

OREGON HEALTH SCIENCES UNIVERSITY HISTORY PROGRAM

ORAL HISTORY PROJECT

INTERVIEW

WITH

Jack Vernon, Ph.D.

Interview conducted November 13, 1997

by

Joan Ash

SUMMARY

Dr. Jack Vernon was born in Kingsport, Tennessee in 1922. Dr. Vernon begins the interview with a commentary on the effect of the Great Depression upon his family. Following high school, he joined the Army Air Corps and became a flight instructor and pilot. He remembers that World War II ended just as he was given his first overseas flight assignment. After the war, Vernon attended the University of Virginia, obtaining undergraduate and graduate degrees in psychology.

Upon completion of his doctorate, Vernon took a faculty position at Princeton University. At Princeton, Dr. Vernon performed research on the electrophysiology of hearing in bats. In 1966, Dr. Vernon left his tenured position at Princeton to assist in the establishment of a clinical research laboratory to study human hearing at the University of Oregon Medical School. Dr. Vernon describes attending ENT (Ear, Nose, and Throat) hospital grand rounds in order to learn more about problems in human hearing. The Oregon Hearing Research Center clinic was housed in the Portland Center for Hearing and Speech, with a second story (funded by the Kresge Foundation) built to provide space for the clinic and laboratory. Through an association with Bill Montagna, director of the Oregon Regional Primate Research Center, and with grant money from the National Institutes of Health, Dr. Vernon began to do research on hearing in primates.

Dr. Vernon then explains how the research shifted to the study of humans when he treated his first tinnitus patient. The treatment of this patient led to the implementation of the first masking device for treating tinnitus, and also led to the establishment of the American Tinnitus Association under the auspices of the medical school. Dr. Vernon also describes the center's long association with Senator Mark Hatfield, including his securing federal funds for building the Neuro/Sensory Research Center (NRC).

The planning and vision for the NRC are reviewed, with Dr. Vernon noting that both the Oregon Hearing Research Center and Tinnitus Clinic are now housed there. Challenges in siting and construction of the NRC are also discussed. Dr. Vernon also describes some of the types of grants, private funds, and donations from patients benefitting research at the center. Although Dr. Vernon retired in 1996, he relates that he is still active in the ENT department, making himself available for patient consultations and as an emeritus faculty member.

Dr. Vernon offers an in-depth description of developments in the treatment of tinnitus and related hearing problems. He specifically describes the application of digital technology to wearable masking devices. Dr. Vernon also mentions that studies testing the safety and efficacy of hearing devices have been conducted at OHSU.

Dr. Vernon also takes time in the interview to discuss the roles of women and minorities as students, researchers and faculty. He also covers the training for post-doctoral students at the Tinnitus Clinic. Lastly, Dr. Vernon notes that the clinic attracts both patients and trainees from around the world.

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Interview with Jack Vernon, Ph.D.
Interviewed by Joan Ash
November 13, 1997
Site: BICC 531
Begin Tape 1, Side 1

ASH: It's November 13th, 1997, and I'm interviewing Dr. Jack Vernon in the conference room in BICC 531. We're overlooking the Neurosensory Building, which is appropriate, I think. Now we're recording, and I would like to just spend a few minutes talking about you, your childhood, where you were born, where you were raised, because that's all relevant to OHSU. Where were you born?

VERNON: Kingsport, Tennessee, April 6, 1922.

And then in 1942, when war broke out, I was flying airplanes and everyone was grounded. You couldn't get back in the air until you could prove citizenship. To do that, you had to have a birth certificate. So I wrote to Kingsport, Tennessee, and said I'd like the birth certificate for Jack Allen Vernon, born April 6, 1922. They wrote back and said there is no such person.

I'd always felt I didn't belong in my family, so I called my mother and said, "What's going on here?"

And she said, "We meant to tell you, your name is not Jack Allen Vernon; your name is Steven Neuton Vernon. You were named for each of your grandfathers."

I said, "Why are all my records and everything about me saying differently?"

She said, "Well, your father had a drugstore and his name was John, and everybody called you Little Jack. So I just matriculated you in school as Jack Allen."

My mother had a great deal of concern for social pressures, and it turned out that the friend who had taken her to the hospital when I was born still lived in Kingsport, and he was an attorney. So I called him and asked him what I should do, and he said, "Let's just change your name." So my birth certificate now has the Steven Neuton crossed out and Jack Allen written in over it. So that's how I started.

ASH: You started with a different name.

VERNON: I started with a different name, yes.

ASH: How do you think the [Great] Depression may have affected your future career?

VERNON: I'm not sure. It affected my family enormously. In fact, my immediate family had to move in with my grandparents to keep both groups from starving, so we could combine efforts.

I guess the only other influence was political. I developed a great affection for Franklin Delano Roosevelt. I just thought he was the greatest, and he was. One of his programs saved our lives. But other than that, I don't think of anything.

ASH: Then your education: you graduate from high school. What did you do after that?

VERNON: Went into the Army—the old Army Air Corps—and instructed flying for years, and then finally got out of that and went through the training myself and wound up as a B-24 pilot. And I had gotten my first pilot's rating and was sent to Detroit to pick up my B-24 and go to the Pacific Rim when the A-bomb went off. And they immediately canceled everything, and I came home, got out of the Army as fast as I could, and went to the University of Virginia.

ASH: And at the University of Virginia you majored in psychology?

VERNON: Yes.

ASH: What made you decide to major in psychology?

VERNON: Very simple. I wanted to be a physician; I wanted to go to medical school. At that time, most people had at least two years of college before they went to medical school. That's changed now, as you know.

In starting courses there, I took a course called abnormal psychology under a man named Frank Geldard. I was bowled over. I've never been in such awe in my life. And finally I went up to him one day and I said, "How can I be like you?"

"Oh," he says, "it's simple. You go to graduate school" he said, "You finish your degree and go to graduate school in psychology."

I said, "That's what I want to do."

ASH: Do you think any of your interests came from the years of experience you had in the military?

VERNON: No.

ASH: It was this man?

VERNON: This man, absolutely. He was teaching a course called clinical psychology, or abnormal psychology. It wasn't that at all. What he taught us was the sensory processes of all the different senses we have. And that just bowled me over. To this day, I can't get over that. You know, the human senses perform pure magic and it is because of Frank Geldard that I was introduced to that magic. Unfortunately he is no longer with us. But it was he who put me on a path, and I guess I've veered some from that path by becoming very clinical rather than basic. But I started out being a basic scientist.

