

Carol Fowler, oral history

CAF: Ok. This is September 22, 2015, Carol Fowler and Donald Shankweiler, and we're going to take an oral history from me. So let me just start with your first question which we don't have to spend a lot of time on: What can you tell us about your childhood and early years that might have prepared you for a life of science as a researcher and leader.

There's not a lot to say here, because I don't think a lot did, but I just wanted to mention that I learned as an adult that both of my parents had wanted to attend Brown University. And neither one got to for one reason or another. And both ended up attending two year colleges, but not because they wanted to. So they very much supported four years of education for their three daughters. I was especially lucky. My family didn't have a lot of money and there were three of us to send to college, and I thought I would go to Rhode Island College or URI, because I was a Rhode Island resident. And I'm one of the few people in the world that had a wonderful guidance counselor. And he actually hand carried an application for Pembroke College and for financial aid at Brown. Brought it to my house, because I had been reluctant even to try it. Thanks to him I did apply and got financial aid and was able to go.

DPS: That was great. That's a nice story.

CAF: Isn't it a nice story?

DPS: Did they give you a four year scholarship.

CAF: Oh no! They gave me some amount of financial aid. I got an Honor Society--or whatever it was you could get as a high school student---scholarship. I didn't get my way paid. And I was a work-study student the whole time and my parents did have to kick in some money. But it made it possible. I remember the day that I came home. My mother was working by then. I came home and there were two letters from Brown. They weren't thick. But because there were two...

DPS: Things weren't so outrageously expensive then.

CAF: No! I think if we saw what the tuition was, it was like \$2500 or something. That was a mountain for us at the time, but it was not the \$60,000 or whatever it is now.

DPS: These things have grown out of proportion to inflation.

CAF: I think they must have. I remember Richard Aslin saying that sending a child to college was like buying a house. If you had three kids, it was like buying three houses.

DPS: Yeah.

CAF: Yeah. It was very different back then. Anyway tell us about your undergraduate..

DPS: Well, just..Oh I'm sorry. That fits my question...That anticipates my next question.

["Tell us about your undergraduate career."]

CAF: I guess a couple things I wanted to say here, I went to Brown at a very good time to go to Brown. There were two undergraduates ahead of me, one named Ira Magaziner, who became known when he helped Hillary and Bill Clinton with their failed health care reform, and the other named Elliot Maxwell. And together they

wrote a working paper on what a liberal arts education ought to be like at an institution like Brown. And the university took them seriously and implemented a number of changes in liberal arts education, including that you could devise your own major. And I had thought I wanted to be a clinical psychology and was stunned when I went to the introductory psychology course to find out what psychology really was like. But I liked it well enough. But I also on the advice of a friend of mind took a Linguistics course and I just thought it was fascinating. And I hadn't even known there was a career...a field of Linguistics.

DPS: Nelson Francis was around then.

CAF: Nelson Francis was the chair.

DPS: Did he teach the course?

CAF: You know, he probably did. And he was a wonderful...I don't know if you ever met him...

DPS: Never did.

CAF: But he was just a very warm, teddy bear kind of a guy. And that was a difference between the Psych and Linguistics departments. The linguistic department was like going to your family. I mean they were very welcoming to undergraduates.

DPS: His article, on the history of the English language, in the dictionary, the Merriam Webster Collegiate dictionary is a wonderful, wonderful article.

CAF: Yeah. Well, he was a very, very nice man. And Sheila Blumstein's first year as an assistant professor was my last year, so she wasn't there in my formative...

DPS: So she wasn't much of an influence

CAF: Well, she *was*, because I and one other young woman were her first lab assistants. I wouldn't say...we didn't actually collect data, but we prepared tapes. She was doing some dichotic listening stuff at the time. We did a bunch of things..

DPS: She was very interested in aphasia at that point.

CAF: She was doing a lot of work on aphasia and she was doing dichotic listening with normal people with a guy named Frank something [Spellacy] in Canada. But she was great also. She would say: "Call me Sheila" even though we were undergraduates. And she wasn't much older than we were as seniors.

DPS: Yeah.

CAF: So she did turn out to be an influence just because she was there. But the thing about this independent major that I came up with in Psychology of Language is that, if I'd stayed a Psychology major, I would have gotten whoever the advisor was for people whose name started with "F", but because I could devise my own major, I got to approach people and say: "Would you be my advisor?" And I approached Peter Eimas.

