

For this interview, Ron Greene and Eric Saul is here to assist me. And we're going to continue on where we left off several months ago. But before we do, you've had a chance to look at the first half of the interview on videotape. So you may have some impressions you want to share with us.

I'd be happy to. Yes, I did look at the tape on Sunday afternoon for the better part of the afternoon with my wife and my young daughter. And the biggest impression that we all three had was that this was a tremendously valuable document for my family, as well for others, who might know us or who would be interested in the times that existed at the time when I was a child. And my wife was absolutely fascinated with it.

And in looking at it myself, I'm partially surprised I didn't repeat myself more often than I did, which I am likely to do because I'm forgetful about what I said. But also, in reviewing it found some areas which I have indicated that I thought might be relevant to a further interview. And I've so indicated these for future discussion here. The biggest thing that I wasn't aware of is the fact that I have so many wrinkles at my age, which showed up very clearly.

Very becoming wrinkles. I think one of the things we talked about at the end of the interview was this question that comes up so frequently having to do with why people didn't leave sooner or why there wasn't more resistance, this whole issue of the response to the Nazi intrusion on people's lives. Perhaps you can comment a bit more on that.

Surely. Well, first of all, as I already indicated last time, the German Jews felt themselves to be totally integrated in society. This had been going on certainly for at least 100 years. Bismarck made sure that there was a homogeneity and there was no differentiation or any kind of disparaging or hatred because of religion. And so the Jews felt that they were Germans first and Jews second with the exception of the very few Orthodox Jews that were dispersed throughout the country. But there were not very many of them.

So what they felt then was that the German nation just wouldn't do this to them. Or any group within the German nation or the German government wouldn't do this to them. And it took a long time to finally realize that, yes, this is being done and it's being done because of definitive propaganda against the Jews that they're being blamed for everything under the sun, particularly what happened to Germany after World War I. And that as a result, some means had to be achieved to get out of the country because I do feel that there was insufficient sustenance in trying to resist any of the organizations that were doing the incarceration and the concentration camps or executions, like the SA and the SS particularly. Then in addition to that, there was a German army, which was being built up.

I suppose some of the Jews felt that if things got too critical that perhaps the other European and perhaps American countries would intervene and at least moderate, if not stop, this kind of pogrom. But that didn't happen. And so it was a question of-- not resisting. I don't think that there would have been an opportunity to resist. Any attempt that resistance resulted in summary execution.

But in terms of leaving that was possible and relatively simple initially because, I believe-- I said this last time-- that the original philosophy of Hitler was to try to get the Jews out of Germany before he started realizing that, well, maybe not all would leave. And then he changed his plan and started to plan on executing those that were still within the country.

And also, of course, if you left, you left essentially with all your means gone. And if you left for certain countries like the United States, you had to have a way of having your support guaranteed, otherwise you would not be allowed to come. And I'm not sure that this was true of the European countries, but certainly must have been true of some of them.

And so it wasn't that easy to leave what was a relatively comfortable life and try to start over again somewhere else. But, of course, the fear of death and the fear of persecution and torture was getting stronger all the time. So at the end, I think a lot of people who wanted to leave would have done so if they'd had the opportunity. But the opportunity was gone when war started.

Do you happen to know-- I assume there were numbers of Jewish organizations working with the European Jews and advising them in some instances about what to do and how to do it. Are you aware of those organizations and how effective they were?

I am not that familiar with them. I know that I came over with the Children's Transport. I am 100% certain that this had to be arranged by an American Jewish organization dealing with the reception and placement of children in the United States. But, of course, that involved also the legal aspects of placing an affidavit by someone to ensure the support of these children.

At the time I came over in 1938, I believe there were 20 children in my group. The woman who had done this in terms of supervising the exodus to the United States had traveled back and forth on an American ship and brought several of these loads out. But at the rate of 20 per time, there would not have been too many in a year or so that they were able to move these children out.

As far as I know, there was no similar organization for adults. And I assume that certainly one of the organizations that might have been involved would have been the B'nai B'rith. The B'nai B'rith got involved with me personally by giving me a scholarship loan when I went to the University of Texas as a student. But I am equally certain that they would have been involved in something of this sort. So my knowledge of this is extremely limited.

Well, let's go back to-- or let's jump ahead a little. You have returned-- you did return to Europe and to Germany. I'm wondering what some of your impressions were about that and what you might share with us about what it's like to go back to a country you were once driven from.

Yes. Initially, the first time this happened was in 1953. My first sabbatical we spent in England and then did a little traveling in Europe with my first wife. And my first wife prevented me from going back to DÃ¼sseldorf, my hometown. She just simply didn't want me to go there because of the fear of evoking memories that would not be pleasant for both of us to share. So I didn't go to DÃ¼sseldorf. I think we did travel in part through Germany, but not very much.

I had extreme battles of my conscience as to how I should react to going back to Germany and in particular how I should react to Germans of the age group that were sufficiently mature at the time of Hitler to know what they were doing. Clearly, intellectually, I could not fault anyone who was born after the war or even who was a small child during the war and had no self-control over anything that happened. But I was concerned about people of my age and older. And I was also concerned about my own feelings about going back.

And I finally decided that, well, the country itself wasn't at fault. It was a government. And I've been to countries where-- other countries where I disapproved of the government and I wouldn't go back until the government was changed. But it wasn't the fault of the rivers, the mountains.

And as far as the people were concerned, there was also always the possibility that certain of these depressions, persecutions of the Jews somehow or other by osmosis got into the younger children. But I doubted that. I had hoped that there was an intellectually open society that at least the vast majority of the people younger than I would feel that, well, OK, he's a German Jew who emigrated. He's now an American. We'll accept him for what he is, not for what his religion was or his country of origin.

So I don't know whether the rationalization was just. But I decided that it was possible for me to go to Germany and not feel inhibited, not feel that I was doing something that was terrible for me or my psyche or for my family or whatnot. And this extended then to some of the people.

Especially early on, I met a number of the older German men, the vast majority of whom profess that they knew nothing about the concentration camps, Auschwitz, et cetera. And it was unbelievable that this should be the case. And yet when I went back to Germany-- and this may be repetitious-- when I went back to Germany last October and talked to a woman who was writing the history of the Jews in Germany in DÃ¼sseldorf in particular, she told me that it wasn't so far fetched because the regime, Hitler, did not go out of their way to advertise the fact that they were killing Jews because they were afraid of adverse reaction abroad.

And so this may very well have percolated into some of the German people. But it's very difficult for me to believe that

the majority of the Germans at that time didn't know about the camp by word of mouth. So any time that I met someone, and there were plenty, who said that they knew nothing about this, was just automatically disqualified as far as personal relationship with the man is concerned.

There's one individual whose family I visited, he and his wife, living in Southern Germany, who I am sure-- I am sure as I can be deep down, even though we never talked about it that he was a Nazi. His position at the time and subsequently would be such that would make it extremely likely. I don't like him personally. I do like his wife. So it's a difficult thing to differentiate within the family. But he's-- in addition to everything else, he's a stuffed shirt.

But there is one other person whom I just met relatively recently three or four years ago, my age, a retired publisher, who claims-- and I have no reason to dispute it-- that he was always an antifascist and that he worked for the Jews. He took me to a synagogue in this town in Southern Germany. He said, this is really a unique thing. It was restored. It was restored by contributions from Jews and non-Jews in the southern portion of Germany.

And he said, you know, Southern Germany is a Catholic country. Catholics have always been much more at loggerheads with the Jews than the Protestants. But this area here was sort of an island within the Catholic region. And so consequently, Jews would come here to worship from hundreds of kilometers away.

And the synagogue has been restored. I was able to peek inside. I asked them if there was still any Jews left in the vicinity. He said, no, but we still restored it just as a monument to the Holocaust and to the Jewish people and their contributions here.

So if he was able to do this and show me this, I have some belief that he was truly what he said he was, namely an anti-Nazi. He's also anti-war. And I think everybody is anti-war unless a war is forced on you in one way or another. And then I suppose along with the Jewish religion, the first duty is to defend yourself. So this is why people go to war, perceive why they go to war.

So this is my relationship in terms of Germany. I've had professional connections there. I have very good relations with some of the younger people. And by "young, quotation marks, I mean people 50 years or younger than that. I've had a lot of contact with them at several of the institutes, several of the universities. And I have no qualms about dealing with them.

As we record this, it's September of 1992. And our papers here in San Francisco have been filled with stories recently about a neo-Nazi riots in Germany dealing with immigrants coming from other countries. And numbers of us have been seriously concerned about the meaning of this. And I'm sure you've read the papers too, about these riots. I'm, again, curious about your reaction. Do you think this is a very isolated situation in Germany? Or does it raise any fears of the beginnings of something bigger?

It raises substantial fears in me. I've been reading the papers. I've been extremely concerned about it.

And I noticed with interest that it is happening mostly in the Eastern portion of the country. And in part, it reminds me of a parallel as to what Hitler, for example, said during the '30s, that the Jews were responsible for. That was the economic status of Germany. Germany suffered through a depression before the United States did. I think in a way, a much more serious depression.

