

ASA oral history. Taken in Arthur's living room, Mansfield Depot
File: ASAOralhistory1

CAF: This is April 5, 2013, and we're here to take an oral history from Arthur Abramson. Present is Arthur Abramson, Carol Fowler and Donald Shankweiler

ASA: I have my copy of the questions.

CAF: Alright. Well start where you wish then.

ASA: Well, I can start at the top if you want. I mean you ask some questions about me. You say what languages do you know and so forth. Actually people get an exaggerated impression. I'm not that much of a polyglot. I have a few languages under my belt from various sources. But I began in my childhood with Biblical Hebrew, you see not modern Hebrew, but Biblical Hebrew and then later even post Biblical Hebrew. Still ancient, you see.

CAF: Now why?

ASA: Well, because of the rabbinic literature, the Talmud, you see., which is post Biblical, although still a couple of thousand years you know. Just under 2000 I guess, for the Talmud. So I did that. Now in the course...If you just stick with that business of my ethnicity for a moment with some religious overtones. Although I didn't grow up in a very religious household. But I had a good Jewish education, culturally, linguistically, historically and so forth. Even though...At the college level. So I ran into Judaic Aramaic also, since that is the major language of the Talmud, you see, where for each legislative portion, it states the laws of agriculture, or the laws of ethics or whatever. There are different tractates on that. I have some in the house if your'e interested.

CAF: In Judaic-Aramaic?

ASA: In Judaic-Aramaic for the expanded arguments in the Talmud. The initial statement of the law is in Mishnaic Hebrew. The Mishnah, it's called, see? So...

DPS: The Pentateuch?

ASA: The Pentateuch is the five books.

DPS: Right.

ASA: I have some...various editions of it there [bookcase] The Pentateuch,...That red and black thing there. That set is five separate volumes from the Pentateuch. And it shows the text of the Hebrew Bible in Hebrew...in Biblical Hebrew, in Aramaic, which is probably one of the oldest translations into any language. But it's put there, because, in some branches of Jewry, it's customary to read out some of it in Aramaic on Sabbaths and so forth after the Hebrew. Also, for study purposes, it's often very useful because there are some words in Biblical Hebrew that are very rare. They occur once. And there's still some argument over what they could mean and so forth. And you may get a hint from the Aramaic, which is of course a related Semitic language. OK. So I had that.

Now, in addition, as far as vernaculars are concerned...Oh, to stick with more-or-less classical languages, in school I had Latin...yes, as many of us did. Why did I have it? I don't know. My father thought automatically it would be well to study Latin.

DPS: As an educated person

ASA: Well, he had done it, I guess in school. So I took Latin and then, in later years, in graduate school at Columbia, I studied Sanskrit. That was because of my then burgeoning interest in Southeast Asia. You see. Not that it was spoken anywhere. I mean, of course, it's really South Asia, in India. But the culture, of Buddhism and so forth, mostly in Sanskrit or even in another form, Pali, texts came into Southeast Asia. So I thought it might be sort of useful to have some background in that. Otherwise, as a budding phonetician, even then, I could hardly have had any pressing other reason to study Sanskrit. We had a good person there, [Tulia??], doing it so I took it for awhile.

Then in modern languages,...Well, of course, again, in my background, there was Yiddish, you see, which, as you know is basically a Germanic language. It emerged out of Middle German, I guess, roughly speaking, starting in the 10th century. And although my parents were born in this country, my grandparents were not, and my mother's elder siblings were not. She came from a large family. She was one of the youngest, so she was among the four born in this country. And eight others were born in Europe, in Ukraine actually. But, as Jews, they had their primary language, as Yiddish, you see.

5:36

And so I learned a fair amount of that from my mother. And then later, during the world war, the second one of course, when I was in Europe, I had occasion to use it quite often especially when the war ended and I was still there for a while. And I found myself among refugees and so forth and I could communicate with them, you see. That means I...That's a story in its own right. But that's just what accounts for a certain facility in the language., which I kept up at UConn, because I was involved with Arnold Dashefsky who is now a professor emeritus in Sociology, in the creation in the Center for Judaic Studies, which still exists, But I was one of the founding members of the committee you know and so forth. And one of our activities, aside from fostering courses and so forth and bringing in people, was to have a Yiddish group meeting frequently, and typically, we talked; we read stories by modern Yiddish writers, by modern I mean in the early 20th century or later and so on. So I can read and write it. And speak it. But I didn't...It was never my childhood language, although I did learn some in my childhood.

French. Of course. Now French, I have been fluent; I guess I still am in French. I studied that in school... in high school, but I was lucky there. It was very unusual in my New Jersey school. We actually had a native speaker of French teaching the language, you see. And since I guess I was already a kind of embryonic linguist, or something, I mimicked him, you know, assiduously, you know. So he was actually Belgian. So people would sometimes say later that I had a Belgian accent. Although not the Belgian vocabulary. You know there are some differences with numbers and so forth. Where we French folks say soixante dix sixty ten for 70. They say septante. Where we say quatre vingt for 80, four twenties; they say octante. See? Although they usually know the other one. Internally, they say that. I guess they still do. I don't know why not.

So I became fairly fluent in that, and I continued it in the first year of college. In fact all thru college, but I say the first year, because at the end of the first year is when I went into the army, see? So that would be 1943, I guess, and I was in the army for

three years. And most of it in Europe. In Britain and France principally. Because we crossed the channel later. Not the day of the invasion, but somewhat later. And I used French a great deal there. It was very useful. When I wasn't speaking Yiddish in the same place among refugees. There were a lot of Polish Jewish refugees in western France where we wound up, In Reims. For one reason or another they found refuge there. Some of them had been released from concentration camps. So I met them.

DPS: Those managed to survive.

ASA: Managed to survive, yes. In fact, one of them, with the urging of the Jewish army chaplain, who was orthodox and a native speaker of Yiddish and all this, although I think American born, set up a kind of Sabbath table in his apartment with his wife. You see. They were refugees there. They spoke a broken French. At that time, I was much more fluent in French than Yiddish. But I had to speak French to them. He could read and write Hebrew, but didn't really speak it very much it. So a bunch of soldiers would go to the Sabbath Friday evening service and stay over night if they could get passes. This was when the war had ended and hostilities had ended. And the language of the table was Yiddish. Except when the American soldiers were talking to each another where they would naturally speak English. So I learned a lot more there. Because I would...I mean I already had an ear for it, and I had unconsciously formed conversion rules from German to Yiddish and also where there were Hebrew loan words in Yiddish as there are, Hebrew and Aramaic, but mostly Hebrew, from ethical,... from philosophical expressions and religious terms and so forth. The Hebrew [loan word?] is pronounced according to Yiddish stress rules and vowels and so forth, you see. Which is not unusual in loan words you know.

CAF: What is Yiddish related to?

ASA: German

CAF: Its related to German

ASA: Wait. It's an offshoot of German, but it has had...along with English, you know, many outside influences: Slavic, so there are Slavic terms in there, Semitic certainly as I said mainly for philosophic and religious contexts. That's right. And so, where I would try to think of the word in Yiddish to say aloud to the company and couldn't quite do it, I would pick the Hebrew word that I did know for it and pronounce it with what I thought was an appropriate Yiddish interference. See? And that was alright except they would laugh and then give me the Yiddish term which might have turned...

CAF: Well, they recognized it.

ASA: Of course they were all quite... these young men were all quite learned. That's why they sort of went with the rabbi to come to this dinner. Signed up for it. We would take things to these people and all that that we would give them. And so an example that I remember very well. I wanted to say something was "on the table." So the word for table in Yiddish is *tish* cognate with *dish* by the way. *tish* But I didn't know it. So the Hebrew word is /fo'xan/and that would be with the normal Sephardic pronunciation that now we use. In the Ashkenazic it would be [ʃo'xɔn]. That would be [...] the Yiddish So I figured that with a stress shift at the beginning and a reduction in the vowel in the second syllable , it had to be [ʃoxʔn]. So I said

[ˈafən] on the...[ˈafən ˈfoʊxən]. And they all laughed and said: [afən] tish. Because that would not be said. But they recognized it. So I did that.

What else? The only other language is Thai. Later you are going to ask why I got into all that. But let's accept the fact that I did and the first steeping in Thai culture was for 2.5 years with my wife Ruby. This was in '53-'55 about 2.5 years. And so when there, I was still a graduate student of linguistics, but I [...] my studies to go there. So while there, I immediately started learning the language, you see. And I had a good teacher, The principal of one of the schools I taught at. I was a Fulbright teacher of English. That's all I could get at that stage of my professional development. But I got it. And so I would go and see her. She was a principal of a girl's school in a Southern town we were in Songkhla. So she put me to work learning it, and immediately started teaching me to read and write also with a children's primer. You'll be interested in that.

14:32.

