 Ford derived from the Quicksilver?" I said, "Well, Jim, the people that made the original Quicksilver model are the very same people that are desperately trying to incorporate all the features of that preproduction model into this production version. But, the differences are that the original Quicksilver model had with it an entirely new engineering package from the group up, and we are working with carryover frames and old packages from the previous model, and the differences are vast in overall heights and widths and proportions of the car, and really the proportions are the key." Finally, Jim Wright did realize in the end that it was the proportions that had such a tremendous effect in the appearance of the original Quicksilver.

Q So the Quicksilver remains...?

A The Quicksilver had a successful year as a Ford car in 1960; but was diluted in some of its sales by the tremendously successful Falcon

that also ate into, of course, the Ford line and the Fairlane at the time. So, it suffered in that respect.

The next car that I'd like to talk about is really one that so many people have made inquiries about, and talked about, and still talk about which is the Mustang. We in the Ford studio were involved with the final unique design development and final proposed model for the Mustang that was accepted for production. What happened was that management decided that it wanted to see additional proposals from the Ford and Lincoln-Mercury studios before they would commit to a final model. They wanted to make sure that both Lincoln-Mercury studio and the Ford studio would have had an opportunity to present their proposals for the Ford Motor sporty car. During this time when the Ford studio was finally given a request to develop a model in competition with the other studios, namely the corporate studio of Ford design office and the Lincoln-Mercury studio, we in the Ford studio, due to our work load which included new models plus the facelifts of all of the car lines that we were carrying for production, and, of course, the truck end of the business, we could only afford to give our maximum effort to one model. In that one model we also split the model so it had two sides, although the front end and back end fit both sides. Thus, we had a model that served a double purpose as our Ford studio proposal.

Q Was that your inspiration?

A Yes. With one model.

Q Forgive me. One question. What was the original impetus for having another small car at this point? Was there competition?

A Well, of course, it was the Corvair Monza competition.

Q Successful Corvair?

A Successful Corvair Monza. Lee Iacocca wanted to introduce a car that was more of a personalized, sporty car as a good four seater rather than as a tight European two plus two limited package. So, we in the Ford studio, along with Lincoln-Mercury studio, were given the green light to prepare models for the Ford Motor sporty car.

At the time this request came through, I was in a one week seminar called the Kepner Tregoe seminar regarding problem analysis and problem solving methods. I was aware of our new assignment since I kept in contact with the Ford studio by phone.

I was told that we had been involved with the Ford Motor sporty car program and that the studio was rapidly putting together a model. That I could see its progress when I returned to the Ford studio the following Monday. This was the week sojourn I had.

Q This was a management seminar?

A This was the Kepner Tregoe management seminar, and I could hardly wait for the week to end. I had difficulty concentrating on my homework and lectures thinking about the design challenge of the sporty car. The following Monday morning I returned to the studio before anyone had arrived so I could look at the design effort that had hurriedly been started during the week that I was at the seminar by my exec., Dave Ash, and the two managers under Dave at the time, Gail Halderman and John Foster.

I looked at the model all around with design analysis, and in my judgement, I didn't think we could win all the marbles in the design competition with the model's design direction as it had been started.

So, when Dave Ash had arrived, I asked Dave to stop the sporty car model and cover it with one of our studio covers. I next asked Dave Ash to bring the photographs of all the previous sporty cars that had been done in the Advanced Corporate studio and bring the managers and the photographs to my office so we could discuss anew with a fresh start the sporty car design direction.

Q Do you remember why you thought that?

A Yes, the model I recall had a reverse backlight which was somewhat similar to the Porsche car at the time. Also, the European Ford Anglia had a reverse backlight as well as the Lincoln-Mercury line of cars. I just felt in my judgement, that this should not be the direction of the new Ford sporty car. Additionally, the rest of the car didn't do much to excite me.

Q In effect, it had a cobbled up look?

A No, it was put together very hurriedly with a sporty type effort, but, in my judgement, I didn't feel it was in the proper direction for the new Ford sporty car assignment.

Q Your lieutenants were, obviously, a bit chagrined?

A Dave Ash, briefly by his appearance, was concerned with the effort that had been expended. My managers, as I recall, were anxious to get started anew and to rethink the problem. The modelers were disappointed somewhat due to their great effort that was expended in modeling. They had been working overtime and furiously putting this model together and particularly to show me a more completed model by the time I returned, but it was too much too fast in my judgement and not enough design thinking.

We started all over from scratch. I requested that all of the Ford designers that worked in the Ford studio, including the truck designers, execs, and managers, meet with me in the Ford Design Rotunda to discuss the Ford sporty car assignment.

In our discussion, I adapted the technique which I had become familiar with from the previous week's Kepner Tregoe conference in problem analysis and problem solving. I asked that we make lists of what the new sporty car should look like and what the car should not look like. We also had at our availability all of the photographs of the previous efforts that had been put together in the Corporate Advanced studio as a springboard--as a guide--not to use themes or ideas that were tired and not accepted. A good part of the day was spent in this initial discussion. The lists we hung in our studio to help keep the designers on track.

I had also requested that we give strong consideration for a Ferrari-like grille appearance with a strong Maserati-like central unique grille motif. I had also requested that we give serious thought to incorporate a side air intake just forward of the rear wheels in the body side design plus a Thunderbird-like personal sporty greenhouse for the Ford sporty car. Additionally, I also requested any other ideas from the designers, but to constantly refer to our lists of what this car should look like and what it should not look like.

After several discussions in the studio working with the designers and reviewing our sketches, we rapidly progressed that week from sketch phase through full-size drawing and full-size templates.

The first clay effort that I had asked to have covered was now

uncovered, and the new templates applied to the clay to save time. Our clay manager, Leonard Stobar, and our timing group established day and night schedules to complete the model on time for review.

I guided the overall appearance of the sporty car which I asked that we call the Cougar since all of the models that were being prepared had names. I will say that both Gail Halderman and John Foster helped tremendously as managers for Dave Ash, my exec., in the Ford studio.

Q By exec. you mean executive styling?

A Yes, executive designer working directly for me on the exterior designs of the Ford studio. Additionally, Charley Phaneuf, as a manager in the Ford studio, was a creative designer with a lot of ideas.

The interior contributions to the Ford sporty car were from the interior design studio headed by Damon Woods.

