

DENTISTRY'S FOUNDING DEAN

Reidar F. Sognaes

Interviewed by Judi Goodfriend

Completed under the auspices
of the
Oral History Program
University of California
Los Angeles

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This interview was made possible in part by a grant from the School of Dentistry, UCLA.

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BIOGRAPHICAL SUMMARY

Dr. Reidar Sognnaes, founding dean of the UCLA School of Dentistry and recognized for his work in hard tissue and forensic dentistry, died September 21, 1984, of a heart attack. He was 72.

Sognnaes's most recent research established him as a world-renowned scholar in forensic dentistry (the application of dental facts to legal problems such as identifying criminals, and murder and accident victims). He developed original forensic dentistry techniques including the use of silicon and an electron microscope to study ivory without cutting it into pieces.

Perhaps most well known for his extensive examination of George Washington's dentures, Sognnaes disproved the theory that America's first president wore wooden teeth. (They were composed of such various elements as lead, cow's teeth, elephant and walrus tusk, hippopotamus's teeth, and one of Washington's original molars.) An exhibit of his reproductions of Washington's dentures is on permanent display at the Smithsonian Institution in Washington, D.C. Sognnaes is also credited with verifying the remains of Adolf Hitler and his infamous associate, Martin Bormann, through examination of classified American and Soviet dental records.

Born in Bergen, Norway, Sognnaes received his dental

education at the University of Oslo before coming to America in 1938 as an intern at the Forsyth Dental Center Infirmary for Children in Boston. He earned a Master of Science degree in physiology and a Ph.D. in pathology in 1941 from the University of Rochester School of Medicine and Dentistry in New York.

Following World War II, in which he served as a captain in the Royal Norwegian Air Force, Sognnaes accepted a teaching position at Harvard University. There he occupied an endowed chair as the Charles A. Brackett professor of oral pathology and eventually served as the associate and acting dean of the Harvard School of Dental Medicine.

In 1960, Sognnaes came to UCLA to guide the founding of the UCLA School of Dentistry and serve as its first dean. He stepped down in 1968 and continued his research as professor of anatomy and oral biology in the UCLA schools of dentistry and medicine.

He is credited with laying the groundwork for the UCLA Dental Research Institute and starting the Venice Dental Clinic in Los Angeles, which provides low-cost dental care to children and adults.

Among other achievements, Sognnaes was the first dentist elected a Fellow of the American Academy of Arts and Sciences, and the first dentist elected to senior

membership in the Institute of Medicine of the National Academy of Science. He held honorary membership in several national and foreign professional societies and served as president of the International Association for Dental Research, the American Institute of Oral Biology, and the International Society of Forensic Odontostomatology. He published more than three hundred articles during his lifetime.

Sognaes is survived by his wife of forty-six years, Edel, their four children, Solveig, Thor, Reidun, and Annelise, and eight grandchildren.

--reprinted from UCLA Monthly,
December 1984

INTERVIEW HISTORY

INTERVIEWER:

Judi Goodfriend, editor/writer, UCLA Health Sciences Communications. B.S., Journalism, University of Colorado. M.S., Journalism, Northwestern University.

TIME AND SETTING OF INTERVIEW:

Place: UCLA School of Dentistry, Room B3-069 (Dr. Sognnaes's lab) for audio sessions Tapes I-V. The video session (Tapes VI and VII) was conducted in the television studio at the School of Dentistry.

Dates: September 21, October 5, October 18, November 15, December 13, 1983 (audio sessions); March 23, 1984 (video session).

Length of sessions and total number of recording hours: Both audio and video sessions averaged ninety minutes each. A total of nine hours of conversation was recorded.

Persons present during interview: Sognnaes and Goodfriend; Michael Pretzinger operated the recording equipment for the video session.

CONDUCT OF INTERVIEW:

Goodfriend contacted Sognnaes by phone on August 11, 1983, and set up a planning meeting for August 26. The two, joined by Dale Treleven, director of the UCLA Oral History Program, discussed plans for the interview and arranged the date for the initial session.

Goodfriend prepared for the interviews by speaking with UCLA School of Dentistry faculty and staff who knew Sognnaes during his tenure there. Goodfriend also reviewed articles written by and about Sognnaes concerning his research; many of these articles were supplied by Sognnaes. Goodfriend then reviewed Sognnaes's booklet, The Planning Years, which he wrote in 1964 detailing the founding of the UCLA School of Dentistry from 1960-64. The interviewer also read sections of UCLA On the Move: During Fifty Golden Years, 1919-1969.

Goodfriend prepared a general outline that detailed topics to be covered in the interviews and distributed it to Sognnaes and Treleven. She prepared more detailed

questions and outlines before each interview session and informed Sognnaes in advance what topics were to be covered. Subjects included his early family history and education; his research from early work on fluoride through his development of dental forensics; his work at Harvard. Special emphasis was placed on the founding of the UCLA School of Dentistry, his impressions of UCLA, the institution and the people. They also discussed his hopes for the future of dentistry.

The video session concentrated on the history of the UCLA School of Dentistry, from Sognnaes's arrival in 1960 to his retirement in 1968. Awards, photos, and other mementos adorned the walls of the studio while an architect's model of the Center for Health Sciences (a model made in the 1960s) sat on a coffee table between the interviewer and Sognnaes. Reference was also made to The Planning Years; the manuscript was used as a prop and pages pointed to during the interview.

Dr. Sognnaes and Goodfriend established a close rapport due to an article the interviewer had written about Sognnaes for the Spring 1983 issue of UCLA Dentistry magazine. This helped the interview sessions flow freely and invited candor when discussing personal questions.

EDITING:

The verbatim transcript was edited by Bernard Galm, senior editor. The manuscript was checked for accuracy and edited for punctuation, paragraphing, spelling, and verification of proper names. The final manuscript retains the same order as the original tape recordings. Words or phrases introduced by the editor are bracketed.

Dr. Sognnaes died before editing of his oral history was completed. Dr. Robert B. Wolcott, a close friend and colleague of Sognnaes, reviewed the transcript and answered queries on dental matters. Mrs. Edel Sognnaes supplied spellings of names and verified sections relating to Sognnaes's personal family history.

The table of contents was prepared by Galm. The interview history was prepared by Goodfriend and David P. Gist, editorial assistant. Gist also compiled the index.

SUPPORTING DOCUMENTS:

The original tape recordings of the interview are in the university archives and are available under the conditions specified in the legal agreement covering this interview. Records relating to the interview are located in the office of the UCLA Oral History Program.

TAPE NUMBER: I, SIDE ONE

SEPTEMBER 21, 1983

GOODFRIEND: I have been looking forward to this because you have had such an exciting life that we have been able to discuss before a little bit and I'm looking forward to going into it in more detail. Let's start from the very, very beginning. When were you born and where were you born?

SOGNNAES: I was born in Bergen, Norway, on November 6, 1911, which makes me a Scorpio, I guess.

GOODFRIEND: What's the town of Bergen like?

SOGNNAES: Bergen is an old fishing city-- I have to take a sip of this, I guess. Water. [coughs]--on the west coast of Norway. It is situated between seven mountains, with a fjord coming in from the North Sea, and it was south of this location. Of course, the city has become perhaps most famous because it is one of the rainiest cities on earth. Every cloud that comes over goes down there.

GOODFRIEND: When you grew up there, you say it was a fishing village?

SOGNNAES: No, it was more than a village by then. It was already the next largest city in Norway with about one hundred thousand people. The growth of the city of course stems from the fact that it had an enormous sea traffic, not just fishing but commerce.

GOODFRIEND: Was your father in--

SOGNNAES: My father started out on a farm in Sognefjord, which is just north of Bergen, and like so many youngsters living on a small farm and fishing in the fjords there, it became very common that they would take off and go to some other place. In fact, many of them, if they had older brothers they would collect enough money for a one-way ticket to America to settle there, as many did. My father, he built his own boat and his own big wooden suitcase and took off for Bergen. There he started off simply on his own what he knew most about, namely, the fishing merchant business, and he did that for a number of years when he was a very young fellow. Then he moved on to establish his own business and store, where there arrived other goods besides fish.

GOODFRIEND: What was your father's name?

SOGNNAES: Johannes.

GOODFRIEND: Johannes. And did he meet your mother in Bergen?

SOGNNAES: Oh, yes, indeed. They met through church groups and became very involved with that, just as we did during our youth. They raised six children.

GOODFRIEND: Your mother's name was--

SOGNNAES: Thora, and her maiden name was Fauske, pronounced like Faust [laughter], and I inherited her

maiden name for my F. Anyway, I was the sixth boy and hence a big disappointment of course. [laughter]

GOODFRIEND: The sixth. You were the youngest of six then.

SOGNNAES: I was the youngest, yes.

GOODFRIEND: To how many brothers and sisters?

SOGNNAES: Just five older brothers. No girls. But my father's brother, my uncle, he had five girls and no boys; so it balanced up that way. I must say that I always wanted to have had a little baby sister, but that never turned out till I got my own. [laughter]

GOODFRIEND: What was your family life like? Your father was a fish merchant, were you struggling or was he a successful merchant?

SOGNNAES: Well, by the time I was aware of the world he was quite successful, had a fairly profitable store in the town, the city, of Bergen and a very beautiful home with a large garden about, oh, six kilometers from Bergen--which was an easy ride with our horse, Grane, and buggy. We had a wonderful childhood, all the boys, you can imagine, living in a very open area, very few houses at that time.

GOODFRIEND: What type of things did you do as children? What were your recreations?

SOGNNAES: Well, first of all, of course, we were very interested in my father's interest in animals. We didn't

have a big farm--there wasn't a farm--but he loved animals. So in addition to the horse we would have a cow, we would have a couple of goats, we would have a pig or two and, of course, hens and roosters and rabbits, you name it. And that I think I have inherited an interest in, though I don't have much time for. And especially my younger brothers, we were very close and had a lot of things going on all the time it seems.

GOODFRIEND: How about the schooling you received? Was it a rigorous program?

SOGNNAES: Yes, the regular requirement was to start out at seven, and we didn't have much of a nursery school or kindergarten because we lived quite a distance from the school. I spent my first seven years in the proverbial yellow little schoolhouse fairly near the home, but to me as a little kid it was a long walk I thought.

GOODFRIEND: You walked there?

SOGNNAES: We had no other way of getting there.

GOODFRIEND: How long did it take to walk there?

SOGNNAES: Well, I would say three-quarters of an hour. That was all right except when we had a lot of rain and a lot of snow that was melting. But it was a very pleasant time at school.

GOODFRIEND: When you say the proverbial little yellow--

SOGNNAES: That meant one teacher teaching you virtually

everything for seven years.

GOODFRIEND: For all grades?

SOGNNAES: Well, I think in the later part of the seven years we got a few specialists in, you might say. In addition to the requirements we had quite a lot of homework fairly soon as I recall, with a variety of the three R's, of course, and beginning language. We were kept quite busy, and it was a serious examination, as I recall, and testing and homework. But we also had fun in terms of the required program in physical education. That was absolutely a must, and I enjoyed that tremendously I recall.

GOODFRIEND: What type of things?

SOGNNAES: Well, anything from inside work, climbing on the wall, so to speak, and jumping over the gate.

GOODFRIEND: How about your education in languages? I know that you are fluent in a number of languages. Back in Bergen was there a lot of emphasis on learning different languages?

SOGNNAES: Well, in these first seven years of schooling it was merely or mostly Norwegian and some beginning English. But once we got beyond that, into what we called middle school, and beginning of the college, which we called gymnasium, then languages loomed very high. It added up to a total of six years of English, several times a week, six years of German, and three years of Latin--in fact I majored

in Latin--and three years of French. Then of course we had this strange situation that in addition to our native language, modern Norwegian, we had to read the saga from this pride they had in the Viking age, you know. That's written in sort of Icelandic. It's very different but very fascinating.

GOODFRIEND: It's a saga about Norway?

SOGNNAES: Yes, about the Viking age, but Norway was emphasized in our case, of course. Then we had, of course, been under the same government as Denmark until 1814, and during that period the Danish language had a certain influence since a lot of books were published in the Danish language, which is not very different from Norwegian except pronunciation, but we had to take that seriously. Then, of course, Sweden being a next-door neighbor, they have a very beautiful language but a number of very different words. So it became sort of a fun thing, rather than anything else, because we traveled between the countries as students.

GOODFRIEND: Did learning all those languages help you later when you traveled the world to have a confidence that you could speak those languages?

SOGNNAES: I suppose unconsciously. I'm sure that certain roots, so to speak, especially Latin, I found very helpful.

GOODFRIEND: Why Latin?

SOGNNAES: Well, to take the most recent experience was

when I was giving some lectures in South America, and in Brazil, of course, they inherited the Portuguese language. The Romans had stayed long enough in Portugal to leave behind their language, and with my roots in Latin I found to my surprise I could read the newspapers in Brazil.

And on another trip when I went to revisit some of these islanders from Tristan da Cunha--we may talk about that later--I found that in listening to the Afrikaans language I heard so many familiar words that I got myself a dictionary. This was very fascinating to me, that every word in English was translated into two or three or four other words, one of which might be a little Dutch sounding, obviously, and a little French or Flemish sounding, considering the traditions down there or the immigration of sailors. There was almost always one word which was not only Norwegian but it was a dialect from back in Bergen, Norway. The language down there: three hundred years ago sailors who had been on ships came ashore with different mixtures, and they had picked up the words they liked the best. Before I left Cape Town I was surprising my colleagues there and these islanders [laughter] by being able to have worked out a speech in virtually fluent Afrikaans, using no words except the old ones they had inherited from Bergen, Norway. So in that sense I have had fun with languages, you might say.

GOODFRIEND: I know I'm jumping ahead a little bit, but this whole talk about language reminds me of the story you told me when you first came to America after all these years of studying.

SOGNNAES: Yes, this is a very interesting change today. We did not learn to speak much in school. Six years of English, six years of German, and all of that; but it was very theoretical, a lot of writing and grammar. I can tell you every rule or regulation in these languages. With German it's very complicated. [gives examples in German] How a certain preposition requires a certain [case ending]. That drove us crazy, of course, but it is so in the blood that you never forget it. The fact was that we could translate in both directions, from Norwegian to the foreign language and back again in another test. We had gruesome tests in these hour-long tests, and that was fine. We learned grammar very well. But when it came to speaking, it became almost sort of "aba aba aba" if we came to a foreign country and met some new person.

So, in answer to your question, what happened when I landed in New York, there were big headlines in the paper back in 1938: "FDR OK'S WPA." I mean, it's almost like fdrokswpa, like Russian. [laughter]

GOODFRIEND: And you had no idea what it said.

SOGNNAES: No.

GOODFRIEND: Well, getting back to Bergen, growing up with your father a fish merchant, going to school and learning all these languages and being the youngest of the boys, how did you ever become interested in dentistry?

SOGNNAES: Well, I can't really be very specific of any big event that made me interested in it. I had been interested in biology and had not had very much education in it. That was not taken as seriously as you would here during these steps I have talked about. But every time I picked up a magazine or an article in a newspaper that referred to health and science, I know that I became very absorbed by it and wanted to learn more.

Getting down to as specific as I can, one of my older brothers, just five years older, Arne, he had left Bergen for Oslo to study medicine. (That was when I was still in college.) At least we thought he had. He stayed in the home of my mother's mother and stepfather. Her father died when my mother was just a baby unfortunately. It was a very serious accident. But, anyway, my grandfather had a fiddle, and my brother came home after one semester. He had failed the first big exam, but he was very proud to play the czardas on the fiddle [laughter] and he played fiddle ever since.

In fact he became quite a prominent member of the philharmonic orchestra in Bergen, which is the longest

continuously operating philharmonic in the world, I am told, because they didn't have any wars. So I heard him play with that orchestra in Carnegie Hall and in Constitution Hall years later when they came over, and I was very proud of him. I accompanied him on the piano on occasions for student affairs, and we had an awful lot of fun with this sort of thing.

But getting back to the reason I did not go back to go to medical school, which was very easy to get into compared to dentistry for some strange reason, in that there were very few admitted to dental school.

GOODFRIEND: Why do you think that was?

SOGNNAES: Because they only had fifty from the whole country, and it virtually amounted to your having your picture in your hometown paper if you made a dental school rather than a medical school. It's a very strange situation.

GOODFRIEND: So only fifty students out of all of Norway--

SOGNNAES: Yes. So I was the only one from Bergen, Norway, that got in when I applied.

GOODFRIEND: My goodness! Then how many would go to medical school?

SOGNNAES: Well, medical school had a lot more tradition and a lot more room, at least in the basic sciences, and they took not unlimited numbers but they had a chance to compete a great number, and then many maybe quit like my

brother did for another reason.

GOODFRIEND: So you decided against medical school because your brother--

SOGNNAES: Well, it didn't stick well with the family, and then there was a certain pride that I had done so much better than my brother had in the preparatory examinations from the college courses, which gave me a better chance of getting right into dental school. And it was a shorter study.

GOODFRIEND: How long of a program was it?

SOGNNAES: Well, it was a three-year program to begin with, and then it expanded to four. But in medicine you had an additional problem. After you are finished the two years of preclinical course work, anatomy and so forth, then there wasn't enough hospital room for training the clinical part of the program, and so they sometimes had two and three years of waiting. So much so that when I started dental school in Oslo, probably half the class had then transferred to dental school from the medical school instead of waiting. With that background in the basic sciences they were transferred, and yet they had to take the full course as I recall. So it was a very funny thing.

GOODFRIEND: So you decided in part to go into dentistry out of pride, too.

SOGNNAES: Well, family pride, you might say.

GOODFRIEND: Does that play an important part?

SOGNNAES: I think so.

GOODFRIEND: You mentioned once, too, that you had a dentist that you went to--

SOGNNAES: Yes. I did admire him, our dentist. (You have a good memory, Judy.) I liked what I interpreted as being his life style, his happy smile and his clean office, and a nice person. These things attract you, of course.

GOODFRIEND: So did you have to go to college first before you went into dental school? Was it preparatory as it is in the United States here?

SOGNNAES: Yes. In addition to the college part where I had all the languages but limited biology, as I told you, and we had social sciences, naturally history and so forth. I got my biological preclinical sciences at Leipzig University, which was then a very distinguished university in Germany, and they were very famous for their anatomy department.

GOODFRIEND: So, in other words, after finishing what would be the equivalent of high school in the United States, you went to Germany, is that right, for college?

SOGNNAES: Yes.

GOODFRIEND: For how many years?

SOGNNAES: Well, I had finished the junior college equivalent, gymnasium. So I was twenty. Whatever education you can cram in between seven and twenty I had before I went to Germany.

GOODFRIEND: Was that common or uncommon for a Norwegian to leave the country and go to Germany?

SOGNNAES: Well, it would not be common, I think, but I had some friends who were also planning to go at that time from Bergen. It was a tremendous experience, of course, learning and writing and reading in a foreign language.

GOODFRIEND: Did you live at the university there?

SOGNNAES: No, we did not have that facility. We rented apartments or rooms rather. Of course, then I began to learn to speak German, which I hadn't, as I told you, had much in school. And I can tell you the best way to learn a foreign language is either to meet a fräulein or a mademoiselle or a miss--I almost said mistress, a miss [laughter]--speaking of German, French, and English.

It makes a tremendous difference. It doesn't take long before you go beyond the sign language.

GOODFRIEND: Is that how you learned German? [laughter]

SOGNNAES: I would say a good part of it, but other friends, too, of course.

GOODFRIEND: How long were you at the Leipzig University?

SOGNNAES: I was there equivalent to three semesters. Then I had one other hurdle, and that isn't too usual in other countries; that is, an exam called examen philosophicum.

They have some of these Latin names for them. That I took at the University of Oslo, which is a fun combination of

ancient and modern philosophy and psychology and logic. I think for some reason years ago Norway had introduced that as being a fundamental entrance exam to higher education, professional and so forth.

GOODFRIEND: You had a rigorous program.

SOGNNAES: Yes, and they were grueling exams. Actually, we were not too strict with roll call in school, and I have to confess that I was so busy, being half in preclinical sciences and half in this, that I combined the two. I did work very hard and enjoyed it. I spent some time at home, in fact, to save money and had my mother make a brown bag lunch, and I went to the library in Bergen, which is a treasure to me. I've told you before, some of my best friends are librarians. [laughter] I set up a program for myself, and it was very disciplining and very, very important to my career that I set my own program, which was allowed.

I notified the University of Oslo that I would like to present myself for examinations, and then I came into Oslo for the day of the examination, or the days. They were five-, six-, seven-, eight-hour long exams, and they were very strict. They followed you even to the bathroom. You have never seen anything quite like it. Then you would sit down and sweat for half an hour when you got the questions, you know. Then you would begin to write an outline, and you were expected to write not just the facts but a sort of

a thesis style. They gave a lot of credit for the outline, I mean the presentation. So to take a subject and to compose an essay, I think this was as important as anything in that experience.

GOODFRIEND: You were a very well-disciplined student then. You must have liked learning.

SOGNNAES: At that time I certainly was, yes.

GOODFRIEND: So after this test then, after this examination, that enabled you to be one of the fifty students who was accepted to dental school?

SOGNNAES: Yes, as a matter of fact the only one who came in without having several years of medicine before. Because of this strange waiting period there were a number of medical students who said, "Why should we wait around? Let's specialize while we wait." So they had priority to get in.

GOODFRIEND: You must have been a shining star of your family.

SOGNNAES: Well, my family was of farmer/fisher ancestry and aside from my brother who became an artist, a musician, none of my family before, my father's and mother's families, nor any of my other brothers went beyond elementary school. In fact, my father hardly had elementary school. Where he got it from I don't know, but I can still see him writing longhand, pencil, page after page after page that he would send in to the newspaper, taking a position on economic and

political issues. He was a very outspoken and a very honest man in his career, and I admired him tremendously. I still am mystified how he learned to write so well. But he didn't know any foreign languages; he had no background of that nature.

GOODFRIEND: So you went to dental school, and where did you go to dental school?

SOGNNAES: That was at Oslo. That was the only dental school in the country then. Since then we have built one in Bergen. That was after I came here, and I was invited home to look over the drawings and offer suggestions for that. That is well established now. But that [Oslo] was the only school in the country, and the maximum admission was fifty students.

GOODFRIEND: What was the program like? Does it compare at all to what our students go through?

SOGNNAES: Well, for this reason I would say that 80 percent of our professors, in addition to their background in Norway, they traveled around the world and most of them had some postgraduate or graduate studies in America. In fact, my dean when I was admitted, and he was professor of restorative dentistry, as we call it, he had been a student at Northwestern [University] of one of the world's most famous dental academicians, known as G. V. [Greene Vardiman] Black.

GOODFRIEND: That was his name?

SOGNNAES: Yes. In fact he was so famous that his dental lab office is permanently exhibited in the Smithsonian [Institution] next to [George] Washington's teeth, or my teeth right now. That's another story. [laughter] He was very proud of this background, and he had learned a technique that G. V. Black at that time considered very important. It has tapered off now, but gold foil-- Have you ever heard about that? It is an artistic art; it's an art of hammering foil or gold into a cavity by condensation so that it has no cement in it. It is a perfect adjustment to the edges and it polishes highly when it is densely packed. I think that people who were involved with it were very proud of the art part of this. And I have always kidded myself, and I know some people who are very good at this, that it's like the ad: "You can always tell an Aqua Velva man," you know. Well, you can always tell a gold foil man. They are very, very artistic with their hands and they are very particular. They have tremendous pride in elegance and style, and they have groups that go together nationwide and deal with it.

GOODFRIEND: So your professor--

SOGNNAES: That was one of the things he was very proud of, because he was trained in Northwestern in 1905, and he was a senior citizen, of course, in the early 1930s. He would

start his lecture on this: that he had been at Northwestern with G. V. Black, and he would point to his front teeth with some gold foils and say that this was put in by G. V. Black in Northwestern University, Chicago, 1905, and they are just as good today in 1930 as they were then. [laughter]

Other professors in oral surgery and orthodontics, and so forth, they had had a lot of communication both personally and by writings and correspondence with the United States, which was certainly recognized, and still is, you know, as leader in the evolution of dental art and science.

GOODFRIEND: So that your education therefore was very international in scope. You are very up-to-date with it.

SOGNNAES: I would say so.

GOODFRIEND: What were the new things in dentistry at that time? What was the emphasis of your education; if there was any?

SOGNNAES: Well, the evolution up to that time, of course, we still had to work on very detailed carvings of ivory. It was supposed to be good for you. It would show some talent in artistic rendering, and I happened to enjoy it. Today we perhaps laugh at it a little bit, and what's that got to do with the real thing? Besides you can't get ivory very easily today. But I remember we sat there in the first part of the technical training and made blocks of ivory, square

blocks, and then we had to look at the anatomy of real teeth and begin to carve and drill, carve and drill, until we got the molar and incisor tooth looking exactly like the anatomical features of the normal tooth. It became a matter of great pride how close you could do, and if you took off a little too much that was just too late, you started over again. These were all polished and looked beautiful and were put on exhibit.

Then, we had crowns and bridges, of course, and casting in gold that we had to make before we got into patients. Finally we had to make dentures, and there at that time we had to rely largely--I'm showing how old I am--on not plastics that are used today but on vulcanite.

GOODFRIEND: Vulcanite? What's that?

SOGNNAES: It's a rubber that under high pressure in a pressure cooker will then harden up and become hard as plastic. It is a somewhat more difficult technique because you have to pack these little pieces in between the teeth before you close up the casting box. Well, I think often one would think, well, I became a dean and researcher, why this must have been a terrible hurdle for me. But I must confess, and this relates to your question why dentistry, I enjoyed the art part of dentistry tremendously. As a matter of fact, the school, the university, bought all of these doodads that I had made.

GOODFRIEND: Which school?

SOGNNAES: University of Oslo. They bought all that I had made to use for future demonstrations for students. So if you go to the history museum you will find these vulcanite dentures with R.F.S. in the palate. [laughter]

GOODFRIEND: Well, that's nice!

SOGNNAES: And it wasn't only nice, but it was helpful because I was not that well-to-do and my father had other things to look after, and they gave me enough of a check for that to buy my clinical equipment for the clinical years.

GOODFRIEND: Were most of your fellow students putting themselves through dental school also, or is it something that only the more well-to-do were able to do?

SOGNNAES: No. I would say that that is one distinct difference over there. If you can qualify, the system allows almost complete coverage, except for, let's say, reasonable meals or room that you may take care of. But tuition is almost nonexistent if you can make the grade.

GOODFRIEND: Is that still true today?

SOGNNAES: Yes, it's essentially true. You cannot buy yourself into higher education, or certainly you couldn't then. Of course there wasn't much choice. It was this place or no place.

GOODFRIEND: Are you expected then, since you are being

subsidized, to stay in Norway and practice after you are finished?

SOGNNAES: Well, at that time there were no restrictions on that, but I think in recent years the Public Health Service in particular have demanded a certain contribution of time to what we call folke tannklinnk (that means public dental clinic), after the education. But we had another thing that relates to this. We also had military service, and that was entirely nonpaid.

GOODFRIEND: It was required?

SOGNNAES: Oh, yes, and that was required before you got into graduation for preparation of military personnel who were in health sciences, medical and dental. We were required to take very serious military training for at least one summer or two or three months. It wasn't merely a question of relating to the subject area of your future career, but part of it was related to being a soldier.

GOODFRIEND: So you were trained in--

SOGNNAES: Marksmanship and marching and all of that. Later, once I had graduated, I was then immediately subject to be called to a military camp. I was called up to northern Norway to spend a summer treating recruits.

GOODFRIEND: That was after graduation from dental school?

SOGNNAES: Yes.

GOODFRIEND: What year was that?

SOGNNAES: That was in 1936.

GOODFRIEND: That's when you graduated.

SOGNNAES: Yes.

GOODFRIEND: And so for a summer you treated dentally the recruits.

SOGNNAES: Yes.

GOODFRIEND: Now, you obviously didn't end up staying in Norway. Did you always think that you would maybe settle down there, go back to Bergen and practice? Or did you know that you wanted to leave?

SOGNNAES: Yes. Well, I did initially have a very prominent dentist in Bergen who wanted me to join him, but I limited it to begin with, just to take over his practice when he went to Vienna for some vacation and a congress. What he had not told me before he left was that he was also the prison dentist for Bergen. One Saturday afternoon I was swimming up at Edvard Grieg's little fjord, there where he looks down from his music cottage, and there was some loudspeaker from a little hill calling my name that I was needed immediately. So I went to get the message. It was that there was a patient that this dentist had treated in the prison before he went to Vienna, he was bleeding to death or something to that effect, and I must come immediately because I was his substitute.

So I went there, and I remember this police[man] with a huge ring with those huge keys, you know, opening several locks, and finally here was this enormous man behind the bars. I soon discovered he was more scared of me than I was scared of him. But I did pack his bleeding wounds, and I was asked to write a report on it and any instructions. I instructed that he be allowed to be given soft white bread, instead of this hardtack that they normally got, and water to be included in his diet until further notice--and I still haven't heard from them. [laughter] So that was my first total responsibility for a dental office, and I enjoyed it.

GOODFRIEND: Did you go into private practice at all?

SOGNNAES: No. This was a great disappointment I suppose, although it was never emphasized to me from my parents, especially my father, who felt that he had done so well without all this education and here I had spent all these years. I think he felt very sympathetic to me, because he sometimes thought I worked too hard because I was always over books, and travel and exams, and so forth.

When I graduated it so happened that I got what is called the-- You would call it probably summa cum laude, but in Norway they call it Instilling til Kongen, which means "with reference to the king." So the king is presented with your exam. After all, he has to authorize you to practice. It is the king who does it; we don't have state boards.

Once the professors have authorized you as being qualified, there is no soul who can argue with that as you have in this country. But that's another story I'll talk about later. The king gives you an authorization with a fancy thing on it.

So I got this "reference to the king" as they call it, and it had only been achieved once before in the history of the school. As a result, my picture and the story about this achievement was in every paper in Norway, and when it came in the Bergen papers, my family, my aunts, my cousins, and my father said, "Now, aren't you going to settle down now and get married and get yourself a big practice and a sailboat and a cottage in the mountains like other people are doing?"

And this is something that I cannot explain. It was completely uncalculated and unreasonable. I went back to Oslo and took on a part-time associateship, working mostly in the evenings, enjoying it.

GOODFRIEND: Doing what?

SOGNNAES: The practice of general dentistry with a very wealthy man, which I found out later. I know I was in parties in his house, with enormous silver and gold plates, and so forth. He was very proud of his wealth.

Well, anyway, I went back to medical school to finish my M.D.

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GOODFRIEND: So, as you were saying, you decided to go back for your M.D.

SOGNNAES: Yes. To complete the M.D. was not with the notion that I would leave dentistry at all. But it happened to be in our circumstances the only place you could go for further postdoctoral or graduate training in biology. I had been bitten by the bug of scientific research. There was no question of that. But there wasn't a typical Ph.D. program, for example, which I later benefited from in this country. So this was one resource where I could go back and go into a greater depth in certain subjects of physiology and pathology, and so forth. But I wasn't enrolled as a regular medical student, and I had already quite a bit of credit to proceed.

But, anyway, in the midst of this I was approached by a very distinguished professor of botany by the name of Erling Christophersen, who met me right on the avenue next to the castle in Oslo one day, and he said, "You have been mentioned to me by professors at the dental school that you may have some scientific interests besides practice. How would you like to join an expedition by the Norwegian Scientific Academy to the world's loneliest populated island?"

And virtually I think I must have said, "Why, of course! When do we leave?" It sounded extremely exciting to me.

So I dropped my medical school. I just had some big exams coming up which I could easily probably have done, but nothing could stop me then. I went back to the labs and began preparing myself for a lot of biological tests, chemical tests, and salivary measurements, and so on and so forth, and seeking equipment to go to this lonely island and became completely consumed by this for quite a while. When we finally left I even had obtained through gifts from companies a portable X-ray machine with a gasoline engine to start up every time I was going to take an X ray.

GOODFRIEND: What was the name of this island?

SOGNNAES: Tristan da Cunha.

GOODFRIEND: Now, was it an island that was totally uninhabited?

SOGNNAES: No. It was originally of course, but it was discovered by a Portuguese navigator by that name, Tristan da Cunha, in 1505 and remained unpopulated until 1816 when Napoleon was in St. Helena. The British had taken command of the island--it's still called a British colony, one of the few left--and they had decided that Napoleon's friends may use the island for a stopping point to go up north to St. Helena, because this island is situated halfway

between the tip of South Africa and the tip of South America and then about a thousand miles or so south of St. Helena. So the British put a garrison there, and they put a cannon there that is about three feet long--that is still there, very rusty--to prevent Napoleon's friends from using it as a base to gather forces to go up and get Napoleon out.

The garrison was recalled only a year or two later, but the man in charge, a Mr. [William] Glass, decided to stay on the island. We don't know quite why. But he had brought with him from Cape Town a black woman, and at that time of history that may possibly have been a factor in his decision. They had fifteen children, and when the boys began to grow up they needed to get some company and the story is that a Norwegian sailor, a whaler captain, had a deal that he picked up a dozen girls from St. Helena, who were also partly black, and dropped them off on the beach on the island. The joke is that he sold each tomato for a bag of potatoes, which was a very important thing to the sailors going south. But anyway, that was the beginning, and the rest of the community simply was a matter of shipwrecked sailors, including two Americans.

GOODFRIEND: So, in what year is it that you decided to join this expedition?

SOGNNAES: This was in 1937 in the fall.

GOODFRIEND: What was the purpose of it?

SOGNNAES: The purpose was to investigate the island from many points of view. First of all, it had become known from British sailors who had been on ships going by the island that the islanders came out in canvas boats and smiled with very beautiful teeth, which were not common among British sailors at the time, apparently, and this got into the literature. Secondly, it got into the literature that the British navy had seen through their looking glasses a lot of cows on the island. Putting two and two together, it became fixed in the literature, and it is still in many, many encyclopedias, I'm sure, that the reason for these islanders' good dental health was their enormous milk consumption. But to make a long story short, it was a desire to find out the facts of it; so I was put in charge of the dental investigation.

GOODFRIEND: How many other dentists went with you?

