Emmy E. Werner

- Born in 1929 in Germany
- Ph.D. from the University of Nebraska (1955)

Major Employment:
- University of Minnesota – 1956-1959, Institute of Child Development
- University of California, Berkeley – 1965-1969, School of Public Health
- University of California, Davis- 1963-1995, Psychology and Human Development

Major Areas of Work:
- Risk/Resilience Across Lifespan, Childhood in Historical Context

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- Member

SRCD Oral History Interview

Emmy Werner

May 31, 2000
Interviewed by Lucy Rau Ferguson
At the University of California - Berkeley

Ferguson: This will be the beginning of the Oral History Interview with Professor Emmy Werner on May 31st, 2000 at the University of California, Berkeley. So, we'll start by asking you, Emmy, if you would describe your family background, along with any childhood and adolescent experiences that may be of interest, including the educational, occupational characteristics of your parents. Actually, some of it is in your most recently published book, *Through the Eyes of Innocents: Children Witness Word War II* (Westview Press, 2000), isn't it?

Werner: Yes, it is actually. Right.

Ferguson: So reviewers can get more information actually from that book, but maybe for the purposes of this interview you can sort of start with chapter one again.

Werner: That's right. Well, we can tell the person who reads this to please buy a paperback. The hardback is a little expensive. But, anyhow, I was born on the border between Germany and France, and so my family is half French and half German. The reason why I said somewhat laughingly that I'm a thousand and how many years old now -- a thousand and fifty-eight years old, has to do with my childhood and adolescent experiences.

I was three when Hitler came to power in Germany and, of course, he founded the One-Thousand year

Reich, which lasted twelve years. I add that to my third birthday, I was already one thousand and three years old in 1945-that was fifty-five years ago-hence my rather long longevity. [Age: three in 1933, 1003 in 1945, 1058 in 2000]

Ferguson: Excuse me. Let me get a calculator.

Werner: Right. So the reason why I mention this is that I suppose you don't really think of this as contributing to your intellectual history, but I guess if you look back you begin to see probably certain experiences that have contributed to my interests in research afterwards.

I come from a family that is not academic at all, my mother had an eighth grade education, and my father was in a technical high school, but it is a family that has a long history as printers. We traced back the printing in our family to Gutenberg, which is a long ways, namely to the time (cca 1456) and the place (Mainz) where he invented book printing. So we've had printers in the family on one side, and on the other side we've had people who grow wine, and so, you know, that's kind of a nice combination, the black and the blue, or whatever.

And even though my parents, you know, technically were certainly not in any way lucky enough to have had university education, which in Germany, as you may know, was very class stratified. There were always books at home, and because we were sort of bilingual, there were always books in at least two different languages if not three: German, French and English. And so in a way, you know, that may, just from the beginning, have started my interest and love of reading.
Ferguson: Book printing and wine makers are guilds (medieval associations of craftsmen) -- very, very long traditions.

Werner: Good for you, Lucy. Yes, very good, Lucy. And you know this is something that I really see when I go back, because I've been going back more frequently now since the German universities have sort of rediscovered me, and I'm fluent enough now that I can give lectures in German again.

Ferguson: Good for you.

Werner: And when I go back, especially to Mainz, I just really begin to realize the roots, yes, you know, that these roots are not necessarily trivial, but there were the guilds of craftsmen, you knew where you were, and you also have this feeling that in your little world, what you were doing mattered, it was esteemed, you know, maybe not high up there with the princes, but down there on the ground. My hometown Eltville is a very old settlement, it was founded by the Romans like everything else on the Rhein (Rhine), and it was called Alta Villa, high, high village. It was also a Celtics settlement and so over the years the people there who grew the wine and printed the books had a lot of experiences with foreign troops marching through; the Romans and the Celts and the Swedes and the French and so forth, so I think that that together with the wine gives you a certain perspective that there is growth and change, there's stability but also change, and that may have influenced my later interests.

My schooling was very irregular because World War II broke out when I was ten years old, and yes in my book I speak about this reunion of three cousins (German and French) who are all ten years old two weeks before the War broke out in Europe. And pretty soon, late in 1940, when I would have been eleven, and I was in what sort of is called a middle school - well, they have it now here, right, also - what we call

'saturation bombing' started. In other words all the towns along the Rhine and, of course, the Ruhr, which is a major industrial section, still is; were systematically bombed by the allies. This was after the Germans had bombed Coventry in London. And from there on, for really I would say four years, more than four years, my school days first consisted of, well, getting up, getting a little satchel, going to school, first alarm, going to the cellar, going back up, second alarm, and the same, of course, at home. So whatever schooling we got in the years between '41 through let's say about '44, was strictly snatches of learning, and that took place in air-raid cellars. And I mentioned that in the book on *Children of World War II,* that in the end there was an air explosive, an air mine they called it, that fell into our schoolyard and the school collapsed, and so that was sort of the end actually of my regular schooling, because both teachers as well as children were killed in the process.

So then from about '43 to '46, this was the later part of the War, and then also in the beginning of the post-war period, basically what we did was just rescue work, you know, it was pulling people out of the rubble and making sandwiches for refugees and that sort of stuff, but as I say, our house even though - our house was not bombed, it was hit by artillery shells, but we had these books, and so I always took them down to the cellar. And so the books really made a difference, I think, as I look back, you know, sort of in getting through this, and of course, my dog, which I have to sneak into this interview because he's the one, the Sheppard dog who sat beside me in the wine cellar, and he always licked a little bit of wine, he tippled out, and so years later he died.

Ferguson: He was a contented dog.

Werner: Yes. He died from cirrhosis of the liver at the age of twelve. And my students always say, "Oh, Doctor Werner had an alcoholic dog." His name was LUX (Latin for light). So after the War was over

Ferguson: In a way, if people wanted to know, you could say that the books and the dog were your transitional objects.

Werner: Yes, they were. Oh, absolutely. Yes, what a great time I had. Right. Yes. And the sound of sirens and shells, yes-that, of course, are still in your system. But anyhow, so after the War was over, and again this is described for anyone who's interested in reading this in the book, *Through the Eyes of Innocents,* the things really got worse-to some extent, both because of the millions of kids who were just roaming around who were orphans, and the food shortage, and the fact that they didn't really quite know now what to do with the educational system. And so the schools that hadn't been functioning anyhow were closed for about a year and a half. And in each zone at this point, you know, Germany was divided into zones, and which is similar to what Caesar did some two thousand years earlier-and I was at the border between the American zone and the French zone, and so the occupational forces had kind of edited the school books, which had been edited before, the other way around, and that took a little while.

And then we started out, I think I went back, maybe early '47, late '46, and it so happened then that this group of us had to make up really about five years of missed schooling, you know, in about eighteen months. And that was a very interesting experience because they gave us what they called, 'a not abitur' which is sort of emergency high school certificate. But it was interesting to see the circumstances under which we learned, which, of course was, you know, it wasn't much. I mean the schools were pretty much without windows, doors and whatever, and the teachers were mostly old folks or veterans that had come back from the war. And then our class, we had about ninety or so, or eighty or so who were at the beginning when we were at middle school, but now that we all came back, oh there was about, you know,

ten percent left because the others; either the boys had been killed, or some became prostitutes, or others just didn't care, you know, about going back to school.

And there I would credit, really my mother for saying, "You've got to go back to school." And I've dedicated that last book to my mom in some extent, because it just made no sense to me in the middle of all of this to have conjugate Latin verbs. And I was good at, yes, stealing wood and water and black marketeering and so forth, so I wanted to go into this career, and she said, "No, you have to first graduate from school," and so I did. And again, I mean, I think the education there was not particularly obviously of the kind you would get in Berkeley High today, right? But it was, I think, an education in-as I look back now, and I never thought about this when doing my work-in looking at how people cope with extraordinary circumstances. And especially the girls, because they were really survivors. Actually I did a paper on this last year at the SRCD, I gave a talk, looking at Elder's book, *The Children of The Great Depression,* and I contrasted his findings with the differences between the opening up of the educational opportunities for American veterans who came back here, you know, like my husband who would not have gone to college if he hadn't got the G.I. Bill, and what happened to a similar generation of kids on the other side, because not only was our schooling so irregular, but then also it was so much more important to really survive. Especially the girls were pulled out of school and never went back. And so there is now, there are some interesting follow-up studies in mid-life that do show that this particular historical event for that cohort, right, made a distinct difference in their lives.

So my military experience, yes, consisted in pulling out people from the rubble and cutting down little boys who in the last days of the War were our defense, and who (if they didn't defend) were hung up, you know, in trees. My early work experience was also connected with the war because the only way, you know, you could get some extra food, that I worked on a farm for about a year and a half, and I guess that teaches you certain things about long rows of beet plants and how you have to pull the weeds and all that stuff, and the importance of how to milk a cow and so forth.

Ferguson: Well, there's an art to that.
Werner: -- there's an art to that, right. And I think, in retrospect, you know, it's like what the Chinese say, "May you have an interesting life." That I did from the beginning, I think, it made me a bit different than sort of the ordinary graduate who might have gone, you know, marched the regular route to high school and college and whatever, because I learned very early that there are things that actually are much more important than going to graduate school, and that also - I shouldn't say this probably on the tape, that there are wide ranges of intelligence, and not all of the people who go to graduate school may be as intelligent as some people who survive, you know, rather trying circumstances.

Ferguson: No, I think that's very important to say

Werner: Because that led me later on to focus much more on folks that are not ordinarily studied, they're now being studied, but not at the time when I went to school.

Ferguson: And also the concept in the beginning of the picture in one respect that there are many, many types of intelligence.

Werner: Exactly. Exactly. Right. So, now college really I had never dreamt of -- I mean my mother didn't go beyond grade eight.

Ferguson: That seems to be the missing link here in history, because all of sudden you're not used to that - higher education, but how did you get into college?

Werner: How did I get there? Right. Well, first of all, as I say, I didn't even want to graduate from high school because I thought this was a great waste of time, but my mother did push me to finish that. Then my father, all the other men in our family were dead, but my father had come at that time back from camp, he was a prisoner of war for a period and he hadn't been released until about '47. And he said, "Well, you know, if you finished high school you ought to maybe try a university," which again, I mean in Germany at that time seemed-where I lived, the closest thing-there was this institution that had been set up in the barracks of the city of Mainz, the Johannes Gutenberg University, from which I have a diploma, which reopened in 1948. It had been functioning in the Middle Ages and then after a Napoleonic Invasion in the 19th Century it had been closed up. That was about 1802 or so.

But after World War II, the entire psychology department from the University of Leipzig, the place where psychology became a science, fled the invading Russians and went across the rubble of Germany to the city of Mainz for the reason that - there was one place that was intact and that was the barracks, the former barracks of the Army (Wehrmacht). The rest of Mainz, like Frankfurt was about, you know, ninety percent destroyed, and so they opened up their first class in the spring of '48, I guess. In order to get in you had to actually put in several months of sort of, it was almost like Para-military experience; the boys had to lay bricks to make the barracks intact, and the girls had to peel potatoes to feed the boys. And so I enrolled actually there with a double major, I wanted to go into law. And the reason I wanted to go into law, this was the time of the Newberg trials, was that I thought if I study law, then in the end there will be justice in the world!