DPS: I was going to...That was anticipating my next question.

CAF: Well, that was pivotal. That was pivotal, because I didn't quite realize that I could have probably worked in his lab, and I never did. You know Peter Jusczyk did and Peter...Jim Vigorito did. But I did an independent library research major [project] with him my senior year. And the summer before that, as the summer approached, I asked him to give me a reading list. And he gave me five books, one of which was *Aspects of the theory of syntax*. These were not books that pulled any punches. They were very daunting. And he gave me a list of readings. And I spent the

summer struggling through these books. *Words and things* by Roger Brown, a fabulous book was one, *Biological foundations of language* by Lenneberg. These were great books. Hard to read for an undergraduate. And I read them, and I got to the end of the summer, and realized I had not touched any of the articles that he suggested I read. And I didn't want him to think I wasn't serious. So I looked at the list, and he had starred some that he thought were important for undergraduates to read. This was not a list for me in particular. And the first one starred was Liberman, et al., Perception of the speech code, 1967. And I went to the library and photocopied it; you could actually do that way back then. And I struggled through it. But I thought it was the best thing I'd read in psychology. I mean it was really momentous that I read that. And it was on the strength of that that among the places I applied to grad school was University of Connecticut, because two of the authors were on the faculty here.

DPS: Well, I'm glad you told us that story. That's very nice.

CAF: Well, it's amazing how these little events can make such a big difference.

DPS: Little did you dream that you would one day write a revision of [Perception of the speech code]

CAF: I know. Well, I didn't dream that til last year. That was Studdert-Kennedy's idea [in fact, it was Donald Shankweiler's idea], and it was a great idea. So anyway, that was what was most important about my undergraduate career, just a series of events that made UConn stand out as a great place to go to graduate school. And that's why—that's the answer to the next question---that's why I chose UConn.

6:57

So maybe something to say about that third question: about what were the most formative influences at UConn, I think, again, I arrived at UConn at a very lucky time in the sense that the Psychology and Linguistics departments were very close, and the Linguistics Department was essentially a phonetics department back then:

Ignatius [Mattingly] and Arthur [Abramson]

DPS: And Phil [Lieberman]

CAF: and Phil. And maybe David Michaels was there back then. I didn't really...I was more of a phonetician than a phonologists so I didn't really ...I guess I didn't take any of his courses. But the Linguistics Department and the Psych Departments were in the same building, right? They were on the third and fourth floors of Monteith.

And the linguistics students were as close to me, as a psych grad student, as other psych grad students were. It really was a close affiliation between the students in the departments at the time. And so I think that was very lucky. And then the other thing that was lucky is that; You told me—even though we had a policy at Haskins back then that we didn't support first year grad students; they have to kind of get a little experience before they were worth supporting. But you urged me to go down anyway. And I did, and just learned what an amazing place it was. Not only were people from UConn, faculty and students from UConn, there but from all of these other places, and all of them were converging who had an interest and speech and reading. And it was just a wonderful place to go down and talk to people. You know, Michael Studdert-Kennedy and Kathy Harris and Leigh Lisker, just all these people...

DPS: So you met all these people your first year.

CAF: I probably did.

DPS: Yeah.

CAF: I probably did. What I remember as I went down there [for the first time] thinking; "What am I going to do down there?" And Nina De Jong was the librarian at the time, but she was getting interested in psychology. I don't know if you remember; she actually went to grad school for a while; I don't think she went here. But she took me over to a class being taught by Ruth Day, and she introduced me to people at the labs. She was just very nice and very helpful. And so it was a place that I just began to go to each week, probably with you in the car. It was just an important thing that made my graduate training very valuable. And I think the Psychology Department at the time was a good department, but the students were mixed in quality back then. But Claire Michaels was there and I knew she was very good, and Susan Brady was there, and she was like my role model. So and then Phil Rubin came with me and Robert Remez came the year after. So it just began to be, I mean even the students, were just a good resource here.

DPS: I think of that as a golden age kind of.

CAF: I don't know...it's hard for me...It's the one age I experienced and, you know, I just feel that I was very, very lucky.

DPS: We didn't always have students of that caliber I think.

CAF: Well, definitely before that. I sort of felt like the psychology department was moving in the direction of getting better students in, and of course it's always uneven; sometimes you get students who are better...

DPS: I think it's true that there's been a gradual upward trend. But those years in the early 70s when you came were really special years. That was when Bob Port was there [in Linguistics] too and..