The year that I finished at Virginia, Frank was having a little private party at his house for me that night, and I got a call from Vanderbilt informing me that they had decided to hire the other man and not me. The process at Virginia, when you took your oral final exam...

ASH: This is for a doctorate?

VERNON: For a doctorate, yes. When you took the final exam, the orals, they would have one person—they have all of your departmental faculty there, then one person from the University who is outside that faculty, and then one person who was within that faculty but outside the University. And that man that they invited down for that was a man named Carroll Pratt, who was at Princeton, who was chairman of the department at Princeton. And he was at this little celebration party, and he said, “Now that you’re finished, what are you going to do?”

And I says, “Interesting you asked that. I just learned that I lost the job I thought I had.”

“Oh,” he says, “you don’t have a job? You don’t have a commitment?”

And I said, “No, I don’t.”

He said, “Wonderful. I’ve got an opening. Would you come with me?”

And that’s been the story of my life. Fat, dumb and happy, and standing at the right place at the right time. I’ve had more good luck than anybody you’ve ever known.

ASH: Well, you stayed at Princeton for quite a while.

VERNON: I did indeed. Fourteen years.

ASH: And you became a full professor at Princeton. Then how was it that you ended up here?

VERNON: Princeton is absolutely marvelous; that was the most wonderful place. You cannot imagine how nice it was to be there, and they

did absolutely everything for me. I couldn't have asked for a better situation.

And one of the things that I was doing was working on electrophysiology of hearing in all kinds of animals, and toward the end of my being there I was working on bats. And that's a fascinating animal. Do you realize they can do with their ears everything you and I can do with our eyes? Everything. Incredible mammal, incredible.

So I was studying the hearing in bats. Princeton had a program where they sent their faculty out to talk to all kinds of alumni organizations, and so I found myself going all over the country talking to alumni organizations about what I did. Working on bats.

Every time I did that, there would always be a group of people coming up and saying, "This is fascinating stuff. Just can't get over this. This is fascinating." But somebody would always say, "But what good is it?"

And I would say, "Well, it's very good. For one person. Me. It excites the hell out of me. I'm having a ball, but it's not going to help anybody."

ASH: Human beings.

VERNON: Right. That finally got to me, and I decided that I had been so blessed and given so many advantages that I owed something, and I had to start trying to pay it back.

And at the same time that thought really got embedded in me, I was on a NIH [National Institutes of Health] committee in Washington, and David DeWeese was chairman of that committee. And one day he said to me, "Would you ever consider leaving Princeton?"

I said, "If I could set up a clinical lab to study the real problems of hearing in man, you betcha. I'd leave tomorrow."

He said, "That's exactly what I want." He said, "I have a fine ENT department, but we don't have any research, and I would like to see a

clinical research laboratory established.” That was in 1966 and that’s when I came here.

ASH: And you had tenure at Princeton?

VERNON: Yes. When I came here, the dean said, “We’ll give you a full professorship and tenure.”

I said, “I’ll take the full professorship but I will not take tenure.”

ASH: Why not?

VERNON: That’s what he said: “Everybody wants tenure; why not?”

I said, “You look around your campus. All your deadwood is tenured people. The day you don’t want me here, I don’t want to be here.” I’ve been on a year—I was on a year-by-year contract until I retired.

ASH: Who was the dean who hired you?

VERNON: Dean [David] Baird.

ASH: Baird. Dr. Baird. So you came here from Princeton; you moved your family, I take it, 3,000 miles to set up your clinical lab here, and this was your dream. Can you tell me a little bit about it?

VERNON: I didn’t know anything about it. I really didn’t. I didn’t know anything about human hearing. I knew a lot about bat hearing, but I didn’t know anything about human hearing, and I didn’t really know what the problems were, except I knew there were problems and I wanted to work on them.

And so I started out by going to ENT grand rounds all the time here and learned very quickly what the real problems are, and then began to work on them. We had the advantage of having Bob Brummett with me in this lab. Bob is really an organic chemist—he calls himself a

pharmacologist—but Bob was very interested in what was happening with the ototoxic drugs, and so we did some studies along those lines.

And out of that experience we did a lot of work relating to the real problems that confront mankind. As I was just saying previously, tinnitus being a very great one. And we started the first tinnitus clinic ever, and that was twenty-four years ago. That I thought we'd run for about six months and learn what tinnitus was all about and then go in the lab and work on it. That clinic is still going, and we've had some 6,000 patients that have been through that clinic.

ASH: Where physically were you situated during these years, from the beginning?

VERNON: You mean here in Portland?

ASH: No, I mean where was your clinic, what building?

VERNON: Oh. We had to build a second story on the Portland Center for Hearing & Speech, and so it was in that building that we put the clinic and the laboratory.

ASH: So that was already in place when you came?

VERNON: No, we had to get the money to build the second story.

ASH: The first story was there.

VERNON: That's right. And let's see, I went to sixty different foundations trying to get money to build that laboratory, and the Kresge Foundation finally came through, and that's why originally our laboratory was called the Kresge Hearing Research Center.

ASH: Who funded your research itself?

VERNON: Mostly NIH. In fact, it was with the NIH that I got off into the tinnitus work.

When I first came here, you know, to be looked over and look over and all that stuff, DeWeese was shepherding me around, and one day he picked me up and said, “I need to go visit a patient in the hospital. Will you come with me to do that?”

Well, that patient happened to be Bill Montagna, who was director of the [Oregon Regional] Primate Center. And we got to talking about hearing and bats and things like that, and he said, “You know, I have some monkeys that I think have unusual hearing. I’d love to have them studied.”

So I said, “You give us the space and the animals, and we’ll do it.”

So we set up a thing to study these monkeys. They were the ring-tailed lemurs, and no one had ever done the hearing in the ring-tailed lemur. And we didn’t realize what our problems would be. We had applied to NIH for funds to do it, and they gave us a three-year grant. I thought three would be plenty of time to do this.

Gosh, when we got to the end of three years, we were just beginning to learn how to get these animals to perform. So I applied for a renewal and got it for another three years, and then all of a sudden everything broke, and within a year we had all the data on the animals.

ASH: Why was it so hard?

VERNON: I don’t know. They were very skittish, and you had to—what we had to learn was to—if you were going to put them in a trial cage, that they would push a lever or something like that, each one had to have their own trial cage, so their own odor was associated with it, and it just took us a long time to learn all of this.

ASH: So it was behavioral?

VERNON: Yeah. Oh, yes, yes. But then once you got that—teaching them to wear earphones was not easy—but once you had sort of broken through all the technical problems, then the data collected very rapidly.