SOGNNAES: No, I was the only one; but we also had physicians, we had botanists, we had marine and land zoologists, we had a geologist, we had a sociologist--thirteen of us.

GOODFRIEND: All looking at different aspects of the population?

SOGNNAES: Yes.

GOODFRIEND: So, was it the milk? What did you find out?

SOGNNAES: They had the lowest milk consumption on earth, a few cubic centimeters a day. The cows were wild and they had to shoot them to get hold of them, which they did at Christmas and births and weddings, and to make moccasins from their hides. So it was a joke, the milk consumption on the island. But that part of the story became enlightened when I found that they had a high fluoride content of their teeth, as much as you would get in this country with one part per million in the drinking water. Secondly, we did fish analyses, and by the enormous amount of fish they ate, they got fluoride that way. So, since then, I always recommend: One can of Norwegian sardines a day keeps the dentist away!

GOODFRIEND: This is before all the research on fluoride and fluoride treatments.

SOGNNAES: Yes, indeed, but you have to remember that by the time I got to work up my material, which I did in the United States in Rochester, the fluoridation story had just broken. Otherwise I wouldn't even have looked for it. I took teeth with me from the island, partly baby teeth that were shed and partly loose teeth of people who had had periodontal disease.

GOODFRIEND: So, in other words, you maybe didn't know what you were onto at the time?

SOGNNAES: No. I had to just look for everything.

GOODFRIEND: So you were in Tristan da Cunha for how long?

SOGNNAES: That was from the fall of 1937 until March 1938.

GOODFRIEND: And then you went back to Norway.

SOGNNAES: To Norway, yes.

GOODFRIEND: Had you left a sweetheart or anybody behind?

SOGNNAES: Yes, Edel [Holand] was still there.

GOODFRIEND: Edel is your wife now, but you were sweethearts from a long time ago. Is that right?

SOGNNAES: Yes. I met her when I did my first military service in the lower part of Oslo fjord. There is a place called Stavern, where she had a summer home, her family. The meeting was a situation where I had been on a march competition, you know, with a big rucksack, pack, and a gun, very heavy, and must have walked for ten miles. I was just getting near the camp, and there was a little romantic house with a white picket fence and a little girl coming out with blueberries in her hand. That was my introduction to Edel. [laughter]

GOODFRIEND: And what happened from there?

SOGNNAES: Well, we knew each other then during part of that summer, but it was towards the end of the summer, and I got back to Oslo, busy with my studies, of course. It was not until one day at the famous Frogner Park in

Oslo, where there is a skating rink, where somebody suddenly yelled, "Make room for Sonja Henie!" And then we all reached out our hands to make a circle, and there on my right hand was Edel.

GOODFRIEND: You hadn't seen her in a while.

SOGNNAES: No.

GOODFRIEND: Oh, how funny.

SOGNNAES: So that was kind of romantic.

GOODFRIEND: It sounds like you've had a romantic life with her anyway. She seems to have played a very important part in your life.

SOGNNAES: Yes. Really.

GOODFRIEND: So when you returned to Norway, did you expect to stay?

SOGNNAES: No, the first thing that happened then, I was of course a qualified dentist and I was now committed to serve military service as a dentist, professionally; so I was called up to the northern part of Norway and served there during that summer. But then the important thing that happened in my life was that by not going into practice and settling down with a lot of overheads and so forth, there came this invitation from the school of dentistry from a professor in pediatric dentistry by the name of [Guttorm] Toverud. (They say to pronounce these kinds of names you have to suck on a lemon.) Toverud. A wonderful man, who

had happened to be a student in America when he was young, and there had been an invitation from that institution where he served as an intern in pedodontics in 1923, that they would like to make open a place for another Norwegian. And since I had shown some interest in that subject, he very kindly asked me if I wouldn't submit an application.

GOODFRIEND: And that was for the Forsyth Dental Infirmary for Children?

SOGNNAES: That is what the name was then. It is now called the Forsyth Dental Center.

GOODFRIEND: I see.

SOGNNAES: I remember very well that I filled out the application, and then I was going home to Bergen to visit my folks. I left the train in Oslo. That was way over the mountains and down, you know. Edel was at the station, and I explained the situation. I gave her the application and the stamped envelope and said, "You can do anything you want with it. You don't have to mail it. But if you do, I may have to leave you another year." She mailed it. You can interpret that any way you want. [laughter]

GOODFRIEND: So you did decide-- So you left and that was in 1938 you became an intern at the Forsyth Center in Boston. Now that's when you--first time, right?--you landed in New York.

SOGNNAES: Yes.

GOODFRIEND: Welcome to America!

SOGNNAES: Yes, and then I took the train to Boston. I had an introduction to a very well known Norwegian architect by the name of Gustav Hagen. He was the brother of one of Norway's most famous authoresses, poet, who had the same name except she was called Ingeborg. But that's another story. However, she had performed for us at the dental school. I had gotten to know her, and when she heard I was going to America she had wanted me to bring a greeting, gave me the address in Boston. I just arrived in Boston; I had taken the train. But it was the hurricane of 1938, which is probably the most famous one. I checked in at the hotel near Forsyth; it was the Peter Bent Hotel, a small, little hole in the wall, the best I could afford. Then I didn't want to wait a minute. I was in America, I had this greeting, I wanted to do that this weekend before I started at Forsyth. So I went on a streetcar on Huntington Avenue and I got as far as the Opera House on the corner of Mass [Massachusetts] Avenue, and the streetcar blew off the street.

GOODFRIEND: No kidding!

SOGNNAES: That was the hurricane. It was incredible. A huge whiskey sign on top of a tall building fell down right in front of my feet, but I was supposed to stay around a while. So I walked from that corner about five blocks to

this address that was near the Symphony Hall. I had come in and I shook off my raincoat. I put my raincoat over my arm like that, my hat in the hand. (We wore hats at that time. At least I did.) I knocked on the door, rang the bell, and nothing happened for a while. Then finally a scared-looking couple barely opened the door, wondering what on earth can be out in weather like this. And that was the architect and Mrs. Hagen. The boy, Hans, was lying under a table in case the house would blow away. Of course they have never forgotten this episode that I could be so crazy having come-- But you have to remember another thing: When you grow up as a kid in a little country like Norway, you have heard that anything can happen in America, and there must have been something, the mere thought that this may be just one of those things that can happen.

GOODFRIEND: And you were ready to take America by storm, I see.

SOGNNAES: Yes, or vice versa.

GOODFRIEND: So you started the program. Well, first of all, before we get into the specifics of that program, what were your impressions, besides the hurricane, of America? Is it everything-- Is it the land of milk and honey that you may have thought it would have been?

SOGNNAES: Well, I think that my immediate impression,

because I met so many people right away, was the extreme friendliness. I have been in other countries, and they are more reserved and perhaps even sometimes not as friendly and sometimes even somewhat arrogant. But the consuming interest in people and in each other and curiosity about you, and I about them, naturally, and wanting to be helpful.

GOODFRIEND: Were they very accepting of people from other countries?

SOGNNAES: Yes. I mean it's truly a remarkable thing. Of course it has a long history of immigration. But it is a remarkable thing to come from a foreign country and have the opportunities and the privileges and the friendships that this country has offered.

GOODFRIEND: Were there any particular good or bad feelings toward you as a Norwegian, or did that not make any difference?

SOGNNAES: Well, this is what I am partly referring to, of course, that feeling that I had probably taken the place of another deserving intern for that spot when I first was accepted, and obviously later on when I was accepted for the Carnegie fellowship in Rochester. So thinking of that, it is an exceptional gesture, I think.

GOODFRIEND: How did your family feel about you leaving Norway?

SOGNNAES: Well, being the youngest of six boys, I told

you that it was not uncommon in the old days to have the older brothers gather enough money to send you with a one-way ticket to America.

GOODFRIEND: Send the youngest? [laughter]

SOGNNAES: Yes. Especially if there wasn't enough for cows or grass or fish to take care of you all.

GOODFRIEND: Was that to hope that you would make enough money to send back home?

SOGNNAES: I don't think that ever entered their minds. I had never shown any evidence of that talent. My father, frankly, was probably in his heart, although he would never show it, rather disappointed I didn't want to get into his footsteps, in business, and wondering why all this education when he had made a happy and good life the way it was. I'm sure that must have been entering their minds.

GOODFRIEND: There is a truism that says that Norwegians are sort of seafaring, adventuresome people and are open to going to new places and trying new things. Do you think that's true?

SOGNNAES: I'm convinced of it. I have so many examples in my own life that I've seen it, and it even obviously applied to Edel, who must be a born gambler to come over under the circumstances that we had then. But I think the spirit of travel-- There is hardly a family in Norway

that doesn't have a sailor or two.

GOODFRIEND: Is that because of the location?

SOGNNAES: I think largely, and the tradition.

GOODFRIEND: You say Edel was a gambler. She did come over then to marry you not long after you had been here. Is that right?

SOGNNAES: Yes. Well, I was supposed to come home finally. I had been to Tristan da Cunha that year before, now in Forsyth for a year, and I with reason-- In fact I even had an offer of a position to come home to Norway to teach at the university, so I would have been able to do some of that besides part-time practice probably, because I couldn't expect a full-time teaching job at that young age. But it would have given a stepping stone to a professorship I presume.

Then this thing came up where the University of Rochester had been receiving Rockefeller and Carnegie Foundation funds to start a special program for educating academicians for dentistry. This had taken a long time because Rochester was a school of medicine and dentistry in name only at that time, or up to recently at that time. [George] Eastman of Eastman Kodak [Company] fame had insisted that the school be called medicine and dentistry and cater to both, because he had some very personal gratification with dentistry, what they had done for him and

his own problems. He established million-dollar Eastman dental clinics in half a dozen cities around the world. Rochester first, of course, and then New York, London, Paris, Rome.

They had gotten a fantastic dean, who later won the Nobel Prize, Dr. George Whipple, who was a professor of pathology at [University of California] San Francisco campus. But in 1921 he became dean of the School of Medicine and Dentistry, and he decided, instead of starting both undergraduate medical and dental programs, to make dental programs post[doctoral] or postgraduate working towards masters and Ph.D.'s in basic sciences. It was an extremely wise decision because you can look around the country and the world today, and there are graduates from that program all over the place--deans and directors and professors.

So, instead of going home to Norway, I was discovered, you might say, by someone in Boston who then wrote to Rochester and suggested I be given an application form, which I filled out and was accepted. That is when I wrote to Edel that two years is enough as far as I'm concerned and I invited her over, and she came on the first ship before I left Boston after the internship. And it was a blessing because it was one of the last ships that left Norway because of the war.

GOODFRIEND: This is around World War II.

SOGNNAES: Oh, yes. After Germany invaded Poland there were great restrictions on traffic. We both had return tickets to Norway. We had thought we might go home within a year perhaps, but then it was completely involved. So she came over, and we were married. We were sponsored by the Hagen family, the architect family, and they received her very nicely. We were married in a little Norwegian church just a stone's throw from Harvard Yard. A Norwegian stone's throw. [laughter] We grew up in a state Lutheran church in Norway, and this was a Norwegian pastor (as we call him). We had a wedding with a lot of friends from Boston, Hagen's family, and from Forsyth, of course, and other friends.

GOODFRIEND: When you say you were sponsored by the Hagen family, what does that mean?

SOGNNAES: Sponsored in the sense that Edel had sort of a home to go to when she arrived and they were her step-parents, you might say, on this side.

GOODFRIEND: I see, and were they from Norway originally?

SOGNNAES: Oh, yes. He had come as a young immigrant, as a young boy without any education, but he worked himself through high school and college with part-time work and became finally a prominent architect graduate from MIT [Massachusetts Institute of Technology]. His specialty was building churches.

GOODFRIEND: I would like to back up a little bit and get into your internship at the Forsyth Dental Infirmary for Children. How many other interns were there?

SOGNNAES: Well, I still have the picture. I could count them exactly, but I think we must have been about thirty.

GOODFRIEND: And it was a prestigious position to attain.

SOGNNAES: Yes, it was one of the few programs in the world at that time that dealt with postgraduate or post-doctoral dental education. The internship and residency is now a commonplace, you know, but it was a very sought after opportunity at that time.

GOODFRIEND: Was it a program then that would be equivalent to now someone going into pedodontics?

SOGNNAES: Yes, it would, and we had not only the clinical experience and exposure, but we had some very distinguished lecturers. Most of them [were] professors from Harvard, who were there on a regular basis, and gave one-hour presentations in the morning before we started in the clinic.

GOODFRIEND: What had you hoped to do with that background?

SOGNNAES: Well, my dream of course was that I had been bitten by this research bug, and knowing that the director at Forsyth at the time, Dr. Percy Howe, was probably recognized as one of the most exciting, from many points of

view, researchers in the world coming out of dentistry. He did very fundamental work together with a professor of pathology at Harvard, Dr. [Simeon] Burt Wolbach, on very early pioneer work on vitamin C and A deficiency and repair. This was before vitamin C was even known as vitamin C; it was an orange juice factor, you might say, and A was a carrot juice factor.

But they raised animals, guinea pigs primarily to begin with, on diets that were deprived of some of these vitamin-containing element foods, and then they would repair it by putting it back. They used the rodent incisor as a metabolic kymograph because it is continuously growing, you know. The edge that bites you today of a rat or guinea pig was the beginning of the root six, seven weeks ago, and so you can follow the mineralization and the organic framework building up during these definitive periods, which you cannot do with bone and permanent teeth. They became very expert in analyzing these facts that way. Besides, since the teeth come from two germ layers, the enamel from the epithelial or epidermin part and the dentin from the internal mesodermal connective tissue part, they could study factors which affected both the connective tissue and the epithelial tissue, which is ideal for vitamin C vis-à-vis vitamin A deficiency and repair.

GOODFRIEND: Did you become involved with that research

while you were there?

SOGNNAES: Only as an admirer, because they already had published all of the fundamental work back in the early twenties, but Dr. Howe was very, very pleased and eager to have me get involved with research. So, being in the clinic a lot of time, I did some clinic research on diagnosis of early dental caries and repair remineralization studies. I published my first-- Well, I published one paper in Norway from the military service, but the first two American publications in Journal of Dental Research and American Journal of Diseases for Children [were] from there. It was a stepping stone. We studied nutrition and general health in children, and I worked with a lady by the name of Ruth [Loring] White, who later when he became a widower married her. She was a very, very competent nutritionist, and they lived--

GOODFRIEND: Who married her?

SOGNNAES: Percy Howe, the director. So I was coauthor with her on one of these papers. But Dr. Howe was extremely stimulating and always willing when he met me in the corridor to come into my office and have a little chat about some other research of some other people. I wished I had had a tape recorder like that when I talked to him. He could have given an oral history that would have been fantastic, in my opinion. He was extremely generous and

kind and would often invite me over to Harvard Club, where he was a distinguished member. He also held a professorship at Harvard. He let me meet with other people that I benefited from.

GOODFRIEND: Didn't you say they had a nickname for you while you were there?

SOGNNAES: Oh, yes. One of the first things I discovered of course was that you had to have a first and last name, sometimes a middle name, but most importantly a nickname. [laughter] Radar had not been discovered yet, [or Reidar], either kind. So what did I do? I think it took them just one day to identify me as "Soggy," short for Sognnaes.

GOODFRIEND: Did that stick for a while?

SOGNNAES: Oh, of course! Did it stick for a while? When I came back from England after the war in 1945 to Harvard, which had held the job open for me for the duration, the dean of medicine was a former professor of mine at Rochester, Dean [George P.] Berry, a microbiologist, and in the presence of President [James B.] Conant, who was of course the big star, atomic bomb expert, et cetera, et cetera, this Dean Berry would at some point call across the table to me, "What do you think, Soggy?" And I think President Conant sometimes wondered if it was a question or a comment. [laughter]

GOODFRIEND: So after the internship, as you were

explaining, you became a fellow at the Carnegie--

SOGNNAES: Carnegie Fellow they called it; it was a stipend.

GOODFRIEND: A Carnegie Fellow at the University of Rochester School of Medicine and Dentistry.

SOGNNAES: And this was a great advancement. My annual income increased from \$1,000 a year as an intern to \$1,250 as a fellow.

GOODFRIEND: Could you live on that income at that time?

SOGNNAES: Well, Edel is a resourceful cook, I guess, and we had the happiest years of our life. We rented a place in an attic for forty-seven dollars a month and it was cute as could be. Warm in the summer but--

GOODFRIEND: This was in New York.

SOGNNAES: Rochester, New York, yes, and we had friends across the street. We were all in the same boat. You know this song from Muskogee: "lightning was the biggest thrill of all." Coca-Cola, a break for a coke or something in the midafternoon, to kick around what we had been doing was sort of the big deal. There was no room or time or money for any big parties, but we always had a good time.

GOODFRIEND: Was Edel working?

SOGNNAES: No, no, not then. In fact she became pregnant fairly soon, and we had our firstborn, Solveig, born in Rochester about ten months after we were married in

June 1939. She is now a nurse. But anyway that was a big event for us, especially for me wanting a sister.

GOODFRIEND: That's right. As a fellow you were able to earn your master's degree in physiology and a doctorate degree in pathology.

SOGNNAES: Yes. The physiology course was largely related to nutrition.

GOODFRIEND: I see. Now was that a major accomplishment at that time, too, to earn these degrees, to go on for further education?

SOGNNAES: There was not a required thing. You could spend years there, some did, without taking a degree, or you could enroll formally for the degree.

GOODFRIEND: What was the emphasis of the program? What did you hope to achieve out of that?

SOGNNAES: Well, there were two things, or three: one was to get a thorough foundation in the fundamental knowledge of the discipline; and in pathology that would include continuous participation in the autopsy room to see all the material that went through, and microscopic work, workup. Then, in teaching you were expected to give seminars, some that the professor would give you or some that you would choose yourself because of a special interest, and some would be interdisciplinary that you would be exposed to a frightening audience of VIPs, but very helpful, very

educational. Of course the primary emphasis by all means was research, either you had some material with you, like I had from Tristan da Cunha to begin with, and then you developed interests and opportunities depending on the facilities. One of the big facilities in Rochester of course was radioactive isotope research, which was of course one of the big features of Stafford Warren. He was a professor of radiology, who became the first dean of medicine here.

GOODFRIEND: He was a professor of radiology at Rochester?

SOGNNAES: Oh, you bet, and chairman. And he had a huge operation there.

GOODFRIEND: Is that where you met him?

SOGNNAES: Oh, yes.

GOODFRIEND: So your research then concentrated on the fluoride research that you started at Tristan da Cunha?

SOGNNAES: Well, the nutritional aspect of it related to dental decay, caries, and various aspects of it--how to create it in small laboratory animals, like rats, which was at the time a fairly new thing and somewhat mysterious. Sometimes it worked, sometimes it didn't. We now realize later on that it was a question of infectivity, that some animals had not been exposed to decay-carrying bugs.

But fluoride became the big thing worked at different levels. One who later became dean, [Basil G.] Bibby,

worked on the microbiology of it, the effect of fluoride on bacterial metabolism; one worked on the biochemistry of it, a Dr. [Joseph] Volker, who was very close to me. We published several papers together. He worked on the effect of fluoride on acid solubility, and I worked at the pathological level--how to apply it topically to the teeth and see how it would affect the subsequent experience of decay, with and without. This was at a very early stage, you see, that the American Dental Association and the National Institutes of Health were primarily interested in water fluoridation.

GOODFRIEND: Had it been started yet?

SOGNNAES: That had just barely been recommended in 1938-39, and they were very eager to plug it and with good reasons. So the idea that you could do it some other way, that you could chemically do something to that hard, dense enamel covering of the teeth was a new concept that was very hard to conceive of or to accept, because we had always thought, especially microbiologists, that the teeth were a passive prey to the environment of the mouth and that their quality wouldn't make any difference. Well, the fluoride story showed that it was. As a matter of fact, it was Percy Howe at Forsyth back in the 1930s who had first thought of a chemical treatment of a tooth to block caries. But unfortunately his substance was silver nitrate which

tended to blacken decay lesions, and it didn't become popular except in children's back teeth. But the concept of a chemical interference with these processes he started.

It was an awful lot of fun to see these things develop. After I had published my animal studies, of course, I went to war, and when I came back it had been tried clinically by several people during the five years I was away, and very gratifying that it worked.

GOODFRIEND: I know you were involved and exposed to other [things] besides the radioactive isotopes and electron microscope, and I think those are all fascinating. I think maybe we will stop here and continue about that next time.

TAPE NUMBER: II, SIDE ONE

OCTOBER 5, 1983

GOODFRIEND: I have gone over the tape from last time and I do have a couple of points that I want to clarify if you will indulge for a minute. First of all, what was the name of the dental school that you attended in Oslo?

SOGNNAES: Norway Dental School. At that time [there was] only one in the country, namely, in Oslo. Later on one was added in my native town of Bergen, Norway, where I was invited over to bring some of the sketches from UCLA.

GOODFRIEND: The other point you mentioned: the influence of the state church. I know Norway had a state church at that time. What type of influence did that have on your family life and your life in particular?

SOGNNAES: Well, in my case my parents were very church-going Christians, religious, and they belonged to the state church. I was of course, being the youngest of six boys, going with them in church longer than the other children I'm sure, not that it did me any good. But for example my father, though he was a businessman and very busy, he always taught Sunday school, and I was in his class. Then he asked me to follow him to the main church; and I may have mentioned this before, but I can remember that he was so accustomed to the very serious sermons,

you know. He loved to sing, but if the sermon wasn't the hell-and-fire type of thing, that he didn't have his handkerchief wet when he went out of the church, he would say to me, "Reidar, that wasn't much of a sermon." So it was very strange in a way.

My wife Edel's family were also very religious; but they did what you are allowed to do: they became a member, at least one of her sisters became a very serious member of what is called the Free Church. So legally you didn't have to belong to the church. But normally all the church was run by pastors appointed by the king after [their] education at the university, and they were all supported by our income tax. I don't know if you ever saw such on the income tax paper, but it was taken out of people's money because it was the king's state church. You could offer money to the church, but this was a top secret thing. You had to go behind a curtain and put money into a big, big container. And if anybody found out that you had done it, you wouldn't get any credit in heaven; and it was not income tax deductible.

GOODFRIEND: Why would one give the money to the church?

SOGNNAES: Because one would feel they could do more than they did with their income tax money. But it was very serious business.

But I regret to say that when I went back to Norway, as I had done many times before my mother died at ninety-five, I have gone back to the Domkirken, as we call it (the main dome) where I was baptized and confirmed, and coming there on a beautiful Sunday morning I think I have been the youngest one, even many years after I had gone to America. All of the youngsters [were] up in the mountains, either skiing in the winter or sunshining in the summer. They love the outdoor life, and it's very hard to get the young Norwegians to go to church.

GOODFRIEND: Was the church--did it demand a lot of discipline?

SOGNNAES: I wouldn't say that that was too openly. I can only say that it was made to understood in the sermons that you better be a good boy or else!

GOODFRIEND: Do you still carry some of those beliefs?

SOGNNAES: Well, of course the Lord's Prayer and the reading of the grace for dinner, before and after, was in our blood.

GOODFRIEND: And you do that with your family?

SOGNNAES: Absolutely, all our life, and at the table, with six boys around the table and being the youngest, sometimes I was sort of suggested by the olders that I should say the grace, and they would have a lot of fun trying to make me laugh out, you know, because my father was a serious person.
[laughter]

GOODFRIEND: You and Edel were married in a pastoral church in Boston.

SOGNNAES: It was a Norwegian church within a Norwegian stone's throw from Harvard Yard, yes. It was a ceremony very similar to the Norwegian one.

GOODFRIEND: And today with your family do you still say the Lord's Prayer at the table and--

SOGNNAES: Not as openly. Our youngest daughter, who is a pediatrician now, who met her husband at Stanford; he is an internist--they do it openly all the time whenever we visit there in Philadelphia or if they come here to Christmas or holidays, and sometimes I of course as the old grandpa will even say it in Norwegian. [laughter]

GOODFRIEND: That's nice. You mentioned your father, I wanted to clarify a little bit also. You mentioned his writings, that he did a lot of writing on economic and political issues. What types?

SOGNNAES: Well, this is the strange thing. I have no idea where he learned to write and when, because he really never went to school. He built his own rowboat practically and sailor's type of suitcase--you know, those big wooden things (that one of my brothers inherited)--and went to Bergen as a young boy, as people did because they had one cow, you know, and had to go out fishing anyway. So he decided to learn to become a businessman, and he was not a

well-read person when he was young, apparently, except for the Bible. But somehow he became a great orator and speaker for the associations, and then he began to spell it out on paper. And I can still see him with the big white paper block that he had, and pencil, and erasing till he had a hole in the paper. But it was all handwritten in his pencil and sent to the magazines and newspapers. It was never typed.

GOODFRIEND: When you say the associations, is that the merchants' associations?

SOGNNAES: Yes. He was defending--

GOODFRIEND: So he was for unions or--

SOGNNAES: Oh, he was very much against bureaucracy. Our uncle who became harbor master of Bergen and unfortunately was put in a concentration camp by the Nazis and his son was shot down over Holland later during the war in England, he was very much more to the social left wing of the city politics, and my father was way on the right, against the socialism you might say. It was left and right party. In Norwegian venstre og høyre, as we say.

GOODFRIEND: So, were his politics consistent with his religious beliefs?

SOGNNAES: Yes. Well, I don't think that in economics that was too much of it--well, honesty, yes, and morality--but the main thing that he wanted was private initiative.

Those are the two words I remember best from his speeches and his writings.

GOODFRIEND: Interesting. Also, you mentioned last time that you were in Leipzig in 1941.

SOGNNAES: Nineteen thirty-one and 1932.

GOODFRIEND: Oh, 1931, right. That was the prewar period.

SOGNNAES: Nineteen thirty-one and 1932 was just when Hitler began to show his face in the streets.

GOODFRIEND: Right. What was the environment like at the time? What was the country like?

SOGNNAES: Well, it was of course a time of a tremendous depression. I had a feeling sometimes that they wanted a change no matter what, and the very unfortunate thing was that Hitler came along and promised them everything, you know. I often reflected later on when I was at Harvard and McCarthyism began, that if it weren't for the fact that America was so prosperous, God help us what might have happened in this kind of dictatorial type of an approach. But that's an aside.

Now the environment otherwise was very, very lively for students. We had our own beer cellars, nonpolitical, whereas the Nazis and the Communists, the Brown Shirts and the Black Shirts, had their own and got into fights all the time. And we had a wonderful cultural environment, going to operas and operettas with student prices, way up under the

ceiling of course, for fifty pfennigs, or five cents, so to speak. And art. Leipzig was a real cultural center.

GOODFRIEND: It was flourishing.

SOGNNAES: Then in addition to that I was fortunate that who was then perhaps one of the world's most famous anatomists, who wrote a big atlas that was used all over the world until new ones came along, and not to speak of today with Carmine Clemente in our own anatomy department, inherited and expanded anatomy atlas. He was then really the star as far as anatomists were concerned and gave us opportunity for dissection material. For example, in Norway it was almost impossible because of the sacred nature of the dead and the whole upbringing and the belief in trolls and all of that. The history is a very different one, and they practically had to import human parts secretly from other countries for a while.

GOODFRIEND: What was the name of the professor?

SOGNNAES: In Leipzig it was Spalteholz.

GOODFRIEND: And his first name? [Werner--ed.]

SOGNNAES: In Europe we don't remember first names. I am only known as Sognaes to my classmates from elementary school--it's an incredible thing--and the teachers call us by our last names. But that's another story.

But anyway, in Norway it was much more difficult, yes. So I got a great introduction to anatomy. But around those

dissection tables in 1931 and 1932, I also found out a few other things, and that was that you began to get careful who was listening to you when you talked and expressed your views on political matters. I saw people disappear for I don't know what: either for that reason or to become generals of the army, air force, and navy, or something later on. It was a very uncomfortable situation. And, sad to say, at Harvard when I was in the medical center's lunchroom at Vanderbilt Hall across from the quadrangle there on Longwood Avenue, when I came back from Greece and Italy with Paul Dudley White from a medical mission in 1948, [Joseph R.] McCarthy had just been raising his head, and some of my finest friends and colleagues at Harvard had their picture in the paper as dangerous communists, and their lives were ruined. It became so that you began to look around when you talked. You had that feeling that I had back in Leipzig back in the early thirties. Scary, but fortunately it didn't turn out to go that bad.

GOODFRIEND: What was the feeling in Norway at the time?

SOGNNAES: Well, in Norway they had a very liberal political system. If you could get up on a soap box and get enough people around you to believe in what you were saying, you could be an outright, card-carrying communist and you could be represented in the government as long as you had enough votes. You could do the same thing if you were a

national socialist, a Nazi in other words; and [Vidkun] Quisling, of course, tried this very trick, you know. But there was no law against it. There were multiple parties. Then there were the Christian party, the Social Science [Socialist] party, you name it--they had parties of every kind to try to get control of the government. And then there was way to the right and way to the left.

GOODFRIEND: Was there any feeling about Hitler at the time?

SOGNNAES: Well, there of course I have to confess that by the time I left Norway in 1937-38 for the first time, when I went to this strange island in the South Atlantic [Tristan da Cunha] and then when I came home and went to America in 1938, up to that point of course it [he] was sort of considered a strange figure rather than a dangerous figure, which was very unfortunate. And as students I have to confess that we had a few beers and made fun of it because he was such a caricature in many ways. But the fact that the country was down under and that the communists didn't seem to have much of a solution to it, I think that that had quite a bit to do that Hitler got away with the initial dictatorial plans.

GOODFRIEND: To get us back on to dentistry for a minute, what were your memories of the state of people's dental health when you were in Norway?

SOGNNAES: Well, I didn't know it then but I know it now, that compared to this country I think we had an unfortunate degree of dental pathology, you might say, especially dental decay, caries. The reason was, and I have to confess that it was even within my own family, the knowledge of nutrition when we were little boys was such that I dare say that some of the well-to-do farmers and the well-to-do businessmen and merchants, including my own father, they would gladly trade in their egg and bacon and all kinds of goodies for white bread and syrup and that sort of thing. And there were a lot of children who had very, very rampant decay. And you saw these "hourglass" teeth smiling. I call them hourglass because cavities on each edge, and it was really pathetic. But the dental education was good, the dental care was good, and the school dental clinics did a great service to save teeth. But as far as prevention is concerned, which is in vogue today, that was nonexistent, the campaign for that and the means for that.

GOODFRIEND: Well, last time we left off you were getting your Ph.D. at the University of Rochester.

SOGNNAES: Yes.

GOODFRIEND: And we were getting into what you wrote your doctorate on. What was that?

SOGNNAES: Yes. Well, I was very fortunate having received a Carnegie Research Fellowship, which had a magnificent sum

of \$1,200 a year, which was \$200 more than I had as an intern in Boston, enough to rent an attic apartment and have a baby with Edel within the year.

But, anyway, the sponsor of the program I was under was Dean George Whipple, who had been professor of pathology at University of California at San Francisco, but was called upon by Mr. [George] Eastman and company, the [Eastman] Kodak Company in Rochester, to come there and build a school of medicine and dentistry. Eastman had insisted that it be both, because he was so grateful to dental care that he had had for various problems that he had had. As a matter of fact, he was so generous that later on he gave \$5 million dollars to Rochester and \$1 [million] to New York, \$1 [million] to London, \$1 [million] to Paris, \$1 [million] to Stockholm, to build the Eastman dental clinics, which are still going strong and do a lot of good research and so forth. So he insisted on it.

But when Whipple became dean there in 1921, he looked at the situation of dentistry and recognized that there were many dental schools, but there was very little done in postgraduate education and graduate education, academic education, except for a few clinics, like the Forsyth in Boston had an internship program; but these were few and far between. And, bless his heart, he decided to use Eastman's money to bring in young dentists to get them deeply involved

with higher education and research, and working for masters degrees and Ph.D. degrees, and hospital exposure, and so on and so forth. He made an enormous contribution to academic dentistry. I can hardly think of any school in this country and few in the most prominent dental institutions in other countries where Rochester hasn't had an impact through his work.

Now he was dean. Believe it or not, he was the only one I know of who won a Nobel Prize in medicine when he was dean. To be sure, based on research that he already had begun in the University of California. He became interested in replacement of blood in various blood diseases, and he got the Nobel Prize together with two professors from Harvard who did the clinical applications of his research on finding means of controlling pernicious anemia.

But he was a fantastic person beside that, and a warm person and generous to us foreigners. Let me just give you one example: I had grown up in teaching in Europe and our respect for professors was such that unless we knew the answer to a question, you wouldn't dare to ask it [laughter], which sounds like a joke, but it was true. That was a one-way traffic. They were very, very dramatic lectures, very pompous in many ways, big drawings, sometimes with both hands on the big pictures on the wall and all of that, and we were impressed by the professors and the deans. We had

had tremendous academic standards we thought we should respect. Well, anyway, when we were going to have the first lecture in pathology when I came there, first of all he said, "Forget the book and lecture."

I said, "What textbook or atlas would you recommend before I begin to receive pathology?"

He said, "Go into the autopsy room and see for yourself." He would say that with his collar of his white uniform up like so and the glasses way down on his nose looking over them, and so I did.

Here's what happened. I opened the door and quickly closed it and said, "Excuse me." Right inside the door was a gentleman lying in a tuxedo, and being new to this country, I had no idea that here was a very VIP person who had died in the hospital and been autopsied and been dressed up by the funeral director right there to get ready for some ceremony. You know, in Norway we never see the dead, and it was a shocking experience, but I can't help telling it because that was my first introduction to pathology in Rochester.

The next one was when there was a note on a lecture room door, "Meet me in the lab." And then we came into this big lab and we sat down with the microscope benches, you know, and here came in the Herr Professor again and instead of doing a pompous lecture sat down on one of the lab

benches and he pointed to the person, the student nearest to him, and he said, "Tell me, have you ever been sunburned?" And then we gave the lecture on inflammation. He filled in the long words, you know, but it was anywhere, you know, from redness to swelling, or what have you, heat, and so forth--the whole history of the inflammatory sequences that he pulled out of us. Of course my initial reaction said what an enormous disappointment. I was expecting this great show; and what he knew of course, and I know now: I have never forgotten that lecture because I gave it to myself so to speak. And I'm sorry it isn't done enough--

Then of course right to the microscope and looking at a rabbit ear with capillaries--

GOODFRIEND: Were there any other glaring differences between education in Norway and the United States?