CAF: Yes! And Terry Nearey [Linguistics]

DPS: And Bob Porter [Psychology]

CAF: Tim Rand [Linguistics] was terrific.

DPS: So there were a lot of people who were memorable.

CAF: Yeah, yeah. When you think about those linguistic students. They all but Tim went on to...well Gary Kuhn went on to applied work, but a lot of them went on to have stellar linguistics careers. So...and then us in Psychology, we did well too. It was a good time to be there.

CAF: OK, so "What was most memorable about your years at Dartmouth"

DPS: Well before we move on

CAF: OK, sure.

DPS: Maybe I wanted to ask you a little bit about—I can't remember exactly how we started working on reading projects.

CAF: That's the way I started.

DPS: And Isabelle [Lieberman] was a...She and I were already

CAF: You were.

DPS: well-established in reading research

CAF: I had been accepted at UConn and had gotten accepted also at some other places. I was deciding between going into basic research and doing speech and hearing kind of work. And after I got accepted at UConn, I came to visit. And you and I had lunch with Isabelle. And I remember you guys asking me what did I want to do research on. And I was absolutely floored, because I had no clue. But I started

working with you on reading. We did two papers together that got published even after I finished.

DPS: I read them recently. I think they...They hold up pretty well in my estimation. They're still interesting papers.

CAF: Well you know, I credit Isabelle with really teaching me how to write, and so she probably is responsible ...largely responsible for however good those papers are. But yeah..I worked in the schools, collected data on little kids' reading. I also collected data on hemispheric stuff with ...You and Michael were interested at the time in a possible relation between handedness and ear advantages.

DPS: We did some work on manual laterality.

CAF: Yeah. A bunch of manual skills and then dichotic listening. And I know I tested Phil Lieberman's son Daniel when he was seven years old. He was notable just because he looked just like his father.

DPS: You met Bill Fischer at that time.

CAF: Bill Fischer was a good friend. I was forgetting about him. So he was in Psychology also, but really much more interested in...

DPS: Well, he started out in Ed Psych and took a masters and then moved over here for his doctorate. But he of course still stayed very close to Isabelle.

CAF: Yeah. He was actually a good friend. We worked together on some...I don't know that we worked together on any research, but I know that we talked about it a lot. We did statistical analyses and that was back in the times of those cards, those stacks of cards that you would read into a computer. And we did that kind of work together, because I associate him with that. But, yeah. He was a good guy and always felt that he didn't want to go on to a research career, even though he was very capable of it.

DPS: He was very capable of it. I sort of had to drag that couple of papers out of him that were based on his thesis, and Vicki Hansen was very interested in his work on spelling.

CAF: That's right, he did spelling.

DPS: We got him to collaborate on something that we did with Gallaudet students subsequently. Then he disappeared.

CAF: He did. I think he got a job at Central, and maybe stayed there until he retired. I'm not sure.

DPS: I think that's true. He wrote to me after Al died. He wasn't able to come to the memorial. That's the last time I heard from him.

CAF: I think the last time I saw him might have been after Isabelle died. Somehow he came to the Laboratories and he was grey haired and otherwise looked the same.

DPS: How about Len Mark ..and Bob Katz was there when you were there?

CAF: Yeah. I think Bob was enough junior that I didn't spend a lot of time with him. But certainly I talked a lot with Len Mark. So he was doing some work with you guys, and there's a Mark, et al paper. I can't remember if my name is on it or not. But he did some reading work with you and Isabelle.

DPS: I think it is on it.

CAF: Uh huh. But also was getting interested in the ecological group, and I guess that's where his research ended up.

DPS: That's where he went. He took his masters with me and his doctorate with Turvey.

CAF: Yeah, yeah and ended up at Miami University where stayed...

DPS: Where he recently retired, I understand

CAF: Did he? Did he?

DPS: Yeah.

CAF: Well, that must have been a slightly early retirement unless he was a little older when he went to grad school

DPS: It makes you feel old when all of your students are retired.

CAF: That's true. That's true.

DPS: So Bob Katz didn't overlap with you.

CAF: Not very much, no. No, so Rubin, Remez. You remember Cam Ellison?

DPS: Oh indeed, he was a very early student.

CAF: Well, he came after me I think

DPS: He did. Bob Porter came before.

CAF: Bob Porter was before and was gone by then.

DPS: He was, OK.