And I called NIH and I said, “We’ve finished the grant two years ahead of time. Would you like the money back that’s left over?”

And they said, “Oh no. We just give out money. We don’t take in money. We wouldn't know what to do with it.”

And I said, “Well, what do you want me to do with it? Do you have something you would like to see us do?”

And they said, “No, use it anyway you want.”

And I decided then we would take the rhesus monkey, because Bill Montagna told us we could use those monkeys, and see if we could teach them to tell us when they were having tinnitus, ringing in the ears, because this was an entity that I had already run into that I knew was serious, and there were a lot of people suffering with this, and there wasn’t a thing being done about it.

So we started out with the rhesus monkey and teaching it to tell us when it got a ringing in the ears, which we put in with earphones. Then, when we got them trained to that, we loaded them up with aspirin and got them to tell us if they were hearing ringing or not.

At about that time I got a telephone call from a Dr. Charles Unis down in California, and he said, “I want to come see you.”

And I said, “That’s very nice, but why do you want to see me?”

“Well,” he said, “according to the NIH, you’re the only man in the country studying tinnitus, and I’ve got it and I want you to treat me.”

I said, “No, no, no. I just talk to rhesus monkeys. You don’t understand. Please, don’t waste your time coming up here.” And I thought I had finally convinced him not to come, when three days later he showed up on our doorstep.

And I didn't know what to do. Here's a poor guy suffering with this problem that I'm just beginning to try to study, and I don't know what to do with him. So I said, "I think you could help us a lot. If I could match up the tones that you hear, then we'd know better what to give the rhesus monkeys."

So he agreed to do that, and we went in the lab and started working. Lunchtime came around and we gathered up Chuck Unis and all the lab, and we went down to the Little King Sandwich Shop, and right outside that sandwich shop there's one of our very nice water fountains that are in this city.

And when we came out to sit and have lunch in this area, Chuck walked over to the water fountain and stayed there and stayed there and stayed there. Finally one of the lab people turned to me and said, "Do you think he's all right?"

I said, "You know, I don't know. I've been hammering on him pretty hard today. I'd better go see."

So I walked up behind him and I said, "Chuck, are you okay?"

And he said, "Shhh! Standing right here, I can't hear my tinnitus. That water sound."

And that's when the whole thing fell into focus for me. Now, we couldn't plant Chuck by that water fountain for the rest of his life, but we sure could put that kind of sound in his ear with a wearable device. And that was the beginning of the masking program.

We went back to the lab, I got the group together, and I said, "We're going to stop the monkey work; we're going to open a tinnitus clinic—we're going to talk and work with people. They're a hell of a lot easier to talk to than rhesus monkeys. And we're going to start treating this problem." And that was the beginning of the tinnitus clinic.

Now, that brought in a man named Bob Hocks, because Chuck Unis had tried to establish the American Tinnitus Association, and he had gotten agreements practically from every state except California, and California, I gather, has some pretty tough rules about organizations.

And so Chuck turned to me and said, “Could you get ATA, American Tinnitus Association, established here under the aegis of this school?”

I said, “I don’t know. That’s a very interesting question. Let me go ask my chairman.”

And I did and DeWeese said, “Gosh, I think that’s a great idea. Let’s go to the dean.”

The dean said, “That’s a super idea, of course we’ll cooperate.”

And so the original establishment of the American Tinnitus Association was under the aegis of this medical school.

Then we needed a board of directors and all that sort of thing, and I didn’t want to have any formal part in it because if they raised money, I wanted to be able to apply to them for research funds and I didn’t want a conflict of interest. And Bob Hocks—I’m not quite sure how Bob Hocks got in this, but he was the chairman of the first board of directors.

ASH: Was he a lay person?

VERNON: Yes. He was a lay person here in town, had Hocks Instruments—that’s how I knew him, because he made earplugs and things like that and ear molds for hearing aids. And Bob became chairman of that board of directors. And then he asked Mark Hatfield to be on that board and Mark agreed.

ASH: When was this?

VERNON: This was back in 1974, ’73.

Now, years before at Princeton, I had been reading Mark's stuff when he was governor of this state, and I would go around to all my friends and say, "Watch this man; he's going to be our president and he's going to be fantastic. He's going to be another Franklin Roosevelt. He's got the integrity and the sense." I was very impressed with his actions when he was governor here, never realizing that I was ever, ever going to meet this man. But when Bob Hocks brought Hatfield in, it started our association.

ASH: Was he governor at the time he was brought in?

VERNON: No. No, he was a U.S. senator then.

And we were doing a lot of talking about what the American Tinnitus Association should be and what it should do and what its obligations were, and somewhere during the exchange like that, he came over to me and he said, "You're not wearing hearing aids."

I said, "No, I have normal hearing."

"Well, what got you interested in all of this?"

And so then I started talking to him about the bat story and the human story, and I guess there was a meeting of minds. It was just one of those immediate things. We instantly became very good friends, and have been ever since.

ASH: Now what brought him into this particular fold?

VERNON: Well, Bob Hocks really brought him in, but also it was because Mark has a hearing problem.

ASH: I wondered.

VERNON: Yes. And it took him a long time to even admit to us that he had a hearing problem. But after we had been around him a lot, it was pretty apparent that he did. So we began to say things to him like, "You know, something could probably be done about this." And he finally agreed

to allow us to test his hearing, and he does have some hearing loss—it's congenital, although I think it was helped by World War II.

Then we started talking about putting hearing aids on him and that was a very interesting problem. And he will now admit to you that vanity was a great problem for him. And I said, "You know, in ordinary people I cannot understand that. When I find that I can mask a patient, cover up their tinnitus and take care of it for them, and they refuse to wear the masker, I always say to them, 'Do you have a vanity problem that's larger than your tinnitus problem? If so, get out of here and quit wasting my time.'"

Well, we sort of said that to Mark. "You've got a vanity problem that's bigger than your hearing problem. It's not right for you to inflict your hearing problem on everybody." Finally we got him to wear hearing aids.

ASH: He wears hearing aids?

VERNON: To this day.

ASH: To this day. So, as I read it, he was brought into the Association because he had an inherent interest in it beyond the board.

VERNON: I think so, yes. Although he does...

ASH: Though not necessarily tinnitus.

VERNON: Right. He doesn't have tinnitus.

ASH: So there was probably a personal friendship he had as well...

VERNON: I think so. I think so.

ASH: ...with the president of the Association?

VERNON: Well, Bob was chairman of the board of directors of ATA. But because we got Mark in to test his hearing, he then said, "You know, I

think my children should be tested.” Sure enough, we found two of his four children have hearing problems. And I said, “I’m sure it’s part of that congenital thing.”