In summary: I contributed personally to the Mustang's appearance by being able to recognize, in my judgement, that the original model was going in the wrong direction. I felt good that after the sporty car was approved, it was a result of our second effort at re-thinking the problem of the Mustang. I was very much pleased with that, and, of course, the overall design theme that I then guided through its development as the director of the Ford design studio. I insured its appearance, and I helped guide particularly the front end of the car with its Maserati-Ferrari front end approach which I instilled. I said we needed a front end on this car similar in character to the Maserati and a Ferrari; namely, that the Maserati, I said, had a very strong center motif of the trident. I said we need something similar to that, and we're going to have to develop a grille with a Ferrari flavor--not

necessarily with the mouth way down low like the Ferrari in a costly bumper integration but maybe raised a little bit due to our bumper standards to give it a little more directional verve. I felt very good that the direction that I'd established on the front end finally paid off. Dave Ash contributed with the development of the taillights for the Mustang, and he did an outstanding job in that respect. Dave Ash, with managers Gail Halderman and John Foster, did an outstanding job in helping guide the Mustang in its development with the committees of various groups that came through the studio such as the manufacturing committees, the engineering committees, and product-planning groups, and it was a tremendous team effort that paid off. When Lee [Iacocca] saw the car, he just rolled his cigar in his mouth--he was always smoking a Havana-type cigar--and I could see the gleam in his eye, and he was pleased as punch with the car. He reminded me of the lively appearance of the car--it looked alive, even in the development of the clay. Now, we took approximately a week to establish the new theme, and then it took us another approximately two weeks to complete the clay model, so we did the whole project in just better than two week's time which was a tremendous effort, and it shows what teamwork can do when properly coordinated.

Q As a group effort?

A As a group effort. It was a tremendous success, but I feel tremendous satisfaction after having worked on so many products in the Ford end and trucks with this particular car as being one of the highlights of my design effort.

Q Well, that's a tremendous episode. Perhaps as a postscript to that, a couple of minor details occur to me. I seem to recall reading

somewhere that the code name initially was the Cougar.

A That's correct, and what I had asked the studio to do was design a Maserati-like diecast center piece with an important impact to fit into the Ferrari-type front end grille. I had come up with the name of the Cougar, and I said let's use the name Cougar for our sporty car. Finally, in the surveys through the sales market research the Mustang name came out on top, and the Mustang horse was designed in another studio and simply inserted inside the very same ring that housed the original Cougar, so we switched the Cougar for the Mustang in its corral.

Q Do you remember who sculpted [the Mustang emblem]?

A It was sculpted by a modeler in one of the speciality studios. I don't recall the modeler's name, but he did an outstanding job modeling that particular detail.*

Q One final question, the name Mustang was slightly different from the concept of the Cougar although it still involved sleekness and movement and sportiness.

A Oh yes. Certainly the Cougar and Mustang certainly are different connotations, but both names--in fact quite a few names--were surveyed, and Cougar and Mustang were in the top contenders, and finally Mustang won out over all of the contenders, but Cougar finally was used for the Mercury version of the car. So that also was used. Interestingly enough, the car fell together naturally as a design theme. It wasn't forced. It all fell in shape. All the pieces came together properly. All the components, all the exterior considerations, the air scoop on the side which originally was intended to be functional, but I suspected that we couldn't maintain that for several reasons, one was cost, and added

*Editor's Note: The sculptor was Waino Kangas. The logo was designed by Phil Clark. The Mustang name was suggested by John Najjar.

complications in manufacturing and the dubious value of the air dam we were considering in directing air towards the rear brakes. The air scoop eventually became a decorative ornament--it was retained, although it was not functional. The car in its engineering development came together very well. We were conscious of all of the package requirements--the manufacturing requirements as far as the feasibility of the model. The car came together like a glove, from approval to the model on the showroom floor, with minor adjustments. It was an incredible successful design effort.

Q You may not think along these lines, but thinking back, you've had a triumph for each decade that you've been with the Company--an outstanding one.

A Well, I've been very fortunate to have been associated with so many successful products. There have been some that I wish I hadn't been associated with.

Q Would you like to recall them?

A I have cringed about them, but, generally speaking, the Ford studio had a pretty high batting average. The other area of the business that everybody fails to talk about yet has been so tremendously important for Ford Motor both from the financial return and also from the importance of the products is the truck business. The truck business and the aesthetics of the trucks grew and developed with the truck design office which was part of my responsibility in the Ford Division lineup of cars and trucks.

Q Of course, Mercury never had a truck.

A And Lincoln and Mercury studios never bothered with the mundane

trucks, but these mundane trucks did help support the financial well being of Ford Motor and then some. They have had a tremendous return on investment, and they have come up through the development of the trucks at Ford Motor from being a so-so truck to being the number one leader in the trucking business for many years, and I feel very very happy that I've been part and parcel in the development of the trucks. The trucks have been in number one position at the time that I was heading the design for the trucks and the cars for Ford Division. An interesting aside on the truck development and a truck that influenced all of the truck development in the United States and Europe was the 1957 F-100 Truck.

Q The basic pickup?

A The basic pickup, and what was so different about this truck and the rest of the industry was that this was the first wide-hood truck concept. The body side was integrated into the pickup portion. This had not been done before, and this concept of a wide hood had never been tried before, and I felt that this would be very appropos to the truck line and something that we could build on in the future years for our F-100 series light/medium trucks. Now, interestingly, what happened at this time was that the dealers saw photographs of this truck prior to introduction, and, again, some of the dealers were tremendously upset because this was a truck that they didn't quite understand when they saw it because it had such a wide hood. The number one truck at the time in the light trucks was, of course, the Chevrolet, and the Chevrolet had a conventional, narrow hood. The number one seller was this conventional narrow hooded Chevrolet truck, and here we were coming out to compete

with Chevrolet with this strange looking truck. They had never seen anything like that before, and they were so concerned that all effort was made to stop the truck, and if they couldn't stop the truck to see if anything could be done to change the appearance of this truck because some dealers felt so strongly that they would lose their shirts on that truck. Fortunately, for the truck, we had run out of time, and there wasn't any time to make any more changes to the truck. We'd gone beyond the point of no return. We were in hard tools, and everything was so far along that it was impractical to change at this point. So, the truck went into production as originally designed. Lo and behold, after introduction, these truck dealers again, we couldn't find [those] that were complaining about the truck. The truck was an instant success and proved to be the benchmark then for all of the future trucks in the light area with the wide hood, and immediately after that, General Motors fell into the same pattern with their next truck line. Then, for years, we could feel the mimicking and the trying to catch up with the trendsetting that we had established with our Ford truck. But, of course, we were pulling away from the number one leader which was Chevrolet prior to this truck, and we had taken over and established the Ford truck for the first time as the number one sales leader in the light area. Later on it also became sales leader in the other part of the trucking area in the medium and heavies.