CAF: Yeah, his brother was a grad student at Dartmouth when I went up there, his brother George. There was someone named Emily...Kirstein, was it, who had just left, I think. Oh Hollis Fitch, we haven't mentioned, although she didn't work on the Haskins side of things, I guess.

DPS: right.

CAF: Oh she did though. She did...oh there's a Fitch, et al....there's a wonderful Fitch, et al, a split-slit paper that developed an idea of Quentin Summerfield's. It's a paper that I always made my students read. I'd forgotten about that.

DPS: And Chris Darwin was around?

CAF: Chris Darwin came, yeah. He came around the time that Susan...Susan Brady was planning her..

DPS: See it was a golden age. It really was. We haven't had such a concentration of talent I think since then.

CAF: Yeah and just the confluence of the Psychology Department and the Haskins Laboratories at the same time. It was quite an amazing time. And that's why, when I got a job at Dartmouth, I couldn't quite leave.

DPS: I know you made that long trip. Very regularly.

16:39

CAF: I did. Yeah. Every week.

DPS: That was really a mark of devotion.

CAF: It was. Especially because, at the beginning, before I had the money to pay for a hotel, I would stay in the... You know, Arthur and Leigh always stayed at 270 Crown Street.

DPS: We all did. Me too! Until I got involved in the orchestra, which rehearsed on Thursday night, and I was unable to change that. Until then I was a regular on Thursday nights.

CAF: Well, I would go down Wednesday nights and stay over and then go back Thursday nights. I just arranged not to teach on Thursday, because Thursday was

the big day at Haskins. I don't know if it still is, but it was the day when we had staff talks.

DPS: It still is.

CAF: which we still do. Alright shall we move on?

DPS: Yes.

CAF: "What was memorable about your years at Dartmouth?" So Dartmouth was a good experience for me. It was a very small department. There was no one there in speech or language, but a very professor there, George Wolford, chose to be my mentor, which I really needed. And his work was on visual masking, so not very closely related to mine. But he sort of just took me in hand and helped me figure out how to teach undergraduates. And he just I think made it possible for me to be happy there. I had some good colleagues, Jack Baird who also studied visual perception, and Howard Hughes.

DPS: I seem to remember that you did some interesting work with George Wolford on unconscious lexical access.

CAF: Yeah. I'm trying to think of whose study...Was it Tony Marcel, maybe did the first...

DPS: yes, yes.

CAF: And it was the finding that you could do semantic priming when you masked the prime so severely that people didn't even know that there was a mask [that there was a prime before the mask]. And people do this all the time now, but it was quite a notable finding then.

DPS: Yes.

CAF: And we replicated it.

DPS: It had a lot of theoretical ramifications.

CAF: Yeah. So, yeah. So we found that way to collaborate. I don't think we collaborated on anything else.

DPS: Later I met him in a different context. He became director of the imaging center at Dartmouth.

CAF: Oh did he!

DPS: And he arranged for Einar [Menc] and me to do a scan on one of the aphasics that we had been studying..

CAF: Oh, how nice!

DPS: and who moved to the Dartmouth area, and she didn't want to come to New Haven to do it, so we arranged to do it there.

CAF: Well they must be one of the first places that actually had an fMRI center right in the psychology building.

DPS: They were and they went all out I think in trying to encourage..

CAF: people to use it

DPS: their students to use it. Was Gazzaniga there when you...

CAF: Some of the time, yeah. So he came, yeah he was there some of the time when I was there. He occupied a house kind of a couple doors away from where the psychology labs were. But yeah, he was a presence sort of toward the end. And I think by the time Ken came. So Ken came to Dartmouth, Ken Pugh, right at the time I left, because he kind of replaced me for a while. And I think by then Caramazza had replaced Gazzaniga. Gazzaniga came and felt that Dartmouth had not come through

with its commitments to him and went out to California somewhere and then came back for a while and now he's in California. But, yeah, he really galvanized the place because of his interest in the brain and getting people excited about those ideas. But mostly, you know there were very good...there was a tiny graduate department. I mentioned George Porter, Bob's brother was one of the graduate students. But only the sciences and psychology had a graduate program.

DPS: Einar was one of the graduate students.

CAF: Einar was a student of Jamshed Bharucha who came well after I came and was an outstanding researcher in the area of music. Now he's president of Union College, I think it is, in New York. [Jamshed Bharucha stepped down as president of Cooper Union, June, 2015.]