So of course now I've had the links with Thai for almost 50 years, I guess about 50 years, and so I can manage in it. And I can read and write and all that. So that would explain that. Why that language. So I think that handles, does it? Question 1?

CAF: So...Don't you speak a little German?

ASA: Well, I do; yes I do. I don't usually mention that, because I don't speak it well. I mean I can...I have been in Germany on more than one occasion, and I can manage to get around on the streets, you know, and ask how much something costs. [Says it in German] and so forth. But...now and then at the table or something I may think of a German expression But I.. And I was able to read German. It was one of the languages for the language examination at Columbia University. So I was able to read and translate some article they flung at me in German, see? In linguistics, see. But...

DPS: Well look. It's obvious that you were oriented toward language from a very young age.

ASA: Yeah.

DPS: But when did you decide to become a linguist?

ASA: Well. Oh.. You want to know that. Yes. That happened after I finished college. And I wanted...

CAF Which was where?

ASA: Well I finished college...I had started at Rutgers University before going into the army. Then I had developed such a strong interest in Jewish culture and so forth because of people I met in England and in France, you know, and so on, spent time with, that I finally decided to apply to Yeshiva University. And why there? Well it's of course under Jewish auspices. But the university has within it a college, that's Yeshiva College and then Stern College for Women; they were separated. They had the graduate school. It was a small graduate school. I may still be. I think that Psychology is all clinical. In fact, what 's his name...

DPS: [Bruno] Galantucci is there

ASA: is there. And last I spoke to him he didn't think there was too much going on in the graduate program that would interest him, you know. But otherwise he's happy there. So he told me. So once there along with everybody else, I took a double program. I was in the Yeshiva, the seminary, you know, studying...Well I was for

awhile [in the teaching institute]...studying things even like Jewish history, but with Hebrew as the language of instruction. Then I switched to the Yeshiva to get into a Talmud class, whatever level I could get into. Which was pretty low for me. But I got into that. And I did that. But in college, I was a French major. And even then I didn't know about linguistics. When I got out, I started, you know, trying to decide what to do. And I thought, well, maybe with my interest in languages and so forth, I should think about teaching. So I applied to Teachers College, Columbia University. I was there. I mean I was over there looking around. I got in. And I was in the program in language, or whatever they called it. But on the faculty, there was a woman named Aileen Kitchin who was an applied linguist, a very active one. And she really inspired me. She taught an introductory linguistics course at Teacher's College And I became so enthralled with that that I went over to see the head of the Linguistics Department, what was then the faculty of Philosophy, the graduate school. That was André Martinet from France. And he allowed as how I belonged there. So I applied, and I got admitted. This was a year or so after I graduated from college, I guess. So I began there, the regular program in General Linguistics. Although I realized that my interest was mostly in the sounds of language Of course, I had to take all the general courses, the background for a degree in Linguistics you know as such. I had people like Uriel Weinreich who's very well known for his work on language contact; of course, his work on Yiddish. And he was one of my teachers, and he became a friend later. He died so very young. Joseph Greenberg was there, who later ended up at Stanford. He was in the Department of Anthropology. But still he was on my committee eventually, you see. And he even helped me to get some money to hire Thai informants or test subjects. (We didn't call them participants then.)

CAF: No. Much later.

ASA: Much later. Test subjects. But my principal advisor was John Lotz or János Lotz, L-o-t-z who was on very friendly terms with Frank Cooper. Now wait, I may be getting off the track for you Don. But I'm now at the point where I would probably be answering: How did you come to work at Haskins?

CAF: Right. This is a good story. So John Lotz's name is familiar, right? Doesn't he..Did he also spend some time at Haskins?

ASA: He did. We had one paper together with Al and Lotz and me.

DPS: He used to drop in. I remember him. I remember talking to him. In the 60s.

ASA: You would remember him. Yes.

CAF: Did you [DPS] and Michael [Studdert-Kennedy] talk about him when we interviewed him. Did you share an office with him?

DPS: No. It was John Borst.

CAF: Borst! Oh.

ASA: John Borst was someone different.

DPS: Lotz was not in residence.

ASA: No, he was not there; he would come once in a while as Don was saying. But he was on friendly terms with Frank Cooper. So I should tell you...But this may be overlapping here. I maybe losing track here.

CAF: You don't have to keep them straight.

ASA: Oh OK. When I got back from Thailand with my wife, with Ruby in the fall of '55, I of course reported in at Columbia. You know I had been in touch, because in the first

place where we were going to stay for one year, but because of the fighting in what was then French Indochina, there were people who were backing out of the Fulbright program. Including the professional person in English as a second language, from Michigan or some place like that, see. So they asked me as a person with some background by then in Linguistics and also some experience teaching there if I could extend my stay. And. I agreed; Ruby agreed. At first we extended it by a few months and then by another year.

CAF: So you went to Thailand after you had enrolled at Columbia University or after Teacher's College?

22:51

ASA: No. After I was already in the program in Linguistics at Columbia. I finished one year of residency and coursework, and I took a leave of absence from the program in a manner of speaking...well, I mean I told them I was going abroad. I had also been doing, by the way, some teaching in an accredited evening high school in Jersey City, New Jersey. That's how I was earning my living. And so I took a leave of absence from there too, 'cause I didn't know but that I might go back you know. Because by then I had a full license. I'd passed the English—what did I pass?—the English examination although I was mainly interested in teaching French; but I also taught English. In fact the supervisor, not the principal of the school, the supervisor said now when you get back, be sure you get in touch with me, because we want to have you. So that was very nice and all. But eventually while abroad, I let...first of all, I let the people in Linguistics at Columbia know that I would be back later than I thought, gave the estimated time. And then I let the public school system in Jersey City know that I would not be returning at all. I'd be returning to the country but not to assist them. I thanked them and so forth very much but said I just don't think that I will be in that kind of spot any more.

DPS: But you had a wife by then, so you needed to think about how you were going to support her.

ASA. Yes. Yes. Well, she was working too. But no I thought would go through the program and get some work, you know? I was optimistic and by then at that time it was not out of the question. No I was not without a conscience. So when I arrived at the doorstep there at Columbia at the Philosophy building where we were, John Lotz announced to me that his friend, Dr. Franklin S. Cooper, President of Haskins Laboratories, Director of Research, had agreed to become an Adjunct Professor at the Columbia, under the rubric of Linguistics, and to give a course, a graduate course to be called Acoustic Phonetics. By that time Martin Joos' book had come out, a text book, *Acoustic Phonetics*. We called the course *Acoustic Phonetics*. And Lotz said to me, and with your interests, you should certainly take it. Now Frank was going to give the course at Haskins where he had everything there, the facilities, and he wouldn't have to travel uptown and so forth. So those of us who were taking it went downtown, or to the midtown area to study with him one evening a week. And he gave the course. So that's how he got into Columbia.

26:04

I should say about Frank that, in addition to that, he agreed also to participate for part of the academic year in another course that they used to call *Phonetics and Phonemics*. I think it was a two semester course. And he would, for a few weeks, talk about speech acoustics and things like that, see? It was not like the graduate course he gave which was

dedicated to that all through the time. So there was a time later when I had my degree--when Lotz was not well, was ill, and he was teaching that course; he was the main professor teaching it, with Frank Cooper filling in for these topics. So Lotz asked me, with the connivance of the Department Head--I guess by then Martinet had gone back to France. May be Uriel Wenreich [was the head]--if I would take over the job of teaching that course, I think it was for the semester. the, fall term with Frank Cooper doing his usual bit. So I did that one term. But that was when I was already working at Haskins Laboratories, so I jumped ahead there a little bit.

27:31

CAF: So what was in it for Frank? Why did he teach at Columbia? Was he looking for grad students [to work at] Haskins? Do you know?

ASA: I think so. I never heard him that. And It wouldn't have occurred to me when I went into his course to ask him that, you know: Why are you doing this? But it's a good question. I believe that's the reason because of things that happened later. First of all, he snared me, you know, got me onto the staff. Then when I...well later when I was minding the store, while he was away—that's one of your questions here--- he asked me to be sure to get in touch with someone else there who looked promising, a doctoral candidate. Or no, she had finished, and she was on the faculty at Columbia actually, a junior member who had some interest in what we were doing. And maybe we could get her to come and become part of a project. So I think he had such things in mind you see.

DPS: So one of your fellow students at least was also...

ASA: Well more than one actually. There's William Nemser, who became professor of Linguistics in Austria in Salzburg, I guess. I haven't been in touch with him in years. But he was a good friend; and we were at about the same level. When I came back—by the way, on the matter of earning a living—coming back from Thailand, I had had all this experience of teaching English as a second language in Thailand. So I was told that I could become a teacher in the School of General Studies, part time you know. Because they had these courses for foreign students. You know, as usual. So I did that for a few years until I was working on the dissertation, you know. And Bill was, this Bill Nemser was in that also, he'd been there before me. So there was also something called the American Language Center, as part of that program, was concentrated for foreign students who devoted the full day and so on. So I was in that for a while teaching and then later I went over to the other classes in the School of General Studies. So that was quite an experience there, and I met some very interesting people, both the students and the fellow teachers and administrators.