Ferguson: Like so many young people in the sixties, you remember the

Werner: Right. And I got into psychology more sort of as a sideline, because we had to take forensic psychology as part of the law, and I found this absolutely fascinating, I mean including, you know, looking at corpses and looking back to see whether they had died from syphilis or whatever, and so I kind of slipped into psychology on the side, and it became interesting enough that I enrolled for a diploma. At that time in Germany, in fact, even today, they don't have too many specialization on what you could consider an undergraduate level, you know, you sort of get a diploma, an all-around diploma, which I got in 1950 - 51.

Ferguson: And you - in psychology?

Werner: In psychology. Just plain psychology.

Ferguson: Because I think that just for American...

Werner: Right.

Ferguson: ...they need to understand that when you go to a university in Germany, or really any place in Europe, you go in a particular field.

Werner: Exactly.

Ferguson: Your general education, theoretically, is taken care of in high school and then you major in graduate school.

Werner: Exactly. And so in spite of a rather poor high school education, in a sense, I had that behind me, that's right. So you go into a particular field, but at the time and even today, it's not so specialized yet. That will come later. And so this is - bear with me on how I get from there to Nebraska and Berkeley. We had, in Mainz, a very good professor. I mean, I really -- it was interesting to think about the impact certain teachers have at the time, because here I was still trying to set the world right, right? And there was this guy, who literally his name was Undeutsch, which means “un-German”. Poor guy, in a way it was probably a professional handicap for him, but he taught the courses in the developmental psychology, and he was, you know, the first one really to tell us about what they call in Germany Uiengsschnittstudien (longitudinal studies), also a long word. And I just…

Ferguson: I discovered that that's why you say Longitudinal Studies in German.

Werner: Right. Right. Of course you can add many more words to it, Uiengsschnittstudien Methodology and all that stuff. It's interesting how these themes, I guess, sort of do occur in your life even if you don't think about it. I was always interested in history, because I grew up, of course, in areas where, you know, history was around the corner, right? Mainz was the city where the Emperors were crowned and so on and so forth, where actually the first Jewish persecution took place in the Middle Ages, but - so I thought, gee this is interesting that people would really, you know, take time to study what happens to people over time.

Ferguson: My understanding is that some of the Jewish persecutions were because the crusaders were on their way through, and they decided it would be good practice to do away with the Jewish community.

Werner: Yes. One of the best accounts of this -- I guess I hope we don't sidetrack -- is by Barbara Tuchmann in *"A Distant Mirror."* They needed to look for a scapegoat for the Bubonic Plague, which went through there at the time. Right. But anyhow, so history was all over the place. Think of Gutenberg, the inventor of book printing. So, I mean, I never forget the guy. And so at the time I had no idea that I would ever go abroad-be patient with me-except just before, or was it right at the time of our exams for the diploma, there came a call by the occupational forces, which in this case were in the Western zone, the Americans and the French. In fact, I needed a passport across from where I lived, which was in the American zone to enter the French zone where Mainz was. I spent sometimes occasional nights in jail because I forgot the passport. And so the call came out for, in retrospect, of course, it was a "re-education," you know, experience for young students who might be interested in traveling abroad. That was an enormous opportunity, because if you needed even a passport to go from one side of the river to the other, to be able to go abroad, you know, seemed a big deal.

I had been abroad actually once before during my student years from '48 to '50 as a migrant worker in Switzerland. They took people to help work the harvest in Switzerland, potatoes and beets, etc. Since I had experience, I volunteered and that was my first, you know, sort of story of going abroad. And I remember going to a store where they had this huge, it looked like a chocolate bar (was like this), probably smaller, you know, but these "one franc" chocolate bars, and it was like more chocolate than I'd ever seen in my entire life. So anyhow, I never knew (I mean these are some interesting things in my life)

who nominated me as one of the people who might want to go, you know, on a fellowship to the USA. It was kept confidential and administered through the International Institute of Education. I don't know if it was specifically American, but it was a joint Allied fellowship for young probably, they considered malleable students to go abroad and experience democracy.

I mentioned this in the book, I had once written an essay on democracy, in the same book in which before the bombs destroyed our school, I had written an essay on being in summer camp on the Lorelei, and the one with the Lorelei had gotten an 'A', but the other one on democracy was very shaky because being rather outspoken even then, I said I wasn't so sure that this is going to work, people all deciding their own fate. So I thought they would have eliminated me, but maybe they thought I definitely needed some experience. So we were offered a choice of where to go. Now you won't believe this, but, you know: 1) I'd never heard about the American university system in the first place. 2) I was the first member of my family to go to a German university, which consists of barracks, rights? And 3) I always loved the books by Karl May. He's a German writer who wrote in the late nineteenth century, books for boys about the Indians. And, in fact, he's back when I was in Halle in East Germany teaching two years ago, I saw the new edition is out, and I looked at all the volumes and he's out again.

Ferguson: You mean the American Indians?

Werner: The American Indians, right. The guy never went anywhere, but he had a wonderful imagination, and so he "ground out" some forty-five books that had to do with adventures in the American West. That's right! That had to do with a couple - it was an odd couple, it was a white person named Old Shatterhand and an Apache Chief named Winnetu, (see if my German comes through) and they encounter all kinds of evil in their westward movement, but they keep their integrity and they have a close bond, and in the end good prevails, so that appealed to my sense of justice. And it was all these books -

Ferguson: It sounds like the Lone Ranger and Tonto.

Werner: Right. These books I had inherited from my brother who had been killed in action, together with a BB gun that I had to give up to the American tanks, but the books I still had at home. And each Saturday, I'll never forget it, I had to clean house, and so I would clean it real fast, and then I'd sit down and read one volume of his books. They were fairly thick, but I mean you got the drift after a while. But the point was he vividly described the noble Indians, right, Native American style. And I thought, if I can have a chance to go abroad, I'd like to meet them, in a place where there are, you know, Indians, and especially the fierce warriors, the Plains Indians. So we were given a list of possible universities that might sponsor us, and there it said-I had no idea where Nebraska was, how flat it was-but it said, "Indians," so I said, "I'll go there." But the funniest part, or not so funny if you look back at it, anyways when I arrived, of course, in Lincoln it was quite an experience because: (a) it was flat, and I came from the Rhine where there were lots of hills, and (b) they did have an International House. My roommate turned out to be an Oglala Sioux. She was, if you look at the irony, of course, she was put like I in the International House for Foreign Students, although she had been there, she and her tribe had been there a long time ago.

Ferguson: -- her education was just as checkered as yours?

Werner: Yes, but they were a most unusual family. In fact, I've tracked them down, they were-I mean this was in the beginning fifties where you had no affirmative action or anything like this, but she was-the

Walker siblings. She had two brothers and herself, and so that's why I was in Nebraska. I had no idea about, you know, what its educational standing was or whatever, but I actually was very lucky because the person who was my Chair, Dean Worcester was very interested in: 1) gifted children, and 2) in providing educational services for the Plains Indians, which was unheard of in those days. So as part of our experience, we had to go, and it was usually on weekends or so and during breaks, in a traveling clinic to various reservations. And we had our little, you know, by then the Stanford-Binet test was out, a little box, right? And the old Bayley test was out, that's right. And the Porteus Maze test was out, the Leiter was out, right, and so we marched out with our little suitcases and

Ferguson: --Bayley? Everybody used Cattelle.

Werner: Cattelle. It was the Cattelle.

Ferguson: The Cattelle for babies.

Werner: The Cattelle for babies. So we had these little suitcases, and that was very impressive, and then we would have these clinics in various places along the Platte River (that's where my interests grew actually that later came into a book), where the different reservations were. And so he was one of the first persons who: (a) emphasized the study of cross-cultural differences, and (b) really making sure that some of these kids that looked "gifted," not necessarily on the Binet with the verbal stuff, but on the nonverbal, problem-solving tests, would have a chance to get regular schooling. And so I just thought I'd be there a year. Well, then it was really the people at the University of Nebraska who said, 'Why don't you stay, you'd get at first a masters," because I didn't think I had it in me to be a Ph.D. And so I worked first on a master's, and then I began a Ph.D. in '52. And, of course, this was the time when I was selling blood, because in those days you didn't have scholarships, right.

Ferguson: Getting yourself anemic, right?

Werner: And getting myself anemic, right. But toward the end I had my data collected, I began to see that one of the wonderful things about that experience, by the way, was that it might not have been a stellar institution, but they left you alone to pursue what you were interested in, and then they encouraged you to go your way and helped you, you know, as best they could with the methodology and so forth. And so, what did I do for my masters? For my masters I did a study of the effects or the association of getting to know people from different cultures on a particular test-a social distance scale. You might know it, Lucy. We'll have to look it up in the Buros Mental Measurement Yearbook, which by the way, is published in Nebraska now, you know, they moved to it. It was an attitude test

Ferguson: Was it something like the Strong or --?

Werner: You know it was along that line. And what for me was interesting in this little study was to see how, for instance, the G.I.'s, who were all back at that time, were generally much more accepting of individual differences in foreigners. The test consisted sort of stereotypical descriptions of what different groups might be like, foreigners, and then it will come to me what the test is, it may still be on the market. And then what you could test out is to see, you know, whether people who had no experience with these groups, what they felt about them; some who had read about them, what they felt about

them; those who had encountered them, and how either the second-hand or the first-hand knowledge about the group affected people's attitudes. And then, my dissertation was actually on the Vineland Social Maturity Scale, which you may still remember.

Ferguson: Sure. Yes.

Werner: And again, how the context is amazing when you think back, how the context affects what people say about the social competence of the children, so that, you know, growing up in let's say downtown Lincoln or Omaha, growing up on a farm out West, growing up in a little town, did indeed, at least as reported by the parents, show consistent difference in the competence of these children at quite younger ages. And then in 19- so wait. When did I get to Berkeley, 1954 '55 right? Yes. I say five years later, right.

Ferguson: Because your degree is '55.

Werner: My degree is '55, so it was in that period.

Ferguson: Yes.

Werner: They had offered postgraduate fellowship-now how did that come about? I mean there's some things that I look back at where some very nice people that I didn't know, who indeed must have been my teachers, must have recommended me.

Ferguson: So you came out to Berkeley...

Werner: I came out to Berkeley for a year as a postdoc, see.

Ferguson: ...kind of postdoc?

Werner: Now by then, of course, you know, since I had heard about the longitudinal studies there, this was I thought a wonderful opportunity, but actually when I came out, and you may remember that still, Lucy, they had the Institute of Child Development up here where the law school is, right? Do you remember? And then -

Ferguson: Well, actually it was right at the top of Bancroft Way.

Werner: It was at the top of Bancroft Way, right.

Ferguson: -- so it was just down from IHOP

Werner: It was down from IHOP, right, you know, and where the - And so there was the Institute with its wooden buildings, and then - because downstairs there was a nursery school, remember?
Ferguson: Well, I can remember because that's where Nancy Bayley used to get her demonstration test subjects.

Werner: Yes. And this is now where I fell into another experience, not planned, which had to do with my inability to give music lessons, and this is a true story. You can remember the layout, right? Nancy had her office and she could tell -

Ferguson: - tell that story.

Werner: - Actually my first job it was not in active research, they wanted you to get an experience with young children, which is good, I'm glad I had it because I think many people who now work in child development unfortunately do not get -they go straight into the research part, and actually never know much about ordinary children, right, outside of the research setting. And so, indeed, we were assigned to give different lessons to kids on the playground, and I didn't do too well with my music because I knew only 'Three Blind Mice,' but I did help diagnose this little boy who they thought was autistic, who stuck with me when I made a lot of noise and the others all went away.

Ferguson: Because he turned out to be deaf.

Werner: He was severely hearing impaired.