So we’ve been working with them—not very successfully yet, I must add. But because they were up one day being tested, Mark and I were sitting in the library just talking, just, you know, socializing, and—by the way, I’m three months older than Mark, so I’m his senior or so I remind him.

ASH: That’s important.

VERNON: Oh yes, we remind him of that often. And he said, “What’s your legacy going to be?”

And I said, “Gee, Mark, look around.” I said, “What you see is all you’re going to get. That’s all there is.”

“Well,” he said, “why don’t you dream big?”

I said, “Mark, I’m super good at dreaming. Dreaming big I’m really hot on. But I ain’t worth a darn paying for it.”

He said, “You dream, I’ll pay.”

I said, “Well, let’s repeat that.”

He said, “Right. You dream, you dream big, I’ll pay.”

I said, “Holy smoke, Mark, do you know what that means? That means new buildings, that means a huge grant, that means all kinds of things.”

“You dream, I’ll pay.” And by God, he has.

ASH: How did you start? How did you react to that?

VERNON: I fainted. I fell over, and I didn't know what to say. I said, "I love this. This is wonderful, but there's one thing we must do first. We've got to go see Pete Kohler, because I got crossways over you with Len [Leonard] Laster by doing things without asking permission."

ASH: So this was after Dr. Kohler came?

VERNON: Yes.

ASH: That's been a long period of time in here.

VERNON: Oh yeah. Yeah, this has all been going on since 1974.

ASH: So '73, '74, he became part of this board of directors. What was your relationship between then—and Dr. Kohler came in in '87, '88.

VERNON: Well, as I say, we were just good friends and socially saw each other a lot, he and Antoinette and Mary and I did social things.

And then when we were doing this testing, it was a follow-up testing on his kids, I think the first testing had been done maybe three years before, and every year since then. And there was this one time that all the kids were here being tested, and Mark and I were sitting in the library, and that's when this very significant thing happened.

ASH: Then did you make an appointment with Dr. Kohler and the three of you got together?

VERNON: No, Dave DeWeese was still our chairman then. Dave and I went over and talked to—is that right? No, I guess Alexander Schleuning had become chairman by then. I think that's right.

Anyway, we went and talked to him and I said, "I want you to know what's happening here, and I want your approval of everything that we're dreaming and thinking about."

"Well," he says, "what are you dreaming about?"

I said, "A big building. We need space, and we need it badly."

And so that building, you know, is two buildings. The Neuro/Sensory Research Center is the bottom half of that building, and the top half is the ambulatory stuff and the emergency stuff. So Mark raised the money for the Neuro/Sensory Research Center, and we started construction on that. And that was wonderful, being able to plan this huge laboratory. You have to go see it. It's a dream come true. It's fantastic.

ASH: Well, we're talking about a little time in here, then, where you mentioned Dr. Laster. Had you approached him about getting more space?

VERNON: No. He was out somewhere when we got a rather large grant from the feds that Mark had set up. And when we got this I went to Mark and I said, "You know, I would really like to change the name of our group and call us the Hatfield Hearing Institute."

No, he didn't want that. He said, "But I would love to have you call it—have its name include Oregon somehow."

So I said, "Fine. We'll just name it Oregon Hearing Research Institute."

At this time Laster was out of town, and so we sort of informally did this in our own thinking. When Laster came back and when he heard about what we proposed regarding a name change, he went right through the ceiling.

ASH: Why?

VERNON: Well, because we hadn't followed the rules of what an institute meant, and you could only become an institute if you had gotten congressional approval from the State and the State Department of Higher Education, and all that kind of red tape stuff that I've never paid any attention to.

So, boy, he started in on me like you cannot believe. It was so bad. At one point I finally said, "I thought we were on the same team. If I'd known we were enemies, I would have treated you differently."

He was very upset with me, and I'm serious. Had he stayed, he would have gotten rid of me for sure. He would have gotten me out of here.

ASH: Because of this name thing?

VERNON: I think so. But I think also he didn't like the fact that I'd gone directly to Mark rather than going through the channels here.

ASH: Did he already have a relationship with Mark at that time?

VERNON: Yes. Oh, yes. I think he viewed me as violating his private territory, when in fact I knew Mark long before he came on board. But I'm probably overstating this case, but I really felt that he hated me.

Anyway, I said, "Because of all of the problems I've had with that, let's go clear all of this with Peter Kohler first." And Peter, of course, you know, is excellent to work with. I think that man is great. This school is extremely fortunate in having Peter Kohler as its director. He did everything he could to help us.

ASH: Now how did he get to know Mark Hatfield?

VERNON: I don't know. I suppose Mark introduced himself to him because Mark wanted to do things for this Medical School, and of course has. The whole campus should be named in his honor. Have you been in the new courthouse downtown that's named for him?

ASH: No.

VERNON: I haven't either. In fact, I just drove by today and saw his name up on the building.

[End Tape 1, Side 1/Begin Side 2]

ASH: ...just broken ground the day before for a huge new building with Hatfield's name on it.

VERNON: Yes. It's going to be the Hatfield Clinical Research Center.

ASH: Tell me what that means.

VERNON: Well, what that really means is that NIH has been taking your tax dollar and spending it for basic research, which has very little to do with the real health problems that we face today. The basic scientist doesn't realize that the clinical scientist uses the same methodology that they use. The difference is, the basic scientist sort of picks up a corner of nature and records what he sees under there. The clinical scientist, using the same techniques, looks at a problem, tries to solve that problem, and then if that problem is solved, reduces it to practice.

Those are very serious demands, much more so than ever has confronted the basic scientist. But the basic scientists have had their say and their rules for so long in this country that it's very hard to get approval for any clinical research. But our research center may be one big move in this direction, and it could not be named for a better person.

Now that, unfortunately, keeps us from naming the hearing research center in his honor. I wanted to name our lab the Hatfield Hearing Research Center.

The Center as Oregon Hearing Research Center has a national and an international reputation. It's known throughout the world. And when you change names, you take the hazard of losing a lot of that identification. And since we can't name it Hatfield, it will stay Oregon Hearing Research Center.

ASH: Why can't we name it Hatfield?

VERNON: Because he doesn't want to do it.

ASH: Oh, I see. I see. So we don't have anything on the campus named Hatfield.

VERNON: No, but there's been talk of trying to name the whole campus after him, which I think would be a good idea. If not, then that whole building should be named after him because he provided it, all of it.

ASH: He has allowed his name to be used elsewhere.