CAF: Who did Frank...Besides...So Nemser was someone that went to work at Haskins for a while?

ASA: He didn't. He didn't. But he did a lot of his dissertation work there.

[Vita: <http://www.uni-klu.ac.at/iaa/inhalt/958.htm> lists him at HL from 1959-1962]

CAF: Who was the young woman ... Was it a young woman that Frank told you to...?

ASA: Yes. She was from Argentina.

30:20

ASA: It's funny I can't think of her name at the moment. She eventually went off to the Netherlands. And she's probably still there unless she's retired you know. Her family was German, but settled in Argentina.

[<http://linguistlist.org/issues/20/20-2568.html> Obituary for Erica Garcia, 1934-2009]

DPS: I know who you mean.

ASA: Ah! Sure you know.

DPS: I do yeah, 'cause she was around Haskins when I arrived.

ASA: Yes. It's terrible. I knew her well and now I can't think of her name. I even learned some Argentinian Spanish from her. Oh yeah, 'cause he helped Leigh [Lisker] and me some in rounding up some Latin American Spanish speakers for some work we were doing.

DPS: I'll think of her name in a minute. She always seemed very German to me

ASA: Oh yes. In her...

DPS; manner, everything.

ASA: manner, and so forth. Yes. Quite right. She was married at that time to ...

DPS: Erica!

ASA: Erica Garcia. Thank you. There we go! Erica Garcia. G-A-R-C-I-A. Yeah. Well she... I guess she's alright for. She moved... She was a junior faculty member... She became... She got a PhD at Columbia and they kept her on for awhile. Until she went to The Netherlands. Frank said to me when he was going off to California, he said... And Erica had been in doing some work, you know, getting her hands dirty in some things. He said: You know she's a person that we want to try to attract here. And see if you can get her to come. And so I worked on it; I spoke to her. I mean, I knew her anyway. And she said to me in her very forthright way: Well, Arthur, I'm not handing you my soul on a platter. But I will come and work.

32:25

DPS: That sound like the sort of thing that she would say.

ASA: Yes. So she did for awhile, and I think if you look in the old quarterly reports, you know not the status reports, but the quarterly reports, you'll find a couple of papers by her. She may even have given a paper you know at a meeting and so on.

DPS: She was a bit of a tough cookie.

ASA: Yes she was.

CAF: So just before we finish with Thailand. You went to Thailand just because you were interested in Southeast Asian culture and languages and so on.

ASA: I happened... Yeah from reading and talking to people

CAF: So you just had the opportunity to go and, therefore, took a leave.

ASA: Well, I talked to people around Columbia and elsewhere you know about what I might do. Now, I wasn't established professionally. I was still a graduate student. I mean I was older than most of them I'd had three years in the army you know. But still you know I couldn't really put together a research project. I wasn't even at the dissertation stage yet, you know, to make a proposal. So I was advised to go down and see people in the United State Department of State. So I went down. I got hold of the right person, a gentleman there who spent time talking with me. And he pointed out that, at my stage, as I was saying of professional development, the best deal for me would be a Fulbright teaching grant. And they were available in Europe and in Southeast Asia and maybe other places. But he said it requires great deal of screening you know; they want to be careful of whom they send and all that. But he told me what to do, where to get the papers and all that. So I did, and I applied. And it was really a drawn out process. And when I got married, I said to Ruby. (She's in the area now, living in Willimantic. Ruby and I were divorced.) But I said to her, well before we rush ahead and get married here, I want you

to know that I am a candidate for this teaching grant in Thailand, and it's gone along quite a ways, and it looks as if I'm going to get it. Is that alright, you know? So she agreed that she'd like to go. She was a New York City girl from Brooklyn, and had never been abroad anywhere, so it was something to talk about. So I got it, and we went. Of course then they were propeller planes; we had a long trip; we stopped in many places on the way: Hawaii, Singapore, Shanghai and so forth...not Shanghai...Singapore and Hong Kong and places like that. And so we went there, and that is, of course, the beginning of my interest in Thai, which was one of your questions.

CAF: So did you... You were teaching English as a second language there, but did you make contact with linguists at that time in Thailand while you were there?

ASA: Yes, they were some floating around. There were some there. One who had just left, Willman Gedney, who has since died by the way [1999], had long lived there and all that. He did a lot of research on it. But I missed him. I met him later at Linguistic Society and so forth. But another one who was there, you wouldn't know the name I think, Marvin Brown, and he was earning his living by teaching at the American University Language Center, which offered courses in Thai as a second language for foreigners and English for Thai people, you see? My wife Ruby in fact got a job teaching... When we were down... we were down south for our first year on the gulf, the side of the gulf of Thailand. So she got a job working for them teaching a class in conversational English in one of the southern towns near us, Pattaya [??], And later when we moved to Bangkok, when they asked us to stay later and we agreed, so we moved from the south to Bangkok, because I had to be near the headquarters and also to be in one of the schools there. So she continued teaching, at the headquarters, the place... the building they had there. Of course the headquarters of the Fulbright foundation was there as well, and so I spent some of my time there, working on materials and what not. So that was the origin of my interest in Thai and then of course that remained with me over the years.

CAF: Yes, even til today.

ASA: Yes. That's right. So I have many friends there, who were disappointed that I never showed up last year and this year and so forth.

37:47

Friends and colleagues, you know, of long standing. And some have died you know... I've even been to some of their cremations if I happened to be in the country. So that was my interest in Thai and indeed ultimately the dissertation I did was on Thai, the vowels and tones of Thai and so forth, which later was published as a monograph with some revision.

DPS: Was Frank a member of your committee?

ASA: Oh sure. You're damn tootin' I mean he was really the principal advisor.

DPS: OK

ASA: I mean John Lotz was my official advisor, because he was a regular member of the faculty. But, in practice, the one I dealt with mostly was Frank. I was doing the dissertation work at Haskins and he was there, you know.

DPS: And the others were Lotz and Weinreich and...

ASA: Not Weinreich, no. Joseph Greenberg, and they had for the defense a man from electrical engineering also. I've forgotten his name, but he was not one of my teachers, you know.

CAF: What was your dissertation on?

ASA: It was called, The Vowels and Tones of Standard Thai: Acoustical. Measurements and Experiments. So I did production, the acoustics of production and then perception with synthetic speech, you know. [It was what was?] available at the time. And that was eventually published by Indiana University as a monograph, you know. It was a monograph issued together with the Journal of---what's it called---American---I can't think of it. But I could look it up

DPS: Carol's was published there too.

CAF: No, that was Indiana University Linguistics Club, which probably came later.

ASA: Oh. The club came later. Yes, it was not the club. Same place, same place. Yes, I remember. Right. This was a series in language and culture, published there. I think it was issued always as monographs going with a journal of American Linguistics, something like that. I'd have to look..It's funny I can't think of it.

CAF: So was this production data that you got on Thai for your dissertation. Did you get it while you were doing your teaching over there.

ASA: No. I got it in New York City. There were a lot of Thai graduate students around. Including quite a few at Columbia. Some branch of Columbia graduate..., some at Teachers College, some of them graduate faculty. And they were new fresh arrivals most of them from Thailand, you know. So I got plenty of material...of utterances to analyze and test subjects for perception. I would round them up. I really nursed them along. I had refreshments for them. I wanted to...They were hard to... they were not easy to get. But they were all on very friendly terms with me, because I could speak with them in Thai and this and that. And of course I still had some contacts back in the old country as well. I used the data from them, production and perception. In later years, you know I did other papers, alone or with Leigh Lisker, the tests were usually run in Thailand, you see when I was going there anyway. Yeah. So that explains the interest in Thai. It also explains my involvement in some of the minority languages of Thailand as I have been in recent years, because my dear friend Theraphan Luangthongkum there, with whom I've been an author, you know, herself is quite an authority on them. And she would always dig one out and then say well this is one we should look at in the village somewhere.

CAF: When did you start going to Thailand on a yearly basis?

ASA: It wasn't quite yearly. But every couple of years. Because once I was in harness at a university, which began in New York City, I couldn't just go any old time. So somewhat later, when I got a sabbatic leave I would spend it there, or on a few occasions I went there for shorter periods when I was able to combine a visit there with some international meeting going on in the summer, our summer, you know. Something like that. So I would spend a couple months there or something. Things like that. Once I spent as short a period as two weeks. You know between things there.

43:15

Because I had the extra support to go to a meeting.

CAF: Right. Then you could...