Ferguson: If I could introduce and get your reaction here, because it's something-I think that musical ability begins with the child--very different from language ability...

Werner: Oh, absolutely.

Ferguson: -- and that people with your kind of experience in growing up, becoming more or less very focused on language skills tend not to be the same people that sort of flower musical talent

Werner: I agree with you.

Ferguson: All of this obviously has to be genetic.

Werner: Yes.

Ferguson: But you don't think it's all genetic

Werner: No, no, no.

Ferguson: -- I think - experience builds on

Werner: Yes, it does.

Ferguson: -- genetic potential, so it makes a great deal of sense to me that music would not be your thing.

Werner: Yes. As far as music appreciation goes, I absolutely, really, really love music. It's even the

practical things like they used to say, one of the reasons why there are more Jewish violinists than pianists, is that you can always run with a violin, but not with a piano, right?

Ferguson: Right.

Werner: And so to some extent, in the War, you know, what would you have, the only thing I ever had was this Blockfloete (recorder) and my fingers are so short, so I played this little recorder, I didn't even graduate to alto, and so, you know, the "Three Blind Mice" was about all I could squeak out from here to here to here. So then again, it was serendipitous, and I think as I look back at my life, a lot of the things that happened to me were that way. Nancy invited me to help her with her longitudinal research.

Ferguson: -- number three.

Werner: Right, right, right. Exactly. In many ways, of course, I'm sure as you say, you're back to the interplay between the genetic and the experience. You have to have a prepared mind to make use of it, but I just thought it-I felt horrible about my music performance, and there was Nancy. And you remember Nancy, she just - what I loved about her was, she was a farm girl from Oregon by the way, as you know, and she never lost this rootedness. And there she was, and she must have been completely mortified to see me with this recorder, and that's when she looked out of her window, you know

Ferguson: But also, what I remember of Nancy is that if Norm Garmezy's nickname for you was 'Mother Resilience', I think my nickname for Nancy would be 'Mother Competence'-

Werner: Oh, yes.

Ferguson: -- and absolutely in the quietest and unobtrusive way you could imagine.

Werner: In the quietness. Yes. Yes. Thank you for saying this, because, you know, when you look at the books that came out of the Berkeley studies, you know, the ones that have made the big splash - Do I say this out loud here? Yes, I will. Is, of course, the ones that were based to some extent on books written by males, right? By males, later, right? At a time, they provided, you know, the organization, but the basic work really was done by the women, and this competent work with true modesty. I mean Nancy was a very modest woman, but her total commitment was to do good work, regardless of whether, you know, she would get a name or not. To me it was incredible that someone would be like this. Now as I think back, among the other characters on the scene at the time, of course, some of whom then get into SRCD, is Dorothy Eichorn, who had just arrived as a young assistance professor. I remember she was teaching physiology, and she still teases me today because we're in the Human Development Graduate Group together at UC Davis, she's with us. She gave me a 'B' in physiology. She says, "I guess the reason why you're writing all these books years later is to prove that you're not a complete -" And so, there was Dorothy, you know, who was at that time as I look back as a young assistant professor, one of the top people in human physiology doing longitudinal work.

Ferguson: It reminds me of my graduate student from Pakistan whose knowledge of human anatomy was strictly derived from television commercials. These Muslim women were not supposed to know anything about physiology.

Werner: That's right. That's funny. That's right. So I was more impressed by the women frankly than the men, although I shouldn't say this, in all fairness. Harold Jones was there and very reserved in his way, but encouraging. Nancy was really, you know, there. And I look back at her when she died, I looked back at her last publication, I didn't know this, but that was the first publication that I had with her. Her last publication was on the reliability of the revised Bayley test and we had done this together, so it was almost like, you know, a link in a chain that I hadn't been aware of, because I worked with Nancy later on. So Nancy made a big impression.

Ferguson: So you worked with Nancy when you went to Washington?

Werner: When I went to Washington, right. But let me real quickly say something about a couple of other mentors. I guess we're supposed to, right? We're influenced. And that is certainly Jean McFarlane-I mean what impressed me about her was she was the general; she could sort of organize things, right? And Nancy was totally dedicated, with dignity.

Ferguson: And I don't think that Jean McFarland had quite the same, the head for detail that Nancy Bayley did.

Werner: Oh, absolutely. Right.

Ferguson: Jean was a clinician.

Werner: Yes, exactly. That's what she was. Right. And now the other person I must say that deserves enormous credit, I think, that reentered my life repeatedly was, of course, Marjorie Honzik, and I feel so sad, I mean I hope that somewhere there's a record of her contribution, because I guess now it's too late, right? I don't know whether she would remember after all these years, but she was exceedingly kind and courteous and you just

Ferguson: And she always knew where everything was.

Werner: That's it. That's the key. That's the key, which is very important in longitudinal studies. And I think sometimes, and I'm sorry to bring this up, but I will since I'm a female, especially in that time, of course, this was considered, oh yeah the women do the piddly stuff and the men do the, you know, big theorizing. And I really truly think, and that's why I felt obliged to sneak it in to at least my last book, that intellectual contributions of some of these women have not been properly appreciated, but that had to do with time, remember? Jean was the only full professor, Nancy never got a tenured appointment, neither did -

Ferguson: Neither did Mary Jones

Werner: No, no, none of them. And, of course, Marjorie Honzik was forever a research associate. Nancy didn't even get a tenured appointment when she was the President of the American Psychological Association, as you recall. And so what I learned there: I did learn that your work comes first if you like it, that ego is a different thing, which of course, is not necessarily the way to get ahead in -

Ferguson: Academia.

Werner: -- in academia, but okay. Back to, now - now would you characterize the development of your ideas in the field as straight or sharp turns? Oh, my! I think from the beginning, but that goes way back even to Germany, I was always torn, but in a way now I see maybe in the end did get to a synthesis between going the biological and the social route. I come from a family, might as well be said, where manic depression is rampant, which has, as you know, a high degree of inheritability. And indeed, most people don't know, some of the first people who were eliminated under Hitler actually before the Jews, and the gypsies, were people who were mentally ill, so I do remember as a child the ashes of my aunt coming back from Eichbach, which still exists. It's a psychiatric clinic. And so even though I didn't have much formal biology in my very scattered high school education, I did think, you know, there was something there that you need to think of besides socialization. And so I could never quite make up my mind, you had to declare where you were going to go with your future too, which way to go. I got a feel that both were necessary.

Ferguson: I'm just worried about the tape, but I think we're okay.

Werner: We're okay still?

Ferguson: Yes.

Werner: And I have an extra tape.

Ferguson: Well, I can just flip it over; it doesn't matter, when you need to.

Werner: Yes. Okay. That was really when that after, let's see - well, let's connect with Nancy, back to Nancy when I was offered the job to be the chief psychologist at a tender age of thirty at the famous or infamous Perinatal Collaborative Research Project. I don't know how many people actually know about this.

Ferguson: This was in NIH now.

Werner: That was NIH, right. And it was in part because Nancy had taught me the baby scale, and they needed someone who would train others in infant testing, and Nancy had been moved to NIH, because her husband, I guess was a professor in Maryland. So that particular study

Ferguson: I've known a lot about her, but we can talk about that, I guess.

Werner: This study, which, if I'm going to be frank about it, and I might just as well be, was a very ambitious study, which was at the time a total fiasco, period! Fifteen leading medical schools in the country, ranging from Harvard to you know out here, San Francisco, combined to look at the early risks, the pre-perinatal roots of neurological dysfunctions, such as mental retardations or autism or whatever. It was conceived as a grand design. It turned out to be a study that after seven years had spent fifty million dollars, which was then in the sixties, a hell of a lot of money. It was finally stopped by the U.S. Congress. And those of us who were in the central office at NIH were sort of caught in the middle because

we had hoped (there was a whole staff of people from, you know, psychologists through obstetricians and pediatricians and whatever) that we could pull these data together that came from these different institutions, but instead they were deposited in a computer and the statisticians kept rerunning the programs, and in the meantime a lot of money was spent, of course, building up pediatrics and OB departments.

Ferguson: You were talking about

Werner: I was talking about the experience, which was interesting

Ferguson: -- that study and trying to put together the data from 50,000 pregnant women and their offspring.

Werner: Right. What was interesting for me in terms of influence, this is really a political and a social event (the research was that) here was the dream of bringing different disciplines together under the sponsorship of the U.S. Congress, because that was the time when the Kennedy's, let it be known that Kennedy's sister was mentally retarded, and Hubert Humphrey had a grandson who had Down Syndrome, so it was an interesting constellation of events where for the first time really there was a major collaboration in theory between different disciplines, both those that looked at the biology and the social sciences.

Ferguson: By this time it was right at the end of the fifties -

Werner: This is now - now the study was '62 - Yes. It began actually, that's right, in the beginning sixties. I was in there on the trial run, there was a period of a year where they tried out the tests and then they began to collect the data, and so actually these people are now in their thirties. And the hope is now-one of my graduate students has used some of these data-that people would access the archival data, which are good data from the prenatal period until age seven or so, both from the pediatricians, the neonatologists, from the obstetricians, from the virologists, blood samples, tests from the psychologists, and so forth to still be used, and there are three places that do it. John Hopkins is now following up

Ferguson: -- young adults or mid-life adults.

Werner: -- mid-life adults, almost. And my hope is that, you know, especially if they could do something with the virology samples that they really can still connect some of the things at birth with the outcome now.

Ferguson: -- said they could go back and recover DNA?

Werner: Ah, you're reading my devious mind, right! And so what I mean, I don't know if you call this political or social, what this experience taught me was-and that was three years at NIH-that: (a) it's exciting to work with people from different disciplines; (b) you need to somehow find a vocabulary so you can communicate, to get away a little bit from their own specialized jargon, but; (c) that bigger in the rank order a, b, c, bigger isn't necessarily better. I mean on the one hand here, these were the stellar research institutions.

Ferguson: Bigger can get so easily out of hand.

Werner: Yes. And that if you're at all interested in a small or a long-term study, I'm trying to say you need to have some control of the events, and I don't mean control of stepping on someone else's toes but, you know, of shaping both the objectives, the methodology and then hopefully also, of course, for having access to and interpreting the results.

Well, my primary interest all along, I think I have alluded to this, was that I was intrigued by the fact that something little could get to be grown up and what happened in between? But, of course, this was the time when every focus was on main effects, right? Whether you were a psychoanalyst or whether you were a socialization expert, or whether you were on the other end looking for a birth experience, everyone looked for 'the' cause, or at least the antecedent. And I think

Ferguson: I think at that time you were also kind of stumped on - longitudinal research and essentially correlational data still somehow plays on experience.

Werner: Oh, bless you, Lucy, that's exactly what I was going to say. Because what were you taught? You were taught what we were doing. We were supposed to describe and predict, and then ultimately really manipulate, right?

Ferguson: Yes.

Werner: You know, if you think back a little, it was terribly naive.

Ferguson: -experimental science-

Werner: Right.

Ferguson: It was somehow second rate, and you kind of turn the synopsis that you did have-

Werner: Into something

Ferguson: -into these quasi experiments.

Werner: -that almost looked like a physics experiment, right.

Ferguson: Exactly.

Werner: And so, it, you know, that once occurred. You could say that was "the band wagon."

Ferguson: The zeitgeist.