VERNON: Yes. Yes. And there's another center downtown that's called the Mark O. Hatfield something, but he had nothing to do with it. They just took his name. I don't blame them, you know; it's a good name to take. But I think—and I know Peter wants to do something to honor Mark for all he's done up here, because he has done a lot.

ASH: Getting back to the beginning of the building, we did find some information in the archives about the \$10 million for the hearing center; that was in 1989, the first article was published about it, and then the Senate gave approval in September of '89.

One of Hatfield's aides at that time estimated the total amount of federal funds between 1980 and '89 had come to us was seventy-four million due to Senator Hatfield, plus another five million for your operations. I thought that was very interesting. Do you think that...

VERNON: Well, when that five million ran out, Mark asked me if we needed more, and I said, "Yes, we desperately need more." I could not get anything out of NIH. As long as I was studying bats or ring-tailed lemurs or rhesus monkeys, they would support that kind of basic research. But this clinical research that I wanted to do they would not support it.

So Mark said, "Well, let me put together another appropriation just for the Oregon Hearing Research Center." But when he went around to get the other senators to sign that appropriation—who's the very old senator from the South? He's about 206 years old. Who the heck is that? Anyway, he wouldn't sign it. He said, "I'll only sign it if you put it out for open competition."

So Mark said, "Fine." See, that was the only way he could get it, so he put it out for open competition. We and forty other agencies applied for it, and we got it. And I don't think it was because of Mark's influence; I think we actually got it because of what we proposed.

ASH: It was competitive.

VERNON: Yeah. And that is now in place and will continue a few more years.

ASH: So this five million helped to pay for staffing the clinic because you couldn't get research funds to do that.

VERNON: Right. That actually started while we were still in the old lab. Then the funds came along to start this building with the new lab.

ASH: Do you think that your influence may have been what was partly responsible for the new building being built on the NIH campus in Washington, D.C., for clinical research specifically?

VERNON: No, no. No, I'm sure not. It was Mark who effected that center. But I think it's wonderful that that is going to be done. You watch what happens in that center. It's going to be significant.

ASH: It's a group of researchers, then, who are NIH researchers?

VERNON: I don't know. I don't know what the staffing's going to be. I would hope that Mark would have some input and control on that, because he understands this thing about clinical research and the need for it. I hope he will have input there. You need to talk to him.

ASH: We will be hopefully interviewing him at some point.

VERNON: Good. You will enjoy that. You'll really enjoy that.

ASH: And our discussion today will help a great deal in preparing us. It's hard to prepare and do the background information gathering for each of the interviews, especially when our archives don't have everything in them. So that's one of the reasons that I was so interested when you said that you'd like to talk about this because it will help us prepare for the interview with him.

VERNON: Good. Good. Well, you will enjoy it.

ASH: I'm just reading my little note sheet here. The federal government will provide eighty percent of the \$28 million cost of construction and equipment acquisition, and then the university plans to raise the rest from private sources. How did the funding end up working out?

VERNON: Well, I don't know where it's ended up. We put together a group of local people here in town and met in the foundation's building downtown. Have you been there? That's kind of a nice setup they've got down there. Kind of nice. I liked it. And we used their big board room for our meetings, and we did all of the meetings as luncheon meetings because a lot of people were busy. But they had to stop for lunch, so we captured them for lunch meetings.

ASH: Now what was this group?

VERNON: To help raise the money that's needed for the matching fund. And we haven't done all of it, and I don't know who's doing it now. And the foundation has gone through some changes, too. I don't know what all that means. They've joined forces with some other state foundation, and I don't know what that's about.

ASH: But back in 1989 or '90 you started planning for further funding. Can I hear a little bit more about the building plans? You had the money secured with the feds. Did you immediately start planning the building, or did you start looking for the private funds all at the same time?

VERNON: Well, a little bit of both, but mostly planning the building. And then that got us into Gordon Ranta's office. I've known Gordon Ranta since he began in that outfit, and now he's director of it.

And Gordon said to me, "I'm going to give you my best man. I'm going to give you Tony Coach, and Tony Coach is going to run the NRC."

And then of course there was a lot of interaction between the—well, first there was a competition for the architectural firm and ZGF got it. By the way, do you know who's going to build the new Hatfield Clinical Research Center in Washington? You know who the architects are?

ASH: Zimmer...

VERNON: ZGF. Apparently there was open...

ASH: From here.

VERNON: Yeah—open competition all over the world, and they got it. And I asked somebody who do you guess they got? And somebody said, "I. Pei?" But ZGF got the contract.

So then Tony and ZGF people, two or three of them, and we all started working on designing—they, the building, we, the lab. That of course then, once we sort of got a footprint of what the lab space was going to look like, then I could sort of get our lab group together and say, "Now tell me, where do you want to be in here?"

And then somebody said, "Well, I'd like to be right there."

And we said, "Fine, now you design what goes in there."

And then we did that for all of that floor, so the whole fourth floor of that building is the Oregon Hearing Research Center, and included in that is the Tinnitus Clinic. And the only problem with that is, patients can't find it.

ASH: Has it already moved in there?

VERNON: Oh, yes. Over a year ago, over two years ago. We moved in while they were still building on the top.

ASH: It was a confusing building the one time I've been through it.

VERNON: Yes. You couldn't go all the way up, as a matter of fact. For a long time, to get out of the building going that way, you'd have to go up to the fifth floor and come off and go across to an elevator and go out to the seventh floor and do something else. But we moved in long before that building was completed.

ASH: I see. So patients were going there when the building was incomplete, which must have been even more confusing.

VERNON: It was. And then trying to find parking, you know, gosh.

ASH: Well, that's another story.

VERNON: That's a perpetual problem.

What are you going to do with all this information, all this gibberish?

ASH: We're the data collectors. We collect the data; we don't analyze it. That's up to future historians. If you would like to write a history of anything to do with this campus, that's what the information is for. We'll be doing—it's looking more like between sixty-five and seventy interviews, and of course, they'll all be audiotaped, they'll all be transcribed so that you will receive a transcript from me within a couple of weeks, and I'll ask you to edit it especially for people's names and such and send it back to me, and then the information will be available to future scholars through our archives program.

VERNON: That's very good. That'll help a lot.

ASH: As a researcher, I feel I'd love to be the person doing some of the analysis, but I'm not an historian and I may analyze some of it some

other way. But we hope that there will be someone who will want to write a history of the whole campus.

Barbara Gaines just finished one on the School of Nursing, and hopefully someone will do—I think they're working on one for the School of Dentistry, which is having a hundredth anniversary next year or the year after.