And the blame for that was laid on the Jews. But it was a question of economic security. And it seems to me this is probably a parallel situation whereby the Eastern Germans, who can see their Western counterparts living much better than they do, in spite of what the German government is trying to do, are rebelling against this. And they pick as a scapegoat, as Hitler did the Jews, they pick the immigrants, the Eastern Europeans. And it won't be long before it'll be the Jews.

And there's another parallel that I'm drawing. And that is the situation in Bosnia and Serbia. And to me, the ethnic cleansing that is being advertised there is no different, except possibly in degree with the extermination of the Jews that Hitler had planned. And so, yes, I'm extremely concerned. And I am watching very carefully to see what the German

government and the German people are planning to do about it.

I'm not going to accuse the country of Germany of going back to Nazism, because 10 or even 20,000 people riot in the town. I also noticed that there were counter demonstrations by Germans who totally disavowed the action of the skinheads and neo-Nazis. So there is an element counterbalancing that that was missing in the '30s in Nazi Germany. There were no formal organized or informal demonstrations against the regime, even though there was underground activity. So, yes, I am concerned. So--

Eric, would you like to continue with some of your own questions.

No, go ahead.

You came, of course, to this country as a young man and went to school here and actually achieved an enormous amount. And I'd like you, if you will, for a few minutes to put your modesty aside and let us know something about your achievements.

OK, I will try. I hope it will not sound too bravado or braggart or whatever. When I came to the United States courtesy of this family in New York who placed the affidavit, they placed me with three different families in Mount Vernon, New York, a small town, just at the northern tip of the Bronx. And the first family I think I've already talked about. They did most everything they could to dissuade me from the path that I took, which was to go along an academic career in the field of engineering.

And they really inhibited me. And the people to whom I've talked recently who knew them when they were themselves were children said, if there was any family that should not have had a child from Germany, a male child, particularly, to bring up they were the first prime candidate.

Second family-- they were Jewish. I lived with only three Jewish families. The second family, I was just a temporary guest there.

The third family treated me more or less like one of their own children. He was a vice principal of Evander Childs High School in New York, the second largest high school in the city. And she was a speech therapist. They're both dead now. But I'm still very, very close to terms with a son, who lives in Los Angeles and who had a very substantial career himself and was the number three man in NBC TV until that relationship ended.

I went to high school. And the people that I went to high school with that I was close with were the people who were playing initially on the chess team. Then we were mostly on the math team. And then eventually we started playing bridge, where I learned to play and love the game.

And when I graduated from high school, I received a scholarship loan from B'nai B'rith to go to the University of Texas. And this was a small sum, perhaps \$500. I don't even remember exactly. And I took a job. And I worked of the order of 40 hours a week first delivering newspapers early in the morning, and then becoming a typist in the library to catalog the new books, and finally becoming a grader of papers, and eventually while I was still at the University of Texas actually, lecturing in lower level mathematics courses.

And then the war broke out and I instantaneously overnight became an enemy alien, which seemed ridiculous now. But at the time, I suppose everybody had to be treated the same way. So what that meant, of course, was I could not own a camera. I could not own a radio. I was not allowed to go out of town unless I got the permission of the US attorney.

And that kept on and kept me in Austin, where I was going to school at the University of Texas, through my baccalaureate. I had six months more to go before I became a US citizen. So I decided to stay and get a master's degree, while at the same time become a citizen. And once I became a citizen, all of these things were instantaneously removed.

I was able to then, after getting my master's degree in September or August of 1945, to go to work for Westinghouse. And by this time, the war had ended also. But that was all coincidental.

And I went and worked for Westinghouse for a year in Philadelphia and for a year earlier in Pittsburgh. And both times I taught in the evening at the University of Pittsburgh and at the University of Pennsylvania concurrently. And I decided at that time that I really did not want to work myself from a rut into the grave in the same company. So I applied to about 25 or 30 universities with two requests-- one, that I become a member of the faculty and, two, that I should be able to get my PhD concurrently.

And there were a number of places where this was possible, but also a number where it was not. For example, Stanford and MIT and Caltech would not have me. And in retrospect, I think that was probably a very good thing.

But Cal, the University of California at Berkeley, as it was fondly known in those days, did accept my application. And I came out here expecting to teach all the wrong courses. But when I got here, things were turned around, and I taught the right courses.

And I have now been associated with the University of California since 1947, September of 1947, which means that in this time I will have spent a total of 47 years with the University. And I'm still teaching at this point. I'm teaching this fall, a senior graduate course in mechanics. So I'm keeping up my activities under a recall status.

Well, I came here and I have not left. But I did go on various sabbaticals, to Europe mostly. I became involved with professional organizations. I became more very heavily with research.

My area of research is within the field of mechanics. It's the collision of solid objects. So I've sort of made a name for myself in that I published a book in 1960 called *Impact*, which is still sort of a classic that has not been surpassed since. And it's long out of print. And if I were to do it again, I would write a much better book. But then a lot of time has passed since I started in 1951.

I became well-known internationally as a result of this book and as a result of my research. And even now in my retired status, I still get constant requests for people who want to work with me. And I no longer have the money or the wherewithal to support them. So if they want to work with me while being supported by someone else, that's fine, but not otherwise.

I have something in excess of 200 publications of an archival or a symposia nature, a number of reports. Many of these were really unique investigations done for the first time to get some feel for the field. And then after I've gotten the field, I left it open for other people to further exploit it. I've done this in a number of areas.

I have been honored in many ways. I guess the first honor I received of any substance was that I was elected a fellow of the American Society of Mechanical Engineers back in 1971, which is perhaps 1% of the membership. In 1988, I was honored jointly by the American Society of Mechanical Engineers and the Society for Engineering Science. I guess upon the occasion of my formal retirement that two sessions of a Joint meeting were devoted to my honor in the field of penetration mechanics.

And the next year, I was elected to the National Academy of Engineering, which is the highest honor an engineer can get in this country. And I've since been elected as a fellow of the American Academy of Mechanics. And these are some of the accomplishments that have been recognized.

Professionally speaking, I've been a member of editorial boards of a number of journals. I have been a chairman of the committee for head injury model construction, which was sponsored by the National Institutes of Health between 1966 and 1970, which started a brand new, shall we say, phase of head injury research in this country. There was a tremendous amount of activity and substantial support at that time.

In 1971, the economy collapsed, not as badly as now, but it collapsed. Money was withdrawn from the research projects. And the National Institutes no longer provided funding to various groups to do research in this area. But what had happened as a result of this national effort is that research was being carried out by individuals and by universities in this area. However, the quantum jump that was made between '66 and '70 has not been anywhere near equaled in the

advances from 1970 to 1992, which shows that if an area is not supported, it is generally not going to go very much.

I've been a visiting professor in numerous institutions. I have been a Midwest-- university research lecturer at about seven or eight institutions. I'm constantly asked to give seminars. If I want to go somewhere to see somebody or talk to somebody, I simply ask, well, how about scheduling a seminar for me? I've never been refused so--

Frivolous or perhaps not so frivolous question, is there anything about your personality that led you to impact science?

No. In going back into that, I can say the following. I knew that I had wanted to be an engineer. My talents or bents originally in high school were more in the mathematical line. Of course, there wasn't much engineering in high school. And I was fond of and pretty good at mathematics.

But I also recognized the fact that in those days, at least, mathematicians had to stand in the bread line, whereas engineers had at least a chance of getting a paying job. So I thought I would be able to combine my liking and talent and mathematics with a more practical side. And that's why I went to engineering. That's the first step in getting to impact.

Then I went into mechanical engineering, even though on my high school-- college aptitude tests, mechanical ingenuity and spatial visualization, the two talents supposedly that direct you towards mechanical engineering, were the lowest of my scores. It was still not bad. But they were the lowest. At top the country that year in terms of the previous year's percentile by 108% in aptitude for foreign languages. It wasn't surprising to me because I spoke four at the time. And other people who were my competition didn't have that advantage.

But the consequence of this was that everybody jumped on my throat to switch my major from engineering to something where these languages could be profitably applied, like political science or diplomacy. And I didn't want to have anything to do with this. So then I got into mechanical engineering.

And both my master's and PhD research were in an area totally different from collisions or impact. They were in heat transfer. And then when I came to Berkeley, I was put into the peculiar situation that my doctoral research was in one area and my teaching and supposedly, quote unquote, "research" was in a totally different area, the area mechanics.

Well, I had to make a decision when I got my PhD. And I chose mechanics rather than heat transfer because I had worked under a professor who was an acknowledged international expert. And I knew there wasn't room in the same department for him and me in the same field. So for practical reasons, I went into mechanics.

And then my chairman at the time suggested, why don't you take a look at the field of impact? It seems to be a promising area. And so I decided to do that.

And I spent 10 years researching what had been done and writing up a set of notes and then eventually a book. Then I decided I would like to do that also for my own individual research, not unnaturally. And that's how I got into it.

But the consequences of this are that I also do a fair amount of consulting on impact, particularly in conjunction with accidents. And so I'm--

You were involved in a rather famous court case recently. Perhaps you would tell us what your role was in that. I think others would be interested in hearing about that.

Surely. The incident you're referring to is the Rodney King beating case in Los Angeles, which was held in April of this year in 1992. The trial was moved from Los Angeles County to Ventura County. It was held in Simi Valley.