Yeah, the colleagues were great. They just weren't in my area for the most part. There was a Linguistics program that had people kind of all over the university who were interested in language, but to get my fix in speech anyway, I had to keep coming to Haskins, which I was very happy to do.

DPS: Lucky for us, I would say.

CAF: Well it was synergistic. You know there were just a lot of people to work with. So "Looking back on your own research, what are you most proud of?" What I..I think that no particular study stands out, it's that I tried to be integrative. I tried to develop a perspective on speech perception that was consistent with a perspective on speech production, which was consistent with a perspective on linguistic phonology, so that they all fit together. I kind of had the idea that people who studied perception didn't bother much about thinking about production and didn't care whether their ideas were really really compatible with people being both talkers and listeners.

DPS: Which unfortunately is still true to an extent.

CAF: It tends to be true that it is so hard to be expert in your own domain that it's really hard to reach out to other ones. But Haskins was the place to be to do that.

22:10

DPS: This is a problem with science now generally...in general.

CAF: I think so to, I think it is. But so I think you know I did do research in other domains. I did a little research on reading. You mentioned that masking study I did. And just because of an undergraduate I met at Dartmouth I did some durational shortening in conversational context. You know about my Garrison Keillor study? We...This guy, was...Jon Housum his name was, was interested in a finding of Phil Lieberman's that, if you have people say "A stitch in time saves nine" and you extract "nine" out of it, it's hard for people to identify it in isolation compared if they said: "The next word you will hear is nine." And the idea was that, if a word is redundant, people don't say it as clearly as if it is unpredictable in its context. So Jon was very interested in that. He wanted to do a senior thesis. And we decided to look at it further by looking at spontaneous speech. And ultimately---Jon had graduated by this time---but I decided to look at Garrison Keillor just because he has all these monologues from his Prairie Home Companion show. And looked at words that he said for the first time versus words that he said for a second time.

DPS: He has very clear articulation.

CAF: He *is*. He is a very folksy speaker, but he's a very slow speaker. But just like people in Phil Lieberman's study, when a word was redundant, when he'd said---so "Labor Day" was one of the words he mentioned in his monologue that we looked at---when he was saying "Labor Day" for the second time and we pulled it out of context and had people identify it, they weren't as good identifying it as when he had said "Labor Day" the first time. So then the question was: Why does that happen? I mean it's a very odd thing. You don't want speakers calculating how carefully they have to bother saying something, and yet they do that. So anyway, that was a little side study. And I did a number of those.

DPS: They take the course of least resistance.

CAF: Somehow they must have a feeling of familiarity or something that guides how carefully they speak. Because you don't want them saying: "Gee I don't have to say this very clearly at all" because that would kind of be too much work. But anyway I did a number of little side studies, but really it was work on perception and production and then trying to hitch that to Browman and Goldstein's theory of phonology that I'd say I'm happiest with that I did.

DPS: But it funnels into your interest in ecological psychology, which was another thing that we didn't I guess touch on.

CAF: I guess we should.

DPS: We talked about UConn, so...

CAF: Yean, so at the time, Michael Turvey was doing award-winning (he won the APA Early Career Award for it); he was doing award-winning work on visual masking. He was doing information-processing research. But he told me that, since he was a graduate student, he was very interested in Gibson. He thought Gibson was saying something important and novel that people weren't paying enough attention to. And he...Michael taught a course called Sensation and Perception II. Really a misnomer. And students of his these days, or just before he retired, would be stunned to know there were exactly two books that were on the reading list of this course. Now there are about 800 and you are supposed to read all of them. One of them was Neisser's book, *Cognitive Psychology*, and one of them was Gibson's *The senses considered as perceptual systems*. And we read through Neisser's book and Michael just did an absolutely fabulous job of selling a constructive theory that Neisser was trying to present, the idea that you take in little hints from your perceptual systems.

DPS: But he [Turvey] was working himself in that framework.

CAF: Yes., exactly.

DPS: In his studies of reading, and

CAF: And he [Neisser] had a wonderful chapter on the motor theory, because that was a constructive theory. Right, you take in acoustic cues and you construct a theory of how that was produced by the speaker. So anyway, we became real fans of Ulric Neisser. But then we turned to Gibson, and Turvey started saying why Neisser was wrong, and we couldn't...could hardly believe it, because he had sold us so well on Neisser's approach.

DPS: So was your course the first Gibson... Turvey-Gibson...