SOGNNAES: Well, from a student's point of view, I suppose another thing was that we did seem to have frequent quizzes, which is probably a good thing to keep track of people, which we did not in Norway. They were the big exams at the end of the year, which were grueling and they were brutal sometimes. I think in this country there is a little bit more generosity, maybe because people have perhaps spent money to get the education and they should be warned in between if something is not going well. In Norway education was free, so I don't know if that is the reason. But if you

want me to give a speech, I'll tell you what [I think] of multiple-choice questions. I once wrote a little editorial in the Bruin about it.

GOODFRIEND: I take it you are not for them.

SOGNNAES: I have never given them and I would never want to take them. And I'll just give you one example. I think the ultimate in educational insult and injury is the multiple-choice question, the correct answer to which is "none of the above." Picture the professor who has spent a lifetime educating himself in the subject and being prepared to pose good questions on the subject, then he has to sit down some evening at home, "Now we have that quiz coming up. How can I figure out five wrong answers to my question, preferably some that are almost correct, and then if you are lucky enough to not mark any of them but 'none of the above,' you have an A+." Who has learned anything from it? But of course it has a tremendous advantage in the computer age because you can just press a button and get the answer like that! [snaps fingers] Our exams were sometimes three, four, five hours, you know, and the poor professor would have to read ten pages, not always in the best of writing, of essays. My father didn't learn to write that way, but if I ever did, it was from that.

GOODFRIEND: Well, I'm still on edge about what your Ph.D. was on.

SOGNNAES: [laughter] Judy, forgive me. I get carried away. You are much too patient.

I happened to walk into the university when radioactive isotopes were man-made suddenly. And fortunately Stafford Warren, who later of course became the great dean of medicine, founding dean here at UCLA, Stafford Warren, he was deeply involved with them, so much, you know, that he became head of the Manhattan Program's nuclear medicine aspects. I was very interested in tracing some of these substances through the calcified tissues, and so I did my research on radiotracer studies through bones and teeth. I was particularly enthused over applying it to the strangest of all biological structures and the most highly calcified; namely, the dental enamel that covers the teeth, which had not yielded to any scientific method hardly in the past because it looked so finished, as if nothing more could happen to it except negative things like decay. And it turned out by experimenting with the influence of salivary secretion vis-a-vis the internal pulpal circulation of connective tissue fluid that we were able to shed a great deal of light on the potentials for chemical exchange reaction in this strange structure, which of course then became the fundamental background that led to chemical reaction and prevention, like topical fluoride application.

GOODFRIEND: There seemed to be at this point a lot of new

things happening in dentistry, or at least a lot of new tools coming to the forefront: electron microscopes-- What were some of the things that were introduced while you were studying?

SOGNNAES: Well, I suppose one is very fortunate to live in a time where these things do happen, and tools of research are very important for shedding light on problems. And I can truthfully say that I was greatly benefiting from such developments. Initially we had these very high resolution microradiographic methods that were not available before, with some very fine Kodak films and very soft X rays where you could study calcification and decalcification and recalcification that were pertinent to the health of bones and teeth. So that was one method.

Then the radioisotope method involved not just tracing it by Geiger counters but getting it into tissue and making sections of tissue, place them on photographic film and getting what we call autoradiographs where you could see inside tissues and cells where certain chemical reactions had taken place. Then came histochemistry, meaning chemistry at the microscopic level where after administering certain reactions to the tissues, living or dead, and then make sections and stain them with certain dye-binding capacities for specific chemicals, which was highly developed when I was at Harvard after the war. I worked with the head of

anatomy there with this subject, Professor Wislocki, and George Wislocki was extremely stimulating in this area for me.

Then finally came the electron microscope, which gave an entirely new vision of tissue. To us who worked with mineralized tissue, we had some of the earliest applications because we couldn't cut sections thin enough to begin with, but we used microreplicas, taking off the surface a thin film that then could be coated and it evaporated metal in back of it to get shadow casting. And that was really the beginning of electron microscopy. Later on the diamond knife and other methods developed the possibility of cutting thin sections.

GOODFRIEND: So was this a great boon time in dentistry? Were new things changing the face of dentistry?

SOGNNAES: Well, I wouldn't say that. At the early time, I think it was a boon to stimulating interest in dental science, not only among academically oriented colleagues and certain deans and professors around the country who read the literature, but also I think it stimulated interest among scientists in other fields in problems related to the mouth and the teeth. I believe that was one of the most significant things that came out to begin with. And organizations like the American Association for the Advancement of Science, they took us under their wings as

a section, like medicine had and others, all others, and we were privileged to organize and publish a number of symposium monographs on fundamentals that included bones and teeth and skin, you name it, of that nature. I think it was enormously helpful to get the interest of scientists in other fields.

GOODFRIEND: Up until that time, it wasn't usual for dentists to get postgraduate degrees. Is that correct?

SOGNNAES: There were very limited opportunities.

GOODFRIEND: And you, from Rochester--let's see, you had your master's in physiology and a doctorate in pathology--why did you choose that course? Why did you decide you wanted to pursue that?

SOGNNAES: Well, I think that my original background had been somewhat morphologically oriented, of course, from going back to the anatomy department in Leipzig, and it became perhaps a factor in it. There were other colleagues of mine who did other degrees. For example, one of my classmates, Dr. Joseph Volker, he took his in biochemistry. And when I came back from the war he had already become a dean at a dental school in Boston, Tufts [University]. Then he became a dean in Alabama, then he became vice-president of health sciences, then he became president of the University of Alabama in Birmingham,

then he became chancellor of all the universities in Alabama, and now he is chancellor emeritus. So this was a springboard that Dr. Whipple had given to us and is best exemplified by Joe Volker.

GOODFRIEND: So you knew Stafford Warren then at Rochester, you mentioned.

SOGNNAES: Yes.

GOODFRIEND: What was he like then?

SOGNNAES: Well, he was an incredibly lively, energetic, hard-working and kind professor, and helpful to anyone. And he had very good people with him. One was a man by the name of Harold Hodge, who was doing very excellent work on radiology related to calcification problems. He became sponsor of many other younger fellows who came there for their research.

Stafford Warren, of course, did many strange kinds of research that I was not personally knowledgeable about, but I remember there was a lot of talk about these caskets that he got from the funeral [homes], extra supply or something, where he would put people in and increase the temperature to cause artificial fever, with the notion, and I think he had evidence to prove it, that we may think fever is a bad thing--"You better take an aspirin"--but his concept, as I understood it, was that fever is a good thing, and in the treatment of certain illnesses maybe artificial fever

could be induced, or heat, to the point where it might help rather than hurt the body.

Now this was just one of those things, you know, and after he retired here he did very interesting work in chickens. He went to his own chicken farms to pick them up, I gather, and worked down at the Warren center here that was named after him, on problems of rheumatoid arthritis, and so forth. So he was always going with something.

GOODFRIEND: Did you know him well there?

SOGNNAES: Oh, yes. Of course my greatest surprise was when I left before Pearl Harbor to go to war after Hitler invaded Norway, to the great disappointment, incidentally, of many of my colleagues, including George Whipple, who was as much against the war involvement in Europe as [Charles] Lindbergh, but that I only found out after the war. He never criticized me at that time, but he thought I should have accepted the assistant professorship at Harvard that they offered me back before Pearl Harbor. But in that case, Warren-- I came back to his lab after I became a captain in the Royal Norwegian Air Force, and there was a man with a gun outside the door. I was flabbergasted of course. It wasn't till after the war that I learned about the best kept secret; namely, that he was deeply involved--and that I would have been involved, too, if I hadn't left already--with radioisotope work related to the

atomic bomb project's biological effects.

GOODFRIEND: Let's talk about the war a bit. Tell me about your involvement in World War II.

SOGNNAES: Yes. Well, what happened was that everything was at a standstill momentarily, April 9, 1940, when Hitler invaded Norway. My own uncle, as I mentioned before, was harbor master in Bergen and responsible for the neutrality of the ships.

GOODFRIEND: What was his name?

SOGNNAES: Sigurd Sognaes, and [he was] responsible for the neutrality of the harbor. So he had to check ships from all over the world practically. But apparently some of the German ships had hidden soldiers under artificial bins of coal, and they got up in the middle of the night on April 9 and went into town and arrested prominent people, including him, and put them in a concentration camp. His son fortunately escaped and became a very prominent hero in the Battle of Britain. He was trained by us in the early part of the war.

GOODFRIEND: And his name?

SOGNNAES: His name was Helge, and our son, who was born during the war and baptized in camp by a Norwegian Lutheran pastor, became Thor after my mother, Thora, and the middle name Helge. And they are still looking for him [Helge]. They think they know-- I have talked to captains who

were with him, who were flying SAS [Scandinavian Airlines System] that go over the North Pole, who sat up front with him, and they saw him being shot down finally. He was too eager beaver, and he is somewhere in Holland in the marsh.

But that be as it may, my part became one that there were all of these people who had escaped from Norway by boats and sailboats and so forth to England, and then they were flown over to Canada, first to be in a training camp called Camp Little Norway, which began in Toronto and then expanded to Muskoka in Canada. Then I was put in charge of developing the hospital part of the dental services to begin with, and I opened offices in Toronto and Muskoka, and I helped with one for the army in Halifax, Canada, and then one for the Norwegian merchant marine, which was one of the largest in the world in the beginning of the war. They lost a lot of them, and they had a service in New York that I helped to develop.

GOODFRIEND: So did you volunteer to be a captain, or is that mandatory?

SOGNNAES: No, I had done all my military service in Norway both as a young student and also after I graduated, so that there was no commitment at all. But it was one of those things that it would be an impossible thing to sit back there at the time when America seemed not yet interested to participate, and knowing that I had the old

mother and brothers in Norway, and I knew that we couldn't communicate. So I didn't want to come home with the feeling that I hadn't done what I could. Of course, the marvelous thing was that Harvard kept open that offer, you know, for the duration, and five years later they sent me a telegram to Norway, and I came back.

GOODFRIEND: So, in other words, after you had graduated from Rochester, you were offered a position at Harvard and you turned it down to enlist in the air force.

SOGNNAES: Yes, yes. And it was a very good feeling about it. I wouldn't want to give you the impression we considered ourselves heroes because I considered it extremely fortunate to have the feeling we did something. And I tell you there wasn't a person there in that training camp who wouldn't give his right arm, so to speak, and some did strangely enough, to get over in the battle. In the Battle of Britain and the other battles some were ferry pilots taking American bombers and bringing them over from Canada to--

GOODFRIEND: Where were you stationed?

SOGNNAES: At first in Camp Little Norway in Toronto, then up near Gravenhurst and Muskoka. Then of course ultimately the plan in England was that there would be an invasion of Norway possibly, and I was selected to come over to London to stay in London House for a while

and help with the bringing together of the appropriate type of mobile equipment and so forth that would be necessary.

GOODFRIEND: Where was your family at this time?

SOGNNAES: They were fortunately back in Boston--Edel and the two children we had then, Solveig and Thor--and we had friends like Dr. [Joseph] Volker, [whom] I mentioned; he was dean of Tufts. We had friends at Forsyth, the director there, Dr. [Percy] Howe and his wife [Ruth]; so it was the best place in the world for them to be. And of course with my salary in Norwegian krone, they couldn't have survived without helping friends, and this was another reason why it was so important for me to get back to America to pay back my dollars.

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GOODFRIEND: So what exactly was your [wartime] job?

SOGNNAES: Well, first of all, we had our clinics for medical and dental care right in London for the headquarters and for personnel that belonged to the [armed] forces; and secondly, there was this potential need for mobile clinics, as we would ultimately presume to land in Norway after Normandy and all that. So I was in touch with that problem, and we negotiated with other services, including the Canadian services for equipment. And I remember very well when my medical colleague who was there to plan invited me to the university one day where he was giving a lecture. He was a man interested in calcium metabolism, too. At any rate, I just had a phone call from the Canadian officer as he came to pick me up for lunch, and I said, "Excuse me, this is the man I waited for, so I can't go."

The professor came back very pale late in the afternoon. He had been inside this auditorium where people were sitting, and I was supposed to be sitting, and [he was] called outside to take a telephone. Then one of Albert Speer's famous V2 bombs hit right down in the auditorium and eliminated the whole thing. So these were the kinds of things you had to be very lucky.

I interviewed Albert Speer later in Heidelberg and I didn't have the heart to tell him exactly this experience; but he knew what had been happening. He was very proud of his V1's and V2's, and they were terrible weapons, you know. They didn't get the atomic bomb because fortunately they didn't get hold of the heavy water from Norway that they tried to get from that famous place called Rjukan, and that was as important to the atomic bomb for them as uranium was, so to speak, to the Americans. They were working on it. But he helped develop the V1's, which were the airplanes, a bomb with wings on, that they just sent up from Holland. You couldn't hear them except when the motor stopped; then you knew something was going to happen. And then you had the V2's, which were the first rockets, you know. In London, as officers, you usually weren't supposed to go underground, but when you came underground anytime of day or night, practically, there were lots of families and children that you walked over in these air shelters.

GOODFRIEND: How long were you in the air force?

SOGNNAES: Nineteen forty-five, September, I came back, so that must have been four and one-half years.

GOODFRIEND: Did you always know you would return to the United States?

SOGNNAES: Not really. I had been offered a position in Norway, too, even before that at Harvard, and I think

there was a certain expectancy. My professor and dean when I graduated was actually in pediatric dentistry, and he had been an intern at Forsyth twenty years before I did. So I think he was clearly instrumental in getting me that opportunity, and that was the thought. But at the end of the war there was very little opportunity for research, no funds available, so I just was extremely fortunate when I got that invitation to come back to America.

GOODFRIEND: What did Harvard offer you and how did they find out about you?

SOGNNAES: Well, of course I was already on their list from before Pearl Harbor, you know, when I had been interrogated or interviewed and been offered the opportunity.

GOODFRIEND: As an assistant professor?

SOGNNAES: Yes, and when I came back after the war, I got my assistant professorship title in September 1945. Then miraculously I got my teeth back in research literally, or vice versa, and in 1948 apparently I was nominated to get tenure at Harvard, which was a fairly quick change. Interestingly they then found out that President [James B.] Conant had a ceremony in the faculty of medicine where they were informed that I did not have the required background; namely, being "a child of the university." Apparently in the old days you couldn't become a professor at Harvard with tenure unless you were a Harvard graduate, a Harvard man.

GOODFRIEND: So were you the first to--

SOGNNAES: That I don't think--no. There were other accents beside mine at Harvard. So I had a master of science degree and a Ph.D. and a dental degree from Norway; so he gave me a master of arts degree or Aeresgrad, honorary, which was, of course, marvelous and treasured by me. To jump the time a little bit, it was only years later when I became an American citizen in 1950, when I knew for sure that I wanted to take advantage of the opportunity in this country and [that] my other positions in Norway had by a long time been filled anyway. So then I wanted to have a license to practice, [and] to get a license to practice in the Commonwealth of Massachusetts you had to have an American dental degree. So I took a leave of absence from Harvard and went back with my senior class (that I was at the same time teaching) and fulfilled the requirements for the D.M.D. degree, and that meant an earned degree. So now on paper it looks very fancy. It looks like I have an earned degree as well as an honorary degree from Harvard. [laughter]

GOODFRIEND: What were you teaching at Harvard?

SOGNNAES: Well, I was made professor of oral pathology, which I can't even pronounce. I have great trouble with my teeth on R's. But, anyway, there was a very famous professor there by name of Kurt Thoma, who had never gotten

much interest in fundamental research and experimental pathology, but he was without doubt the world's busiest textbook writer. He wrote a textbook in oral pathology that became thicker and thicker every year to the point where, bless his soul, our children learned to play piano on it. It was the thing to sit on. [laughter] And interesting that Harvard would pick me to be his successor. It was the only name professorship in dentistry. It was from a rich Bostonian, Charles Brackett. So I became the Charles Brackett Professor of Oral Pathology succeeding Professor Thoma, and as an aside, I must tell you that I have been to more banquets since then after being listed in the program as one of the speakers, and they have had two seats at the chicken a la king dinner, one for Reidar Sognaes and one for Charles Brackett, because they think there is a comma missing between Charles Brackett and Professor.

So I must say that that was a tremendous honor for me, but interestingly that Harvard would do a thing like that. There were many prominent oral pathology students of Thoma right in Boston, had been there all during the war, and had great credit to them in case history pathology. But Harvard will do it, so they picked me because of my interest in experimental pathology, a complete switch. They have done the same at all levels. Of deans, they have gone from

biochemist to microbiologist to clinicians. As presidents, they have gone from Professor Conant, who was almost a Nobel Prize winner for his chlorophyll chemistry, when at thirty-four he became president. And to President [Nathan] Pusey, who was a classics [professor], and to President [Derek] Bok now, who was the dean of the School of Law. So they are apt to do that, and for me it was a fortunate circumstance, naturally. Then at the same time they happened to make me an associate dean; so I had an administrative post from 1952 on until the last year at Harvard, [when] my fellow dean, or my dean, went on sabbatical and I was made acting dean.

GOODFRIEND: What was the emphasis of the curriculum at that time at Harvard?

SOGNNAES: Well, Harvard has probably had the most interesting history in this country in terms of dental curriculum. To be sure, it was founded as the first university-affiliated dental school in the world in 1867. Prior to that, the schools had been sort of independent, more or less. The first one in the world was in Baltimore, in fact, in 1840. So Harvard curriculum, the second thing that makes it stand out rightly or wrongly, they didn't give the D.D.S. degree, not because they wanted to be snooty. They gave the doctor of dental medicine degree, D.M.D. degree, and everybody thinks it was because they started off

the completely new medically oriented program, which was not true. It was the classical Latin scholars at Harvard who looked at D.D.S. and couldn't translate it to a Latin Harvard diploma, because there had never been a Latin version of it. So they simply added another D to the Doctorus Medicinae; so it became a Dentare Doctorus Medicinae or Dentare Medicinae Doctorus (D.M.D.), and that was it. And yet the appointments--the first professor title at Harvard in dentistry was professor of mechanical dentistry, same as at Baltimore in 1840, indicating the concept of dentistry at the time was largely a technical skill subject. Later on, of course it became very much more closely affiliated with the medical school, and then other dental schools for many years. Most of them are now.

GOODFRIEND: But what were the things that you were trying to teach the students?

SOGNNAES: Oh, well, the program at Harvard when I came there was one where we had identical classes for medical and dental students. So I was partly involved with the anatomy department to give some of the lectures and to share a group of maybe twenty-five [students] with microscopic specimens. And I tell you to begin with when I returned from the war, I hadn't seen a reprint for five years, I just kept a few pages ahead of my students. [laughter] But I recall with

pleasure the interesting students that I met at that time, and that I met since then. And at the time, you know, in anatomy in the first semester, the very sensitive persons, who did not like the jokes around the dissecting table, I could see in their faces that there was something [that] wasn't-- They should be extremely proud and happy to be at Harvard, but [they] would confide in me certain feelings, and thinking of quitting. And I'm glad to say I don't know anyone that I got that close to that did quit, and I've seen some of them pictured in Time magazine since, great workers in public health and teaching, and so forth. So that was gratifying.

And then the same in pathology. I gave--not the same--I gave the lecture for the medical students in oral pathology. But then, of course, my main responsibility-- The other thing could have been done by other people employed by the medical school, but I did have to give to the dental students on top of what they had in pure basic sciences, which was absolutely identical for the first two years, I had to give them what I called a "hysterical review" [laughter] of the details of oral and dental histology, embryology, anatomy, and pathology related to clinical situations [with] which they were soon going to be involved. That was perhaps my most difficult task when I first came back to Harvard.

GOODFRIEND: What type of teacher did you fashion yourself after, the Norwegian or the American teachers you had studied under?

SOGNNAES: Oh, I think that I was very deeply influenced by American [teachers] because of the freedom and the openness and responses from students, and being interrupted and embarrassed, and so forth. I'm saying that, [but] of course to them I'm sure I was a foreigner. [laughter]

GOODFRIEND: You were involved in research also while you were at Harvard. What was that about?

SOGNNAES: Well, I became sort of enamoured with enamel. In fact they asked me to write an article for the Harvard [Dental] Alumni Bulletin after they found out my interest in it, and one of the first papers I wrote at Harvard was "The Enamel Then and Now," getting historical perspective when enamel was considered a dead rock. I got deeply involved with studying the organic elements in enamel, sort of the more vital origin of it, and its chemical interchanges with the saliva and connective tissue fluid and relationship to preventive dentistry, fluoridation, and so forth. So I had quite a bit of interest in that subject for a while, and I think that it was my publication on the organic elements of enamel that put me on the map in the sense of becoming involved nationally and internationally in dental research.

GOODFRIEND: Did you come up with something new?

SOGNNAES: Well, I think that my main blessing was that I was able to develop new methods of re-covering these very diffuse substances. For example, using high pressure during demineralization by lifting off the salt and then using fixative, what you call a "fix-as-you-go" technique; but these are getting into the very great detail. But, in answer to your question, I think that was my first effort. Then, as we mentioned before, these newer tools came along, with the histochemistry and the electron microscopy, which I enjoyed very much working with.

GOODFRIEND: Why did you move from teaching into administration?

SOGNNAES: Well, I think at that time at Harvard, the answer was very simple. I was practically not forced to, but asked to supplement the administration because the dean of the school when I came back had been a pure administrator. Then the dean who was appointed at the time I was made associate dean was a Ph.D. in zoology, Dr. Roy Greep, who was a very prominent endocrinologist actually in his research, and he had come to Harvard specifically for a dental school appointment to give a basic science stimulation to the place, which he did. But not knowing anything about the dental community and maybe dental science, the politics of dentistry, and what have you,

visitors coming from all over the world and wanting to know about dental things--I think that that's why they offered me to get into administration on a part-time basis as associate dean. It was almost accidental. I had no aspirations at that time. Later on, of course, once that title was on board, I got invitations to visit other schools where the dean was going to be appointed or replaced. So I had many opportunities after that, too, but I never got tempted, even from some fairly big ones, to inherit somebody else's headaches.

So that's why the last year at Harvard I was made acting dean when Dean Greep was on sabbatical, and I may have told you the story how pleased one of our young daughters was when I came home and there was a letter from President Conant that I had been made acting dean. She made a few dance steps around the floor and said, "Oh, how lucky you are, Daddy! I wish I could go into acting!" [laughter] And of course, a year later when that letter came from President Clark Kerr from Berkeley, if I would be coming out to take a look at being a founding dean of dentistry near Hollywood, they were sure I had made good. [laughter]

GOODFRIEND: With that then you say there were a lot of other opportunities, but when UCLA came along, is that the one that sparked an interest?

SOGNNAES: That was entirely different.

GOODFRIEND: Why was that?

SOGNNAES: Well, first of all, it was new and any interesting things I might have been dreaming of doing that I couldn't do maybe at an old institution, here was an opportunity to explore it or try it. Number two, I think having grown up in ice and snow, even the word California to a young Norwegian sailor that certainly is a place to visit. And one of my older brothers who sailed the seven seas recommended it highly.

GOODFRIEND: Who approached you?

SOGNNAES: I was approached by a telephone call, and I don't think this needs to be a secret, by Joe [Joseph F.] Ross, who was associate dean of the School of Medicine under Stafford Warren. And the reason he called me was that we had become acquainted a little more closely, being contemporaries, than Warren; so it was an indirect way of doing it. Which is very appropriate, because if I had said no, one shouldn't be advertising this that anyone who might be second choice, although I might have been the tenth choice for all I know. But it was very new, and I was invited out to Palm Springs.

GOODFRIEND: Why was the School of Medicine involved with recruitment of the dean of the School of Dentistry?

SOGNNAES: Because the chancellor's office had to delegate someone related to health sciences to help sort out the

matter, I'm sure. They had a committee on campus ultimately to decide on these things, with a multidisciplinary background. But there was no dental representative yet that could take it on. So that was perfectly normal. Of course, historically dentistry and medicine, especially the Harvard type of program, had had a lot of close associations, and these people know each other. So it may be that they went to someone at Harvard with this in mind, since this was such a closely knit group here. But they are interesting questions that you are raising there, and I will only mention one or two points at this time.

The real test was when I came out to Palm Springs to give some lectures at an oral biology conference that they usually run there in the fall (I later became president of it). Stafford Warren was another of the lecturers; so he asked if he could drive me back to here, since I was flying back from here anyway, and that is when I had my first conference with those in power here. And the thing that impressed me was luncheon in the Faculty Center, which was just inaugurated, you know, in 1959. Acting Chancellor Vern [Vernon O.] Knudsen, the physicist, had invited representatives of other disciplines there, and I was very intrigued by the whole concept of a faculty center where just like that, [snaps fingers] on the spur of the moment, they could bring together people anywhere from

zoology to philosophy, so to speak. Which is hard to do at an institution like Harvard which is spread out all over. That impressed me. And then when I came back home after having discussed a few things here, I got this letter from President Kerr about considering the opportunity.

Then another person I must mention, very famous, he has a building named after him here, was Professor [Paul A.] Dodd. He came to Boston to reinforce the situation. I remember we had lunch under President Conant's painting at Harvard Club, and he was shocked when I had to tell him that he couldn't pay: you had to be a member. [laughter] But he was very charming, and I must say that if it did any good for UCLA that I came here, he perhaps deserves as much credit as anyone for teasing me away from Harvard.

GOODFRIEND: Was there any doubt in your mind that you could leave Harvard?

SOGNNAES: Well, I think that Edel and I are both adventurers in the sense that, unlike other people who I have tried to invite to come to Harvard or to here in my life, we set up a balance sheet, you know, pluses and minuses from what you have and what you know and what you don't know, and what you may get, and so forth. They always come out negative, because you know what you've got and that goes for everything, from school to church and family and

friends, and so forth. And it's tough to go three thousand miles a few times in your life as we have. But you get to the last question: Could you ever forgive yourself if you didn't have the guts to get up and go and do it? and what might it have been, the unknown? I think that is by far the overwhelming reason why we came.

GOODFRIEND: How old were your children at the time?

SOGNNAES: Well, the littlest one-- The oldest one, I should begin with, was Solveig, who was then already graduated from college and was staying on in Boston to go to Forsyth (where I went as an intern) to become a dental hygienist. Since then she has become a registered nurse and doing very well in that. Thor, who was born in Canada, he was sixteen, and thank God he got his driver's license in California before me; so when we had the big drive for the bond issue, I accepted every opportunity to speak, anywhere from Pasadena to Long Beach, and so forth.

GOODFRIEND: Which bond issue?

SOGNNAES: The bond issue for the university to build the school and a lot of other things. After all, Franklin Murphy, the chancellor, came here the same day I did, July 1, 1960, and this was high on the list of priorities. So he [Thor] used to drive me. I didn't dare to drive with a driver's license for a while. It was without any doubt-- You think why was it difficult to leave Harvard? Nothing

compared to the difficulty of getting used to the freeways. Do you know that I moved a stick of an airplane before I turned the wheel of a car?

GOODFRIEND: Are you a pilot?

SOGNNAES: Well, I did flying for fun, with company; some of my patients liked to take me up and spin me a little. But the truth is that I was a one-horse family from Norway. None of my brothers had cars. My father didn't have a car. I don't know any relatives who had a car, and so it took me a long time. I was a captain in the air force before I got a car. And you know how I got it? I got it from Ingrid Bergman and her former husband, a famous dentist friend of mine, Peter Lindstrom.

GOODFRIEND: How did that happen?

SOGNNAES: It happened because they had come to Rochester where he was trying to get his M.D. degree, where I was, you know, and which he did. So when he got it, they called me up and asked if I would come down and visit them. They knew Norway was in the war; they [Sweden] were not then. So they gave me a new Chevrolet--they were going to Hollywood--and they loaded it up with clothes for Edel. In one of the pictures you have in the album you made for me, that is Ingrid Bergman's polka-dot dress. And little Solveig was a contemporary of their daughter, Pia, and she inherited--though she was a little younger, a little smaller--even a

fur coat, believe it or not, which they wouldn't need in Hollywood. Well, I gave the car to the hospital service in Toronto, but at least I had learned by that time to drive it. [laughter]

GOODFRIEND: So I assume then your family--there was Solveig, Thor, and your third child, Reidun--did you fly out here to California then?

SOGNNAES: I did alone. Oh, yes. I mean for the job?

GOODFRIEND: When you moved out here.

SOGNNAES: Oh, yes. I didn't move the plane, but I took the plane. They were left behind to try to sell the house, which they never succeeded in doing. I went to the place in the Pacific Palisades. Then they became very impatient; so finally they gave it away, so to speak, for rent. When they finally came with the truck, moving truck, to get out here--they were going to fly--they came down to fill the truck, and suddenly Solveig went up in the attic and said, "We forgot Daddy's cello." So she came down with it. By that time the drivers were trying to close the back door, you know, and that's not the way to pack a cello. So they gave it to the driver, and he had it up front, and that's the last I saw of it. No compliment to my music. They bought me a new one for Christmas though. [laughter]

GOODFRIEND: So you moved out here ready to start a new school of dentistry.

SOGNNAES: Yes.

GOODFRIEND: What facilities were you given and what help did you have?

SOGNNAES: Well, actually there was no place where I could sit down by myself to begin with; but the medical school had a hallway next to the dean's office, going out to what now is the big tropical garden, that I fortunately was able to get approval for. But, anyway, it opened up to a lawn. Up to the School of Dentistry now there was a lawn when I arrived, you realize. But they put a door inside the little corridor there, and that's where I started out negotiating a few things.

GOODFRIEND: It was just you and your secretary, is that right?

SOGNNAES: Well, then of course I was very fortunate, in searching for one to help us get started, to find Dorothy Good. This was much more important than finding me, I assure you.

GOODFRIEND: She was your secretary?

SOGNNAES: I stole her from surgery, and it's been said that that's why I have never dared to have a heart transplant or bypass operation. [laughter] She was really a godsend for me. She knew the university, she knew a lot of the rigmarole, which is to be expected. Then fortunately the administration, chancellor's office, was able to let me

inherit the building 5F, so-called, the [University] Religious Conference Building where the medical school started. They even did their first dissections down there in this same room where the big ten-by-twenty mural for the dental school, you know, was put together in clay. But anyway, that was a marvelous building, and Dorothy and I soon brought around some other people to help, and professors.

I think the most dramatic part of arriving that I remember was my first conference with Dean Warren. He had his desk full of bricks and wooden layouts of buildings, you know. Not just what was here, but his dreams for the future. And he had rolls of drawings that was about six inches in diameter tightly rolled in, and he said, "Reidar, take this home to your hotel and take a look at it tonight." I was just dreaming about education and academic programs and the last thing in the world I thought I would walk into was this enormous concentration of something that had deadlines of how to build a dental school. [laughter] But he was a great builder, and bless him for it, because it turned out all very well. But that was the most shocking part of my first arrival. I went back to that hotel and I sat down on the edge of the bed and spread them on the floor, "What on earth have you been doing to yourself, Reidar?" [laughter]

GOODFRIEND: Before we get into the nitty-gritty of building a school from scratch, I wonder what the national climate was for another school of dentistry. Right now I know that there is a lot of discussion that we have too many dentists, but what was it then? Was there support for educating more dentists?

SOGNNAES: Yes, fortunately that was one of the things in our favor. First of all there was matching grants for teaching facilities as well as for research facilities that were possible to apply for. Needless to say, it kept Dorothy and me, as she can tell you, busy late hours to get these huge documents ready (before the Xerox machine) with so many copies. So I would think the environment at that time was good from that point of view. As a matter of fact, beyond that, I think the national government was extremely interested in finding out how to best build a dental school, and there were others who came along after me, other schools. But it became, I won't say a prototype, but when I finally put together The Planning Years, so-called, which is in our library and in every other dental library I believe, that was extremely well received, not just by deans and potential deans but by the government in evaluating what it takes in square feet and money and faculty, and library above all.

GOODFRIEND: So there was federal money, then, to support

the building and the educating of dental students.

SOGNNAES: Yes, and so between that and the bond issue, which fortunately went through, I must confess that I was delighted, if not just elated, because you had to remember I came from a private environment in Rochester and Harvard, and I raised every penny for my department at Harvard. The electron microscope, the first one brought to the Harvard quadrangle, I bought from a research grant from NIH [National Institutes of Health], and I think every secretary, every technician, every paper clip and wastebasket and filing cabinet I had to bring in or else.

As a matter of fact, although I had an endowment in my professorship, it was endowed so long ago that it wasn't adequate for my appropriate professorial rank so that I had to also bring in enough to fill in the difference. I came out here, and you realize when I left Harvard it would take \$500,000 to create a professorial FTE [Full Time Equivalent]. It took \$750,000 when I left Harvard, and today it takes \$1 million. When you stop to think that I got the eighty positions qualified in building this school, if it was going to be that I had to bring in the private foundation endowment money, it would be \$80 million right there, which is ten times as much as all of dentistry has in endowment in the whole country. So I think some people thought I must be [having] a difficult time, but from some points of view I

was very blessed and very impressed by the support that I had both personally, and administratively and financially.

GOODFRIEND: What did the bond issue give you?

SOGNNAES: Well, that was part of the whole university's package that went before the legislature and the regents, of course; it had gone through all the mills of each campus and to the president in Berkeley. That had to be planned ahead, so that was already in the wind before I arrived, that we are going to build a dental school. The president had recommended it through a committee, and the regents had accepted it. So that's what I'm talking about, far beyond dentistry.

GOODFRIEND: What other dental schools existed in the state?

SOGNNAES: Well, San Francisco was the only other campus that had a dental school, and that of course was not at that time called a campus. It was the San Francisco Medical Center, you might say, but they had medicine, dentistry, public health. Well, Berkeley also has public health in that sense. Nursing, of course, San Francisco had. Private schools there were two: in San Francisco at the University of the Pacific, as it is called now, and here at USC. And then, pardon me, one more, Loma Linda [University].

GOODFRIEND: Now, with UCSF was there a camaraderie there, was there help from them?

