Virgil M. Exner Jr. Oral History

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Note to Readers

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DESIGN ORAL HISTORY PROJECT

EXNER, VIRGIL M., SR. &
EXNER, VIRGIL M., JR.

1989

EDSEL FORD DESIGN HISTORY CENTER

Henry Ford Museum &
Greenfield Village

This is David Crippen of the Edsel Ford Design History Center at the Henry Henry Ford Museum & Greenfield Village in Dearborn, Michigan. Today is August 3, 1989, and today we're privileged to be talking with and interviewing Virgil Max Exner, Jr. Mr. Exner has had a long career as an automotive designer, mainly with the Ford Motor Company, and is the son of the celebrated Virgil M. Exner, Sr. We're talking today with Mr. Exner about his design career and about his relationship with his father. Since he has a unique perspective on being the son of a famous design and growing up and working with him, we would like him to speak in as detailed a fashion as possible about what he has perceived over the years of his father's career and how his father's career has impacted on the history of automotive design. So we'll ask Mr. Exner to give his career narrative in his own way.

A Thank you very much, Dave. It's a privilege on my part to be here, and I want to thank you for our association over the last couple of years, especially, while I was at Ford Motor Company Design and finally got around to making this interview.

As Dave said, I'd like to go through my father's biography on a chronological basis. It naturally impacts my own career a great deal, and so I may as well start with when he was born in Ann Arbor, Michigan, September 24, 1909, and was, at that time, put up for adoption as having no supportive parents and was adopted by the Exners shortly after. The Exners renamed him. He was originally born to a couple with the background name of Little and Anderson, thus being [of] Scots and Norwegian ancestry and, perhaps, may be looked upon as getting some of his eventual design aplomb and sensitivity from particularly the Scandinavian side of that combination.

Nevertheless, the Exners, an old German name in Buchanan, Michigan, adopted my father virtually from birth, and his name became Virgil Max -- why the Max, we never knew -- Exner and the son of Iva and George Exner. My grandfather Exner was pretty much a do-it type of a person from a craftsman's standpoint and [was] an inventive/creative type of person himself and encouraged my father, at a very early age, to be able to handle all facets of shop making, woodworking, and working with his hands. But my own father was really more of the nature of the artistic type. With my grandmother's urgence and being the only child, from a protective standpoint [she] wanted my father to pursue the fine arts rather than getting his hands a bit greasy.

My grandfather was a good machinist and worked for many years as one of the head machinists at the Clark Equipment Company in Buchanan, Michigan, which was the national headquarters of that company for many years. Buchanan was just a small town of about five thousand on the Western side of the state and about ten to fifteen miles North of South Bend, Indiana, which is the home of the University of Notre Dame.

My father grew up quite normally and had many hometown friends and went to Buchanan High School. He graduated at the age of sixteen and, very early on, had not any particular formal art training but did develop to become the Buchanan High School yearbook art editor and did a number of sketches. He was always known for painting signs and doing things of that nature around Buchanan, Michigan, while he was in his high school years. He was, as a boy [with] one of his best friends, Art Allen, in Buchanan -- who was one of our family's life-long friends -- interested in guns and the Old West and all kinds of the romantic type notions that boys at that time went through.

My father soon became very fascinated with automobiles and grew up with quite a passion for both the aesthetic appeal and the mechanical appeal of the car. While he was still in high school, he and his friend Art and a couple of the other fellows would go over to Chicago from time to time on the train and go to the auto shows, and my father, in particular, seemed to be quite fascinated by the magnificence of the shows. Even one time, along with Art, crawled through a barrier to see a car that was a brand new type of car that was on display which happened to be called a Duesenberg back in the early 'Twenties. It was the Model A Duesenberg. He was always impressed by that. Even in his early 'teens, as well as doing fine art sketches and fine art work, he started to draw cars and to actually design the bodies, of which I have a couple of his very early sketches that he portrayed a couple of Model A Duesenbergs and a design for a Kissel Roadster.

But he soon graduated from Buchanan High School. He had just a smattering of artistic training in any way. He, at that time, decided that he would go to the university as a day student. The family was not Catholic in any way, but, nevertheless, the University of Notre Dame was close so that he could commute. My father and his rather fanciful-painted Model T Ford took off [for South Bend], and he went to day school and enrolled in the College of Arts and Letters at the University of Notre Dame in 1926, after having graduated from Buchanan High in 1925.

For a period of about two and half years, [he had] very little art training because this school was not a strong artistic school. But there were a couple of art classes: design, and just basic art design, and a bit of advertising art that was taught there. It was, primarily, fine art and painting, typical of the Catholic type institution.

Q Enlightened Catholic institution?

A You might say that. Again, my father was not Catholic in any way. My grandparents were quite independent. My grandmother really was Church of the Latter Day Saints and never imposed it on my father in any way. My my grandfather was quite a normal individual at that time -- Protestant, but not heavily involved in any church. They supported him, along with his own efforts in picking up a bit of work doing sign painting around Buchanan to help [pay] his way through school. They picked up the majority of his tuition fee at that time.

This worked for about two and half years, and it got to the point where funding was running out, and it was getting more expensive. He really only attended the university and did very, very well in his regular academic courses; he had very high grades and did as well as he could in picking up the artistic end. But he was advised, frankly, by the head of the art department, that they couldn't teach him very much more as far as becoming a professional artist -- which he was by then very interested in -- and [suggested] that, perhaps, it [would be] best if he tried to secure a job around the fringes of advertising art at that time. So he quit school in 1928 -- he did not graduate -- and started work for a firm in South Bend called Advertising Artists. This firm was an advertising studio, a branch of the then widely-established Meinzinger Studios, which had its head offices in Detroit and Chicago and was run by Frank C. Foote and Ed Clark in downtown South Bend. And they held accounts in South Bend. Their office -- Advertising Artist -- held the account of Studebaker Corporation -- their main [client] -- for doing their advertising catalogs and the advertising art work leading to the catalogs. Their accounts were

also some of the musical instrument [companies], which were largely concentrated in nearby Elkhart, Indiana, such as Conn Instruments. Some of their other accounts were local breweries like Berghoff, which was in Fort Wayne, Indiana, and Clark Equipment Company, of course, in Buchanan, as well as various other typical office equipment accounts.

So, my father was advised to try that, knocked on the door and was actually ushered in for an interview as an errand boy to start with, by my mother who was then the newly-hired office secretary of Ed Clark there at the advertisng agency. My mother, having come to South Bend from Three Rivers, Michigan, [from] a family of one son and three daughters. Both my mother and her younger sister -- they being the youngest of the family -- were sent off to South Bend to go to secretarial college by my uncle, the oldest son of the Eshleman family -- my mother's family. [They were] from Nottawa, Michigan, [and were] farmers, for the most part. [Nottawa], where my mother was actually born, was close by Three Rivers, Michigan. My mother went to high school in Three Rivers. They were sent off to go to business college in South Bend by my uncle who, because my grandfather on my mother's side had died at a very early age, had taken over the family at that time with Grandma Eshleman (Virgil and Frieda).

So when my father showed up at Advertising Artists, it was really my mother who did the physical hiring, along with the paperwork, but my father became an errand boy to begin with.

Q Typical of those days?

A Yes, typical of those days. Really [it was] an apprenticeship. And he was happy to get the job and to be around watching artists there at work. The type of errands that he did was to deliver artwork and prints

and all kinds of things like that to the [client] companies, but it was primarily Studebaker that they needed that type of liaison with. He got to know the design engineering department at Studebaker, and this furthered his interest in cars.

Q What year was this?

A This was in 1928/1929. And, of course, the Depression came along at that time, and that hit very hard, and that's one of the reasons that he could not foresee the continuance of going to college. So it was important that he had this job. And I remember both my mother and my father telling me, when I was a little kid myself, that, oh boy, they worked long hours there, and then my father got on the board and actually started to do a bit of the illustration of advertising art under Frank Foote and Ed Clark. They worked him onto the boards to actually start doing some work.

Q They, obviously, recognized his talent?

A Yes. They started to recognize his talent as he started to discuss things then, talk about things, show them some of the work that he had done. My mother was making more money than he was. My mother was making $11.44 a week, and my father was far less than that just starting out. And he kept up for a few years at those kind of wages. But he soon started to work out quite well on his own, as far as being able to handle some of the major work. He started out doing backgrounds, to a great extent, for some of the car illustrations, and then he started to do some of the car illustrations himself for both the Studebaker truck and the car. And then worked in the complete advertising layout brochures and the full-size brochure illustrations. [Eventually, he] worked into the complete range of things, as well as cars, and worked out some of the major brochures for some of their major accounts.

He didn't really become a senior artist, from a managerial standpoint. They just didn't have things like that. But he became one of the full associate artists within a couple of years, and, as I said, became responsible for some of the major brochure work, of which I have a few samples left from that time.

Q What can you tell us about his personality? The photographs show that he's tall and handsome?

A Yes. He was skinny. Relatively tall -- 5'10½"/5'11". Very dark hair. Rather light complected. He always had a high, receding hairline and was built not too unlike a tennis player.

Q Rangy, but...?

A A bit rangy. He liked sports, although my grandmother, even back in high school days, pooh-poohed that. My grandfather wanted to see him become a football player, and he wanted to be a football player, but my grandmother was a bit up in arms about that. Although he was an avid sports enthusiast, and while he was at the University of Notre Dame, went out for track there, he did not make the [varsity] team but participated in some of the intramural sports.

Q Was he gregarious?

A Overall, I would say he was quite gregarious. His personality, to hear him tell it, was that of a daring kid. Especially, he and Art [Allen] were full of pranks. The Allens owned the local hardware store in Buchanan for [many] years. They were that kind of prankish-type kids. He liked the girls in high school. Although to show his interest in cars even in those days -- his girlfriend's name was Mercedes in high school -- just like kids today, everybody liked cars. There were a lot more and varied makes in those days, too.

Q Oh, in the 'Twenties, paradise!

A Incredible, yes.

Q How did it first manifest itself? You told us how he was able to parlay it into a job. I think you also indicated that he was interested in fine art.

A Yes, very.

Q But with his physical dexterity and his being able to translate what he saw into something more than just a sketch was, obviously, something he'd picked up along the line?

A He'd nurtured the idea of designing things in general as part of the background that he got from my grandfather, who was always building things on the side. My grandfather was purely a constructor type, but not much of a designer, but he would build his own furniture, turn his own wood legs for tables, and make small amounts of furniture. I think my father picked up on the idea of combining his artistic [sense] with making something. When he would make his own swords with the other kids, his would always be beautifully carved and break instantly. But he always perceived the idea of when he did something, he could make a lot of things. He could do things very well with his hands. He was not only a good draftsman, but he was a good craftsman and perceived how craftsmanship should proceed.

Q A wonderful combination.

A Yes. Mechanically, especially, he had a sense for mechanical beauty. With his artistic ability, he could be very fluid in his draftsmanship and painting, but he liked mechanical beauty, also, or, at least, had an eye for it. It was a natural to work into about the only

thing that really existed at that time -- as far as industrial design is concerned -- was the advertising aspect of art or architecture. But there was little in the way of any kind of school to be had for industrial design. It was a Twentieth Century phenomena, really. It was that you went to your local university, and they had art courses, and then art -- which was a good background, because, after all, that leads to everything. At least he got a little bit of training there. But he was largely self-taught, from a drafting standpoint, and he could see how drafts were made by seeing engineers working at Studebaker, and he was able to use that ability. He had a bit of mechanical drawing at the University of Notre Dame, but, mostly, he felt comfortable with a pencil and a straight edge and/or a paint brush and whatever type of media was available.

Q Obviously, a quick study as well?

A Yes, quick sketches. He was extremely versatile, as well as the ability to sculpt things. He was just able to master these mediums very easily. It's difficult to judge exactly what his best medium really would be, although it leaned most heavily towards transparent water color, which was of large interest in the 1920's. It was something that was quite popular in the 1920's, but he was particularly adept at that. Later on in his life, even while he was at Chrysler, he picked back up on that, and it was very much his first love. Even some of the illustrations that were done for Advertising Art during this period while he was there, the majority of them -- the final illustrations -- were transparent water color illustrations for cars or whatever it was.

He was there until approximately 1931. He started to date my mother there. It took him awhile to get up some nerve. He started to date her in 1929/'30. They were married in 1931.

Q Tough year for young marrieds to start out?

A It certainly was. But they had a good time. By that time, my father had acquired a Model A Ford roadster, and it was a tan job with black fenders. He painted the wheels cerise, and it was a real sharp-looking rig. Then he proceeded to work there. My mother, before she started to work at Advertising Art there, had gone to South Bend Business College. While she was doing this, in order to raise tuition and to cover her own room and board, had taken up a position with a rather large family as a housekeeper and live-in babysitter in South Bend, and they -- the Shaefers -- became both my father's and mother's very best friends. They built the Shaefer Gear Works in South Bend.

My mother was actually living with the Shaefers and continued to live with them when she first started to work for the advertising agency. That's where my father first starting dating her, and later on, in 1931, they were married and rented their first apartment. Their first house that they rented [was] in a very small, old-fashioned area in South Bend. It was struggling times during the Depression years, but they were doing quite well. During this period, they, naturally, kept up contacts with my grandparents in nearby Buchanan and with my mother's family in Three Rivers, Michigan.

During this time that my father was working various accounts, he was also, on the side, always fiddling with new car designs, with the idea of designing the lines of cars himself and not just illustrating existing cars. But the idea was more and more appealing to him to do new advanced-looking cars, just for his own amusement, more than anything else. He did not realize that, other than at the various [custom] coachbuilders during

those years. there wasn't too much of a call for actual art designers to do cars, but he had definite ideas about how cars should look and what they would look like in the future.

I might add that a very important part of his background and enthusiasm and interest, and it became an interest of the family -- I was brought up with it almost all my life, and my mother was a great enthusiast, too -- was of automobile racing. Even at an early age, he was fascinated by racing cars. My grandfather was a bit enthusiastic about that, too, and would take him to the local dirt track races in those days. As early as the age of sixteen, he begged my grandfather to take him down to Indianapolis, and, of course, that was a big turn on. Unfortunately, my grandfather was hit by a car while they were down there that first time and broke his leg. Well, he was enthusiastic about it and liked the idea, but he said, "[I] never want to go back down there to Indianapolis again." But my father just loved it, and [this interest] carried on through the days of the early 'Thirties when the purest breeds of racing cars existed with the Duesenbergs and Millers and cars of that type that were aesthetically beautiful and sounded good and ran fast. He was a great enthusiast of the sport, and he hot rodded his own cars around through high school and even with his Model A Ford.

In 1933, I was born in South Bend, Indiana, and just shortly after that time, a couple of visits from the main branch of Meinzinger's in Detroit, resulted in my father breaking away from Advertising Art and coming up to Detroit. I can't remember who the individual was. It was one the top-ranking persons up here that had been visiting the studios in South Bend occasionally and had seen my father's work that he put up

around his design or drafting cubicle. One of these individuals kept seeing some of these advanced car designs, and my father got a bit of publicity, in that a couple of little home magazines around St. Joseph County in South Bend wanted to do an article on what a futuristic car would look like, and my dad did make a couple of sketches and illustrations for them. I have a copy of that, and it's really nice looking stuff -- a pencil sketch as well as a black and white ink sketch. So he got a bit of publicity there to show off what he thought advanced cars would look like.

It was in 1933 that he was told of the hiring that was going on on the part of General Motors. He was advised, "Gee, you ought to go up there and show some of those people the kinds of things that you're doing, and, maybe, you could, perhaps, get into a career of working into actual automotive design." This appealed to him greatly. So he gathered a portfolio together of the work that he had done there, and, especially, the advanced car designs. And he was advised to go up and see Harley Earl, who had been putting together the General Motors design/styling section since 1926/'27. It initially started out as the Art and Colour section.

My father went to G.M. and met with both Harley Earl and Howard O'Leary at that time. They were impressed with his work and offered him a job which he was really tickled to death to get starting off as just a young designer. They were gathering together a bunch of young designers. There was hardly any kind of formal training that was available for car designers in any way.

Q This was 1934?

A Yes. During that period, they had been stocking the Art and Colour

section with designers that had come from coachbuilders. A lot of them [were] going out of business during that time.

Q Which made a large talent pool available?

A There was, and G.M. got them, and they supplemented them with young fellows, like my father, a lot of them coming directly out of high school. Some of them had a bit of formal education. Some of them switched jobs from other places -- came in from advertising businesses, like my father.

Q Very fluid and flexible in those days?

A Oh, yes, very much so. Not formalized in any way. With a philosophy yet to be developed, and so it gave birth to a great variety of design which General Motors was, consciously, at that time, promoting their products to make each one of them different. So it was just a natural pool that developed there.

Initially, my father worked for Frank Hershey, who was the head of the Pontiac studio. But, at the same time, and this went on for only about a year, Harley Earl decided to put on a design contest within the General Motors studio network.

Q Did you father ever mention why he thought Harley Earl initiated this contest?

A As I understand it, the reason was that he wanted to put people in competitive positions and increase the competitiveness within the studios. And, also, I think he wanted to hold out as sort of a reward, the studio head positions. Because it got down to a process of selection, from that standpoint, as some of the older fellows, perhaps, didn't have quite some of the creative ideas that Harley saw within the younger group. So they had a contest, and one of the people that was around at that time that I

can remember my father talking about was Clare Hodgeman, who was certainly one of the young group that hung around together after my father and mother came to Detroit. They were good friends. The Hodgemans -- Clare and his sister, Clarese -- were originally from Jackson, Michigan, and so they were all small-town-oriented people. At that time, Clare wasn't married, but his sister was always hanging around up in Detroit. It wasn't that far from Jackson to Detroit, and my mother and Clarese became very, very good friends.

Then, in addition, there was Paul Zimmerman, who was an Easterner U.S. -- actually an Austrian -- who was quite a good designer. It was primarily those two.

Q Gordon Buehrig was...?

A No. Gordon was not at -- I don't believe he was ever at General Motors.* Bill Mitchell had not quite come in there at that time, but they became friends. And there was Carl Reynolds who worked there as well as some of the modelers with whom my father was always friendly throughout all of his career. They were among his favorite people at all time. He appreciated their artistic ability and sculpturing ability, and he liked to do that himself. Some of his greatest friends were always the modelers -- the clay modelers and wood sculptors.

Q Very astute of his because that's where it all started.

A That's really true, and he appreciated the fact that they could execute in three dimensions the things that he, himself, and other people dreamed about in two dimensions and always appreciated that. There was

*Editor's Note: Mr. Exner is mistaken here. Gordon Buehrig was a member of General Motors' Art and Colour Department in the early 1930's.

never any rivalry there like there has been about many designers with the model-making faction.