Q So, it was the 1957 model that started the successful trend for Ford being number one in truck sales?

A Yes, and interestingly enough, Ford Division then broke away very rapidly from the rest of the herd and established their separate

servicing techniques for the truck business and provided the dealerships and truck facilities with all the newest electronics and all the latest thinking for service. Ford trucking really established itself. The final culmination of the truck effort that I was connected with was also with the development of the heavy line of Louisville Trucks, and I remember distinctly what Phil Caldwell, who was then General Manager and Vice President of the Truck Division for Ford Motor, wanted, and I distinctly remember him saying, "Joe, we need a theme for our new Louisville Trucks that we can hold and build on." I said, "Phil, we are going to deliver such a theme for you," and we brainstormed the themes of all of the trucks in the U.S., and we came up then with the theme of a rectangular, slanted, diamond-shaped front end that we carried into the body. It is a very contemporary approach to the trucking business machine. It should hold true and good for many years. To this day, that theme is continuing on the Louisville in an updated version, but the theme is still there that we established in the Ford studio for the original Louisville Truck. It is so successful and going so strongly even today, and it's gotten even in the cabover engine themes and into some of the light truck front ends, and the truck was a tremendous success.

Q And is still to this day, I imagine.

A And it is still today. Now, my exec at the time of the Louisville Truck development was John Najjar in the studio, and Bill Wagner had prior to that retired after reaching age sixty-five. Bill Wagner was a very meticulous executive designer and a person that was superb with detail and organization and working with the engineers and the trucking engineering requirements. Bill Wagner was in the studio

with the 1957 Ford pickup truck new theme development, and John Najjar was in the studio as my exec with the Louisville Truck, and he did an outstanding job. So, really the trucking business we have not paid much [attention] to in these tapes, but they have been a tremendous growth and a tremendous success story in themselves, and they have been number one for many years, and I hope they remain that way.

Q Looks like they will.

A Right.

Q Did you, as a postscript to this, have any input into the development of the Ranger concept before you left?

A No. I did not. Not on the last Ranger at all. In 1968 I was asked to consider an assignment in Europe to be director of the European design effort for all of the European products in Europe for a period of three years. Having talked it over with my wife, we thought that would be a super challenge and something that would be so different, and we could have an exciting time, that we accepted. The children were growing up--we had two still in school, but we felt that they could continue their schooling in Europe, and we left to go to Europe where I assumed responsibilities in Europe for all of the European Ford car lines and truck interior and exterior--for all of the Ford European products.

Q Excuse me, you're being modest again. Did someone feel that there was a need for a well-rounded design executive to pick up, perhaps, the pieces of Ford of Europe and reshape them?

A No, it wasn't that so much. What had happened was that--I'm glad you asked--was that Damon Woods, whose previous assignment before going to Europe was as a chief of all interiors for Ford U.S. He was

asked to go to Europe with his capabilities, and he was a tremendous designer and a super organization man for managing, and he was asked to go to Europe as the chief designer for Ford of Europe, and then Damon, on one of his return visits to the States, had an unfortunate accident and lost his life in a car accident on the way home one night driving towards Ann Arbor in a road repair area. Several months went by, and the position was not filled, and [it] finally became urgent that they needed someone, and I was asked if I would consider going to Europe, and I accepted the challenge. I'm glad I did. We were slated to go to Europe for three years, but it wound up to be six years. The family--our daughter--had completed her high school in Europe at the American school in London, and she had returned to the States to college, and our youngest, John, was still at the high school in London at the time that we returned from Europe. Both the family and the children and Betty and I really benefitted from our stay in Europe, and there were car lines that I feel particularly happy with. I worked, of course, with all the European car lines and the trucks, But the successor Capri to the original Capri, I helped develop this Capri in Europe with the designers in Europe. This Capri was a tremendous success both in Europe and in the United States and was imported in the United States for awhile until finally the economics of the exchange rate--the dollar versus the Deutsche Mark of Germany--proved to be more prudent not to export the Capri to the States but to design it here. Finally, the last car that I was associated with in Europe--but before I got to that, I'd better brief it by saying that during my time in Europe, it was felt that the European design office, Ford of Europe, needed an Italian input, and I had brainstormed the idea

that we ought to start a new studio in Torino for Ford of Europe.

Q Why Torino?

A Torino because that was the heart of the car industry in Italy, and that's where all the design work and Fiat were located, which was the hub.

Q Maserati there too?

A All the specialty cars were in that area or around Milan or Torino in the Northern part. Ford of Europe management thought it was a great idea, and Mr. Ford [Henry II] thought it was a great idea. We started to recruit for a studio in Torino, a brand new studio, which was a tremendous challenge because I wanted the studio to be 100% Italian--all the people in the studio to be Italian and no other nationalities involved to insure that we had as much as possible a strong Italian input to our design effort in Europe. Now, the way I went about it was that I dovetailed my effort with the industrial relations of Ford Italiana of Italy--the main office in Rome. We had set up an advertising program in Torino, and I had set up dates for interviews in a Torino hotel where I interviewed designers--potential designers--for the studio, potential engineers to supplement the studio with the engineering work and the modeling end of the business, and we had to secure and find a new facility in which to operate from. So, we located a building which was a food processing plant just outside of Torino and which we rented and leased. A request was made at the time by European management, particularly by Paul Lorenz, who was Chairman of Ford of Europe at the time, that we buy the building, but I was a little hesitant, tongue in cheek, because I had really not worked with any of the people that I had

recruited. I had interviewed with the assistance of Ford Italiana as my interpreter, and I talked with all these people--both the engineers, the designers and the modelers, and recruited all of the personnel including my managing assistant to the chief--the business end--all from the Torino area, and I thought it would be better if we at least leased it for one year before we put more money in the project by buying the building. So, that's the way we started and had everything lined up. My chief for the design of our studio was Filippo Sapino whom I had recruited. At the time that I recruited him, he was working with Fiat and was one of their lead designers, but he had felt a little misgiving, with his career potential being with Fiat, and I was most pleased finally after interviewing quite a few people for the key spot to finally secure Filippo Sapino as my key man. Then, Filippo Sapino assisted me, who incidentally had a plus for him that some of the others did not, he had a little smattering of English. He soon became quite proficient. He, in turn, helped me recruit my engineers and the modelers, so it was a team effort. We finally were organized and set and ready to go. We pushed the button, and the studio was functioning. It functioned like a clock. Everything clicked. The studio was a tremendous success and operated in Torino concurrent with the Ford studio that was servicing Ford U.S. called the Ghia Studio. The Ghia Studio in Torino was furnishing Ford U.S. with full-size bodies that they had facilities for. Eventually Mr. Henry Ford requested that the two studios be combined. Filippo Sapino eventually headed the Ghia Studio. Filippo Sapino, to my knowledge, is still the chief of the Ghia Studio--the Ford of Europe portion of the advanced studio in Torino.