And I was asked by the prosecution to come down there and testify. And my testimony was supposed to be of such nature as to disqualify a defense expert who had been called, who was going to testify. So both her testimony and mine were only in front of the judge. The jury had been sequestered. And her testimony had to do, or purported to have to do, with the severity of the blows that Mr. King sustained, the fractures that appeared on the x-rays and in the facial area. And her contention was that he had sustained this by a fall, rather than by the blows from the batons.

Well, the judge agreed with me that the field of biomechanics in which she and supposedly I were experts could not differentiate whether a facial fracture was produced by a blow or by a fall from a sufficient height. If you fall from high enough, obviously you can sustain these fractures. And I said this.

But in my own mind, clearly, the viewing of the tape-- and I looked at that Rodney King beating tape at least 200 times-- the viewing of that tape convinced me absolutely that this was not the result of a fall, that it was definitely the consequence of a blow or a series of blows. And I expressed that opinion.

The second thing that she testified on before I even had a chance to rebut it, the judge completely disqualified it because what she had done was she had taken one frame of the original tape, blown it up, and then positioned people where she thought they would be, and then put a computer program on this to give a three-dimensional rendering so as to show the jury the spatial relationship between the people. Well, there were all kinds of things wrong with her reconstruction, which the judge picked up the. Judge was very shrewd. So I didn't even have to get into this.

I succeeded in keeping her from the jury. I did not succeed in producing the result that the prosecution had anticipated, which I had anticipated after seeing the tape. And the mistake that was made was in moving the trial to Simi Valley. So that was my role in this.

I do not anticipate that I will be called in the retrial because the retrial deals strictly with the deprivation of civil rights, which I have some rather large personal stake. But it is not a question here of the severity of a blow. It's the fact that blows were struck at all.

Do you want to comment on your stake in the Civil Rights in this matter or in civil rights in general as a function of what you've lived through all your life.

Well, that's the whole thing. I believe that if he had had a very, very active German civil liberties union, that perhaps some of the things that did occur under the Nazi regimes wouldn't have. It strikes me as grotesque that anyone in this country, politician or otherwise, would accuse someone of being a member of the American Civil Liberties Union. Because even when I don't agree with them-- and I don't agree with them for personal reasons in their stance, for example, of the March of the Nazis in Skokie, Illinois, as an example of what I disagree with-- I feel that they serve an absolutely vital function.

Civil liberties in this country are something that is very, very precious and we have to guard very much to ensure that they will continue. I've seen in other countries a gradual evolution. I've seen also a very sudden evolution, almost a cataclysmic evolution. And so when that happens, it makes you feel frightened for the human race.

And so to me, the incidents that occurred in Los Angeles were a civil liberties matter, yes. But they were also police brutality, the question of that, of which they have mostly been acquitted now. So my stake is that I want to see the rights that are guaranteed by the Constitution preserved for the people. So.

Your life has been filled with many achievements. But you've also had some losses, a number of losses in fact.

Yes.

So I think our testimony here wouldn't really be complete without spending some time talking about those losses, if you don't mind.

No, I don't mind. The two earlier losses that were severe were my two divorces. I had married consecutively two nice Jewish girls from New York believing that it was important that for the sake of the culture, more than the religion, I should be in an environment that was compatible. Both marriages were disasters for different reasons.

My first divorce was asked for by my first wife. And it was a terrible blow because I didn't realize-- I didn't recognize why. To be sure, in retrospect, I didn't work as hard at the marriage as perhaps I might have. Well, who does when it

comes to the ultimate.

But I also did not receive the support that I needed because I was trying to make tenure. No, not tenure, to become a full professor. And when you go either for tenure or for the full professorship, you have to work your tail off as far as productivity is concerned. And my first wife did not either understand or want to understand the kind of pressure that I was going through in this. And she was in an entirely different field.

I managed in spite of the fact that her grades were inadequate, I managed to get her into graduate school at Berkeley by using a little personal pressure. And the moment that happened, she started asking for a divorce. And we were divorced.

My question is why me? Why? When one of the things that I was looking for so desperately in this country were roots. I had been totally uprooted. I had been decimated psychologically by what my peers had done to me, by the removal from a known environment and my family to a completely new situation. I thought that I had built up something with my education, which I provided myself with, and with the achievement of obtaining tenure at the University of California, which was even then easier to get than now, but still, no mean feat, and a lack of understanding of my goals in life professionally speaking. So I could not understand.

I gave her a good living. We had-- she had a miscarriage. I had wanted children. She apparently didn't. But I didn't know that.

I put her in an environment for the week that we were very close before we got engaged-- in every situation that I could think where I would want to function, going camping, going to the symphony, going to a drama, play, to dinner with friends, et cetera, et cetera. And she seemed to be reasonably amiable to all of these environments. It turned out then after we got married that very few of these were actually what she had wanted to pursue. And so there was a disagreement, a dichotomy of our objectives that must have led to this. But it still was a terrible blow to me to find that something that I'd undertaken and wanted to succeed very badly had failed.

Then I was-- there were no children from that marriage. Then I got married again two years later, which was clearly a mistake to do it that quickly. And this time, I married a second time a Jewish girl from New York. And my daughter, my older daughter who is an issue from that marriage has told me over and over again she doesn't understand how her mother and I could ever have gotten married. She's glad we did because she's available now. But she said we had absolutely no elements in common.

The marriage was a disaster. The initiation of the divorce was a disaster. It was such that when I came home I didn't know whether she'd throw her arms around me or curse me out for an hour. I mean I had no way of knowing. And this is no way to live, especially when you're under pressure. And I was still under pressure, although perhaps not quite as much as before.

In any event, I moved out several times and came back. And then finally, we had a blowup. And I moved out. And I decided this was it. And she asked for the divorce because if she wasn't going to I would. In those days, it was customary to let the woman do it, if at all possible.

We had two children from that marriage. My older daughter is now in New York for the summer only. She's going to get her doctorate degree in electrical engineering from Berkeley next year. She's worked for the last two summers at Bell Labs in New Jersey. She is very highly regarded. She's currently has taught at Laney College the beginning of the electrical engineering series. She has a very close boyfriend, who just got his PhD in the same area from Stanford in this last June.

My wife, my present wife, not her mother, is going back on Friday to spend a week with them because they have a big apartment in Greenwich Village. And they wanted both of us there. But I'm teaching right now, and I can't go. So my wife is going because she enjoys New York.

So that was my daughter. When my second wife had my daughter she had a psychotic episode. And she had to be constantly accompanied by somebody. And one hour a day for a long time, she had to go to a psychiatrist. It put a

tremendous burden on me. This was '64, '63, '64.

And so she was fantasizing and she was writing things that were just clearly literally out of this world. We had a son about 8 and 1/2, 9 months after we had gotten married. My son lives here in California. He was very, very strongly affected by the turmoil and the fights that we had because he was by this time something like 3 plus years old. Andrea, my younger girl, the younger of the two, was a year and a half. And so she was still not psychologically affected by this strife in the home.

My son has not followed my path. In fact, my son is at the moment somewhat estranged from us. He's never been married. But he does have a daughter from a woman whose whereabouts are unknown. And he was given custody after some long battle.

But he has never held a steady job. I don't know how he gets by. I think he repairs cars. And I told him at one time or another that anything he chose to do would be OK, as long as it wasn't illegal. He did some illegal things. And he paid the penalty for that. But he's still my son.

But the last time he just acted in a way that was incompatible with what I can tolerate in the house in front of family. And so, I don't know, I suggested to him that he needs some counseling, and as everybody else has to. And certainly, he will always be my son. But he needs to make some major changes. And this is a terrible burden to bear.

I'd always wanted to have my family continued on. And he's at the moment, the only one who can carry on the name. He's 30 years old now. My daughter Andrea is 28.

Then, after that divorce, I stayed single for quite a while. And I finally met my present wife when she invited me for coffee-- invited me to take her for coffee, which I did. And she was the secretary to one of my colleagues in a different department with whom I had very close professional relations. And we went together for a number of years, and then we got married and will have been married 20 years next year.

We've been together for more than 20 years now. And I think that marriage is solid. And she is not Jewish. And she's not from New York. So she's a Californian, tall, blonde.

We have a daughter, who will be 16 this coming October, and who's working very, very, very hard, as I said earlier. She's beautiful. She's talented. She's sweet. She has wonderful qualities now. We're very fond, both of us, very fond of her. But the nice thing as far as my family is concerned is that my daughter from the previous marriage gets along so very well with both my wife and her sister. And that's not always necessarily the case.

Now then just 11 months ago, I was devastated in a way that is not equivalent, but somewhat parallel to what happened to me when I left Germany. We had the firestorm in the Oakland Berkeley Hills, October 1991. I had come back just a week before, the Sunday before, from a 3-week trip to Europe, which included my visit to Germany, of which I spoke earlier.

And the day before this disastrous fire, I'd taken my daughter to see one of the best football games I've ever seen. It was the University of California versus Washington. It was a fascinating game.

And as we came back, I noticed on top of the hill, there were eight fire engines just above the road that led down to our house. And I stopped and asked the fireman. He said, oh, yes, they had a brush fire there, but they'd gotten it out. And I said, are you sure? He said, absolutely.