SOGNNAES: Well, historically I suppose I soon found out that the north and south part of the evolution of this university have had many interesting episodes of competition, some healthy and some not, I suppose. And there is no question that there was an eyebrow or two raised once in a while, up north, when I had recommended something that didn't seem quite similar to theirs, or quite necessary, or so soon, and what have you.

I think one of the first things that came across my desk was from the president's office in Berkeley which essentially said that it has come to his attention that there may be competition for faculty and that the new dean should be informed not to flirt with faculty from any other competing or other dental school. I suppose that was not surprising because it's easier to do it that way in some respects, but it meant that I had to seek them from other parts of the country.

Number two, I was faced with the embarrassing position that a professor at another school who wanted to tear up his family and come out here, or perhaps a clinician, an orthodontist, and so forth, or oral surgeon, would not have very much of a chance to get his license in California because of a peculiar requirement, that I might dwell on at some other point, that you have to pass what is called-- the needle eye for license in California--the gold-foil

test. This is something that was developed with great pride about eighty years ago, and it's a beautiful jewelry type of work. But an oral surgeon or an orthodontist, who may be the greatest one in the world and the professor and chairman of the department, how could he tell his family that this is what I have to do? So I had this conflict of on the one hand I couldn't take Californians who already were licensed, and I couldn't get hold of some people from outside who wouldn't have the guts to face this kind of embarrassment.

GOODFRIEND: I do want to get into faculty recruitment and building of the school, and I think why don't we start off next time just there.

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GOODFRIEND: What I want to do before we start this time on UCLA days is just go back for one second, all the way back to the thirties when you were in Europe and when Hitler was gaining power, and I'm curious to know the impact that you witnessed on the Jewish intellectuals at that time?

SOGNNAES: At that early time, where he was not officially in power, as you realize, back in 1931 and '32, our feeling was that we had to be aware of two things: one was the open battles in the streets, especially on weekends, between the Brown Shirts, the Nazis, and the Black Shirts, the Communists. So, from an obvious point of view, that was the main battle we felt the most--between the far right and the far left. On the other hand, around the dissecting tables, where we were perhaps half a dozen students at a time--and we spent an awful lot of time that first year; they took anatomy extremely seriously in that department at the time--there were times where we began to be very careful what we were saying and who was around. I also noticed, as others of my friends did, that there were people who suddenly disappeared and without any obvious explanation. The reason for that is still not clear to me. It may be

that some became involved with the armed forces, and for all I know they may have ended up as generals of the air force or army, or being in a submarine that chased me over the Atlantic [laughter] during the war. I don't know, but that's one possibility.

GOODFRIEND: Were they Jewish?

SOGNNAES: No. This is the next point that I was going to make. There was not a big awareness on my part or many other foreign students, especially coming from Scandinavian countries, because they [Jews] were so completely absorbed by the community, and it was not obvious to us that this was a big factor at that time. It was probably behind the scene a great deal, and it would have been unbelievable what happened later if we had any warning of it at that time. So, I had a feeling that politics and economics were the two biggest items of concern and of battles and of changes. The economy was, of course, suffering a great deal. There was a time we had to have a suitcase of German marks to buy a meal. [laughter] They used to kid about [that]. Well, anyway, this was 1931 or '32, and the depression, you know, was worldwide in some sense. It was the thing we heard most about. I found that a few Norwegian kroner that I brought to Leipzig to get started dropped in value also, so that sometimes we didn't look at the left side of the menu, we looked on the right side and found sometimes we could

get a glass of beer for less than a sausage, so that we had a glass of beer for lunch. [laughter]

But, seriously now, I have to tell you another aspect that may not have made me a good observer. It was only after the war had started, when heroic Norwegians whom I knew well were working in the underground and helped people to escape from Norway, either by sailboat to England or Scotland, or by ski over to Sweden, which was neutral, you know, and that was one blessing of that fact, and were then flown over to England and joined us either in the air force or in the navy or army contingent or in the Norwegian merchant marine, that we began to realize that they were escaped because they had a Jewish background.

In other words, as the saying goes, some of my best friends were Jewish in Bergen and in Oslo, and some of the most highly respected citizens, including the chief medical officer who was my boss to begin with in our training center in Canada, Professor [Leiv] Kreyberg, who was one of our most distinguished professors of pathology and a cancer expert. And it was years later, after I came to UCLA, that I heard him give a very significant lecture here for the whole medical center, about smoking and cancer. He was one of the early people to have done the autopsy work on these unfortunate people with lung cancer. Well, anyway, that was just one example of it. So, what I'm

trying to say, Judi, is that if I had come perhaps from another country, I might have been much more aware of what was brewing at that time than I was, considering my background.

And you know that in Norway, [as] I've told you before, as far as religious background is concerned, the state had a state church and the pastors were appointed by the king, so that we had freedom of religion in the sense there was what they called the Free Church. We had a little Catholic church very near where my father had his business in Bergen, and so I believe also there must have been some synagogues. Either that, or maybe the Jewish population was so absorbed in the community that they participated in our regular activities. So, I'm a very poor judge at that point. But, of course, later on it became a different matter.

GOODFRIEND: Right. Well, great! That clears that up. Moving forward about three decades, back to UCLA--

SOGNNAES: On to UCLA. [laughter]

GOODFRIEND: On to UCLA, exactly. I have here this very detailed manuscript that you wrote, The Planning Years, which you cover from 1960 to 1964 about how you set up the school, and I think it's a manuscript which other dental schools looked at to help set up their schools, and I will make this available as an appendix so that we don't have to

go into all that detail, and I'll start with some broader questions then. I want to go back to the very beginning when you came, even though we started on that last time. First of all, how old were you when you came to start the school here?

SOGNNAES: I came here in 1960, and I was born in 1911, which means I was turning that very dangerous age [laughter], going on forty. No, wait a minute. [laughter] My mathematics is wrong. I was forty-nine.

GOODFRIEND: Forty-nine.

SOGNNAES: Yeah. So I had already passed the dangerous age at Harvard in 1952, when I became associate dean.

GOODFRIEND: Did that, becoming forty and becoming associate dean, was that related?

SOGNNAES: I can only explain it that way because I can never think of any of my former students and former faculty members who were as devoted to research as I was who would ever dream of becoming a dean at that point, until they had passed the forties. But then it happened, and of course several of the professors I brought here became deans or directors of research, and one of my outstanding research fellows at Harvard, Dr. Paul Goldhaber, who couldn't be distracted for anything from his lab work and his beautiful-- I almost said Nobel Prize-winning type of research--became a dean after I left Harvard, and is now the dean there. So, I

don't know what this thing is, but--

GOODFRIEND: You had mentioned once, I think, that when you did turn forty that you had a feeling that maybe you could do more as an administrator than as a researcher.

SOGNNAES: Well, going to meetings of the school, of the associations for dental research and dental education, it inevitably became apparent that dentistry had a great many unmet needs which I think one in an administrative position could do something about: the nature of appointments, for example. So many deans historically had been highly technically oriented, and admirably so, but the influx of deans who had had the opportunities like the younger people at that time, like myself in Rochester, working for basic sciences and doctorate degrees in pathology, and so forth, I think we were very eager to implement appointments in dental schools with a more basic science background.

GOODFRIEND: You mentioned last time also that Paul Dodd, who I believe was the dean of the College of Letters and Science, was very instrumental in your decision to come to UCLA. What part did he play and why was he so instrumental?

SOGNNAES: Well, actually he was a top appointment in the search committee. He came to visit me at Harvard, and as I mentioned before probably, we sat under the

painting of President Conant in Harvard Club [laughter], dreaming about this extraordinary opportunity. I think that his enthusiasm and his gentleness discussing university life, and UCLA in particular, and opportunities and examples from other schools that had started here, without any pressure whatsoever, impressed me very much. So when he went back here and I got the follow-up letter to come out and be looked over, so to speak, seriously, the temptation became irresistible. [laughter]

GOODFRIEND: So, you moved out here. You packed up your family and you moved out, and you moved to the Pacific Palisades.

SOGNNAES: That's right.

GOODFRIEND: Why did you decide on the Palisades?

SOGNNAES: Well, first of all, we had only recently bought a house in Boston. It was built for us by a Finnish carpenter and it was a magnificent house, inexpensive by your standards at that time, at \$25,000, overlooking Cambridge, and so we felt in many ways that that was a great sacrifice, of course, in moving.

Number two, we had this imported Norwegian log cabin, which sounds very fancy. It was actually built after the war in Norway for helping housing shortages around the world, and they were precut lumber with numbers on them, and like you crossed the fingers, you know, in the corners. We

were fortunate to find a little lot with a pretty little lake, Province Lake in New Hampshire, where an agent for this was willing to set up a test cottage for advertising; otherwise we couldn't afford it. But I enjoyed very much, as the family did, helping out and putting it together and adding even a porch to it in the same style. My wife and I even bought a guesthouse in the back in which I installed a dental office. I took my license in New Hampshire and inherited my dental equipment from the Forsyth Dental Clinic that I had used in 1938-39, because they were getting new equipment. So, I was very enthusiastic about helping these little kids with their hourglass teeth, as I called them, that had no care whatsoever. It wasn't a money-making proposition, but it was extremely gratifying to feel I could do a little something along those lines.

GOODFRIEND: Did you provide free care or low-cost care?

SOGNNAES: Essentially, yes.

GOODFRIEND: Oh, interesting.

SOGNNAES: Don't tell the state board. [laughter]

GOODFRIEND: So, when you moved out here and you decided to be in the Palisades, what was it like around there?

SOGNNAES: Well, we wanted a home that we could call our own, but we didn't sell the house right away. And we didn't have enough funds to buy a house, so we rented a house in the Palisades, partly because, of course, it was near the

ocean, and the sun went down in the West just like it did in Bergen, Norway. It was the right place to be we felt--or I felt. Well, my wife loves gardening and there was a beautiful garden, fruit trees and flowers, and so forth. So, that's what we started with; then we began to look for housing. My family had rented the house away in Boston, but then we had an agent, and we got the good news that he had gotten the money back that we had paid for it, \$25,000 [laughter], and we had enough invested in there that we could put a deposit on the house in Palisades. And believe it or not, a cute little house, overlooking the ocean, and beautiful flower gardens and fruit trees we were able to buy for \$29,000.

GOODFRIEND: Was that expensive, though, then or was that reasonable?

SOGNNAES: Well, to us it was [expensive], because it was more than the big house we had in Boston. This was a very small house, but we liked it very much. Then, believe it or not, within a couple of years we had an offer of \$32,000, and it was the most money we had ever made in our life. Then there was a sweet lady who was married to a professor at UCLA, Catherine [Robson], who was an agent and began looking for us. We even were very interested in a house virtually next to Marilyn Monroe. This was--

GOODFRIEND: Where was that, Beverly Hills?

SOGNNAES: --in 1962, in Brentwood, very close to UCLA, Helena Street. And then the sad news came, of course, about her death just about that time that we were ready to move. But, meanwhile, she found a very nice house, a corner lot in Bel-Air, which had a huge garden for any garden party we might have for students and faculty and search committees [laughter], and it had an Olympic swimming pool. To us this was a great thing. We even had a, what do you call it, a waterfall with fish swimming, colorful fish, and we had dog runs, which were very essential to us. It was great, and history is history, I may as well tell you that we got it through her goodness for \$65,000. I think she skipped most of her own benefit from it, and we lived happily ever after there, as long as I was dean. And it became very important. We were able to accommodate all of the students and the faculty and the chancellor and the chairmen of various departments for a big reception for our pioneering class of '68, who arrived, of course, in 1964. I must say that we hated to give it up, but we did when our youngest daughter went to Stanford. We needed to raise \$25,000 essentially for room and board and tuition. So we were fortunate, we thought, to sell it for \$75,000.

GOODFRIEND: When was that?

SOGNNAES: That was in 1972. Ten years. And I hate

to admit it, but it was written up in Time magazine in 1981, I think.

GOODFRIEND: Your house was?

SOGNNAES: Yes. Not by our name, but by the name of the buyer, that he had said to himself, "Why should I sit with a big corner lot in Bel-Air with such a valuable property and not invest in something else." So, he advertised it for \$600,000.

GOODFRIEND: Oh, no!

SOGNNAES: And the first customer came by with \$550,000 in cash! [laughter] So we might have changed our life. We would have been multimillionaires in kroners. [laughter]

GOODFRIEND: What was your family's reaction to moving to California? It sounds like you almost got a home with a California dream.

SOGNNAES: Yes. Well, I think that our children, the four of them, must have been somewhat infected by whatever virus Edel and I had caught as youngsters in Norway, and that was to see the world, if not joining the navy, joining the university. [laughter] And that was no problem whatsoever, the excitement was there. I daresay that the most difficult age was the sixteen-year-old, the son, because he didn't graduate with his class in Boston; he came here. Otherwise, the little ones and the older one I think had an easier time. And our son was sort of a classics scholar, of Latin,

and wrote essays that were published for a very famous school in Belmont Hill. I think he was on the wrong shelf for college in this field, but that's what he did, and ended up later in electronics and audio-video business.

GOODFRIEND: When you first came to UCLA, what existed here in terms of the Center for Health Sciences at the time? Was the School of Nursing here and [Schools of] Public Health and Medicine?

SOGNNAES: Yes, they were officially established, and with the exception of the School of Nursing, they had definitive programs for the facilities. So, as far as the dental school as you see it today is concerned, it was a beautiful lawn, and Dorothy and I had a pad and a pencil. [laughter]

GOODFRIEND: Dorothy being your secretary, Dorothy Good?

SOGNNAES: Dorothy Good, bless her heart. It was, of course, tremendously challenging, but I must tell you what first happened before I had a chance to defend my own concept of how the school should be tied in with the medical center. Regent [Edwin] Pauley, who was chairman of the Board of [Regents], of Pauley Pavilion fame and much other fame, had negotiated to buy--he had just bought Sonja Henie's skating rink, which was across [Westwood] Village, you know, where now you have Warren Hall and, what do you call it, the Center for Rehabilitation, and so forth. I'm sure he thought this was a tremendous opportunity for

me, and he received us very graciously. We were in huge parties at his beautiful home, and he, I'm sure, had many other people who would want Sonja Henie's skating rink, but he--

GOODFRIEND: In other words, that's where he wanted you to build the dental school.

SOGNNAES: Yes, because-- Think of parking, for example, which is said to be one of the academicians' biggest problems, and others. So, I went down there and I walked up-- The steps were still there and the rest was a big sand dune. It was extremely tempting from some points of view. But, again, I must say that any decision I made I have, in retrospect as I look at it now, always had the academic interests taking precedence over, let us say, some very practical considerations. So, I had to regretfully decline even though, as I pointed out, it would have been a very romantic idea for me, because I knew Sonja Henie. First of all, she had been indirectly instrumental in Edel and I meeting, when we were skating in Oslo and made room for Sonja Henie.

GOODFRIEND: And that's when you grabbed Edel's hand and--

SOGNNAES: Yes, when she was very young, both of them. Number two, during the war when I joined up, as I told you, before Pearl Harbor and started in a training center in Canada, I became president of the officers' mess for a

period of time and, as such, was the host for various visitors, including the Crown Prince Olaf, now the king of Norway, and his Princess Märtha [of Sweden], who unfortunately died before the war was over, or shortly after, and also other dignitaries, including Sonja Henie. These were individuals, many of them very supportive, who did their own things for the fame of Norway, so to speak. She came up and I had her at the head table, of course, and we gave speeches and toasted the king of Norway. It was a situation where I found it very hard to decline the Sonja Henie skating rink for the dental school. [laughter]

GOODFRIEND: But what were your considerations? Why did you not want the school there?

SOGNNAES: Well, I had already become very impressed by the layout of the UCLA campus in general, and the School of Medicine, and public health and nursing surrounding, and near to the life sciences, and surrounding the Biomedical Library. I think that the Biomedical Library concept was probably the most influential thing in making me wish that we could be within corridor distance to the books and reprints, and so forth. I think it was also one of the most enjoyable parts of coming here to be a part of building up the dental holdings which, of course, hadn't been very extensive until that time.

The other thing was that there was an opportunity, as I saw it, to be corridor connected with the basic science expansion on one side, instead of building additional ones down there or have the students go back and forth, and the clinics being corridor connected with the hospital on the other hand, and its facilities for medicine, surgery, and pediatrics, and so forth. So, there was absolutely no doubt in my mind on academic grounds, from the point of view of the future of dental education and research, that we must see if we can just try a proposal that would tie us in with the rest of the place, which later, as a result, was actually named no longer the Medical Center, but with Chancellor Murphy's blessing, who himself is, of course, an M.D. and was a dean of medicine in Kansas before he came here, that it be named the Center for the Health Sciences [CHS] to incorporate the whole thing. And, as you know, he also appointed a coordinating council for the health sciences during this building period where they rotated the chairmanship between the dean of medicine, dentistry, public health, and so forth. So that concept was extremely appealing. Now, another chancellor may have felt entirely different, that parking, perhaps, should take precedence. Of course, it was a big problem in itself. So I have to give credit to Chancellor Murphy, I think, for--because he came here the same day I came, July 1, 1960, and thank

God that he gave that its blessing.

GOODFRIEND: How did the other deans, the deans of nursing, medicine, and public health, react to having the dental school be part of the CHS? Were they supportive?

SOGNNAES: Well, I think that the main contact I had to begin with was, of course, with Dean Warren, Stafford Warren, as far as the building program was concerned, [which] was his great contribution to this development, and also to some extent with Dean Steve [Lenor S.] Goerke, who was then dean of the School of Public Health but died before he saw it fully developed. In his case, it was more or less a discussion of "what did you go through [laughter] when you started?" You remember that the School of Public Health originally started under the northern campus in Berkeley. But, anyway, it was independently operated then, and I learned a great deal from his experiences. But, without a doubt, the direct connection with medicine was the most significant one.

GOODFRIEND: Lulu Hassenplug was the dean of nursing, is that right?

SOGNNAES: Yes, and of course a very, very interesting and prominent person, whom I enjoyed many sessions with. But there is company in misery. We neither of us had much of a facility, you know, to begin with, and she passed on, I think, or rather retired before nursing got more of a

definitive facility for itself. That's been a long story of its own.

But let me tell you one thing that I think illustrates a point that I may have touched on before. When I first came in, I had known Stafford Warren, Dr. Warren from Rochester, I told you before, since he was chairman and professor of radiology and a great atomic scientist and head of the Manhattan Project (and that has nothing to do with Manhattan). [laughter] I was very fond of Stafford, but our concepts at that time-- He was one hundred percent involved with this huge building program, because the medical school was going to be expanded. They needed to expand both the basic sciences and the hospital facilities, the clinical facilities, and it was a job for two men, you might say. I was all consumed with the interest in this academic education and research thing that I had been dreaming about, how I could do it different from Harvard, which never had big facilities, but they took that very seriously obviously.

But the shock was an interesting one when I first came in to discuss the building plans, once we had with his blessing gotten approved by the chancellor and regents that we were going to build the school in juxtaposition to the rest of the medical and related facilities; then we were actually right here in what we call now the Center [for the

Health Sciences], you know. That was decided. But he had already begun to visualize the problems that might arise with regard to physical facilities, and one of the biggest ones he told me fairly soon in his thinking about this-- I had the feeling he took home with him the blocks, and so forth, and put them together. He was very three-dimensional in his documentations. "That one of the biggest problems we have, Reidar, is this enormous cost of building facilities for anatomy, for the huge dissection hall for both medical and dental students," and that he had talked to engineers and figured out a way where they could take the steel containers and lift the medical bodies, so to speak, up in the ceiling in the evening and then have dental bodies coming down on other chains in the morning for the next day's dissections. Well, this turned out to be a blessing in disguise, because it was the least of the problems I could think of, for this reason: I thought it would be wonderful if a health science education could begin with living instead of dead human beings.

So I said, "Forget the whole thing. I will teach in the semester after the medical students, and we will teach them something about structure and histology of cells and the biology aspect of it from a cellular and molecular level, what have you, before we go into the actual dissection of these tissues that they don't know anything

about." He drew a sigh of relief, and I don't know, it may have saved a few hundred thousand dollars. Well, it would have saved a million if we had gone into arguing about building two dissection departments, so to speak. So that was my first confrontation, in a sense, about physical vis-a-vis academic considerations. But he was extremely helpful, and it was he who, on the advisory council that Chancellor Murphy had established and the facility committee for the dental school, who made a motion that a school be built in direct juxtaposition to the rest of the center.

GOODFRIEND: We've mentioned the bond issue, and I understand that the greatest building era in UCLA history took place in the sixties. There was a passage of statewide bond issues in '62, '64, and '66 which provided UCLA with something like \$95 million in construction funds.

SOGNNAES: Yes.

GOODFRIEND: What do you remember of that bond issue? What was the part that you had to play in those bond issues?

SOGNNAES: Well, I think each of us who were involved administratively with the proposal and expenditure of funds automatically became very deeply concerned with it. While it was not a formal demand that you do this and you do that, I think each in our own way tried to fulfill that obligation and make clear to our own colleagues in the community who

would be spokesmen and would be questioned by patients perhaps about what's going on at UCLA needing all this money. So, I never said no, [laughter] whatever the saying is, to any invitation to come before groups and speak. And no matter what the subject that was announced, [laughter] I would always end up with a plug for this great development. It was very difficult to begin with because I was a very lousy chauffeur; as I told you before, I held the stick of an airplane before I held the wheel of a car. But my son was sixteen, got his driver's license, and he loved to drive; so sometimes he would take me to Pasadena or Long Beach and have a hamburger across the street when I had chicken a la king and gave my plug for UCLA, among other things. So it wasn't a very formal thing that I recall, but I certainly was aware of it, and the chancellor certainly made us aware of it, that it was very basic to development. After all, it was a very costly thing. You have to remember, in addition to the new dental school, the equally expensive thing, if not more so, was the extremely elaborate expansion of the basic science wing and the hospital wing. The structure was there, the foundations were there, but they were adding several more floors, four more floors on each wing, you know, to accommodate a great expansion of the medical student group as well as the dental student group.

GOODFRIEND: How much money needed to be raised for the

School of Dentistry, do you remember?

SOGNNAES: Well, it is in my "bible," as I call that progress report [The Planning Years] that you have there, and the additional thing that was involved besides the state funding was, of course, related to physical and dimensional data, page sixty-two. The total funding at that time was \$7,768,000 construction costs, including certain types of fixed and movable equipment, which is expensive in dentistry. Of that total, we were fortunate in raising about \$2.5 million from nonstate funding. So from the bond issue, we were involved with about \$5 million.

GOODFRIEND: How did the public react to raising all this money for construction at UCLA? Were they receptive to it?

SOGNNAES: Well, the general reception of that I think was good, because above my own limited field I think that the contributions already made through the university under previous chancellors and the medical center under Dean Warren, especially, I think had set the stage for this. I felt there was a great deal of expectations as well as respect for the past history, which was very helpful to the part that we needed at that time.

GOODFRIEND: Were the 1960s a good time to go after money? Was the economy inflationary? Was there a lot of money to be found?

SOGNNAES: Well, relatively speaking, I think this was

true, and it was certainly true at the national level. And I think that the fact that there was an outlook for support from the national level probably also helped the state and the regents and the legislature to look more favorable to sort of a matching situation. If it had been today, that would have been much more difficult. I think from the point of view of dentistry, to obtain from outside the state \$2.5 million was a very significant thing in our field. So I think that at the national level there was not only interest in what we were doing, building a new school, but [also] there was a national concern for health care, health facilities, health research. That, in answer to your question, was a very favorable time.

Now there were some unfavorable elements, I suppose, that could play into opposing views or resistance, and maybe the "long hair" in Berkeley, [laughter] and so forth, there might be people who looked upon that with less favor. There might have been certain anti-intellectualisms since we had produced some wild students apparently. I don't know. This whole issue with the long beards and the long hair, which of course extended into the time that we started to admit students, was a rather interesting one and I could make a footnote on that, if you--

GOODFRIEND: Why don't we get to that just a little bit later when we talk about that first class that came in.

TAPE NUMBER: III, SIDE TWO

OCTOBER 18, 1983

GOODFRIEND: Well, before all this construction began, where were you located? Where were you housed?

SOGNNAES: At UCLA in the planning stage there was no prior commitment of any facilities, because it was wide open, except for the pad of paper and a pencil, as it were. But fortunately, within a few days, so to speak, a few doors from Dean [Stafford] Warren's office, there was an open hallway that went from the corridor out to the open space, the lawn that now is the dental school, and it was possible to put in a big window there, closing it off, and put a door on the other side of the corridor. It became a ten-by-ten sort of temporary headquarters where Dorothy and I were able to start out.

GOODFRIEND: So Dorothy was your first staff member.

SOGNNAES: Yes, Dorothy Good, as I may have mentioned before, was my greatest blessing. And I think I told you I stole her by giving her a promotion from the Department of Surgery, and people think that's why I haven't dared to have a heart transplant or a bypass operation here.

[laughter]

GOODFRIEND: She is still with the school, right?.

SOGNNAES: She is still with the school, and she has kept

the continuity with the rotations of deans and acting deans.

GOODFRIEND: So what did you set about to do first? What was the top of your priority?

SOGNNAES: The top of priority at the very first, of course, had to be the establishment of a program and plan for the university. And with her good help, we prepared an extensive prospectus for this and for that and for other things. But because of the urgency of having money becoming available so that you could take students in the not too distant future, we had to make a major effort in program planning of not just the academic side of the question, but in the facilities. And fortunately, which I did not know in advance, we had some very excellent help from the campus architects group, which at that time was a very significant one. They had been deeply involved with the medical school development, and so that in an area that I had no competence personally, aside from wishing it to serve a certain purpose, when it came to technical aspects, they were extremely helpful. So that was I think to prepare these initial documents and then have them brought to the chancellor's council. Chancellor Murphy had regular monthly meetings where we discussed various problems. He was also attending our planning committee on campus, you know, because this was not the only thing going on by far; there

were many significant building projects (that I am sure he has put on record). He was very good to deal with and very supportive and enthusiastic about the development.

GOODFRIEND: That had to be an exciting time with so much construction.

SOGNNAES: Yes. There were things we didn't necessarily agree with. For example, [laughter] during my research work in the past at Harvard, I was rather known for having had a great interest in monkeys. In fact, the rumor had gotten around that I had so many animals that I may not come to UCLA because what would I do with them all. And we did at one point have a monkey playmate at home, too. But by the time I came to UCLA and met President Clark Kerr here for the first time, the first thing he asked me was, "What did you do with the donkey?" Because it [the story] had changed, you know, and he had sort of pictured me like Harold Lloyd coming out of my car with a donkey. [laughter]

But anyway, I proposed in addition to the vivarium that we should have a monkey colony, if I could raise the money for the sixth and seventh floor, which I did, and it became an alternate from outside for a research facility matching grant. I made it from my experience at Harvard where I had a monkey colony, and I even had a radioisotope facility especially made; so on the seventh floor I had built into the program these two things and also a germ-free animal colony.

GOODFRIEND: First of all, why monkeys? Are they-- Is their dental--

SOGNNAES: Well, their being primates, subhuman to be sure, there is a dental similarity for certain studies that I had already conducted with radioisotope tracer studies, first at Rochester and then at Harvard. I had found them very valuable for that and for other structural studies, like dental microscopy, and so forth.

But, anyway, I had already gone ahead with this dream so far that it had come into the books, and I remember we sat in the Regents' Room with Chancellor Murphy in the chair, with the program planning of the constructions around UCLA, and he caught notice of that, "Reidar, we have a vivarium in the Center." I admitted that was true, but there were no monkey facilities at that time. [laughter] I think he ended up by saying, "Well, I have a very hard time to argue with a fait accompli." He realized that it was so deeply engrained in my mind. And it was built, but I now have to tell you that with the later development of the Dental Research Institute, we have some very intelligent human primates in there now. [laughter] Our research fellows and technical staff and faculty have divided up these rooms for various activities related to the Dental Research Institute.

GOODFRIEND: Now, that seventh floor though that you

had set aside for these monkeys, et cetera, was held then until the Dental Research Institute was established years later. Is that right?

SOGNNAES: Yes, that's correct. That was not established until the regents had approved a proposal that I sent in for it, and was approved by their meeting on February 16, 1966. So, you see, that had to be postponed. And there were other reasons for not talking too loudly about research, except the research facilities I had to have. Of course, once I could raise my own money from the federal--well, not my own, but your own [laughter]--from the federal support, that was acceptable. Then it was just by the skin of my teeth, literally speaking, that it was built into the program. So they added the steel beams and everything for the sixth and seventh floor and doubled the research facilities, because we had to equal state support for the research facilities built into the primary building with the facilities that were one hundred percent supported from the federal government.

GOODFRIEND: Why was it necessary to not speak too loudly about research?

SOGNNAES: Well, there was a letter from President Clark Kerr that is understandable but was a little shocking to me to begin with, that it had come to his attention that as dean of dentistry I had been extremely interested in

promoting research activities at this stage, and it should be made clear that these things would have to take secondary consideration until you have gotten the school started and graduate students. Of course, I don't know where these things transpired, whether it was in Sacramento or in Westwood Village or at the dental school in San Francisco or USC, God knows; but this was obviously something I had inherited from my Harvard and Rochester academic background, that there was a concern that I might not take any dental students [laughter] but do like Rochester and Dr. [George] Whipple, I told you about him, and make it a graduate program. Which had no truth to it, but the perception could well be there. I can appreciate that.

GOODFRIEND: Was this a radical idea at the time, to integrate so much research into a dental school setting?

SOGNNAES: Well, I can tell you this. By the time that we walked into this building and opened it, we had the largest dental research facility in any dental school in the world. Today there are other schools that have moved ahead, and there are other private research institutions and clinics, including Forsyth, that have moved ahead. But at that time, there was-- It was not surprising that it gave that perception that maybe this took precedence over other things, which it did not.

GOODFRIEND: Were there any other ways in which you were

trying to follow the Harvard model when you were setting up the school?

SOGNNAES: Well, the Harvard model, of course, became characteristic because they had a very small student body of dentistry of fifteen students per year, which the president and faculty were able to incorporate as part of the medical school student body, which was one hundred and fifty or so, without too much trouble. They just added another student at each dissecting table, and so forth. The program became for practical reasons one where they had identical classes and examinations to the medical students during the first two years, and I was part of that program when I came back from the war in 1945 and had participated both in anatomy and pathology in the teaching program. The students were extremely well prepared; but I also found that when they entered the junior class and began to see living patients, I had to give them a hysterical, I called it, review of the embryology, histology, and pathology of the oral cavity--of the teeth and gums and salivary glands and tongue, and so forth--which they had had a brief contact with during their basic medical science preparation, just like you have today here and other places for medical students. But we had to go into it in depth obviously, since they were going to become specialists in the mouth and teeth, much like an ophthalmologist and

dermatologist must have a great deal more background to specialize in the field of dermatological and ophthalmological science and biology. That became a little problematic, so that my decision was not only for the size of the class being much larger than Harvard, but for flexibility of the education, that we must set up a independent, not independent, we [would] have the same teachers, but we would have a separate tailor-made program for the students of dentistry.

GOODFRIEND: So you had to recruit faculty to design this.

SOGNNAES: To supplement the medical school at that time, a basic science faculty.

GOODFRIEND: How did you go about recruiting that faculty, and what type were you looking for?

SOGNNAES: Well, we did it in two ways. Partly when the basic sciences departments were authorized additional full-time, FTE as you call them, full-time equivalent faculty, they would be selected strictly on the basis of their basic science experience and competence and scholarship, and so forth, just as they would have been before for the medical students. But in addition to that, we established a section of oral biology, which was a thing that had actually started in San Francisco with a Professor Hermann Becks. He was the first one in the world to hold that title, and I suppose I was the second

one. I was appointed professor of oral biology when I came here to signify that, and by that device we were recruiting individuals who could do what I proved to do at Harvard through this hysterical review in the third year, to begin in the first and second year to bring in an emphasis on specialty knowledge of the mouth and teeth and oral tissues generally.

In these appointments, they were people of a background where they not only could do this for the dental students, but also participate and receive secondary appointments in the medical school equivalent departments. And I think this idea of joint appointments in the School of Dentistry and in the School of Medicine and in the School of Public Health were sort of signifying the academic and the intellectual cooperation, besides the physical interchange of facilities, you see.

One of the first people I brought here to get a joint appointment was Professor John [W.] Knutson, who was a distinguished leader in public health and preventive dentistry, and he became also a joint appointment as professor in the School of Public Health. By the same token, we had joint appointments with surgery and pediatrics, and in my own case they-- Pathology did not have a graduate program at that time (they now have a Ph.D. program in pathology), but anatomy certainly

[was] extremely active in that area, so that I was offered an appointment in anatomy, to again signify the supplementary connection besides the oral biology appointment.

GOODFRIEND: Were you alone responsible for finding the faculty and hiring them?

SOGNNAES: No. We had a very important university committee which was appointed by Chancellor Murphy and [which] turned out to be extremely helpful in establishing criteria for appointment and actually looking at specific cases of talent in these various fields. So we had an advisory committee, as I told you before, to begin with; we had a building committee; and we had a basic science curriculum committee, which had joint cooperation; and a curriculum coordinating committee, and so forth; so that I did not in any way make any dictatorial decisions.

As a matter of fact, with Chancellor Murphy's blessing on December 12, 1960, which was a fairly short time after we came here and I had dealt a lot with the physical planning, he appointed a committee that included zoology, Professor [Frederick] Crescitelli; Max Dunn, the late Max Dunn now, he was acting dean of the Graduate Division; John Field [II], who was associate dean of medicine and who was one I had a great deal of interchange with regarding the academic programs. After all, that was one of his functions, whereas

Dean Warren was more concentrating on the physical facilities. Our sister school in San Francisco was represented on that committee by Dr. Willard Fleming, who later became chancellor at the San Francisco campus, and we became very good friends. And Dr. Goerke, I mentioned before, he was dean of public health; and a very distinguished professor of anatomy, Dr. Horace Magoun, whom I had known for some years because he had been involved with some interesting educational conferences in medicine and dentistry back at Harvard and the Berkshires, so I had tremendous respect for him; and Dr. Joseph Ross, who was director of the Laboratory of Nuclear Medicine and also associate dean of medicine when I came out here; and Vice-Chancellor Foster Sherwood, who was, of course, in the position that [David S.] Saxon later became here; and Dr. Lynn White [Jr.], professor of history. So it shows a tremendous--

GOODFRIEND: Cross section--

SOGNNAES: --cross section of the university, which I think has been most unusual in dental schools when they started. I was very appreciative of it, and I was extremely proud to present to them with the appropriate curriculum vitae and bibliography examples of candidates that I thought would fit into our program.