Werner: Yes, the zeitgeist. And, of course, zeitgeists come and go and, of course, we have now other zeitgeists. And what, by the way, I'm afraid of is that when we will have a rough map of the human genes,

the field of the human genetics and behavior genetics will then start all over with main effects, and correlating one little chromosome with one little personality test and so forth, and then we'll have to learn this all over again, which we will. But anyhow...

Ferguson: So, essentially, it sounds to me as though that what you're saying, is that from the very beginning you had a sense that the only kind of data that made sense were interactional -

Werner: Yes.

Ferguson: -that you had to have interaction.

Werner: Yes. That I did from the beginning, and you know it's been intriguing for me that a much cited monograph, a monograph by Sameroff and Chandler, that deals with some of these issues, is based on our data. They actually looked at the data from the Kauai study. That was really, in a sense, what I gleaned from what little I could extract from the data that we had at NIH at the time, okay? There were not many publications from that time. There were some, and they are somewhere in the beginning of my CV. I think, what was just awfully hard for us at NIH was we saw that, yes it's an interactional thing, it needs input by many different disciplines. We're getting it, and my God, we can't really get hold of the outcome, because that was all in the computer at the time. So after

Ferguson: But that's also the argument for longitudinal studies, isn't it? Of longitudinal data, because you're only going to be able to pin this down when you have these-

Werner: Exactly.

Ferguson: --of

Werner: Right. But I think, Lucy, where I think the real danger, which I really saw acutely then in that big study and, of course, which is inevitable in every so-called longitudinal study, is that people really do-I mean the advantage of it is that it gives you a perspective about both stability and change, and the possibility of continuity and recovering from adversity. But the disadvantage is that I think so often times people then really do get caught in this business of 'we got to wait a little longer, a little longer, a little longer before we write this up, because we don't have the definitive outcome.' And so given the amount of, how should I say, effort that goes into this work, I do think a mechanism has to be found where people should, you know, be held responsible for publishing preliminary results, without being made -

Ferguson: That's an important point.

Werner: Without being made (I can't speak English anymore) --to feel awkward about that they are preliminary findings.

Ferguson: Yes.

Werner: You know, so often preliminary

Ferguson: Preliminary is not second-rate.

Werner: Exactly. But, I mean, sometimes, you know, I think that judgment can happen.

Ferguson: But isn't it also that we can much too fancy ideas sometimes about outcomes -

Werner: Oh, my God. Yes.

Ferguson: -and that sometimes the very simple incomes, are they married or are they not?

Werner: Yes, Lucy.

Ferguson: Do their children go to college, or do they not? Those outcomes are-

Werner: Matter, actually in real life, don't they?

Ferguson: -are much more important and much more than some fancy personality rearing, that nobody may be interested in in another ten years.

Werner: Of course. This gets to, actually, to my most wrong-headed stuff. This was, of course, a time when there was a lot of fancy personality testing, remember? And of course, in part I had been influenced when I was here, Harrison Gough was one of my mentors, and - Diana Baumrind and I were in his seminar, you know, where we practiced the CPI.

Ferguson: Yes, I remember those.

Werner: Remember, right. And I remember we had to pretend, you know, to be different personalities. And in the write-up that I produced he said, "You know it's a very crowded write-up, you should know something about spacing." I never learned how to type. He says, "But you did a marvelous job in impersonating a psychopathic," because you learn how to pull-off different images almost, that were then represented in these profiles. And there was a period in my young life, that's right, where I was very intrigued with that. And when I-and this is now coming to UC Davis. I spent several years and wrote a number of articles on personality profiles of gifted women, the mathematicians and the lawyers and the politicians, and it sounded great.

Ferguson: That was very much doing the IPAR [Institute of Personality Research and Assessment] part.

Werner: Well, that was the IPAR tradition, you know, and I thought here I can catch it and, of course, all I got was basic, yes some interesting profiles. I got a product that was, of course, prepackaged through the MMPI and CPI [California Personality Inventory]. And again, I'm not saying that some of those scales aren't useful but, of course, you can't just focus on that particular product, it does not explain the essence of a personality.

But back to longitudinal work. Well, number one, my aim was never, never (and I'm amazed when I read details nowadays of young promising scholars who tell you my aim is) by the year 2010 to have the

definitive theory of human development, or to have a research-what is it called nowadays, "paradigm" - that really will revolutionize the whole field. My aim at that time, and remember this is how we got paid, too, was if I was lucky with a Ph.D., you get a simple job, maybe in a child guidance clinic or so with a-you remember they had the psychiatrist and the psychologist and the social worker, to help children who were "in trouble," right? That was actually my only professional aim, because the average salaries at the time, even with a Ph.D. were about five thousand dollars.

Ferguson: Exactly. And actually if you got a job in one of those child guidance clinics, as I well remember, the average salary was a little higher.

Werner: A little higher. That's right. The applied was actually a little higher. So I could have stayed at NIH as long as the study went on. I was there for three years, so I did learn about the early stuff, and I learned about the infants, and I learned about the preschoolers, but then my husband, who was in the Navy, was moved about, and he was moved back to California, and so I was looking for something maybe in a child guidance clinic, and then opened up this job at U.C. Davis. Now let me explain how I got this job. Again, I mean it was just a sort of accident They had at that time a home economics department, just like here in Berkeley, remember, Catherine Landreth was in charge of the nursery school and in early childhood education in Berkeley. And actually Catherine, who also was my mentor in a different way, wrote me a nice letter of recommendation, and so I got the job. I never forget the first day when there was a reception for new faculty members.

At the reception a woman who has been my good friend for now thirty-five years, said, "I can't understand why anyone would like to take a job here." This was the first day of my new job-I thought, "Oh, my God, I wonder what's going on?" Well, number one, of course, the principles of home economics that I knew at the time consisted of three little lines: "If it's on the floor, pick it up." "If it's stationary, dust it." "If it moves about, feed it." And that sort of summed up, and I thought, “How can I teach anything,” because I had never thought I could actually be a good teacher. I liked the detective work of research, and I liked working directly with children, but I thought everything I knew I could say in about fifteen minutes, and this was still on the semester system, right, so it was forty-five hours to the semester.

Ferguson: By this time you're at U.C. Davis.

Werner: I'm at U.C. Davis as a young assistant professor.

Ferguson: And in the College of Home Economics?

Werner: It was in the College of Agriculture and Environmental Sciences; the Department was called Home Economics. And so in that first year there were just two of us, and we tried to expand the nursery school, it was then called, which is now a very large center with about a hundred and fifty kids of a wide range of abilities, but then it, I sort of tried to do something like what Catherine Landreth had done at Berkeley.

Ferguson: They need to understand that the tradition was that U.C. Davis was the campus of the University of California that was essentially devoted to agriculture.

Werner: Exactly.

Ferguson: So it was the Ag School then, now it's the University of California's system.

Werner: Exactly.

Ferguson: And it really sort of stayed in that mold for a very long time.

Werner: Actually, it changed rather quickly, which, of course, what Berkeley did in the sixties.

Ferguson: For instance, U.C. Davis is one of the very few universities of the United States (Cornell maybe another one) that has a Department of Enology.

Werner: This is right. It has the top department of Enology in the USA, that's right, and a top veterinary school. But actually what most people don't know is that it will also be the top campus in Human Genomics because all the basic work on DNA has been done by those folks up there who are members of the National Academy of Science and are building a ninety-five million dollar institute that combines the efforts of the Vet School, their genome studies, the medical school, and all the departments that have dealt with this for a long period of time.

Ferguson: And even agriculture.

Werner: Oh, yes. Especially agriculture (plant sciences). So it is an interesting campus, and actually I'm not trying to sound defensive about it, it now is the campus that has every college there is in the U.C. system, there's no other campus that has all the other colleges, which will lead to my explanation of what's in human development now. We have a new med school, we have engineering, we have a law school, we have letters and science, we have agriculture and a vet med school, but anyhow, at the time I came it was still predominantly agriculture. But it just was then beginning to change, because within a year this person who made the prediction-you know, about why would anyone to come-that the Department of Home Economics was dissolved and it became Nutrition, and the people who were in design went into arts, and then there was us-so they didn't quite know what to do with us. But one of the things that the first three or four who were in this group were very good at-and mainly it was the time, we were beginning to get a lot of young people who were interested in and would have been then all into the social activism of the sixties was doing something worthwhile for our children. And so....

Ferguson: Like the migrant workers and etc.

Werner: Oh, absolutely. Now, which, of course, we have many students. So the major that started with three students who are now professors and are about to retire, grew and grew.

Ferguson: This is specifically in child development?

Werner: In child development, right. The new Dean told us how to show growth in percentage, so the next year he said, "You already have a two hundred percent growth," that's right, we got to six students, he didn't mention the baseline, the end. It really took off, and it took off to the point, well, now we have too many. We have five hundred undergraduates, we have twenty-five masters and we have about thirty Ph.D. students, and it is now the one major in the system that has trained graduate students in human development.

It became first child development, and then human development at every level. And the wonderful thing about that experience was (I am really a "Davisite", because I've had offers from UCLA, and, of course, I had an appointment here at the School of Public Health at UC Berkeley) -- the wonderful thing I've liked about Davis is because then all those other colleges came in, the law school was founded, the med school was already there, we could create, and we do have now, our graduate group. The Chair of our graduate group is a family lawyer, Carol Brook. We have people from pediatrics, from psychiatry, from neurology, from epidemiology, from the law, psychology, sociology, education; it's a rather unique group. It's the closest, I think, almost-I hate to say-to what the University of Chicago once upon a time was in those days, and to Cornell.

Ferguson: As I'm listening to your experience, it's interesting to me that I went from Stanford to Michigan State, and just about the time brought these people.

Werner: Right. Yes. So you've seen these

Ferguson: -so I saw essentially that same kind of development at Michigan State.

Werner: Yes.

Ferguson: -which was traditionally the agricultural, and to some extent the engineering school -

Werner: Right.
Ferguson: -in the state of Michigan. And it was the same idea that applied research was not only respectable, but important from the very beginning.

Werner: Right. Right.

Ferguson: And there was the possibility of putting together all of these disciplines, which included engineering, which included the medical school as it started to develop, which included the veterinary school, etc.

Werner: Right. So you saw that too, didn't you Lucy? So it was actually a very exciting time if you look back at it, because people were not yet in boxes, or they had been forced out of a box to some extent, you know, like the home economic types, right? And they had to find new organizational features and they had to talk to each other, again, I think in a language that communicated across the individual jargon. And there wasn't yet a great deal of defensiveness, I think we were all sort of new and in it, you know, and the lines weren't drawn; they always get drawn after a while. But if you also look at Penn State, you know, that was a college of ecology, I mean it was agriculture once upon a time, then it became ecology and whatever-I mean, yes I would certainly give Glen Elder credit, a field is shaped, of course, not just the subjects of a cohort study by historical events. And the events there had to do with an enormous growth of the student population, right, the baby boomers, and new campuses and new schools, and everything was in flux.

Ferguson: Also, relatively minimal funding, because -

Werner: For a while, yes.

Ferguson: ...cut out a little bit out of the experience at NIH, and that period which was the period of the democratic administrations that preceded the Nixon era -

Werner: Yes.

Ferguson: -and I have acute memories of serving on a NIMH committee just at the time that the Nixon administration began, and the spectacle of what happens when you apply battle-axis to federal funding -

Werner: Right.

Ferguson: -is very vivid in my mind. I mean that was, important, in the sixties.

Werner: Oh, thank you Lucy, because you've also given me also some validity and reliability now in our interview, right? Because these are some things that would be kind of difficult to communicate today.