And little bits and pieces have been done by people in the School of Medicine, but no one has done a School of Medicine history, and one of the periods that we're focusing on a great deal right now during the interviews, which is my next question to you, is about becoming a university because I would hope that someone would write a history of the entire university at some time. But the move from becoming schools to becoming a unified university, and when Dr. [Lewis W.] Bluemle came was a major, really major move, and you were here during that time.

VERNON: Yes, but I didn't know what was going on. You know, I just heard scuttlebutt. The stories that went around were that when the dean of the Medical School went to the State Board of Higher Education asking for funds, he was competing against college presidents and he was viewed as just a dean. And somebody said, "Well, we ought to have a president."

And then I guess somebody said, "All you have to do is become a university and you can have a president."

It seemed to me that we expanded the number of people on campus greatly when we became a university, but I'm not sure that we increased the faculty any. We have something like 6,000 people up here. How many faculty do we have? Three seventy-five.

ASH: Well, so, when we talk about the numbers so much as in the hospital, hospital staff...

VERNON: True, true. Anyway, I really don't know anything about the becoming a university.

ASH: So it didn't really have an impact on what you were doing?

VERNON: No, it didn't. Maybe if I'd been more aware it would have.

ASH: Well, you were busy doing other things.

VERNON: Well, we were having an awful lot of fun working on these clinical problems in the laboratory.

ASH: Did Mark Hatfield work with you when you were planning? Who was involved in the actual planning of the building?

VERNON: ZGF. Tony Coach. Mostly Tony Coach. You know, ZGF was designing it, to be sure, but Tony was a very powerful and very good influence. Gordon Ranta was right; he picked the exact right guy to work with us.

ASH: And he worked with you and...

VERNON: Well, that was the first time they'd ever allowed a faculty member on any of the planning committees. It had never happened before. And I think it was Peter who said that he thought I should be on their planning committee rather than, you know, their sort of handing us plans and saying, "Sketch in what you want and give it back to us."

So I went to the weekly meetings for several years on what was going on in that building. And I must say, it's fascinating, fascinating, to build a building.

ASH: The process?

VERNON: Yeah, the process. Did you happen to see "Nova" last night on building the bridge? Watch for that program.

ASH: Which bridge?

VERNON: This is the bridge from St. Louis over to Illinois across the Mississippi, and it's one that's hung with two big towers up in the air and these cables are hanging down that they put the bridge through on these. Fascinating story. Well, building our building was a fascinating story.

ASH: Anything special about it that you recall?

VERNON: No, just that I'd never been in on such a big project, and that thing I was telling you about, their having to go down to the bedrock, and that they could glue rods to bedrock and then fasten those to the building as an anti-earthquake measure. And how they ran into the interesting problem of roadbeds that caused the rods to ricochet and come back up to the surface.

ASH: These were roadbeds that no one knew existed?

VERNON: Right. There was no archive that said these old roadbeds ran there.

ASH: Do you think they were from before the campus was here? Or they had at one time been part of the campus?

VERNON: I have no idea. Since the campus really is above where those things were, I would guess that those were old roads that had been there forever. I have no idea.

ASH: I'll have to ask Gordon Ranta when we interview him, just out of curiosity. It sounds like they must have been very old.

VERNON: Well, Gordon has been around for a long time. You'll have a good time interviewing him. He knows a lot about the campus, he knows the people on this campus. I just sort of know this one little thing.

ASH: It's a pretty big thing.

VERNON: Well, yes, because of Mark Hatfield it is a big thing.

ASH: What's happened to the other building, your original building?

VERNON: Well, the Portland Center for Hearing and Speech took over our space when we moved out. We built that space, but we paid them rent for it. I never did quite understand that.

ASH: Who is "they" versus "us"?

VERNON: They are an independent organization that was allowed to build their building up here on the campus, and it's on a 99-year lease. At the end of 99 years, that building will belong to the University. But they are...

ASH: It's a private clinic?

VERNON: It is a private clinic, and they were downtown. They were a speech and hearing clinic that taught—mostly they were teaching children speech, and they still have a big speech program.

I don't quite understand how they're going to relate to Doernbecher, because Doernbecher should have a big speech program for children. I don't know what's going to happen there. But when we moved out, the space became theirs. Now, we moved out our soundproofed chambers and things like that and brought them into the new building, and I suspect we left them with pretty much a mess over there. But it's theirs.

ASH: Now, you retired in '96? Yes, '96, and you'd been here for thirty years. But you're still very involved, it sounds like.

VERNON: I'm trying not to be. I think one of the worst things for a new director is to have the old director shadowing him around. Nothing will foul up his program more than having the old director around.

So, some time ago, before retirement, I started this—I couldn't get anything done because of the telephone. Patients were calling me from all over the world, all the time, all of them tinnitus patients. So finally I decided I would set aside one day and take telephone calls. So I declared

Wednesday as phone day, because then the secretaries would be able to say, "Well, the only time you can catch him is on Wednesday."

Then when I retired, I thought I should keep that going. So I went to Alexander Schleuning, who's chairman of the ENT department, and our laboratory's in that department, and I said I wanted to keep the Wednesday phone day going, could he give me a space over in the Physicians' Pavilion so that I wouldn't be in the new director's hair in the lab. So I've been in the Physicians' Pavilion every Wednesday.

ASH: So you are still involved one day a week. And in other ways as well? I know you're part of the emeritus faculty group.

VERNON: Yes. Yes, I guess I am part of that.

ASH: We had great fun when we had the luncheon not too long ago.

VERNON: Did that go well?

ASH: It went very well. I'm sorry you missed it.

VERNON: Well, I am, too.

ASH: I wish you could have just come for the lunch part.

VERNON: Did you get lots of good information?

ASH: We had four groups discussing various topics, and they were excellent, excellent groups. We got a lot of background information all at one time. I guess you could say it was very efficient, and I think people had a great time. After the small groups got together, then there were reports to the whole group about what each of the small groups had come up with, summarizing what had happened.

VERNON: I see. Very good. Very good.

ASH: So I think it was a fun time for everybody.

VERNON: Are you going to do it again?

ASH: I hope so. I know they'll be doing a luncheon again. I know they felt that was very successful, and we have—this is a one-year project for the oral history project. We have funding through the end of next September, so I don't know what the role of the oral history project will be after that, because it does take funding not just for us, but transcribing is a big expense.

VERNON: Well, that phone day thing, I have to confess that I'm glad I've continued that. I feel I've been able to help a lot of people. I get from between twenty-five and thirty phone calls every Wednesday. So it's pretty constant.