In those days it was primarily wood mockups that were done in full-size work. However, G.M. did, more or less, start the large process of going through scale clay models with the old type of almost children's type of modeling clay, initially.

Q It's been written for years that Harley Earl and his great modeler at G.M. really pioneered that technique.

A Yes. For the most part. [But] the use of modeling clay was done at some of the other coachbuilders and bit in Europe before it really happened [at G.M.]

Q It's a natural progression because children's modeling clay has been available since the turn of the century.

A Yes, that's right. And that's all that there was, unless you got into a water base clay from which it was impossible to form any kind of a finished surface that would hold. So the use of oil base clay was important. Initially, it was used as a filleting material for wooden models more than anything else, and then it became more and more the overall surface of the model.

Q It was a natural progression?

A Yes, it was. So, those were some of the people that were there at that time, as well as some of the older designers like Frank Hershey. It became necessary, as they were hiring more and more people, to sort out echelons to sort out areas of responsibility and to establish more strongly the individual studios: Pontiac, Chevrolet, Cadillac and Buick, with LaSalle being more or less a subdivision of Cadillac and not its own

studio, and with Oldsmobile. So it became necessary to sort that out, and Harley's way of doing that was to hold this in-house contest, and each designer that had relatively major responsibility worked up his own designs and model for this contest. One of the winners was my father, and another was Clare Hodgeman, another one was Paul Zimmerman. And they were soon assigned, not too long after that, to be the [studio] heads. My father took over the Pontiac studio. Frank Hershey moved up at that time to Buick or Cadillac. I believe it was Cadillac studio.

My father took over in 1935 as the head of the Pontiac studio, and Clare Hodgeman became head of Oldsmobile studio. Paul Zimmerman, I believe, was Chevrolet studio. The work that my father had done prior to that -- even as early as 1934 when he was first hired there -- did manage to influence the '35/'36 models of Pontiac. Even though it was, basically, the overall managerial responsibility of the studio head, who was Frank Hershey at that time, it was his team of designers, including my father in 1934 and '35, that did create the Pontiac Silver Streak. And, of course, Frank Hershey is known for that, but, I believe, that my father is given some specific credit, too.

Q Very distinctive trademark.

A Yes. It certainly is distinctive. Later on he was known as the "Fin Man." You don't know if you want to be known as that or not. Piling some chrome on cars was something that became taboo later on, but, nevertheless, it was looked upon as quite a break-through at the time. Then after he became the head of the studio, his large contribution was the '38 Pontiac, really, and he was largely responsible, along with his own team of people, of having designed that car.

Q Was there a distinctive look about it?

A It was very slim. He always believed in and started to develop a philosophy of car design. His chief modeler in the Pontiac studio was George Martin, who later, along with his sons, made tremendous contributions to the industry in the sculptural field, clay modeling in particular.

Q In what firm?

A George was at G.M. and later went out to Art Center in Los Angeles to become one of their first sculpture instructors ten or fifteen years ago -- maybe earlier than that. Ronnie Martin, his son, actually worked for my father at Chrysler when he was young and developed many fiberglass techniques. Later he became a representative of Chavant Clay in New Jersey. He built and demonstrated a clay [extrusion] machine for them and later supplied Chrysler with [foam] models [and clay modeling assistance]. He knew all types of methods of clay modeling and promoted the material.

By 1938 my father had responsibility for the design of a complete car. He had developed a philosophy of design in which, along with his own closest friends, were, more or less, in agreement with. And, of course, they were influenced by [contemporary] publications, automobile racing, anything to do with design, which was then coming to the forefront and in the form [of] a revolution of industrial design that was providing, at that time, [the philosophical and practical basis] for the modern industrial design concepts that we have today. It was a transitional period going from old, flat, high-hooded, straight angles, full fenders, flowing fenders, automobile design typical of the early 'Thirties and rapidly turning into the more fully-bodied, all-steel body, incidentally,

as opposed to the combination of wood and steel, giving way to new mechanical innovation in chassis, body, and total vehicle development, as opposed to the coachbuilding days of the 'Twenties and 'Thirties. Giving more and more to the design of all-steel bodied, mass production cars.

Q This was a remarkably fluid time as they [began to] adapt to the world of modern automotive body design?

A Very fluid. Right. Very contemporary, very modern for <u>that</u> time. It was dabbling with aerodynamics, and it was dabbling with smooth shapes with flowing, enveloping designs, as far as the body was concerned, with a certain amount of innovation in glass technology. In plastics technology even. In all types of material inventions. One of the things, for instance, was building <u>in</u> everything on the exterior of the automobile. Even though there were separate fenders and separate hoods and things like the, the idea of blending things together, building in. And, <u>especially</u>, a General Motors' overall philosophy at that time. You may attribute it to Harley Earl, but it was the idea of having a continuity of design where each detail, be it a bumper, and that was considered a detail at that time, or a radiator ornament, or a door handle, or any type of a molding, that every piece of ornamentation would look like it was designed to go with the basic body itself as well as every other detail. In other words, a continuity of design elements. Even headlights, for instance, were large details, but they were shaped and ornamented and designed to fit to the body much like the taillight would be. They even looked like they were -- one was a smaller version of the other, attached the same way, was sculpted the same way with whatever particular shape it took -- a bullet shape or a flat, thin shape looked like it belonged with the sister

taillight. Bumpers looked like they were designed to go with their counterparts. And various embellishments were design detailed. Trunk handles were designed to look like they matched the door handles, and that was a very important part of General Motor's philosophy, in particular, at that time. Some of the other firms didn't pick up that quite, but there were notable exceptions. The Lincoln-Zephyr was a very excellent example of that same philosophy.

Q Do you think that the European influence in the early-to-mid 'Thirties was ever acknowledged by your father, or did he just sort of absorb it as [part of the] general atmosphere of...?

A The designers -- and they became quite a group of people that suddenly were aware of what was going on in Europe as well as developments here in the United States. My father, in particular, became an enthusiast of, and conscious of, European design. Again, it was due to a certain extent with his great enthusiam and curiosity about European racing cars.

Q They were the acknowledged leaders?

A Yes. They were going through, in the mid-to-late 'Thirties, with the rise of Mercedes. The Germans, in particular -- Mercedes and Auto Union -- and prior to that, the Italians with Alfa Romeo and Maserati -- were producing some of the most absolute stream-lined, purposeful, and powerful racing cars in the world at that time. [However], my father kept tabs on [The] Indianapolis [500], and my folks would go religiously every year to Indianapolis.

Q You mentioned the Zephyr, and this is what triggered my train of thought. Would he have known John Tjaarda at Briggs?

A He didn't particularly know him, no, at that time.

Q Or would he have absorbed any of Tjaarda's [design] influences like his earlier streamlined Sterkenberg and the Tatra from Czechoslovakia?

A Some of my father's own sketches and car designs of advanced nature didn't really embrace the Tatra type design that you're talking about or the Maxim, because he couldn't -- I believe he would tell me that he couldn't justify that type of a shape on the large cars we had at that time in this country. Those were designs at that time -- especially the Tatra -- that were okay to do to a Volkswagen size car.

Q He really felt the constraints of American tastes?

A Yes. There was constraints of American taste, but there was, naturally, always constraints of American engineering, too, as far as chassis are concerned.

Q What about the Airflow? Did that enter into his thinking?

A I know that he was always an enthusiast of aerodynamics and [was] very honest as far as automobile design is concerned. It was a primary mission, and it was always the idea to get people from point A to point B first. That was the most important thing. Then there was plenty of room left over for some exciting style going on. But he always tried to be what he would call honest as far as his philosophy of what a car ought to look like, even though he took great liberties himself at times, as did we all. His other continuous theme -- he always had a great spot in his heart for what have become the real classics: the long hoods, the Duesenbergs and Packards and all kinds of cars with special coachwork.

He and his closest friends were constantly buying up all of the European car magazines they could lay their hands on [that] were available in the Detroit [area]. They all lived around the New Center area. Of

course, G.M. styling was located on the third floor of the General Motors Building. They ate up automobile racing and racing car models and were very enthusiastic. My dad did some race car sketches, as did some of the other fellows. They were always doing that type of thing.

I was just a little kid at that time. My dad was trying to "bring me up right," and he was always drawing me race cars when I was a little kid and making race car sounds for me and stuff like that. My folks were very close together, and it was sometime before I had brothers and sisters, [and], as I grew up, I was included in most of the racing enthusiasm. I was born in 1933. I saw my first dirt track race, myself, in Detroit, Michigan, in 1934 during the time that my parents lived here in Detroit. They constantly were going out to the speedway at 8 Mile Road where, initially, it was dirt track cars (sprint type cars, as we would call them today) on a half mile, and then it became a quarter mile track later on. Any type of racing was the big sport.

He wasn't ever particularly interested in water sports [boat speed races] that the Detroit area had to offer, until later on, and then he got very heavily involved in that. But it was primarily car design. The hours were long, lots of overtime, typical General Motors' pressure, and....

Q They worked even on holidays.

A Oh, yes. The pay wasn't that great, and he did manage to become the chief of the Pontiac studio at that time and contributed a bit to when they had crash programs on various other products. I think he designed the 1939 Buick headlights for that particular front end and a few other miscellaneous detail assignments that he was responsible for.

[I] was quite amazed in digging through my father's papers [to find] patents to the bumper integrated grille that he designed at G.M. The style shown on the patent is very similar to the late 1940's style of bumper grilles that were used by G.M. in the early '50's.

Q Somebody went back and saw those drawings?

A Well, G.M. held the patents, and it was a functional patent: The idea was to take the air in through the bumper and actually shroud it to the radiator. The patent was made in his name at that time. It was issued, really, after he had left General Motors and gone with Raymond Loewy in 1938, which was the next phase of his career. But this was a leftover from that period of time regarding patents, when designers at that time worked for companies -- nowadays, you just sign a release that you [won't] get anything from that standpoint. Back in those days, the company had to do the patent research, issue the patent in your name, and then they paid you a dollar, officially, to buy the patent for the corporation. This was the way it was handled at that time.

Q Tell me, was he happy at General Motors?

A Generally speaking, yes, he was happy.

Q What did he think of Harley Earl?

A He liked Harley Earl very much, and, apparently, he thought Harley liked him, too. In fact, Harley tried to talk him out of [leaving]. [He] practically cried when he left.

Q Elaborate on that. How did that happen?

A He was contacted by the Raymond Loewy [design] headquarters in New York.

Q Any particular reason?

A They had gained the Studebaker account for [automotive] design as well as International Truck, and they were rapidly gaining accounts [such] as Pennsylvaniva Railroad, Coca Cola, [and other] large accounts. Industrial design was becoming a very important thing by this time.

Q Loewy had come up through the industrial design matrix?

A More or less. Actually, he'd started off in fashion design and then got into designing store fronts in Chicago, in particular. He had had a bit of experience as far as [working in] car design with Hupmobile. And, again, it was Frank Hershey [who] had been with him during that period and had a bit of experience there and then made contact with Studebaker and picked up their account. They had no in-house design at Studebaker. They were, of course, still pretty old-fashioned.

Q In body engineering?

A In body 'style'.

Q Loewy had worked with the Pennsylvania Railroad [where he] had become very famous with his locomotive design?

A That's right. Initially, they were looking for people to be able to handle these accounts, and he was gaining more accounts than he was able to service. That's what it amounted to, and so he started to go on a talent search, and it took him to General Motors first off, where within a very short period of time [he recruited] -- I believe Clare Hodgeman was the first to go, [next] Paul Zimmerman, and then my father.

Q That's a high-powered trio.

A He got all three of them right off the bat to [consider] going to New York. It took a little while. Clare got there first, and my dad kept in touch with him to see how he liked it there. "Well, okay, every-

thing's fine. What are you working on?" that type of thing. [And] besides, he [was] offered twice as much money, and that was a big deal and then the chance to go to New York and live around the big city.

Q Irresistible?

A Oh, a big, big thing. It made my mother gleefully happy, and my father was happy about the whole thing. He always had a penchant for travel -- an interest, a curiosity about what other people did. Even in the early days, they'd always taken trips with my grandparents back to Pennsylvania. That's where their relatives were from on my father's side -- the Exners were Pennsylvania Dutch, originally, and my grandmother was Holland Michigan Dutch. My father had been taken on long automobile trips during that time but had never been west of Chicago. [And while] he had been to Pennsyl-vania, he'd never been to New York.

So it was a big, big deal. My mother was game, and always sporty, always ready to travel and had fun at it. They were very young at the time. He was the youngest head of a design studio in General Motors' history.

Q How young was he when he assumed [the] Pontiac...?

A If that was 1935/'36, he was twenty-six.

Q So, it's off to the big city?

A So then in 1938, he actually accepted [Lowey's offer].

Q How old were you?

A I was only five at that time. Those were my earliest recollections, really, about a lot of this. I can vaguely remember that my dad had a 1933 Ford when he first come up to General Motors. And that was just before he came up to General Motors that he traded the Model A in on that.

He got the green '33 Ford, and I vaguely remember coming back. I was dragged back and forth myself from Detroit to South Bend or to Buchanan many, many times during that period of time to go back down and visit our family. To hear my mother tell it, and I don't know why I remember these things, but by the time I was about two or three years old, my parents told me that I knew every car that was coming up and down the road.

At any rate, the next big milestone I remember: I had my little race cars that I'd run on the front stoop of the apartment that we lived in on Ohio Street around the New Center Area. We lived in an upper flat. The people that lived below had a couple of little girls that I used to play with -- the Hoakes [family]. I remember my daddy bringing home his new 1938 Pontiac and my mother telling me, "Look out the window. Your daddy designed the car. You're going to see him drive it up the driveway," and I remember watching for that. That was a big, big thrill. It was maroon. It was a four door. This was in early 1938. Shortly after that, he accepted the position with Loewy, and we packed up and traveled East. That Pontiac car was a lousy car. He never liked that car.

Q [What happened to the Ford?]

A He got rid of that. He had the pressure on him by General Motors, of course, and he got a little bit of a break on the Pontiac. He was very proud of the fact that it was his design, but he never liked the car.

We went to Florida once when we lived in New York, and that was just unbelieveable.

Q Where did you live in New York?

A We went, initially, to Long Island.

Q Typical?

A Yes. At that time it was developing out on the island, and we went to....

Q Robert Moses was carving out all of those wonderful parks out there?

A Yes, that's right. We lived in Amityville. Rented a house there. It was very nice. We had kind of a funny-looking, little house built around a green. The house was an older house, but it was all brick. My father was working right in the city at Loewy's studio on 33rd or 34th and Broadway. I'm not sure where the studios were at that time. But his initial assignments were to help Paul Zimmerman and Clare [Hodgeman] work out some of the passenger train car designs, and he got involved in a bit of architectural layout there with some of that work. He always told me, "That was a lot of fun." He liked to do that.

But his major interest was cars, and Loewy very shortly assigned him to work on two projects. One of the first projects was the 1939 International Truck design, and the second project was Studebaker. Studebaker was demanding that [Lowey] send somebody down there constantly to work with their engineers on the Studebaker designs.

Q Going right back home?

A Right back home, right. Loewy realized that my dad knew South Bend and Studebaker very well. He [first] sent my father down to Fort Wayne where International Truck was to do a bit of finish up work that they had there. Actually, I think he designed one of the front ends for one of the trucks at that time.

But more important was Studebaker, and, by mid '38/early 1939, he started to commute down there for a week at a time every three weeks, and it was a rigorous [schedule]. Meanwhile, my mother and I....

Q He'd take the midnight flyer home?

A Yes, the train. Many times I was sent along with him. I'd go to my grandparents, especially during the summer when I was out of school. I started school in Amityville in 1938. That Fall of '38, one of the big events in our lives -- my father was down in the [Lowey] offices in New York. It was [in] September of 1938 that the hurricane hit Long Island. It was a big one. It killed five hundred people.

Q Did it hit Amityville?

A Yes, it hit Amityville. It uprooted some trees that I remember in our neighborhood. It flooded our basement. My mother and I were scared to death. We were there alone. My father was stuck in the city -- he commuted at that time. There was no electricity. It was quite a harrowing experience. But that's just one of the things I remember at five years old.

Then he started to commute all the time. The Amityville residence was temporary until we built a house in Port Washington, Long Island. Actually, Raymond Loewy lived right near there himself. The folks built a house in a new subdivision -- very nice. It was actually the first house that they had built themselves.

Q Did you have siblings at this time?

A No, not until 1940 [when] my brother was born. During that period of time my father commuted back and forth to Studebaker, and it got to be kind of a treadmill situation, but we held out until 1941. And my brother was born in 1940 in Port Washington. We only lived there for a short period of time after that, and Studebaker was beginning to demand that they needed to have an in-house design section, and there needed to be a

resident designer there [so] that they could work together much better that way.

Q Did your father have any direct influence on the first '39 Studebaker?

A Yes, of course. He got in on the tail end of the 1939 Champion, of which he was quite proud to have been associated with because he had developed a philosophy of liking smaller European cars.

Q Can you reconstruct from your knowledge of those events how that was put together? You say he got in on the tail end of the designing?

A He got in on the tail end of the overall design. I think he managed to do a little bit of cleaning up and just a little bit of detailing. But the basic formula had already happened, really.

Q Was set by then?

A Yes. I think Clare Hodgeman had most to do with it, and probably Studebaker themselves had put forth that type of a package. The 109 inch wheelbase was considerably smaller than full-size cars. The standard full-size wheelbase in those days was 115 inches with 56 inch tread. But the Studebaker was unique [in] that it had the short wheelbase. A smaller car. A very nice little six cylinder engine. A very efficient automobile.

Q I can remember it very well as a sub-teenager. I thought it was smashing.

A They were neat. We finally got one ourselves. During that period of time, my father managed to get a little discount from Studebaker, so we had a Commander at one time, then a Champion, then a President -- 1941 President. That was nice.

Q Looking back on this, you, obviously, have given it a lot of thought and [have] absorbed a lot of it from your experiences with your father and elsewhere. How the Loewy setup worked there? Loewy was the New York [fashion/design] guru, and he had talented people...?

A He owned it, of course, overall.

Q And negotiated the contracts?

A Negotiated the contracts.

Q [He employed] very talented people like your father, Mr. Hodgeman, and Mr. Zimmerman. Did he give them their head? Did he allow them to...?

A Pretty much, yes. He demanded that they not work for anybody else and that he [made] the final decisions about things when he was available.