ASA: And I could combine them [with something] nearby. Something like that.

CAF: So when you graduated did you...you stayed at Haskins and you got a job in New York somewhere?

ASA: When I got the...You mean...

CAF: When you got your PhD

ASA: PhD. Yes *before* I got it, I was put on the payroll. Not long before; the year before. I finished the dissertation; I defended it in 1960. It was published later with some revision in 1962. But '60. But in 1959 Frank asked me if I would join the staff, because... And that's one of your questions here: How did I begin work there. Or how I was supported at Haskins before A40. Well, my support I can tell you came from the United States Office of Education and from the American Council of Learned Societies. Now how was that? Frank was persuaded, I guess by John Lotz, to undertake the making of X ray motion pictures with stretched speech, you see, of a number of languages. It was the Office of Education which was interested in having that as a possible teaching aid. So those languages were Mandarin Chinese, Syrian Arabic, and Standard Russian, and what was the other one....Russian, Chinese, Arabic. Oh we had another one from the American Council of Learned Societies, Hungarian. That's it; there were four of them. But Frank in negotiating this got them to agree that we must first make a pilot film on English just to shake down the techniques and so forth. And they asked me if I would join the staff and be the coordinator of all that, see. That would be essentially my project although other people would help with the work on it. So for... now and he also said as an another added inducement that: It's going to be slow getting set up to do all this, so that will give you more time finish your dissertation, on the payroll. So, you know, this was very good. I mean I was already well into it. I should add there that he made me most welcome earlier on even after I had taken the course to keep on coming when I could and continue doing this research. So I agreed. I was on there doing that. So for a few years, I don't have the exact dates in mind, I was supported that way, because it took awhile to do this. You know I had to deal with film processors outside across the river in New Jersey, because we weren't going to go and develop the...; we had to make work prints and match sound tracks with picture tracks, which I did.

DPS: Where was the X ray made?

ASA: X raying was done at Columbia Presbyterian Hospital uptown in Manhattan. We had ...Oh, it was all arranged. We had a radiologist there who was on our team. For the moment I don't remember his name. I'd have to look at the introduction to one of the films to see. I think we'd have it on the title or something like that. It was a friendly radiologist, and he just made sure we didn't over dose anybody, because...He set the limits. Whatever was known.

DPS: They were more liberal in those days, I imagine.

ASA: Yes, so we had to shield the camera as much as possible from noise...to record the sound. Because, you see, we were using image intensifiers for the X ray. You know essentially, this kind of X ray is essentially an elaborate fluoroscope. You know, you're lighting up a screen and photographing it. So there's an image intensifier that is attached to the X ray tube and you pass the radiation through and it's magnified by that thing. And it's focused. You have to focus it with cones and everything around the area, because we had lateral views. In addition, we made what I always called outer views. That is, at the Lab itself, we took these speakers and we had them go through the same scripts with ordinary motion pictures at regular speed so that the viewers would see for each category that we were demonstrating, normal speech.

CAF: From the inside of the vocal tract

ASA: Well, the outside of the vocal tract

CAF: The outside and the inside together, right?

ASA: It would be the next stretch. I did all that editing, you see, to put it together.

DPS: Was this a pioneering application of X ray to phonetics?

ASA: Oh yes, because we were stretching speech with a Vocoder, see, and I don't think that had been done.

CAF: Oh. So when you said stretched speech, I thought you just meant people were speaking slowly.

ASA: No, no no. They just talked naturally. But we took the films at a higher rate you see to get slow motion. That's how you get slow motion. But then the problem is to synchronize the sound with it. We did that with a multitrack tape recorder that had been built especially for Haskins just for that. It was called Rangertone. Do you remember that? It had 22 tracks on it.

DPS: Big console.

ASA: Yeah. Big console. Right. Upstairs. We could vary the speed of that. And using a Vocoder, a channel Vocoder, you see, we had the output of each channel going into one track on that wide tape you see. And then we had one channel, a separate channel, for the signals for, for the fundamental frequency, see, also for timing you see. So that we could keep track of that. And it took a lot of fussing with the Vocoder that we had to get it right for different voices and so on. So we had the help of an engineer there. The last one we had was a man who was curiously named David Speaker. And Dave Zeichner was my right hand man in this, you know. He was a technician. Did you know him?

CAF: Yes

ASA: You did, of course. Of course you knew him. He and I worked together. And we would get the thing all set. And Dave Speaker would come over. It was very funny. He would reach his hand out. And he was in charge of the Vocoder actually. It wasn't unreasonable. He would reach his hand out. He was listening to it as we were working. He'd say: You know, it could just be adjusted...He was all set to reach...And Dave and I would both shout out: Don't touch it!

51:13

Because we know that on either side of it it would start crackling or something like that. We'd worked so hard! So we made all those films that way. We had to get native speakers. We had consultants, linguistic, from here and there. I guess John Lotz made contact with them for us. To prepare the scripts and to engage informants, speakers you see. So the most lighthearted crew was the Chinese one. A joy to work with. The ones that were sullen and serious were the Arabs, you know from Syria. And I think it was because we wanted the vernacular Arabic, not classic, see. And we had a contact man from Georgetown University. Our linguist was Ferguson, Charles Ferguson. You know the name? You know, yeah.. Because he'd worked a great deal on Arabic and so forth. And he got us this man Mouktard Anni I guess his name was from Georgetown was very nice, and was also from there, Syria. And he engaged the speakers, who were mostly young men, four or five of them, and went over...rehearsed with them. He would tell me, take me aside and say he was having a hard time. Just leave me alone with them for awhile. I have to convince them that what we want is how people really talk, not classical stuff, and so on. For that, we had script cards made up that way, in Arabic script you know, writing the vernacular. He made them. So we did it. And one night...But then we were living, I and my wife and I guess we had maybe our first child then, were living up in Morningside Heights near Columbia University in an apartment. And one day I went

out for some milk, I was walking along the street, and suddenly I saw one of the Arabic speakers walking behind me. And I said: My God, they're out to get me, because I'm corrupting their language. But then he said hello to me. I said what are you doing in this neighborhood? He said, well, I have cousins in your building. (And they were people I knew actually.)

DPS: This is my naivete, but I don't fully understand what was going on there. You were relaying the X ray movies to the output of the Vocoder. They were in synch.

6:24

ASA: We passed the..., The speakers...the language speakers were in there in the hospital sitting in the apparatus there. Because the tube was aimed at them and so forth. And they simply...

DPS: They would speak the script

ASA: spoke the script in the normal way. And we had the camera going at a high rate of speed for slow motion. I won't bore you with the frame rates. I could dredge them out, but it doesn't matter. So that's all they did, you see. They had already separately at the laboratory recorded the same thing for what I called the outer view...just the face, a frontal view.

CAF: Now did they say something like a Rainbow passage analogue. I mean there couldn't be a whole lot of speech so was it enough to try to get all the consonants and vowels?

ASA: We had scripts that were divided into groups to get all the consonants and vowels. In the case of the Mandarin also the tones. Not that you could see anything, but at least for the record, you know. Then they would go the hospital. We had to set up appointments of course, do various things, and one language at a time. We did that. So I had two sets of films, the normal outer views, 16 frames a second I guess it was, and then the slow motion ones, which had to be edited and put together so that, for any group, say it was on a group of consonants with vowels of course, would be matched with its corresponding X ray sequences, by the same person. So that was what I was doing alone in the laboratory. Sitting for hours at the editing board which I think we still have turning cranks and listening. And we had a synchronization signal that flipped, you know, made a click so if it appeared on the sound track, I would also see it, a rod flipping on the picture track, and then that would be the place to synchronize the two tracks for that stretch. Now and then it didn't come through and I had to do [bone] synchronizing. You know I would sit there and listen. I was running the tape over the playback heads and looking at the film you know through a magnifier and finding some landmarks where I could synchronize them and then I would go through and make sure that it worked. That's where the cell that was supposed to give us a signal somehow failed, see. Unbeknownst to us. But most of the time, it was alright. So I didn't have to do that. But that kind of problem did arise sometimes. So we would send these things out to our professional film people across the river, and they would make up a work print for me to inspect, see. And if that was alright they made the good copies that we could use for projection see. You know we had fade in, fade out for beginning and ending of sequences, and I would put the marks in, code marks that they usually do on the film for that. We also had to put in, I guess for the X ray, I don't remember now, I think we put in elements of the script on little boards as it were and we had to make titles of course. So it was all that...It was quite a job really.

CAF: Tedious.

ASA: Well it was also interesting because I was looking at the articulations to do this.

DPS: It's the acoustic displays that I'm confused about.