Q Do I recall that the Ghia Studio was under the general direction of a gentleman named DeTomaso?

A Yes. The Ghia Studio was under the general direction of [Alejandro] DeTomaso, who was the third owner of the Ghia Studio. Luigi Segre was the second owner who bought the studio from the Ghia people. He was a car racer and designer. Later he came to the Ford Hospital for a kidney problem and returned to Torino where he died shortly afterwards. DeTomaso purchased the business from Segre's widow. The Ghia design studio in Torino was finally purchased by Ford Motor. So, it has been a Ford Motor design studio. DeTomaso is no longer in this effort. DeTomaso was involved with the Pantera development in Torino at the time that DeTomaso had the Ghia design enterprise in Torino. But, the leading designer today for the Ford Ghia staff is Filippo Sapino whom I recruited in Torino for the Ford of Europe specialty advanced studio that was incorporated into the Ford Ghia Studio. The Ghia group, with John Tjaarda and Filippo Sapino heading it contributed the theme for the European Fiesta car. Although this theme came from the Ghia effort in Torino, it had to be adjusted and put into production practicality as the Fiesta car for Ford of Europe. This was the total Ford of Europe effort in respect that the theme was developed in Torino, delivered to European and U.S. management in Europe to be further developed by the design effort in Europe, which I headed. I worked for Jack Hooven, who was overall director of engineering and the products for Ford of Europe. I was the design vice president of Ford of Europe, Inc. on the project, and when I left Ford of Europe to come to the States, the Fiesta car had been completely approved by European and American management. It was in the final stages

of production detailing, and the car stayed pretty much as it was approved at the time that I was there. The only details that were changed on the car were some of the details like a little sheet metal detail above the tailgate or the third door of the little car that improved the aerodynamic air flow. It was a little raised lip at the back edge of the greenhouse. The grille was altered slightly, some of the trims were changed, but, overall, the car was exactly as it had been approved when I finally left Ford of Europe. When I left Ford of Europe, the person that took my spot then was my chief of exterior design in England who was Jack Telnack. I returned to the States as Executive Director of production design for the U.S. Lincoln-Mercury and Ford Division cars and trucks which I held for approximately a year or better after which I retired.

Q I'm not going to let you off that easy, Mr. Oros. I'd like to have you chat briefly and then I'm going to ask you a second question about the staff that you had--the chief executive stylists that worked under you at Ford of Europe.

A Well, I'm glas you did because I had missed that, and I'm glad to be asked that. In Ford of Europe, when I went to Europe, I had three chiefs when I arrived. I had a chief in England who was Gil Spear, and he did an outstanding job as the chief of exterior design for the English cars. In Germany, my chief was Jim Sipple, an American on leave to Europe, and he handled the European/German end of the business. Uwe Bahnsen (a German national) was my chief of all interiors for Ford of Europe, and that was my team. Now, when Jim Sipple returned to the States from Germany, I placed Uwe Bahnsen in Germany with Ford of Europe

concurrence.

Q He was German, was he not?

A He was German, but he was working in England. I put him back into Germany to head the German car lines, and Gil Spear continued in England for some time, and then he, too, returned to the States, and I lobbied for and got an able assistant in Jack Telnack to come to Europe. He took over as chief of design for the English end of the business. Now, to clarify my chiefs and the way I worked again with my chiefs. The operations were identical in England and in Germany in respect to detailing the designs and preparing designs and submitting designs for consideration for products that would be sold both in Germany and in England. In other words, England competed with Germany for the final product that would be bought for a car line as a body style for both Germany and England, but, Germany had by far the superior equipment in the studio for doing the final detailing on our car lines. They had the finer bridges and electronics and the latest electronic equipment and the readouts for our design effort. So, if a design was approved that would be used for a German body as well, and if it had been approved in England, then for the final detailing I shipped or flew the model to Germany for the final production detailing. Now, of course, if the German end of the business were successful in coming up with the winning design for a model that would be used both in Germany and England, if it happened to be in Germany, it just stayed there for its final completion. I did this for several reasons--one was that the Germans had the better equipment, and, two, we wanted to make sure that we had a German input into our products and particularly if those products were to be sold on

the Continent so that we could say yes, indeed, these products have been designed and have been handled with our German end of our business here in Germany. So, that was a good political position to maintain. However, all the interiors for both Germany and England were designed and detailed in England, and, so, it was a rather complicated procedure, and it was complicated in many other ways. Our shows were a great Ringling and Barnum and Bailey effort in respect that we had our shows and proposals for final selection of models to be bought by management either in England or Germany which meant that the various models had to be prepared in one country and shipped over the channel, across the channel into Germany or from Germany shipped across the channel into England. We literally flew models by airplane from England to Germany and Germany back to England. We trucked models from England to the channel and then shipped them by boat and then by truck and vice versa back to England. We had also models coming from Italy that were coming in to the shows as their portions of the presentation, and these models came in from Torino by truck. So, it was a gigantic effort of scheduling the timing. We had an additional problem which was that, generally speaking, at our shows we had usually some personnel problems with the shops. This was a good time for shops and particularly the shops in England to make their points for the various grievances or advantages they wanted to secure at the time of the show. I was fully aware of this, and I would always bake into my timing schedules an allowance for this kind of a disruption. So, although the disruptions occurred, they were anticipated that they would happen although it was a real problem. I worked with the individual chiefs. Then, I travelled between the studios every week. I was in

Germany at least once to three times a week every week year round, and every other week I made a round robin trip to Germany, Italy and back to England. Of course, I also spent time in England with the designers just going over various programs and design detailing and talking about the products as they were developing in all three locations. It was a wonderful experience and something that I'm sure the family will always cherish.

Q I can imagine. You've been somewhat modest about your accomplishments in Europe in terms of developing and accelerating some of the product line ideas. Could you detail, as you have elsewhere, what your original priorities were and how that was accomplished?