Q That was a problem?

A Yes, it was a great problem. He sat back and raked in the dough.

Q And took all the credit?

A Paid them quite well, but fudged on expense accounts. I remember my father telling me about this. I can relate this as being true. My dad knew that he'd submitted his expense accounts, and he tried to be very honest about the whole thing. Loewy would take a cut on them. Studebaker told my dad that Loewy was taking a cut off of this. "You should have more coming to you. We're paying him more than what he's giving you."

Q The combination of ego, his European background, and his need for a success in the automobile industry lead him to a somewhat autocratic...?

A Quite autocratic. Actually, though, he liked cars. He really didn't know that much about them, and he was more of a business entrepreneur -- it was of a type that did a great thing overall.

Q He put together a package?

A Yes. Put together a package, promoted the idea of industrial design, and provided a service, and did the overall managing of the services.

Q He did have a talented cadre of...?

A Oh, yes, very much so. Built up a great section of designers for these other accounts. My father, himself, hired a great number of talented people when he was sent down to Studebaker to finally [set up] the in-house Loewy account there for Studebaker and build up a staff of very good designers.

Q Even though Loewy did not [delegate] much authority, it early became apparent that your father would be the leader of the...?

A Of the Studebaker account. That was intimated at the time he was hired that he would. Studebaker demanded that he come down there -- that Loewy put somebody in [charge] and build up a styling section to service the account. So, that's what happened.

Q It was a very great success in the early...?

A Yes, it was. In mid-1941 we moved back down to South Bend, and the war was imminent, and there was a tremendous housing shortage in South Bend. We wound up renting a little guest house on the Paul G. Hoffman estate. He was the president of Studebaker at that time. It was a cute little house -- very cold -- it was in the middle of alfalfa fields on Donmoyer St. in South Bend. It was on the South side of South Bend. We lived there in 1941 and early 1942.

When my father was sent back down to South Bend, it was with the idea that he would build up a much larger staff to more fully take care of

all their [design] needs and to develop future models. Studebaker thought it would be far more beneficial to them [because] they were complaining about the kind of service that they were getting. It wasn't as thorough from a styling/engineering relationship that it needed to be.

Q Even though Loewy had him on the account full time?

A He had him working on the account full time, but the distance was hurting, and the need for people to work right with engineers and with the drawings and the surface development details of models was a great deal more than could be handled on a commuting basis. And even though [the] Loewy studios in New York had this staff of model builders available to them right there in New York to do detail work, there was a lot more to it in creating new President, and Commander, and the Champion series -- their three major car lines. And all of them needed to be redesigned in order to keep up with General Motors and Detroit.

Initially, when he came back to South Bend and we moved back down there, he needed to concentrate on the design of the next models to be done past 1942 models, especially, and preparing for '43, '44, '45. Even though the war had not started yet, he needed a larger staff to do that. And, besides, there were some government contracts that were starting to come along at that time, with the recognition that there was probably a conflict on the horizon. And, of course, Studebaker had a truck building facility, and there needed to be some facelift work, at least, done with the Studebaker truck line.

So he started to hire quite a few people, and among that group of people were Jack Aldrich.

Q Was he ever known as Jake?

A Jake, yes, of course. Jake was his nickname, and Jack was his real name. There was Jake Aldrich, and, of course, there was Bob Bingman, Tom Dingman, as well as John Reinhart, and the modeler Frank Alroth.

Q Was Bob Bourke among those?

A Bob Bourke was hired later, and that was even after Gordon Buehrig. Later on, Gordon was not hired by my father. He was made sort of an equal manager to my father at one time. At one time my father worked for him, and then he also worked for my father. They were very close friends. It was amazing to be able to carry on being good friends throughout all that, but they did.

Q I understand they had a mutual respect for each other?

A Yes, right. And besides they all hung around together. I'm sure there's a number of people that I'm leaving out there.

Q Was there a woman involved at that time?

A No, not as a designer.

Q Came in a little bit later?

A One, perhaps, a little bit later but not under my father. Then later on, there was Ed Hermann. And there was, at that time, some engineering people that were assigned, at least, to my father's activity, just like there are design engineers today that are assigned with design staff at Ford Motor Company. And one of those individuals was Dale Cosper who had been a design engineer for Duesenberg who was a good friend of Gordon Buehrig when Gordon was working with Auburn, Cord and Duesenberg. There were a group of ten/eleven/twelve designers. Bob Koto was another one.

Q He'd come on from Briggs?

A Yes. And this group of designers was a pretty elite group when you

got right down to it. Later on, many became very well known in their own right going to other places.

Q All attracted by your father's, let's say, charisma?

A Well, he had a great deal of that and enthusiasm, especially, and he was a regular guy type of a person. They had a lot of fun. They were known as the "Loewy Gang." That's what they were known as -- throughout the industry at that time. They were doing things. Especially after they did the post-war Studebaker, they got quite a bit of recognition from their counterparts in Detroit.

Q Although it was Loewy's unit, and they weren't necessarily autonomous, they were set apart from the rest. Who did Loewy and your father report to within the Studebaker hierarchy?

A My father reported, primarily, to Roy Cole who was the chief engineer during this period.

Q Still fairly traditional?

A Yes, it was quite traditional. Paul G. Hoffman was the president at that time in the early days. Was it Harold Vance who was vice-president at that time? Then under him was Roy Cole.

Q Who was a rather dynamic fellow?

A Yes. The gang got going there, and they were turning out models. Then, of course, the big deal was that the war came along, and things were not exactly postponed, but there was other types of work to be done, and they did a great deal of work between 1941 and 1944 on military projects, among them was the Studebaker Weasel, which my father helped to develop along with his group of people. And the Duck.

Q Was that an amphibian?

A Yes, the Weasel was an amphibian. It always left him, after that time, a kind feeling for an amphibian because it keeps popping up every once in awhile in his work later on when we were in business [together] and later on -- this idea of a car running on water. If he could make it good looking, and racy, and sporty, that would be great. I've run across some things like that [in his papers].

Q Did Loewy stay on with the wartime unit? Was he involved with...?

A Loewy was strictly in New York, and my father was put in place in South Bend, and Loewy would come down very rarely and visit the group.

Q But did he maintain his contract with Studebaker so he [would be] involved with, let's say, the design of the Weasel?

A His contract was [that] he got paid for whatever his group did, in effect, and so his contract was broad. I'm sure he was given the responsibility and contracted for all things to do with design.

Q That's a remarkable pioneering contract for that time?

A He had his Wall Street friends that were involved with Studebaker financing according to my father, and according to Roy Cole, and Loewy had quite a hold over them from that standpoint. By the early 'Forties or mid-'Forties, at least, they really would have liked to not had his hold over them and would not like to have dealt with him according to Roy Cole. He wanted to get Loewy out of there.

Q He was tenacious?

A He was tenacious. Other companies did manage that, and yet [with] others it became a very good relationship to have Raymond Loewy working for them, but he didn't mix from an automotive standpoint. During the war they were committed to doing truck work, in the nature of camouflage schemes and blackout type devices for head-lights as well as the actual shapes

of hood stampings for their trucks and detail for new army truck designs. They were asked to contribute to that type of [war] effort. And [also] along lines of shaping things, modeling things, and creative design work for things like the Weasel and the Duck.

Q Did your father ever say that he regarded it as an interesting period?

A Oh, it was very interesting. He thought it was, really. He was patriotic. He was offered a commission in the Navy and almost went into the service. A good friend of his did and became a tin can [destroyer] commander. [But] because he was [classified as] a chief design engineer for Studebaker, he was able to get a deferment from going into the service. Several of the people that he had hired and worked under him went off to war, and most came back -- some of the modelers like Dick Clark, Fred Hornung and Frank Alroth, and some of the designers, I believe. Bob Bourke, for one, came out of the service, and, later on, Bud Kaufman, who my father hired after he'd separated from Loewy.

This group of people were still designing cars on the side with their predominantly Army work during the war. But they were preparing car designs for whatever the post-war period would bring.

Q Was there a bit of secrecy involved in these projects?

A A lot.

Q It was generally prohibited?

A Yes, it was generally prohibited, so a great deal of it was done as overtime work.

Q The beginning of moonlighting?

A Oh, yes, on a big, open scale. But this was encouraged by

Studebaker and, especially, on Saturdays, they would all be down there in the studio working like crazy on car designs. Then it was in the evenings, also. Then the formula was more or less established by Roy Cole for the post-war designs. Incidentally, before they launched [what] came to be called the post-war designs, among my father's most favorite designs that he was responsible for -- and that was before he really set up this in-house project down there -- was the 1941 Studebaker President. He always felt that was one of his cleanest, nicest-proportioned and nicest-looking cars. We owned one ourselves. He even did a special color scheme for Loewy's own personal version of it, as well as our's, which became a production color -- tulip cream body with a very ultra dark green top and green stripe running along the side.

A good many of the 1940 and '41 U.S. cars were very clean, very good looking overall, uncluttered, honest, purposeful designs. The '41's, I would say, and my father always said, that of all Detroit cars, mastered the 'interim' automobile style at that time. Fenders were still separate, but, nevertheless, blended into the body with generous filleting areas. They were able to handle surfaces and masses by that time in an unheavy looking way. Quite a light look, as ponderous as they really were. [One] of the most excellent examples, in his mind and my own, too, was the Lincoln Continental [which] was an example of a very, very well-designed, balanced car at that time. Some of the General Motors products were very nice. The Oldsmobile and Buick, while they were a bit on the ponderous side, were still beautifully integrated, beautifully detailed, and he always thought that the '41 Studebaker President was among that group of cars, especially with its front end design that was real clean with the

twin grilles and very fine detailing. Ford cars, at that time, were also quite nice. '41's, while there were some similarities, were all characterized by this very fine grille work usually outlined, as opposed to the previous year that was unoutlined, by a fine frame running around various grille work.

It's amazing how much similar thinking there was throughout the industry. But one can immediately distinguish between '40 and '41 products, of which most of the bodies were the same body from those two years with the particular detailing that they have, whether it's a Lincoln Continental or whether it's a Studebaker President. It's very different, and yet similar, in the concept for the year.

The Commanders were a bit dumpier because they're a shorter wheelbase and not quite as well porportioned to work with, but he did like the cars. He liked the products that he represented. He liked Studebaker products. He always believed in them because he'd heard about them, probably, from the time he was a little kid and was influenced by that more than any other car. But he really did think, in a lot of respects, that Studebakers were a superior car to some of the Detroit offerings at that time. He believed in that.

He would bring home the competitive cars. Even in 1940/'41, there would be a competitor's car sitting in the driveway once in awhile, because Studebaker would purchase their cars. He brought home Chrysler products, and they had a very distinctive smell to me as a kid compared to Studebakers and as opposed to Ford products, because of the fabrics and materials that they used and the smell of the factory that they came out of. Chryslers, in particular, when he would bring home a Chrysler pro-

duct, were just the most vile things that ever existed from an odor standpoint. It was the odor of their plastics, to a great extent. They were getting quite heavily into plastics in the early 'Forties, and they were kind of baroque in the way that they were designed -- awfully heavy. My father said, "There's some really good things going on here. Isn't it nice the way they can do this, they can do that, and there's some good things there? But, yes, I agree, Virgil, the car's awfully clunky and heavy-looking compared to..." and Chryslers were heavy at that time compared to a lot of other Detroit products.

Q They had no styling sense?

A No, they really didn't. And they were run by the engineering community, of course, at that time, and they had....

Q The Zeders and...?

A Yes, Zeder, Skelton, and Breer. They had, unfortunately, gone through the failure of the Airflow that further....

Q Drove them into conservatism?

A Yes, exactly! My father, when he started with Chrysler, had to go through that whole situation.

Q The K.T. Keller syndrome?

A K.T. Keller was a super guy, and he wound up giving my father a true backing and giving him the green light over the Zeders and people like that.

Q That's good to hear, because he didn't have that reputation.

A He didn't, but they got along very, very well. Meanwhile, the Loewy gang proceeded to launch into the post-war car designs, and....

Q Now, that workshop -- that woodshedding they'd done on the

[post-war] products, obviously, gave them a real jump ahead of their competitors?

A It did, but it was done here in Detroit, too, I'm sure. It was that Studebaker was in a position to be able to move faster than Detroit was right after the war. I think that their being a smaller company and being that the war effort grew up there overnight that they weren't quite as affected with the unions as Detroit was. South Bend grew up quickly. During the war Bendix, Oliver's, Singer, Studebaker and others that were there built up Studebaker's availability of non-union factory workers and skilled people. They were able to put out the product more rapidly than Detroit.

Q A wonderful flexibility?

A Yes. There was tremendous talent around South Bend. They had a lot of old Belgian woodcarving, model-maker people that worked and were known for [that] in South Bend even before the war. They had die shops and model shops and quality craftsmen and workers. Although, the Budd Company in Philadelphia did a great deal of their tooling work and tool development.

Q Had that been traditional from early on?

A Yes. Also, the green light was given to the Loewy group to go ahead and develop the post-war car, especially by 1942/'43, and there were a lot of proposals made. My father was encouraged by Roy Cole to even take a team of a couple of modelers and work on it at home in our basement. Meanwhile, the other guys were developing the car up right in the studio, so they had their own designs.

Q Now this has been [described] as one of Cole and Vance's ploys to drive a wedge between your father and [Loewy].

A I would say that there was a wedge developing there, anyway. However, it was promoted by Roy Cole because even my father had trouble getting Loewy out from New York to take a look and make any kind of commitment to the post-war car development. He would show up and make rambling non-decision decisions and take off and soak Studebaker with an expense account. But, literally, he just was going to milk them for everything he could for years. That's what it amounted to, as far as contracts are concerned, so he didn't care how fast or how slow things developed. And he put my father in a position of being in the middle between a faction of just letting things go as long as possible before we do anything, and Studebaker management wanting to, "Hey, let's get going so we are able to get a car out here just as fast as we can for right after the war."

So they commissioned him, in effect. Roy Cole said, "Let's not put up with your doing this through your styling section. You go ahead and start to work on this at home."

Q From that standpoint, it's a natural development.

A Yes.

Q They were hobbled and trapped by the Loewy commitment, and they wanted to try to get out of it?

A That's right.

Q This episode that you've begun to describe has been variously characterized as a split, a subterfuge, an attempt to undermine the Loewy influence in South Bend, but the way you've described it really was an attempt to....

A Get back to work!

Q Get back to work and make a post-war car. Loewy was dragging his feet, was inattentive, was involved with other projects, and, if it wasn't for Roy Cole and your father, God knows what would have happened to the post-war Studebaker.

A I can remember my father, again, telling me about one particular episode where he had models going in the studio, and this was, I believe, sometime in 1943. They always developed models with quarter-scale clay models. That was the main method of design, of course, sketches and then get right into quarter-scale clay. And there were several models during that period of time that had been developed that they were working on. Again, a great deal on a spare-time basis because their war effort was the most important thing. They implored Loewy to come to South Bend -- get him down there to make some decisions about which way to go as far as the style was concerned. And, so, a day came when, yes, he was going to come down there from New York. He brought his main man with him who was Breen or Barnhardt. Both Breen and Barnhardt worked for Raymond Loewy, but it was Barnhardt. So they showed up and came in to make their assessment on the models, and I believe that Cole was involved in the meeting as well as other engineers. They finally got down to going through the models, and Mr. Loewy was very dissatisfied with everything. He could turn his French accent on and off anytime he wanted to. I had known him myself when I was a little kid. At any rate, my father said, "Okay, Mr. Loewy, if you object to this, I will have a modeler personally assigned to you for this afternoon, and you can work out some of the things with the modeler that you want to change and work into the design." At noontime [Loewy] got a very convenient telephone call from New York recalling him immediately to

New York. His henchman, Barnhardt, had called up New York and told them, "Call us." And that's the way he operated, to hear my father tell it.

Q That was quite a dilemma. What was your father's solution?

A He was able to tell Studebaker, "You see what I'm up against." So then, I think, is when he was able to convince them. The other people knew this at the same time that were working with my father, and they lamented the situation. The guys hung together. They were more helpless than my father. And, of course, my father had to do something about it, or, at least, he felt that he did, but he really felt committed to Studebaker, and this wasn't doing anything behind Loewy's back. This was simply honoring the commitment that he always felt that a designer should [have] to the client -- to the employer. So, yes, he did work for Loewy first, but, on the other hand, he couldn't let the client down. Loewy never told him he was doing anything wrong at all. It was just that Loewy was going to put this business off.

Then Cole got rather anxious about the whole thing, and that's when he said, "Okay, you better start working out of your house." Or my father suggested, "I've always got things going on at home, anyway," which my father did. He liked to work at home in his own studio, and, if he wasn't drawing race cars or dreaming up projects like that, he was working on fine art. (He, along with Gordon Buehrig and Bob Bourke and Dale Cosper, went in together on a "home" project later on as they were always good friends. It was even after the big rift between my father and Loewy that the four of them went together and bought a '48 Mercury chassis and started to build a sports car. It became the Tasco that Gordon Buehrig finsihed later, and it was done in our garage at home.)

During this period there was quite a large family trauma because my brother died at two years in 1942 as a result of a home accident. By 1942 we had rented a big farmhouse -- again from the Haufmans -- and, unfortunately, that's where the accident to my brother happened. Then my folks finally found a house to buy up on Eckman Street, still on the South side of South Bend. We had a nice garage there. It was just a regular three bedroom house -- smallish, but a nice little house. My folks enjoyed it.

Q You remember it pleasantly?

A Yes. My most active memories are from there because I was about ten years old when we moved up there in '43, and we lived there until 1949.

Q The formative years?

A Yes. And my most fond memories were there. Fortunately, my mother went through the trauma with my little brother all right, and my oldest sister was born in 1943, and she was happy to have a daughter. And the family was always active. Their great friends, the Shaffers, were there in town, and there were my grandparents nearby, and my other grandmother nearby, and the relatives. Not a huge family, especially, not on my father's side, but, at least, on my mother's side there was a pretty good size family. On my father's side they weren't directly his own relations, of course, but they were his foster cousins, and they were farm people from up around the Belding, Michigan area on the West side of the state.