CAF: I don't know. I don't know if he had done that before or not. But it was very memorable because it was so shocking when he shifted gears and began to try to sell Gibson's approach, which of course was the one he was committed to.

DPS: I think that he was probably especially exciting, because I think it was probably new to him at that point.

CAF: Yeah, and of course, he is an outstanding communicator.

DPS: Because I mean he was just totally 100 percent in the information processing framework. And he published that Psych Review paper [1973].

CAF: Yes, and it's a wonderful paper, just absolutely wonderful...And of course, Claire Michaels was his student and did other terrific work as well. But he told me that before he did that work he knew that Gibson was an important resource and something that he needed to work on and think about.

DPS: It might have been Bob Shaw that brought him to Gibson. I'm not sure.

CAF: I don't think so. Because I think Turvey told me that as a graduate student somehow he encountered Gibson's work. Yeah.

DPS: See Gibson was in the air when I had that post doc at Minnesota at the Center for Human Learning.

CAF: Sure.

DPS: That was in '71-'72. And Bob Shaw was there then. And Bransford was there.

CAF: That may be what brought Turvey and Shaw together.

DPS: And Gibson was in the air.

CAF: Yeah, yeah.

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Therefore, when I started thinking about speech perception...As I said, I came from Brown a real fan of *Perception of the speech code*, so I was a committed motor theorist. And, by the way, Al was in Japan when I first came and I took his course from you that fall, probably that fall when I first came. Then I took it again from him when he came back. But Turvey...

DPS: You got the *real* thing.

CAF: I got the real...well, you know, I had to get it from the horse's mouth as well.

DPS: Of course

They were both great courses, but different. But anyway, I became committed to Gibson's perspective and therefore wanted to think about what a theory of speech perception would be like from a Gibsonian perspective. And I thought it was going to be revolutionarily different. And it was quite a shock to my thinking when I realized that both Gibson and Liberman would hold the view that you perceive articulation not the acoustic signal. It wasn't that revolutionary. The only difference was the adequacy of the acoustic information. For Gibson, it had to be adequate. For Liberman, it didn't; it wasn't.

DPS: So we've got that straightened out now in the paper [*Perception of the speech code revisited*]

CAF: Yes, now we have it straightened out. We'll see what happens when our...when our paper comes out. I've gotten so many requests to provide electronic copies of it.

DPS: Wonderful! I'd love to have a list sometime if you're keeping it.

CAF: Well you know...I'm not...and we have Dave Braze to thank for that, I think. I mean there's something that you can do, which I don't know what it is, but he did

that sort of made it apparent that this paper was going to come out. And suddenly I get all these emails saying would you send a copy. And it's not even emailing a copy, it's in some kind of research network that you can upload it.

DPS: Well, just to keep on this thread. I was looking at your CV briefly and a lot...a number of papers are written or coauthored with Turvey in the '70s and '80s.

CAF: That's right. Well, he was...he was always very committed to helping people put a vita together that would help them get a job. And I was not one of his success stories, because I had nothing on my vita when I was looking for jobs. But he was just very generous. If he was invited to write a chapter, he would ask one of his students to write it, and often invite them to be the first author. So yeah, there's a paper that we published together in 1978, a chapter that a lot of people still cite and that he has his students read. Can't remember, there's a paper on bite block speech that I can't remember how he got involved in. But

DPS: Well, Kathy [Harris] was interested in that, and Pinky [Strange] and Bob Verbrugge and I were interested in that. There was...Sieb Nooteboom from The Netherlands did some of the important work on that.

CAF: Yeah, and Bjorn Lindblom did some. I think it was Lindblom's [Lindblom, Lubker & Gay] that we had followed up on. Yeah. It's just one of those remarkable things that people can compensate for a bite block immediately. They don't....What we showed is that it's not perfect...

DPS: We knew all along that there was compensation. There was mashed potato speech...

CAF: Right, right Pipe speech.

DPS: Pipe speech, yeah.

CAF: But yeah, I mean, that's a notable thing about my career is that I went on the job market with nothing on my vita.

DPS: But that wasn't that uncommon then.

CAF: It isn't...

DPS: It's just been fairly recently that it's become a requirement that graduate students have a long list of publications before they can be taken seriously. And I think it's a bad trend.

CAF: I do too. I think there's a happy medium. I think you should have something on your vita just to show that you can produce and are capable of writing a paper that can get published. But I feel as if we are...we end up writing more than we read, because the requirements for tenure are so severe; the requirements for getting a job are so severe that a lot of papers get written that...