Ferguson: An institution like U.C. Davis, I think, or Penn State, or Michigan State, then had a pool of state funding to fall back on, because an institution like that has the basic job of educating young people of the state to be productive citizens, to be good engineers, good lawyers, good doctors, you know, good nursery teachers, whatever they're going to be.

Werner: Right. Well, and they did have -

Ferguson: And that's the important fall back of support for not only higher education but research.

Werner: It is. And, of course, that then in the end, of course, also creates eventually some tension again, I mean that's because the College of Agriculture then became a College of Agriculture and Environmental Sciences and, of course, they always had Hatch-funds on the side, that's right. In theory you could apply, or it was almost taken for granted that besides your nine months you could apply for funds to get you through eleven months, which grew way back from the idea you had to be present when your seeds were growing, right? And watch your plants or eggs. Now I have to -

Ferguson: You ought to explain the due law of Hatch.

Werner: Where I am, I have to honestly tell you over the time, but I don't know whether people need to know that, but sometimes that's not such a good idea. It's like my experience with NIH, as much as I treasure NIH, having a lot of money at that time before in the Kennedy administration, didn't necessarily lead always to the most productive research, even though it accumulated data that now could be used imaginatively. And the same is true with the Hatch Funds which by the way now have been severely slashed-that for people knowing that you could always fall back on that, I think to some extent may have impeded for some the spirit of getting out there and getting some funds for yourself. And I was, as always, a little out of step because I opted for nine months, for a nine month appointment rather than eleven months, and because it was at that time, of course, then that my work with UNICEF began, and I wanted to be free to go three months some place and do something applied. And in retrospect when I look at the

records of people, because I ended up on the committees for merits and promotions from the college and then later on for the whole campus, I'm not so much convinced that really, again, the security of funding necessarily, Lucy, makes you a more creative person, you know, but it's always good to know that there's something there, and that's true for the medical school.
Okay. So what did we get to, should we say anything on funding, quickly, in terms of research funding? We're down there to...

Ferguson: Let's see. There's a place for it here. Research funding, number five down here.

Werner: Yes. Well, quickly then let's talk really about the research, right. I mean, I think...

Ferguson: What we have skipped over, I think, is number three and four here, which is really the heart of it, the impact, sort of the whole.

Werner: That's it. Why are you interviewing me in the first place, right?

Ferguson: What continuities in your work have been significant and so maybe we should double back on that.

Werner: Right. Through the previous experiences I would say, not necessarily planned, I would say there were several themes that I have arrived at when I came to UC Davis. One that I was always interested in individual differences, and a lot of this came also from the experience here, from Bob Tryon, remember the guy who taught cluster analysis?

Ferguson: Bob Tryon. I do.

Werner: Yes. The experience I think out in Nebraska, especially with the Native Americans, and having been an immigrant, made me keenly aware of the need to look at cultural differences, right? And the fact that I always had this combined interest in biology and the social experiences certainly, and the mentors who were great in doing longitudinal work, certainly made me think, okay this is something worthwhile pursuing. However, when you are a young assistant professor, and I think that's something people need to know about when they do their own work, I guess, is you always have to balance these interests in a system like California where the demand of what's been called "P or p"- Publish or Perish-right?

Ferguson: Yes.

Werner: And so that, I think, -

Ferguson: Yes, that's another way in which sort of feeling that you have to wait for significant outcomes, you're very counterproductive.

Werner: You can't because you might be out.

Ferguson: You may perish while you're waiting.

Werner: You may perish while you're waiting. Where I was, of course, exceedingly lucky was then that

when I returned to California I met - well, it's actually through Marjorie again, as I think back

Ferguson: Marjorie Honzik?

Werner: Through Marjorie Honzik, because she had been consulted by Jessie Bierman at the time in the School of Public Health about what to do with what then were basic epidemiological data that she had accumulated on Kauai, that was the first part of the Kauai study, which were basically data that showed how many of the children at the time, this was during the period of the epidemic, you remember there were these meningitis epidemics that kept coming and going on the west coast.

Ferguson: And polio too.

Werner: And polio, right. How many children in her particular epidemiological study had prenatal handicaps, perinatal handicaps, and there was the beginning of thinking about, should we take a look and see what happens to them afterwards? So it was at that time, Jessie had already retired from the School of Public Health, and they were looking for someone who would have the sense of, well, what do you do when you look to see what happens to children after they survive the first year of life or so? Marjorie had recommended that I might work with Jessie, and so they gave me an appointment. I was a Research Associate (it's in my CV) with the School of Public Health at U.C. Berkeley, which was my research appointment; I continued to teach at U.C. Davis. And so the first thing that I really did with Jessie, who was a wonderful woman, she was in many ways like McFarland, was to look at the big picture. Did you know Jessie at all?

Ferguson: No, I didn't. I don't think I ever met Jessie. I do know the...

Werner: Yes. She was in maternal and child health, and she was a practical person and, of course, her concern was, how can we cut out risk factors that are pre or perinatal that affect children. She was not--and she was very honest about it--trained in any way to consider social or cultural factors that might affect these outcomes, and really was sort of at a loss at--you know, how could you now monitor these outcomes over time? So for about three years I worked with Jessie, really in sort of taking a look at what she already had accumulated, because what they had published was the fetal losses and then how many were mentally retarded, how many were autistic, and that sort of thing, which actually was also one of the first publications of the Collaborative Project at NIH. But they had all these wonderful background things already on the families, and so I said, "You know Jessie, maybe we should take a look at these data, and then we get into this interactional effect, right, in variations in social class and family stability and how that already may show up quite early in the child's development," and she didn't quite believe it, but then we did some analysis. And I think as I look back, sort of the crucial thing there was a 1968 publication, God forbid, on the cumulative effects of perinatal and environmental casualties, or something like this, you've got to look it up, because that's where we showed rather dramatically, and for the first time (I couldn't believe it either, and I was worried that it could never be replicated) the differences between kids who were rather seriously peri-natally stressed but grew up in fairly, not affluent, but at least middle-class families and stable families, and those who grew up in poor families. There's enormous differences already; on the Cattelle and Vineland scales at age two. And then also over time how the pre-perinatal code affects antecedents, took a back seat to the quality of the caregiver environment in these children, so that sort of when I had not yet thought of the term "resilience," emerged. It was obvious that not everyone who had been severely peri-natally stressed would turn out to

be a high-risk child. And, of course....

Ferguson: Or would turn out to be a casualty.

Werner: A casualty, exactly. And, of course, remember this was the time when we looked at casualties always retrospectively, right? Knobloch and all those folks pointed out if you looked at people who have reading disorders, my goodness, you look back and quite a number of them were born prematurely, therefore, prematurely predicts reading disorders.

Ferguson: And if you start defining your sample in terms of casualties, it's always going to be a biased sample.

Werner: Exactly. But that's all we had at the time. And I think, you know, there was nothing wrong with starting there, it led to certain hypotheses and then you could be pleasantly surprised if some of these hypotheses didn't turn out. So Jessie retired then within three years, and actually basically sort of left all the stuff there, and so I thought, well it's a wonderful opportunity to look at this interaction effect, maybe just for another two years until the children of Kauai get in preschool. Then, of course, as time went by, it was in part the community that kept asking us to come back to see what the implications of having this risk and this protective factor would be for elementary education and so forth.

Ferguson: Actually had quite a bit to say for research environments because it's a very defined community.

Werner: Yes. Although over time, certainly, one of the interesting

Ferguson: It's limited obviously.

Werner: Yes. And, of course, we have the interesting data now up through age forty that you get selective migration, actually the ones, the 'higher risk,' for want of a better word, "resilient" individuals move out and move further away, so all our problem in follow-ups has almost been the reverse of what you get in inner cities, where you have a hard time tracking down the ones with problems. In our case, often times the ones with problems, because they couldn't make it, stayed home, this was especially true for the last follow-up after the severe recession.

But anyhow, what best - I'll get to three - what best-published or unpublished manuscript best reflects, sets your theme about child development? I would say probably there are three of the - I'm thinking of the books now. *Vulnerable but Invincible,* which has been, I guess, reprinted many times now since the fourth edition. Then *Overcoming the Odds,* which carried the study through '32. I'm bringing out now one with Cornell University Press, which will be *Journeys from Childhood to Midlife: Risk, Resilience and Recovery* (Cornell University Press 2001).

Ferguson: These were, are basically, data.

Werner: From the Kauai Longitudinal Study. There have been five books on the Kauai study. *The Children of Kauai* which carried them from the prenatal period to age ten, and that was, Jessie was still alive, so I published that with Jessie and with Fern French, who was the statistician on the project.

The second one was not a very exciting title, *Kauai's Children Come of Age,* which carried the study to eighteen. So we had the prenatal data; we had seen them at age one, at two, at ten, and then by the time *Kauai's Children Come of Age,* at eighteen. And it was at that point, that was I think '79 or so, that what intrigued me, looking at the data up to then was, "how strange that some of our predictions didn't come true." I mean, that's how we were fixed in our thinking at the time, "high risk children have to turn out poorly", and here was this bunch of kids that seemed to be doing all right. And so it was, of course, also the time by which, then independently, people like Norm Garmezy, who had been looking at the offspring of schizophrenics, discovered that not all turned out to have problems. And Michael Rutter had looked at the children of the Isle of Wright and seen quite a number of survivors. In fact, when we were beginning to pull our data together, it looked as if maybe almost half of the high-risk people were okay. And so I analyzed the realm of the data up through age eighteen; I gave it a different twist. I thought, “Why does everyone look at the casualties?” That's right. What's the difference between them and those who have similar risk factors, in fact, a high load of risk factors, not just perinatal stress, but poverty, and early dysfunctional family and those who turn out okay, I mean, they have similar risk factors but turn out okay. And so that analysis became the basis of *Vulnerable but Invincible,* and it was at that stage that Garmezy and Rutter were in...remember at Stanford they have, as you know, a behavioral sciences center.

Ferguson: The Center for Advanced Study of the Behavioral Sciences.

Werner: Yes. Right. And they asked me to make a presentation, and all along, Lucy, I was entirely unaware of the impact of this book. I was just a plain assistant and then associate professor on this cow campus, right? And far away from, you know, the political power, and always wondering whether the data we had might be very peculiar because they came from out there, from a Hawaiian island. For instance, the first time we published-the fact that a good one-third of the whole cohort had serious reading problems, I thought, Oh, God this could never generalize, well then some years later they found this high percentage in Denver and so forth. So I think I was not originally quite impressed by what data we had. It was interesting, but I thought, you know, I don't know whether this will make any dent in the field. And I have to give Rutter credit. When I presented this analysis, comparing the high risk kids who succeeded against the odds comparing them with those who didn't over time, he said, "By God she did what we all are talking about we should be doing, she's done it," I didn't think there was anything unusual about this. But I think that particular volume took off in part also because people were sort of -- the zeitgeist had changed. They were getting away from "risk" to something different, and they didn't quite know what to call it. And I've written quite extensively, especially in the last book about this. What concerns me now is that the counterpart, 'resilience' or whatever, has reached a bandwagon level, and as far as I'm concerned they might just as well do away with that word. It doesn't do any harm to my self-esteem, because it's become over-used. The term has gone far away from Garmezy and Rutter's usage, I humbly said, that there seemed to be in the course of events protective buffers in the lives of children that pushed development back into a positive direction, and that the opportunities for change over time don't just stop in the first grade or the third grade. You know, that's basically what we're talking about, and whatever you want to call it, it's all right with me. However, what's happened now is that the field is inundated with studies of "resilience" that bear very little relationship, I think, to what Rutter, Garmezy and I really thought, the phenomena we studied. And that's fine, but it bothers me when it then generates a so-called "second generation -- studies" of resilience often times studies that make the assumption that you can use wholesale intervention to make everyone resilient, which, of course, is the opposite of what we originally found in the first place, Le., that there are individual differences between people and their responses to adverse circumstances, and also, you know, in their response to intervention.