During the war there was hardly any racing, but, nevertheless, in '43/'44 there started to be a bit of it. The third floor of the Studebaker engineering building was my father's styling section. During that period -- '43 -- he discovered an Indianapolis racing car that was up

on the fourth floor of the engineering building. It was being stored there. Studebaker had built a team of five cars for the 1932 Indianapolis race that was based on a semi-stock racing formula for that period of time. They were very successful. They didn't win the race, but they placed as high as third in 1932, and they placed as high as fifth, I believe, in 1933, and they placed all five cars in the first twelve in 1933. This particular car was one of those team cars that had been built and sponsored by Studebaker, and the chassis and body had been built by Herman Ringling who was an Indianapolis race car builder in Indianapolis. Studebaker lent their time, and effort, and their machinery, and engine and chassis components to the team being built up, and they used it for tremendous publicity. Ironically, my father had illustrated some of these efforts when he had worked for Advertising Artist when he was very young. He had actually illustrated this particular race car racing at Indianapolis.

He wound up buying it from the private owner. After their racing career, they had been sold out to private individuals after 1933, and this particular car wound up in the hands of a person right there in South Bend who managed to acquire it and all of the parts from the whole team of the five cars -- all of the spare parts. And, so, my father inquired -- this was during 1943 -- as to who owned it. He was told who -- he was a plastic supplier to Studebaker in South Bend and owned Sobenite Plastics. It was raced as the Sobenite Plastics [special] when he purchased it. It was after they sold all of them in 1933. He last raced it in 1937 at Indianapolis. Louis Tomei, the Hollywood stunt driver at that time who also raced in Indianapolis, drove it to tenth place in 1937. This particular car had been driven to third place in 1932 by Cliff Bergere. In

1933, it was driven to ninth place by Zeke Meyer. It was stored for Sobenite in 1938 and forgotten about.

So, Father came across it about 1943 and asked about it. At that time, starting really in 1944 with the G.I.'s coming back from Europe, there was a bit of what became the [post-war] sports car movement starting to happen. People talked about a "sports car" as opposed to even a hot rod or a convertible. But my father always loved a race car, so he looked upon this car as something that could be streetable.

He managed to buy the car from Phil Sanders, the owner who had last raced it at Indianapolis, for five hundred dollars, which was a pretty good amount of money in 1943. And he got all the spare parts from the whole team with it.

My father was given the go-ahead by Cole to develop a car that started out in the basement. I remember the package drawings being pretty well finished up when we first moved there....

Q When you say "finished up," do you mean a model?

A A quarter-scale layout. He was assigned a draftsman to help work on the quarter-scale model as well as a couple of clay modelers who would come in during the afternoon and evening, and then my father would work in the evening on the model itself, and I even helped put clay on it once in awhile.

Q It must have been exciting?

A It was. It didn't go on for very long. It doesn't take very long to do a clay model -- a quarter-scale model -- although it took longer in those days than it does now to work out different developments and themes on it until you get it just right....

Q In terms of design, did Roy Cole give your father carte blanche to deviate from the one he'd done for Loewy?

A There wasn't any particular one that he had done for Loewy. It was still the same basic formula of the full-fendered type, and, again, he had his philosophy of what a car ought to be. He believed other than going to other current philosophies that were happening at that time, such as the full-formed, full-fendered, totally envelope body that would be like the '48 Hudson. Unfortunately, Studebaker had manufacturing problems to work with, therefore, the rear fender still had to be separately attached on the post-war Studebaker. My father would love to have blended it in, but he still wanted a semblance of a classic automotive form as opposed to what he believed were characterless cars at that time. They were "upside bathtubs," like he characterized the '48 Hudson as being. He still wanted cars to have a little lightness in them in their looks and to have, what he always thought was, automotive character.

He had carte blanche as long as he didn't deviate from a cost standpoint. He learned quickly on to be able to handle [that] quite well. Cole was a very understanding engineer and a good production engineer. They got along very, very well and Cosper was a super guy as far as working on anything. A very creative design engineer.

Q But the shadow of Raymond Loewy's contract was constantly looming?

A Constantly. So my father hired Bourke to be his chief assistant, and then Loewy brought in Gordon Buehrig about that time.

Q Deliberately to...?

A I think Gordon went to Loewy and asked him for a job, more than anything else.

Q He knew what was going on?

A He didn't exactly know what was going on, but he soon found out and decided that, maybe, he could do something about it, so he buttered up Loewy. There was all kinds of subterfuge, but they were all just great friends. And that was what was funny because, literally, Gordon's wife, Betty, and my mother were very best friends in South Bend. That was Gordon's first wife. It was a strange situation.

At one time, my father didn't know if he was running the styling section or if Gordon was. Gordon didn't know either. And it was because of Loewy keeping things up in the air more than anything else.

Q But this unbelieveable contract, what...?

A There was nothing they could do about that.

Q Nothing?

A No.

Q Why?

A Because of these connections with the financiers of Studebaker.

Q And he had conned them into thinking that he was the savior of the Studebaker?

A Oh, exactly. That's the whole idea. Meanwhile, in the styling section, other designers working with modelers and building up a bank of models were going ahead and starting to get down to a genuine selection. Studebaker said, "Hey, we're going to have this design set by Mr. Loewy. He's going to have to be here. We're going to select a model." Meanwhile, my father was working on his model at home, not in different dimensions, as has been reported. They were all working under the same dimensions to begin with. I don't know where the different dimensions

business set in, because I have a letter from my father to whoever wrote about that that it absolutely was not true. There was never a different set of dimensions, and my father never gave a different set of dimensions to his own people that were working on these other models.

How it came about that one or two of the other models were wider than they should have been, was strictly their own doing. My father's own model, which he'd done in the basement, was the same dimension as were many of the other models. But I don't know who claimed that there was a difference in dimensions.

Q How did Loewy take this?

A Terribly.

Q I can imagine he was pretty upset.

A He fired my father the next day after the models were shown to Studebaker, and Studebaker selected my father's design.

Q It was a competition?

A Oh, yes, it was. My father said, "Well, I tried to tell you." So they kept on with Loewy, and then is when Bob Bourke took over Loewy's styling section.

Q Cole must have known that there would be a collision?

A Probably, yes.

Q And that probably Loewy would.... Couldn't he hold on to your father?

A Yes. Cole hired my father back the next day.

Q Tell us how that happened.

A Well, naturally, my father was [upset], but Cole said, "Don't worry about it. You'll be hired back tomorrow under our own styling section."

Q And that's what happened?

A And that's what happened, yes.

Q What happened to the old [Loewy] cadre?

A Then Bourke took that over, because Bourke was my father's second man in charge.

Q Loewy was, in effect, aced out?

A No. It was still Raymond Loewy Associates in South Bend with Bob Bourke -- still honoring the contract.

Q Virgil Exner, Sr. is now...?

A He's out. <u>But</u> Studebaker <u>directly</u> hired my father back as director of styling for Studebaker Corporation. Cole says, "You need to hire some people." So my father hired Bud Kaufman, and he had Ed Hermann come work for him in interiors. He hired Randy Farrout after that. They competed from then on from 1945. And they continued to compete from then on between the two styling sections. I guess [Cole] thought, "This is a pretty good deal. Got some work out of both of you."

Q That's interesting. He was to do the actual production and development of it?

A Right. Production development. He was given carte blanche to hire whomever he could hire to begin with. I can't remember if he hired somebody away from Loewy right then and there, but, of course, he had engineers to work with -- Dale Cosper was assigned by Studebaker -- and he had some other people to actually work with him. He was perfectly capable of doing the whole car by himself, if necessary.

As it turned out, they went on, and he got the car in production. Then in subsequent years with facelifts -- most of them were minor through 1949.

Q He got out the first post-war car of the industry?

A Yes. It was 1946. They came out in late Autumn.

Q The first all-new car?

A The first all-new post-war car. You didn't know whether it was coming or going. That was the big advertising gimmick. [It] got a lot of publicity that way. Who was it that said that? [Something] like -- "I "couldn't tell whether it was coming or going?" It was Bob Hope or popular radio comedian -- Fred Allen -- that made some comments like that. It got quite a bit of publicity, and it was extremely successful. It got them up to as high as, at least, fourth place, and it may have touched third place in the whole industry during 1947. Of course, they beat the industry to the punch, and the industry didn't have their new cars out by that time. They had a bunch of old cars, and the public was [really] waiting, to a great extent, to buy their new offerings [for] which [they] would wait until '48/'49. So it was natural that they were doing as well as they did. They were economical cars, and they were quite good products. The Champion, especially, was a great success. The other factor was that the public needed new cars, because everything was shot during the war. There wasn't any [civilian] production during that time.

Q It certainly did shake things up.

A Yes, it did. Much competition in the 1950 development, such as, Father really developed the front fenders that shot forward on his models, and then the Loewy gang picked up that. Then they came out with that 1950 Studebaker with the three-pronged look, and my father just thought that was awful, but, at least, he had contributed. He wanted to make the grille horizontal. That was the next phase of design he was going to get

into that was greatly influenced by European cars which, by that time, were starting to get into the low hoods with the fenders protruding. That was the influence of the Cisitalia to a great extent and other cars like that.

But, at any rate, that was the kind of designs they were starting to get into. His biggest contribution on the actual post-war model that became the picked model was the initial development of the wrap-around back light. And even on the 1942 Studebaker, which was the very last car before the war, there was a center pillarless windshield. They had a curved windshield on the 1942 model where they had it curved without the center divider bar on the windshield. And they carried that out on the 1946 models.

The idea of the front end was new and the full bodies, etc. They were really the first car that came out after the war with a modern formula for bodies, even though shortly after that Ford and G.M. came out with more advanced models of that basic [design] philosophy that was picked up after the war, although my father always felt that his cars were lighter looking than they were. And he always believed in a fast-looking car and thought that the [1949] Ford, while it was nicely done and very honest in design, still represented something that was a little bit slavish -- a little slab-sided. G.M. was starting to do things that were a little bit heavy looking in their own way.

Q Do you know the story behind the 1949 Ford?

A Bob Koto and Bob Bourke, yes. The breakup is, obviously, looming ahead here in the late 'Forties.

A Sure. Then Father just couldn't keep up with Loewy's design section. He was given his own studio out at the Studebaker proving grounds.

Meanwhile, these people were all still good friends with each other, and they were having a lot of fun with my dad's race car going to the only sports car club meets that they ever had at that time. The Sports Car Club of America was beginning to develop on the East Coast, and by 1946, when the war was finally over and, even in 1944, we saved up gasoline rationing coupons, and my dad and I drove all the way out East with the Indianapolis race car and came back. Five times from 1944 to 1948. Those were some very memorable trips.

Continually, my father confided in both my mother and myself about what was going on at all times about this design stuff. I always had a little clay model going at one time or another, and my father would bring home clay, or sometimes when I'd go up to the studio on Saturdays when he was working at Studebakers, I'd have my own little model car -- the modelers got a kick out of giving me tools to work on [it].

Q About this time, you were involved in the Fisher Body competition. How did that come about?

A This is when I was in the seventh grade -- 1945/'46. It was a social studies class that handed out newsletters on Fridays -- The Social Studies World or something like that -- a little newspaper. All the kids got it at that time. There was an ad in it to design a model car and win a college scholarship. I was twelve at the time. So I brought it home. I had recognized the idea of it because my father had always told me that in 1937, when he worked at General Motors, he had something to do with one of these contests.

I brought the thing home, and I said, "Look at this. I'm going to enter this. This is going to be fun to design a car." Then is when they

told me, "Did you know your father judged that contest in 1937?" And they were surprised that I'd picked up on it. And I said, "No. I didn't know he judged the contest." They said, "Well, he did, and he was very involved in that." I thought, oh boy, this is going to be neat and a lot of fun to do.

So I started to draw cars. This was in the fall of 1945. (I was always building model airplanes at that time.) So I got some clay and started to model a quarter-scale model. I made up a buck and started to model. It was tenth scale in the contest. I started to work roughing out designs as well as to draw up designs for the contest. Then, in the early spring of 1946, as it came closer to the deadline (mid year), I had to really work on it harder. So I turned out a finished clay model and made the mold and cast the car in plaster. It was closer to the deadline, and I put it in my mother's oven to dry out the plaster, and it cracked. I had to repair it.

Q You had to do it all over again?

A Not all over, but, I had to patch it up, sand it, finish it. My father helped me quite a bit, but I had to hew every last little piece of detail out of aluminum chunks and file them, and polish them, and assemble it. As it turned out, I won first place in the junior division in 1946. It wasn't really what I considered the beginning of a design career because having gone through it from the time I was born, I was sort of in it. It was a very important thing in my life, naturally, to get a scholarship. That took care of my education to a great extent.

Q Was that through the G.M. Institute?

A No. It was just a $4,000 university scholarship to use anywhere.

It just was the idea they gave you money. If you got into college, then you could spend it on tuition.

Q Where did you eventually go?

A I went to the University of Notre Dame. Of course, we were living [in South Bend]. By then, though, my father had started with Chrysler.

Q By then, Notre Dame had a better industrial design department than they had when he was there?

A Actually, I studied architecture. They still didn't have too much of an arts/design department when it got right down to it. Mostly advertising art. But they were quite well known for architecture, and they were doing very well that way. The thought was that it's best that I get some engineering background as well as art. It didn't work out that way, but, nevertheless, that was thought to be [true].

Q There was what used to be called a Mexican standoff at Studebaker?

A This kind of rapidly gets us to 1946, and I've touched upon my own Fisher Body career at that time and our affinity with the Indianapolis race car and the beginnings of the Sports Car Club of American which started out as a group of Eastern car enthusiasts that grew out of the pre-war American Race Drivers Club (ARDC) in the East, of which Bill Mitchell, incidentally, was a big supporter of back in the late 'Thirties/early 'Forties. And it was also came out of the Vintage Car Club of America and the Antique Car Club of America, which were largely East Coast-oriented organizations. They would have very large meets for all these cars. Usually these clubs were combined. Out of this grew the Sports Car Club of America, which had such notables as Dave Garroway, Briggs Cunningham, and Peter Helk as members of this organization. In the

very earliest days of the Sports Car Club of America, you actually had to own a car, and it had to pass judgment as to whether it was a true sports car to be even allowed as a member of this very exclusive club.

They were honored to have my father as the chief designer of Studebaker, especially after he was given credit for having designed the post-war car in 1946/'47, and he owned this racing car, which they looked upon, unfortunately, as an Indianapolis racing car and not a sports car. We had just driven 758 hundred miles to go to their sports car club meets, and if that didn't meet the criteria of being a true sports car, nothing did, and they more or less accepted that later on, except there were some incidents that proved a bit otherwise. It was funny.

We made about five or six of those trips annually. During the war we'd save ration coupons to be able to take the cross-country tour. I was the riding mechanic and a little bit too young to drive, although my father let me drive. My mother actually taught me to drive when I was thirteen, and, actually, I learned on the '41 Studebaker President. That's where I truly learned to drive. We had the President until 1946 when we got a post-war car.

The minor facelifts that were made between the 1946 or '47 post-war Studebaker and 1949 for the period of two and a half years there, were all of my father's with little ornamentation differences. They developed the Land Cruiser at that time, which was the bigger car that replaced the President. The three basic car lines became, by 1949, the Champion, the Commander, and the Land Cruiser, as well as the 1948 Studebaker truck. That was another major breakthrough. My father always felt that the front end design for the pickup truck was one of his nicest design contributions.

Q Was it '49/'50?

A It was either '46 or '47 when they facelifted that from the pre-war model. It was a very nice, simple front end with slot air intake design -- separate slots that composed the grill.

All of the designers during the war, naturally, were greatly influenced by aircraft design, especially wartime fighter planes. That became the reason for the spinners that you saw in the 1949 Ford and all the bomb-type, bullet-type bumper designs and ornamentation -- especially hood ornaments -- rocket shapes, and machine gun slots and that type of philosophy. It will come out later that there is going to be a rift there between a lot of designers that totally went after that type of [design] philosophy and those who were able to adapt to getting back to the more honestly what is an automobile? where are we really going? and the philosophical difference between we're a world of cars as opposed to just United States as cars or Europe as cars, and the appreciation of cars overall, versus American cars are the only cars in the world.

This is all still without any schooling coming into the whole thing. Architects have accredited schools to go to; engineers, accredited schools to go to; doctors; most professional people. The automobile design community -- its styling community -- or industrial design -- had only a bit of that -- Pratt Institute, MIT. But there was virtually, by that time, no formal schooling being built up. There was a little bit of an association of industrial designers, but that didn't amount to very much. My father, for instance, even when he was at Studebakers, was invited to be a vice-chairman of the American Society of Body Engineers and joined the SAE himself and was very engineering conscious oriented himself and gave

several speeches on what's the future of cars. [He gave] two notable speeches: "Are Dangerous Curves Ahead," which was before one of the SAE conventions in French Lick, Indiana. He was quite accepted by the engineering community. Friends like Roy Cole and Dale Cosper welcomed his integrity as far as being a stylist with real automotive and engineering feeling.

There being no schools available for designers quite yet, but soon America would grow up with the idea of education.

Q Your father probably had some very strong ideas on this?

A Yes, very much so, because he always talked about [that], even from the time that he was sent down to Studebaker to hire people, and, especially, [since] it was difficult to hire people during the war. They were usually involved in the war, but as soon as they came back, he was able to get them. He would get some very nice people like Bob Bourke [who] was very well spoken, well-educated, but, literally, had no kind of [formal] design training whatsoever. A lot of people were like that. They were either with the old car companies back in the old days, or they just were young kids coming up. Bud Kaufman was an example of that. Yes, they wanted to draw cars, they wanted to design cars, but they had no more training than my own father had had as far as specifically knowing how to go about it. So, for the most part, they were just self-taught artists. Most of them had a mechanical interest. While most of them did have pretty decent fine art background, they were neither fish nor fowl, and he always lamented the fact that there wasn't some kind of schooling that would give these people some basic [design] training and educate them at the same time. He did <u>not</u> favor a trade school. Dale Cosper was a

graduate engineer, but among designers, Gordon Buehrig was one of the very few college graduates.

Q Did he have an engineering degree?

A I don't believe it was an engineering degree. I think it was a liberal arts degree. But he was one of the very few of what the community thought was educated. My father hadn't graduated. He'd gone to college, but he hadn't graduated. My mother always got a kick out of holding her two years business college degree and saying, "I graduated from college" [to my father]. But they knew the importance of that. When I won my scholarship, they [saved] that money [so that] my education was partially assured, at least monetarily. I was sent to Cranbrook School in 1949, a private school, because our next door neighbors -- one of our best friends were Easterners and believed in private education. They told my folks, "Virgil isn't getting too much out of public school." So that's how that came about.

Q You were talking [earlier] about the relative dearth of industrial design....

A Schools. Right.

Q Pratt Institute was tentatively reaching out about this time?

A They were, yes.

Q Under the Costellows?

A I believe so. That was about the only place mentioned. Art Center hadn't hardly begun until about 1950.