ASA: The acoustics, well for the normal film, it's just the regular... the sound track was just what we recorded. For the stretched speech, what we did was to take... You know the Vocoder you recall has an input, a set of filters for analysis, and an output, a set of modulators, each one corresponding to one filter for the whole spectrum whatever it is. So we were going up to about 5000 Hz, 6000. And these signals for the articulation, that is tracking the formants, we had the signals going into the various filters and modulators of the Vocoder. The outputs of those were going onto separate channels of the tape recorder, which we could then play back at the appropriate speed to get normal sound out. As if they were... just as it was in the original. Except that what you heard was no longer the voice of the informant, but his vocoded speech and of course this was not perfect. It was better with some people than others that's all. There had been a lot of work done at the Laboratory with Vocoders. Some of the classified work for the Department of Defense had been done with Vocoders. The army was using them. The military was using them. So the technology was not unknown, and we always had an engineer there who could supervise. The last one was Dave Speaker. David Zeichner himself was quite knowledgeable about it, and we had a lot of tapes around with his voice, stretched or shrunk as the case may be. So what you would hear... Have you ever see one of these films?

DPS: Must have. But it's been a long time.

ASA: Long time. We could find one probably and play it..at the Lab.

CAF: Just one minute. I want to start this and restart it.

File: ASAoralhistory2

CAF: The purpose of Vocoding at all...was that to enable you to slow it down to match the X rays being slowed down?

ASA: Yeah.

CAF: It was, OK.

ASA: To have X rays in slow motion so that people could see better what the articulators were doing.

CAF: And then they would hear...

ASA: And the speech to be linked to it temporally, exactly.

CAF: Did that get used?

ASA: Well, we fulfilled the contract. Sent them the required number of reels to the Office of Education. In one case, the Hungarian, to the American Council of Learned Societies (ACLS). I believe that they were used in some schools for the language teachers. Back home at the Lab now and then a student would use one to help with some research. So there were some people who did that. Some colleagues who were out in the field other places asked to see them, to borrow them, or to have copies. But I don't know how widely they were used. The only ones I heard about were the people who were interested in the phonetics. So that was my first assignment. Otherwise, for other things I was doing there before A40 came about, I guess I had support from the Department of Defense, you know, because those were our main contracts. Is that how you...

DPS: I think so. But you know, it was never made explicit.

ASA: No, but you filled out a sheet or something.

DPS: I suppose.

ASA: I mean we had projects that were always numbered the way they are now. So it depends on what the project was and so on. The major support was of course the Department of Defense. Sometimes it was through the Office of Naval Research. But usually it was Bethesda, Maryland you know where the CIA is and all that type of thing

CAF: But was it largely...So the project you just described was a very kind of applied project, not a basic science kind of project. How about the Department of Defense? What kind of work was it?

ASA: We were doing work on speech encrypting, you see. Some of that was classified. And the people who were working on it directly had to have security clearance. I was not one of them. But the way I always described it was that, in the penumbra of this research, the Department of Defense tolerated some basic research, you see, that could go on as long as we did...as long as we fulfilled the contracts you see. So some of us didn't work explicitly on things of concern to the Department of Defense. We may have had some support from them. We, for example, had to have, for some period, perhaps you remember this, clearance from Fort Meade for any paper that we were submitting for publication or paper we wanted to give orally at a meeting.

DPS: Is that right?

ASA: Yes, yes. It had to be cleared. We would send copies down. It was always a nuisance, because sometimes you work to the last minute. So, we would do that. And

...

DPS: Fort Meade was the ASA, or?

ASA: Yes, What was it called? Well, I think it was always loosely labeled as the Department of Defense, but specifically it was,,

DPS: It was ASA. [Army Security Agency?]

ASA: ASA, I guess it was

CAF: This was not the Acoustical Society of America.

ASA. No.

DPS: I'm trying to think of

ASA: I'm trying to think what the acronym stands for.

DPS: Well, Doug Hogan was...

ASA: Doug Hogan, exactly!

DPS: was one of the..

ASA: ..officials from there. Yeah. He would come around and inspect. Because we were under contract. And we were always alerted to that. We would put on ties. Many of us had neckties from the,,, discards, from the factory downstairs that the elevator man gave us. But usually they would say that. But Doug Hogan and before that there was someone else whose name I can't remember. But that's how we met Ignatius Mattingly.

DPS: He came with Doug Hogan once. That's how I met him,,. met Ignatius.

ASA: Well, he came more than once though. He started coming regularly with him. And that's how we got to know him. And later when he wanted to leave government service and continue his graduate studies, you know because had a masters degree, wanted to get a doctorate at Yale. I guess Frank and Al, having gotten to know him and so forth, decided that he would be a good addition to the staff. So when he went back to Yale, to

work on that, he was also linked to Haskins. Later when we moved the Laboratory, he was by then in the English Department at UConn without his doctorate yet.

CAF: Oh really?

ASA: Oh yes, he was still finishing that at Yale, but he had a teaching job. And by the time we founded the department [of Linguistics at UConn] he had the degree. I came in as head. This is '67. He came in, and that's when Philip Lieberman came in. Now Philip Lieberman was a late addition. You asked me how he came. What happened there was that Phil had been in the Airforce. We used to see him in uniform, you know. He was working on research and he did a lot up there, up in the Boston area. What was that airfield there? I can't think of it. But he was there at a base, and he would come down to Haskins sometimes, so we knew him. To consult, and some at meetings. And then he apparently informed Al maybe that he was thinking he would like to get out of the service and just go into research somewhere...or to an academic position.

DPS: It was called Airforce Cambridge wasn't it.

ASA: That's it exactly. Airforce Cambridge, yes, thank you. So Al, I think it was Al alone, who managed to persuade the dean of the College of Liberal Arts and Sciences at UConn and maybe above him to create yet a third position for this new department that they had already agreed to found, Linguistics, with Philip Lieberman. Now, between you and me, I will tell you that I had misgivings at the time. Because I knew Phil well, and I thought... by then, I'd seen a lot of him. He thought of me as his friend and all, and I was. But he was difficult in many ways. You know, he would make trouble and he did. But still they created a position for him. No one consulted me about it, by the way. It was already arranged that I was coming in as head, but neither Al nor... Ignatius was already on the scene in the English Department. I told you.

8:30

Ignatius, by the way, perhaps you know this, was on the committee that looked into the desirability of forming a Department of Linguistics. The late Homer Babbidge was President of UConn at the time, and he went along with it and said let's form a committee and see. The committee put in a favorable report. The committee was made up of people from anthropology, sociology, and some other departments, English maybe. And Ignatius was teaching a course in linguistics in the English Department which gave it up later, you know. An introductory course, undergraduate. So they brought Philip in, and he was around for a few years of course.

CAF: Yes, I took a course from him.

ASA: Yeah. Oh he had a lot to offer too. Personally he was very good to me. All I had to do was call him up and say: Phil I'm having trouble; I'm trying to rewire this switch. I want to put an extra light in on the porch or something. He would say: Don't do it! Stop! Stop! Stop! He said: I'll be right over!

CAF: Wiring your porch lights? I thought you were going to say some linguistic thing you were doing.

ASA: Well I mean to add something to add another device or something like that. He said: No, I'll do it for you. He'd come running over with his tools and do it!

CAF: Wow! Good guy. A PhD from MIT.

ASA: Well he had degrees in engineering, you see. Bachelors and Masters, I think. And then he went into linguistics.

DPS: Can we go back to Ignatius for just a moment?

ASA: Yeah.

DPS: Did you have the impression that Ignatius was brought in *because* he was interested in speech synthesis?

ASA: Oh! Well, yes. Yes, he was interested in that. I'm trying to recall the chronology here. When he went to England.

DPS Yeah. He worked at the lab of the British Post Office, with a man called John Holmes.

ASA: John Holmes, yes.

DPS: Or Shearme was another person

ASA: Shearme and Holmes

DPS: Shearme and Holmes, yeah.

ASA: Yes, they worked together

DPS: And, I don't know whether that was before or after we first...

ASA: You see I don't remember the chronology of that, but certainly he was very much interested in that and worked on it later. I don't know. Beyond that I can't say, because I knew Ignatius just from his visits and so forth, but I didn't know too much about his interests. Then he got to work on his dissertation, which was, in fact, synthesis by rule and all that. He took the degree through the English department, but he had outside advisors.

11:36

I don't remember, I mean, maybe one of the... maybe Al was on it or Frank Cooper, I'm not sure. One could look it up and see I suppose.

DPS: Sure. Yeah, his thesis was in the Status Reports

ASA: Yes issued as a supplement. Right. OK so. So you know how I began my lines of research on Thai because of that. And: "What recollections do you have of Frank Cooper as a teacher and mentor?"

CAF: And President.

ASA: And also... yes. I was just reading one of the questions out there but later you have that... Yes, well. As a teacher, I found him was very good. He was very mild; he was not dramatic or exciting or anything like that. He didn't have any particular ax to grind.