So then we went home. I had seen some smoke from the stadium. The next morning, our neighbor called over, 10:30, said, look, there's smoke over there again. We looked out and saw this huge cloud. My wife and my neighbor and I jumped into the car, and we drove across the freeway and saw the sheet of flame coming down at this apartment house, with the 800 apartments. And we realized we had to get back.

We got back. And my wife climbed on the roof with a hose. And I went on the balcony with a hose. And we stayed

there for 20, 30 minutes, 40 minutes trying to water this thing down. And then the water pressure gave out. And we had no more water. And we realized we were dead ducks.

But by this time, it was so late that we got almost nothing into the cars, a few things, maybe 2%, 1% of what we owned. And my wife is much cooler headed than I was. I have a number of more or less serious ailments, mostly less, but one of them is a state of emphysema, occasioned by smoking when I was young.

And after my wife had asked me to run up and down the house getting explosive and volatile material out, I sat down on the steps. I couldn't move. I didn't care what happened to me. It was just that I was totally exhausted. They had to literally lift me under my arms to get me out of the house. And that's one of the reasons I didn't get much out.

My younger daughter, sweet girl, got the carpet from my parents' home and one of the silver chalices that had been sent to us. I don't have very many things from our parental home. She took them out because she knew how important they were.

My wife got a few of the pictures out. I had the pictures that I brought with me of my early life, which I had taken to Germany to show to this woman as part of a history. They were on my desk. So I grabbed them in leaving. And that's why they have been saved.

My wife took the top drawer on the left side of my desk and dumped it into a shopping bag. That's where the insurance papers and the passports and some ready cash, travelers checks, and a few other documents were. But the valuable things that I lost I just didn't even think about. I lost the first edition Mercator Atlas, perhaps the only one extant in the world today. And so that was a disaster in magnitude, although not perhaps in severity and psychological importance as serious as my leaving Germany.

The loss of my family was something that was more gradual recognition of the fact that this was so, although when I left my father at the ship, he brought me up there because my mother was ill. I recognized that I would probably not see them again. And this recognition was reinforced as I came over here.

I did receive some mail. Unfortunately, most of the-- almost all of the letters I received are lost somehow. Some of the envelopes have been saved. So I do have handwriting samples. But so these are the disasters that have occurred to me since I left Germany. Everything else pales by comparison.

But you are a survivor. And you must have, over the years, developed rather unique or special coping skills, something that you're doing, something that you're holding onto, some philosophy or thoughts that help you over the years move through these various tragedies. I hope you can just reflect for a moment with us on maybe some personal thoughts about what keeps you going, what's kept you going over, what you've gone through, one tragedy to the next.

It's difficult to say. Certainly, the importance of family to me has been critical. The importance of what's home and so on has been very vital. It's been a driving motif for me.

Recognition has certainly been a motive as well. In the game that I'm in, that's really the currency that you deal with because, financially speaking, you're not, shall we say, awarded anywhere near as well as you would if you were in private industry or if you were on your own. But recognition of your colleagues, accolades, if you like, is something that is important to me, as it is important to all of my colleagues.

The will to survive, I don't know where I get it from. And I look at some of the things that hit me simultaneously, sometimes I wonder whether it's all worth it. And when you have four or five maladies hitting you at the same time, as, for example, I have right now I have a diabetes. I have emphysema. I have arthritis. I have cramps. And I have a post nasal drip all at the same time. The post nasal drip unfortunately is extremely debilitating because it collects down in my lungs, and it has to come back out. And I spend more time at Kaiser Hospital than I would like to announce. But you can fight these one at a time.

And when you have success in fighting one, you think you've won a major victory. But when they all hit you at once,

you seem to be relatively powerless to do something about it. That's very debilitating. And I wonder whether or not the survival spirit that you think I might not be substantially dampened by my physical environment.

What else drives me? The fact that I have a wonderful marriage. That I have a loving family with the exception that I've cited. That I have a grandchild. My son is custodian of his daughter, which means a lot to me.

I have hobbies that fascinate and interest me. I'm a collector, as I may have mentioned, of old maps. I had this Mercator Atlas, which is part of that collection. The other thing my daughter got out with two old volumes that I had on the shelf, which had maps in them, but they were text with maps only as illustrations. The important maps that were on the walls did not survive, expensive maps.

So I'm a map collector. And that got me into collecting maps on stamps, which is a lot cheaper. And I go to the stamp fairs now looking for just that. And I'm looking for enough time to be able to catalog my collection. My daughter who has always accompanied me refuses to go because I'm lugging all my albums with me to see whether what I buy I already have. It would be so much simpler if I just had a list of the stamps. But I haven't found time to do this. Five years after retirement in the hopes of looking after my hobbies, there's more piled up than there was when I did full-time. So that's another hobby.

And these hobbies are of importance to me in terms of what makes me want to survive. I want to do more of the same thing. I'm a duplicate bridge player. At one time, I was really almost-- almost-- at the national level. But you can't do that and continue with your work at the University of California and research. So I'm just an average player now. And I said it-- I stayed out for 10 years because my partner with whom I played for 30 years left.

Now, when I move into the new house-- we move into the new house in hopefully March or April, my older daughter, the one who's getting her PhD, has said that she will buy me an upright piano so that I can start to play again, as I did when I was a child. And it's very interesting that as far as playing piano is concerned, there's a woman who lives in-- I'm not sure she's still does. She was 92 when I talked to her in February. She was my piano teacher in DÃ¼sseldorf. And she lives in Providence, Rhode Island. And I recall distinctly going to her at the time when Hitler was in power.

In addition, some of the things that the city of DÃ¼sseldorf sent to me were copies of the Jewish newspapers. And I found in there advertisements by her for piano lessons. So I have those. And I didn't bring that with me. But perhaps if there is another time, I shall.

And so I played piano then. I've never had a piano since that time. But whenever I see a piano somewhere, I sit down and start playing. So my daughter says, well, we really should get you back into the hobby.

So I don't know whether I'm responsive to your question. But these are all things that drive me. And the driving force is the motivation for survival.

You've had some low moments obviously. You're still having some, I take it. But you're managing. And I think you're going to have a long history yet to record. You may have to come back in a few years. So what do you look forward to since like you're still moving forward? What are the things you're going to do yet?

Well, some of the things I was going to do burned up in smoke-- two books that I was going to write. The material for were my cellar. And that all burned. And there's no way, no way whatever, to recoup it because the newspaper and magazine articles that I was going to clip together.

So I was going to-- and I may do this now in a different way. I'm giving thought to the idea of writing a semi-popular semi-technical book on impact in which there would be stuff for both the general population and for scientists. For example, if you have an airplane crash, what is the energy, the forces involved, et cetera, et cetera? But then you can also look at the economic damage that results from this sort of thing, the sociological damage. And this will require some research. If I ever get the energy and the time, that maybe the sort of direction that I would take.

I hope to continue to teach at the University for a while yet. I'm teaching right now because the man who teaches the

course normally is on sabbatical. But they don't have a backup. They will in the future. But they don't have now. So he wanted to go on sabbatical, and they asked me, whether I would replace him.

And I've worked five months on this thing, harder than I ever have. I feel like an assistant professor because, number one, I haven't taught the course in 10 years. Number two, I have no books, no problems, no notes, no nothing. Three, most of the books that I want are out of print. So I can only get them from the library and Xerox them.

So all of this stuff is making it very difficult for me to teach the course. But it is a challenge. And I enjoy challenges.

I do hope to spend more time with my family. My family's been deprived of my time for many, many years. And in retirement, supposedly, you're supposed to be able to spend more time with them.

Make up for lost time.

As far as traveling is concerned, I'm not all that anxious because I've always taken sabbaticals. And I've always gone away, the only way in which I can get some peace.

My wife and I are planning next year, if we can, to go to Europe for an extended period of time so she can look for her roots. I've been looking for mine ever since I came out of Germany. So we're going to go to Ireland and Scotland, England, Germany because-- Sweden-- she's a mixture of things. And we'll spend some time doing her thing.

What else am I looking forward to? Maybe learning to play the piano again. And really and truly having some peace and quiet where I don't have to be concerned that, A, where's a food coming from to be on the table next week. B, am I going to make full professor? C, is my paper going to be accepted by this journal? Am I going to get this contract or grant for research? All of these things are relatively passing.

But there's one thing I've taken out since my retirement that I didn't do before. I want to correct some of the, well, injustices if I can call it that, where recognition for people who deserve it has not been extended. And so one of the things I'm doing is I am initiating the procedures and the paperwork to get people elected to positions of honor or at least recognition in areas where I am a member or a fellow or whatever.

And I have been successful. And this is why I'm going back to Washington in three weeks. I've been successful in getting the colleague with whom I've worked for 20 years, and in whose outer office I met my wife, elected to the National Academy of Engineering. And she and I are going back to see him inducted into the Academy. I did all the work on this.

And I'm doing this with other people. I have plans for several others for the near future. So I don't know-- I'm actually a fairly valuable resource for the department in this direction. I have a great deal of experience. I still have some energy.