Q There was the Cleveland School [of Art].

A There was the Cleveland school, but it was very infitesimal. The University of Michigan had an industrial design [department] at that time.

Architecture schools were not supplying anyone because they were very specialized as we came to find out. I mentioned MIT.

Q Industrial design?

A We called ourselves industrial designers. That was the basis of everything. But, even at that time, there was a rift between people calling themselves industrial designers and car designers. It was felt that if you were a car designer, you weren't an industrial designer.

Q You were a stylist?

A Yes, a stylist. Car designers felt that, "Hey man, unless you can design a car, forget it!" Anybody can design a toaster. And that was the feeling at that time. Brooks Stevens was an important designer during that period of time.

Q He and Teague and Bel Geddes and others had formed the industrial design society?

A That's right. They had. As it turned out, Brooks Stevens and my father became very, very good friends, because he was a big member of the Sports Car Club of America, too, during this time. Brooks Stevens was truly crazy about cars and was a good car designer, but his main business was pots and pans, and he made good money on it. In fact, he almost hired me at one time. I almost joined him, but that was before I went to Ford.

At that time, no one was trained. My father always said, "It's like getting people off the street, practically, and you've got to train them. If they have a little bit of talent, my God, get 'em." You couldn't tell. There was no [design] philosophy then. That's what he was complaining about more than anything that there was no conviction. "Yeah, I want to be a car designer, but I don't know how cars should look." Even he had

had an idea when he was kid about how he thought cars really should look. It wasn't just an idea of making a pretty picture of a car without having a conviction about what a car ought to look like, ultimately. At any time in its history, it ought to look like this. It ought to be this. As far as we can go with our thinking of what it ought to be able to do and its role, as far as primarily providing transportation.

Q One more question. You had begun to talk about your father's feeling for the need for car designers and car engineers to have a rapport?

A To work together, yes.

Q And with his famous SAE speeches that you mentioned?

A Yes. "Where is the future of car design going?" -- to honesty, integrity. He presented in those papers -- one, in particular -- what his impression of where the French school of thought was going. One of them was "Are Dangerous Curves Ahead?" and the other one is "What is the Car of the Future?" They're both SAE papers.

Q So he was attempting to publicize in the best possible forum -- the SAE -- the need for a rapprochement betwen those two disciplines?

A Yes. Very much so, and the need for [more creative] engineers whom he felt were getting a bit cast-ironish. His best friend was Dale Cosper who was a tremendously creative engineer, so he knew how good an engineer could be.

Q How creative?

A That's right. So he was very much preaching the idea that the car designer/stylist needs to be honest, and they can't go too Frenchy -- the French school of thought -- or too flamboyant. By the same token, there's

room for improvement in the basic overall car. It should be lower, it should be more stable, perhaps [be more] aerodynamic, things like that. He'd already had some experience working with that type of thing in the University of Michigan wind tunnel with the development of the '47 Studebaker.

Q That's where he used it?

A Yes. And what is the role of the foreign car? What is the role of the public, where they stand, what should they get out of this? A fair shake in both ways. They were excited about materials and fabrics. These were early pushings of philosophy. And it was nice that he was accepted by the engineering community to do this. And he continued to do that while he was at Chrysler.

Q The big breakup is imminent. How did it actually occur?

A The big breakup was simply that, obviously, there wasn't too much of a future left in South Bend, and Roy Cole was actually getting ready, at that time, for retirement, and Roy was making my father's availability known around Detroit and he said, "I'll see what I can do." As a matter of fact, the first thing that he did was contact Ford and talk to John Oswald.

Q I'm not sure I knew this.

A I have a letter to this exact effect.

Q How did this come about?

A It was just a contact that he'd made that Virgil Exner may be available from Studebaker, and would you be interested...?

Q Oswald was a reasonably forward-looking person?

A Yes. And he said, "I'd be very interested." It was early in 1949. I'd already had to be tutored to get into Cranbrook because my mathematics

were not very good, and my folks were looking forward to sending me to Cranbrook in the Fall. By early 1949 my father knew that he was going to go to Detroit one way or another and thought very much that he would be going to Ford.

Q Oswald had been receptive?

A Not only receptive, but virtually said, "Come up and look for a house, and you will become the chief designer of Ford." [He was to] become what George Walker became. They made a verbal agreement to that effect. My folks went up several times. They committed for a house. It was a very large salary and everything. It was just fantastic! There were people up there that my dad already knew [who] were working for Ford. They'd worked for him at Studebaker. There was [Bob] Koto, and [Jake] Aldrich, and [John] Reinhart. There were many people like that, including modelers. They started to build up a large group of people. At that time, it was the interim group, along with George Walker's consultancy.

And then about mid-Summer 1949 -- I have the letter -- Oswald wrote to my father and said, "I'm sorry. We have decided that we cannot proceed with our agreement at this time. The company wants to hire George Walker to bring in his associates and become the in-house design at this time, and that's been decided."

Q What a terrible mistake that was.

A You never can tell whether it was or not.

Q It's wonderful to contemplate what might have happened [if he had gone to Ford]?

A As it turned out, it was awfully good the other way. So what can you say? Who knows? You never can tell. It may have gone to his head

even more than [Chrysler] did. My father was an egotist, too, to a certain extent.

Q But he was on firmer ground than, say, George Walker was?

A That depends on how he would have been treated by the Fords. As it turned out at Chrysler, he was treated very, very well by the hierarchy, and he always managed to get along with people from that standpoint. I think that he would have gained the confidence of the Fords, and, I think, they'd have been better off. But you never can tell.

Q Isn't that fascinating? What a difference that may have made, because the Walker influence [at Ford] was devastating.

A In some ways, it was. I'll have to tell my own stories of my own first impressions of working for Ford and for my twenty-one years there.

Q The specter of what might have been is fascinating.

A [As for] George Walker, maybe his hands were tied, too. But he lacked conviction as far as what cars ought to look like, in my opinion.

Q He wasn't a true designer! He was another manager, a packager.

A Very much so. Unfortunately, we Exners probably lack a bit of managerial ability. I do, certainly. My father had more than I have. Probably more respect. But that was the beginning, then, of the transition. And with the Ford deal falling through, Cole quickly said, "Well, we'll try Chrysler." As it turned out, it was half the amount of money, and they had to scramble around and give up their big dream house that they were going to build. They always looked forward to building/designing houses together. Suddenly we were looking for a house in Birmingham, which turned out to be great. Then he did start with Chrysler with a very solemn good promise.

The next major phase of my father's career, and of the family's history, was that he started with Chyrsler in the late Summer of 1949, and we moved temporarily into accommodations near Birmingham as they had found a house they wanted to complete the building of. By this time, my youngest sister, Marie, had been adopted into the family. She was actually my cousin. Unfortunately, my aunt died giving birth to her, and my father and mother adopted her. She became my youngest sister, and she was approximately two years old by that time. As a result of [my] having won the Fisher Body Craftsman Guild contest, my folks felt that they could afford to send me to a private school, and I attended, as a boarding student -- even though it was a short distance away -- Cranbrook School in Bloomfield Hills, Michigan. My folks, in early 1950, moved into their home on Westwood Drive in Birmingham, which was their permanent home for the rest of their lives.

Q Can you tell us the circumstances around your father being offered a job [at Chrysler], who offered it to him and [of] his acceptance?

A Yes. After Ford and John Oswald [withdrew] the offer, Roy Cole paved the way for him to see K.T. Keller and the vice-president in charge of engineering at that time, James C. Zeder, at Chrysler.

Q Cole was a friend of Jim Zeder?

A Yes, they were engineering friends. It had been determined by Chrysler that they needed to get into design in a much larger way. They had a very small styling section headed by Henry King, and they thought that this was an opportunity for them to initiate an advanced design section. They had a considerable decline in sales in 1948 and 1949. Their cars were very narrow and stodgy, especially, in the cheaper car lines --

the Plymough and Dodge. They had determined that they needed to do something rather rapidly. For that reason, with my father's availability, they decided that they would start him as the director of an advanced styling section, and he was given the green light to go ahead and hire some people. The entire staff of design, including modelers and draftsmen at that time, numbered [only] seventeen people, and so they were very hurting to keep up with the times compared to General Motors and Ford.

Q You've mentioned this before, but can you elaborate on it? What was the reason for Chrysler lagging so far behind in having a full design staff?

A I believe part of the story is that K.T. Keller was prone to insisting that, in Chrysler cars, the customer be able to step in and out of them [and drive] with a hat on, which was rather an old philosophy. It was very much oriented to a heavy engineering hand. They had some wonderful products. They were very sound products. They had started, at that time, to get into more advanced transmissions, engine development, and chassis development, and their cars were very soundly built, very heavily built. The entire line of cars were dominated by a very heavy engineering hand, not that anything's [necesarily] wrong with that. It's just that it was rather old-fashioned engineering, to a certain extent, and it left very little room for styling. They had also suffered, and the engineers, in particular, knew that from -- what was very apparent to my father at that time -- their daring experiment in 1934/'35 into their aerodynamic cars -- the Chrysler Airflow, in particular. They were quite good cars but, saleswise, really let them down. They associated those cars with having been heavily styled. They weren't, in reality. They were, again,

a result of the wind tunnel which was an admirable stance to take at that time, but there was little actual style that went into them, and they were rather poorly designed from a styling standpoint. In fact, they were downright ugly, even though they were aerodynamic. As everybody knows, we have a heavy emphasis on aerodynamics today. Every design section does. It's very interesting. It's very rewarding, but there's still a lot of room for pure style within the confines of aerodynamics.

Q So, in effect, his availability was a godsend to them?

A Yes, his availability. He knew something about engineering. He was engineering-oriented in his attitude. They felt that it would be beneficial to start to probe a little bit further ahead. Their sales were suffering terribly, and they decided they needed to do something. So he was not made the head of all styling at that time, nor did they even have a vice-president in charge of styling. He was simply given the responsibility to initiate an advanced styling section.

Now, the first couple of projects that he actually started to work on was with some of the designers that were already there, although they were, for the most part, busy finalizing plans for 1951/'52 and '53. He got into that very little, as far as the production styling was concerned, but concentrated on, initially, a series of show car type vehicles. The results of which became "The Forward Look" -- [which] became the future for Chrysler styling. Those projects, in particular, were, number one, to design a parade car for the three major cities in the United States. This car was initiated in 1949, and it was shortly after that the cars were actually built as very custom large phaetons in the Chrysler shops. They were fabricated there, and Chrysler presented one to the City of New York,

one to the City of Los Angeles, I believe, and the [third] to Chicago. They were very impressive. They represented a new style, which was heavily drawn upon in the all-new '55 models, but they were my father's first really true [design] effort there as far as the very first [product] that he did.

In 1949 the firm of Carrozzeria Ghia in Italy had approached General Motors, Ford and Chrysler offering their custom coachbuilding services. Particularly, Luigi Segre, who was a co-partner with Mario Boano of the firm of Carrozzeria Ghia. Ghia had been started by [Giacinto] Ghia and by the Ghia family before that as early coachbuilders in the 19th century. This changed over just prior to World War II to building special coachwork bodies for some of the grand marques of Europe, and, in particular, Italian cars -- Alfa Romeo and Fiat, as well as French cars. They were able to reconstruct their bombed-out factory after the war and go [into partnership]. Giacinto Ghia, himself, had died in a tragic accident in the very late 'Thirties, and Mario Boano, as the chief designer, and Luigi Segre, as the business entrepreneur, took over the firm. They came over searching for new work from America and showing off their coachbuilding ability. It very much intrigued both Ford and Chrysler because they could do such beautiful work, inexpensively, and they brought over a 1950 Plymouth chassis that they had built their own special design on.

During this period of time, from approximately 1946 until 1949/1950, the sports car movement [had] become a very large thing in the United States, and European car design was being led by the Italians, led by Pinin Farina and certain other Italian designers, mostly on Fiat and Alfa Romeo chassis. Ferrari was coming into the picture very strongly at that

time, [as were] some of the smaller sports cars, Cisitalia, notably. The Italians were doing wonderfully clean, simple body work which was a new phase for all of Europe, as opposed to the French and English, who were still back in pre-war type styling. The Italians were rapidly making advances in the clean, simple, full-bodied cars, and the Italian design, in particular, was fresh-looking, aggressive, smooth, aerodynamic, and it was very impressive to the American design/styling sections at the time.

Q Did this appeal to your father?

A Very much so. He very much believed in the purity and the honesty that they showed, and he took this up but didn't merely apply it to his efforts and to his direction because the popular European cars, at that time, were much smaller than their American counterparts, so that tremendous simplicity that they had about them couldn't be directly applied to a much larger car. One notable flop at that time was when Nash actually hired Pinin Farina to design one of their larger cars. While his efforts had been excellent on some of the smaller European cars, a very large plain bathtub that resulted, was clearly something that he found a little difficult to handle.

Q Was that the 1950 model?

A Yes.

Q [Which model]?

A It was the Nash Ambassador, I believe, that was done by Pinin Farina.

Q And that flopped, totally?

A It was quite a flop, yes. The American public was not on to European design by a long shot. The designers, naturally, are aware of

those trends throughout the world, but, of course, the public had not been conditioned to it. So it would be quite a long time before they got used to that.

Q Did Segre approach your father?

A Segre approached C.B. Thomas, who was the European vice-president of Chrysler in charge of the export division. He approached through C.B. Thomas and engineering to Jim Zeder who was the vice-president of engineering to show what they called the Plymouth 500X. And it was shown to my father, and, oh, he thought that their workmanship was wonderful, and just unbelievable compared to these parade cars which had been built by the Chrysler shops at an enormous cost -- two hundred/three hundred thousand dollars. At that time, that was a tremendous amount of money, while Ghia was showing this little Plymouth. It wasn't nearly as big, but it was a totally new body built on a standard chassis, but they were quoting prices for show cars to be built from ten to twenty thousand dollars at that time, and the workmanship was excellent. There was a bit of fear on the part of Chrysler that they would be taking work away from union shops to have these cars built in Italy. But, nevertheless, they signed a contract with Segre to go ahead. Chrysler would design a car, and Ghia would build what became the first true show car that my father was responsible for [from] the new design section at Chrysler.

Meanwhile, he built up his design section. Got it up to, maybe, thirty people. That included shop personnel and administrative personnel. But he hired some important designers, [such as] Cliff Voss, who had been with Kaiser-Fraser, and Mauri Baldwin, a Canadian, who had been quite a top-notch illustrator for one of the ad companies here in Detroit and who

was, himself, a designer. Ted Pietsch [was another designer he hired]. I'm not exactly sure where Ted had come from. Shortly after that, several people, including modeling personnel, especially, came to Chrysler and knew that my father was starting something new there. Many people flocked from General Motors and Ford at all times to try to work there, and he was able to start to build up a design section [with] very good people.

Thus was born the famous show car [project] that really turned Chrysler styling around in the early 'Fifties -- the Chrysler K-310.

Q Mr. Exner, are you segueing from Ghia to Chrysler? Would these show cars be fabricated under the new arrangement with Segre?

A The first two, yes. The Chrysler K-310 was built on a standard New Yorker chassis, and it was a rather large car -- a two-door sport coupe, but five passenger. It was modeled in clay, in 3/8th scale in the studios at Chrysler in Highland Park. A plaster cast model was made and shipped to Ghia.

Q How did they ship them? By air or by boat?

A At that time, it was by ship, but, later on, the models were air shipped. It represented kind of a neo-classic design. It still had a rather handsome radiator grille with headlights set in scoops, and it had, what we called blister-like fenders that were high at that time, and the hood was relatively low. It featured a rear quarter panel that blended smoothly into the body sides. It was quite nicely sculptured, overall, and featured, as my father started to lift the rear fenders and to accent them, what became the famous gun sight taillights that were actually patented at the time. It featured one of his favorite sports car touches, at that time, which was a spare tire cover on the rear deck. The car was

quite smooth looking -- very handsome. It featured very large, round wheel openings and very large wire wheels, as he was always a fan of that classic approach. Now, as opposed to a lot of other show cars at that time, it was looked upon as being very honest, very clean, very automotive, in its concept, as opposed to what we called the Buck Rogers type of styling that was incorporated in future cars being shown at that time by General Motors and Ford. It met with extremely good success, as far as the public was concerned, and, especially, the people that thought that Chrysler was virtually on its demise. And with the world community design, it represented something that was, hitherto [missing]; that the cars that they saw [in] the future weren't quite as honest, and clean, and sculptured as this idea represented.

Part of its large success was also due to the fact that Chrysler was -- as was everybody -- getting into V-8 engines at that time. The Olds 88 engine had started the V-8 overhead revolution in 1947. Chrysler was lagging behind a bit from that standpoint, but their emphasis on developing the famous hemispherical V-8, which was a very important part of the contribution that James Zeder -- made to the industry. That was his pride and joy. K.T. Keller, as the president of Chrysler, backed this car completely and gave my father the green light and a free hand without interference, as far as the body design was concerned, and it featured this very powerful, new V-8 engine that Chrysler was to further develop into production. The combination was really quite sensational, and, thus, the car was called the K-310 -- 310 meaning the flash horsepower that they got out of it at that time. K standing for Keller's involvement in it.

It was first shown in 1951, and the very next car that came was nothing more than a convertible version of it in 1952. Because the car was successful, Segre was given the contract to do the second version, which was a convertible called the Chrysler C-200. Those were the first two cars.

In the Summer of 1951 my father continued to draw and design at home. He got more chance to be non-bothered by managerial responsibilities and the everyday work, and he could concentrate on doing something on his own. It's very difficult, when you're in a managerial position, to actually be drawing on the boards as well as supervising the work of modelers, designers, and administrative people.

Q Did he have an administrator?

A Initially, just a secretary. Later on, he had several full-time administrators, but it took time, and he was interested in the welfare of the people, building up the design section, and working with the engineering people. Initially, at least, there was always a battle going on there between the engineering fraternity, and he had the support, always, of the sales department and advertising people. Keller had made it clear to people that this is the way things were going to be. Also, at that time, K.T. Keller had brought in Tex Colbert from a sales background into the company. He became the president, then -- Lester Lum Colbert.

Q He came from sales?

A Basically, he came from the sales management area.

Q Marketing?

A Marketing background, for the most part, yes, a marketing/sales background. Very successful.

Q In Chrysler or elsewhere?

A He had come up through Chrysler through dealer/sales organizations in the Southwest, having been from Texas. Thus was born the Tex and Ex show, to a great extent, because Colbert believed that they needed to emphasize advanced styling to get ahead.

Q Mr. Keller had been elevated to chairman?