A That's a good question, and I'll try. What had happened here was that Damon Woods had his unfortunate accident, and that spot was not filled for quite some months, and, finally, when I arrive in England, John Andrews, who was chairman of Ford of Europe at that time, said, "Joe, you've just arrived in England, and we welcome you joining our group here, but this is our problem. We need a front end like last week for the Cortina because it's been surveyed, and it has come back as a disaster. Would you please get us a new front end for the Cortina real fast?" So, the first thing, of course, was to hurriedly design with Gil Spear and his group in England a new front end for the Cortina, and, of course, the new Taunus was also be launched at the time--the Taunus and Cortina--and the Escort had problems with facelift problems at that time, and it seemed that all the car lines had had some neglect as far as scheduling and the final detailing. A lot of it was due to the fact that the position of design director of Ford of Europe wasn't filled in time. So,

the car lines that were due to be introduced had problems in respect that a lot of the sheet metal detailing that had been going on and supposedly was approved, should not have been approved because there were flaws in the dies and in the highlighting of the sheet metal. We had to hurriedly change some of the surface detailing of these cars that were scheduled for introduction to accommodate and correct some of the surfaces that were going in production because they weren't correct due to the highlight final detailing. So, that was another tremendous problem, and, of course, then we also had other problems of hurriedly trying to assemble a new Granada.

Q Yes, I'd like to hear about that.

A A new Granada theme. The timing again was back on its schedule, and the design effort wasn't quite there. We had missed a lot of time, so we had a lot to make up. So, the Granada was rechurned and rescheduled, and we got that moving which was a top priority. The Granada was the top prestige car of Ford of Europe car line.

Q Top of the line?

A Top of the line car. Of course, along with that the truck end of the business in Ford of Europe also needed some attention, so everything seemed to need a lot of attention in a hurry, and everything was eventually buttoned down. We managed to make all our schedules. It was a tremendous effort, but the designers in Ford of Europe were extremely capable, and we got things turned around and on target.

Q What about the Consul? Were you involved with that?

A Oh yes. Well, you see, the Granada Consul. This was the same car. The Consul was the English version, and the Granada was the German

version. Now, it was intended to be that way, but the Consul wound up then, eventually, in Germany. The Granada was the top-of-the-line nomenclature, and the Consul was the low end of the line for the same car. So, that became a problem with the German end of the business, and the German acceptance of the Consul in Germany because this was an English name, and it was a tremendous obstacle. Eventually, the name Consul was dropped, and only the Granada name was used.

Q And it still was used in Germany also?

A Yes, it was used in Germany as well.

Q That was pretty much a long-time favorite platform, was it not?

A Yes, it was. It started out a little slowly, and then approximately at the time I left Europe, it started to take off again. Then, the year that I had left, it turned out to be one of the best sellers in Ford of Europe.

Q Now, I think you've glossed over a bit too quickly the Fiesta concept. What was the reason for--the need for--a new--what became the new Fiesta?

A Well, the need for the Fiesta was that Ford of Europe did not have a B-car type car in its linup. It just wasn't competitive, and Ford of Europe needed a B-car type to compete with the Fiat.

Q What were your A, B and C cars at that time?

A They were then the Escort, Cortina and Taunus, and, of course, the top of the line was the Granada. The Escort was just a notch above the Fiesta size but below the size of the Cortina and Taunus. The Cortina and the Taunus were slightly smaller than the Granada which was the prestige end of the line.

Q So, you needed to plug the gap in the middle.

A The Fiesta--the B car--was needed in Ford of Europe to compete head on with the European B cars. It surveyed in the surveys prior to introduction much stronger than any of the current European B cars, and at introduction it proved the same. It outsold all of the B cars in Europe when it finally was introduced after I had returned to the States, and it was a tremendous success and was eventually exported to the United States. But, again, the exchange system between the German Deutsch Mark and the American dollar was a little difficult to accommodate, and, finally, the Fiesta was relegated to European use primarily.

Q I was always disappointed to find that the American version of the Fiesta, or the export version, was not as exciting as the one you developed.

A No, it was. It was really the same sheet metal.

Q Was it really?

A It was the identical sheet metal that was developed in Ford of Europe from the proposal from the Ghia designers, and as I mentioned before, that this was the theme started with the design group from Ghia with Filippo Sapino and John Tjaarda, etc. The model was given then to Ford of Europe to develop as a production version for the Fiesta. Now, we were also in competition in Europe at the time with a U.S. "B" car proposal. This B car was surveyed in Europe. Unfortunately, it did not come up as strongly in Europe as it had rung the bell in the States because the European design acceptance to the design was different from the American design acceptance. So, it really wasn't accepted well as a European proposal. Incidentally, the instrument panel on the Fiesta was

a tremendous success, and I felt very good about that.

Q The final note on the Fiesta, I'm interested in the fact that you had brought in a young man whom you felt had international experience in design and assigned him the task of developing the Ford of England end of the Fiesta concept.

A No, what had happened here was that the Italian input to the prime management show included a proposal from Torino submitted from the Ghia studio. This proposal was the nucleus and the start of the original Fiesta in Europe. It was the preproduction effort from Torino that was sent to Ford of Europe either in Germany or England where we had our show at the time. We were directed in Ford of Europe to take that theme from Torino and productionize it and make it feasible for a production Fiesta. The name Fiesta was not used at the time. The code name for the "B" car program was Bobcat. It was just the Bobcat.

Q That Bobcat, right.

A It was the Bobcat, and we proceeded with the Bobcat proposal from Torino along with some other Ford of Europe proposals that were developed both in England in Germany. We were putting together several models including developing into the production phase the preproduction effort submitted from Torino. The "B" car proposal that we received from Italy was way under package. It was quite low and slinky. The Ghia studio had taken liberties with the package that neither Germany nor England nor the U.S. took. Of course, they had this liberty in Italy to do that. They were a preproduction effort studio, and they felt that it possibly could be squeezed in that kind of package, but the package that we had going for the Bobcat was a package developed in Ford of Europe, and along

with the U.S. engineers and refined in Ford of Europe, it just could not accommodate the car that we received from Torino, so we were given the responsibility to take that Torino proposal and make it feasible, which we did. My chief in Ford of England at the time was Jack Telnack.

Q Whom you had recruited personally?