Another thing that I have done is I've written the history of my department, the Department of Mechanical Engineering, which is contemporaneous with the history of the University of California because we were started at the same time in 1868. Now, I've written this up as part of an assignment by the Department to me when I was still active. The promise that it would be published.

Well, they haven't published it. And the previous chairman didn't think that it was all that important, I guess. But the present chairman says he's going to take another look at it and see what can be done. It doesn't take much to get it published. I mean I could fund it myself, but that goes against my principals. When I'm asked to do something for the Department, then told I should pay for it, I think that's obscene. So this is something I'm looking forward to.

I've been a participant in two other book endeavors that are struggling to get published. One because we are a very specialized group of people at Berkeley and want to teach a course a certain way. So the publishers don't find that the market is there that they would like to see. The book is very good, but the market isn't there.

And the second one is one with my other close friend that I have back East, a neurosurgeon, with whom I've

collaborated on this head injury business for many years. We were going to write a book, the definitive book, on the biomechanics of head and neck injury. And I was going to do the engineering side, and he's going to do the medical side.

Well, I've done my job four years ago. But I had the misfortune of having him marry somebody 33 years younger than I. And that even is more than I managed to do with my present wife. So the project has been, shall we say, delayed. But when I go back to Washington I will put the needle in and see whether he wants to be preserved for posterity himself. So this is another Project.

And I think I have been very careful throughout my life to try to plan for retirement so that I wouldn't suddenly have a job one day and then not know what to do with my time the next. I find by looking at my colleagues those who do this sort of thing will not last very long. They die off very rapidly. Whereas the people who have interests, who have pursuits that they follow, find that they can function very well if physical ailments or psychological ailments don't get them, and well into their 80s and 90s.

So I've looked forward towards this with my stamp and map collections. And it may very well be that I will become more active in the World Affairs Council, which we're a member of. And I probably will lose whatever contact I have with my younger daughter's high school because, after all, she'll be going off to college. It is possible, although not too likely, I will go back to the University of Texas, which I will be doing also on this trip, and seeing about stirring up some things and maybe getting more involved than I have been as an ex-student, as an alumnus.

I have-- my wife has several siblings. We're not-- we're close, but not intimate. They live away from here. Her parents, who are approximately my age, live down South. And there is some family relationship there.

In my own case, my own family, the closest relative I have is a first cousin once removed. This woman lives in Amsterdam-- she actually lives near Brussels, right outside of Brussels. But her husband had worked in Amsterdam. He had lost his job. They took an apartment there. And now they have to decide whether to live in Amsterdam or Brussels. They can't afford both.

In any event, I've seen her several times. She is the one who will not go through Germany. She won't even fly over Germany. She has that strong conviction.

She fled Holland as a child, went to Australia, apparently had a very hard time there with her step parents, came back, found this young man that she married and been very happily married since. And we are in close contact. But again, distance does make a difference and the obstacles of not seeing each other for years at a time is a serious--

I have a second cousin-- the only person by my own name. I think I may have mentioned this-- he was a renal surgeon, then became administrator of the largest hospital in Liverpool. He retired three years ago. And he still does surgery. But he is through administering. And I saw him also in last October I went up to see him. I take the opportunity when I go over there to see what relatives and friends I have.

I have a set of family down in New Orleans, all at the level of second cousins, with whom I'm much closer than that relationship would imply. But part of this is the fact that I have no close family. And this is-- drives me towards seeking people that I'm compatible with, with whom I share some kind of root. And this is second cousins.

Their mother is somebody whom I have revered and my wife did too. She died in 1986. She was my mother's closest friend, and I've talked about her already. But because of that, I'm going to New Orleans frequently to see these people, and they're trying to come and see us.

And that's about all the relatives I have in the world, close or distant. So it's not exactly a plethora of people that I can associate with.

I'm actually been looking over some notes that we have just to see if we haven't left some important issues or areas. Eric?

You have a reference to you want to talk more about your family in Europe and this reference to how your parents felt when you left. Is there more that you want to elaborate on that?

Sure. These I think were notes that were taken from my-- oh, from here on down-- yes, well, my parents must have been very, very, very hard on them when I left. I wasn't even consulted. I was just told. And they tried to hide their feelings.

And I also think they tried to do something constructively by moving to Holland, which they did in, I think, January or February of 1939. Their feelings about my leaving must have been incredible because I was an only child. And I'd been with them for all that time. And essentially, I think, they were saying that they're saving me, probably at their own expense, which turned out to be the case.

So my family life was a very close knit one and became more and more close knit because of the external pressures. My wife mentioned to me, for example, that because of my unusual childhood-- namely having friends only who were Jewish and I was the only Jew in my own school. And I was allowed to go there because my father had been wounded in the World War I. That's not very good reason. But that was the reason I was able to go to that school.

So my wife said, my present wife, that the reason that I may have had a little bit of difficulty relating to my children is because of my own lack of experience as a child myself because my relationship to my parents was not very critical one. It wasn't critical because that's all I had. So I couldn't afford to be critical. The pressures, the external pressures, were too great. That was her conclusion as to what happened there.

My family life was a very comfortable one. My father and mother, I don't think, were very much alike. But they got along. And my father was 11 years older than my mother, which I guess was usual for Europe in those days.

And my grandfather was the scion of the family. He ran the household. But he and my mother also got along well. And so that made for peace and quiet in the house. I don't recall ever hearing any shouting or any strong disagreements or anything of that nature.

We moved several times. I don't know the reasons for that. It may very well have to do with the fact that the owners of the apartment houses didn't want Jews. I can only speculate as to that.

I know that my father and my grandfather were in business together. I mentioned that earlier. That was closed down largely back in 1933. And then the business was moved to our residence. And then it shrunk and shrunk and shrunk in terms of what they were able to do. I do not know what they lived on because I don't think the income was enough to support us.

So I don't know if I've addressed the problem adequately in terms of what you say how I felt about my parents, how they felt.

You make reference to the Yad Vashem. You found out more about your grandparents.

Yes. I don't know whether I said this. When we went to Jerusalem, my wife and I and our daughter, the first time I went to the Yad Vashem, I did not go into the exhibit Hall where they have the pictures. I went to the museum.

And I found out there that my grandfather had died in the concentration camp, Westerbork. I had assumed since he was 92 years old that he had died a natural death. It's still possible he died a natural death. But he was in a camp when it happened. I did not find that out until I went to Jerusalem and looked at their records.

I left the records, such as what I have, with them as a Holocaust survivor. And so there's documentation for my mother and my father. Until I found the birth-- the death certificates from the Red Cross, I didn't even remember the birth dates. I did remember the birth places.

Now, it turns out-- I don't know if I mentioned this-- the city of D'Asseldorf compiled a list of all the Jews who were in

the city or in the immediate area and who were killed by the Nazis. They compiled a list of the names, the place of birth, the place of death. And I have that book, which if there's another session, I should have but in case you haven't seen it. I can bring it over anyway.

But this is documentation that my grandfather, my parents-- my uncle died before. He died a natural death. And when I went to Dusseldorf, I went to his grave. This woman took me to his grave. And I took pictures of that grave, which, of course, I lost in the fire. But she went back, and so I have a copy. And what I want to do-- and she strongly suggested this-- that I put in in memory of my parents on the gravestone, which I will do. I'll send the money to have this done.

So this is the family that I had. I had an aunt, a sister of my mother's, who was a spinster. My father had a sister who died before I was born. He also had a sister who married a Dutchman, moved to Dordrecht, where I spent many summers as a youth, and where my parents went to initially after they left Germany.

So getting back to this pressure on the family life, she hypothesized that because of the unnatural form of my existence in those days that this carried on over into some of my relations. And I'm sure I must have been deep down-- you must know about this as experts in the field-- I must have been tremendously affected by what happened to me in those years between the ages of 7 and 13.

So it even started before January 1933, because the Nazis were organizing. And even though they may not have had a majority of the power in the Reichstag, they were still chanting antisemitic slogans and making life miserable. So this is a rather critical time of anyone's existence to be pressured that way. It must have an effect on subsequent human dealings, dealings with the family and dealings with others.

I try as hard as I can to dissociate myself from this. And I'm not sure how successful I am. Until this Project actually, I had locked a lot of these thoughts up in a tight box and wouldn't let them out for fear the genie would fly the bottle. Now that I've started, and it comes out, my daughter comes to me and said, why didn't you ever talk to me about being Jewish and what it was like over there and so on? And I said, well, if I have not done so, I've been amiss and we have to rectify this.

My daughter again last night-- this is my younger daughter-- said, I asked mommy, can I go to Jewish shul when I was eight years old? Mommy said, no. Mommy said, no, that's not what I said. She said, oh, yes, you did.

Well, I don't recall the incident. But she obviously has an interest in my family and my religion, my outlook. And this in turn must be something that is transferred to me from my parental home and into my present family life.

You seem to be saying that there have been aspects of your life that you've been avoiding up until this point--

Not aspects. Verbalization, things that I thought. In other words, I excluded, shall we say, the things that happened to me as a child, the fact that my parents were killed in Auschwitz. I mean I verbalized it occasionally. I mean when I'm asked about it. But I deliberately avoided thinking about it consciously-- what it meant, what it meant to me, what it meant to the world, et cetera.