A Yes. Keller then was elevated to chairman, and Jim Zeder was still vice-president, engineering. During that summer of 1951, working on his own at home, he developed a series of three or four drawings that actually became the next series of Chrysler show cars. Two out of the three cars that he did, as well as the quarter-scale model in his basement at home, became the next three show cars. They were the Chrysler Special, the DeSoto Adventurer in 1953, which he always thought was one of his nicest designs, and then the Chrysler D'Elegance, approximately in 1954.

Ghia also did some cars on their own. They had the go-ahead to do that. Some of these cars -- especially the Chrysler Special -- at the instigation of C.D. Thomas, the export manager for Chrysler, actually became a small production series of Ghia-built cars. There were about twenty-five or twenty-six of them built for very wealthy customers. But the show cars were primarily used to tour the country at auto shows and dealerships to drum up a lot of enthusiasm for what would be the future trend of Chrysler products.

Meanwhile, my father was starting to get into just a little bit of facelift work on the 1951/'52 bodies, which were quite staid, quite behind the times. There was very little he could do in the way of changing what was already in place without a major retooling program. Nevertheless,

their sales did perk up. They [had] also improved the products [by] offering the new V-8 [models]. They became very hot stock racing cars. Their sales were starting to pick back up, but they still needed a great deal of help, as far as production car styling was concerned. My father had the opportunity to get involved with the 1955 production line of cars.

Mostly he concentrated on the show cars. There were many other variations of show cars built in '53/'54/'55. Some of them were designed by Ghia, like the Firearrow and the Plymouth Explorer.

Q Someone has just acquired the Firearrow.

A Yes. I believe I heard that.

Q It's still in existence.

A Right. There are several of them in existence. The Firearrow, or, actually, it was the Firearrow Roadster, became the prototype for a series of cars that were promoted here in Detroit and built by Ghia. About four hundred were built which became the famous Dual Ghia and was sold to many movie stars and was carried later on as the Dual Ghia II. My father actually didn't design that car. It was a Ghia design. Basically, a Boano design. He was still there until Segre bought out Boano and took over all of Ghia himself. The designs of those cars were actually instigated by Ghia themselves and by Mario Boano.

In 1952/'53, during that time when Chrysler was redesigning for 1955, my father was asked to give an opinion. Again, he was still only the head of [the] advanced design section, and Henry King was responsible for carrying out production styling. But my father was asked to give an assessment of what were to be the '55 models. This was approximately 18/20 months before production -- you could get things out faster in those

days. At that time, he was asked to give an assessment of what he thought of those cars that were being designed and, frankly, told Keller that he thought they just were lousy and they'd be a flop. So Mr. Keller says, "Okay. You've got eighteen months to redesign them completely." Those are the cars that borrowed heavily [from] the parade cars -- the 1955 car line. He, initially, started with the Chrysler New Yorker and re-designed Plymouth through Chrysler -- Plymouth, Dodge, DeSoto and Chrysler. They were very successful, and they put Chrysler back in the black, solidly. They had sunk to as low as thirteen percent of the market around 1950, and, by 1955, they went up to nineteen percent and went on up to approximately twenty-two or twenty-three percent by that time and were phenomenally successful. It ate solidly into Ford's [market share] at that time, more than General Motors.

He continued to develop more show cars -- idea cars. These represented what was always part of his [design] philosophy. They weren't just pretty mockups or wild blue sky design props, but they were really looked upon as being heavily borrowed upon for the future. They represented designs that could be lunched off of for production design.

Q Is that a designer term, lunched off of?

A Right.

Q A variation on cannibalism?

A Right. They were developed to be advanced designs but not so ridiculously wild as some designs people did, so that they were totally useless as far as being a genuine trendsetter to be baked into production cars. Nearly every one of them were total running prototypes, and, of course, Ghia made that possible by their wonderful engineering and

craftsmanship. They would take production chassis, for the most part, and re-skin them and do a total job of body engineering them into excellent running show cars.

Most of the show cars that [were executed] in 1955/'56 represented my father's direct involvement, but as he got a larger design staff, he delegated some of them. Mauri Baldwin contributed heavily toward them. Father always had his own projects going in his back room that were to influence the design of the production cars as well as the show cars. These cars, such as the Falcon in 1955 and the 1956 Flight Sweeps I and II, were the cars that were to be the predecessors of the famous Forward Look cars of 1957-1960 in which they started to get more sculptural activity into the body design and also started to get into the large fin age.

Q Were you ever able to talk to him, in later years, how the fins came about?

A That's something that I lived with myself. We saw how that all came about. That's very simple. Before the war, there were fins appearing on LeMans road racing cars, which were largely German developments. Immediately after the war, the 1946/'47 Cisitalias, which were actually designed by Giovanni Savonuzzi and who later on became one of the engineers for Ghia, tremendously influenced Detroit designers. They even had an influence on the 1949 Cadillac. A little bump fin or taillight type fins [appeared] on the '49 Cadillac.

Q That was...?

A That was a definite influence [from] the Italian Cisitalia. G.M. designers recognized these cars at that time, too, and that car had a great deal of influence on Detroit, overall. My father was also

influenced. He liked the cleanliness of the idea. He liked the aerodynamics of the idea, and in his mind they were genuinely aerodynamic. Later on, Chrysler proved that in wind tunnel tests. They ran cross-wind tests with cars with and without fins that proved that they were working, and that was the intention. He didn't want to be dishonest. He didn't use them for a styling gimmick, but he did use them for a design philosophy purpose as well as a true functional purpose. That philosophy went something like this in his mind: cars in the 'Forties and early "Fifties were getting to have a heavy appearance. He felt that cars should look light -- even large cars should have a light appearance, a fleet appearance, a racy appearance. They should look like they're moving, because they are, in effect, a moving sculpture. They do move. They should look like they move. Anything that he could do, sculpturally, within the body work to give this light appearance and to lift the rear end of the car to attract the eye to the rear end of the car [with] a lifted motion would help the dart-like appearance that he favored as opposed to what we called a drag-ass look, especially with the skirted rear fenders that some of the competitors exhibited at that time. Notably Ford and Mercury had a very heavy look to them, and he wanted to get away from he called slab-sidedness. He wanted a more genuine cross-sectional sculpture to the bodies, again, all for the purpose of making the car look, overall, lighter and faster and more dynamic. Thus, the natural thing to do was to go towards more of the wedge look, more of the dart look of the car, and, thus, he embraced the idea of the fin, completely. Of course, other people [did], too, at that time. He tried to do his in a cleaner way, I believe, which was more of the way that the Cisitalia had

been done -- very simple and very clean. They became huge, of course, because the cars were huge at that time, especially Chryslers and DeSotos and, later on, the Imperial. But, nevertheless, that was the basic idea, and that was the general philosophy.

There were some notable show cars that came along that were done solely by Ghia, at that time, that were promoted. Again, they had a wonderful designer/engineer combination in Giovanni Savonuzzi [who] actually worked in-house for Segre at Ghia. And, later on, my father actually brought him to the United States as a design engineer working directly for Chrysler. He had a wonderful career. This man had designed the Motocuzzi V-8 motorcycle engine, and had had an enormous amount to do with the Fiat Italian racing seaplanes for the Schneider Cup series. He was a fully-qualified aerodynamacist, having worked a great deal with Fiat in their wind tunnel in aerodynamic testing of cars, especially before the war.

Q Did Chrysler have wind tunnel facilities at this point?

A No, they didn't. They did not have their own at that point. They rented it at the University of Michigan and other [institutions] that had them at that time. The big success story overall, of course, was in the 1956/'57 models -- the Forward Look.

Q Who coined that phrase?

A I really don't know.

Q Someone in marketing?

A Yes, I'm sure. As well as concentration on design, he built up his staff. It became a staff of approximately three hundred people, and it's about that size today.

Q But his personal administrative staff were a half a dozen people?

A Yes, something like that. A few PR included. He gained an enormous amount of publicity. He won many awards for styling. He still contributed very much to the SAE in which he was a vice-chairman of body activities for a couple of years during this time and made many speeches regarding automobile design.

Q Have they been collected?

A Yes, I have. Copies of these speeches are undoubtedly available by the SAE themselves. He became a vice-president of SAE during this period. So he was still looked upon by the engineering fraternity as one of their favorite people as far as stylists are concerned.

As I have mentioned, during this period of time, he built the design section up, having been given more control. He was named director of styling, in its entirety, in approximately 1955 or '56. They still had no vice-president in charge of styling until '57. Then, he was made a vice-president and became a member of the board of directors at Chrysler, of which there were very few at that time. His title was Executive Vice-president and Director of Styling. He had, by this time, totally reorganized design [and had] built up quite a line staff management team. It was headed by designers and managerial people. There was, of course, a design head for each of the major divisions: Chrysler, Desoto, Dodge and Plymouth. Each had their own studios. Some of these people were Bill Brownlie, and Johnny Schwartz, Cliff Voss, and Mauri Baldwin. And some of them headed advanced design. Even during this period, he always had his own private back room where he employed a modeler working for him himself to rough out what he thought were new ideas that he [could] keep his hand

in. [He] didn't have too much time at home. He was starting to do a lot of traveling, because as early as 1950, he had gone to Italy to consult with Ghia and Segre. [He] was fascinated [by] and loved Europe and became a very close friend of Luigi Segre. He liked to travel throughout Europe. My mother started to go with him, and they enjoyed it, particuarly, Paris. He enjoyed the Left Bank in Paris and haunting various book shops and art galleries in both Italy and France. He finally was able to pursue [his] historical art interests.

During this time, the pressures of work built up where he'd become an important designer and had a very large responsibility. This weighed on his health, which he had never been particularly careful of. By this time -- even by the time he started with Chrysler -- his hair had turned completely silver from very dark. At the time he started with Chrysler, he was only forty years old, but he was completely silver white by that time. He carried a handsome personage and was looked upon that way in the industry. A very dapper and sharp dresser, [he] still had a rather unpolitical approach to his business dealings overall, and the family was regarded, as I always felt, quite highly by fellow competitors. But it, nevertheless, took quite a toll, as it does in that type of position, and [eventually] resulted in heart trouble. He was a heavy chain smoker, drank a lot of coffee, stayed up pretty late, and did a little bit of drinking. It was affecting him, but he wasn't a constant drinker. [There] was a lot of pressure, and he was doing battle with various factions of manufacturing and engineering community to get his designs across and executed properly.

Q In these years, he had the [full] confidence of K.T. Keller?

A Yes, but K.T. by this time was, more or less moved up. He was not directly in the picture. It was Tex Colbert that was his very large sponsor at this time. [He], as president of the company, was very supportive. They became good friends. And Jim Zeder was fine, too, for that matter. And Harry Chesborough, as Chief of Body Design. Initially, my father and Harry were antagonists but became very good friends as both of them finally saw eye to eye. Some of the people that got on his nerves that were the penny pinchers and the manufacturing types, reasonably so, because some of these cars were getting pretty elaborate. They were harder to build. [Chrysler] manufacturing was expanding greatly. Their business was going great at that time, especially, up until '57/'58, and they were able to expand sales tremendously. But the quality [control] was getting to them a bit, not necessarily as a direct result of design, but as a result of greater production, perhaps, and it also was a result of the general tone of quality that was [lessening] within the industry overall. However, in the scramble to get new models and give them quite extensive facelifts in the mid-to-late 'Fifties, things were a bit underengineered, and, perhaps, the manufacturing elements [were] not given the time or attention for testing that would result in a better lasting quality. In other words, styling was getting ahead of the whole works to a certain extent, and later on that was corrected. But, Chrysler Corporation became extremely competitive with General Motors and Ford. And, Chrysler had a bit of the best of it. Naturally, I would have felt that way at the time, but, I think, that that's regarded quite true overall. They managed to get, at least, on an even par with their two larger competitors.

The development of the '57's took quite a toll on my father. He started to have heart trouble, resulting in a quite massive heart attack in 1956. As a matter of fact, it was very close. And when he pulled through it -- open heart surgery -- he wound up in the hospital and [gradually] came around to the fact that one of his great show cars had just been lost on the Andrea Doria while he was lying in the hospital bed.

Q That's incredible. Could you give us a bit of background on that? That's always been a murky episode.

A The car was called the Norseman. It was [to be] one of the really advanced cars -- a very advanced fastback design. It was very clean. It had quite a large fin-like design, but it was very much a sculptured fastback. Very clean front end. Had retractable headlights. The most unique feature about it was that the entire roof was cantilevered out of this fastback design from the rear. Normally, it [would be] held held in place [by] the A-pillar, with a wraparound windshield. [On the Norseman] it was held in place in the front by very thin steel rods that actually tied the front of the roof down to the cowl structure, and the windshield was in between. Very clean wraparound. It resulted in virtually no vision obstruction for the entire windshield all the way around to the side glass.

Q How radical was this?

A It was very radical. And, immediately preceding this, with the '55/'56 models, were a couple of my father's very strong design [enthusiams] -- not innovations. He didn't actually [create] them, but a couple of the things that he really promoted for the industry was curved side glass in cars. He also liked the idea of the wraparound windshield,

but he still wanted to have his A-pillars slanted forward at the bottom. However, in this particular show car design, the windshield wrapped around completely with just these very thin steel rods connecting the roof to the cowl. The object behind this was safety, to a great extent. Not only from a vision standpoint, but from the fact that in a roll-over situation, it was thought that the rods would shear, and the roof would actually spring up, giving a crush-proof situation to the occupants. It was a large car built on a Chrysler chassis. It was finished in June of 1956, and it was [to be] shipped to Detroit on the Andrea Doria.

Q This was the large Italian liner?

A This was the large Italian ocean liner.

Q Had you been using the Andrea Doria?

A They'd been using various shipping, mostly Italian, because the cars came from Genoa or Rome, and they were shipped out of Genoa for the most part. It was not crated.

Q It was not?

A It was not crated. Most of them were just tied down in the holds.

Q Was that the normal procedure in those days?

A Yes, for the most part. So, unfortunately, the ship went down in a very famous collision at sea, and....

Q Nighttime or fog collision?

A It was very early morning and foggy.

Q And, actually, another ship ran into them. It was Swedish. [The Stockholm. July 26, 1956] That's all quite well documented. Photographs have come back. Divers have taken pictures of the car in the ship since that time -- very dim, murky photographs.

Q It's still there?

A It's still there, yes.

Q But too far down?

A It's not nearly as far as the Titanic, but it's in about, I believe, three hundred feet of water, and it's just a little bit too far down to try to retrieve much at the time.

Q Had your father entertained the notion of trying to retrieve it?

A Oh, no. He loved the idea that maybe somebody would some day. Again, the romanticist in him loved tales of shipwrecks, and tales of the old West, and steam locomotives, and that type of adventure story, so that was fascinating to him. He got a kick out of that, as a matter of fact. He thought, that's neat, one of my cars went down in a big famous shipwreck.

Q What I've never been able to understand is why wasn't it duplicated?

A You had to get on to new things. It was a waste of time to go back and rebuild it in any way, even though there were probably hammer forms left [over], and that wouldn't have taken too much [effort], and Chrysler collected on the insurance, of course. But [the thinking was that] by the time you design anything, it's obsolete, so my father probably thought that, rather than have it duplicated, let's take that money and do the newest thing that is in his mind. Again, I want to reiterate that while, in some cases, these show cars were actually drawn and designed by my father's own hand and actually modeled, especially the DeSoto Adventurer, the Chrysler SS and the D'Elegance to a great extent, for the most part, any design effort, whether show cars or production designs, is a team

effort, and he had a lot of talented people surrounding him, engineers as well as designers and modelers that contributed to the specific areas of any vehicle, be it the body side design or the front end/rear end, or the entire vehicle. In the case of many of these cars, it became impossible for him to dictate the design, although he held a pretty tight rein on an overall picture of what he wanted to accomplish and the direction for design to go. He, nevertheless, delegated responsibility to people to come up with their ideas and to promote their designs within the framework of the overall philosophy. They went about this quite enthusiastically, and he gave them a lot of credit for that, although he was given, of course, the overall credit [with regard to] design awards.

Q But, nevertheless, he did have many talented designers?

A Yes, many, many talented designers, of whom the majority enjoyed working with him and respected him overall.

Q But it occurs to me that [the Norseman has] such a marvelously radical engineering design, so those principles....

A Of that particular car, yes. It was quite radical, but, again, he wanted to get on with new things.

Q It's a shame that those principles -- the cantilevered roof -- were not available?

A Yes, that's true. They were kind of abandoned, you might say.

Q Have they ever been utilized as far as you know?

A Not to my knowledge. One of the closest things that I've seen, actually preceded it. Back in the 'Thirties, there was a special-bodied aerodynamic, Delage coupe. [It had] a large central fin on the rear of the car [and a] very shapely body.

Q A dorsal fin?

A With a wraparound windshield and a dorsal fin and with this principle of a cantilevered fastback roof. Quite a good-looking, handsome car. I think it exists today as a collectors' car.

Q It's sad that [the Norseman] wasn't resurrected.

A Yes.

Q And that when the Norseman disappeared, [the cantilevered roof] disappeared with it?

A It did.

Q But on to other things, obviously? The dictates of the market and the...?

A As I mentioned, Father was in the hospital when it happened and nearly didn't survive, himself, and he was nearly written off by the corporation. As a matter of fact, during that time they didn't know whether he was going to make it back and be able to fully recover from the situation, and, thus, Tex Colbert brought in Bill Schmidt to, more or less, take over. My father had not made any strong plans for any one of his own people to take his place, and it was felt that it was better to have someone come in from the outside as director of styling to handle it on an interim basis. So they brought in Bill Schmidt. Then my father did make a slow recovery and came back. Schmidt was there for about two years, and he did cause my father some political problems, but, in a couple of years, they managed to let him go, and my father was back in total command again. But there was some disruptions.

Q He [Schmidt], obviously, wanted to stay on?

A Sure, of course. And he took some people back with him when he went to Studebaker/Packard, and some of them [were] alienated from my father

with his promise, "Stick with me." Politically that's the way it goes -- some of the people that my father had entrusted. But, nevertheless, my father came back and was made, at that time, a corporation vice-president and director of styling, owing mainly to the great success of the '57 models.

During his recovery period, from mid-1956 to 1957, he was able to relax a great deal -- at home, initially -- and again took up his artistic career in painting, especially watercolors and pastel sketches. He didn't really forget about cars. He had daily contacts with Tex Colbert and was kept apprised by his real design cohorts [as to] what was going on during the time that he was physically away from Chrysler, which was approximately five months. During that period, he was starting to get back in doing the things that he genuinely loved best, which was drawing, and painting, especially, some large transparent watercolors, and reintroduced himself to fine arts.