Though he presented a lot of the Haskins work. He had us read all the literature that had been published up to then, you know. This was '55. He made us aware of other labs, other peoples' work, in Britain, and the Continent, in Sweden, He, as I said before, he offered the course, this first graduate course in acoustic phonetics at the Laboratory, and there, of course, he had access to all the facilities.

CAF: He was... It's remarkable, though that he was entirely self-taught, wasn't he, because his degree from MIT was what in... physics, or..

ASA: physics

CAF: Yeah

ASA: He had degrees in engineering and then in physics, but physics as the PhD. Well, I don't know how much that included acoustics, see, I mean, certainly, he had the background for it, the mathematics and so on. Because we talked about such things, and he gave us readings. And some of those things were sort of difficult for us, because we didn't all have that background, and he discussed them in class, you know, explained the difficult points that we couldn't handle. And put on very clever demonstrations, you know, using the facilities he had there, which helped a lot.

DPS: I'm curious. Did he talk about the work of Martin Joos?

ASA: Yes.

DPS: He did.

ASA: Oh, he recommended reading the book [*Acoustic phonetics*, 1948], and we all read it. We all read it. I mean there was hardly anything available of a pedagogical sort, you know.

CAF: What year was Joos' book out? It was...around that..

ASA: Around ...I'm trying to think...19...

CAF: '45?

DPS: '48 or something

ASA: Yeah. '48, or '50. I was going to say '50, but I don't know.

CAF: Didn't he name the field? Isn't he...Wasn't his book...

ASA: I guess he was the first one to use the term "acoustic phonetics" as far as I know, and other people used it. We don't hear it too much nowadays. You know, people use "speech research," "speech science" and so on. But still, that's what it was.

DPS: There was Fletcher's book from the... long time...before the war

ASA: Yes, sure we were referred to that too. Fletcher. We read all those guys. But that wasn't...

DPS: No, it would have been the aspects that would be relevant to telecommunications

ASA: Yes, sure, sure. But you know we read some of his work, Fletcher. We knew who he was, what he was doing...Joos, of course, was interested in language. Martin Joos, he was a linguist. But he had a background in engineering as I recall. And he did this book. So we all read it. It contained some interesting speculation that turned out to have some foundation you know and so on.

I was going to say: Frank would assign articles in the field for us to read. A lot of it was Bell Telephone stuff, you know.. It wasn't just the Haskins productions. I even, through Frank met some of these people at Bell, Jim Flanagan, Homer Dudley. I became very intrigued with Homer Dudley and his theories of speech transmission, you know, as a kind of an analogue to modulating a radio signal on carrier waves.

DPS: Is he the inventor of the Vocoder?

ASA: Yes.

16:47

I first...as a child, I first saw a perform[ance] of a Vocoder at the New York World's Fair. They had a demonstration going on using a keyboard, you know, to create synthetic speech, you know.

CAF: So Frank...One of the questions I had about the early speech work that was stimulated by the failure of the early reading machine was whether Al and Frank were kind of, in some sense, reinventing the wheel. And that's why recently I went to look at Martin Joos's book just to see what was known about things like coarticulation and there wasn't much there. It sounds though if Frank was able to teach a graduate course in something like acoustic phonetics, he really did his homework. So

ASA: Oh yes!

CAF: So maybe he knew a lot about whatever was out there in speech in a way that...

ASA: Oh, he did.

CAF: So maybe I'm wrong about..

ASA: He pointed us in the right direction, you know. We read things. You know, Peter Denes was at Bell Labs, and he had been in England with Dennis Fry, and we got to know him. I mean I got to know Peter Denes well. He died very young.

DPS: But this was still at least 10 years after the earliest reading machine assignment that they took on. So he would have had some time to...

CAF: He would have had time. It's just...Michael Studdert-Kennedy sort of verified my intuition about AI that he was not a reader. I mean he wasn't a guy who did his homework that way. But Frank probably was if he was teaching acoustic phonetics.

ASA: He taught that course a few times. And he also, I told you, got into the undergraduate course. Oh no! That was, excuse me, that was not an undergraduate course. It was a graduate course. I misspoke if I said that.

CAF: You did. At least I understood that.

ASA: It was a graduate course that everybody took on phonetics and phonemics. Not everyone took Acoustic Phonetics, which was specialized. But he did a part of that course. Yes, and that's what I was called upon one term to teach. I should say about myself by then I had done some part time teaching here and there. I was called upon to teach a course at Hunter College in the evening you know. And I taught one Saturday mornings another year at NYU. And you know people got to know me and all that and would get hold of me. It didn't ever interfere with the Laboratory; we set things up that way. And ultimately before coming to UConn of course, I was at City University of New York.

DPS: How did that come about?

ASA: That came about because I...Frank had said to me that he was very much concerned about my career. You know, I was his protégé, his product you might say. And he wasn't sure about how long the Laboratory was going to last. He had some misgivings about support and so forth. He said; You should really keep your eyes open for an academic slot. I mean, the model was AI, and then Lou Gerstmann also was there; he had an academic spot later. And other people, Leigh Lisker who was at University of Pennsylvania. He said; You should try to do that too and be with us the way they are. And try to get something in the region, nearby, stay within reach, he said. And one day...And of course, I knew people round and about at some of colleges of City University, at Columbia, NYU and so forth. I got a call from someone you might not know by name Arthur Bronstein.

CAF: Oh yeah. He worked with Susan N...He was Susan Nittrouer's advisor, I think. At CUNY.

ASA: Was he?

CAF: I think so.

ASA: He could have been on her committee or something.

DPS: I thought that Michael Studdert-Kennedy was her... Susan's

CAF: No, but she also worked with him a lot.

ASA: For her dissertation maybe it was Michael. But maybe, if Carol says so, she also had Arthur Bronstein. Well, Arthur Bronstein was a kind of a traditional phonetician who specialized in American English. And he was in Speech and Hearing at Queens College. So he called me up one day at Haskins and he said: "Arthur, we're looking for someone in Speech Science, we have a position opening up. So and so is retiring. "I don't remember who it was. Can you recommend a few names that we could consider, that we

could approach. So, having just recently talked to Frank about this, I said: Well, how about me?

21:47

See? He said: "Would you be interested?" He was quite pleased. I said: "Yeah, I am interested. I explained. I'd like to be in the area and Queens College is certainly in the area." And it was to involve not just Queens College, but the Graduate Center of City University. But the hiring would be through Queens College. At that time it was mostly done that way. Kathy was hired that way too through Brooklyn College. Kathy Harris. So I mentioned this to Frank. He thought "Oh yeah, go ahead." So I got interviewed and I was hired. So I came in as an Associate Professor, you see, because already I guess I had some publications and this and that. And this was perhaps a bit of a bitter pill for some of the people there. Although nobody attacked me or anything like that. But because you know the history of the City University is that of a medley of separate colleges emphasizing teaching and not too much emphasis on scholarly or scientific work although there were always a few people who did. So I went in that way. So I was there for three years. Interrupted—a total of three years--but one year, in between is what you mention here in one of the questions here when Frank asked me to mind the store while he and Al were out west.

DPS: We want to hear about that. But...

ASA: But you want to bring up something else first.

DPS: But I wanted to ask you about Lou Gerstmann whom you mentioned a minute ago.

ASA: I did mention him, yeah

DPS: We should have put him on the sheet, but I forgot to do that. Because I don't know. ..I'm very vague about how...what is role was at...

ASA: Well he was on the staff. He was working. His name is on a number of the early articles.

DPS: Well, He...his name is on the earliest article that I know of on synthesis.

ASA: Uhuh. And some other articles, I think, if you look through the Haskins publications.

DPS: Gerstmann and Kelly. Or Kelly and

ASA: Oh that was published. That's through Bell Labs

DPS: From Bell Labs. But it was on synthesis

ASA: Yes, you're right. But by then he'd left Haskins

DPS: He was at Haskins before he

ASA: Before he went to Bell Labs

DPS: So he was at Haskins when you arrived?

ASA: Yes.

DPS: OK. So he's a person we need to...

ASA: Yes. He left at one point. You know I guess you know for his career or what not, I don't know. He left altogether, I don't know the exact year, and got an academic position. I guess he was at NYU

DPS: At City. He was at City, I think.

ASA: At City College? Not NYU?

DPS: No Well, I don't know. I really don't.

ASA: Because I thought it was NYU, but I'm not sure.

DPS: You're probably right; you're probably right. [See url below for obituary: City College]

ASA: Well, I'm not sure.

DPS: I knew him slightly.

ASA: Well, I knew him pretty well while he was around. He was always very nice to me. I remember I had a statistical problem with my dissertation and he gave me guidance, as to what to do. He was friendly. He was something of a gadabout, you know, personally.. He was--I don't know if this term is still used—I guess, a womanizer or something. He went through three, four or five marriages. I don't even remember anymore.