DPS: It fills the journals with junk.

CAF: Yes, exactly! A lot of extraneous stuff. And I think, you know, Turvey is extremely careful of his students to make sure they have a lot on their vitas, but it does mean that a lot of papers get published that are just...There's nothing wrong with them, but there's nothing so exciting about them that they really needed to get into print. I don't mean just his students, but in general, getting your student a job does that, and it's too bad. And it does prevent people from being good scholars I think too.

OK: I think we're on number six which is: What were your initial thoughts about becoming President of Haskins.

5:00

CAF: My initial thought was I didn't want to do it. But, you know, Haskins becomes kind of a second family, and I just felt a sort of a familial obligation to do it. Phil [Rubin] told me any number of times that I was *not* the first choice to be President. My guess was Louis Goldstein was and absolutely refused.

DPS: Well, you know, I don't know. I wasn't...

CAF: Uh huh. You weren't party to that decision.

DPS: I wasn't party to that decision. Haskins was a very top down paternalistic kind of place...

CAF: Right.

DPS: in those days. And I think the decision was made very...by people who kept it very close to their chests, by Frank and Al.

CAF: Yeah. But I don't mind. I didn't feel kind of equal to the task, and probably wouldn't have been except that there was a lot of help. You know there was... Pat Nye shouldered a lot of the burden and Phil Rubin took on a lot of the burden and was happy to do it. But I only did it because: number 1, I thought it was a kind of like a family obligation and, number 2, I thought there were some things that...I didn't want to, at all, to remake the laboratories in my own image. I wanted to preserve what had been so important to me when I was a graduate student, which was that it was a haven, just a mecca, to come to if you're a student or even a faculty person who's in a small place like Dartmouth—to come and get enormous amounts of stimulation. And I wanted to try to preserve that.

DPS: You succeeded in that, admirably in that.

CAF: I think I did too. Yeah. I'm not very...I'm not unhappy about how the lab proceeded while I was president.

DPS: And you...and people came to the lab, you engaged them, and you have a number of papers with younger people who came to the lab, people like Vicki Hanson and some people I don't even remember that you have papers with.

CAF: Yeah, well, Mario [Vayra] and Cinzia [Avesani]. I enjoyed that collaboration even though I don't think it eventuated in anything ground breaking, but it was enjoyable.

DPS: Tassinary, who's he?

CAF: Lou Tassinary. So he was my first graduate student at Dartmouth. And I engaged him in... I was working on P centers back then, and he and I have a paper together on P centers. He was very interested in facial expressions. He became more interested in social kinds of things. And he got interested in Ekman, Paul Ekman's work on facial expressions.

DPS: Don't know that.

CAF: Well, he's just a very famous guy for saying there are like, you know, six universal expressions that we have in cultures. That kind of thing. And Phil...I mean Lou Tassinary is an extremely careful, systematic guy, and he spent probably a year and a half developing an apparatus to present olfactory stimuli to people to try to elicit facial expressions. And he spent so long on it that he had to do his dissertation on smell rather than facial expressions, because he never got to the point where he could actually do the face research. He ended up getting a job at Texas A & M in the...not exactly archaeology [architecture]...environmental studies, or something

like that. He also got a law degree. He's one of two students of mine from Dartmouth that ended up getting law degrees. But he never...neither of them ever practiced law...He went back to Texas A&M.

DPS: Was he interested in the forensic side of facial recognition?

CAF: I think the first ...the other student who got a law degree was interested forensic psychology. But, no, in his case, I think it was practical. He had gotten married and his wife was a veterinarian and was doing an internship...This sounds completely implausible, but my memory tells me she was doing an internship somehow at MIT. But anyway, it was up in Boston or Cambridge. And she liked the Cambridge area so well, compared to wherever, College Station, Texas, that she thought they should stay there. So I think that Lou got a law degree, because he's not a guy...Because he is so systematic, he doesn't have a lot of publications, he didn't think he could get a job in Boston in a psychology department. But whatever, ...I lost track after that. He's back in College Station, and he's doing his research in the environmental studies department or whatever, and he's also a dean. The other student who got her law degree from...who worked with me and then got a law degree is Dawn Dekle, who I have a manual McGurk study with. And she is president...She has been president of universities in Iran [American University of Iraq]...she was some kind of high administration person in Singapore and now, I think she just got a job in...now I've lost...Afghanistan, maybe [Orkhon University, Mongolia]?