During this time he was being given rave reviews for the 1957 Chrysler line, which he had just completed before this misfortune took place. By this time, styling was very much hard at work on the facelift versions -- '58/'59 -- and then the new line of cars for 1960. After he returned full time to Chrysler, they went through some bad economic periods. The whole industry did in 1958/'59. Then G.M. hit very hard with their 1959/1960 all-new lines of cars. The next set of totally-redesigned cars that was planned by my father featured the short hood and long deck, lots of greenhouse [area], and the large fins. He was largely responsible for that whole philosophy.

In the late 'Fifties -- 1958/'59 -- he began playing with the idea of getting back to a bit more of a classical automotive theme. Not such

totally full, complete body sides and full fenders, but to get to even more sculpture and, more important, to a long hood and short deck type of overall proportion. He was developing some of these ideas in his second office, which was a hidden-away office at Chrysler. That gave him more personal time to develop design themes.

Q How did it differ from the previous?

A Mainly, from the proportion standpoint. Everyone in the whole industry had picked up the idea of the low, wide hood that was quite short and with the very long deck with big fins. The new idea really went back to a more classic proportion of the long hood and the short deck (something which Ford, themselves, of course, picked up [on with] the 1964/'65 Mustang). He always liked long-hooded cars, and he was really starting to promote that.

He was working on a series of cars, especially for 1962, that [contained] that philosophy, and they modeled a complete line of cars to show to Chrysler [brass] for their approval. There were some rather radical ideas in the sculpture of them and in the proportions. However, during that time, Chrysler was running into financial/sales problems. They went through a [supplier] scandal with Bill Newburg.

Q Colbert had been forced out, at this point, [and was given the presidency of Chrysler of Canada]?

A Yes. Well, sort of exiled to Canada. Newburg took over and made all kind of promises.

Q Had there been a palace revolution?

A Sort of. It was the coming of the bean counter, you might say. It was the advent of getting closer scrutiny on costs and watching investments more closely.

Q The bean counter mentality was beginning?

A Yes, it was creeping in. [It had been] lavish times, and spending was a lot freer, but things were getting a little tough. They'd been through a couple of recessions in 1958/'59. There were some big layoffs. My father had to do that within his own styling sections. Corporate directors were objecting to the low return on investment.

Q But, in the meantime, your father is trying to design cars and is being distracted by all of this?

A Yes, to an extent. Their sales were not going well, and he had designed this whole line of cars, [which] he thought would really do well for '62, and, suddenly, the new group -- the new corporate philosophy -- more or less shot down completely this whole line of cars that he had prepared. They really pared the expenditures -- the cost objectives -- to an extent that they came out looking like, as my father always referred to them, "picked chickens." They lacked the dimensional and detail verve. The basic philosophy was there with the long hood and short deck philosophy. The philosophy wasn't objected to. There was no problem there. It was the idea, on the part of management, that they skimped on spending money needed to really make the design totally effective. Especially for an all-new idea like that, [the cars] needed to be [carefully] detailed to totally promote the whole image.

Q The chronology here is that your father is still vice-president for design, but there had been some skinning of some of his '62 line?

A Yes, of the '62 line, in particular. Just prior to that, though, another milestone that the industry went through was the development of the compact car. The popularity that had built up in European cars,

notably the Volkswagen, by that time, had resulted in the Big Three -- and Studebaker -- designing and bringing out in production small car lines. Studebaker led off, actually, by bringing out the Studebaker Lark, which was a shortened version of the Studebaker Champion. I, myself, was in the design business by that time and actually contributed to that program professionally. Then G.M. came out with the Corvair, Ford with the Falcon, and Chrysler with the Valiant. These were the first American compact cars in over thirty years, really, for the entire industry. My father had definite ideas for smaller cars that were a part of his long hood and short deck philosophy that he carried from there on into the '62 line.

Q How did that come about in terms of your father's involvement?

A Oh, he welcomed the challenge. He was a "champion" of the smallish Studebaker Champion, himself, years before, and he had always welcomed honesty, simplicity, and really looked upon the car primarily [as transportation], even though he was romantically attached to it. He truly believed that, first of all, the car was there to get a person from point A to point B. He even thought, at times, that things were getting out of hand as far as the largeness of Detroit cars in the late 'Fifties. They were just huge from an overall size standpoint -- the greatest they'd ever [been] in history -- and ponderous. Engineering did manage to stay up with them. As large as they were and as heavy as they were, there was some wonderful engineering innovations that went on at that time that have been refined today. We haven't made, perhaps, any larger strides in terms of real basic mechanical innovations since that time. The automatic transmission, power steering, power brakes, body structure, and overall driving and handling were vastly improved in the mid-to-late 'Fifties.

[It was] an astounding turnaround from the basic car that we had seen in the 'Forties. And, the small cars were introduced to America during this period also. I think the [period from the] mid-to-late 'Fifties [to the] early 'Sixties accomplished a great deal in the history of the American automobile.

Father always tried to push a sports car at Chrysler, and they never did bring out their own production sports car. He loved sports cars and racing cars. But, in his series of show cars, they brought out one that was actually named after him -- the Plymouth XNR. That was in 1959, and it was based on the Valiant chassis and promoted the Valiant styling.

Now, I'd like to say here that when my father got into the development of the compact car -- which became the Valiant -- that when my father first showed me the development of the actual model in its earliest phases as a full-size clay, it had the name Falcon on it. That was because Chrysler had registered the name Falcon [when] they brought out the Falcon show car in 1955. My father liked dramatic birds. Falcon was neat, and so he named the 1955 show car.

Q The medieval connotation [to falconry]?

A Right. Falcon. He was always interested in heraldry, so the Falcon became a Chrysler name. In 1957/'58, when all the companies were designing their compact cars, Ford had a history of having names of birds for their products. They were developing their own small car that initially started as the Cardinal in England, but became, finally, the basis of the later Ford Falcon. Henry Ford very much wanted that name and went to Tex Colbert, who was still, at that time, president of Chrysler and asked if they could have the Falcon name. These kind of things are still

done today, and people consort with each other without having any big corporate fights or anything like that. So [Chrysler consented] to that. Tex agreed that that they would go ahead and give [Ford] the name. But, I remember Tex came to my father prior and asked my father's opinion about that. "Should we given them the name, or how bad do you want that name, Ex, to put on our compact car?" And he said, "Well, I guess, they do us some favors once in a while, [and] we do them some favors, and so that's okay."

So, now you've got to rename the car. Back in those days marketing, advertising, and design came up with the names of cars. [My father] always liked Prince Valiant, the comic strip. [It was] one of his favorite comic strips because of how well it was drawn by the artist.

Q Hal Foster was his name.

A Hal Foster, that's right. He always loved Prince Valiant and the whole idea of King Arthur [and Camelot]. So he decided it would be neat to have Valiant [as] the name of the car.

Q And it stands on its own?

A Yes. They renamed the car Valiant, and Ford's compact car became the Falcon.

Q Neat tradeoff?

A Yes, it was a neat tradeoff.

Getting back to the larger car lines, though, Chrysler's '62/'63 Ppicked chichens" ween't selling well, and Earl's G.M. '60's were again leading the industry. Lynn Townsend was now presiding at Chrysler and seemed to favor a "bean counter" run business. That's not all bad, it's just that the Harvard business school of design became the way of the future.

Q Unfortunately, the men who have practiced that have not been very visionary designers?

A That has hurt art to a great extent in all ages of history. Nevertheless, that was the future for Detroit, and it needed some of that, too -- some better accounting. At that time, it was generally felt at Chrysler that when Lynn Townsend came in, he wanted a new image, as they'd gone through the Newburg business, and he was given the responsibility of cleaning up the act. Even to the extent of moving my father aside and bringing in Elwood Engel from Ford. But, they still kept him on as a consultant. This happened in 1962.

Q How was his health in '62?

A It wasn't the greatest. Again, he'd been struggling with his health, but he recovered quite strongly for awhile. He started to keep more in touch with his fine art, to a certain extent, and taking more time away from the pressure of the actual every day involvement with Chrysler design. But, by this time, in 1962, he was fifty-three years old, and he was getting close where he could genuinely retire, and the family was urging him to take it easier because of his health. When Chrysler came along and said, "Okay, we want to bring in some new blood," my father contracted to stay on as a consultant until he could officially retire at fifty-five from Chrysler in 1964.

Q How many years had he...?

A He'd only been there for thirteen/fourteen years. So he moved aside. He still continued to work on several projects and consulted with Engel and his group. Engel revised the styling section and kept most of the people that my father had built up. By this time, my own career was

starting to take place. I was coming out of the service about that time, and it was a great opportunity for a dream that we'd always had together, and that is to go into business together.

Q Mr. Exner, since your triumph with the Fisher Body first place award in 1946, [could you] sketch out your subsequent years for us.

A I continued to go to high school, or went to high school shortly after that. I hadn't entered junior high, even. I was thirteen when I won it.

Q That's incredible. That was the junior division?

A That was the junior division, right. We were living in South Bend at that time, and I went through junior high school. I was a sophomore in high school in South Bend in 1949 when we moved to the Detroit area, to Birmingham. I was enrolled for my last two years of high school at Cranbrook school. I graduated from there in 1951. This was virtually at the time that my father's career was starting to blossom at Chrysler, and he'd already done some of the successful show cars there. I always wanted to go into design, and my parents felt it was best for me to go to a school of architecture thinking that would be the best stepping stone -- the best preparation -- for car design. You must realize that at that time there still weren't any schools, except on a trade school basis, that really prepared a person for automotive design. Nothing professional in architectural schools -- nothing professional as engineering schools of any kind. And, certainly, nothing with a true university background. Having always been influenced by my father and having lived in South Bend -- [which] we liked very much -- I elected to go to the University of Notre Dame.

I might mention that during my time at Cranbrook, I participated in sports -- lettered in football and in high school, basketball. The family was always interested in sports, as well as I received a couple of art awards myself.

Q You enjoyed Cranbrook?

A I enjoyed it very much. I liked being a boarding student. I liked being away from home. And even though home was close by, I still had to respect the rules regarding that and very thoroughly liked it. This was great preparation for college, as had been thought by my folks, and something that held me in good stead at university. So I went back to South Bend. Of course, we had friends there that I knew, but not so many former school friends as family friends, and my grandparents lived nearby in Buchanan, Michigan. So I was quite at home there.

For the first two years, I pursued architectural engineering. When I started, it had been made into a five-year program out of two four-year programs. One was architectural design and the other architectural engineering. It came under the engineering college, but, the combined course of five years was an official American Institute of Architects' program in major universities. And, at Notre Dame, it was well recognized as a fine architectural course. The number of students was very small. There were approximately ninety-four of us that started in architecture in the freshman class. Notre Dame was a relatively small, mostly undergraduate school at that time of approximately five thousand. It was, of course, Catholic run. I was still not Catholic. I dropped out of the architectural school by the end of my sophomore year because the engineering aspects of it were getting to me. I was having wonderful success, artistically, and design-

wise, and the head of the architecture group tried very hard to talk me out of transferring to fine art. But I was having difficulties with statics, physics and calculus -- all at once -- so I had a couple of failures there and I honestly felt, also, that I wasn't getting enough art background. It was really a course where they were going to make an architect out of you, and that's all there is to it. And even though they knew that I was interested in car design, the head of the department, Mr. Montana, really thought I'd make a wonderful architect.

Q What do you think looking back on it?

A Looking back at it? I guess I still love industrial design and car design, but it would have been fun. My trouble was that I tried to make buildings move! Everything that I designed in the way of a building looked like it was going a hundred miles per hour. So I wound up transferring to fine art, but I still came back over to the architecture department where a lot of my friends were. I would draw cars on some of their illustrations that they had to make and do background work for them.

But, meanwhile, I pursued fine art, and I got much more within my element and more comfortable, and I started, myself, to promote transportation design. Every design problem that I had, I would turn into a transportation problem, and I soon fell in with my professor there. Mr. Frederick Beckman, who was head of the design department of the art department of Notre Dame, took up quite an enthusiasm for my interest in car design himself. He had, for the most part, tutored in advertising design. He didn't know too much about car design or industrial design, but he thought this was a neat opportunity because I was the son of the

guy that was the head of design at Chrysler, and I openly pursued getting him enthused in all of the car design work that I could. And some of my fellow students took up quite an interest in it, too.

I took design and liberal arts courses, and then I had the opportunity to go to Europe for the first time. Towards the end of my junior year, for one semester, starting in 1955, I had the opportunity to go over to the University of Vienna and spend a semester there -- not on an exchange basis -- with the Institute of European Studies. And, I was able to go to an art academy in Vienna -- the Kunst (Art) and Bilden (Pictures) Academy. I spent one cold winter there from early February of 1955 until June of 1955. I got a great deal of travel experience, as well as artistic tutoring on a personal basis. The professors there were great. It was fantastic. It was a great experience, and it built up my enthusiasm for Europe tremendously, too. It was an education within itself.

That Fall I returned to Notre Dame. And I'd wanted to build a real car all of my life. Back when I was a small kid, I built a great many soap box [racers] for both myself and my friends. There were no official organized soap box derby races in South Bend at that time from 1943 to '49. It had been discontinued there, so I organized my own races. I built the kids in the neighborhood cars and promoted programs and everything else to get them to do that sort of thing. I was just crazy about racing cars.

Q Did you ever get down to Akron?

A No, never did. It wasn't a banned thing. It was that the newspapers in those days that sponsored the races had lost their sponsorship in South Bend during that period of time, so it was never officially promoted there. Later on, [the sponsor] became Chevrolet.

By the end of 1955, I returned for my senior year at Notre Dame, but by that time I had talked my father into allowing me to build a car at home during the Summer of 1954. He knew I wouldn't do anything else if I started to do this, but, nevertheless, he said, "Okay." We were crazy about sports cars and going to all the sports car meets, and it was getting very popular at that time, and I wanted to build a sports car. I also worked during the summers. When I was going to school, I worked at Creative Industries in Detroit as a draftsman one year and as a fiberglass worker another year. I worked for Chrysler the first couple of years that I went to college during the summer in a parts bin near styling and as a mail delivery boy in Highland Park. The very first Summer of 1951 I was a shop instructor at Cranbrook for young kids before I actually went to university. So I was picking up some experience, especially in the fiberglass aspect of things, which I was terribly interested in because it represented a medium to be able to build a body out of what followed your exact design, because it was molded.

So I had wanted for years to build my own sports car with a fiberglass body. And I pursued that. I found a little Simca chassis -- a 1950 Simca car. One of my father's cohorts that he had been working with at Chrysler, and who had been brought into Chrysler as an Italian consultant to Ghia and as a interpreter, was a man by the name of Paul Farago. He had run a small sports car shop in Detroit in the early 'Fifties and had built his own special car. A very nice man. Very comical at times. An Italian, he had a good bunch of friends that were actively involved in the sports car meets, and my father got involved that way, too, even with some of the Chrysler show cars -- the DeSoto Adventurer and the Chrysler Falcon.

I took up a great friendship with Paul. I looked upon him as a great innovator. He could engineer things by the seat of his pants. He could build anything. He was the only person in this part of the country that understood Ferraris in any way, and his sports car shop was very successful. In fact, he became the chief service head for Falvey's Sports Car Shop out on Woodward Avenue during this period of time. And he was always involved with Chrysler. My father brought him into Chrysler to be their consultant when they got hot and heavy into the Ghia/Chrsyler show cars, and he became a good friend of Luigi Segre, also.

Paul had started to build another car, but then he didn't have time. He had built a beautiful little Fiat sports car body, and he didn't have time to pursue more as he got more involved in Chrsyler and Ghia. He started to modify another chassis of a Fiat (which was identical to a Simca). I purchased a little four-door sedan from one of his friends. It was a Simca. I swapped Paul my body for his frame that he started to modify, and I put my components from the Simca on to his frame. From there, I built up a tubular case, and by the Fall of 1954, I had it pretty well built up -- a basic running chassis. I had moved the engine back and lowered it and had the basis to pursue a body design for a full-size sports car.

When I came back from Austria and returned to school in 1955 at Notre Dame, I towed the chassis down there with me and worked on it as a project for my under-graduate design thesis in 1955/1956. I actually didn't do too much work, again, on the chassis itself, but what I did do was to design and construct, as my thesis, a quarter-scale model and wrote a paper on the whole project. The model was of fiberglass and fully detailed.

Q Do you remember what grade you got on the project?

A It was an under-graduate thesis competition for the senior art students, and I won the highest honor, which was the Jacques Gold Medal of Fine Arts. I had been promoting with my professor, Mr. Beckman, and with my father, the idea of establishing a transportation course for art students at the University of Notre Dame. Notre Dame looked upon that very favorably. My father was getting involved very much with the university, himself, at that time, on the fine arts advisory council, too. They were looking for involvement, and, of course, they were looking for funding from industry, and it just worked out wonderfully. Father was always a great spokesman for the university, and they appreciated that, and his success at that time. Naturally, it was good for them.

When I graduated in 1956, I was offered the position of graduate teaching fellow, and I started graduate school, and set up a transportation design course with Mr. Beckman with some funding from Chrysler. The first actual design class started in the Fall of 1956. I started graduate school in the Summer of 1956. During the Summer of 1956, I also had started to complete work on my chassis to use the body design that I had established in the thesis.

In July of '56, my father had his heart attack. That didn't really put a crimp into anything, as far as my activities were concerned, except that I was suddenly called home and had to take care of my sisters while my mother kept a vigil at the hospital for quite a long time. But then things turned out all right, and my father went back to work, finally, that winter. I went back to school in September and started to teach Notre Dame's very first transportation design course based primarily on

automobile design, in effect. It was the first type of industrial design course that they had in any way.

I also taught a basic perspective drawing course, and I was taking my graduate studies. I was working on my car, which would be my master's thesis project, and I was teaching under my professor, Mr. Beckman, the transportation design course. I took the course at the same time, at least I was given credit for it.

Q You were teaching a section of it?

A I was teaching the whole course. There were thirteen students that signed up for it -- about eleven art students and a couple of engineering students. One of the engineering students has become one of my lifetime friends.

Q Who's that?

A That's Mike Cleary. As it turned out, his father had been in the advertising business for Studebaker -- especially for Studebaker truck. He held the Studebaker advertising account back in the 'Thirties, and Mike, himself, had lived in South Bend for years, but his family was actually living in Chicago at that time. We became close friends and later on built cars together, raced cars together, and stuff like that. He's currently an engineer at McDonald Douglas in Phoenix, Arizona.