DPS: That's curious. But he was very smart.

ASA: Oh yes!

DPS: And something of a man ahead of his time perhaps, a little bit.

ASA: He may...I suppose you could say so. I liked him well enough. But he was always looking out for other opportunities. I guess it's all right. I remember once, I was walking along the street with him, he pulled out...I said: "Where are you going now?" He said:" Well, I have an appointment" I said" "You have so many of them" He said : "yes", and he pulled out a pack of cards, in one of these folding plastic holders and he opened it so it fell down on the street. And these were all of his contacts where he was consulting, I guess.I don't know. He moved on to Bell then to an academic position. He died very young. Sad thing to think about. But I don't even remember why, what happened to him, but he died, I guess of an illness.

[Gerstmann died at 61 in 1992 of lung cancer:

<http://www.nytimes.com/1992/03/21/nyregion/louis-gerstman-61-a-specialist-in-speech-disorders-and-processes.html>]

DPS: He was a chain smoker.

ASA: Well, there was that. That could have been a contributor. I don't know. I don't know.

CAF: Isn't his name on the 1952 and 1954, the pikapu and didu papers? I think it is.

ASA: Yeah. I think so. If you look back on the papers from the fifties, you'll find his name there.

DPS: But he was there when you arrived.

ASA: When I arrived in '55. Well, I arrived in '55 as a student, and I guess I saw him around then, because I started going to Haskins to the Laboratories to start research leading to my dissertation. Whenever I could fit in the time, you know. Because I was still pretty busy at Columbia itself. Still taking courses. I guess at some point I gave up teaching. My father said it was holding me back and gave me a lump sum or something to help us live better.

CAF: Oh, I see, so you didn't have to teach on the side.

ASA: That's right. That's right. So we moved in to a nicer apartment. Oh, we had a child then, Joseph, my elder son. He was concerned about that so...

CAF: So how about...What's your impression... One of the things I'm interested in is people who were at Haskins as the succession of presidents went by. So I guess Frank was the president when you were first at Haskins and Caryl Haskins was out of the picture pretty much.

ASA: Yes, Frank was, I think,, in fact , the president, de facto. But when Caryl's Caryl Haskins' title ended, I'm don't know exactly.

DPS: '55, I think.

ASA: Around that time. So that's when I arrived back from Thailand. Because John Lotz introduced Frank Cooper as Director and President of Haskins Laboratories, so maybe it had just become official. We would see Caryl Haskins from time to time. We always knew he was there, because he had this loud laugh. He was always very happy and cheerful. He would come in. There was an office reserved for him. It was like a shrine in New York. Right? Finally, it was decided, maybe with his permission, that it did not have to be kept for him. It could be used by other people.

DPS: Kathy told us that she got told off.

CAF: Oh, it was Kathy, I was thinking it was Michael. Yeah, looking at the calendar

DPS: For looking at the calendar on Haskins' desk. .By the woman who was, I guess it was his part time secretary.

CAF: She just wanted to find out where Caryl Haskins might be, but that was completely unacceptable.

ASA: Yes I think you told me that story. I wasn't aware of that. Yes.

DPS; But he didn't have any real role in research as far as you know.

ASA: No. I mean he was doing his own research on social insects and that.

DPS: Doing his own thing.

29:30

ASA: Yeah. But he would come. I mean in the earlier days, of course, he and Frank and Seymour Hutner and all had done some work together. You know before they came to New York. But no, he wasn't involved. He was in Washington, DC and sometimes in Connecticut. Caryl, and Edna Haskins would come too, because she sat on the board as well.

DPS: Looking at Frank's list of publications, I only could find two that were coauthored with Caryl Haskins, and they were, you know, very early. From the '30s.

CAF: From the '30s

ASA: Yeah Probably so. Right.

CAF: Yeah. So Frank really just changed the direction of his research with... Beginning to develop on the reading machine and from there out. He just completely...

ASA: That's right. That's right. Of course, when he...in the earliest days, he had no idea he'd be going into speech research and those things.

CAF: And Michael sort of characterized him as paternalistic, and somebody else said, this was not a negative comment, but somebody else said: Frank wrote all the grants when he was president or at least until A40 and so on, so that other scientists didn't have to be bothered with the difficulty of getting money, because he wrote the grants.

ASA: Well some of them were contracts, you see, with the Defense Department. They were never grants.

CAF: But I guess my point was: was he pretty much choosing the direction of the Laboratories by doing that?

ASA: Yeah. By doing that. But on the other hand, the scientists who were invited in, and the young people, budding scientists, really had a lot of freedom to...

CAF: That's been my impression of what's great, what was great about Haskins for a long time. Caryl Haskins has a quotation that is oftentimes used just to characterize his view of the ideal scientist. And it's something like the "undirected scientist," the lone scientist walking by riverside just thinking his great thoughts. And I sort of think of

Haskins as being a place where, during Al's time especially, he would try to bring very talented people in and just let them do what they thought was important to do. And would you say Frank sort of had that philosophy as well?

ASA: Oh yes, I think so. I mean, that's how he struck me, especially that year he was going to be away. I told you about that... He encouraged me to bring Erica Garcia in for example, and so on. Because we hadn't had so many... We had research assistants, but a lot of them were hired through the newspapers. I had some people there who were not graduate students, you know. They were hired off the street you might say. They got involved. There were a lot of mechanical tasks, like splicing, cutting and splicing tapes to put them together.

[Pause for phone call]

32:44

CAF: Ok

ASA: Yes, you see. I would say that I was very soon struck by the atmosphere there. It was so enriching, I mean, it was a heady mixture you know of people and ideas, freedom to do things. And very interdisciplinary, you see. So I sort of grew up in that at... that kind of setting and got quite used to it. It became normal for me to be in touch with people from psychology, or something else, engineering, you know, medicine.

CAF: Yes, that is one of the great things, that people from different disciplines all sort of converging on the same place with the same general kinds of interests. Makes it a great resource.

ASA: That's right.... You asked how I began working with Leigh? I can say about that that I became aware of him while still working as Frank's student, doing work at the Lab. It was inevitable that I would bump into him when he was one of the linguists there. And I became attracted to him, by his way of thinking and talking, and what he was doing. And we would often talk together, I guess sometimes we'd have to have meals together if I was there at meal time, you know. And so, it was very easy to fall into a collaboration later when we were discussing things. I think you specifically ask about VOT somewhere here. Yeah. Relatedly... oh that was "how did you begin working with Leigh". Well that was how. Because we had some common interests, we were talking. We had some similarities in background. He too had spent a lot of time abroad, in India and thereabouts and also in the army. He and I were the only as far as I know the only war veterans there. So there was that.

So we were talking on a number of occasions about this voicing business. Now Al and the others had already done this study on F1 cutback, you see. And we decided that that yes, that was a really good contribution, but it was part of a larger picture. And we started reasoning about that. And thus evolved this notion of laryngeal timing, you see, and we needed a reference point for it, so since this mostly involved stop consonants, oh not exclusively but mostly, you know, a convenient reference point was the moment of release. And thus initial position and maybe medial position and not so much final position, Because there are a lot of languages that don't even have a voicing contrast in final position, you know. So we focused on the initial position or word-initial anyway although we did do some sentences. So thus came out that 1964 paper in *Word*, which happily is still cited to this day.

CAF: Lots. Yeah.

DPS: Was there something before that, an ASA [paper]?

ASA: Yeah. We gave a couple of oral papers. And we had a paper, the first oral paper on perception, I guess was the International Congress on Acoustics in Liege Belgium, and I went. I was there. Because I was the first author of that. I gave that. But I think that appeared after '64. There may have been... You know, I'm not sure, Don, there may have been one or two oral papers that appeared only as abstracts in something you know in print, but were given orally before the '64 paper came out. I'd have to ...I, you know, alas, have not kept a record of all oral presentations.

DPS: I haven't for me either.

ASA: Either, no, I see some people do.

DPS: A lot of people do.

ASA: A lot of people do, yeah. And, then I guess it would be useful sometimes to be able to look back and say that, but I...rather than having to do a search through journals and edited books and so forth. Yeah. So we were working on it for a while. We probably did have at least one or two maybe oral papers given by him or me or both of us if we were both present, but usually one of us, before the '64 paper came out. Because there was always that lag in publication, and it was in a linguistics publication, in *Word*. So, of course, then we had a bunch of other papers that came out. Lisker and Abramson, Abramson and Lisker. Some of them were at conferences, International Congresses of Phonetic Scientists, and appeared in the proceedings. Some were in articles. Toward the end of that, Leigh had at least one or two papers by himself when I was diverted onto other things.

DPS: Do you have a recollection of what Leigh was doing before you began collaborating? I mean he was there earlier.

ASA: Oh yes.

DPS: From what about early 50s?