And the role of Nazi Germany in the history of the world I also did not think about. There's this new book out. I don't know whether I want to read it. What would happen if Hitler had won? And so all of this comes back and stems from my period from 1932, '33, up to the time I left and the repressions that I was subjected to.

Now that you start talking about it, do you find it helpful.

I think it is important. I think it's very important for my present family. I think that there should be a documentation.

And I talked to one of my colleagues who was also from Germany, although he left several years earlier and his entire family left with him. I told him about this project and asked him whether he would possibly be interested in participating. He said, absolutely not. And there are several people that I can ask if you are looking for additional personnel. One of my colleagues whom I know very-- he's not here this semester-- was actually in a concentration camp

in Poland. He's Polish himself. But he escaped. And he's also now a professor at Berkeley in engineering, and a very nice guy.

So people react differently to these circumstances. Maybe he doesn't want to think about it either. In his case, though, I think his family, his property, his financial standing was more or less intact in moving here from southern Germany. And so I don't know what difference it makes if you lose your entire family and come alone, as to whether or not you're in the cocoon of an existing family and start anew.

I can look at it in New Orleans from my second Cousins. They, however, are extremely conscious of Judaism. And they're very conscious of their hometown, what happened there, how the people felt. In fact, my second cousin's son married a non-Jewish girl, but the non-Jewish girl converted. And they were married by a rabbi.

So this is the kind of thing-- I didn't demand this. My own wife is a granddaughter of, I think it's a Baptist a Presbyterian minister. And she does not hold to a religion. We celebrate Christmas only as a social event.

But because of my older daughter, we have Hanukkah and Pesach together. And we have the appropriate ceremonies and read the English translation of the Hebrew. She can speak Hebrew, but I can't. So again, we did celebrate these things in my home, but only in a nominal way and not anyway as a religious zealot or even as a religious practitioner.

But I think I'm typical of middle class German behavior in the Jewish circles, at least in the big towns. I don't know about the small villages. So that's the story on that.

My wife, I think, would like that I should talk more about my early days. But this is why she was so fascinated with the tape. A lot of the things didn't register. I mean when I was thinking about all of this, all of a sudden, I don't know if I mentioned this or not, I recalled out of the clear blue sky the telephone number that we had at home before I left. I mean it was crazy-- 60,044 and 60,045. I mean these were the numbers that of our telephone back in 1933 in Germany.

You are a mathematician.

No. No. No. No. But these little morsels come out when you start thinking about them, not consciously, but about related matters. And sometimes you apparently tickle some kind of subconscious memory that then becomes conscious.

And DÃ¼sseldorf itself was a rather pretty town even then. It's not bad now. It was hit fairly hard during the war.

My father and I used to, many, many Saturdays, go on hikes in the woods. And this was his quality time with me. We'd take the train and go somewhere, then walk for a couple of hours in the woods, and then come back.

And my mother would take me shopping or she'd take me to see her friends. And I've had some small social circle with my Jewish friends. I don't remember friends prior to 1933. I'm sure I didn't have anyone that was very close.

We went on vacation, courtesy of my uncle. I went skiing twice in Switzerland. I went twice in the summertime to Switzerland and to the Balaton Lake in Hungary, of which I have a picture actually here. I remember very early-- it must have been before all of this happened-- that we-- I went to some resort on the Baltic Sea. But I don't recall where it was and with whom. I don't think I was with my family. I may have been with a group of other children.

And so other than that-- and also there was a trip to Brussels. And then many times I went to visit my relatives both in Dordrecht, Holland-- that's my father's sister and her family-- and my cousins in Raden in Westphalia in Germany. And the two boys from there are now in New Orleans. And one is my age. The other one's 10 years younger. So those were virtually the only vacation trips or trips of any sort that I recall until the big one to New York.

Eric, do you have any more questions?

Yeah. You also mentioned you wouldn't read William Shirer's book, The Rise and Fall.

That's right.

You probably didn't see the documentaries and the movies.

I have consciously avoided for the last 45 years, 50 years, looking at things that deal with concentration camps, that deal with executions of Jews and so on and so forth. I have made it a point because I felt by either viewing it or earlier reading it that it would so much upset me that I would not be able to stand it. So I avoided the problem by just excluding it.

And the same thing happened to me when I went to the Yad Vashem. I walked in. I saw the first picture. I walked right back out. I was crying. I couldn't take it.

And yet I went to a Jewish Museum in Paris in the Marais, which is the Jewish quarter, and we all went in there. And these things weren't as graphic or gruesome. Anyway, I was able to accept this and go through the museum.

I haven't been to the museum in Germany. My wife and I will plan on going there because there is an invitation, a one-time invitation, whereby the city pays for a great deal of the cost of the visit, not all of it. But they put you up and feed you and they pay for a portion of your expenses.

And they have a memorial in Düsseldorf to the Jews, which I have not seen. They have a bureau that puts out publications. And I have quite a few of these. And they send them to me. And so it'll be important to me to look. At this point, I think I can do it. But 20 years ago I couldn't-- still could not have. And I still couldn't, today, I don't think I could go through the Yad Vashem. Maybe that's the effect it's supposed to have on you. But in my case, it just pushed me.

And I don't know if I mentioned this, apropos of that. I was in Poland in 1967 in a southern town, resort town, for a meeting, technical meeting. And the organizing committee had organized a trip to Auschwitz, Oswiecim, as they call it. And they urged everybody to go because it was a national shrine. I refused to go. And they got mad at me.

They said, how can you not go? It's our national shrine. And I said, I don't care what it is. I'm not going. And so, of course, I didn't go. I haven't visited any of these camps, not Dachau, not anyone.

And when I see something like the connection, certain political figures occasionally, in the past, visiting places where Jews were killed, massacred, and whatnot, and there's just a fury welling up in me because I don't see how any decent citizen can do this if they're conscious of what had happened there. So there were a number of things I deliberately excluded from my life and views. Like the Yad Vashem are one of them.

Some people think that some things positive came from the Holocaust. In your case, you were driven to have a wonderful career. Are there things in a larger sense-- some people say perhaps Israel grew out of the sympathy towards the Jews. How do you feel about that? What are the things--

Frankly, I hadn't before you raised the question considered this as a point. To me, just ad hoc and a priori, there was nothing that could possibly have come out of the Holocaust that could have been good because of the horrendous things that happened. You might say you're taking a look at Hurricane Andrew and you say, well, some good may come out of it because somebody may be better off afterwards than he was before. But what is this? One person out of a billion? We're talking about proportions here.

To me, the state of Israel is a good thing. It's a very precarious existence. I've been over there several times. And I couldn't live that, frankly.

The reasons I couldn't live there may not be irrelevant. But I couldn't. If you're interested I'll talk about it. But--

It's relevant, so you can talk about it.

OK. Well, when I went over there, I found that the one thing that held the whole country together was the necessity of fighting the outside world, the Arab world. And so everybody at least tolerated one another. But when you look more closely, what did you have? You had the Ashkenazi versus Sephardi. You had the new settlers versus the old Sabras. You had even a Black Panther Party over there. You had the professionals versus the laborers.

Every possible antagonism between classes that you can imagine existed there. And I don't see how these people could carry out a common purpose unless there was an overriding fear, an overriding necessity, as there was in the defense of the country against the outside world. So I couldn't live there for that reason.

The second reason I couldn't live there is because I am too much of an American at this point to accept the characteristics of the majority of the members of the Jewish state. To give you a silly example, they don't put stop signs at four corners of a highway. Why? Because they would have more accidents there than if they don't because everybody thinks they have the priority over everybody else. And this is exemplary of what I mean.

I was, as a Jew, taken advantage of in the [SPEAKING HEBREW], the Jewish quarter in Jerusalem, by one of the merchants who sold me one of these chandeliers for Hanukkah--

Menorahs.

Menorah. And told me it was pure silver and charged me appropriately. And it turned out, of course, to be only silver plated. And I thought this was kind of terrible to do that.

But the one time I walked into the [SPEAKING HEBREW] with a camera on a Shabbos, I was practically stoned. The only reason that we escaped is because my wife is tall and blonde and very obviously not characteristically Jewish, in any event. And they shouted after me as to whether or not I was a Jew. Just carrying a camera in there was considered to be heinous.

And so I don't think I could live there. I have a lot of good friends there, many students, former students, who got their PhDs with me. And they worked in the Israel Ministry of Defense, the research and development agency, which is called Rafael. And right now, they are at a turning point because while Rafael was supported by the government all this time and it produced super weapons. I mean they were able to sell them all over the world and make a great deal of money for the state of Israel. That is coming to an end.

And so now Rafael is going to be civilian. And so they're going to reduce their force to maybe 20% of their original personnel. And my friends may or may not have a job when this gets through. And so some of them-- one of them I know, one of my former students has emigrated to Canada in perhaps anticipation of this move some years ago. Others are trying to create a connection with the Technion, which is the Israel Institute of Technology.

Incidentally, apropos of that, I spent three months at the Technion in the fall of 1986. I received a fellowship from the Lady Davis Fellowship Trust, which is a high honor. And I worked there, strangely enough, in the Ministry of Agriculture-- not the Ministry, the Department of Agricultural Engineering, excuse me. And the reason for that is that one of the worst problems in agriculture, particularly for Israel, which depends so much on agriculture for its economic survival, is the spoilage of fruits and vegetables as a result of impacts.