A Whom I personally recruited in the States, and I was very happy to get him in Europe to help with the products. I remember when the car was finally approved, I called Jack in my office, and he wasn't aware of the total operation of Ford of Europe at the time, and I explained to Jack, I said, "Jack, this model that we finally developed in your studio, the Italian contribution that the English developed, now that it's approved, we're going to have to take this model and ship it to Germany and have Uwe Bahnsen and his crew do the final production detailing." At that point, Jack, of course, not being familiar with all of the requirements of Ford of Europe an what we had to go through politically, was quite concerned. He felt that he could do the detailing right there in England, and I said, "No, Jack, we can't, and for two reasons we can't: one, you don't have the right tools. Germany has the best tools of the two areas," and he knew this. "It's got the latest electronic bridges, it's got the best equipment, and they can detail it; and then, secondly, Jack, we have to have a German input into this car, and we have to be able to say that German engineering and German design effort was involved in the development of the Fiesta." So, reluctantly, Jack finally saw the light. We did ship the model to England, but, again, as an operational management group, the way I functioned with it was that I had Jack Telnack go to Germany periodically with me or separately to dovetail with

Uwe Bahnsen to make sure that as the model was developed if there were changes, that Jack was aware where we were making the changes, and for what reason for manufacturing or feasibility or costs, some of the changes were being put into the model. Jack, too, was fully aware of the final detailing to the Fiesta that we had developed in England finally, and that was our method of operation. The cars we developed in England, we invariably sent them to Germany for the final detailing.

Q Now, the Fiesta was an immediate sales success....

A Fiesta was an immediate sales success, and it was a tremendous effort by Ford Motor worldwide--U.S. and Europe combined in respect that they had to put in new plant facilities and set up new production lines and new plants in Spain--look for property in Spain, buy property in Spain, set it all up--developing the plant for the production of the Fiesta car in Spain. And, it was a tremendous effort because the Spanish people had not had this kind of effort before, and they needed a car line like the Fiesta in Spain to help their economy, and, of course, Ford was happy to go to Spain because it proved to be economically a good place to have a plant; and it turned out that the Spanish people finally turned out the product with the same competency as the German manufacturing people did. It was a tremendous effort with the engineers and management of integrating the manufacturing of this Fiesta car in Spain. Training the Spanish people in Germany and then sending them back to Spain so that they would do it the way the Germans did it, and then, finally, the car being produced in Spain with the same qualities and standards of production as in the rest of Germany, it was a feat. I was not, of course, connected with that portion of the business at all. That was entirely

Jack McDougall's world in manufacturing, and he did a tremendous job.

Q So, the erstwhile Bobcat was now renamed the Fiesta and produced in Spain as the first product of that assembly plant?

A Right. it was produced in Spain and also in Germany.

Q What city in Spain is that plant located?

A. Near Valencia, I believe.

Q One final detail about Ford of Europe that interests me that you describe elsewhere, the increasing feeling you had that you had duplicate facilities in Germany and England.

A Yes. For the time I was in Europe, I felt that we were spending an abnormal amount of money with the two facilities primarily. I wasn't putting the Italian facility in because that was just a very small, single preproduction effort back in Torino with a very small group of people, but England had a full design section devoted to designing cars--very similar to the U.S. effort on a small scale, and a counterpart of that same effort going on in Germany, and with the cars being designed in both areas and the numbers of people that were required to staff the separate studios--one in England and one in Germany--and to keep these staffs going with engineers, modelers, designers and the shop effort and the time that was spent shipping these models back and forth across Europe for our individual shows, with the cost of the facilities and overhead, I thought was just a tremendous expenditure that would be far better and more economical, more efficient to integrate the whole business in one design center. My recommendation was to integrate it in Germany.

Q For various reasons?

A For those many reasons I just cited. Management also felt, yes, this was true, and they asked me to make a study and see what would be involved in having our design effort integrated into one design center, but finally when all of the economics were evaluated on paper and the timing involved and the timing of the various programs that were in the hopper at the time, it was felt that it was too early to try that effort. To my knowledge it is still split, as far as I know, with an English and a German section. Maybe some day, hopefully so, it'll be one design studio effort similar to the one in Dearborn which, I think, should happen.

Q Where are they located geographically?

A Well, the one in Germany, of course, is in Cologne, and the one in England is out in Dunton which is just outside of the Brentwood area near Warley in Essex. They both have had--and I don't know the final detailing--the same makeup for the two organizations or of the separate functions, but when I had left Europe, they both had equal engineering efforts and design efforts, and they were duplicate counterparts in all respects. I thought that this was a tremendous expenditure of money and of effort, and I felt that the budget could be helped by streamlining the personnel and getting more qualified personnel in one building, and it would have made the whole operation in Ford of Europe that much easier. It would have certainly been a lot easier for me because I had spent so much time travelling between the three sections, primarily between England and Germany. As I mentioned, I was in an airplane from one to three times a week, every week, year round. In fact, my passports had a visa and entry/exit stamps in them till it wouldn't end. I had accordian pleated sections added to my passport. It was hilarious.

Q So, the bifurcate efforts continues. They have not closed down....

A To my knowledge, the two areas are still functioning in a separate fashion. I think they should be together, and I hope they do get together eventually. Now, if I may close, in total, after returning to the States, a year or a year-and-a-half later, I had retired from Ford, and with my retirement I feel that I have accomplished at least some of my starry-eyed hopes [I had] when I was in art school; mainly, number one, was to be able to see my products in the marketplace. Industrial design products, as as automotive products, that I have been associated with. And, soon after graduating from art school, I began to see such products starting with my joining, of course, with George W. Walker's design group. Industrial design products that I had been associated with through his office; and then, of course, very fortunately, a lot of design products from my first love which is, and always was, the automobile. I have been associated with many cars in the development of the Ford line of cars from 1949 through 1974, and, of course, with all of the European cars and trucks for six years, and I did realize some of my ambitious daydreamings and some even more than I had realized and also some that I didn't quite achieve because possibly they were difficult to get to. But, generally, I did achieve most of the things that I had daydreamed about after graduating from Cleveland School of Art in Industrial Design.

Q And the Fiesta was your triumph of the '70's.

A The last car I worked with in Europe was, of course, the Fiesta.

Q If I were to ask you, and I've warned you that I would at the end of our interview, if you could sum up your design philosophy by which

you've lived all of your professional life. Could you do that for us at this time?