GOODFRIEND: Was there a certain type of person that you

were looking for, for the faculty? Here is a new school. They can come in with new ideas. Were you looking for radical ideas or ideas consistent with your thinking?

SOGNNAES: Well, in view of the fact that we had to get the basic sciences started first, both with planning and in programs, and so forth, one of my earliest efforts was to bring a few key appointments related to this field of oral biology, which was one thing that we had sort of control of, and yet must relate to the medical sciences. My first appointment was of a dentist who was one of the few, if not the only one in the country, who had gone seriously into biology and physiology, had a Ph.D. in physiology, Dr. [So Wah] Leung. He was extremely helpful in that early planning. Unfortunately for us and fortunately for him, he turned forty after a while and became bitten by the bug of deaning, and he became the founding dean of the [University of British Columbia] dental school in Vancouver, Canada, where one of my former associates at Harvard and Forsyth, Dr. John B. MacDonald, whom I had helped to bring to Forsyth, I would say, and as professor of microbiology at Harvard (he also had a Ph.D. in that field), he was invited to Vancouver to be looked over as the dental dean. They liked him so much they made him president, and the first appointment he made was to steal my chief oral biology planner, Wah Leung, to make him dean. Well, so be it. We

are still friends.

GOODFRIEND: How long did it take to collect enough faculty that you would be able to accept the first class?

SOGNNAES: Well, there was a great deal of discussion when to start the first class. My own associates, I would think, varied a great deal in their feeling of urgency. There were some who would say, "Well, Reidar, don't rush it. They'll never put any pressure on you for that. Just do your job." Which, of course, you couldn't argue with in one sense. There were others who felt like I did that the one thing that does count in Sacramento and Berkeley, I'm sure, are students rather than faculty. Secondly, without students being projected to be accepted fairly soon, as soon as we had the facilities to teach them, we couldn't very well expect to get the additional funding for faculty. And I don't think even the university or Sacramento or Berkeley expected me to take on a class in 1964, from the way it looked with the building program, the funding program, the bond issue, and so forth; but certainly if I could, it would be something that would be appreciated, you might say. So, we set sail for doing that and managed to do it.

GOODFRIEND: How many faculty did you have on board at the time that you--

SOGNNAES: We had an approval of eighty full-time

equivalents, and as I may have told you before, to me that was a tremendous support; but it was well discussed by the appropriate committees and by the chancellor and regents, and so forth, and was approved. But coming from a private university background at Harvard, as I told you before, where they now require a million dollars to support one endowed chair, or at that time half a million dollars. It was in that sense far above what a private university could do, so I was very appreciative of it. And God knows that the school was growing and we needed them.

I must mention one other name. I should mention them all, of course, but they are in the bible here [The Planning Years]. You spoke about the basic science appointment, where I said I had to start. It was very important also to have a significant clinical appointment. And there was one man on the scene already in that field, by the name of [J.] Eugene Ziegler, who was actually working for the University Extension. He was a dedicated practitioner to begin with, and I had seen him at meetings in Palm Springs for oral biology, and so forth, and I became very impressed by his dedication and enthusiasm. He was given a clinical appointment and part of our clinical planning committee, and he had actually educated dental assistants under the program of the extension. I gave a commencement speech shortly after I came for three hundred pretty, young dental

assistants, but the program was discontinued by the Master Plan for Higher Education, which President Clark Kerr was the author of, or senior author of, which had to be implemented, meaning that only the university should deal with the higher education or doctoral degrees, and then the junior college system should deal with bachelor degrees and master's degrees, or rather associate degrees in the related paramedical/paradental sciences. So, that is the way it worked out.

But Ziegler was a very valuable man, both from his knowledge of dentistry in general and dental equipment and facilities, and from his great respect he had in the community. I would say that he must have been one of many very, very dedicated practitioners who must have been on the list of being looked at as possible deans.

GOODFRIEND: You say you had approval for eighty FTE faculty. By the time you were starting to recruit students, did you have all of those filled?

SOGNNAES: No. That took a little longer because, after all, we had-- The first class was limited to-- Just as the medical school class was. We had twenty-eight students.

GOODFRIEND: So, it's in the book. We will look it up in there. How did you go about recruiting that first class, finding that first class?

SOGNNAES: Well, we had--again, it's in the book--a very

fine admissions committee. Again, with representation, not just our limited dental faculty, but also from the colleagues in the medical school and campus representatives. I made it very clear to them that we would want to set the highest possible standards to justify the education by outstanding faculties in both basic and applied sciences. I followed very closely their advice in sending out the acceptance letters. So much so that there were times when I was receiving a friendly call from some very distinguished individuals who had a friend or relative applying and putting in a good word for them. And I have been told that there have been deans who have had a little drawer with a few special tickets, public relationswise and otherwise, and I can imagine at a private university this must be quite a problem for a dean to leave it to an admissions committee rather than a personal decision to make that kind of admission. But I never fell for the temptation, if you want to call it that, or I didn't want to start it because it would have been very difficult to do otherwise. And there were things that were somewhat amusing in a way. I remember one case where the individual calling me was very prominent and very respectful and friendly, I think, in regard to Chancellor Murphy. And I did touch upon this with one of my conferences with him, and he left it this way: "Reidar, take a good look at the individual. If he

is accepted, let me tell him. If not, you tell him."

[laughter] Well, that was meant as a little joke, I would say; but, anyway, it wasn't something that turned out to be critical as far as I know. I hope we didn't lose a million dollar endowment or a professorship.

GOODFRIEND: You say you had twenty-eight spots. Did you receive a lot of applicants?

SOGNNAES: Yes. That was really a surprising thing considering it was hardly advertised.

GOODFRIEND: Is that right?

SOGNNAES: And they were extremely competent. You know the American Dental Association keeps track. We have to report each student's qualifications for admission and examinations, and so forth. And they send out a list every year to all of the deans of the country where they list all of the schools in sequence, but they only give a code number and that is only supposed to be known to the dean of his own school, obviously. I didn't know in advance how well the students were prepared, or how well the admissions committee had done in their selection, but I think it must have been a very great surprise to Harvard when they found out they were no longer number one in student qualifications.

GOODFRIEND: So your first class was number one?

SOGNNAES: Number one in the country.

GOODFRIEND: How did you advertise? How did the word get out?

SOGNNAES: Well, you'd be surprised. You know, the first applicant or potential applicant I interviewed, when Dorothy and I sat down in the Religious Conference Building on the corner of Tiverton and Le Conte [avenues], was none other than the famous world Olympic champion in decathlon, Rafer Johnson. I can still see him sitting there in front of me with his friendly smile and enthusiasm that he had been dreaming of becoming a dentist. And I saw these beautifully sculptured hands that could also obviously have the power to take out any wisdom tooth. And this was just as we had started to plan. I couldn't even tell him what year it would be. He was eager to start there and then or to be told what courses he could take to supplement his background that year so he could perhaps qualify for next year. In retrospect, I think what I should have done is probably tell Gene Ziegler, who was an all-around dentist, that I would take on Rafer Johnson in basic sciences, [laughter] and let him take him on in clinic, and give him the first dental degree at UCLA. I wish I had had the courage to do it. It would have been very distracting in many ways and probably have raised a tremendous number of eyebrows in the community and in the [American] Dental Association headquarters in Chicago. But it wasn't to be, and of course he became a

very important ambassador for the United States and for his other causes, you know.

GOODFRIEND: So, you received these applications and their qualifications were the top in the country, as you found out. Was there a certain type of student that you were looking for?

SOGNNAES: Well, I don't doubt that the admissions committee, by the nature of its composition and the nature of their interviews, and so forth, would have given the students quite the obvious impression that they were expected to be both biologically oriented and technically competent, and socially compassionate, so to speak. We had these people-- Dr. Knutson was actually very much for the behavioral sciences and social sciences in his program, and he was the chairman of the admissions committee. In retrospect, now looking at the result, which is anticipating your story a little bit, when it turned out that they were confronted with the national board examinations, they also came out number one both in basic sciences and in clinical tests, which I think surprised many, I suppose Harvard in the first instance and USC in the clinical instance. But we have to say we had fewer students compared-- Well, not compared to Harvard, we had almost twice as many. But I think the other thing is they were pioneers and they were enthusiastic, and they didn't have it given to them, because

we didn't have the full clinical facilities until they were in their junior year, you see.

GOODFRIEND: So, what were their first two years like? Where were their classes held?

SOGNNAES: Yes, well, partly we held them in the Religious Conference Building--the medical school had done the same thing--and it was like a church setting. [laughter] It was very serious in a way, and we had some labs down there. Then, of course, we were fortunate that our wonderful vice-chancellor of planning, Professor William Young, the famous chemist, who is passed on now, was a tremendous supporter of our program in every way. He donated, for temporary use, two chemical laboratories that were being transferred with a new building program of their own. And we set up there the technical facilities for them to begin to learn some of the very involved casting techniques and impression techniques, wax and gold, and you name it.

GOODFRIEND: What was their curriculum like at the time?

SOGNNAES: Well, the curriculum, I think, was essentially similar to what we have had since. Maybe they got a little more personal attention because they were fewer in number, but they went through the basic sciences, before they were fully expanded for the first year. In anatomy, for example, they were able to be fitted into the dissection program there. Biochemistry, physiology, pharmacology, and

ultimately pathology--they went through all of those with the great help of the faculty in the basic sciences. I will say that compared to what I understand may have happened at some other dental schools, the colleagues in basic sciences and in medicine and in public health were very supportive.

We had a few problems, as I may have alluded to before. One resulted, for example, from the clinical development in the school. I mean, in my building program, when it became apparent that I was proposing a complete surgery facility on the A floor of the dental school, there was some concern, especially from the Head and Neck Department in the medical school, as was expressed by the chairman at that time, Dr. [Joel J.] Pressman, in a letter to the chancellor and the dean of medicine, that having noted this as part of the program, he was concerned that we might go further than just the maxillofacial part or dental part of operations. I think that the notion was expressed that "who would think that Dr. Sognnaes would leave an endowed chair at Harvard and associate deanship, or acting deanship at that time, to come to UCLA without perhaps having some ambition to build another medical school," so to speak. And it's true, head and neck and plastic surgery are generally considered two areas where dentistry might try to overlap a little bit. Fortunately, I think later on they realized that this was supplementary rather than instead of, and our relationships

have been very good. As a matter of fact, plastic surgery now, I understand, uses this surgery for their own patients every Monday of the week, and our head of oral surgery now is getting along fine with them.

GOODFRIEND: Were you on the semester or the quarter system?

SOGNNAES: We have been under both, of course.

GOODFRIEND: How did you start?

SOGNNAES: We just started with the same as the medical school had, the semester system to begin with.

GOODFRIEND: And then when UCLA went to the quarter system in 1966, is that when you went to the system?

SOGNNAES: We went both to the same system.

GOODFRIEND: I see. How about the pass/fail? I know now the students are on pass/not pass.

SOGNNAES: Yes.

GOODFRIEND: Was that also--

SOGNNAES: Well, the students have always been very interested in this, and I have stayed out of it quite a bit, and I'm not even sure at this moment in 1983 what is being favored. But there was a time where we felt that the pass/fail system had quite a bit of merit. The only unfortunate thing about it, it turned out, is that when you apply for advanced education, postdoctoral education, the pass/fail type of idea makes it difficult for a student

perhaps to compete with an A student. In fact, when my daughter graduated from UCSC (which sounds like the best of two worlds), University of California at Santa Cruz, the chancellor, Professor [Kenneth V.] Thimann from Harvard, whom I knew there and knew then, he in his commencement address made the point that he regretted to say that with all the fine students he had graduated, that there were some distinguished universities who could understand letters but couldn't understand words. And that was the pass/fail system.

GOODFRIEND: So, did you support the pass--

SOGNNAES: Well, actually, in heart I did, but I was impressed by some student considerations where they felt that we might put them at a disadvantage.

GOODFRIEND: I see.

SOGNNAES: Of course, there was one area, speaking of student examinations, that I always made a point of not believing in, and that is not in the pass/fail, but in the multiple choice. And especially the "none of the above" correct answer, where those poor professors have to dig out five wrong answers to good questions.

GOODFRIEND: Right. I remember we talked about that last time.

SOGNNAES: The waste of a lifetime.

GOODFRIEND: Right. Well, next time I'd like to continue

about this first class, because I know you were all very close, and their graduation, and I think that's where we will start next time.

TAPE NUMBER: IV, SIDE ONE

NOVEMBER 15, 1983

GOODFRIEND: When we left off last time we were just starting about the first class that was admitted to the dental school, and I'm intrigued to learn about that class.

SOGNNAES: Yes. Well, first of all, let me say this. Back in the early sixties there were a lot of discussions "When do we start?" We had these temporary offices in the Religious Conference Building. We had building projects all over in very much of a planning stage with-- There was a lawn where we wanted to have the building, you know, and when could we really get going? And there were some of my colleagues who felt that I may have been a little impatient to get started prematurely, and yet I was led to believe, and I think correctly, that there is one thing they understand in Sacramento--students. So we made a major effort to start, actually a year ahead of what had been anticipated at that time, to shoot for a class in 1964, rather than '65 or '66. And it wasn't, of course, until 1966 that we had our own facilities. But, thanks to help from many sources at that time, especially from a facility point of view from Vice-Chancellor of Planning William Young, who has passed on since then, who not only helped us to get the Religious Conference Building, but also made available some

labs in the Chemistry Building temporarily, so we could start to rotate a class through. Anyway--

GOODFRIEND: Excuse me for a minute. Was it competitive to get these spaces?

SOGNNAES: Facilities?

GOODFRIEND: Yes.

SOGNNAES: I would think so. But I think the Chemistry Building, because of some new construction, [they] were prepared to hold on to remodeling the older facilities, and that's what we borrowed. But that, of course, came once we had the class on hand.

As far as the class itself was concerned, it was suggested to us to try to take twenty-four students, although it was not the fixed number. We could have taken twelve. But anyway, we--

GOODFRIEND: Why twenty-four?

SOGNNAES: That is sort of a unit of ninety-six. Ninety-six had become a number used in Washington a great deal for facility planning, and I had been in on an advisory council there. When I later wrote The Planning Years report to the school, this loomed heavily, and it was distributed all over the country, especially to newer places that were building schools. So, we wanted to experiment with units which we later could apply to-- A lab, of course, in a chemistry building couldn't take a big number, but it turned

out that though we had no time hardly to advertise, there was really a great interest in what was going on here, both by students and potential faculty and by colleagues in the community. So when we found that we ended up with twenty-eight outstanding applications, we didn't have the heart to say no to the last four, so to speak; so we took a class of twenty-eight.

GOODFRIEND: Why was there such interest? Was this a time when there were a lot of people going into dentistry or interested in going into dentistry?

SOGNNAES: I think that it was more than perhaps now. By 1983 the ratio between applicants and admitted students has changed a little bit, and I think the grade point average may have gone down a little; but I'll leave that to the present dean to discuss later. Anyhow, what turned out was that, notwithstanding what I have said, when Chicago [American Dental Association (ADA)] distributed the national status and ranking of students--which they do from every school in the country, and they give you a secret number, and you are the only one who knows what you are doing (the other deans are not being told)--it turned out that UCLA ranked number one in the country.

GOODFRIEND: In terms of our qualifications of--

SOGNNAES: Of our student qualifications both in terms of their academic background, their grade point average, and

also importantly from ADA the national aptitude test. They give an academic [test] and also a manual dexterity test. So this was extremely gratifying, of course, and extremely surprising to some other schools, including my fellow dean at Harvard, who was one of my research fellows years ago, and it turned out that I had to admit that to him at some point. [laughter]

GOODFRIEND: Why do you think we attracted such top-notch students?

SOGNNAES: I still don't understand it in a way, because Harvard had such a small group of dental students, because they had to be mixed in with the medical students in all basic sciences with the same class, and the facilities were not big enough. So, they had adjusted the student body down to only fifteen students, and we had virtually twice that many, you see, and came out with this extraordinary group of young fellows. I say young fellows because at that time we only had one girl in the class.

GOODFRIEND: Were you intentionally looking for a certain mix of--

SOGNNAES: At that time, I must confess that the admissions committee, to whom I give a great deal of credit for their work and their selections, there were no specific instructions. That came much later. And even when I became an ex-dean, or some say x-rated [laughter], I must confess

that there is a suspicion that I interviewed every girl student available, and I had two requirements: they had to be exceptionally pretty and pretty exceptional, and they have been. And I think we came out not to my credit later on as number one in the country in implementing the proper mix.

GOODFRIEND: But our first class had one woman.

SOGNNAES: Yes.

GOODFRIEND: And that was pretty radical at that time, wasn't it?

SOGNNAES: Yes, I suppose it was. And she became an outstanding professional.

GOODFRIEND: And that was--

SOGNNAES: Pan. Margaret Pan. The rest of them were, I would say, an extremely cooperative group and enthusiastic and accommodating when it came to temporary facilities and lecture areas, and so forth. And to mix them in, that first group, with the very early time of small faculty additions, both in basic sciences and in technology, but they survived very well. Maybe that helped, [laughter] to be pioneers.

I can tell you some strange illustrations. One that became not too well known outside UCLA was that in the first two years, before we had our own facility, using the labs in the Chemistry Building, it is customary for dental students to have some exposure to the real thing, the technology of

crowns and bridges, and so forth, and also diagnosis. And we had no place for patients, you see. But what we did was that we got some temporary equipment and put it up in the Chemistry Building, and to tell the truth, like George Washington's dentist should, [laughter] I, with the help of some of my colleagues, we were able to put the bid in for some surplus military dental chairs. These are the kind that I used all during the war. They are all tubes of metal, you know, and when they collapse, they really collapse, [laughter] and when you put them together, it's quite a hassle. But, so we did. We had these ten chairs and rotated the students through, and they became their own patients. They diagnosed and x-rayed, and you name it, charted each other, took impressions with various materials and made the plaster casts, and so forth, which was a very important thing for them to get the feel of what they were getting into. But the story was that we were extremely concerned that some USC students should find out about this and come up and take pictures of the UCLA Dental Clinic. [laughter]

GOODFRIEND: Speaking of USC, how did they react to this new school across town being started and the best students applying?

SOGNNAES: Well, they had rated very high nationally. That was well enough advertised by all our colleagues and

friends from there, but particularly they were noted for very high achievement on the national boards in the clinical part of the board examination. But I'll come to that later when graduation came, which was an even greater surprise, I think, to many. At any rate, their reaction, I think, was good collegial conferences, and I was invited to visit the dean there and we visited at various meetings around the city and the state. Certainly there was perhaps, and not surprising, some feeling that my life was a little easier than my fellow dean there, insofar as we had a good promise or hope of substantial support from the state, whereas their private school had to rely much more heavily on high tuitions.

GOODFRIEND: But weren't they--

SOGNNAES: And I knew all about that problem [laughter] from Harvard, which is also a private school and is supposed to be rich, but not particularly in dentistry.

GOODFRIEND: Weren't they very established though by that time?

SOGNNAES: Oh, yes. Oh, yes. They were very well recognized, too, and a very proud alumni body and very supportive.

GOODFRIEND: So there hasn't-- You didn't feel, at that point at least, a competitiveness?

SOGNNAES: No, I don't think that any reactions that I had

coming here-- Of course, there was one, I must confess, that became critical, but that wasn't just USC. That, I think, was partly initiated by Northern California and, of course, especially our sister school, older sister school, at San Francisco. And I think it ultimately came to the attention of the president, Clark Kerr. He had received me very well, and Edel had nice Christmas greetings and good wishes, and I had enormous respect for him.

But there were two communications that were somewhat discouraging to me, or three, I should say: One was that a dean should be informed that you cannot steal any faculty from your neighbors in California, including the northern and southern [schools]. That was one problem.

The second problem was to me personally, more than to the rest of the faculty I suppose, very disappointing. I had from the very beginning initiated applications and proposals for major research development; you see some of the equipment right here in the cellar where I am now with my forensic work. And another letter came to inform me that it had come to the president's attention that I was very enthusiastic and eager to move ahead with research; but here, again, this will have to be a secondary issue and await a time in the future when you are in full swing with the new building and the students have graduated.

Well, I paid attention to the first requirement: I didn't steal from my neighbors, although it's been done since by others. You can negotiate with the chancellors or presidents of other universities. It's fair game. But the research developments, there was nothing that could stop me from proceeding to make plans that ultimately could be implemented.

There was a third thing that was somewhat disappointing to me. I say this because I have so many things [laughter] that were gratifying. When my appointment was negotiated by Vice-Chancellor Dodd--whom I incidentally saw just the other day at a big fifteen-year party for Chancellor Young, Charles Young--he came, after I had been out here once, he came to see me at Harvard. And as I may have mentioned before, we sat under President Conant's picture, big painting, in Harvard Hall for lunch, and he asked me about a few things that would be difficult for me to do or to leave, reasons for perhaps staying where I was. There are a million things one can think of--the house, the home, and the children's schools, and you name it. But the one thing that came up that was very unusual was that I happened to be elected to a fellowship in the American Academy of Arts and Sciences in Boston, which is the first academy in the Americas. And since it had been done so by nomination by my sponsor at the Harvard Medical School in anatomy,

Professor George Wislocki, when he was dying from cancer, I had enjoyed this academy as the ultimate in my academic experience, as we had monthly meetings in beautiful facilities and enormously intellectually challenging speeches and discussions. This came up as one of the items I mentioned that I would probably miss, besides my cottage, my Norwegian log cabin [laughter] in New Hampshire.

And he said, "Well, I'll tell you, there is no problem in that. I am sure that the chancellor and the president at the University of California will gladly pay your way back to Boston for at least one meeting a year." Well, these are little wonderful things, you know, that never materialized. As a matter of fact, even now when I am here and there is a good nucleus of UCLA faculty who in recent years have been elected fellows of this Academy of Arts and Sciences, there is still no UCLA component. I have suggested it to the chancellor and my fellow dean in the medical school that it would be a wonderful thing if we could arrange [such a component to meet] perhaps a couple of times a year in the Faculty Center, which I'm so fond of, you know. We have had two meetings, but wide apart, and nothing fancy. We cater our own lunch or bring it in on a-- Well, never mind. So these were three little items that sort of came to mind in answer to your question.

GOODFRIEND: Right. Backing up a little bit about that

first class-- You mentioned there was only one woman. Was there any emphasis on the ethnic makeup?

SOGNNAES: Well, you have to realize, Judi, that ethnic background doesn't exist in my vocabulary, so to speak. I grew up as a boy in Norway, and it wasn't until I went to Germany back in the early thirties and realized what was going on there, and then came back to Norway and then went to war, joined up before Pearl Harbor for a training center, first in Canada and later going to England, that I realized that there were people of different ethnic backgrounds who had been smuggled out of Norway by way of Sweden (who fortunately had been neutral at the time) or with rowboats and sailboats, and what have you, and who were able to come over to England and then be flown to the training centers. So, even at the time I was dean I didn't realize the magnitude of this question. And while my very first student [applicant], as I told you before, was Rafer Johnson himself, the Olympic star and gold medal winner, whom I wished I could have taken back in 1960, even if I had to do it alone, there was absolutely no indication from any of us on the admissions committee that that would stand in the way.

GOODFRIEND: As it turned out, was there--

SOGNNAES: As it turned out, it was a fairly limited spread. I don't have the nice class photograph with me now, but I realize in retrospect that while we have a couple of

Oriental, we may have had a Mexican or two, but they were mostly Anglo-American, or what would you call it. The one thing that occurred to me was that maybe I gave much more authority to the admissions committee than many deans do. I've heard rumors of deans having a little drawer next to their desk; if some VIP came along or some huge grant, or philanthropic contribution was in store, they might have a free ticket or make it a little easier. I soon made a decision that I wouldn't touch it with a ten-foot explorer. [laughter] And it was true that in some cases it came to my attention that there was a VIP person who was very interested in having a VIP student admitted, and I discussed it, I think I may have mentioned before, with Chancellor Murphy, and I think he made a very nice solution. He said, "If this particular VIP's friend is admitted, you let me know and I'll tell him. If he is not, you tell him."

My admissions committee that finally admitted the class of '64 was under the chairmanship of Professor John W. Knutson, who as you know passed away a few years ago. He had very good members of the committee, and they worked very hard and they took all of their statistics and even interviews, which are not done too frequently anymore, very seriously.

GOODFRIEND: Were these students influenced, were they a reflection of the sixties, the peace movement people, the

social consciousness?

SOGNNAES: Well, if you look at the class picture (which I should hang up, up in the lobby some day; I think I may have the only one outside the students), I would say that they are a very clean shaven bunch at that time, yes. Later on, as new students arrived, not necessarily from Berkeley, [laughter] it began to become apparent that some of my faculty members, many of whom were extremely proper in the sense of clean shaven and polished nails, and that even goes with some aspects of the dentist's profession, especially people who are interested in very delicate work like gold foil-- More of that later, regarding the community's and my reaction to it.

But Dr. Wolcott, Robert B. Wolcott, should be mentioned. Not only for the fact that he worked Saturdays and Sundays with my planning of architecture and electric outlets and lab tables and equipment for grinding and polishing things. He put in an enormous effort, compared to many others who considered a five-day week, and I could always rely on him if I had some headaches, to have someone to rest my head on. In addition to that, he was nationally famous because he had been head of the national group that is working with gold foil as almost a specialty, and he is extremely particular about the appearance in the clinic of students and of himself and faculty. I have used a joke which is not fair

to use, that you can always tell a-- What's that shaving lotion?

GOODFRIEND: Aqua Velva.

SOGNNAES: Aqua Velva man. You can also always tell a gold foil man. And he was one. He was very unhappy when these beards and mustaches began to appear.

GOODFRIEND: Why don't you explain a little bit what gold foil is so we can get a connection.

SOGNNAES: Gold foil is something that historically and from the point of view of art interests me very much. I had been spending time back at Harvard when I became interested in ivory and ivories, the art aspect of it. And I was enjoying the old monks' writings, even Latin manuscripts, with beautiful pictures going back to 1200 and which had bible covers made of ivory that they had flattened out, you know, to get them big enough, by taking out the calcium and putting in some mineral again. It's a long story. Demineralization and remineralization, and they had found some efforts too to use vinegar and then some ash salt to put back the minerals to get these big bible covers. And then they had gold-foil inlays. They had a gold that is extremely finely threaded and then it becomes cohesive. If you put that down in a little opening, a bunch of that, and hammer it, either by hand and an instrument or now today, of course, with a mechanical hammer, it becomes

as solid as a gold casting. It's a beautiful technique. And I have enjoyed it as a part of art. My wife Edel, of course, would have an ivory handled letter opener with Edel written in beautiful handwriting, and all made by me hammering in gold foil, which would take, of course, more than ten patients [laughter] the comparable thing.

So, Wolcott was an expert on that, and he was a great blessing to this school because he did something that I couldn't have done. Nobody would believe that I could make a gold foil of anything, because I was a professor and dean, I was from Harvard and Rochester, highly academically oriented. And there was apparently a widespread concept that here was this fellow from Harvard, who probably couldn't make any crowns and bridges, let alone Washington's dentures which came later, and that he must be one of those totally academically-oriented fellows who gave up the practice of dentistry because he couldn't have done it anyway. I needed someone to counteract that, and since gold foil was the thing USC was perhaps most famous for at that time, in terms of restorative dentistry, it helped me a great deal to have him on the scene. They knew that we could deal with it if we wanted to.

GOODFRIEND: You've talked about the artistic use of gold foil. In dentistry, particularly for what ailments is gold foil used?

SOGNNAES: It's almost exclusively used for restoring cavities, as you would say, between the teeth and sometimes on back teeth, on the smaller back teeth, the premolars. But if you wish me to go into it, I'll come back to it if necessary. But it must be mentioned that I had some difficulties with acceptance by the [California State] Board of Dental Examiners. They are appointed by the governor. They are almost exclusively practicing dentists, and it is a feather in their cap, obviously. But they take it extremely seriously, and the needle eye for passing the state board in California, [which] was known all over the country, if not the world, was the gold-foil filling.

I found out many things about it that really shook me up. Number one, most gold foil was sold to the dental schools, not to the practitioners. Number two, their argument that if you can do a gold foil, you can do anything in dentistry, because it's so extremely delicate. So I talked to some psychologists about it, and they told me that the skills are not transferable. You've got to do what you are going to do. Number [three], I have a brother who quit medical school to take up the fiddle, and when he went from the fiddle to the viola, which became his final instrument in the philharmonic in Bergen, Norway, he felt that if he was going to do a viola concert, he had better stay away from that teensy-weensy fiddle maneuver. And I play the

flutes. If I was going to play on the long flute, which I was more often doing, the worst thing I could do was practice on that tiny little piccolo flute, you see. And here is-- This was a piccolo flute, state board needle eye in California, and it bothered me so much that I for a while had a talk with the state board and wondered what would happen if we didn't teach it at all. They never forgave me, I'm sure, because they needed it more than our students, because it was one place where they could sort out some outsiders, from either this country, in the Midwest and the East, or not to say from foreign countries where they didn't teach it at all sometimes.

GOODFRIEND: Was California about the only state?

SOGNNAES: Oh, no. There were others who did it too. In fact, I did a gold foil for my state board examination in the Commonwealth of Massachusetts. But, that is another story. The point is that it was one of the critical questions for a while, and I'm afraid that our school suffered for a while because of me, as dean, not wholeheartedly applauding this, because I felt there were so many other things that should be done. And we still are doing today, I think--we are teaching them very important things which the state board doesn't pay any attention to at all.

GOODFRIEND: Do they still test for gold foil?

SOGNNAES: Yes. They have now broadened it that you can choose a gold inlay instead. But that is involved with some extra time, or a day, for casting it in the lab, whereas gold foil you can do right in the clinic. They can watch you all the time. You can't fool around anywhere else.

GOODFRIEND: How do you think the school suffered because of your involvement?

SOGNNAES: Well, I think that they resented it a little bit to have in California a dean in a leadership position who didn't feel as enthusiastic about what they were doing as they thought I ought to.

GOODFRIEND: But did our students at all suffer, do you think, in the exams?

SOGNNAES: When it finally came to the finals, they passed with flying colors, and thanks to not only gold foil, [laughter] to other things, too, but to Wolcott and company having taken it seriously. So, I have to express my appreciation to that sort of thing.

GOODFRIEND: So, along with that he wanted the class to look meticulous and well shaven and--

SOGNNAES: Oh, yes! I'm glad you're not forgetting the theme. [laughter] As I told you before, my memory is not what it used to be and my memories are quite good, including what we are doing now. Well, here's what happened. I had people very concerned about letting students wear a beard,

or hair in the face, or whatever you call it, because it was new and it was a sort of activist Berkeley type of atmosphere, and this is a conservative type of profession, I think, in general, a humble profession to be sure, and none of these extraordinary things. But, here again, I must say that I played a role that turned out to be quite significant for a very strange reason. And it goes back to the fact that I once had a beard, [laughter] which few people might believe; but it happened on that island of Tristan da Cunha. It took us two months sailing to the West Indies, and then to Cape Town, and then fifteen hundred miles over to the island of Tristan da Cunha, which I think you can spell now. And we spent a seven months' trip, you know, and during the trip, sitting on the ship and all this time, playing chess or something, we got too lazy to shave. So we arrived with beards on the island, and we had beards on the island because everybody else had beards on the island. They didn't have any Remington shavers or anything. It became very convenient, and I didn't do much drilling or fillings, so I didn't get caught in the machinery, although I took X rays and did diagnosis, and I did some dental care, naturally, for emergencies.

But, when we had a radio signal-- Our radio didn't work. We didn't reach anybody when we were on the island. Nobody knew what had happened to us until we heard a radio

signal from Bergen, Norway, which has a very high mountain, and it said that today a Norwegian ship is going to pass the island of Tristan da Cunha and pick up the Norwegian Scientific Expedition. We were thirteen men stranded there. When we heard that, that they would be there in a week or so, we shaved to become civilized, so to speak, and go home. But when the islanders came down to the pier to kiss us goodbye--they were extremely warm and friendly by this time, and as I may have told you, at least one young boy was named after me on the island, in my honor, on my honor--they said, "We don't recognize you people anymore. Don't ever come back without a beard." [laughter] (And I'm thinking of going back. It'll be a different color.)

But then, on the ship home, which took only a month because we went right up to North Africa and then around Spain and France and up the British Channel to Norway-- When we came home with this ship, we were met by our friends and families, those who had some, in Oslo, and we were all checked into the Grand Hotel to have a sort of welcome party. All of the wives were there; I was the only bachelor. The next morning everyone was clean shaven. Of course, we had let this hair grow back on the way home. They were all clean shaven except me. So, I realized that this was going too far in conservative Norway. So, I shaved everything except my mustache, and I masqueraded with that

mustache for two weeks in Oslo, Norway. Even that for a fairly young man was unusual at that time.

Well, what happened was that in those two weeks, I found out that I could divide my friends into two categories: One was, "Reidar, welcome back to Norway! I've been reading in the papers about this fantastic expedition to the world's loneliest island, that you may have been lost or shipwrecked, that nobody had heard what happened to you for four months, and finally that you were going to be picked up and get home. Good to see you. Tell me more about it. We must see each other. We must have a lecture. We must do this and that." The other category was the one who said, "Reidar, look at that hair on your face! [laughter] That is funny!" Not the slightest interest in what had happened to me or where I had been.

So, it was a very revealing thing, and when that happened to me then, it never left my mind until we got into the Berkeley beard situation and some of our students appeared like that and irritated some of the faculty. And I was probably the only dean in the country who totally ignored it, and I think it did more good than anything I could have done. They resented being pushed around, and I think when they realized that the dean didn't think this was the worst thing that could happen to society, they simply began to shave.

GOODFRIEND: That's great.

SOGNNAES: Well, anyway, that's a long story. You will have to cut it down.