ASA: Well, I think so. Or, '52, '53. You know, I just can't think.. I mean, he had an article on... One that I remember was something about /ε/-/æ/ distinctions in English, he'd done a publication on. And then... There were some other things. He was involved with other authors too. They.. He was one of the authors, wasn't he, on one of the early papers on synthesis by rule?

DPS: Maybe, I don't know.

CAF: Oh, he might be. Didn't we both look at it? I think I know what one you mean.

ASA: Yeah. I'd have to look it up. I'm not positive, but I think so. So he was doing various things. He was also engaged in some publications that had nothing to do with the Laboratory. He was called upon to do a textbook on, I guess, the Tamil language, one of the Dravidian languages that he did with drawings by his wife, Sarah, in it. And see he had something of a name also for south Indian studies you see.. And earlier in his career, at Penn, he sat astraddle two departments, Linguistics and South Asian, see.

41:00

CAF: Yeah. I think he... I guess he was recorded by Pat Nye in the transcripts [Oral History, 1989] and talked about that a little bit.

DPS: Yeah. I remember now a little bit. He had a kind of traveling fellowship where he went around and visited labs, phonetics labs.

ASA: That's how he met Martin Joos. I think.

DPS: Yeah he talked about that that he... He was a graduate student in linguistics and decided that he was interested in phonetics and didn't want to pursue general linguistics.

ASA: Yeah. Well, he got the degree anyway. In linguistics, but his interests certainly moved to phonetics. Yes. That's right. Of course, when I met him I was also interested in phonetics by then. So that was one of the things that cemented the relationship with him.

This business... You asked me about when I was at the ...my being at the helm when they were in Palo Alto, Al and Frank. You understand, Frank was in touch with me. He would call once a while. I would call him. He just couldn't keep out of it altogether you see. So we would talk on the phone. I would tell him any problems that had come up. I was really just sort of making sure everything was harmonious, see.

CAF: Caretaker president.

ASA: Caretaker, yes. That's right. I didn't make any big decisions, like that.

CAF: Who else would have been in the administration then? Would that be before the time that Pat Nye became an administrator?

ASA: Before then, yes.

CAF: This was '60s somewhere.

ASA: Well, yes, in the '60s, right, right. So there were some interpersonal difficulties that I would handle, talk to people. The technicians... You know John Borst, the engineer, was a...

DPS: He was a grump.

ASA: a very gruff person and very critical. He was full time on the staff, you see, and he did a lot of the work there. But he was that kind of person. And he had these electronic technicians under him, young men, and they were...you know, they were insulted by him and so forth, and I had to go and smooth things over. So that was one of the things I did.

I 'm trying to remember was that when Sven Ohman and ...

DPS: Bjorn

ASA: Bjorn Lindblom were there. In my time? They were there in my time, but I don't know if it was while I was caretaker.

DPS: They were there before me.. 'Cause I came in '65 and they had already left.

ASA: Yes, and that was after I had been this caretaker also wasn't it?

DPS: No.

ASA: You were there when I was caretaker? Oh. OK. Then it wasn't... Then I didn't have that. Because they had some problems with Kathy, you know. Well they ..you know, access the equipment and so forth and things like that. They talked to me for some reason. Therefore, I thought maybe it was in this period, but it wasn't.

Some of the people in the supporting agency in the Department of Defense would call me. They didn't come around and talk to me. One of them, maybe it was... Maybe it was ...who was the one you mentioned? Flanagan? No. From the Department of Defense who came around?

DPS: Hogan

ASA: Hogan. Doug Hogan. He would call me. He said: "Listen" He wanted us to take on more work for them. He said; "Can you persuade Frank Cooper to do this?" Well, I'll pass the word on, I don't know if I can persuade him, you know. Things like that. And then, there were discussions about a possible move. People were beginning to feel pressure about moving out of the place. I had calls from people about where we could go. There was talk of taking over one of the old World's Fair buildings, for example. I guess,

we never looked into that. But, so there were things of that sort. There was the administrative staff there you know handling the business and all the.

DPS: Right. Mr Huey was still there.

ASA: Mr. Huey...Ray Huey was still there

DPS: Then there was the woman in charge, a [burly] woman

ASA: That was...I can't think of her name, but she was the head of the office you might say. But she'd been there a long time. And she was alright.

DPS: She didn't suffer fools gladly.

ASA: No, no she didn't but she was good. There was a secretary. Frank had a good secretary who was there.

DPS: Oh yes.

ASA: You remember her?

DPS: Oh yes, indeed, but I can't think of her name.

ASA: Giddy in some ways, but she was efficient; she was good.

CAF: When did Alice Dadourian come; was that not until we moved to [New Haven]?

DPS: She came before.

ASA: Yeah, In New York. Yes. So, I have to say that there were no serious changes. I thought of... You know I would joke with people, I would say...At that time there was all this excitement about dolphins. I'd say: "Maybe I'll tell Frank I'm going to order a dolphin so we should have one too, and put it somewhere"

CAF: Who was it went off to study dolphins?

DPS: Jarvis. Jarvis Bastian

ASA: Jarvis Bastian. Went to California, I think. Yeah. That's right. Jarvis and I had a study together. It only became an oral paper. I guess we never wrote it up for publication. I just don't remember what happened.

CAF: I guess that was his legacy, wasn't it, because we were talking about another paper that Al said on the transcripts he wept when he thought of what a great study it was and it never got published because Bastian just wouldn't write it up.

ASA: Well, I can't blame this one on Jarvis. I think we were working on it together. I just don't remember all the circumstances any more. It had to do with Thai, we were doing something...speech rate and perception of vowel length, distinctive vowel length something like that. I may still have the data somewhere; we could dig it out. Is he still around somewhere?

CAF: He is. He's still.. He's at...one of the Californias, Davis?

DPS: Davis, yeah.

CAF: You can find him if you google him.

ASA: Yeah. That's right. Well, I have to be sure I'm ready to work on it before I google him.

CAF: He might not be..

ASA: Yeah. So I don't know. Then you say, yeah, did my experience give me any new insights about the workings.. into the Lab. I don't know. You know, that time that they were away. Everything seemed to be much the same. And I didn't have any big decisions to make. I was just the caretaker as it were. The only thing.. the only thing dramatic or traumatic about it was that it involved my resigning from the City University, you see. And I felt so indebted to Frank that I did it. You see, because there was no other way. He suggested getting a partial leave, reduction in salary, which could be

compensated for by the Laboratory and so forth. But there was no way to do it. And of course, I discussed it with Frank, and he said: Well, we could take you on full time again if you want. So I wrote a letter of resignation. I'd been there one year, I think. See it was not the fault necessarily of people in the department or of the City University as a whole. Because it was blamed on the rules of the Board of Higher Education in the City. One year of residence was not enough to take a leave of absence even without pay.

DPS: But they hired you back.

ASA: They did. Because for the year I was away, they hired for one semester one man and the other semester another man, both of them retired professors of speech science, well-known, I just can't think of their names at the moment, but I knew their names. They came in and filled the slot. And then I was notified that it was still open and would I come back, you know, that following year, and I did for two more years. Of course, my time was divided between Queens College and the Graduate Center. As I say, that's how Kathy began and Michael Studdert-Kennedy...Kathy later...she was there later after both Michael and I had stopped being there. She became resident only at the Graduate Center; she was strictly in that for some years. But before that, she was split up the way I was. So in '67, we founded the Department of Linguistics at UConn.

CAF: I was wondering about that. So that was after your second year back at CUNY that's when you went to UConn

ASA: I resigned to take this position.

CAF: Quite a change to move from Manhattan to Storrs.

ASA: Yes, quite a change. And we had two children in school. And they adjusted pretty well in school.

CAF: So what can you say about Pat Nye? A very predictable thing about that oral history that he did is that he did not interview himself as it were. He doesn't say anything about his arrival at the Labs or what he did.

ASA: That's right. Well, I think he came because of work he had been doing in California. Frank became aware of him. I don't know if Al was involved with it. But Frank thought he would be a valuable acquisition and there was a slot open. Pat was like Frank; he had degrees in engineering, but also a PhD in physics, you see. I think I've got that right. And he came and it was later that he became..See Frank had another administrative assistant Bob...

DPS: Barrett

ASA Barrett. Yeah. That was a new thing in the last years in New York City, right. Because it was getting to be a big handful for Frank you know to do this. Of course, you understand there were the biological laboratories with us as well, and Frank was director of the whole business. Although there was a directors of those: Seymour Provasoli...I mean Seymour Hutner and Luigi Provasoli. I had to deal with them sometimes when I was caretaker, because they would bring up problems [and had some things to talk about]. So Pat came in and I think it was later that he gradually started to take on administrative duties. Bob Barrett did not come with us to Connecticut.

CAF: I thought Pat was brought in to work on the reading machine.

54:22