And these impacts occur both in the harvesting, in the processing, and very largely in the transport of these fruit and vegetables. And so there's a lot of brainpower that's going into mechanisms to try to minimize the amount of bruising and impact. And I spent some time in this department in order to further this effort, or trying to. I didn't do much good. But what did happen is that the then director of the state agency for the agricultural research is one of my very, very closest friends. And we see each other whenever we can.

So I do have lots of good friends in both Haifa and to a lesser extent in Tel Aviv that I'm in constant touch with. So it isn't as though I am unhappy with the Israelis. It's that I'm unhappy with the general turmoil that exists there. And for someone at my age, peace and quiet is a very important thing.

These things are all relative. I mean I'm sure somebody coming out of Russia would find it extremely quiescent over there. But being used to, shall we say, not having been attacked or impugned or verbalized because of my Jewish heritage, at least the Bay Area is not a bad place to be. So that's how I feel about living in Israel. Now, where were we before that?

Well, I'll ask you one more philosophical question about the Holocaust. Some people say that the Holocaust because of its proportions may have changed the course of history. It desensitized people towards that much violence. Do you think that may have changed history in a way? Change the course of history because of the image that's been burned in everybody's mind.

I think in the short run it may have over a period of, let's say, the last generation and perhaps the present generation. My own feeling is that in terms of the course of history, looking 50 or 100 years ahead, that it will not have more than a minor blip in the, shall we say, behavior of people towards each other. And this, you see-- look at the accidental factors involved. The fact that I am here speaking to you is a probability of 1 in a billion that I would have survived, lived to this age, under the circumstances that happened. Whereas had I been in New York, been born in New York, that probability would be maybe 1 in 2. So the accident of your birth is so critical to what's happening.

I just read Art Harvey yesterday on the remark of Mr. Quayle concerning the "choice," quote unquote, of homosexuality. Mr. Harvey wrote, yes, the people in Somalia really choose to be there, or the Bosnians. He didn't say the Jews in Germany in '33, but he might as well have because it's all the same thing. It's a matter of where you were that matters.

But memories are very short. And I think two generations is all that you really can expect people to maintain the intensity of the philosophy of-- I mean, today we all think Genghis Khan was terrible. But do we really have a deep personal feeling about how terrible he was? Napoleon, the French themselves, dislike, by and large, Napoleon for the simple reason that they feel that he held back the country from its normal development by being so eager to conquer other areas. And while some of them, of course, hold him in very high reverence, I think the intelligentsia think he was a definite detriment to a society.

So as far as the Germans are concerned, I don't think they will ever, by and large-- I'm talking about the vast majority-- will honor Hitler or his policies. But at the same time, even though the Germans are far more honest in admitting their errors, their crimes really, compared to, shall we say, the Japanese, I don't think that they will maintain that for another century. So from that point of view, historically speaking, projecting to the future, I honestly don't think it'll make that much difference that it happened.

I'm sorry. I have to feel that way. But as you say, there are these antisemitic, the xenophobic outbreaks in Rostock in Eastern Germany right now. And if you have a country that is civilized and acclimatized to what happened in the '30s with Hitler and what they did to the people, this shouldn't be done. It shouldn't happen. And if there is a very, very, very small minority, there should be such that the police can certainly handle it. And apparently the police is up just about against the wall on it.

So my own fear is this. I think this country, the United States of America, is not an impossible place for a dictator to rise. I am thinking back of someone like Huey Long. I think Britain has less of a probability, although it's possible in any country. I think Britain actually-- perhaps because it is more homogenized has less of a chance of a dictatorship occurring.

And if you have a dictatorship, it can be benevolent or it can be malevolent. And it can go against the Jews. It can go against the Negroes. It can go against any minority and be successful, as is being demonstrated right now in Yugoslavia.

So you seem to be saying we really haven't learned the lessons of the Holocaust?

I think you and I have. I think the Jews may have. But-- and that, of course, is the reason for the existence of Israel, that they said, never again. But given the political reality, let us say, that Israel cannot survive without the United States support-- they can't. There's no question in anybody's mind that they can't. The Israelis have admitted it freely.

Supposing we get a president and a Congress that is not very favorably inclined towards Israel and all the money we're spending or whatever, they feel that Arab oil is more important, whatever the reasons may be, I can envision that we will sell weapons, as we already have to Saudi Arabia, but now to Syria, to Iraq. Maybe not during Bush's term, but sometime in the future, Iran. You take it.

And you never know what somebody in a country that is considered to be stable might do to overthrow the country. Look at the instability of the governments that you have in the Middle East and in Northern Africa and for that matter in India and in Pakistan. These countries, which are Islamic in nature, I think would be very happy to see Israel go down the tubes. And if you give them the opportunity, they will do that. And then where's the Holocaust in this?

We, the United States, will sit and do nothing as we are doing nothing with respect to Yugoslavia. It is incredible to me that we would let a genocide, as is occurring there, go on without doing more than just saying, well, Mr. Fischer, you can't play chess, which is what I read in the paper today. And yet, at the drop of a hat, when oil was involved, we went to Kuwait.

So the history does not dictate the economic doctrine that a country follows. The economic doctrine being translated into military policy, as was in Kuwait. I mean, there's no other reason to go into Kuwait other than that we wanted the oil and we wanted to prevent Hussein from, shall we say, controlling the Middle Eastern oil, which he certainly would have next moved to Saudi Arabia. So if they had only been honest about it, I don't think anybody could have objected and said incidentally, we'll put Kuwait's rulers back in. But that was such an artificial division when-- if you remember your history-- the British and the French pulled out of there, that the lines that were drawn had no historical significance of any kind.

So I feel that the Holocaust is something that appears as a blip, a major blip, mind you, in the history of the 20th century. But I think that you will find that in the 21st century it will be perhaps not ignored, but the lessons from it will have been less and less heeded. And who is it that should heed the lessons? The Jews or the non-Jews? Or both?

Should the Jews say, well, the moment we have something like that, we're going to band together and enacts some form of military revolt and make sure that the person who is threatening this gets removed? I don't know how you can do this. The Jews are a minority, everywhere except in Israel. And pretty soon, they'll be a minority there. So it's a difficult thing to realize what the Holocaust has done for humanity within my lifetime, yes, and within the lifetime of my peers.

Incidentally, I wanted to tell you this. And this is important. In our paper that we get, there's a notice from the fire victims in Oakland with particular reference to Holocaust child survivors, asking to get together and compare experiences. And we're talking about 3,000 homes over in the East Bay. And there apparently are a number of people like me.

And I will certainly make an effort to get in touch with this group and see what their experiences are. And I don't know whether or not this organization here would be interested in that. But I can certainly provide the data, telephone numbers and things like that, to alert you to who's calling for the meetings. My wife called this to my attention because we got just oodles of literature from [? reeple ?] in the house, you know. And it's just wedged in.

A bunch of referrals, anything you have or--

Yeah, well, I say there's Professor Jacob Lubliner in the Department of Civil Engineering at Berkeley who is the survivor that I mentioned of a concentration camp in Poland. And I do believe he's on sabbatical right now, but certainly is accessible. I can find out where he can be reached to see whether or not he'd want to participate.

In my own department, there are two other people-- I don't know whether you're interested only in Germans or whether you're also interested in people from Austria--

In 10 seconds. I'll let you know when we're ready. OK.

I understand that your uncle's death had a serious or very important impact on you.

Yes, it was the timing and the circumstances that have been with me the rest of my life. I was 13 years old in 1937, scheduled to be bar mitzvahed in May, the month of my birth. And I forget the exact date.

But two weeks before that, my uncle-- this is my mother's brother, who was living with us at the time-- and I was scheduled to go on a bicycle trip for the day out in the various parts of the neighborhood and also in [INAUDIBLE] to stop by some relatives in Wuppertal.

Anyway, three days before this scheduled event, the Gestapo came to our house at 3:00 in the morning, banging on the door, demanding to be let in. And, of course, we were all frightened. Well, what was the situation? They wanted to take my uncle away to the concentration camp.

And there was some discussion. There was some more discussion. And it turned out they had the wrong person. And so they allowed him to stay.

So three days after this, we went on this bicycle trip. I imagine he must have been still terribly shaken, as we were all. Being younger, it was perhaps a little less severe for me.

But we visited our relatives in Wuppertal and then came back. That's a distance of maybe 25 kilometers back to D \ddot{A} sseldorf. And halfway in between the middle of a field, he had a heart attack. And his bicycle went off the road into the field. And he fell off. And a couple of breathings and then he was still.

And I ran screaming into the nearest house. People there were very kind. I guess they didn't ask me if I was Jewish or not. And they called the local constable.

And he came by. And he tried to calm me down and then made effort to get a hold of my parents. And my parents apparently went across the street from where they lived. And the bakery there had a car. And they drove them up to this place. And after a couple of hours, they came took me home.

And then we had a visit from the rabbi. And then there was a funeral. And all the relatives in the vicinity came, including his first cousin who lived in Wuppertal with whom we had just visited and who then moved to Los Angeles in 1939 or 1940.