GOODFRIEND: Did the sixties and, as I say, the social consciousness, did that have any influence on us establishing the Venice [Dental] Clinic, which was an outreach program to the community?

SOGNNAES: Not in the early years.

GOODFRIEND: No.

SOGNNAES: As a matter of fact, I would say almost on the contrary. We were confined, so to speak, to the UCLA premises for another reason. When faculty was appointed from out of state and had this strange state board requirement in order to be licensed in California, with the gold foil, and so forth-- You have to remember, we had orthodontists and prosthodontists and endodontists and all of these experts who hadn't done a gold foil in their lives, some of them, and it would be a total waste of their time and a risky business to flunk it maybe. So, it became intolerable. But we were automatically authorized, of course, to teach and do research and practice on the premises of the university. It was only later on in 1965-66 there began to be some talk about satellite clinics.

GOODFRIEND: I see.

SOGNNAES: And it was not until 1968 that the Venice

clinic-- Probably the last dean decision that I made was to establish the Venice clinic before I had my heart attack in September of 1968. And I hasten to say, what happened to get it through more than anything else was the enthusiasm of Dr. James Freed, who has just been made a chairman now in November 1983 of the Section of Preventive Dentistry and Public Health. A devoted and dedicated man.

GOODFRIEND: Well, you mentioned that the first class had to work on each other as patients.

SOGNNAES: Yes, initially the first year.

GOODFRIEND: Very initially. Then when were the clinics first opened to the public?

SOGNNAES: The building itself that had been planned over these years, and had dug out the biggest cavity in West Los Angeles to build was the lawn, you know, where now the school is. That was fully finished and the opening ceremony in September 1966. So that meant perfect, you see, that we had taken students in 1964 rather than 1965 because they had then completed the basic sciences in the medical school facilities and in the chemistry lab, as I mentioned to you, and they were ready to see patients. This was an enormously important period. You can imagine that everything was shipshape for them, and they walked into very, very nice facilities.

GOODFRIEND: Was it hard to attract patients?

SOGNNAES: Well, with a class of twenty-eight, of course, we didn't even notice it. The interest was enough and there had been enough written in the papers about this new adventure at UCLA, so I don't think anybody had any complaint at that time.

GOODFRIEND: And was it as it is now, where the cost of the dental care is less than it is in the private practice world?

SOGNNAES: Yes, it is, by a certain factor, but apparently certain types of patients are still harder to get.

GOODFRIEND: Now, when this first class graduated--

SOGNNAES: I mean certain types of requirement as far as dental care needs are concerned. For example, full dentures are not as common today probably because of a certain control of tooth decay and periodontal disease. Gold-foil patients are almost impossible to find. Sometimes, they apparently have to pay them a fee to be subjected to this hammering.

GOODFRIEND: When the first class graduated, how did they fare on their national exams?

SOGNNAES: I'm so glad you asked that question. That was perhaps our greatest surprise. They did pass the local state board here in California, which was a great relief for me, because I thought they might even be penalized, but they did too well to be done that. And then, again, the deans of

each school in the country are informed how their class is performing and ranked in the national boards, and it turned out that again this class came out number one in the country and ranked first not only in the basic sciences, which had been almost from my experience at Harvard their usual standing, but also in the clinical performance or test questions, and so forth, which I think came as the biggest surprise to USC, if I may put it that bluntly. I think Harvard and USC were two of my personal competitors: one, because I had been through this private university [Harvard] where basic sciences were rated very highly; and two, because USC had such a distinguished record in the clinical skills.

GOODFRIEND: How did you feel the day they graduated?

SOGNNAES: Oh, my! The next happiest day in my life.

[laughter] Yes, that was a thrill.

GOODFRIEND: It was a close class. Did you all socialize together?

SOGNNAES: Yes. It was really wonderful. Even when they arrived in 1964, with all the excitement--Edel and I had sold everything we owned, including the cottage in New Hampshire, to buy ourself into Bel-Air no less and had a big garden, Olympic pool, waterfall--we were able not only to invite the students and their families, and they all came, but also, of course, Chancellor Murphy and his staff,

and chairmen of the departments in our health sciences who had been so helpful to us, and some others. We had a big, big garden party.

One of the things we took advantage of at that time, we had this artist, Elaine Marienthal, who made a mural later on. Well, she was in the midst of making the clay at that time, obviously, in 1964. She had three and one-half tons of it to carve that huge mural in the main lobby of our dental school. She had made a model of it, which I have on my wall--I have to tell the truth again--in my home, because it weighs two hundred pounds, and she had already carved it and baked it. It's about two yards by one yard, in baked clay, you see. It's a rock. And that is now magnified to a ten-by-twenty-foot mural in the main lobby. So we had that to look at, and the chancellor was greatly impressed.

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NOVEMBER 15, 1983

GOODFRIEND: I know the DRI, the Dental Research Institute, was one of your pet projects.

SOGNNAES: Yes. Well, as I indicated before, I had perhaps prematurely, according to higher-ups, begun to set in motion things for research while we hadn't yet even graduated a class. But in 1965 I prepared a prospectus for the university having seen other research institutes, including the wonderful [UCLA] Brain Research Institute, and I had known Professor Magoun, he was the initiator of that, Horace Magoun, and head of anatomy and founding chairman here. We had talked about education and research for years, even back East when we had conferences up in the Berkshires and at Harvard; so I was very impressed by UCLA's ability to get people from different disciplines together and take hold of a problem and go after it tooth and comb, or whatever you say. This is one of the most outstanding things about this campus, and I'll repeat myself on that, I'm sure, many times. Harvard with all its grandeur, and God knows I'm an alumnus and love the place and have good memories from it, it was so darn complicated to get together with people in different fields. Because the best hospital, Mass [Massachusetts] General, was downtown, some of the best

humanities, of course, and biology was across Charles River, if you could get across the bridge; and then the basic sciences were uptown in the Longwood Avenue area, which became not the best part of the city. It was difficult to make the arrangements, in other words. And UCLA-- I had seen these other examples, and I got bitten by the bug, so to speak. We had the Faculty Center, you see, to meet people in other fields and kick it around a little bit.

So, although it was premature from some people's point of view I'm sure, I had already written huge applications at Harvard for special programs like the National Academic Training Program for Dentistry, which had never existed before until 1956, when I was able to author such a prospectus. Then, at this university it was required that you had to justify the reason why there was a need for a multidisciplinary research unit, and there should be. So, I studied up on this very carefully, and as Dorothy Good will tell you, we worked very hard to prepare this document in 1965, which then went to university committees here and in Berkeley, and finally went to the regents. And the birthday of the Dental Research Institute is a great memory for me. I had an extra martini or something that day, I think, or beer.

GOODFRIEND: What date was that?

SOGNNAES: It was February 16, 1966. And, you see, it

was before we had opened the building, but what we did have, and what already was in contract, we had been able to attract from outside sources, not from state funds, one of the greatest dental research facilities in the country at that time. Those were alternates mainly. The sixth and seventh floor, where we now have the institute, they were simply planned by the architects, but it was with a big question mark back in the early sixties, depending upon whether Dean Sognnaes can find the money for it. I think altogether we had in grants and contracts from outside the university during those planning years, as you'll find in The Planning Years, was over \$3 million. And with that backing, plus the interest I was able to elicit from talking to the members of the faculty of other departments and schools, the regents fortunately approved it. But it was a long way from there, of course, for implementation. I was the first one to admit that we couldn't make that a major item financially until we had gotten bigger classes going, and so forth.

GOODFRIEND: So it laid empty for a while, didn't it?

SOGNNAES: Well, we had a lot of empty research space, and we didn't talk too loud about it because everyone was alert for empty spaces.

But I have to give credit to my successor, the late Dr. Robert Caldwell, who I had known for several years

and admired enormously, and I am sure that the university was going along with him-- He wasn't known to the faculty here at all, because he had been very much involved with research in oral biology. But once he came, he was certainly welcomed with open arms, and it was one of the greatest tragedies that he passed away after only two years. But he did one thing, speaking of the Dental Research Institute, he did make arrangements with the university to obtain a stipend whereby one of the local professors could be given the administration of the research institute. So the first official director (in applications before that I had been enlisted sort of as acting) was Dr. William Hildemann, who was a tremendous choice. I had observed him at meetings and heard him present papers, and I knew that this was an excellent decision. He got it underway, and, of course, now we have a new director in 1983; so it is a going concern.

And I think that the opportunity for this research institute, one, to broaden its base to involve other areas, and as everybody knows too well, I have been plugging it, maybe excessively, lately, for a forensic science section in that, and I think it's about to happen. And I'm hopeful that other areas of the university, including law and social sciences and humanities and communications and speech, legal aspects related to medicine and dentistry, to crime,

law and order, especially crimes of passion--child abuse, rape, sex assaults and homicides, in which I am currently testifying on-- But, anyway, I think that and many other areas have tremendous opportunities. I just hope that with the outstanding faculty we have now and the outstanding work they are doing, that there will be some thankful patients some day, as they have had in other areas of the health sciences, who will feel so grateful to this fine school that we can hopefully perhaps obtain some more funding.

GOODFRIEND: Another one of your projects, and you've mentioned it was maybe the last decision you made, was the Venice [Dental] Clinic. Was that difficult to get started?

SOGNNAES: It was only difficult in the sense of its novelty. There had been discussions at some national levels about the need for students to be exposed to other things than the restricted environment of this dental school clinic. What is the real life like? And, of course, there were efforts to cycle some students through some private practitioners, to go back to the old fashioned apprentice system, which had much to be said for it, you know. And while students had admired dentists at a distance--they had a big car and they played golf and they smiled happily, it was a good life, and family, and so forth--I think that they were not exposed to all the spectrum of it; so discussion

had come up in meeting health needs, you know. And whereas we graduated more students, we had been paid to build physical facilities for teaching and research and practice, but many students, of course, went into practice in more profitable communities. Beverly Hills and San Francisco proportionally had more dentists per number of people than others. So, the upshot was that this isn't something entirely to our own innovation and concept; but people in public health, like Jim Freed that I mentioned before, were certainly aware of this. And when I finally was involved in the decision-making to get permission to move ahead (what you have to have from the university), I went into this with enthusiasm.

I still remember the faculty meeting we had back in 1968, where quite truthfully and quite understandably many of the very, very busy professors, who already were trying to get things going with a bigger student body and with the clinic teaching as it was, to conceive of getting out of here to some other place and be diluted was not easy. But thanks to the enthusiasm mainly of James Freed, I went along with it happily--with some opposition. And I'm awfully glad I did because it's one of the most enjoyable things I've done is to have visited this clinic, and it's one place where I've treated a few. [laughter]

And this brought up the other situation. Finally, the state board had to acknowledge that for such a good cause, to take care of these underprivileged people, there was no competition to the local dentist or any dentist, that the condition is now that all university faculty members here who are in the School of Dentistry will automatically not only be allowed to teach, treat, prevent, and research patients on the premises of this school, but [also] on the affiliated satellite units. Venice was the first one, and dentistry was the first one to get involved with this program. Now, of course, it covers many other fields or specialties, of which I don't know too much about in detail; but it's really been a very wonderful thing.

In fact, I had hoped to have a mobile clinic for kids, because it's hard to get them there. Some don't have cars, and I can put this on record, maybe somebody will come along-- I had hoped to find a Howard Hughes or some rich man who was interested in flying, and to buy an old airplane, cut off the wings and then put wheels on it. Then, I would have this aisle, you know, with two seats on each side, or with one seat on each side, for that matter. And you have all the oxygen, you have all these things coming out from the ceiling for air and for water if you needed it, and it's plugged in. The chair can lean back. I picture

the preventive clinic where you will drive around the community with all of these poor kids coming excitedly. They want to go on that airplane from UCLA, and they would have their teeth cleaned, something comfortable, topical fluoride application (which of course I was very interested in from years back in research), and diagnosis. And then maybe they'll be so excited that they will be willing to be picked up or come to the clinic for maybe a couple of painful extractions. I still think it's a terrific idea, but it will take some time to implement. But can you imagine? You can get one of these small airplanes.

GOODFRIEND: It would be great! Yes.

SOGNNAES: It would be better than the minibus we have at UCLA; that's another possible solution. But I think in some of these things, the outreach thing for the health sciences, we've got to get to the people somehow. And we've got to make it exciting and interesting and inexpensive. At least we ought to make diagnosis and find out what the problems are. And then prevention and treatment.

GOODFRIEND: Right. How did the school fit in with the rest of the Center for the Health Sciences at the time? How accepted and involved were you with medicine, nursing, and public health?

SOGNNAES: Well, that is a very wonderful story, and I say that because it has not always happened for dentistry.

There have been times when they have been close geographically, but as one educator once wrote in a little book, "It's the widest street in the health professions between medicine and dentistry."

GOODFRIEND: Really.

SOGNNAES: That certainly has-- The opposite has been true here at UCLA. And the very fact that we did not build the school on the other side of Westwood, on Sonja Henie's skating rink, romantic as that would have been, for me especially. I must say that we could have not done any better and had more support and enthusiasm for getting a facility worked in completely interdigitated, one, with the Biomedical Library in the middle, and then with the basic science wing on one side and with the clinical hospital communication on the other.

GOODFRIEND: Is this closeness that you were able to achieve a reflection of the dean of medicine and your ideas?

SOGNNAES: Well, I don't know if I can pinpoint it in any way. It evolved, and of course it must have had something to do with the good faculty, who had developed good rapport with their colleagues. And certainly from the administrative level, I think Chancellor Murphy deserves a great deal of credit for having baptized even the place as the Center for Health Sciences, which was an entirely new

concept. He had been dean of medicine in Kansas before he became chancellor at Kansas and then here. And after all the discussions of this interrelationship, which he embraced with enthusiasm, as he would as a person, you can imagine. Not just between us here, but between the whole campus, I'm sure that's why he came to UCLA and certainly had a big factor in my coming here-- So, he was very helpful, and I think that rubbed off on colleagues in many fields, that this wasn't something that this new dean had been dreaming up in an isolated manner. I think encouragement from the higher-ups--the chancellors and presidents, and Sacramento--is very important to people who are asked to do something, you know, that they don't be discouraged. And that was one thing that I appreciated very much.

He did it with the library, for example. It would have been so easy to cut down on the money, or to sell some good books; but I had virtually carte blanche. And between him and, very importantly, of course, Louise Darling, who really became my "darling," we developed a beautiful supplement to what was already there in the dental library.

GOODFRIEND: Louise Darling was the librarian?

SOGNNAES: Oh, yes, indeed. So, that was helpful. As a result of that, and also as a result of what others of us could do directly in communication, I have really no complaints about the manner in which we were handled

and treated with the deans of medicine, public health, and nursing. And, as a matter of fact, to show it in a more official way, Chancellor Murphy appointed a coordinating committee for the health sciences. Which was a very wise move. If for no other reason, it was very practical with all these physical facilities being developed and inter-related, and the chairmanship rotated between us. So, Dean [Sherman] Mellinkoff, after Stafford Warren retired, he took over and became the first chairman, and later on I took over. It was helpful for me to learn about them, and vice versa. And by 1966, we had a beautiful deans' conference room up on the fifth floor, here, and I think they enjoyed coming together, as did other university committees.

GOODFRIEND: What was the tone that Chancellor Murphy set for the campus? What type of direction did his administration set?

SOGNNAES: Well, I think that he is a very gregarious person. He is a person interested in many aspects of academic affairs, and intellectual. He enjoys verbalizing his ideas, and he does it so well. And I think in one word, if I should say something about Chancellor Murphy, and I've heard nobody say it in this particular way, but I think he is one of those persons, that I have met a few in my life, who has an enormously great sense of occasion. He has never failed me in his conduct and behavior and his

expressions of how he feels and what he thinks. It's a very delicate type of thing, you know, dealing with so many groups as he has, anywhere from the whole faculty, to the Sacramento people, to the Berkeley office, considering the history of all the south and the north battles. He couldn't help stimulate pride and enthusiasm in those who worked for him.

Of course, we had also very great help administratively, naturally, in then Vice-Chancellor Young, both William [Young] in planning and Charles Young in administration. So, they-- I have no complaint about the way we were treated at that time.

GOODFRIEND: Well, you and Chancellor Murphy had the same tenure, 1960 to 1968.

SOGNNAES: Yes, July 1, 1960 we both arrived on the scene.

GOODFRIEND: And you stepped down as dean in 1968, as he--

SOGNNAES: Well, it isn't exactly the way I would [phrase it]-- [laughter] I lay down or lie down, or what do you call it? Now this is not a criticism of Murphy, it is a fact of life and death. I resigned officially in the spring of 1968. I had seen all of the things I hoped to accomplish completed: the building was finished, the basic sciences were arranged, the clinic was finished, the Venice clinic was authorized, the Dental Research Institute was authorized already a couple of years, and I was dying, literally, to get going with it.

Secondly, I had done a very stupid thing. In fifteen years at Harvard and, by that time, eight years at UCLA, I had never asked for a sabbatical. And my wife, of course, thinks I am not quite sane because everybody else has. In fact, the first sabbatical in dental school was one of our graduate students, Dr. [George W.] Bernard, who got his Ph.D. in anatomy and got a faculty kind of classification that allowed him to say that he had been here for earning half a sabbatical. Well, anyway, that was news to me. But I hadn't in twenty-two years. My wife says it's because I was more concerned about the rats and monkeys in my lab, that they wouldn't be well taken care of, than anything else; and she may have a point. Anyway, I enjoyed what I was doing.

But in 1968, in the spring, when I saw everything going our way, everything I had hoped for in creating a program and in teaching, research and practice and in facilities, and so forth, and students doing exceedingly well obviously, I felt it was time for me not only to take a sabbatical, but to change back to my original career of research as a major item in my life. I sent in my letter of resignation, and the response was, "Sorry, Reidar, but Chancellor Murphy has decided to resign himself, and until his successor is appointed, he is not about to release any deans from their functions."

Well, little did he know and little did I know that what the university was not willing to do, come Labor Day, just before I was to welcome in the next class, the Good Lord took it into his hands and simply said, "Reidar, if they won't do it, I'll do it." So they put me on my back.

GOODFRIEND: You had your first heart attack.

SOGNNAES: Yes. And being a cardiologist, I suppose Chancellor Murphy, who has never commented on it since he had left by the time I got to the hospital, I think must have felt a little sorry that he didn't let me go. But, then, I can appreciate his point of view. He had worked hard for eight years, harder than I had, and he had enormous opportunity for a tremendous advancement in his administrative career. And I must say, as I said to him the other day when we met at the library here for a little affair, he asked, "What have you been doing since you got out of deaning?"

I said, "I've been laughing all the way to the library." [laughter]

GOODFRIEND: But, did that heart attack, that experience, change your perspective on your life or your work, your ambition?

SOGNNAES: Well, I think that it would be unfair to claim that I retired because of the heart attack. I think that I had a heart attack because I was not allowed to retire. I

am sure of it. I was--ask Dorothy--I was twiddling my thumbs all that summer instead of going home to see the family in Norway, then arrange that investigations be run in several countries, from Japan to Russia, to get the sabbatical year and get away from it and come back as, hopefully, not just the acting but the real director of the Dental Research Institute. It was a dream for me. When I had graduated that first class with national distinction, as I told you, and sitting in the office there all that summer, not planning a darn thing, just waiting to hear from the administration whatever they might do with me, I was literally twiddling my thumbs. I was restless, I was disgusted, I was disappointed.

The worst part, of course, was that by that time, since I supposedly could be a relaxed dean having done all of these things, I had the most incredible series of what I consider the most trivial administrative matters that I've ever handled in my life. With a faucet running somewhere, probably, and no soap in the washrooms. It was endless, and worst of all, the parade of people who were wondering why they hadn't become professors yet, or a merit increase, and what was I doing about the salary scale for the following year. It was terrible. And I understand from Norman Cousins, our new famous professor of medical humanities, who has just written this book on the healing heart--

He really knows what he is talking about. I don't think that the heart attack had anything to do with hard work in building this school. I think it probably was the reason why I hadn't had a heart attack, because I had enjoyed it so much. But that summer of 1968, I don't know why it takes two or three months to activate, my circulation to my left ventricle simply went pop! and I ended up with an aneurysm. So when I have to thank somebody these days, and I say thank you right now for what you are doing, [I say], "I thank you from bottom of my left ventricle, aneurysm and all."

[laughter]

GOODFRIEND: What did you do then? Were you at home for a while or--

SOGNNAES: Yes. I was dead for a while. I was in the hospital for quite a while.

GOODFRIEND: How long was that?

SOGNNAES: Well, probably a month. Fortunately we still had our house in Bel-Air, and my dogs kept me company walking around that pool a hundred times a day, because it was not an area where I enjoyed walking out in the dirt road, so to speak. It was a very terrible thing. I must say that if people can find a way to avoid that, bless them, because you feel completely useless.

GOODFRIEND: After you had accomplished so much, also, and done so much.

SOGNNAES: Well, and very scared about the future. Of course, it's much worse for the family.

GOODFRIEND: How long did it take till you decided that you did want to come back, you did want to start on your research again, become active in the school?

SOGNNAES: Well, I would say the university was generous in this way, in that I was not on the bare bottom from the point of view of keeping the family going. But the obvious need was to find a new dean, because Chancellor Young immediately accepted my resignation when he took over in the fall of 1968, or maybe in the summer informally. The school was helped by, first of all naturally, Dorothy Good keeping continuity, since it isn't done overnight to get a new dean. An acting deanship was established while the search went on, and then, of course, it took a year and a half or so before the new dean--

GOODFRIEND: How involved were you in that search?

SOGNNAES: Like admitting students where I didn't have-- I had a committee doing it. In the search for the deanship I did not lift a finger to ask to have the privilege of picking my successor. But names had been nominated, not by any one person but by a number, and when [Robert] Caldwell's name came up, I was of course immediately very enthusiastic. By that time, I was asked what I thought of this man, and

while he was virtually unknown to the faculty here, I would think completely unknown, I gave him a very high mark as a--

GOODFRIEND: You knew him before?

SOGNNAES: Oh, yes. From his research and from speaking at the university where he was before, and he had also been at Rochester. He had even been at Berkeley and studied at some point. But he was a man from Scotland, and when he died, I went over to Scotland to meet with his family. I happened to be lecturing at an international forensic congress in Edinburgh, and I was able to go over to the island where he came from.

GOODFRIEND: Talking about other nationalities, it's always been a curiosity for me to wonder how it felt to be a Norwegian who came over here, founded a school in the United States that rose quickly to be ranked among the top ten, how you were received and how you felt as having had your roots elsewhere?

SOGNNAES: Well, I've been pinching my arms so much that I'm losing my biceps. This is an incredible country, you know, who will give opportunities to the people. But on the other hand, of course, this has been the history of the country. I came over here alone, and now we have four children, so-called, and eight grandchildren, the oldest one graduating from college. So that's the history of the

country. I'm sure that Edel and I-- We had return tickets to Norway, back in 1939 when we were married, before Hitler started the war, and we would have gone back, I think, because we could afford it. We had the tickets. But many other foreigners who have come to this country had one-way tickets. I told you that sometimes the youngest son, a boy like me, the sixth boy, would get a one-way ticket to America and never could earn enough to come home and visit the mother and father; so I've been blessed. I'm extremely thankful for the opportunities I've had in this country.

GOODFRIEND: Why did you decide to become a U.S. citizen?

SOGNNAES: Well, in 1951 (we had been at Harvard then since '45), in September I got my license in Massachusetts, partly out of pride, partly out of the fact that there were colleagues who would like me to get involved. There was a very fine gentleman, a Harvard graduate, in Concord, Massachusetts, who had quite a few children and adult [patients]. I had looked after both of them, but I was particularly interested in pedodontics, which I had been trained in at Forsyth, as he well knew, and I enjoyed a sort of a part-time practice. I found out, however--and I carried that back to UCLA and told some of my colleagues--that part-time practice is like being part-time pregnant. It grows on you, and before you know it, somebody's friend's

friend-- So, it became somewhat distracting; so I never expanded it to more than one day a week.

But the point of getting an American license was very important to me, that I would feel completely at home with my profession and my career, if something unusual should happen. It wasn't that-- Well, I had tenure at Harvard since 1948, and they even had to give me an honorary master's degree, because I was not "a child of the university." In the old days, you couldn't be a Harvard professor unless you were a Harvard graduate, apparently. So I still masquerade with my honorary master of arts degree, plus my own doctor of dental medicine, D.M.D. But I think that that was a factor, just a sort of security.

And I can tell you this, Judi, that there were professors, outstanding ones, that I was looking at when I was dean here, who wrote me back that they wouldn't dare to come here because the security of a license to practice in California was absolutely vital to them, and they were scared stiff about this gold-foil needle eye, which they had never done in their lives. There was a brilliant orthodontist from Michigan that I wanted in the worst way, and he was very interested. He was even a candidate for dean here. This is one of the sadder parts of my California life, but the rest of it was very happy.

GOODFRIEND: When the new dean came along and you were

taking more of a backseat, how was that feeling? Here was the school that you founded, it was your baby. Was it hard to give up the control?

SOGNNAES: Yes and no. I suppose I might have given a lot of thought to it, but I didn't verbalize it. I think I can say two things about my conduct after I-- There would be a lot of bad things, I'm sure, that can be said about me, because I do have a tendency to be sticking my nose into things, at least superficially. But, there are two things: I have never offered any advice. Not even with the selection of the deans. Number two, I have never wanted or suggested that my successors, the deans, would solicit my advice.

GOODFRIEND: But have they?

SOGNNAES: I would think, frankly, virtually nothing, and it's been a good thing, I think. I would give credit to anything that's been done to the people who have had the administration in hand.

GOODFRIEND: Are you content with the direction it's progressed since--

SOGNNAES: Yes, I think many things have been done well. For example, one thing that I didn't have a chance to develop very much was the total clinic operations. I think this one was an area that Chancellor Chuck Young and his staff have been very helpful with. It wasn't the sort

of thing that Chancellor Murphy was too interested in personally. After all, Chancellor Young was his vice-chancellor of administration, and he is a very great expert in the field. So I think between him and the dean and their staff, they have made great progress in evaluating and studying this big operation, which it is, and which is an area that even if I had continued as dean, I wouldn't be particularly good at, I'm sure. It's not my cup of tea, if you know what I mean. My wife does my accounting and my income tax. [laughter] So that has been very important, I think. The other thing, related to that, is the intramural faculty practice, which I felt extremely strongly about, and I'm delighted to say that it is getting wind in the sail. And again, hopefully it will pay off in more ways than one.

GOODFRIEND: Have there been any directions that we have ignored that you would have liked to have seen, or would you like to still see carried on? You mentioned the forensics, but--

SOGNNAES: Yes. Well, that is a much broader aspect of it, and it relates to the whole relationship to not just the Center for the Health Sciences, but to the whole campus. And I'm sure that there are those who think that I may be a little pretentious to even-- And I when I say I've been sticking my neck out at some point in discussions: the chancellor was here just the other day, in early this

November of '83, and opened up a discussion for all faculty who could be there, to any thinking or thoughts they had about the university. And again, I am guilty of-- I had to go to a superior court [trial] as an expert witness in two murders, and I was very, very eager to leave soon, so I had to speak when he had only been there for an hour and leave before it was over. But I did make these two points, which I think are quite familiar to my colleagues both here and on campus by now, that there is no place in the world like UCLA, as far as I know of (I'm referring to central Europe and northern Europe, and a little knowledge about the Orient, and Russia a couple of trips), where we have such an incredible unit of a campus together. It always challenges my thought what an exceptional opportunity it is. And I say it because, as I've said before, it is so different from some of the other countries and states and cities where the whole thing is spread out over an enormous geographic area.

So I think this interrelationship between schools and departments and the development of interdisciplinary research is one of the greatest challenges to UCLA, and the School of Dentistry can and should play a part. I've used as an example my current interest in forensic sciences that we have dealt with before. It would be a good case for that kind of programs. But it's my understanding that the

chancellor's office rarely initiates such plans; that they might give it encouragement, but it will have to come from individual schools and departments. I wish there was some kind of funding through the chancellor's office where they could set up some luncheons and dinners and at least kick around some ideas. I think it-- I won't say if I were chancellor, because it sounds like I'm really sticking my neck into something I have nothing to do with and no competence in, but from what I have seen, I think UCLA hasn't even begun to develop this kind of thing. It would be of great local and national importance, it seems to me. So you'll have to forgive me.

GOODFRIEND: No, I think that's great. I think that's a good note to end on today. Next time we'll go into what you've been doing with your forensics and [George] Washington's teeth and all the other exciting research you've been involved with.

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GOODFRIEND: We've talked all about UCLA and stepping down as dean and went through your days here--

SOGNNAES: You mean stepping up to emeritus.

GOODFRIEND: Stepping up, [laughter] right. But there was one point that we didn't cover, which was your involvement with the Faculty Center.

SOGNNAES: Yes.

GOODFRIEND: I know that you were president, when was it, from '79 to '80.

SOGNNAES: Yes. Well, the Faculty Center meant a very great deal to me. First of all, it had a memory of being my first confrontation, you might say, or consultation with the university VIPs for a luncheon when I first came out here to visit back in 1959. I'd given a lecture at the Oral Biology Institute meeting in Palm Springs on the same podium as Stafford Warren, dean of medicine, and he drove me back here. [The luncheon] was arranged by the university, including the then Acting Chancellor Knudsen, Vern O. Knudsen (whose name is preserved in Knudsen Hall), you know, the physics building, and several others. And I was so pleased to be in the Faculty Center and meet people from so many fields at the drop of a hat, so to speak, because I

knew so well from my experiences at Harvard, wonderful as the institution is, by the distances between faculties and schools, that these were very difficult things to arrange.

So, that appealed to me very much, and I think it was sort of a factor in bringing me here, coupled with the fact that other schools and institutes and colleges were within walking distance on one campus. I didn't know of any other dental school really anywhere that in the first place could be built in juxtaposition to a large medical or biomedical center and library and schools of public health and medicine, nursing, et cetera. But in addition, you could within a few minutes' walk, lunch, meet with almost anyone at the Faculty Center. So that appealed to me very much, yes.

GOODFRIEND: Do you think being president, then, gave some more visibility to the dental school? Having the dean--

SOGNNAES: Well, it's interesting but understandable, you have to remember that the faculty of UCLA, once it became its own campus, not just a southern branch, there was a lot of interest in developing intercourse, if you like, between the various departments and schools. So, they were way ahead of us before the medicine, dentistry, and public health [schools] started. So it is not surprising that the leadership there and the people who were elected presidents, who were best known to the campus in general, were from

schools and departments other than the health sciences; but we were able to make some change in that insofar as representation goes. First of all, Assistant Dean of Medicine [Byron] Backlar, who of course was very competent in the field of budgeting and grants and contracts, with which he was very helpful with me as well as many others, he was close to the operation there and was elected president before me. So that was the foot in the door for the health sciences. Then I was serving on the Board [of Governors], and after that in a couple of years I was privileged to be elected president. And, believe it or not, after I gave up the position, another Center for Health Sciences representative was elected for the first time from the School of Public Health.

GOODFRIEND: Who was that?

SOGNNAES: Alfin-Slater, who of course--

GOODFRIEND: Roslyn?

SOGNNAES: Yes, Roslyn, who of course had the benefit of knowing a great deal about nutrition. [laughter] Anyway, so that I think is a good thing. I would hope that as a result of it, it gave a little more visibility to the southern part of this campus. I believe that some increase in membership occurred with it; however, not as much as I had hoped. I still feel in the future that of the enormous group of people affiliated with this Center for the Health

Sciences, it would be nice if more would support it and become full-fledged members. Certainly it's a wonderful place to have meetings of various scholarly groups.

GOODFRIEND: Yes, it's a nice facility.

SOGNNAES: Yes.

GOODFRIEND: Well, after your deanship, you seem to have become involved again with research, and one of the things that you are cited for over and over again every February, I guess, is your work with [George] Washington's dentures. How did you become involved with that?

SOGNNAES: Well, it really went back to a basic interest in ivory and ivory art. For many years, as my family will tell you, I sat up sometimes quite late very excited about a new volume I had found in Harvard's wonderful libraries about the history of ivory art, both that and the scientific aspect of it. There were some rare Latin manuscripts and old Bibles, and you name it, written by the monks a thousand years ago. I had never used much my Latin major, [laughter] but I got very excited about it, even going back to ancient history to caveman, how he found the inspiration from the formidable tusks of the hairy mammoth. Of course, I traveled a good deal, and in Dordogne, France, to see this chunk of a mammoth ivory where the caveman, the Neanderthal man, had carved a profile of the mammoth itself. Then, of

course, going through the history of ivory art, all the religious periods and all the utilities that were made from ivory, from doorknobs to haircombs, and all the religious implementation as I mentioned. And then up to the American whalers, you know, the scrimshaw art, where they carved a profile of the whales and other animals, and sweethearts they had met around the world, on their little sperm whale tusks, which became a very popular art. President [John F.] Kennedy, it was one of his great hobbies--collecting scrimshaw; and I have a couple. Anyway, so that was basically my beginning of it.

Here in Los Angeles it was very fortunate for me that next door to our school, as I took a trip for lunch once in a while down to Westwood, there was a museum called the [Francis E.] Fowler, Jr., [Foundation] Museum. This [Fowler] turned out to be a very delightful gentleman, and I don't know which, he or I, was the most excited about the opportunity to study some of this. And he gave me a grant to develop a microreplica technique for scanning electron microscopy, whereby I could study such art objects without cutting them to pieces for microscopic work. This is a surface microreplica.

GOODFRIEND: In other words, you met him--

SOGNNAES: I met him through that museum.

GOODFRIEND: Museum, oh, that's--

SOGNNAES: Then I made a study of his ivories. He had a very beautiful collection. He was, of course, very pleased, and I was very proud, when I had an article published on his ivories in the beautiful British art journal, The Connoisseur. It's probably one of the most beautiful magazines in the world. He could never get over this that I had been so interested. As a matter of fact, I went further. I have a collection, but I've never written it up yet, on not only ivory art but art made from other biological substances, anywhere from eggshells and nuts to wood, and you name it, of which he had also a big collection.

GOODFRIEND: I see. What was this gentleman's name?