The design course was a wonderful teaching experience for me. I decided I liked that very much, and I had an opportunity to influence possible would be designers. The year was successful from the standpoint that we turned out two designers that actually went into the industry out of the very first class. The philosophy of the university was, at that time, that they didn't want to get into too much of a trade school type of

atmosphere. They didn't want to take the undergraduate and start him from the time he was a freshman and make strictly an automobile designer or transportation designer out of him. In fact, their philosophy was, and it is still is to a great extent, in building a very solid basic foundation for their students, and then go on to specialization. The students that we took into the course were juniors and seniors by the time they were allowed to take the course. I think it's important even today that a student have a pretty good overall, well-rounded background before he specializes in something. And, that was the philosophy at the time.

The course still exists to this day. It was taught for many years by Mr. Beckman. He was not particularly experienced in automobile design. So, during the Summer of '57, my father introduced him to Chrysler styling and actually took him in as a designer to work there for a while to get more of a feeling of the whole idea. I recently did this myself just about two years ago with a designer from Brigham Young University. It's necessary to aid educators in keeping current.

Then it came time for me to graduate, having taught the course for the '56/'57 year and on through the '57 summer school, for the drawing course portion of my fellowship. We had started out in just a couple of rooms, and then the funding came through from Chrysler to actually take the attic of the new building that we were in by that time -- the Arts and Letters Building -- and to convert that into a studio for the industrial design course.

I also needed to finish the car that I had started. I was already building, in the attic, the full-size clay model. During my graduate studies, one of the courses that I took was fine art sculpture. The

University of Notre Dame had just brought to this country Professor Ivan Mestrovich, who was a very well-known Yugoslavian sculptor from the City of Cavtat in Yugoslavia. I've been there myself. He was kind of a friend/foe of Tito in Yugoslavia, and he had a....

Q Marshall Tito?

A Yes, Marshall Tito. He had political clout there as a Catholic -- looked upon as a great Catholic sculptor and church proponent. He was finally exiled by Tito and brought to Notre Dame (along with many of his sculptural works) as a professor emeritus. He also had contracts to do some magnificent works in New York, Washington, and Chicago. They built a studio for him at Notre Dame. I was very fortunate to be one of his very first sculptural students. I would do figure studies as part of the sculptural training, and he saw what I was doing -- as far as my full-size car modeling. He'd never seen anything like that before.

Q He had worked in the materials?

A Not in oil base clay. There's a big difference. Yes, he knew of the clay, but he had not used it for his type of sculpture.

Q Not the Chavant?

A Not industrial type clay. He worked in the water base stuff, naturally, and plaster.

Q What was his reaction?

A His reaction when he saw a full-size car model, which was quite wild looking being sculpted in clay....

Q You were doing it full size?

A Oh yes, I did it full size. I had to because I wanted to cast my car body from it. ....he was just amazed. He was a very wonderful. A very nice old man.

Q You had a good relationship?

A Yes. He was always kidding me about my stooped shoulders. I was finishing up the full-size clay model of my Simca design. I was also getting very close to being inducted into the service, because I had joined the ROTC when I started Notre Dame, and I owed them my three year commitment of active duty. My call-up in the Air Force for basic summer officer training was deferred until that Fall of 1957. I finished up graduate school then and went directly to Langley Air Force Base in Virginia and started my summer training, which I needed to complete my ROTC program.

Q What happened to the full-size clay?

A I left it there.

Q You finished your master's degree program?

A Yes, I had finished the program. The full-size clay model became my graduate thesis.

Q And that was accepted?

A Yes, and that was accepted.

Q But you asked them to hold onto the model?

A Well, I knew I was going to come back. So, I finished up the model and went down to Langley for a month and a half of summer training and returned to Notre Dame, because I knew that I wasn't going to be called to active duty right away. I wasn't sure how long it would be. During the time that I was teaching the course at Notre Dame, I became good friends with a couple of young designers at Studebaker in South Bend. I'd always kept track of Studebaker styling while I was there. In fact, the head of Studebaker styling in 1956/'57 was Duncan McCrea, who was a friend of my

father's, a long-time friend of the family, and a fellow sports car enthusiast. He hadn't actually worked for my father at any time, but they'd been close. I brought in from Studebaker a couple of the designers, actually, to give a few seminars when I was teaching the course. I relied on them to come out and give demonstrations of sketches to show what was really going on inside the business. My father would send people from Chrysler to stimulate the students as well. We had a real nice course going there, which was great. I had good outside resources.

I wanted to finish my car before I was called to active duty. It would be a great opportunity if I could stick around and be able to work on the car and give some help to my professor, Mr. Beckman, which he appreciated. It was free tutoring. Also, I sought a deal with Duncan. Duncan says, "I'll hire you," because he needed designers at that time. So, Duncan hired me at Studebaker in the Fall of 1957 when I came back from my summer training. I told him, "It might be six months, or it might be a year, before they call me to active duty." He said, "That's okay. You can start as a designer." So I worked right along side my good friends Del Coates and Emil Bocade. Del became, later on, the main principal of the build-up of CCS [Center for Creative Studies] to, practically, what it is today. And both of them had their training at Art Center School in Los Angeles, which was flourishing by that time.

I started to work at Studebaker/Packard as a designer in October, 1957. I was put into Packard studio. Del and Emil and I were the Packard studio. About the only thing that I accomplished during that period of time was that as we were working on the Studebaker Lark to bring out the compact car, I got a chance to actually contribute a little bit to the

design. It was the rear quarter panel and taillight design for that car. That's about all. Del actually had been there for a little while, and had done the Packard Hawk front end, which was produced in fiberglass.

I was very happy to work there for six months, and during that period of time, I actually cast the fiberglass molds from my full-size clay model at Notre Dame.

In February of 1958, I got my call to active duty. The Air Force gave me quite a long period of time before I had to report. In August, 1958, I went down to Shephard Air Force Base in Texas to take summer training as a transportation officer. So, I had the time I needed to finish my car. I quit Studebaker in February of 1962. I had the molds finished, and I carried them up to Detroit on a trailer. I'd already driven the chassis, because that was finished. In fact, I'd entered it in several sports car club meets and drag races and won a couple of trophies with it, but it was just a running chassis. It didn't have a body on it, but it was driveable. I had driven it to Detroit before. I trailered the molds (in fifteen pieces) and arranged to get a space at Dual Ghia, because Paul Farago was working there [with] Gene Cassarole on the Dual Ghia project. They gave me a little space to finish the casting of the body itself in.

I finished the casting of the fiberglass body, and then I mounted the body on the chassis, and I prepared the body for paint. Just before I left for the summer training, I turned the car over to a shop here in Detroit to be painted.

Q Was Cliff Voss involved with any of this?

A No, not with that particular project nor with the teaching business. I took about a month's training at Shephard, returned about the first of

September, and finished detailing the car itself. I knew that I was going to be called to active duty about the first of October to go to Korea for the first year of service. Finally finished, I drove it down to Notre Dame. Del and I photo-graphed it there. It became a feature article in Road & Track magazine in early 1959. This was in the Fall of '58. I think it was in the April issue of '59, and it told all about it. I had gotten a lot of publicity from Notre Dame magazine articles and the South Bend Tribune newspaper as well.

Q Notre Dame alumni magazine?

A Yes, alumni magazine and newspaper publicity, which I had gotten with the art department design transportation course and with the Simca project.

I went to Korea in the Fall of '58. It was a hardship tour type of thing. I became an air transporation detachment commander for one of the Air Force bases there. Kunsan, Korea. I enjoyed it! I enjoyed the service, overall, very much. I felt responsible, and I felt it was a great experience to have a command of my own. My headquarters were in Japan. It was like running an airlines branch at an airport. It was part of Pacific Airlift Command. It was a thirteen month tour. During that period of time, I actually had contracted with Luigi Segre of Ghia to, in effect, become sort of a design consultant. However, I found there was very little design work I could do when I went to Korea. It was initially cold there, and I didn't have the kind of a drawing facility needed. The contract had to be deferred until my tour of duty was up in Korea. I was transferred for the next two years to Travis Air Force Base north of San Francisco, and I loved that. It was great. I was a duty officer there --

a transportation control officer. That put me into shift work, and that worked out great because then I could pursue my design contract as well as a bit of sports car racing.

For the period of time that I was in Korea, I had left my Simca car in the hands of a Detroit sports car shop. They took it around and showed it, and they even won some trophies for me with my car, and then the car was shown at the Henry Ford Museum in its "Sports Cars in Review." Simca saw it at that time, and they thought it was a neat car, and the officials contacted my father about it. Simca was heavily involved, at that time, with Chrysler.

Q By this time, Chrysler had taken them over?

A Chrysler had taken them over, yes.

Q Ford had [sold] them off in the early 'Fifties?

A That's right. They saw the car there, and they had just acquired the name Talbot, and they needed a sports car to promote the Talbot name at the 1959 Paris show. They wanted to promote more of a sporting image. Talbot-Lago had been a racing marque, to a great extent. They asked me, through my father, if they would mind if they shipped it to Paris and show it in the Paris show. I said, "Please, by all means." It was great for me. So they shipped it from Detroit. I was in Korea at this time. They shipped it to Paris and showed it in the Fall of '59 Paris show. Then, in the Winter of '59 when I was restationed at Travis Air Force Base, they shipped it back to San Francisco. Not only that, but they gave me a beautiful Fiat roadster for the privilege of having allowed them to do this. My goodness, it was a fabulous privilege for me! They felt they actually owed me something!

I proceeded to race the roadster and show my Simca around at various shows. Then I continued the contract with Segre in Torino as a design consultant. I made a quarter-scale clay model set-up. He would send me projects from Italy. I would draw designs in side view and three-quarter sketches, and rough out a clay model, and take photographs of it, and send the drawings and prints once per month. I became his American consultant. He had very good designers in Torino, as a matter of fact. One of them was Tom Tjaarda.

Q He was there at that time?

A Yes, he was in Torino at that time. But, nevertheless, he wanted to keep abreast of what the younger designers thought and where design was going in the States.

Q Segre was very forward-looking in that regard?

A Very much so. He was a real nice guy -- super guy -- great big fellow. He married quite a wealthy Brazilian gal. They were a neat couple and raised a nice family. They became very good friends with my family. I liked Luigi very much, and Paul Farago was usually in Torino, also.

In 1960, I took my regular leave of absence, which was thirty days when I was stationed at Travis Air Force Base. For the 1960 Paris [auto] show, I "hopped" across the country and "hopped" over to Europe on military aircraft. That was a nice privilege service men had, and I took advantage of it and went all the way to Germany and then met my parents and my sisters in Paris. Then we met the Segres -- Louisa and Luigi -- there. We had a good time and drove down to Italy through Torino and Florence and then down to Rome. I had to go back home, and I flew back up

to Frankfurt. I took my [military] flight back to Travis Air Force Base. But I got a chance to see the Paris show, and it had been the first time that I had been back to Europe since I went there as a student.

Q Did you get to the Ghia works in Turino?

A Yes. I had been there in 1955, the first time. In '55 I spent about a week there with a friend of mine from school in Vienna and got acquainted with Luigi a good deal more. Paul Farago was there at the time, too. They were just completing work on the Karmann Ghia Volkswagen.

Q That's their big success?

A Yes. Which was a direct, intentional swipe off the Chrysler D'Elegance -- the 1954 show car -- except for the front end, of course.

Q Your father didn't mind?

A No, not at all. He didn't mind. Giovanni Savonuzzi was the engineer and designer who downsized the D'Elegance and made the Carman Ghia out of it. Nobody minded it. It was wonderful. Savonuzzi was a great artist himself. Others would say that the D'Elegance had nothing to do with it, but I know absolutely that it did. Luigi said, "Didn't we do a good job of adapting the design?" I agreed. It was intentional.

Q They made no bones about it?

A No, not at all. They did a good job of it. They had to redo the front end because the V.W. was not a front-engine car. In fact, I owned the first Karmann-Ghia that ever came to the State of Michigan. I just loved it. It was a beauty.

Q How many years did you have it?

A I had it just about a year. That was during the time that I was building my sports carin 1957, and I needed money to continue. I traded

it in for a standard Volkswagen and made a little bit of money out of it, because Karmanns were in such high demand.

Two of my consultant designs for Ghia, during my Travis Air Force Base duty, resulted in reality. One was the Fiat Z100-S, which became Fiat's largest sports coupe production offering. The other was the Selene II Ghia show car based on a Renault platform. (Selene means "moon" in Italian.) It was a very radical forward control, rear engine design. It was not an actual running model. It exists today at Ghia as one of their historical "props".

Q This was the second version?

A The second version. The first version was a Tom Tjaarda designed rear engine running car that Segre had been commissioned [to do] as a show car for Renault. Segre had contracts with Volkswagen, Renault, Fiat, Volvo and several others to continuously develop show cars for them, as well as possible production models and facelifts. The Ghia facility was constantly running new Fiats through it to make little doll ups, and then they'd come out and be called a Ghia Fiat with the badge on them. Other Italian coachbuilders did much the same, and Ghia was becoming one of the larger ones, along with Pininfarina and Bertoni. There had been many Italian coachbuilders in the past, but they were [being] weeded out because they really didn't pursue the production route. Segre sought to expand with a new company right across the street called OSI. OSI was a combination of Olivetti, Segre and Innocenti. Innocenti was famous for the motor scooters. They were right around the corner from the Ghia factory. Olivetti was the typewriter people, also in the neighborhood.

Q Could you elaborate on the OSI connection?

A It was in 1960 or '61 that Segre got together with Innocenti and Olivetti and invested money in a new, modern plant across the street from Ghia, and the three partners named it OSI. The initial product was a small special-bodied Austin/BMC coupe, sports car. I think it was based on the small Austin Healy/MG Sprite components. They also produced a Fiat 1500 sports coupe, which I had something to do with the design of on my consultantship basis. Then they were sold out later after Segre's death and ceased to become OSI.

Today, under the ownership of Ford, Ghia does not own any of that plant that still exists across the street.

Q Is OSI still functioning?

A I don't know that it functions today as OSI in any way.

Q So there was a period there where they were sort of moonlighting on their own?

A Not exactly. They made a new consortium, not exactly a coach-building works, but a production facility that they thought they could make some money on by getting some larger production jobs. The way they used to contract in those days was that, for instance: when Ghia did the Karmann Ghia, they built the prototype car there at Ghia, and then they were rewarded [with] the contract to do the initial pre-production cars. Ghia did the same thing with the Renault Caravel, and with some Fiats.

Q This would be their payoff?

A Yes, this would be their initial payoff -- any profit from initial production. It would also be, sort of, proof of whether the product was going to be popular and sell. Pininfarina worked the same way and expanded into an even larger production factory.

Q Now in the case of the Karmann Ghia, how did Karmann come into the body works?

A Karmann had been long affiliated with Volkswagen, mostly in building V.W. production convertibles. Ghia contracted with Karmann to do much of the prototype and new model development through Karmann for Volkswagen. When Segre showed Karmann the V.W. coupe, Karmann said, "I'd like to build that!" Initial production was done at Ghia, and Ghia got the profits off of those, and then they shifted the main production to Karmann after Karmann expanded with V.W. financing, and he continued production. I believe Ghia still got a royalty from it. They did the same thing with Renault with the Caravel.

Q Where were the Karmann Ghia works, by the way?

A It's in Osnabruck. Wolfsburg is Volkswagen, and Osnabruck is Karmann. Karmann built up a beautiful plant facility to do special Opel bodies and, of course, various Audi and Volkswagen models.

It was very natural that when I got out of the service in the Summer of 1961 and returned home, I continued my contract with Ghia. I did little else while I was in the service, but race and design cars. Except, I also very much liked the work I was doing in the Air Force. Being a transportation officer, I learned a great deal about airplanes and handling passenger, freight, and ground traffic control in working on the flight line. The air transportation business. I've always thought that it gave me a broader insight to business as a whole, and, besides, it was fun. Then I came back home. My tour of duty was over.

Q Were you still single at this point?

A Yes, I was still single.

Q Lady friends?

A Yes, some lady friends. But I wasn't quite ready to settle down. I lived at home in Birmingham with my folks. My sisters were going to school there at that time. In the Winter of 1961, unfortunately, we had a very disastrous home fire. My father was, during the day, at Chrysler. I used the studio, which he had added onto the home to do the Ghia design work, and I had a small clay model going at all times there also. We did not have a very large studio, but good enough size for my quarter-scale. At Christmas in 1961 we went down to my grandparents in Buchanan, Michigan. The studio was relatively new. It was very cold. It was heated by a pair of small electric heaters separately from the rest of the house. So we arranged a service call to regulate the heat, or repair the heat. For some reason, one of the heaters was out. We waited in the morning of our trip for the repairman to come, and he came and got the heater going again, and we took off and drove down to Buchanan.

But when we got down there, we got a call from our next door neighbors on Christmas Eve there had been a fire in the house, and it [had done] really extensive damage mostly to the studio. We kept all of the drawings and artwork [there]. My father had a large collection of art books and all types of design prints and photos of car designs that were there in the house. Smoke heavily damaged the house, so we were out of the house for a period of six months while it was being totally redone.

Q More poignantly, you lost the designs?

A We lost a lot of design work, and it put me out of the design business for a little while with Segre. I got pneumonia about that time, besides, when we moved into another house that we managed to rent for six months.

During the time that I was in the service, my folks had gotten interested in boating. The family hadn't been terribly interested in boating and boats, but my father had become more and more hooked on it, living in Detroit near the water. He also became a member of the Grosse Pointe Yacht Club. He had some friends that kept boats there, and the family got more and more interested. They bought a little twenty-five foot Cris Craft cabin cruiser and docked it at the yacht club. By the time I got out of the service in '61, my dad was thinking about designing power boats, and it became a big passion. I still wasn't that enthusiastic about it, but I soon did, and we started to study boats and play around with designs. We also started to make some contacts within the boating industry.

So in 1962, when my father ceased to be the head of design at Chrysler and became a consultant, we thought very much in terms of starting our own business and going into transportation design using, first of all, my Ghia contract, and, secondly, seeking out possible boat design [work]. We approached it from a standpoint that we didn't really know anything about boats, and, therefore, that we needed to learn more. Even though we had ideas about what they should look like from an exterior standpoint, we wanted to team up with a qualified marine architect who might better educate us about overall boat design, have need for our expertise in styling, and keep us honest about it.

In 1962 we actually opened/rented studio space from Lukenbach & Associates -- an architectural firm on Woodward Avenue in Birmingham.

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