The other book, *Overcoming the Odds*, I think, which Cornell University Press has kept now for ten years in print, I was surprised for a scientific book. I think that may have made an impact because it showed changes that were possible among the so-called troubled people over the time into the third decade, and changes that were possible not because we professionals intervened, but because individuals made use of available informal systems of support in their community.

The book that is coming out now (it did in 2001) I hope will maybe remind people that we're a biological entities, because what I see now in midlife is the persistent problem, the persistent problems, either among people who have a family history of alcoholism or substance abuse, or a family pathology is schizophrenia or manic depressive disorder or serious perinatal stress, or a combination thereof. There is a lot of recovery still in the third and fourth decade of life, but the people who make use of these opportunities, ironically, as we go back to I think I mentioned earlier, tend themselves to be a select group, in other words, they tend to be people who early on had a good relationship, a trusting relationship with their caregivers. They tend to have been a bit more intelligent. They tend to have been a bit more sociable and so on and so forth.

Ferguson: So you begin to see those protective factors are the variables that have identified with resilience coming through.

Werner: Right. They're coming through in the process of recovering, but it also then points out certain limits to some extent, to the assumption that if you just intervene now with whatever programs you have, that everyone will respond equally well. And I'm afraid that's become part of the bandwagon now, and someone needs to say, "Now hold on," if you look at the protective factors they may very well have a very strong genetic base such as temperament, intelligence, etc. So keep in mind that if you intervene, you know, your very ability to succeed will be determined to some extent by what people bring to you.

But the other book that probably may have made an impact is one that should in one of those days -- be revised, but one of my graduate students should do it, is the book on cross-cultural child development, because in my work with UNICEF I really was aware relatively early that we were only thinking basically, yes, in our child development theories and methodology about kids that we knew, right? Which were mostly the kind that grew up in Boston, Berkeley, and Baltimore, and

Ferguson: -- have been inclined that way in the first part, the Kauai study sort of forced you to -

Werner: Exactly. So there was a feedback.

Ferguson: So that to a degree a different population - but you also had the cultural diversity within that population.

Werner: Exactly. Yes. So in a way, I mean, I never sort of thought about this, the work with UNICEF was really important to me for personal reasons, because without UNICEF I wouldn't be alive. That goes back to World War II, but it really does open your eyes about things that I think we just never -- either things we take for granted and therefore are not considered to be a variable, like access to education, right? Or, very important factors or mechanisms that exert a great role on families other than middle-class white folk.

Ferguson: This goes back to your thing about, 'If it moves feed it.'

Werner: Yes.

Ferguson: Because if you don't feed it, it's not going to survive.

Werner: Exactly. So, you know, one of the things that I feel sad about, with all the talk about resilience on the one hand, in the last SRCD meeting we were trying to organize a symposium, it was actually someone from Penn State -- I really thought that's a great idea, where they were trying to pull together some data on studies, of "resilient" children in South Africa, in Asia, in Guatemala, who had come from levels of both risk and deprivation, much, much more severe than anything we have in our country. It wasn't accepted because it wasn't deemed to be of interest. Now come on, you know, ninety percent of all the children in the world live in those places, so if you ask me what I would recommend for the Society for Research in Child Development, is that they definitely, as you would agree no doubt, should have a possibly bit wider perspective on children in developing countries.

Ferguson: Actually, you had started to talk a little bit about SRCD, and

Werner: Yes. It doesn't have to be in the same order. I guess. Okay.

Ferguson: We were working on personal research contributions.

Werner: Right.

Ferguson: Two, three, four, and actually I had asked you something about the women in politics studies.

Werner: Right.

Ferguson: -- and you said something about their being wrong-headed, and I'm not sure whether you meant that seriously or not?

Werner: Well, I don't know. It depends, again, on how you define - are we on?

Ferguson: Yes, we're on.

Werner: -- what's wrong-headed or what's significant, of course, all depends on where you're at in your professional development, and to some extent in the development of your field, isn't it? So to me at this stage, looking back I would consider it quite naive, to say the least.

Ferguson: Because you were looking for a specific personality trait -

Werner: Exactly. Rather than addressing factors.

Ferguson: -- that might characterize women who got involved in politics.

Werner: Right. Or other women in other fields, right, and things aren't that simple. Let me then say something a little bit on the research funding, because it actually does tie in, to some extent, to also, of course, what topics you address. The personality stuff sort of could be done as a quick and dirty thing, right? I mean you send out questionnaires, and hopefully you can cover the postage, right, and maybe they respond. I'm overdoing it a little bit. I hope no one takes this all too serious.

Ferguson: No, absolutely, because I think that this is exactly the kind of reflection that we need from the perspective of senior people in the field who've been through these various eras of both - a **combination of research funding and what's fashionable in research.**

Werner: Exactly. Right. And to some extent, I think, this is something maybe, but I don't know if you can teach this young researchers earlier enough. It's like teaching research design, you know, it's terribly boring because you can't hang your own problems on to this -

Ferguson: It's like trying to teach peoples statistics when they've never tried to do a study

Werner: Exactly, Lucy. And yet to some extent, of course, the pressures of an institution, like you say Stanford, or a UC system which is research-oriented and rewards you, right, for publishing or perishing - ah, now we've got the Hoover. (Vacuum cleaner in the background)

Ferguson: I'm just going to close the window. I can't hear you.

Werner: Oh, you think the Hoover's outside?

Ferguson: Yes. He's cleaning.

Werner: All of it impinges, of course, on your research, that's right. I mean, you can't really say realistically that if whatever you do, if you're curious in development you go ahead and draw up your plans and things will come to pass, that's totally unrealistic. You live in a given time in a given institution with pressures that are other than just your research, right? And now if your heart is in the right place - I've always told my students, oddly enough, it doesn't matter so much what the concepts are and so forth, are you curious and is your heart in it? Because you need your heart - the passion of your heart, actually more than anything else to keep you going, because you - like so many others, you'll perish.

Ferguson: Otherwise why would you keep going through all of the stuff that is so boring?

Werner: Exactly. Exactly. Yes. So the art is how to balance the competing pressures. Let me see if I can define this between the demands from your institution and what it means to fund your research, that's an art in itself.

Ferguson: Yes.

Werner: And the real hard thing is, I think, to keep your integrity in the middle of it, and that's where I have some reservations about how this can be done, because I watched - this is my own bias now, a lot of very bright young students who are with professors, who tell them the quickest way to get through graduate school is to take a little piece of his or her project and work on it, right, so they can get out with their Ph.D. in this century, or in this case now in the next millennium. And that's fine on one level, but oddly enough I don't think that's the best way actually to teach -- to encourage a good researcher.

Ferguson: That is the sort of literal apprenticeship model.

Werner: Yes. Now the apprenticeship let's say that Nancy Bayley gave us was that you could see her as a model that cared about the quality of her data, but she never told you why don't you work on this for you to get ahead, right?

Ferguson: She might have put you to work on some of the data.

Werner: Exactly.

Ferguson: -- as a job that just needed to get done.

Werner: That's right.

Ferguson: But she wasn't saying to you have to do it my way.

Werner: Exactly. And unfortunately, as you know, Lucy, I don't know if that's the case at Michigan State or Stanford, that's how a lot of the graduate students are trained, you know?

Ferguson: Yes. Well, that's how a lot of major professors get their work done.

Werner: Exactly. Are we all putting this down here? Exactly. So that part of balancing - the curiosity of your mind with the passion of your heart and all those pressures around you, whether it's the pressure of your professor, your institution or the funding agency, that's an art all by itself. And I would say the only way you survive this at all is to never be entirely socialized in any of these systems, because the minute you are, you're actually, in a sense, putting yourself in a box.

Ferguson: Right. The shutters come down.

Werner: The shutters come down because then you are taught, "this is the way to go, jump through the hoops" and then I get up there and I've seen many brilliant people who jump through the hoops at Harvard and Yale, then once they were but didn't know what to do, you know, they were so trained to do what their professor told them.

Ferguson: Right. That's an argument certainly for a cross-cultural perspective, but above all - interdisciplinary research it seems

Werner: Yes, it is to. And to find a way, I mean there's always an apprenticeship, but it should be an apprenticeship, I think, that honors the integrity of the students, especially the passion in that student. And okay you can stand by and teach them a few little tricks about, you know, that maybe your project as presently conceived will take a hundred years so you might as well cut it out to maybe five or so, but otherwise to try to force students into a mold, to me that means that you were creating a lot of unproductive researchers. And the graduate students I take usually - there are some who've worked on my project on the master's level. I want the ones who have ideas of their own, and - but that gets back then to how can you support them. And so my experience with the research funding has been, I think, I try to summarize it a little bit in this little epigraph, more money is

Ferguson: This is the epilog that you're -

Werner: Yes. More money, number one, doesn't necessarily mean that I may become a prodigy, and more money does not necessarily mean better research. And if you see sometimes students say, "Ah, this guy has got all this money, so I've got to work with him," if it's a guy, it could be a woman, right? It depends. Is it something you really would like to do and do you have the freedom then in the confines of this institution to see it through? But how can you support people? Well, I think there are two pressures. If you are in the academia, you've got to think about how you support your project, and at the same time your students; that's really an ongoing dilemma. And I have been once on a committee that I was never invited back again, because I tend to call a spade a spade and not an agricultural instrument even though I'm in a college of agriculture. I won't name the project, but it will probably become obvious, that it used to teach teenage mothers, some twenty teenage mothers and their young children how to get better skills in life, and it had been much written up. And after so many years the children are a little higher up on PPV scores, not quite normal as most findings show, in other intervention studies, that yes, there's an increase, but it doesn't necessarily put you into the normal range. But they had spent by then something like, you know, fifteen million dollars on these twenty teenage mothers and their children on this project, and in reviewing it I said, "You know, if they had given each of those mothers a trust fund at the time the study began, with investments they could send their kids to Harvard now if they had the money." There was, of course, total silence after I made this remark, because the fifty million hadn't gone into guess what, the teenage mothers and their children, but supporting a whole institution that had to support all the people who were interviewing the teenage mothers and testing the children and so forth, and the Director, for better or worse,

Ferguson: Provided a little enrichment for the children, but provided tremendous education for the graduate students.

Werner: It did. And it didn't necessarily mean that I could not see the dilemma of the Director, he had to support. So I found - well number one, I've always been a maverick, as you know, probably by now. I have not been a member of any consortia, and I think what cured me there was my experience at NIH with the Collaborative Study, which I think was a kind of consortium. Seeing that I thought, "My God, a consortium no matter how well meant comes down to the lowest level of denominator." This has been my experience watching what has come out of consortia, because you've got the politics, you've got the big boys fighting for their piece of the action, and the new ones trying to figure out "where do I fit in in this?" we know the characters in the game, right? For instance there's this consortium on midlife, which I think is interesting to me because this study now that we have published will probably be the first study on the baby-boomers that follows them from birth to midlife. I haven't seen anything actually published by this consortium that's accumulating a lot of stuff, but it's because there's just too many cooks working on the soup.