SOGNNAES: The name was Mr. [Francis E.] Fowler. Junior. He was a very well-to-do man. I also visited many times in his other business office, which was over in Brentwood. Southern Comfort was the company that he owned, and he never failed to give me an ivory present and a bottle of Southern Comfort for Christmas. [laughter]

GOODFRIEND: Ah!

SOGNNAES: But he passed on, I'm sorry to say. I missed him very much. And his museum, then, his family moved it down to Wilshire Boulevard between Maple and Palm Street, and it's still going strong, as it were, there.

GOODFRIEND: Now, this grant he gave you using electron

microscope to study the ivory--

SOGNNAES: This was the notion that I had developed that with the development of the scanning electron microscopy field, which was quite new then, this would have a scientific application as well as an artistic one, insofar as you can replicate with very precise silicone types of material, a surface, and then you can convert it to a positive print, you might say, with all its elevation in epoxy plastic. Then, if you coat that with evaporated gold or palladium in a vacuum, you get a very thin layer that will make it conductive under the electron beam, and then you can scan and read the surface.

It has two very important qualities this type of thing. One is the three-dimensional appearance, which the human eye can't quite catch, nor can an optical instrument catch it, but the scanning with the electron beam floating in and out on these waves will do that. And secondly, of course, you can get into enormous magnifications if the material justifies it.

GOODFRIEND: Now, how did-- What year was this, first of all?

SOGNNAES: This was in the 1960s, mid-sixties.

GOODFRIEND: I see. So, how did you use this? How did you apply this to dentistry?

SOGNNAES: Well, in addition to the application to his

ivory art objects, a very natural conclusion for me was in connection with the history of dentistry and specifically the ivories, if you like, of George Washington. As a result of this method, and the publications I had done, preliminary ones on application of microreplicas and scanning electron microscopy to art, technology, and science, I gave examples and some of the applications there. That gave me an introduction to the Smithsonian [Institution], and when they realized that I would do no harm to the objects being examined, they gave me almost complete free hands, with a guard behind me, of course, to examine the Washingtonian relics there. Similarly, once I had been introduced there, I got introduction to Mount Vernon and did similar things there. Then, with that I got introduction to the New York Academy of Medicine, where the rare book room has some very valuable relics, including the very first ivory denture that Washington wore for his first inauguration at the age of fifty-seven in 1789.

GOODFRIEND: What revelations did you come up with about his dentures?

SOGNNAES: Well, of course, the first one was after I studied these, and also in a London museum there is one of his ivory relics that the British got hold of by mistake. I think they should give it back now. [laughter] I've published to that effect, and maybe they will in the

expanded Mount Vernon museum that I'm working with now.

At any rate, the nature of the material turned out to be hippopotamus, elephant, walrus, cattle, and there were metal substances in it. There were gold and steel spiral springs to keep the teeth apart, so to speak, so they wouldn't hang together [laughter] when you talked, as if lying through the teeth, and so on and so forth. But I couldn't find a trace of evidence that he ever had wooden teeth.

When I published in The Smithsonian the first big article on these relics, I had very interesting correspondence from schools and colleges that wanted copies and gave children a lesson in it. I even got a thank-you note that was most beautiful from a whole kindergarten, where each one had signed it. I was elected the--what do you call it?--the star of the month or something. They apparently had some game going on, and then they had each signed it with first and last name, in different colors for the first and last name.

GOODFRIEND: Ahh!

SOGNNAES: It was just very romantic.

But aside from those good things, there were also times when I got a letter that I was sort of considered almost an iconoclast--tongue in cheek, I trust [laughter]--by having refuted this well-established truth that he had wooden

teeth. I can explain it now, if I can insert that when we are at it. I think what happened is that [for] some of the large conventions, and especially the centenary celebration in 1876, and also at some world exhibits, whatever you call them, they had been able to borrow from these institutions--the Smithsonian, Mount Vernon, and New York--samples that they put on exhibit through a glass cage. What I think happened was that one-- First of all, ivory is like tree rings: it grows in increments like a tree, you know, and you get growth rings, and depending on the winter and summer, and so forth, and they can get very much to look like a tree, a crosscut. In addition to that, if you imbibe in dark wine, especially port wine, which is also acidic, it will soak in like a sieve into this material and that will further exaggerate the softer areas of the growth rings. So that is one possibility.

The other one is that one of his dentures, believe it or not, was made of lead alloy, and they were probably one of his most popular ones, because they were very heavy and sitting in there on steel rods between upper and lowers. This one, in fact, on the bottom they had one ivory tooth to fill in a tooth that had been wiggled loose by his first denture. I became very intrigued when I found that was made of elephant ivory, because the upper teeth that were mounted there were supposed to be made from donkey teeth, or elk

teeth. Well, anyway, I thought at first here was a beautiful example of a "bipartisan" denture--elephant below and donkey above. The simple truth I found out after further study was that the teeth themselves on top that were mounted, they were something as ordinary as cow teeth.

So I went to Vernon slaughterhouse (not Mount Vernon, but right here, south of here, Los Angeles area), to examine cows of various ages. It was disappointing because they hadn't worn down their teeth enough to be similar to these that were mounted on Washington's teeth. I took all kinds of color photographs and went back to Mount Vernon and looked at the original, and so forth. Then it turned out that they had a slaughterhouse only for beef, eighteen-month-old or two-year-old cattle.

So I found out they had a place in Cino--what do you call it? Where they had the terrible murder recently. [Chino] Well, never mind about that, but it's near Pasadena. They have a slaughterhouse exclusively for cattle that have gotten too old. That is, maybe they make hamburgers of them, I don't know, maybe dog food. But the point is, they have them five years and over, and they're either old bulls or they're old dairy cattle. And lo and behold, I took one look at the smiling cows out there, [laughter] and they had exactly George Washington's teeth. With a slight little modification, you could grind them a

little on each side, and I mounted them on my recreated lead bases. This sample is right now out in our lobby on exhibit in the area. This is one of several that I'll maybe bring to Mount Vernon for permanent custody.

GOODFRIEND: You have an exhibit at the Smithsonian, don't you?

SOGNNAES: Yes. The Smithsonian, that is a very sad story in a way, because in 1981 Washington's most famous dentures were stolen from the Smithsonian. These were a beautiful set made of a combination of elephant and hippopotamus ivory, and mounted on a gold palate plate with gold spiral springs between the upper and lower jaw. It was probably the gold there that led to the theft. So the FBI got on the case. I just arrived in Norway to give a lecture at an international meeting--I may have mentioned that before--on George Washington's roots, [laughter] and the local newspaper had a lot of fun with me, suggesting that I was probably the prime suspect, the culprit, since I had just come by the East Coast on my way to Norway. This was in my native town of Bergen. Well, they had some fun with me there.

But, anyway, the point is that they were never found. So by his next birthday, which was his two-hundred-and-fiftieth anniversary on February 22, 1982, I was invited to a gala celebration at the Smithsonian with the understanding

that I might bring a special present. So I brought my remake that I made after this scanning and replication, and exactly. I've never taken a more difficult exam in my life: to start with a big elephant tusk for the lower jaw and with a hippopotamus tusk for the upper. The hippopotamus has very hard enamel on the surface; it throws fire when you put a grinding stone to it. You can imagine what difficulty it was to make originally by this ivory turner and instrument maker turned dentist in New York, John Greenwood, who was Washington's most popular dentist. I can imagine doing the files there. He invented a drill, but it was slow speed and it must have been horrible, a lot of work. Anyway, so I was very pleased to be able to put my teeth, my replicas on exhibit there, and there they are now, with due credit to UCLA, of course.

GOODFRIEND: Is that the denture which you used a little bit of a cherry tree?

SOGNNAES: Yes, that is right! You have a good memory, Judi.

GOODFRIEND: Why don't you tell us that story?

SOGNNAES: And I have good memories. [laughter] Yes, I had to do a little something, I thought, so I found that there were wooden pegs the thickness of toothpicks that connected the elephant ivory on the bottom with the mounted teeth on top, and so I decided to go in the Botanical Garden

right down below our school, you know. (We even stole a little of their space, I think, when we built the driveway there, bless their heart.) There is a cherry tree that is actually what they call in Latin--I hope I pronounce it [correctly]--Prunus virginia. So it's even a virginia (Virginia) cherry tree, which would fit with the little boy, George, at the time. And I, to tell the truth, did cut down a branch of that cherry tree, and I polished it down to make these wooden pegs. Then I connected the elephant ivory with the hippopotamus and a couple of human teeth from Washington himself mounted on it.

GOODFRIEND: You seem to have made a contribution to American history, that's for sure. Do you still receive a lot of media attention around Washington's birthday?

SOGNNAES: Yes, in fact, this year it will be-- I'm giving a lecture at the American Academy of Forensic Sciences, which this year meets in Anaheim. So, at Disneyland Hotel in a subgroup of the academy, which is called the Last Word Society--I've lectured there before on some other things; I won't say they have been the last words--I have a talk on forensic footnotes on President Washington's famous dental relics. I'm going to illustrate and explain what the state of affairs is. The last paragraph of my abstract reads something like this: that I haven't found any evidence of wooden teeth, and it's evident

that George Washington's favorite dentist was an instrument maker and ivory turner turned dentist, not a carpenter.

[laughter] But, mind you, I have been impressed by the old relics from the Orient with carved wooden palates, you know, and wooden blocks fitting the lower jaw, on which are mounted delicately carved carpentry art of polished mother-of-pearl incisor teeth, really sparkling in the sun, you know.

GOODFRIEND: Right.

SOGNNAES: Throw in a couple of diamonds and you really have some smile. Well, well!

GOODFRIEND: Was it all this that eventually led you to get involved with forensic dentistry and investigative identification?

SOGNNAES: In part. Certainly, the one thing that tied it in most significantly, I think, was the development of this scanning electron microscopic approach to microreplicas of the tissue surfaces.

GOODFRIEND: Were you the pioneer or one of the pioneers of that?

SOGNNAES: Well, as far as the application to dentistry is concerned, this was my baby at the time. It was such a new instrument, and it became very logical in connection with the surface examinations where you could not cut up the tissue. So I had applied it to examination comparing the

teeth of suspects, especially the incisal edges and front of the mouth, with markings on the epidermis of victims, where there have been skin prints, you might say, by teeth.

GOODFRIEND: Had that ever been done before?

SOGNNAES: Not with such methods, no. They were usually done photographically with tracings and overlap, and still being done, but it was accepted here in court the first time in 1974, in a case that I was invited by the prosecution to contribute this particular methodology. It's known as the Marx case and is quite well known now in the literature.

GOODFRIEND: Did, indeed, the suspect--

SOGNNAES: He was convicted, yes.

GOODFRIEND: Based on that evidence?

SOGNNAES: Yes, apparently it was a very significant part of the evidence.

GOODFRIEND: And you did--

SOGNNAES: Now there were other methods involved and other colleagues involved in using standard techniques for the same case. In fact, the coroner, [Thomas] Noguchi, was the junior author, you might say. He was coauthor with us. And another was a Dr. [George] Vale, who spent a lot of time with the coroners in the dentistry.

GOODFRIEND: So, you've been doing a lot of cases since then on--

SOGGNAES: It has come up in a variety of connections. The

most tragic aspect of it, an important one obviously, are the cases of child abuse which sometimes include a variety of damage that may show up on fingers and arms and legs and buttocks, and you name it, including bite marks.

But the method also has application to tool marks and to things that may have been done by other instruments.

Even tools opening a door, a wrench that would tear off the knob on a door: I had a case here at UCLA where I replicated and examined the tool marks with the view to finding the pattern of a tool that was used. Anyway--

GOODFRIEND: Did you also discover-- I think I remember reading that you could identify individuals by their teeth, either their sex or even identical twins you can distinguish.

SOGNNAES: Yes. One of my favorite lighter topics is "Sex and the Single Tooth," insofar as there are three or four methods now where one can, if necessary, in case of fragmented remains or things found in a desert, examine material with a view to determine age, sex, et cetera, even from single teeth. This is a little technical, but I'm giving a talk on it for the [UCLA] Emeriti Association in the Faculty Center in January. Also the current issue of the Dental Research Institute publication, Oro-Bio, as you know, will have a cover story that I've written on "The Case of the Talking Teeth," which I have kind of an interesting introduction to.

We are hoping, in fact, to develop a section on forensic science in the Dental Research Institute. That's one of my last opportunities to leave something going with some of the younger colleagues here.

GOODFRIEND: That will be great. Have you used these techniques-- I know another couple of famous cases you've worked on, of identifying Adolf Hitler's teeth.

SOGNNAES: Yes. The involvement with that I think also sprang out from my initial involvement with identifying ivory and ivories, and so forth. The case of Adolf Hitler and his righthand man, Martin Bormann, and to a lesser extent his mistress and wife for a night, Eva Braun, are cases of individual natures that I sort of identify with through, well, a roundabout way. But I published most of that work in the early seventies, and as sort of a follow-up after I had started my forensic work in a more general way. It was complicated for this reason that it was very difficult to deal with the Germans at the time. I would write long letters of inquiries about material I had heard had been found and located. In the case of Bormann, for example, I finally felt compelled to write a long letter to Willi Brandt, who was chancellor as you know, and who even knows Norwegian. He married a Norwegian girl during the war, when he was expelled by Hitler, you know, because of his political views. Through his help and also through an

interview I had with Albert Speer, Dr. Albert Speer, in Heidelberg, I think they put some good words in for me with the prosecutor responsible for the Bormann case, and I was finally permitted to go and see it. I was giving a paper at the Forensic Congress in Rome when [I received] a telephone message that I could come and look at the remains that had been found in Berlin.

GOODFRIEND: Whereas they had thought that he had escaped to South America.

SOGNNAES: Oh, yes! There were six books written about that and many newspaper articles--and still are.

GOODFRIEND: And thought he was alive.

SOGNNAES: Alive and well in South America, of course.

GOODFRIEND: And your investigation--

SOGNNAES: There was no question about the concordance between the antemortem data which I had found through my work in the American archives in Washington from intelligence interviews with his dentist, who escaped to Salzburg, but was met by the Americans, caught by them there, and the antemortem data, including, in Hitler's case, five very important head and neck X rays that had been taken by head and neck people and jaw experts, following the assassination attempt in 1944. The Americans captured those records when they entered Germany at the end of the war. So I compared the so-called antemortem information with the

postmortem information. The Russians had just opened their archives back in the late sixties as the Americans opened theirs for me and others. So it was a coincidence that I had spent a lot of time in Washington in connection with [George] Washington, and I had been fingerprinted for access to this, that, and the other things, and I was able to make this comparison, yes.

GOODFRIEND: Who approached you about the Hitler and the Bormann [cases]?

SOGNNAES: Well, I tell you, nobody approached me and I didn't approach anybody hardly. It's a case where I think nothing could have been done if it had been made a big spiel about it. If I had applied for a grant for either Washington or Hitler or Bormann, I am convinced that it would never have gotten anywhere. It would have become a sort of national affair with the American Dental Association in Chicago taking charge and being sure they got the right representation on these things. Number two, I think that-- Well, I did talk with the State Department, for example, and they were not very eager because if it was made a big ado about it, it would have to involve-- For example, when I went to [West] Berlin and East Berlin, I could never have made it if I had had to have a contract, not only with the American authorities but with the Russian and the German and the French and the English. Just the paperwork would

have been enormous. So I couldn't raise any money. So my whole contribution to the Washingtonian studies, which was similarly complicated, but not that complicated, and the identification of the Nazi leaders there--I am convinced that I couldn't have done it if I hadn't spent my own money exclusively on it.

GOODFRIEND: So, you had an interest in it and you were able through your connections and your work to gain access to these records and these classified records and study them.

SOGNNAES: Yes. As long as I could foot the bill.

GOODFRIEND: I see.

SOGNNAES: But it meant many trips to Europe and to South America, a couple to Russia, to East Berlin, West Berlin, and some of them under very-- Well, it scared the daylight out of my wife and my two daughters [whom] I once took with me on a trip through Germany looking for some of these characters. And the East Berlin trips with the Russian soldiers watching me every minute, you know, taking photographs.

GOODFRIEND: Well, your results on Hitler, your verifications on Hitler are accepted. Is there still controversy surrounding the Bormann--

SOGNNAES: There is controversy about all of these things.

GOODFRIEND: Oh, are there?

SOGNNAES: As a matter of fact, [laughter] there is a new forensic journal just published. I was elected to be the U.S. representative on the editorial board, and they have Japan and Britain represented and Australia. But, anyway, I wrote an article on the myth and measurements in forensic science. It is incredible when you look at this whole story [what] people will swallow with hook, line, and sinker when it comes to an interesting myth or possibility. Bormann books have been selling like hotcakes, you know, and it is not long ago since I saw a clipping of Hitler, alive and well in South America still, going on hundred. And of course many on Bormann. Then you have local cases: Marilyn Monroe, there are still headlines about her being alive and well, not well, in an insane asylum to silence her embarrassing reflections from the Kennedy administration allegedly. And so it goes.

I don't know what to do about it. I tried to find the word gullibility in a psychiatric text index. It doesn't occur. But this is a real problem, and I don't enjoy it particularly, because people would much rather believe in some myth like that than in scientific evidence.

GOODFRIEND: Your work with Hitler and Washington, I mean, you've moved dentistry far from just the dentist and the patient. How have you felt your involvements have enhanced the dental profession, expanded its frontiers?

SOGNNAES: Well, this of course that we have talked about now towards the end of these interviews, from your question, have been rather specific and very personal on my own forensic activities. I think in the years past, if I were to sum up where I might have been more generally helpful, I would think [it would] have been in connection with international and national administrative offices I have held in scientific organizations. For example, as being head of the dental section that was established some years back, of the American Association for the Advancement of Science, I think put dentistry on the map to scientists in other fields. I was able to arrange half a dozen big well-financed international symposium conferences, all of which have been published, and, oh, they relate to things like calcification in biological systems and growth and repair on calcified tissues, mineralized tissues, bones and teeth, skeletons. I'm very pleased to say that these things helped enormously, I think, in bringing interest of scientists outside of dentistry to take a look at this territory.

Of course you have to remember dentistry is basically a very humble field compared to all of medicine, and yet it is the only health profession, so to speak, to compete for interest and for students, not competing with dermatology or ophthalmology, but with all of the rest of medicine put

together where that decision can be postponed by the young man. So, it is really remarkable that it has survived.

In the International Association of Dental Research, for which I served as president twenty years ago, they have now grown into an enormous organization. They meet annually in various parts of the world, and I'm pleased to say that one of my former research fellows from France, Professor Robert Frank, is now the current president twenty years after he was a fellow with me at Harvard. And those things are gratifying. He is an M.D. as well as a dental graduate. Next in line is my former research fellow at Harvard, Professor Paul Goldhaber, who is now the dean at Harvard in the School of Dental Medicine. These, of course, are the gratifying things.

And introducing good scientific tools to dental science, such as electron microscopy, both transmission and scanning, and high-resolution microradiography, as you see the instrument right next to me here. It was the first research instrument brought to UCLA. I built it when I came here in 1960.

Histochemistry is another field. And, above all, I think, where I did my doctoral thesis for in Rochester, back before the war, and continued at Harvard with an atomic energy contract, which was funded through the help of Willard Libby, the Nobel Prize winner, here, the late

Willard Libby. I had a very extensive research going on the application of radioactive isotopes to tracing the metabolism, structure, and mineralization of bones and teeth.

TAPE NUMBER: V, SIDE TWO

DECEMBER 13, 1983

GOODFRIEND: So, how are you spending most of your time, now? Professionally, first.

SOGNNAES: Yes. Well, I have a little office still in the school. I have an electronic secretary to take messages; so when I come in once or twice a week I pick them up, the mail, and I send some mail out through the courtesy of the university, fortunately, especially related to inquiries about my research and requests for reprints. We just finished a 1982-83 review of what we are doing here, for the chancellor's fifteenth anniversary yearbook [which] is coming out. I think I have been more active than I thought, because I found out I have ten literature references from the last year. So, I have been doing some writing.

GOODFRIEND: Particularly on forensics?

SOGNNAES: Much by invitation. Yes, and most on forensics.

GOODFRIEND: You're following your father's footsteps in all your writing. [laughter]

SOGNNAES: Ah, well! Whatever. The convenience of our own school and the word processing center, and so forth, which I am entitled to, I haven't been able to use as much as I would have liked, because we have moved out to Thousand Oaks, and so it makes it forty miles each way. So

I have found a lady living near us. I found a sign on a telephone post, Typing, and she is turning out to be very competent, not inexpensive, but it is expensive to drive back and forth to UCLA, too. That's been very helpful, and she has now gotten a system going with me dictating on a tape first. She raps it out quickly, but she puts it on a word processor she has been able to buy, thanks to some of my expenses, [laughter] I hope. She has been extremely helpful, and it has got me stimulated to put together a few things.

I do have many requests for writings that I cannot fulfill anymore, including textbook chapters. And I have to tell you honestly--I know you are a great writer--but I must say that something that is already known and that I know from having worked on it, which is a textbook type of [writing], bores me to death! I would much rather sit down and do a small experiment, even in my garage if necessary, and put together something that is on the horizon of something. I have to say in all honesty that I have refused numerous [requests]--including I have one in each pocket right now, which I picked up in my office--on writing a textbook or writing a chapter. Of course, right now a lot of it relates to forensics.

GOODFRIEND: Do you do a lot of work at home now? You talk about "in your garage," do you conduct something?

SOGNNAES: I'm embarrassed to say that I sometimes do. I have some of the facilities for making plastic imprints, for example, test bites, and so forth; then I come in here to do some of the photography and X rays. I do some photography myself now. In fact, just the last week I have an urgent case coming to court. I have used a new Polaroid film where you can develop it within a few minutes and mount them or for projection. I have always been interested in Polaroid, from way back at Harvard when Dr. [Edwin H.] Land first began this. But, anyway, that's not answering your question.

I am excited right now about the implementation within the Dental Research Institute of a section on forensic research, and we have some very fine men on the faculty here, and ladies I'm sure, who have expressed interest in this. But we have particularly one in radiology, Dr. Barton Gratt, one of our former students, who has now a tenured appointment in radiology, and we are doing some work together on a new means of radiography by new instrumentation that he has helped pioneer for this purpose. We have a man in prosthetic dentistry, Dr. Theodore Berg [Jr.], who has been involved with some cases. There are others: Dr. [J.] Philip Sapp in pathology, who has been involved before he came here (he came here from Canada).

But, more importantly, not more importantly, but more unusual, I think, is the opportunity within the Dental Research Institute to make it truly interdisciplinary, which it is by definition, and that's how it was defined and approved when I first wrote the prospectus back in the mid-sixties, and when the regents authorized the institute to be formed in [their] February 16 meeting in 1966. I'm very pleased to say that the people who succeeded me in administration here did very well. Dean [Robert] Caldwell appointed the first full-time director, scientific director to the institute, Hildemann, William Hildemann, who so unfortunately passed away as did Caldwell at young ages. But their successors are taking over, and I feel very optimistic that it is going to grow and develop.

There are people on campus that are potentially related. I think it's no secret to either the school or to the chancellor's office that I have become very excited about any notion of campus wide collaboration. It's a difficult field to touch because, in the first place, the chancellor I don't think would feel that it's really his business to tell deans what to do. On the other hand, I don't think it would be very easy for a dean of a single school or college to tell other deans that we ought to do "this." And I don't know what the chemistry of this is, Judi, but I think it is an incredibly important area. It's

one thing to administer a university and a campus--and, of course, Chuck Young was an enormously competent vice-chancellor of administration and very helpful with our planning and budgeting, and so forth, when we started--but I don't know who would take on this kind of challenge and this kind of catalyst to interschool and interdepartment and intercollege excitement that only, not only, but where UCLA is probably the best place in the world to accomplish, because of the juxtaposition to each other. So, if I have any swan song, and some are probably sick of hearing my song because I have made comments on this question in chancellor conferences and deans' conferences and faculty conferences, and I'm sure everybody knows my enthusiasm about it, but it's getting a little late, except through this vehicle of the Dental Research Institute. I might be able to do a little something.

But you have to remember, we have problems to deal with in our country today and our communities. Look at the indirect way I have gotten into the understanding of cases involving child abuse, rape, sex assaults, and homicides. It isn't something that any one school or any one person can really come to grips with. You take the situation with abuse: you have problems related to medicine, dentistry, public health, social sciences, law, psychiatry institute--Brain Research Institute. Well, you could go on and on.

And the trend in the world today, I think, is this kind of unification. You see it in names of journals, as I may have mentioned to you before. We have now journals not called Histology or Anatomy or Pathology. We have a journal called Brain. We have a journal called Heart. And I think we should have a journal called Mouth (with my pronunciation, that's m-o-u-t-h). [laughter] Well, that is in a little aside, but this to me is exciting.

Now, what's going to happen ultimately to the health professions, I really don't know. Well, nobody knows, I guess. But I have been thinking a little bit about it. We have a World Health Organization congress coming up, and they have written questionnaires: what your feelings are about this, that, and the other thing. And I wonder someday whether there will be two major areas of health care. One would be internal medicine, not in the current sense, but any organ system, so to speak, from unifying things in a holistic level from brain to computers, to heart and lungs and kidneys, and you name it. And maybe there would be one branch called external medicine, which would include skin, which is the very biggest organ of the body, in a sense, which has a lot of problems (dermatology, in other words). It would be the orifices of the body--the eyes, the ears, the nose, the mouth, the throat--and if you took all of these-- If you reduced the individual's most common

problems, maybe there is something you can do with the whole external part of-- I call it, this ear and nose and throat and mouth and eyes, and what have you, "orificiology."

GOODFRIEND: So, do you see then--

SOGNNAES: Did you hear the spelling? Orifice.

GOODFRIEND: Orifice? Oh. [laughter]

SOGNNAES: Orificiology. [laughter]

GOODFRIEND: Do you see, then, that dentistry should or will become, obviously more involved, more interdisciplinary yet. Will the advances in dentistry become more specialized? Will you need--

SOGNNAES: Well, there is a good deal of discussion in Bethesda [Maryland] now, a new director of Dental Research Institute, about the future there. They are very optimistic about controlling some of the most common dental problems. Dental caries (tooth decay), of course, is well under way with fluoridation, but now they are very hopeful with immunology, and I think our own institute can contribute to this field and has. I think they are optimistic about improving their research on the other big cause of tooth loss, periodontal disease, with great emphasis on that now. So that what will happen after that, there will be less repair and there will be less complicated surgery on the supporting tissues of the teeth, and it will have its impact

on the practice of dentistry.

Well, I feel that there are other parts of this external medicine--the relationship between the mouth and the skin, for example, and systemic disease, nutrition, endocrinology--that have a lot of excitement buried in it. And I have had the impression that when scientists in other fields have had a close look at some of these problems, they can get very excited about it and become very contributory. There are many examples I could mention from around the world of these people.

GOODFRIEND: What about for yourself? How do you plan to spend your time now, divide your time?

SOGNNAES: Well, right now I wrote a Christmas card to the loneliest island in the world, Tristan da Cunha. I think we talked about that earlier. I have a little dream that I might still come back to that island and see my "grandchildren" because the Sognnaes on Tristan da Cunha was named in my honor. I say that on my honor. Nobody believes it, but the truth is that I feel very close to this. This was the beginning of my scientific career, and the first book I ever published was on that expedition, published by the Norwegian Scientific Academy.

There's something about travel, you know--I think we have touched on that before--that is in the blood of people from the Norwegian fjord country. As a matter of fact, I

just had a Christmas card from our oldest of the eight grandchildren, Erik, with a k, of course. [laughter] He is graduating now from the Maritime College up near San Francisco, and he has gotten his first sailing trip now. He is going to be going to the Orient for eighty-four days. He loves the seas; he thought of oceanography. But I can see that there is a little bit of that Viking blood left there, [laughter] which pleases me. And we [would] like to do some more travel. There is a big meeting in Oxford next September '84, which I have submitted an abstract or two.

GOODFRIEND: And Edel travels with you and--

SOGNNAES: Well, we try to. Of course, Edel is getting very enthusiastic now in business, and she helps our son, Thor, in his new audio-video enterprise. And I must say, in a way I am very glad. You know why? Because usually when spring comes and there are some beautiful gardens somewhere, she sees a new house. [laughter] She gets very restless. She loves gardening.

GOODFRIEND: Is that one of the reasons you went to Thousand Oaks?

SOGNNAES: Oh, yes!

GOODFRIEND: You have a lot of land out there.

SOGNNAES: Many of our moves have been related to the gardens. [laughter] But, anyway, she is very enthusiastic about it, and of course she is a very good-- She has a

mercantile education, accounting, so she does a good job of that.

GOODFRIEND: It doesn't sound like you've slowed down much.

SOGNNAES: Well, I don't like to slow down too much, but Edel, of course, tells me "you must learn to say no." And I guess I will soon, [laughter] something I'm thinking about.

TAPE NUMBERS: VI and VII

[VIDEO SESSION]

MARCH 23, 1984

GOODFRIEND: Well, Dr. Sognaes, we've spent hours and hours with just a tape recorder doing this oral history [so] that we thought it would be necessary for us to get together in front of a video camera, so that's why we're here.

SOGNNAES: Happy to be here.

GOODFRIEND: Good! I'd like in this session for us to go over some of the things we've gone over before, and add a few new things, particularly about the founding and the building up of this School of Dentistry. So, to begin with, I know that you came here in 1960, fresh from the Harvard School of Dental Medicine; here you were in UCLA, nothing was built, you were the founding dean. What did you set out to do first?

SOGNNAES: Well, from the point of view of excitement in coming here, I had been out the year before, and they had a gathering for me in the Faculty Center, which was a very encouraging experience to me, because Harvard was so spread out, much like the universities in Europe, whereas UCLA was this compact campus with all of the opportunities for academic interrelationships, which I

think excite all of us in this kind of work. And Vern O. Knudsen was then the chancellor, and he brought together people that actually spoke several languages and professors from campus, and I had a very good feeling about wanting to be here rather than anywhere else. I had had a few opportunities to inherit schools as dean, but this was all new. And I only got a pencil and a pad and, of course, fortunately, Dorothy Good (I stole her as the administrative assistant, [she's] still here, keeping the continuity) to help formulate the plans. I stole her from surgery, and that's why I haven't dared to have a heart transplant or bypass at UCLA. [laughter]

GOODFRIEND: Right.

SOGNNAES: A magnificent person. I want to be sure to acknowledge that very early in the game.

GOODFRIEND: Well, when you came here, did you want to build the school based on the Harvard model, or did you have some new ideas of your own?

SOGNNAES: Well, not only did I have some ideas of my own, but I was also influenced a good deal by two very important documents. One was the 1960 Survey of Dentistry in [the United States], on which I happen to have been a committee member, and which for the first time really signified a national commitment to make a greater impact in the field of dentistry with regard to academic content,

qualification of students, research activities, and teachers' training programs, and so on and so forth. And also additional activities where we could make a contribution in the community, that I might mention in a moment.

The second document that was on my desk when I arrived, although I didn't have a desk, was the Master Plan for Higher Education in California of 1960. And this dictated to us that the university, the higher education level, should primarily deal with doctoral degree programs and professional schools, whereas the state colleges and junior colleges, and what have you, should divide up the pie to take over other programs for the associate degree and bachelor's degree, and what have you, that related to professions. So, initially, the hope of sort of building a school and taking care of everyone within the profession, the team, while that didn't work out within the one and the same system or facility, I was very pleased with the cooperation from the college systems, and it's worked out very well that we have supplemented their educational program. We rotate the dental hygienists and assistants within our program to work with the doctors of dentistry-to-be, to get used to the team effort.

GOODFRIEND: So this was something new.

SOGNNAES: This was the master plan, and I accepted that

gladly, because it made sense not to have to bite over too many things, so to speak, right away.

GOODFRIEND: What were some of your own ideas that you brought with you?

SOGNNAES: Well, I was, of course, very greatly influenced by the persons on whose shoulders I was standing myself. And as a young Carnegie research fellow, I was blessed by being given responsibility by the founding dean of the School of Medicine and Dentistry at the University of Rochester, Professor George Whipple, who was the head of pathology as well as dean, and he gave me opportunities to get into research, and I received my Ph.D. in his department. And, of course, I was influenced by the feeling that doing something along these lines and preparing students to do it for the future was of great importance.

GOODFRIEND: Emphasis on research.

SOGNNAES: Yes, and besides we had the blessing of the Master Plan for Higher Education, as I quoted in this Planning Years document that I wrote for the opening of the school. They stated very bluntly that the university shall be the prime site of research. And the academic programs planned by the Survey of Dentistry in U.S.A. emphasized that this is an area we must really make some headway. And it also influenced my search of outside funding for what turned out to be one of the largest dental

research facilities in the country when we opened the school in September 30, 1966--the facility, that is; we had already students.

GOODFRIEND: Right. So you wanted an influence on research. What were the other components you wanted the school to have?

SOGNNAES: Well, the other component was to do unlike, unfortunately, many of the older dental schools, to not look for complete autonomy in the sense of independent facilities and library, and what have you, but to capitalize on this wonderfully integrated campus and to develop shared facilities, shared faculty and teaching programs and some research programs with our colleagues, especially in medicine, public health, and so forth. Hence, the whole program was developed with having the dental students taught by outstanding teachers in basic biological sciences, preclinical subjects, from anatomy through pathology. And then that we would take them over and then really go after the mouth, you might say, tooth and comb, and get talented people on the scene who had good dental and academic and research backgrounds to take seriously the field of oral biology, the biology of the mouth system, which we couldn't expect our medical college to delve too much into to begin with. That to me was a very essential feature, and it was not an accident that the university actually decided to let

me have the title of professor of oral biology, aside from a very nice gesture that they gave me a joint appointment as professor of anatomy.

GOODFRIEND: Well, you talk about the integration of the health sciences, here, and we have a model in front of us--

SOGNNAES: Yes.

GOODFRIEND: --prepared when? in 196-?

SOGNNAES: That was prepared just as we were planning the final round of building the school.

GOODFRIEND: And what does this show?

SOGNNAES: If we can move the camera to show the essence of the layout here, of course, [which] was that of Dean Stafford Warren of the medical school, dean at the time. And he built a center for health sciences as it later became called, one wing here completely devoted to clinical and hospital affairs.