A Well, I believe you've asked me what my design philosophy, my credo was--I would assume that those would probably be two kinds of questions. In my design philosophy, primarily, I have always striven to investigate the product as to what the product's function would be and to try to design for that product in the simplest possible way designs that would accommodate that product in the marketplace without encumbering the product with superficiality. As much as possible I tried to keep the lines as simple as possible and tried to keep the products generally on target to what they were intended to do in the marketplace. Also, George W. Walker instilled in me something I've never forgotten and something that he's always talked about, "that the final judge of all the products was the buying public." And, I've never forgotten his saying, "that if a customer has an opportunity to evaluate two products for the same function at a similar price, the one that has the better design and the better aesthetics will always come out on top--will always outsell the other." So, I've tried for the best design for the product. I've never lost sight of that--never lost sight that if there are two products on the counter, the one with the best design effort will always be the winner. The credo of my operation has been you can't do it all yourself, and it's good to give credit where credit is due and work with people and always remember that they would like to be recognized for their effort on the products, and always remember to listen to other design input and other opinions to make sure that the products do have the best possible input for design consideration. I think I've done that through the

years. I've worked with a lot of designers, and we had a lot of communication from top to bottom and from the bottom up, and, in fact, I enforced it. We never had anybody shy in the Ford studio for long because we dug them out of their shells, and made them talk. That was one of the requirements of being a designer in the Ford studio. You would have to be able to communicate about the design that you were working on whether you thought that product was going in the right direction or not and be prepared, however, if you felt that it wasn't--to have an answer how to fix it or what would be needed to fix it. There was always an open-ended discussion, which was a healthy give and take.

Q Well, certainly the results that you've accomplished over the years has vindicated that method of operation.

A And, I feel rather successful also that to my knowledge I was the only person in the States or anywhere in Europe that had had a studio like the Ford exterior design studio effort for approximately thirteen years, officially, and, of course, unofficially as a consultant working for George W. Walker in the same capacity for eight years, but officially for at least thirteen consecutive years on all the products that were developed for the Ford Division car lines and the trucks.

Q Just about twenty years in all?

A Oh yes, in total it was just over a twenty-year, official experience.

Q Thank you very much for that delightful accounting of your incredible design career. You've agreed to add an amusing and instructive postscript to the Mustang story: your reaction to Lee Iacocca's description of the Mustang episode in his new book.

Q Oh yes. I read my first alert that the book might be coming out by reading the October 8, 1984, Newsweek article quoted as an excerpt from Iacocca's forthcoming book. Having read the article, I was considerably concerned re: the credits on the Mustang mention for both Dave Ash and myself. I felt that it shouldn't have been given that way, and I wrote Lee a letter explaining that first of all, the Mustang would not have been the Mustang that was finally bought had I not changed the first clay effort of the Mustang that was started in the Ford studio by Dave Ash. I had felt that the model was going in the wrong direction. It was then the second effort after I stopped the first clay model, and having gathered our management group in the design Rotunda with all our designers together and brainstormed the problem more thoroughly and given more thought to the design and its concept and after having established that, we proceeded then with the final detailing of the Mustang that was finally bought. Lee was never aware that there had been another Mustang started in the period of time that I was in management training over several days and absent from the studio. That the effort had rapidly been put together for my inspection when I got back from training. But, having come back from this session/seminar, I immediately recognized that we were on the wrong track, so I stopped the model. Now, Lee had never known this, and further I said, "Lee, there were...."

Q But, at this point you were writing him a letter?

A Yes, I had written Lee a letter. I said, "Lee, it should have said 'Joe Oros and his staff of designers,'" because there were really, by rights, several other competent designers in the studio that also contributed to the development of the Mustang. I mentioned in the letter

to Lee that a designer in the Ford studio that was a manager at the time working for Dave Ash who had not been mentioned in the excerpt in Newsweek by the name of Gale Halderman did a tremendous job in helping establish the theme with the Mustang, and, of course, we had in the Ford studio another manager, John Foster, who did an excellent job in contributing to the development of the Mustang. We had another very capable young designer, Charley Phaneuf, who also contributed, along with many more designers.

Q Did you mention Mr. Halderman's immediate...?

A Oh yes, I mentioned that Gale Halderman did a tremendous job in assisting to bring to fruition the final Mustang.

Q And you mentioned David Ash as well?

A Yes, I mentioned Dave Ash as my executive designer and his involvement with the Mustang program as I have outlined in this report.

Q They enthusiastically accepted the...?

A Everybody enthusiastically accepted the final Mustang, and, after approval, this car did fall together well as I have previously said, and very little change was put to the car.

Q I think you've also pointed out, and I think it must be reemphasized, that this one instance where you literally created your own vehicle from scratch, or very much from scratch.

A We did, in a sense I might clarify from the design point of view, we product planned our design in respect that we brainstormed as to what this car should look like and what it should not look like, and we brainstormed as to the kinds of designs that would be acceptable and would not be acceptable, and I do remember that I personally contributed

many ideas and sketches for the Mustang, along with the designers as a directional indication from me as to where I thought the Mustang should go as far as theme. I feel quite pleased that the direction that I helped establish on this car proved to be so successful, and I personally also feel very strongly about the front-end concept for this car which I helped nurture and develop along with the designers and the total design effort in the studio.

Q Well, it was a tremendous success.

A It was a tremendous success and a lot of fun. It took a lot of time as far as our overtime and tremendous effort and highly concentrated in a very short period of time, but it paid off.

Q It certainly did. As a final postscript, what was Mr. Iacocca's reaction to your letter?

A It was interesting. When I wrote Lee this letter, he wasn't in the office, and I called a few days later, and his secretary said that no, he was out of town, that he would be in in a few days and sure that he would be calling me or something to that effect. And, sure enough, a couple days later--5:30 in the morning Santa Barbara time--the telephone rang at my bedside, and I awakened with a jolt, and on the other end was Lee Iacocca. I had talked with Lee and said, Lee, I felt that the excerpt as I read it in the Newsweek was not quite correct, that it should have given credit, if credit was to be mentioned, to many designers. I said that would be diffcult, but I felt that possibly it should have read, at least, "Joe Oros and his staff" and too, if need be mentioned, some other people in the studio because it was a total design effort in the Ford studio.

Q What did he say?

A He said he felt terrible about it. That that was the way he remembered it, and he couldn't do anything about it because the books had already been printed. He seemed to indicate that he might give it consideration for a correction in the second edition or thereafter, but, at least, I felt well that I'd written him a letter, and I had received a return response. I'm pleased that I have been associated in the Mustang development and pleased with the effort that went in it and the success of the effort and my association with all the people that worked on it with me.

Q Well, certainly, Mr. Iacocca obviously valued your contribution over the years as well.

A I've always had a good relationship with Lee, and I think he's a tremendous automotive product man.

Q Well, we think you're a tremendous designer.

A Thank you.

Q Thank you, Mr. Oros.

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OROS, BETTY

April 17, 1985

Q This is Dave Crippen in Santa Barbara, California, and as a bonus or an extra added attraction to Joe Oros' interview, we have asked his wife, Betty Oros, to give an added dimension to our history of design by detailing the early part of her career in the design field; so we'll pick up the story as a young Betty Thatcher is about to enter the Cleveland School of Design to train as a designer.