I talked to a patient yesterday and he said, "You know, I called you fifty times before I got through."

And I said, "I can understand that."

But as long as that amount of calls continues, I'm going to continue doing this. But I still want to try to stay out of Fred Nuttall's hair as much as possible.

ASH: Are any of these former patients potential donors?

VERNON: Yes.

ASH: I take it that there's still a need for an ongoing fund.

VERNON: Absolutely. Absolutely.

Indeed, one of the problems that some of these patients have is called hyperacusis. Everything is too loud for them. (Whispering:) You have to talk to them like this. They are in real trouble.

One of the engineers that we had here when I was in the lab developed a special hearing aid for them that was just marvelous. It would allow normal sound to come through—because these people tend to overprotect their ears and they just get worse and worse and worse. So the first thing you have to say to them is, “Get those earplugs out. Don’t wear earplugs all the time.”

So he fixed a window so that normal sounds and normal environmental sound, speech, music, so forth, would come through at their normal level. But then there’s a shelf up here and nothing above 65 db can get in, so they wouldn’t get these problems that they’ve been having.

It worked so well on the initial patient that it was tried on—he lives in Philadelphia—and he called me and he said, “This is a real star. I didn’t think we’d get this until the year 2000.” He said, “Hey, that’s the name. Star 2000.” So that’s what we’ve been calling it ever since.

And one of the patients that has negotiated with me on the telephone said that he was very interested in getting Star 2000 for his wife. And I said, “Well, we don’t have the facilities to do any kind of mass production on these. In fact, we don’t even have the funds to make any of them.”

He said, “I’ll give you \$25,000 if you’ll go get them done.” Just so his wife could get two. So she’ll get two.

So yes, those people are, and they—for the most part they are not affluent, but they are very generous. And one of the conflicts is that they really should give to the American Tinnitus Association, then Oregon Hearing Research Center should apply to the ATA for research funds to do tinnitus research. But the patients’ donations should go to ATA and not directly to us.

ASH: For tinnitus, but there are other reasons people want to give money. So I take it that goes to the foundation.

VERNON: Yes. Yes.

ASH: Now, what kind of ongoing funding—I take it that there is some more clinical funding available now for the kinds of studies that you wanted to do and couldn't get funding for. Is that true?

VERNON: That's true. Those funds I think will run out in about a year or something like that, and I don't know what provisions the new director's making about getting additional funding.

ASH: So it's not a group of more or less independent researchers—like we all have our own grants that we have to get to survive. Has it been a more stable situation in your area?

VERNON: Up until the time that I retired, yes, it was. I took it as my responsibility to get the funds for the entire lab. Now, that is not the usual way to do that. Most people would do it the way you're doing it, that each researcher would have his own or her own grant, and it's going to come to that, I think, very quickly.

ASH: It sounds like there may be a shift and there may be more funding available?

VERNON: I think so. In the first place, there will be a lot of the work that is much more in the basic fields and therefore ought to have good success at NIH. And of course there are other agencies, you know, that do fund research that are not federal, and they will be called on, I'm sure.

ASH: Before we got on the tape you were telling me—you drew a picture and you were telling me about the marvels of digital technology, because we were talking about the digital camera. I wondered if we could talk about that on the tape. This is something that you just learned about last week?

VERNON: A little bit before that, but it's very, very recent. The problem was this: We want to cover up or mask a person's tinnitus. You realize there's no cure for tinnitus. I'm talking about people who have this horrible ringing, never stopping, twenty-four hours a day, driving them up a wall.

ASH: But you discovered something because of the fountain.

VERNON: Right. And that was the beginning of the masking program. So then all we had to do was take a hearing aid case and build a sound generator in it and hang it in a person's ear.

ASH: Just like white noise.

VERNON: Yeah. Exactly.

Now, what does white noise mean? That means it contains all frequencies. Everything that we can hear from 20 hertz through 20,000 hertz. Well, where is tinnitus? Tinnitus is, on average, at 7,000. That's a very high-pitched sound. All of our environmental sounds pretty much stop at 4,000 hertz. Highest note on the extended grand piano is 4,000 hertz, slightly over. So almost all of our environmental sounds are down here, and that's where our hearing is best. You know, our hearing curve favors this region. But tinnitus is up in the high-pitched region, and as such is a very unpleasant sound.

Now, we want to cover that up and we did start with something kind of like a white noise. Well, that very quickly turned out not to be the way to do it. And so then we were trying to filter out the low frequency out of white noise and just use the leftover high frequencies, but one couldn't do that very steeply. It was kind of like climbing up a mountain; it was a gradual incline. So we had a lot of low frequency stuff left in the masking sound, in order to get up to the high frequency that we really needed.

[End Tape 1, Side 2/Begin Tape 2, Side 1]

ASH: This is tape 2 of Dr. Vernon on November 13th.

VERNON: The general incline that's going up to the frequency region that you really need for the masking was too gradual, and if a person had a lot of hearing loss up in the highs but heard the lows perfectly well, then this whole thing would be too loud for them. Yes, we could cover up their tinnitus, but they'd say, "Gee, I can't tolerate that because it's too loud."

And then very recently this engineer down in California named Mike Petroff called me about a year ago and he said, "I have tinnitus, and I understand that you send out a thing called a Moses-Lang CD."

I said, "That's right."

The Moses-Lang CD is a CD with different bands of masking sounds on it so the patient could listen to those, select the one that works best for them, and then just put their system on repeat. We've sent out lots of Moses-Lang CDs. Why the name Moses-Lang? Because I had a patient in Canada who kept talking to me all the time. He would call me weekly; every week I'd get a call from this same guy. And when it turned out that we wanted to send out masking sounds, the patient who emphasized that to us was a man named Lang. So I asked Mr. Moses if he would give us the money to buy a CD recorder, and he did. So with his money and Mr. Lang's idea we put together the Moses-Lang CDs.

Well, Mr. Petroff wanted one of them, so we sent him one, and then he called me back and he said, "You know, this is a very good masking sound." We'd done a lot of filtering and the slope wasn't so terribly gradual; it was truncated somewhat. And he said, "This is the best masking sound I've ever heard, but I can do better."

I said, "Wonderful. How are you going to do better?"

He said, "I'm going to digitize it."

I said, "Super. But I'm from Missouri and you've got to prove it to me."

So he started working on these, and he started sending me CDs, and we now have a CD that is a cliff and not a mountain slope and it really cuts out all of those lows that we don't need. Then you can take that and shift it to whatever frequency you need for a given individual because there's some people that have tinnitus way up as high as 18,000 hertz. Can you

imagine listening to that? I mean, there isn't a sound like that in your environment that you'd ever heard or known.