Anyway, this happening, just two weeks before my bar mitzvah, was a terribly traumatic event. And I can still see him falling off that bicycle, not knowing what it was. I can only attribute it, at least, in a significant manner to the visit by the Gestapo three days before. I can't help but associate the two in a very intimate way.

And it's an image that I've carried with me for all this time. And it's been very, very frightening to me to put myself back into this position. So how I handle it? I don't know whether I handled it well or not. But I've never forgotten the circumstances and the meaning of it, as far as I'm concerned.

So that was the situation with my uncle. First time I've ever seen death directly and firsthand. It hasn't happened very often since either. I've seen dead people, but they died while I wasn't there.

So you wanted to know something more about my early life, some of the impression that I can recall. These will be some--

I want to digress. If you could describe in more detail what a Gestapo raid was, not having never been. Were they in uniform? And were they wearing leather trench coats? And--

Yes--

Did they barge in the house and break the place up? If you could describe in detail exactly what time of day it was and--

It was 3:00 in the morning. And they banged on the door with their, I guess, truncheons. And so loud, you could hear it all over the street and everything else. And they yelled in German, open up, open up, open up, or we'll break the door down.

So I don't know who answered it, whether my father, my mother or who. It wasn't I. And they pushed everybody aside and went to the room of my uncle and grabbed him. And then there was some conversation. I guess somebody is trying to ascertain the identity. And then I found out that it was not the person they had wanted.

But, you know, it was a terrible experience. And you see, or saw, the SA, the Brownshirts and the Blackshirts, the SS, marching around with their goose step and their Heil Hitler motions and whatnot. But you never seen a group actually pressing into a house. Maybe-- I don't even recall how many there were. I would imagine five, something of that order.

And it was enough to frighten us out of our wits. It was apparently not that unusual. It happened to others who were taken to concentration camps. So perhaps I blocked out more of that image than I would like. But it did happen in our house and had the consequences I've described.

I have never been personally attacked by one of the Hitler Youth or by an SS or SA, uniformed person. I don't know what I would have done. I mean-- but it didn't happen. So I can't speculate on what I might have done. I probably would have tried to run. That's the honest answer.

There was a certain, almost morbid fascination to see this marching. I've listened occasionally because the news broadcasts do show this Hitler speaking in Nuremberg at a rally to a million people or so. And the guy was a aura of incredible power. I mean he was mesmeric-- mes-- yeah, I guess mesmeric is the word. He held people spellbound. And he had the power or the actions of others that is incredible.

Now, to some extent, I would imagine that the Germans with their own characteristics as a nation were led into this. They have always been the most orderly of people. And, of course, Hitler stood for absolute order, as long as it was his order-- and the fear, respect, and obeisance to authority and the authority is represented by a uniform.

I found that even after the war the first time I went back to Germany. And I was traveling from Switzerland to the Saal-- and this was in 1968. No, it wasn't the first time. It was the second time-- by train. And I got one of these officious border guards who started asking me all kinds of irrelevant questions. And unlike a typical German, I was just not answering him in the fashion that he wanted to. So he started getting nasty. And I got nasty, and I said, look, if you keep this up, in German, I said, there will be a complaint at the embassy tomorrow morning.

And so then he looked at my passport. And he said-- I have to translate it into English, I guess. He said, oh, a real, real, real American. I said, well, thank God, I had the opportunity. I mean, this is the kind of stuff that the Germans put on when they have a uniform on, at least in those days. And this was only a few years after the war.

So the Germans respected the uniforms. And this was part and parcel of the image of the Hitler moment. It was the uniform, storm brigades, and they were going to fight to bring the country back to its pre-war prosperity and its pre-war status in terms of international respect. But to me, this was such a repellent thing in retrospect that I never joined anything where uniforms were asked, even if it was a voluntary matter. And this included the Boy Scouts.

So I think that's the spellbinding of the population must have been more than Hitler's oratorical abilities. There had to be a propensity of the country to want to be led in that direction and to believe what he said to be the gospel truth. And that was part of the problem.

And there were resistance to this movement, resistances. We know that the German army tried to execute, a putsch, except it didn't work. And this man [? Roehm, ?] I think was his name, was executed. And there was another attempt during the war with a bomb that didn't come off. And besides that, there were a lot of subterranean groups that were trying to get people out unofficially. But, by and large, I would say 98% of the German population was in Hitler's pocket, perhaps not actively, but at least not resisting it.

So as far as other impressions of my youth-- or is that enough in terms of the--

Were they in uniforms, the people the Gestapo that broke in? Or were they in civilian clothes?

The Gestapo wore black uniforms, like the SS. They all wore black and completely black. It was the Brownshirts were the common, ordinary, the drones, so to speak, that were just together so that they could say they swore their allegiance to Hitler in a special way. These were Blackshirts.

And I don't honestly remember whether they were Gestapo or SS. They both wore black uniforms. And I can't recall the difference at this point.

Did they hit anybody in the household? Or shove them?

They shoved them for sure. Hitting, I can't-- I can't say that. And you must recall I was just a very, very small boy. Actually, this was in an apartment on the second floor of this apartment house. There were three story apartments, bottom, second floor, and the third floor. And then there was a little attic.

And I was sleeping in the attic. I think I mentioned this. I slept there and read until 4:00 in the morning with a flashlight. So when this all happened I rushed downstairs. And so I didn't get in at the beginning of this. But I shortly was in on the whole operation.

And God knows to how many people this sort of thing happened. How many resisted and were shot on the spot? These people weren't just wearing batons. They also had pieces, revolvers and whatnot.

So they obviously didn't apologize when they left, right?

No. They just left. May even have made some nasty remarks. But I don't remember that. The--

Were the family up for the rest of the night discussing this?

Oh, sure. Yes. And I'm surprised in retrospect that we still went on this bicycle trip, but we did.

You asked how my daily operation was. I don't remember too terribly much of my young days. The last few years, I live maybe about two kilometers from my high school, gymnasium really. And I bicycled back and forth. I took the bicycle when it had a puncture, I repaired it and so on. And I had a bicycle path, so I didn't have to worry too much about traffic.

The street we lived on was a major thoroughfare. And there was a fair amount of traffic, as well as a set of streetcar tracks. And so it's a good thing there was a bicycle path attached to the sidewalk, so I didn't have to counter the amount of traffic.

However, the traffic situation in those days is nothing like what you find in San Francisco today. And so there were distinct and lengthy spaces between vehicles. And I would think that the majority of the vehicles were some trucks of some sort or other, or, well, some form of car with a loading facility. They weren't exactly station wagons. And they weren't exactly small trucks. It was something in between.

My school was almost next to the railroad tracks, the railroad tracks from which my father and I used to go take the train and go hiking in the country. And I have some certificates that I got after the war. And when I had correspondence with the present director-- also, I don't think I have the letter. But it wasn't a particularly friendly or apologetic or anything like that. It was just this is what happened, whatever you may think, this is what happened and you're wrong in thinking otherwise.

So I didn't even try to establish anything else other than seeing this teacher who lived across the Rhine and whom I

visited at least on three occasions. The last time when I wanted to visit him with my wife, who had met him once, we were in the vicinity. And I called up. And he said, no, he had just lost his wife. He was in deep sorrow, didn't want to see anybody, and so on and so forth.

When I passed through Düsseldorf last year, I looked up to see whether he was in the phone book, and his name was not there anymore. So I assume he's dead. He would be well in this 90s at this point. So he was the one who tried to protect me against the excesses of other students.

I remember distinctly that I did very well in French. And I spoke French fluently. And I still speak it, although not as fluently. My grammar is horrible. But when I go over there I do make myself understood without the aid of a dictionary usually. And that was one of my favorite subjects.

And, of course, the German educational system at that level was far advanced of the corresponding American system at that age level. So when I came to this country, I was able to go through high school having had one quarter of it by passing a four-year examination in German, another 1/8 of it, a two-year examination in French. And the things that I had to pick up on, which I didn't have, was social science, English, and so on.

But English came fairly easily to me. I fancy myself that I'm a reasonable writer and communicator, maybe not as good as Reagan. But in any event, the advance was in all areas, in science, in physics. Of course, history was distorted. And it was distorted in somewhat similar way to the way Russians distorted it, except that everything German was great and good.

I'm not saying, however, that they would claim inventions that were made by others to have been made by Germans. But I do remember my high school-- my teacher over there in music, we were discussing national anthems. We were discussing the American anthem. I still recall it now that we're talking about these things. He said it was undoubtedly the result of a prize contest for a few dollars that was won by somebody and that became our national anthem. So this is the kind of attitude they had towards things non-German. And it's perhaps typical.

I think the Germans didn't know much about the United States. The United States was pretty isolated until World War II. Even World War I was a very limited expedition. And I don't think the European culture got back to the United States or America culture got to Germany in the same way that it did after World War II, or during and after World War II.

And so they were at the same time envious. They were envious of the tremendous area of the country and, even at that time, the level of the population, the standard of living, which was very high, relatively speaking to many European countries.

There were also fearful. I remember this that I read all the books by a man called Karl May, who wrote, I don't know, 50 or 60 books, all about-- all but two or three about-- foreign countries. And the US was one of his favorite subjects. The other--