A It was four-year course. My dad thought I ought to be a secretary because he was a CPA, and he knew secretaries could make a little bit of money, but I wasn't for that. I wanted to go to art school, so I went to Cleveland Institute of Art.

Q And you were then Betty Thatcher?

A Thatcher, yes.

Q From?

A Elyria, Ohio. That's near Cleveland. I took industrial design as a four-year course.

Q Rather an unusual curriculum for a lady in those days, was it not?

A Well, there were other girls in the class.

Q Were there?

A Yes. I enjoyed it very much. About the time I graduated, the school had received a letter from Frank Spring in Detroit, Michigan. He was head of design at the Hudson Motor Car Company, and he had the right idea. He thought that cars should at least appeal to women because at

that time I guess most families had only one car but he thought the woman of the family would have a lot to say about which car was chosen because of the appearance, never mind whether it ran well or not. So he wanted a female designer to consult with and also do some designing. So he wrote the Cleveland School of Art, and they asked me to come to Detroit and be interviewed.

Q What year was this?

A This was 1939.

Q Incredible. Mr. Spring was obviously a rather forward looking, progressive thinker at this time.

A Yes, he was.

Q However, may I ask you one question, quickly. What was your career objective at the Cleveland School of Design or had you thought that out?

A Oh yes. I wanted to design products, probably. I didn't think I was going to be a car designer. But, anyhow, I went for the interview. I had received a fifth year scholarship, but I didn't think I'd take that. I was raring to go for a job, so I went for the interview and got the job, turned right around and went back to Elyria, and, on Labor Day, my mother and I drove to Detroit, and the next day I went to Hudson Motor Car Company.

Q Now you're going a bit too fast. Let me ask you some questions about the interview. You had not met Mr. Spring.

A No.

Q How did the interview go? What did you discuss?

A Well, it was a long time ago.

Q What sticks in your mind as the salient points of that interview?

A He wanted to find out if I was serious about design, for one thing. I could tell that, and he asked me questions about cars, but he didn't know that I couldn't drive. But, you know, I had my ideas of good design, and that's what we discussed.

Q Do you remember any details?

A I really don't.

Q Now, was he interested in you for the input that you would be able to give to his developing concept of the then novel notion that there were female customers for automobiles, and that perhaps many decisions were influenced by the female half of the buying public? Did he feel that you would be helpful in what became to be the traditional [female] role of a color and fabric consultant and beyond that in terms of actual design work?

A Yes. I did work on color and fabric, but I also worked on the exterior decoration. At the time they weren't changing the body shape very much. I worked on what they called the side bonnet lights. There was a little triangular light at the front of the hood that would be [turned] on at night, of course, so the car would be instantly recognized as a Hudson. That was the top of the line, and then the less expensive one had sort of a rectangular light, and this was all incorporated in chrome trim that went the length of the car.

Q When you say light, you don't mean the conventional light, you mean a motif.

A Yes, but there was a light behind it that actually went on.

Q And where was this placed, you said the bonnet?

A In the front--on the side of the hood--at the front point.

Q It was illuminated?

A Yes, and now the Thunderbird has something like that, you know, it goes on at night just as soon as you turn the corner.

Q Was it a plastic or a ...

A Yes, it was a plastic...

Q A clear plastic?

A No, it was white--frosted.

Q Frosted plastic?

A Yes.

Q That's fascinating.

A I worked on the interiors too, and the interior hardware, the instrument panel with a concave radio grille. I have pictures of all this.

Q All of this for the Hudson line?

A Yes. Mr. Art Kibiger was just under Frank Spring. I really saw more of him than I did Mr. Spring. He gave me a place in front of the window in his office with a drawing board and everything. I wasn't allowed in the studio at first.

Q It was a male preserve?

A He said he thought I shouldn't be exposed to their language.

Q Do you think also he thought you might prove a distraction to them?

A Oh I don't think so. But, eventually, I did go in the studio after awhile. After all, designers talk among themselves and talk over the developments of what they're working on.

Q Creative interaction of ideas and interchange, of course, is the life blood, I suspect, of the profession.

A They must have cleaned up their act because I didn't notice any bad language, and I enjoyed working with them.

Q How long were you there?

A About two years.

Q Anything else that you think would be helpful that would tell us about your sojourn?

A Well, there were people that were in the design...

Q Who were your colleages there?

A Jake Aldridge.

Q What was his function?

A These were all designers.

Q They weren't designing specific portions of the car's anatomy?

A I suppose from time to time they were given assignments.

Q I see, but it was generally a design team, overall design team?

A That's right. Nils Thornquist, and I don't know if he's designing or not; Herb Todd, Bob Koto, Bob Thomas, Bob Fitzpatrick, and Dick Calleal.

Q Now, three of them later turned up in your [J. Oros] unit at Ford. Interesting coincidence. That was Mr. Calleal, Mr. Koto, and Mr. Thomas, I believe. What did you think (maybe this is not a fair question) of the final product that you produced, was it the 1940 Hudson you were working on?

A Probably '41.

Q Were you happy with what finally resulted?

A The body wasn't such an attractive thing, and all through school we were thinking in the future. It was a little disappointing.

Q Was it? In what way?

A Well, we all wanted to make the body more modern or streamlined.

Q What was holding you back?

A Budget.

Q Budget? Management? The engineering packagers, I suspect?

A Yes, sure. They...

Q Pulled in the reins. So it while it was a fascinating experience for you, and you valued it, the end result was a bit disappointing because of budget constraints?

A Yes, right.

Q Is there any final comment you'd like to make about the fact that you were, apparently, as we've been able to ascertain, probably the first female hired to do design in the automobile design field in 1939?

A As a full-time employee. I think so.

Q This has not been generally recognized, as far as I know, in print.

A No.

Q Do you feel that distinction? Have you thought much about that particular aspect?

A Not unless somebody mentions it to me I haven't, no.

Q Well, I think, as nearly as we can ascertain, that you were, perhaps, the first full-time female doing actual design work in the automobile industry.

A If you hear of somebody else, you let me know.

Q Is there anything else that you both think that should be recorded at this point?

A Since Joe was with G.M. at the time, and I was with Hudson Motor, we were sort of competing. We thought that before somebody found this out, one of us had better quit, and, of course, I was the one.

Q Today you might have made a different decision, perhaps.

A I don't think it would matter today.

Q It really wouldn't matter today, no. That old bugaboo about having spouses working at competing firms is pretty old hat today. Thank you, Betty Thatcher Oros.

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