And by the way, these people have a lot of trouble describing their tinnitus because they never heard a sound like it. They'll say, "It's awful."

I say, "Yeah, I know that, but what is it really like?"

"It's always there, it's terrible."

And it's very hard for them to describe the pitch because they've never heard a pitch that high. But the new masking disks called DTM's—meaning digital tinnitus masking—they're going to be very interesting.

ASH: So they use the CD to pick out the best masking frequency for them. What do they do with that information? Is there something they can wear on their ears that...

VERNON: Not yet. Not yet. If we get the system set up right, then they would send the information back to us and say, "It's track number six or whatever that really works for me." Then someone would build track number six into a wearable masking device, I mean, like in a hearing aid case. It would be a tinnitus masker that they could wear which was custom made for each patient.

As it is now, I ask patients to get one of the portable CD players that you can get at Radio Shack for about 60 or \$70, and it's small enough that you can fit it in your coat pocket. Then you wear earphones with that, so they kind of look like kids going around with Sony Walkmans.

Radio Shack makes an earphone called Pro-25 that is the best high frequency earphone I've ever listened to in my life. I mean, Boze stuff that costs hundreds of dollars isn't any better than this set of \$25 earphones. They're marvelous. So I ask patients to buy those two things until we reach the point that we can build it as a wearable unit, that's how they use the masking CDs.

ASH: Is somebody working on the wearable unit?

VERNON: I hope so.

ASH: Sounds like a very good idea.

VERNON: Yeah. Well, there's an interesting organization down in Tucson, Arizona, called Hearing Innovations, and they're very interested in unusual and different types of hearing prostheses. For example, right now they're making a bone conductor that will conduct up to 35,000 hertz, and they use that very high frequency as a carrier wave and then they modulate speech on it. And what they're claiming is that totally deaf people can hear. To which I say—I'm from Missouri.

ASH: Do people do clinical trials testing this kind of thing?

VERNON: Oh, yes. You have to. If it's going to go through FDA, and all of those organizations you should go through, you have to prove *efficacy* and *safety*, and that's part of this reducing to practice that the basic scientist wants nothing to do with because that's tough work. That's a lot of work, but it's got to be done. And yes, you have to prove safety and efficacy.

ASH: Is our center involved in studies like that?

VERNON: Yes—have been and still is.

ASH: Do you have any questions you'd like to ask me?

VERNON: I'm sure I'll think of a dozen when I leave and I'll think of a thousand things I should have told you. And if so, I'll call you.

ASH: We can do this again, too. We only did one tape plus a little bit, so...

VERNON: Give me your phone number.

ASH: And I'm going to turn this off.

We're back in business here, because I just reviewed my list and I realized that I covered everything except women and minorities on the campus here. Since you were here for thirty years, I wondered if you might give us your perspective on changing roles over that thirty-year period. For example, if you think back to the number of women and minorities who may have been working in your area at the beginning versus when you retired. Was there a change?

VERNON: Well, I think there's been a great increase in both the women and the minorities. But I'm a little confused about the latter. Let me give you one interesting statistic which is slightly off the subject, but as I told you, over 6,000 patients have gone through our tinnitus clinic. Do you want to guess how many black people have gone through? Six.

ASH: Why is that?

VERNON: No, that's my question. Why is that? Now, you know it's not socio-economic because the clinic is free to anybody. We charge, yes, but it's free to anybody who can't pay and that's well-known. I think black people have tough ears. I don't think they have tinnitus.

For example, when your ear was being laid down, when it was being built, it was in the first trimester. If you don't have manganese present to work in the ear, it's not going to be a complete ear. Now, where is manganese stored in the body until it's ready to be used to build the ear? In pigmentation cells. Who's got more pigmentation cells than anybody you know? Our black friends. I think they've got very tough ears.

Now, a lot of people have tough ears. If we expose a whole group of people to a big explosion, there will be some people in there whose ears will be totally decimated and others who won't be hurt at all and all shades of grey in between. I think that our black friends have got very tough ears, and that's why we don't see many of them come in the tinnitus clinic. Now, there certainly have been black minorities on the Hill, but I guess the thing

I'm more aware of is the increase in the number of ladies on the Hill, and I think that's delightful. I like that. I'm all in favor of ladies.

ASH: Have you seen a difference in the faculty in your department?

VERNON: You betcha.

ASH: And is part of that that the graduate programs are generating more women graduates?

VERNON: Yeah, I think the more who qualify to come in at the faculty level—let's see, we have one female faculty in the ENT department, and we have one female faculty in the lab, and that I'm sure will change. I'm sure the ladies will become more prevalent, and that's good.

ASH: You have Ph.D graduate students as well in the department? So you've been training graduate students all along?

VERNON: More likely training post-doctoral students who did their Ph.D somewhere else but then decided that they would like to work in hearing or hearing research or tinnitus or whatever, and would come spend time with us, and I'm sure that will continue.

ASH: And there's funding available for that? Post-graduate programs through NIH?

VERNON: Yeah. Usually a research grant will have tacked onto it some funding for post-doctoral students.

ASH: Well, I think I have covered all of my questions, then.

VERNON: We have one very interesting program where the English approached us and asked us if we would train people in tinnitus treatment. And so they sent a physician and his audiologist as a team here for two weeks, and we did that many, many times. And those people are spread around all over England. England's got more tinnitus clinics than any country in the world, and I think it's because we trained so many of them.

ASH: Are there many around the United States now, too?

VERNON: There are three or four, maybe a little more than that. Yeah, I can think of six or eight. But that's not anything like the number that's in England or the number that is needed.

ASH: Did you get many patients from out of state?

VERNON: Yes. Out of this country, as well. In fact, it got to the point that we had a little superstition; we said the further they came, the less we seemed to be able to do for them. I've actually had patients from South Africa, from all over Asia, from all over South America, from all over Europe. It's a tremendous number of people that have come here.

ASH: And when they come here, are you able to usually do something so that they can go home with a cure? Not a cure, but a...

VERNON: No cures, no cures, but certainly with relief treatment, yes.

ASH: So it's well worth their effort to come.

VERNON: Yes. I think so.

The area within tinnitus clinical work that I don't like is litigation. We've gotten involved in litigation. This has been where maybe someone was in a car wreck and received a head injury that resulted in tinnitus, and then they're taking somebody to court trying to get compensation for their tinnitus. And I don't find that a very—I don't like that activity. But we get involved in it. You know, what can you do?

[End of Interview]

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