GOODFRIEND: That's the medical center as we know it?

SOGNNAES: Yes. Well, it was, yes. And here the basic science components, from anatomy through biochemistry, pathology on this side; and then the arrangement that I was so appreciative of that we were allowed to build the school in juxtaposition, here, to the Biomedical Library.

GOODFRIEND: So, this represents the School of Dentistry.

SOGNNAES: Yes. This color--whatever it is with this light--this is the Biomedical Library that we hug on one

side which, in turn, hugs the life sciences up towards the upper campus, and then the clinic wing comes down on this side and connects with the hospital wing.

GOODFRIEND: I see.

SOGNNAES: So, it was-- And the Botanical Garden, of course, right next to here. So I must confess that they were extremely generous to me, to have such an ideal location.

GOODFRIEND: But when you arrived in 1960, this didn't exist. What was here?

SOGNNAES: There was a lawn. It was a very nice lawn.

GOODFRIEND: Really! So the first day you arrived there is no school, there is you and Dorothy Good, your administrative assistant.

SOGNNAES: Right, right.

GOODFRIEND: What do you remember about that?

SOGNNAES: Well, I remember, relating to planning and facilities, that I got the news that the chairman of the Board of Regents, Regent [Edwin] Pauley, had, with the university's blessing, bought Sonja Henie's skating rink, which is down in Westwood, you know, or was. Or you probably don't remember. And that would be an ideal place to build a dental school. And I think if you had had almost any other dean, certainly from conventional schools, they would have grabbed it. Because, "Look. Finally we can have

total autonomy and independence. We'll have the world's biggest parking lot; we will have our own library; we'll have our own physical facility completely, our own basic science department," and down the line.

And there was quite a bit of interest in that feeling of grandeur, so to speak, for one discipline. And, while I knew Sonja Henie, and it was a very romantic sort of idea that I inherited her skating rink, I must say that academically I could not justify it and made a big spiel for, plea for this particular location, hugging the Biomedical Library and basic sciences and the hospital wing.

GOODFRIEND: Did you receive a lot of support or resistance for this idea?

SOGNNAES: I must confess that they were extremely generous in helping me. First of all, Stafford Warren, the dean of medicine, I think made the very motion--he was part of our planning committees--to approve my proposal to build it in this area. And, secondly, we had on campus, with regard to planning, we had then Vice-Chancellor [William] Young, who passed away a few years ago, who was extremely encouraging and helpful in doing it. And then, of course, July 1, 1960, at the same time as I arrived, Chancellor Franklin Murphy arrived with Vice-Chancellor Charles Young, now the chancellor, working with us and also other people in

the central office, and I cannot complain about anything in that regard. Chancellor Murphy to me was of particular significance, because with things that might not ordinarily be considered uppermost in planning, he gave me sort of a carte blanche practically for the Biomedical Library expansion, which had virtually no history or current dental texts. And with the help of Louise Darling, the chief librarian then, now retired, I think we have a magnificent library for being such a new school.

GOODFRIEND: What was the national climate like at the time? Was it receptive to have new schools of dentistry built?

SOGNNAES: Yes. That was also a very fortunate circumstance because the survey of dental education I mentioned had found its way, of course, to Washington and to Bethesda, and to NIH [National Institutes of Health], and I was, of course, right at the time to apply for fairly, for dentistry at least, major million-dollar type of support, both for teaching facilities and for research facilities, and for research itself. We had considerable grant money coming through very quickly, and we had papers presented at the International Dental Research Association meeting within relatively few years that were high in number and quality, I would say.

GOODFRIEND: But were there--with the number of dentists

being produced in the country, was there a feeling that we needed more dentists and, therefore, we should have more schools of dentistry?

SOGNNAES: Yes. Unlike today, that was definitely in the cards. The other thing that was emphasized was, of course, that we must hopefully educate dentists who would have a social conscience and try to implement dental care for those who may have been deprived of it. Unfortunately, there was some criticism later that communities that already were well served became better served, and some of the lesser-favored communities might not have had as many as they should have had. But I think the contribution of our public health and preventive dentistry programs, in this and other schools, have improved that recently.

GOODFRIEND: I see. How about right here in Los Angeles, wasn't there the USC School of Dentistry already established? Was there a feeling of competition then?

SOGNNAES: Very much so. I mean, being established with a long and a great tradition. And they had a great reputation especially for clinical dentistry. Of course, they had graduated the great majority of the practicing dentists in Los Angeles, including our own community. But I think the dean there and I, we got together and got along quite well, I think. I respected his ideas and accomplishments, and I think he was curious about what I

might do with my special research background. There was kidding about the "other network," [laughter] and so forth. This is good.

We didn't steal any faculty from them. In fact, I was informed very promptly by President Clark Kerr that I should be informed not to flirt with faculty from other schools, dental schools in California, which I don't blame those deans for having perhaps made him let me know. It did present a problem, though, in some extent that then you had to steal from other states. And it gave rise to a problem that the California dental licensure state board, some of the professors, let's say, of orthodontics or what have you, at some famous university elsewhere and of great stature internationally, were reluctant to give up everything they had and say that "I would be very interested in coming, except for this problem of not feeling at home or getting my licensure for some reason." It's a sort of a silly thing in retrospect, but it was a little bit of a problem for a while. And I think there must have been a good deal of skepticism among some of the practicing colleagues in the profession, what this "ivory tower" dean, Ph.D. from Rochester and endowed professorial chair at Harvard, might have in mind that might be very contrary to their philosophy.

GOODFRIEND: So, how did you appease that image?

SOGNNAES: I don't know if I ever did really, [laughter] but I'm sure it's appeased today and I think we have a great deal of mutual respect that developed, thanks to my successors as deans. As I say, there is nothing that succeeds like successes. [laughter]

GOODFRIEND: Well, when you were looking for that original faculty, what were you looking for in the faculty and what type of person could you attract or did you attract to the school?

SOGNNAES: Well, I think that when I think back at our meetings of the advisory committee on academic affairs, which had some very distinguished people from campus, since we didn't have a dental faculty, they did on several occasions when I presented a big pile of curriculum vitae, that there were an abundance, not an abundance, but a good deal of talented people that could be flirted with. To begin with, I was looking for people who in addition to dental background had some scientific achievements, and when finally we voted to approach somebody, I would think that they were also impressed, as they indicated to me, how readily they became enthused and considered coming here. This was very pleasing to all of us, of course. And I looked for this additional element. In fact, I had to. The university were not taking lightly, although I'm sure a dean could have forced it through by an emergency or

claiming desperation, they would not have taken lightly if I had tried to bring people here who didn't have promise of or evidence of scientific accomplishments.

GOODFRIEND: In what year did you start recruiting faculty?

SOGNNAES: Fairly soon. The first ones were in the field of oral biology, because that had to be taught before the clinical subjects, and the first man I appointed was the only one in the country, or the world that I knew of, who was a dentist with a Ph.D. in physiology.

GOODFRIEND: Who was that?

SOGNNAES: Dr. So Wah Leung, and he unfortunately was stolen by Vancouver [University of British Columbia], some four--three years later, after he had helped in the planning here, to plan a new dental school or be a founding dean there. As a matter of fact, I lost, or we lost, ultimately I think four or five people who became deans or founding deans or directors at other institutions around the country, which was a great compliment to us.

GOODFRIEND: Sure, sure. Were they, when these people arrived, were they involved with securing or helping to raise money for the building of the school? Or by the time you were recruiting, was the school already under construction?

SOGNNAES: I would say that they were very helpful in the whole planning of the program and the facilities, those who

were here. And they were not only the basic science related people, but in the clinical field we secured some top-notch clinicians in restorative and prosthetic dentistry. For example, Robert [B.] Wolcott, who was very, very knowledgeable and worked day and night, Sundays, Saturdays, never minded coming in to go over some urgent changes of plans with the architects and engineers. And John [E.] Flocken was an early professor, who is now the senior professor in our school.

And then we had some key related appointments that had joint appointments with the rest of the center, here. One, of course, very importantly was Professor John Knutson, who was head of public health and preventive dentistry for the school, and had a joint appointment in the School of Public Health. He instituted an unusually significant program in behavioral sciences and social sciences and preventive dentistry.

And I might mention one other clinical contact was with pediatrics. We had a Professor Gordon Nikiforuk, who was an outstanding person in pediatric dentistry, and who became acting dean for a while, while I was out of office after my heart attack in 1968. He, again, became dean in Toronto [University of Toronto] a few years later after he had worked with us very well.

GOODFRIEND: I'm trying to envision those early years.

Where were you all located in these formulative years when you were getting your faculty together--

SOGNNAES: Yes.

GOODFRIEND: --you're planning a curriculum and you're planning the design of the school?

SOGNNAES: Well, Dorothy and I, initially, we literally lived in what you might call a hole in the wall. The dean of medicine had a little corridor going from his corridor out to the palm trees, and a window was put on one side, or sliding doors, and a door on the other, and Dorothy and I sat there and worked it out.

GOODFRIEND: And that's when you were recruiting your faculty?

SOGNNAES: Yes, but then, very fortunately, the building called the Religious Conference Building, where the medical school had started, was made available to us for the planning, and that was magnificent and very inspiring, of course, with a sort of an altar in the lecture room.

[laughter] I think I'll have a little more martini.

[laughter]

GOODFRIEND: Oh, more water? OK, sure. [interruption]

SOGNNAES: I am on dehydrating pills because for my heart failure, so you have to excuse me.

GOODFRIEND: No problem. We'll just take a break and wait for the water.

SOGNNAES: Well, Judi, since we are on, I want to be sure that we leave room for thanking you for your interest in the school, and the many beautiful volumes you have written and articles--

GOODFRIEND: Thank you.

SOGNNAES: --and interviewing. I appreciate it.

GOODFRIEND: Well, thank you very much. It's been a pleasure. It's been fun.

SOGNNAES: Yes, I was thinking of acknowledgments, and I think the best way I could probably put it without leaving out anyone would be to say, "none mentioned and none forgotten."

GOODFRIEND: I know a lot of your documents do have acknowledgments for people, and that is on record.

SOGNNAES: Yes, they will be on file. [interruption]

GOODFRIEND: I'd like to get back to the school and the opening of it. When were you ready to start accepting students for the first class?

SOGNNAES: There was considerable discussion on that. There were many who said to me, who had lived at UCLA before, "Reidar, don't rush it." In fact, one even said, "Nobody will ever notice the difference." But I noted the difference. There was one thing they understood in Sacramento, and I think in Berkeley and on campus--students. They are, of course, what we are here for. And having

learned that, we lifted heaven and earth and a few floors here and there [laughter] to get in business.

I appointed an outstanding committee on admissions, and they started work. And though it was hardly ever advertised that we would admit the class in 1964, two years before there was any hope of finishing the physical facility, we had an awful lot of excellent applications. And I am proud to say, when they finally selected the class of twenty-eight, we were settling for twenty-four for various physical reasons, but we felt there were four more that were absolutely overqualified; so we took them all.

They were real pioneers because they worked down in the Religious Conference Building in part; they had to fit in here and there in the basic sciences, which we hadn't completed the facility, the expansion, I mean. And then Vice-Chancellor William Young in planning gave us [two] of his labs in the chemistry building. Being himself a famous chemist, he wanted to [refurbish the spaces, and in the interim we were allowed to use the facilities]. So we had a dental technology introduction to various aspects of crowns and bridges, and so forth, done during that first semester, or the first year, in the chemistry building.

And I must tell you as an aside: we also wanted to give them a little bit of introduction to a clinical setting, so they could take some impressions of each other, so to

speak, and some X rays. And we had big plans for beautiful equipment, but we couldn't do that yet, so I bought ten army-surplus dental chairs. They are made of brownish or black tubes of metal, you know, and they collapse at any moment! But we got them to work. Our biggest fear was that some students from USC would come up and take pictures of it [laughter] and say, "Here is our competition!" Well, they didn't.

GOODFRIEND: By the time they were ready for their clinical experience, was the school built?

SOGNNAES: Yes. The school was finished by the summer of 1966, and that was exactly the year after they had finished their basic sciences and preclinical technology. And by that time, of course, you realize we had added ten million dollars' worth of floors on the basic science wing, here, which we had a bond issue helping us with. And then we had built the dental basic science facility here and the clinical wing there.

GOODFRIEND: Were you involved with having to solicit for money in connection with that bond issue?

SOGNNAES: Well, it was an absolute expected requirement that one would--as deans, I'm sure all of [us] accepted any invitation to speak in an appropriate place and put in a good word for it, and explain what we were trying to do, because there was an awful lot of money involved. I

remember very well that I would get invitations to Pasadena, Long Beach, and you name it; and I am the world's worst chauffeur. I have automobilophobia, and I still have it. Because, as I think I mentioned to you before, I was the youngest of six boys in a one-horse family, and I wasn't even allowed to use the horse. [laughter] So, fortunately our son, Thor, was sixteen and he got his driver's license immediately. So, instead of me going on the freeway, which when I did, I made a complete stop on the on ramp, you know, to be sure that everything was all right and people honking their horns. He drove me to these distant places, to me, and had a hamburger across the street when I had the chicken a la king hamburger--

GOODFRIEND: Right.

SOGNNAES: --and bragged about the great events at UCLA.

GOODFRIEND: Were the sixties a good time to be going after money?

SOGNNAES: Well, I must say, compared to other times, it probably was, because the bond issue was in itself a struggle, I'm sure, by other people higher up to get through, and then for us at lower levels to benefit from. I think that President Clark Kerr at that time was a very important element in helping us and very encouraging to me personally.

GOODFRIEND: Was the economy such that--

SOGNNAES: And, of course, Chancellor Murphy, not to forget, and Chancellor Young.

GOODFRIEND: Uh-huh [affirmative]. Was the economy in the sixties favorable?

SOGNNAES: It must have been. I'm not an economist, I regret to say, but I have no complaints. Let me give you an illustration. I came from private universities, at Harvard and Rochester, and knew something about what that meant. And this being a state university--the very fact that you had any money that was in the bag, so to speak, by the state, was to me an enormous change. Because I have to tell you, at Harvard I think I brought in every penny, from ashtrays to paper clips, to electron microscopes and isotopes for my work there as professor and as associate dean, even it seemed to me--and travel. And even my salary, though I had an endowed chair, it was so long ago that the money wasn't adequate, so they had to give a supplementary endowment from another old donor. It was taken for granted that if you could get part of your salary from the university budget from an endowment, you were very lucky. The rest you'd better bring in.

Another example is that to make a professor, to have an FTE, as we call it here, full-time equivalent, when I was at Harvard it used to be required that we would have to raise \$500,000. And when I came out here a few years later, it

became \$750,000. I think today it is \$1 million. And, whereas UCLA now has been able to create several endowed professorships by magnificent, generous donations in the name of some prominent person, donor or other, this was not in existence, as far as I know, when I arrived here in 1960.

GOODFRIEND: I see.

SOGNNAES: And we had approval almost immediately for sixty full-time equivalents. Now, sixty full-time professors at Harvard, if I was negotiating that, would require \$60 million. Now it turns out that the total endowment for dentistry at Harvard is about \$6 million, and that's one of the biggest endowments in dentistry in the country. So, I wanted to let that be known that we were very fortunate to have so much support, both from the state and federal government.

GOODFRIEND: I see. The sixties, getting back to the decade that we were in, did it have an influence on the type of student who was applying for dental school?

SOGNNAES: I'm not sure that I can answer that question in terms of the type of qualification. They certainly were magnificently prepared, and there must be something remarkable about dentistry, because you have to remember we do not compete with any other specialty of medicine, like ophthalmology or dermatology, or what have you. We compete

with all of them put together--medicine, with all its branches, vis-a-vis dentistry, a very humble, limited field. And for some reason, there must be something in this combination of elements, of art and science and technology, and maybe thinking of perhaps a good life, that attracts some very outstanding students. I think you may be referring to the sixties in terms of the hippies and a few other things like that, with long hairdos--

GOODFRIEND: A socially conscious time--

SOGNNAES: Yes. My intriguing observation was that when the beards began to show up in the clinic, and the professors began to be afraid they would be caught in the dental drill, or something, I did not raise a lot of issue with the students about it, because I once had a full outfit myself when I was on the world's loneliest island [Tristan da Cunha] doing research as a young fellow. And--

GOODFRIEND: You had a full beard--

SOGNNAES: And when I shaved when we left the island, they said, "Never come back without a beard!" They knew me that way. And when I came home to Norway, I had saved a mustache to show my friends, and I divided them into two categories: those who said, "Oh, look at the hair on your face!"; and the others who said, "I read in the papers, heard on the radio, that you were lost on a lonely island. Tell me more about it!"

So, for that experience, I think I survived better than any dean in the country, by simply not making an issue of it. I would look the students straight in the eye and ask how they were doing, instead of complaining about something. And I think for that reason it became sort of a trivial matter, and they started shaving.

GOODFRIEND: Was there an effort to get an ethnic mix or women into the first class?

SOGNNAES: To begin with, I would say that the women part of it, at least, was either neglected or there wasn't enough input of women applicants.

My first student I interviewed was a black man. That was when Dorothy and I were sitting down in the Religious Conference Building, before we had started taking a class, and it was none other than Rafer Johnson, who had just won the Olympic decathlon, Olympic gold medal. And when he sat in front of me and talked enthusiastically about now that that was done, hoping for a profession, I feel so sorry that I didn't take him as student as one class of 1960 and struggle with him the best I could have, with the help of a few faculty members. I don't know what the national board would have said about this idea of a one-student dental school. But unfortunately, or fortunately for the rest of the world, he became very prominent in national and international affairs, as you know. But, I liked him so

much, and I saw those beautiful big hands and I knew he could handle a lot of things that I couldn't--impacted wisdom teeth. But, so it is.

Later on, of course, the school took a great deal of initiative in accepting and encouraging more women to apply. I cannot take too much credit for that, because by that time I had been succeeded by Dean [Robert] Caldwell and later by Dean [Andrew D.] Dixon, and now by Dean [James R.] Hooley. The point is that the joke was at least I was very pleased with this development, and I was kidded by it being said that I was interviewing all of the lady students, and that I required two kinds of qualifications: one, they would have to be exceptionally pretty, and pretty exceptional.

GOODFRIEND: I see.

SOGNNAES: Well, well!

GOODFRIEND: That curriculum that you designed for that first class, was there a particular philosophy associated with that that you wanted to teach them?

SOGNNAES: Well, I don't think there was any question about their understanding of the philosophy, that we expected them to have a very solid scientific foundation in the biological sciences (biochemistry, pharmacology, anatomy, and so forth), and by the results there is no question that they fulfilled that expectation. Then, secondly, the oral biology part of it that we supplemented,

I had very great hopes for that, and much of it was accomplished. I even physically built a whole wing for an oral biology research teaching lab, and that was one of my disappointments later that it wasn't as extensively implemented as possible.

The reason I make this point is that, speaking of the future, I still think dentistry has a great deal to learn about the fundamentals of the mouth and its relation to other parts of the body. That in terms of scientific diagnostic measurements, that we are short, we sort of jump in and go to work, you might say. It's moving, but at my age one gets impatient. I would have liked to see greater activity in this oral biology research teaching laboratory, which, by now, I'm afraid has been almost completely consumed by technology teaching. But you can't win them all.

GOODFRIEND: Right! Do you remember moving into the building with this first class?

SOGNNAES: Very much so. Of course, the first class of twenty-eight was accepted in 1964, and halfway through we inaugurated the building we are in now, including this TV lab, I'm glad to say, and we had a magnificent affair going on, on the front steps on Tiverton, with very distinguished speakers, of course, and excited students. And, two years later, we graduated the first class which--

GOODFRIEND: Isn't that the picture right there--

SOGNNAES: Yes!

GOODFRIEND: --of the first graduated class? Did you remember--

SOGNNAES: Yes, I remember them so well. They were--

GOODFRIEND: Was it a very close class, since it was the first?

SOGNNAES: Yes, they were. And I think they were really pioneers because, as I mentioned before, they had to suffer with some inadequate facilities for the preclinical years, at least the dental part of it; but they moved into the clinic in 1966 and graduated in 1968. And remarkably, it was shown by Chicago [American Dental Association] statistics that they sent to each dean--they don't show it to the other--but I was informed that they were number one in the country in predental requirements, qualifications. They were number one in the country when they took their national boards in basic sciences. Which I think surprised Harvard particularly. They were no longer on the list as number one, and Harvard had only half as many students, I might say, at that time. And they [UCLA class of 1968] were number one on the list for the national boards in clinical disciplines. Which I'm sure USC was wondering where that went. They had held a high ranking and still do there. So, I couldn't have been more pleased and proud.

GOODFRIEND: I bet. That's great!

SOGNNAES: And I felt all ready to almost retire right then or at least to change-- I couldn't repeat that, I felt.

GOODFRIEND: [laughter] But did we?

SOGNNAES: Well, I'm sure that they are doing well, but they have much larger classes and that evens out a little bit.

GOODFRIEND: Sure. You had some pet projects, I know, when you were establishing the school, many of which were ahead of their time. We mentioned earlier in our discussion here about the importance of research and the Dental Research Institute. Didn't you start out very early on to establish that institute, which we still have today?

SOGNNAES: Yes, that was a process that was very well organized generally in this university, because we had the Brain Research Institute established, and so on and so forth; and it has to signify an interdisciplinary-multidisciplinary approach to problems. I studied that very carefully, and we worked out with Dorothy Good a big prospectus in 1964-65. Which was ultimately approved on campus and then sent to the regents, who approved it at the meeting in February 16, 1966, which was, of course, approved even before we moved into the new building. But the point was we had, at that time, almost finished the building,

including what was then probably the largest dental research facilities in the country. So, we had every reason to beat our chest a little bit, and we had very talented and enthusiastic scientists inside the school and outside the school.

So, I was so pleased with that development that I have to tell you frankly, in retrospect, that I had been dreaming--I was the acting director on our applications typed for this and for the regents--but I had been dreaming [that] when the first class had graduated in 1968, I would resign as dean and become a full-time professor again in teaching and research and, hopefully or at least transitionally, help to act as director of the Dental Research Institute. But, as you probably know, something happened that prevented me from doing that.

GOODFRIEND: That was your heart attack. Right?

SOGNNAES: Yes. I did send a resignation letter to Chancellor Murphy in the spring of 1968, knowing full well that this was the year that I would graduate the class and get-- But the point was that I had been so stupid in my academic career, and I had thought I was so important in what I was doing, at least my wife thinks I tried to convince her about that. Sometimes she thought my rats and monkeys were more important than [laughter] my children, which isn't true. But I had never applied for a

sabbatical leave, and I had been full-time involved with activities. First, five years of war, from before Pearl Harbor until after the victory in Europe, when I was abroad in the Royal Norwegian Air Force. Then, fifteen years at Harvard as professor, associate dean, acting dean. And then I had been involved from 1960 to 1968 here as founding dean. I was totally pooped, I'm sure, and totally excited. I wanted, one, a sabbatical and, two, to come back as a full-time [professor], teaching and research.

The letter was unfortunately answered not by Murphy, but by Vice-Chancellor [Foster] Sherwood at the time, with a notion that there were other plans: that Chancellor Murphy, himself, had planned to think that eight years were enough for him too--

GOODFRIEND: He was going to retire?

SOGNNAES: --and that nothing was going to happen around administration affairs until his successor was appointed.

And then, I had a terrible summer twiddling my thumbs. Absolutely nothing exciting to think about and just the trivial things that Dorothy can remind you, little increases in salary here and there, and promotions--comotions. And by Labor Day, the day before I was going to accept the new class, the Good Lord said, "Enough is enough!" I never thought I would be a candidate for a heart attack, but bingo!

I'll never forget Vice-Chancellor [David] Saxon came to me in the hospital, representing the chancellor's office, and held my hand, so to speak; but he didn't tell me until fairly recently that when he saw me-- He said "Reidar, I can't believe it! I frankly thought you were dead on Labor Day 1968!" [laughter]

GOODFRIEND: But you pulled through.

SOGNNAES: Well, anyway, so much for that--

GOODFRIEND: I want to back up just a little bit, before we get to your retirement--or stepping down as dean, I should say, not your retirement. Besides the Dental Research Institute, you also initiated the Venice Dental Clinic as an outreach for our students to go to. Was that also something very dear to your heart, or something that you thought was very important?

SOGNNAES: Yes. I will give credit to someone else for the main part of that task. But in answer to your second point there, I had always been very interested in seeing what I could do under primitive circumstances for people who needed care, and on that world's loneliest island of Tristan da Cunha in the South Atlantic, who didn't even know there were dentists. They had very good teeth. That's why I was there to study them.

GOODFRIEND: Let's just fill in here, so that people understand that you, as a young dentist--

SOGNNAES: New baked dentist from Oslo, Norway, yes.

GOODFRIEND: Right. You went to Tristan da Cunha to do research.

SOGNNAES: I was part of a thirteen-man expedition from the Norwegian Scientific Academy, and I was given the charge of the dental part. There were medical, social sciences, and--

GOODFRIEND: And this was an island where--

SOGNNAES: They lived there in isolation since Napoleon's days. Yes. But, anyway, that gave me a great deal of challenge to see what I could do for them with very primitive equipment. I had an X-ray machine with me and a gasoline engine motor to make current. And I lit the first light on the island, which was good because during World War II it became an important radio station, with other equipment, obviously. But that gave me an impetus.

Then, when I came back to this country, or came over to this country as professor at Harvard, I became very interested in neighbors who had problems going to the dentist, who became known to me. Had a delightful Italian couple. He was unfortunately suffering from multiple sclerosis. He did my income tax at that time, or helped Edel. We were new in this country. And he had to move his body to sign his name. But he was brilliant. I enjoyed his company a lot, and I found out that here was a handicapped

person, but what was left of him-- He had the highest standards I have ever met, as far as the rest of him being maintained as perfectly as possible. And I think we have sensed that in the great work that my successors have done here for handicapped people. That gave me an enormous satisfaction.

And up in New Hampshire, where we had a Norwegian log cabin that I was blessed with for many years, there was a man who gave me my fishing license, who had diabetes and lost a leg and was afraid of losing the other. I always stopped by his place, and here, again, was a very handicapped person, but this was very important to him. And to me it was so important that I took my New Hampshire license and built a little dental office in the back of my Norwegian log cabin, to take care of local kids, who had hourglass teeth, if you know what I mean, cavities--no treatment.

So I had that background of interest in the underprivileged, but when I came here, the man that deserves all the credit to doing the groundwork for the Venice clinic is Dr. Jim Freed, in preventive dentistry and public health. The only credit I can take for it is that the last thing I did as dean, in the spring of 1968, was to facilitate authorization of this university having a satellite clinic outside the university (there were none at the time). And

with the help of Vice-Chancellor [Charles] Young and others it was approved. Now, of course, it has become very famous, and there are many other activities there now in the medical field.

There are many other satellite programs that the school has gotten involved with, with the other deans that succeeded me, for which I am just delighted and very proud; including, even when I was dean, a big program to take care of Indians, where a whole staff and talented people went out with their students in the summer and restored their dental function, you might say.

GOODFRIEND: Hmm, interesting. Another thing I know that you are very proud of, and that I'm sure people watching this tape years and years from now will still see, is the mural in the dental clinic.

SOGNNAES: Oh.

GOODFRIEND: I wonder if you would tell us the story behind that.

SOGNNAES: Yes. Well, when I came here in 1960, I gave a lecture for a university group of some kind on ivory art, which I had been interested in for many years back at Harvard. In fact, it was the only time that I benefitted from being a Latin major, because they had some old Latin manuscripts on the history of ivory art, religious objects, and so forth. And I had been over to Dordogne, France, in

the caves, and seen these carvings of hairy mammoth on the tusk from a hairy mammoth. And I've seen the scrimshaw art of the American whalers, with the profile of the whale on the whale tooth from the sperm whale. The whole thing fascinated me so that in this lecture I said that something should be done about this.

There was an artist in the audience, Mrs. Marienthal, Elaine, who became so enthusiastic that she made a proposal for a mural in the dental school. Which was unheard of. It's only in Mexico where you have fancy murals and very few books; but here it was, hopefully, the other way around, may I say. But she made a proposal, which we thought was a little too obvious. Finally she leafed through one of the books that I had published on calcification in biological systems and found an electron microscope picture that I had cut with a diamond knife of the calcium phosphate apatite crystals of bones and teeth, and she got so intrigued by that that she decided, "That's what I want to do!"

And since you have brought up the question, I have to now give her credit for this. She not only spent two years lying on the floor with three and one-half tons of clay--I'm not sure if she or I paid for that--and carved out these seven hundred pieces. And she added a third dimension to my electron micrograph, which was in the early sixties, and she anticipated the three-D appearance of a scanning

electron micrograph. The scanning electron microscope became of great interest to me later, of course. But here was an artist anticipating a new look of science, so to speak.

GOODFRIEND: And which was proved to be true, her conception.

SOGNNAES: [laughter] Which was proved to be true--except the human eye didn't have the capacity to see it. Well, anyway, so--

GOODFRIEND: Is there a picture of that in here?

SOGNNAES: There is a picture of her and the mural, somewhere under "Facilities and--"

GOODFRIEND: Oh. Here we go!

SOGNNAES: Yes, there we go! I don't if that--

GOODFRIEND: So, it's a wall with all the different stone--

SOGNNAES: Yes. As a matter of fact, I think in the official proposal it was called a wall, because I think I would have been in trouble if it was called an art-- Of course, Jules Stein came over and was very interested in it. They had art work in the Jules Stein Eye Institute and in some others, but it wasn't too common at that time.

As a matter of fact, I said to Jules Stein, "We may need some money from you." [coughs jokingly] "Why don't you sponsor an eyetooth institute?" [laughter] He thought

that was a little too narrow.

GOODFRIEND: Oh, no!

Well, the school was established by the time you stepped down as dean in 1968. How was it received on campus, how was the dental school looked upon?

SOGNNAES: Well, I suppose you should ask that from the people on campus. Those that I dealt with most closely on planning committee and academic committees and institute studies, and so forth, and in committee work I served on, Graduate Council, and so forth, I think that I had no complaints at all. Of course, I met so many friends through the Faculty Center Association, which was so meaningful to me from the beginning.

There is one very important element that may not be appreciated today; but in discussing the whole plans here with Chancellor Murphy, it was at that time, when adding to medicine, public health, nursing, came dentistry--that rather than being identified as a medical center, which was perfectly adequate and used most of the time in other parts of the world, that for the first time we decided to approach it in terms of this new terminology, Center for the Health Sciences, to signify the unity of what we were doing. And he made it a committee, coordinating council, where he decided to rotate the chairmanship between the deans of medicine, dentistry, and public health, and I served my

turn. It was very helpful to me especially, probably, because there were so many problems of integration, both of the facilities and teaching and research, and so forth. I thought that was a very brilliant idea on his part, and it's been imitated elsewhere.

PRETZINGER: OK, let's take a little break just for a minute. [video recorder turned off]

SOGNNAES: --chance to tell. He [unable to identify--ed.] moved into a time of dental affairs where there has been already some significant studies on this very subject, and that he has played a role in and has discussed with the faculty. One of the examples of a change is this change in disease pattern. For example, tooth decay (dental caries) has been significantly reduced because of fluoridation, both of water supply and of topical application of fluoride, which happened to be my sort of a master's thesis in Rochester before my Ph.D. I did one of the first experiments in vivo, with topical application--we were very interested in that at the time--and toothpaste studies, et cetera, et cetera.

It has had its impact on the practice, which would indicate that there may be greater emphasis now on some of the other problems of the mouth, including the soft tissues and the supporting tissues of the gums, the gingiva and bone, so that people will not lose otherwise cavity-free

teeth by periodontal disease. I also think that we have areas to explore in collaboration with colleagues in other fields of health, including metabolic disease as indicated by symptoms in the mouth or related to other illnesses. And I think that requires cooperation with people in dermatology, skin and mucous membranes being related; in head and neck fields; and in plastic surgery, of course, we have quite significant cooperation already, both with facilities and faculty, and so on and so forth. I do foresee a greater emphasis on the biological aspects and the medical aspects--oral medicine, if you like--than perhaps there was in the early history of dentistry.

GOODFRIEND: Well, I know your work and your founding of the school has been appreciated by many people, and I have a feeling that key behind you might give me a hint of it.

SOGNNAES: Yes.

GOODFRIEND: Why don't you explain what that gold key and plaque is.

SOGNNAES: Well, I am very pleased to make reference to that. This was donated to, as it is signed on the plate there, to Chancellor Murphy and Dean Sognaes on September 30, 1966, during the big ceremony when we moved into this wonderful finished facility. And the interesting part of it is that it was organized without Murphy or me knowing

anything about it. [laughter] The man to give credit to that for is Dr. John Flocken, professor of prosthetic dentistry, who had just been appointed through the planning years and now is the oldest member of the faculty.

Secretly he had written to dentists in Southern California and asked them to send in defective inlays and bridges in gold, that he wanted to do something with them for the ceremony. And he has a bunch of letters, apparently, going with it, because he melted them all down and had an artist create this medallion and a plaque in pure gold. The idea was that these defective inlays of the past will give an idea of the metamorphosis here into a suggestion of the future, and also will indicate to the citizens of California how they have been paying through their teeth [laughter] for this wonderful facility.

GOODFRIEND: Is that the key to the school?

SOGNNAES: That is the first key to the school, yes.

GOODFRIEND: And that opened all the doors?

SOGNNAES: Also in gold, yes.

GOODFRIEND: Oh, that's great!

SOGNNAES: So, that is a very precious souvenir. It gave me a chance to acknowledge his special role there. But as I said before, there are so many that I better [say], none mentioned and certainly none are forgotten who supported the effort, and I am extremely grateful to them.

But I have to say one more thing, that speaking with a foreign southern accent--southern Norway, that is--I must tell you, Judi, how grateful Edel and I have been for the opportunity to have a career and raise a family in this country.

GOODFRIEND: Well, thank you. You've certainly given a lot to this country and to this school. And it's been a pleasure interviewing you and learning all about your life, and I thank you very much.

SOGNNAES: Well, thank you most of all, Judi.

GOODFRIEND: Oh, thank you.

SOGNNAES: And thank you, Mike, behind the camera. And I'll drink to that!

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