My experience has been, you have to try to do this in a flexible way, and that comes back to your responsibility to the consumer, to say, of course, I'm going to plan a forty-year study of resiliency is ridiculous, no one ever planned this. There were opportunities that came along. New research questions that came along, and possibilities that one could utilize with moderate amounts of money, and I'm someone oddly enough who feels small is beautiful - small to moderate. In my experience when I look at very large, large-scale studies that have spent a lot of money that I think, most of them weren't worth the investment, don't you think so Lucy? And it has to do, not that they weren't good people and good ideas, but it's just the nature of the beast.

And now federal funding, we started out with a grant from the Maternal and Child Health Branch of the then Children's Bureau. Remember the Children's Bureau before it became powerless. And they were pretty nice people, they were concrete, applied, but their application forms weren't too long, so you could follow through - I think I did have some support for some time through the National Institute of Child Development, which certainly claims now, you know, that they were always very interested in resilience. That was short-lived. Most of my funding, I found, worked better if I went to private foundations. The one I'm extremely grateful for is the Foundation for Child Development in New York.

Ferguson: The Grant Foundation.

Werner: The Grant Foundation, for sure. Development and there's the other one, Child Development.

Ferguson: The MacArthur.

Werner: Yes. But there's the other one, it's a smaller one. The Foundation for Child Development. I've got to look this one up, it's in my dedications. Orville Brim used to be the head. But they all, you know, they would give, I mean, I hate to tell you this but most of my individual follow-ups didn't cost more than maybe about fifty thousand dollars. It can be done; actually, it can really truly can be done.

Ferguson: Are you using a lot of community resources?

Werner: I used a lot of community resources, that's right. And of course, also the graduate students who were interested in and could write Master's thesis on it. I mean unless you really need brain scans on everyone, I do think a judicious use of what is already there can be incorporated into whatever methodology or theories you have. And it reminds me what you said before, Lucy, about outcome data, I mean I think psychologists, especially in the realm of child development are given to these very fanciful concepts that float up there, right, whether "required helpfulness" or whatever, "ego-strengths", they're up there, and they're rewarded often times for creating new concepts like this that are up there that, of course, no one can replicate because

Ferguson: --and Zeus.

Werner: Right. But that it's almost as if you're rewarded for, a) creating new methods, new instruments that measure the same thing. And how many different ways can you measure a baby, now whether with a Cattell, Gesell or Bayley test, you know what I'm trying to say. A baby does certain things, so fine, you want a new scale you can give it a new name, but this is, I think, has been a temptation in our field. The refusal to come up with some solid set of measurements that have proven their worth, and considering

some basic outcome data that intelligent citizen, including the taxpayer can understand. You have that sense too? Look at any given issue of *Child Development*. I mean, it's interesting, especially if there's lot of arrows, some of them, of course, not filled out because the "in thing" now is to have lots of arrows in path models; showing what these arrows mean over time takes a hell of a lot more time to do. But it's one of these, I think, almost illusions that we have in our field in order to be known or to be known among those who know we have to come up with new words, new methods, and then no wonder that often times stuff doesn't replicate. It would be like physicists inventing constantly, instead of an inch or a foot, then a meter, you have to invent new ways of measuring distance. Have you noticed that?

That part, I think -- you know, is now reflecting on my experience with research funding, because I think in the ones that are reviewed in the study groups of the federal government often times, some of this is rewarded if you've got a new concept there, a new instrument. Some of the private foundations seem to be more practical, they say, "Okay, how many people eventually turn out to have a job or be married, or be taxpaying citizens," isn't it? So - I have always enjoyed more working with private foundations because they also give you more leeway to go your own way. And you don't spend all this time forever filling out seventy pages of grant applications that you have to fill out, two years later all over again, before you ever get to get your work done. Now this is not a criticism necessarily of the funding, but it may be of the mechanisms that are applied. And I don't know how to improve this except to say that study sections, yes, in the beginning I was on a lot of them, and what I learned from that is the researchers that were known or in the know get more money than those who don't, usually. They tend to reinvent the wheel. But it's important because then whoever is on the study section can put this on the CV, so it goes on and on and on. Study sections generally do not allow room for the mavericks, for the ones who really think differently. So somewhere a mechanism needs to be found, I think, to say, "Look, you know, maybe this is an odd idea, but what the hell; let them try it now with some restraint. Try it, and after five or ten years if it doesn't work, then well, you know, we have to go to some other place."

Ferguson: Consortium?

Werner: Yes. Not a consortium, but something just where you have a funnel or so where you would say, "Okay, the old war horses we know, they're going to grind out something, or their students are going to grind out something, we'll give them sort of a moderate amount of support. The young ones with interesting ideas, let's give them a try!" but I don't know how you can break this down, Lucy, that's organizational restraint, right?

Which gets us to the organizational structures. Certainly the one I know best is the University of California in general, and I would say it's worked well for me because I like the pace, I mean I think you are under the gun, always, I work best under the gun. I mean you're under the gun, you know, I retired as a Professor at step eight or nine, top of the ladder, but you're still being reviewed by your peers who see if your brain is still functioning, that's good. But it's not good for everyone, so -

Ferguson: To sort of backtrack on that, because you've been sort of mentioning a number of things, that it's good to be a maverick.

Werner: I don't know. It's not always good to be a maverick. I'm not so sure, Lucy.

Ferguson: Oh, but in your case it certainly has panned out.

Werner: It's panned out. It's panned out now. I get periodically rediscovered, that's all.

Ferguson: That you need to be flexible, that you - that above all you have to have passion.

Werner: Passion, and real integrity. And I do think I learned this one lesson from Nancy - I mean it was a quiet passion, but

Ferguson: You know it seems to me that you must also - that passion, because to sort of take hold of a mentor, to respect that in a mentor, to understand what it can provide - I think you have to -

Werner: Oh, yes. We'll, we're back to, of course, there is a fact that you make your own environment, isn't it to some extent?

Ferguson: -- in our field or in any other field is where that passion comes from.

Werner: And that's my interest in the gifted, right. I'll tell you what, and this may sound terribly naive, but every time I go into this library I just--for me it's still a thrill. And remember I grew up when they burnt books in Germany, right? That you - there are all the minds of the world there that you can access, and that you can just go in there with your library card, and then I have now one - well, they've given me a research professorship, but I mean I can hold on to this library card until eternity. And someone told me (I never got through Dante's Heaven, I only got through hell and purgatory) but a friend of mine said that Dante's conception of heaven is a library. I don't know if she made that up, but that's wonderful.

Ferguson: That's also Roger Boring.

Werner: But still, it's - now where that comes from, I don't think in all fairness that comes from the university at all. It does come from way back, yes, those printers, for centuries. It comes from those books, you know

Ferguson: And the books that you managed to save when the house got bombed or shelled.

Werner: Yes. And it - to me, I mean, I'm so excited hoping that I'll live long enough at least now to see the first map of the human genome. To me, the wonderful thing is, if you try to understand now what's happening with the genome, you see - God is a printer, right? So now he arranged all these different elements like letters in different ways [if he or she exists], and out of it grew evolution and us, and a few little printing errors became mutations, and probably mavericks. I mean this whole process, yes, to me it's just as exciting now as it would be when I was probably five or six, and I think that's the difference, of course, with students too. I don't necessarily - I'm never so impressed by students who have an average of 4.0, right? God forbid they didn't even flunk in P.E., but would just sort of sit there and say, "I want to know it all and as fast as possible, and then I'll go out and tell others how to do it," you know. And, of course, our graduate education, Lucy, is mostly encouraging that kind of a student, right?

Ferguson: Sad, but true.

Werner: What do we do? We teach them how to - we teach them certain things we make up, a jargon, we

teach them how to define this jargon and how to spit it back at us, often times, right? So these are some thoughts that tie research experience with teaching. And as for the future, I would really think if the field is to get a little pizzazz, it does need to get humans back into the field, because a hell of a lot of what's being done now so often times is to archival analysis. The real fast way to get ahead is not be dumb enough to collect all of the data, but to go back to others who collected it, to reanalyze it in a meta-analysis. And then if it doesn't turn out you can always blame the person who collected the stuff, see? They should have done it better, right?

Ferguson: -- brings me to another sort of aspect of your career, which I think we ought of at least comment on, that's the work that you've been doing in the most recent years. We can go back essentially to the primary documents that people leave reflecting their own life experiences, you know, what's become fashionable now to talk about is qualitative research.

Werner: Yes. Well, you know, if you've look at the way I've written some of my books you will see that I'm trying to balance the quantitative with the qualitative, and I guess, you know, I really -- people said that during the War in the cellar-that I was always a good storyteller. I am, I think, much more a storyteller than anything else. Now I can certainly impress you with discriminant function analysis and latent variable path analysis, and you know, my husband always says, "Put them in the third appendix because no one will understand it in the first place," and he's right, the reviewers don't understand it either, I've discovered. But, of course, the person I think who was most instrumental in bringing that storyteller out, and I haven't talked about Minnesota at all, was the person whom you may still know, Dale Harris, who was my boss at the University of Minnesota's Institute of Child Development when I was there for three years between graduating and then eventually going on to NIH. He's a Mennonite. He had this wonderful sense of, you know, life as a history. And I think in his work with the SRCD History Project, he's done a fair amount on that, although I haven't read anything by him.

Ferguson: I think Dale was really instrumental in starting.

Werner: In getting this all started, that's right. What I'm doing now, I'm still alternating. I wrote the forty-year follow-up on the Kauai Longitudinal Study in between the book on *The Children of the Civil War* and the book on *World War* II. But I guess, always what's intrigued me is that you need to look across something, across cultures, across genders, across historical events to really understand what life is all about. You can't just sort of poke into one little hole but this is not necessarily something that's rewarding, Lucy. I've been lucky. I don't know how many people get rewarded for doing this, but it actually ties together for me - it's been really great fun. I'm working now on *The Conspiracy of Decency*. Did I tell you about that?

Ferguson: No, you didn't.

Werner: Oh, that's a book about the rescue of the Danish Jews, but it's seen through the eyewitness accounts of those who were children and teenagers then who are now among others, professor of psychiatry and psychology, etc.

Ferguson: -- the rescuers or?

Werner: Both. They're both in it, right. Finni Schultzinger, who's done a lot of work on the high-risk

schizophrenia study, is one of the ones that was rescued as a teenager. His wife, Hannah, who's also Jewish, was left behind and was hidden like Ann Frank, and she has a whole number of friends who as teenagers helped her. It's also actually a biography of someone who's not been much appreciated, Duckwitz, the German who actually warned the Danes. And the German Commander of the Copenhagen Harbor who put all of his boats into dry-dock, this happened with the cooperation of the German Navy. And I think it needs - the Danish story needs to be told because it involves these people of different cultures, and I think among the Germans were some decent folk besides all the villains and so this is fun. But anyhow, but of course, I will tie into it again, questions about how are people living resiliently in dangerous times, and also to some extent, what makes for moral courage, you know? So, that's just the fun part now. But anyhow, so what are my hopes and fears for the future of the field? Is that where we're at now?

Ferguson: I think so.

Werner: Yes. Because my experience with SRCD, I have to honestly tell you, has been somewhat limited. I joined it in 1962. My first bi-annual meeting was actually at Penn State, where I reported at that time about work I had done in Minnesota. I've been - I've never been an editor or council member or president. I'm a storyteller. Even in the University I was on many councils and committees and occasionally threatened by the idea of becoming Chair of a Department, I said, "If you elect me I will dispose of this department tomorrow," I would stop it. Because I learned - and I think there are some people who can do this, like Sir Michael Rutter, you know, he's now, as you know, the SRCD President. Rutter has an intellect that's just indescribable. Actually, most of his teaching at the University of London was not the sort of teaching that we had to do, you know, with large numbers of students. If you both teach and do research, I think people make up their minds which way to go. It's like administrators at a certain level make up their minds it's better to be a dean or provost and I would assume people in SRCO make up their minds that it might be great to be a council member or president, I don't know. You know?

Ferguson: So what you're saying is that in SRCD as an organization, that you haven't been necessarily very involved. The other thing -

Werner: They gave me an award there, I guess, for something

Ferguson: They did indeed. So that SRCD is an organization whose contributions to the field of developmental psychology is -

Werner: -- mayor may not overlap.

Ferguson: -- research in child development is something else.

Werner: Right.

Ferguson: The other thing that we really haven't touched on that's reflected, I think, in your Vita and some of the other material, is a tremendous amount of work with UNICEF and the other agencies around the world.

Werner: Right.

Ferguson: And I think we really ought to talk about that a little bit, that needs to be - there isn't an obvious question.

Werner: Right. No, thank you, Lucy. Because in a way that really has affected my research in turn, you know. That came about really because of the cup of milk they fed me after WWII. I write about it in the last book. Do you have a copy of this? Oh, you had to buy it a hard back.

Ferguson: I only buy the books I want.

Werner: Oh, bless you. Okay. It's actually being translated into German, coming out in the spring; which is interesting that they picked it up so quickly. But I, of course, was very much shaped by *the Kindness of Strangers,* and I mean it literally. Without the Quakers, the three hundred fifty calories they fed us, and without the milk from UNICEF, I wouldn't be alive, period. So, I tried whenever it was possible, I thought, "Well, what are organizations that I could work for in some way," and it was very funny, the UNICEF thing came up again almost as a fluke. I wrote to them, once I was tenured, I believe, right. I mean you always wonder if you survive in the UC system, which would have been in the late sixties or early seventies. By then I had at least published articles on the effects of pre and perinatal complications on early development, so it's something that UNICEF might be interested in. And I volunteered if there was any project they had they wanted me to help with, or if I could help free (I never accepted any money), but I said I could do it during the summer, that's why I held the summers free, and during sabbaticals. And I know Swahili, I wrote, because I actually learned Swahili in Africa, it's my fourth language. It's Kiswahili.

Ferguson: Just, by the way, you learned Swahili.

Werner: So I was dreaming about going, because I had spent some time in East Africa, that they would assign me to East Africa for obvious reasons. No, they sent me to India, you know, it's like the Army. And that was the time when women oddly enough were not active in UNICEF. It had been a supply agency, and people in UNICEF were very suspicious of women, especially academic or possibly neurotic women, right? So they sent me to India, and I must say that work, and later on I'll tell you about some other places I really feel good about, because one of the first things I did is I helped the people in Baroda, where there's a very good institute of child development, translate and adapt actually Bayley's Infant Scales, adapt to Indian, but adapted to their setting in Baroda. Then, low and behold, they called me back, the Indian government called me back the next time around, and I went to the Institute of Educational Research, which is in New Delhi, and actually tried to help them set up really a decent library, I mean this sounds so awkward, but a library that would reflect on what was happening in the world, not just in the United States but in other countries, because a lot of the libraries at that time were sort of set up by hand-me-outs from the USA and then I worked with a very good woman, a researcher from the state of Kerala, looking at children who had mild to moderate malnutrition, sort of the kind that actually I had experienced as a child, to see what developmental effects could be documented.

So after that, most of the time it was actually the people in those countries, not the upper level administration who requested that I come back because they said I had my feet on the ground - I have a great respect, and I think this is a reflection on international organizations, for wonderful people who are very, very bright, who often times work for UNICEF, but even more for people who run its programs and who are considered second-rate citizens because they come from Calcutta, Baroda and Delhi, you know,

it's still somewhat of a colonial attitude. So I worked in Thailand in accessing the effectiveness of a combined program of preventive healthcare, early childhood education and parent outreach, it was sort of a little bit like we were doing in the country at the same time in Head Start. I discovered in the process that they were wonderful -- the things that Denmark had sent us as toys. They were blonde and blue-eyed, and of course, they didn't look like any of the kids in Thailand. They were put away and displayed for UNICEF visitors. I wrote a letter saying, "Maybe they should send something else." That didn't really sit so well with some UNICEF administrators, which was Denmark's contributions.

Then they sent me to Nepal, and I worked with children who were at the Institution of for the developmentally handicapped, again setting up courses, which I had taught at home. I taught courses on exceptional children. What else? I worked with a joint Egyptian-Israeli team that was beginning to pull together data on PKU, and the effectiveness of the diet therapy. There are lots of children with relatively high rate of PKU in Israel because of the inter-cousin marriages, among the ones that come from the Orient. But all of this certainly taught me a great deal of humility about, I think, what we're doing in the West in terms of the relevance of our research. Open a volume of child development, human development, or developmental psychology, and ask yourself, "How relevant is this to ninety percent of the children in the world." You just have to ask yourself that! Well, it doesn't mean that you're saying that it's no good. It's just we're studying a rather unique sample of the human race. We need to look at the real world, which is getting smaller in the west because we shrink, you know, with the aging population, of course, the proportion of children in the other parts is growing more and more. And I just think we need through SRCD or other organizations, to have more programs and more cross-cultural training possibly, really the sort of post-doc that I was lucky to get here; to just sort of look at how the real world lives, and that is in my hope for the future.

My hope is that the field will expand, both in terms of becoming more human development rather than just child development, because it seems to me as everyone ages you are looking at the connections of your children's past to middle age and aging, and that we've got to expand to look at human development, truly, from a planetary perspective. And I think you could draw on the enthusiasm of the young people to do that. But for this you need courses, and we have at UC Davis the largest course I've taught, continue to teach, is cross-cultural child development, and it's wonderful. Two-thirds of my students are now, you know, the refugees from Vietnam, Cambodia, Guatemala, El Salvador, and they're great.

Ferguson: It is a fascinating generation

Werner: Right.

Ferguson: The students who took these courses were the students who then went out into the Peace Corps, and now is turning around and we're getting those students into the -

Werner: Right. But also, actually speaking about UC Davis that when you go through graduate exercises in two weeks, two-thirds of the Ph.D.'s come from developing countries around the world. I'm glad that we have SRCD associates now that are from different countries, but I think they should really be paying a bit more attention to the developing world. I'm not begrudging this incident, but it was interesting, this fascinating attitude of, "Oh, no this wouldn't be of any interest." So what they're doing now, the cross--cultural symposium, they're trying to get it into the program in China. The International Society for Behavioral Development has their next meeting in China, so they're going to have it in China.

Ferguson: In Beijing.

Werner: In Beijing, right. But it would have been nice to have had it in Albuquerque, New Mexico as well, given the fact that there were really quite a number of subcultures right there Hispanic, Native American, you know.

Ferguson: Maybe it'll move back from Beijing to the SRCD meeting.

Werner: Yes. So, I don't know - Oh, yes. I think there are beginnings, but there are just not that many people yet who do cross-cultural research, you know, Lucy, if you really think. I mean, Pollitt, who is with us up in Davis, works on nutrition and iron deficits in Thailand and so forth, and others work with a lot of migrant workers. But, I mean look, maybe five to ten percent of anything in the *Child Development* journal has to do with children from other cultures. I mean they've just discovered our subcultures in the USA.

Ferguson: Right.

Werner: -- but they still really haven't looked around the world.

Ferguson: -- education has increased.

Werner: That's increased, and that's good. But even there, one of the other things that I think they really need to address is certain, processes or mechanisms that playa very important role I think outside of the middle class culture that still represents the governance of SRCD. And that is factors like the role of faith, the role of religion, of extended family members, etc. It's not talked about much. It sounds so unscientific, but it plays an enormous role really in human development, you know, whether you're a Hindu, Moslem, Buddhist or whatever, and that's not much, you know, addressed yet. Anyhow, the personal note, we're almost there.

Ferguson: That leads us to that last topic.

Werner: Oh, my goodness, well what could I have done - most men say, "What could I have done without my wife," and what could I have done without Stanley. I met my husband actually in Minnesota, when I was in Minneapolis. He is from a farm family, from the Iowa - Minnesota border, who was in the Navy when he was seventeen, in the Pacific. A little bit of him is in the book. And he was taking courses on the G.I. Bill, yes, when I was there. Then he joined, he was in the Navy Reserves, then he was called up again, so a lot of the degrees he had also were, of course, had to do with my moves. He had a degree in - what did he get in Minnesota? Minnesota was sociology, and when he was in Washington he took a degree in Public Administration an American university. When he was shipped back out to here, he was down in San Diego, at Long Beach for a while, he took a degree in Social Policy at use, he has a PhD, and he has a Law Degree in retirement, so I say, "Stanley, the only thing open now is either degree in Mortuary Science or Theology." But what's so wonderful about Stanley is that he's not, you know, an intellectual in the sense of all those professors. He's grounded. He's a very, very thoughtful, wise man, and most of all he types my manuscripts because I've never learned how to type. So I work on my computer in my inimical way, and so every book, of course, is dedicated to him. And he keeps me grounded because, well, number one, he's extremely supportive. He does not have professional jealousies or anything, which must be hard in some

places, Lucy. You were also lucky you were in different disciplines, isn't it?

Ferguson: Exactly. I've always thought that two social scientists should be in two different disciplines was an ideal arrangement.

Werner: Yes. And it worked. But otherwise, in retrospect, I must really say, my mom was just a most remarkable woman, if I think about the fact that she had an eighth grade education, but she said, "You've got to go to school." So that's what I like about teaching, and especially at UC Davis, these kids who are all first generation college, you see the Hmong [a tribe from the Laotian highlands] who didn't have the written language. They have a tape that I did in my class where they came and showed the class how they stitched the story of their flight and survival and their rescue into their embroidery, right? They were three or four or five years old when this happened, and now I had a call the other day from one Hmong who has graduated-she went to Minnesota because there are many Hmong there-and she said, "I'm getting engaged, I want you to come to a Hmong wedding." I said, "Wow, how did you meet your boyfriend?" She said, "On the internet." So at once

Ferguson: (590)-One of the things that's so fascinating about the Hmong culture is how they held their tradition, as far as a family network, a tribal or planned network and how they share resources. So now they're on the Internet, that's funny.

Werner: Well that's how they got to Minnesota, you see because the wonderful thing about Minnesota is that all my in-laws are there, and that they were always the first ones to offer refugees, you know, a home - they have the highest rate of interracial adoptions in the country, by the way, in Minnesota. And when this happened, just to back up a bit, because we really left the Hmong in the lurch, they offered them to come and to be supported, and so that went to the tribal leaders, that's right, so if the tribal leader in this place went then everyone else would. So you have this astounding thing then, people coming from a highland in the tropics are now in cold Minnesota, a Hmong now is in the legislature, the first Hmong lawyer.

Those who inspired and were influenced by Emmy Werner:

Mentors
Dorothy Eichorn
Jean McFarlane
Harrison Gough
Carol Brook
Glen Elder
Jessie Bierman
Michael Rutter
Norman Garmezy

Colleagues
Nancy Bayley
Marjorie Honzik
Diana Baumrind
Fern French