DPS: Wow. These are tough places to be.

CAF: I know! And I just never would have guessed that she would go in that direction, but she did.

DPS: Mary Smith is a name that I'd forgotten until...

CAF: Yeah. She was a linguistics student here.

DPS: Yeah that's right.

CAF: She was almost contemporary with me, maybe a little behind, maybe Laurie Feldman's vintage. And she did a post doc with me. For a while I had ideas...I think I even had grant support to do infant research, and it was going to be on P centers, I think. And Mary was going to run my lab. And she kind of like... Well, she just got very distracted by things. And we got the lab set up, and she'd run babies for a while, and then she'd go completely off on some reading tangent, something she got interested in and she'd completely forget to run babies, so it was a very unproductive lab. And eventually, she left the field; she lives in the Albany area. I think Laurie Feldman sees her once in a while. But yeah, she's a very, very smart, energetic person, but not the kind of person who can put things on her vita and be an academician for that reason.

DPS: Well, Betty Tuller; she was a grad ...did she..she came...must have been later.

CAF: Yeah, she may not have overlapped with me, but I saw a lot of her, because I was at Haskins and she was at Haskins a lot.

DPS: She was at Haskins. You published some with her, didn't you?

CAF: Yes, we did some P center work. You know, Betty very quickly became adept at doing EMG research. And so I had wanted to get some direct articulatory evidence that P centers were based on articulatory timing, not obvious acoustic markers. And so she and I did a study on that. I think that's the only one we did together. [Also

Kelso, et al, 1984.] But she was a very talented, energetic person who I think was technically much sharper than me than me. And I think she gravitated toward Kathy Harris and worked with that group.

DPS: Well, yeah. I remember.. I think I tried to steer you to work on production.

CAF: Could be.

DPS: Because it was late...fairly late in your graduate study. But it seemed to me that there was...I think I steered you to Kathy Harris.

CAF: You might have. You might have. I know I did my dissertation on speech production and I kind of did it, maybe at your urging, but also because Turvey was working on a theory of action to go with the Gibsonian theory of perception. And I thought; How can I work with Donald and with Michael at the same time. Well, Donald does some speech work and Michael does some action work, maybe I can bring them together in a theory of...coming together on research on speech production.

DPS: Well Michael Studdert-Kennedy was very helpful..was very active as an advisor for you.

CAF: He was, he was. You know he was just a rock star as far as I was concerned...a major reason why I liked going down to Haskins. Either from grad school or from Dartmouth. It was because he was available and just loved talking to students and he was so good at it. He was a great listener, he was a great commentator. Yes, he was a very special guy to me and I think to a lot of graduate students.

13:38

Because he was so smart and so willing to communicate with students.

DPS: So where are we?

CAF: So this was number 6 becoming president of Haskins. So "What was it like being divided among three institutions?" I took that very seriously. So the way I worked it, I think, almost the whole 15 years, I spent three days at Haskins, two days at UConn. But I tried to go to Cognitive Lunch at Yale every week, and there was a Memory Lunch at the time that Bob Crowder and Mazarin Banaji ran.

DPS: Yeah.

CAF: And I would go to that as well and then occasional colloquia and stuff in Linguistics that I.... I tried to be a bit of a presence at Yale, but because Yale was not nearly as engaged in Haskins Laboratories as UConn was I just sort of decided...

DPS: It was mostly Ruth Day and Bob Crowder.

CAF: Bob Crowder. Yeah. Ruth Day was really before my time as president; she was long gone by then. But Bob was still in the Psych Department then.

DPS: I miss him very much. I think he was a very...

CAF: He was very helpful to the Laboratories there.

DPS: He was.

CAF: And here could have been others, you know. There could have been Artie Samuel, there could have been Letty Naigles, But I think they were pretty much discouraged. They had to get their own grant support. Otherwise they didn't have a chance of staying at Yale.

DPS: I don't think of either of those people as Haskins people.

CAF: They were not. They absolutely...I think they stayed away for the sake of their own careers. That Yale said: You've got to get your own grant support. Being on a

grant at Haskins is not the same as getting your own support. It's got to be based here at Yale. And I think they just really discouraged the people from getting involved. And we are lucky that Louis [Goldstein] didn't care. One way or another. But anyway so I tried to spend time at each institution. I only trained one graduate student at Yale, Jennifer Pardo. And the only reason that was possible was because Bob Crowder let her use his lab space. I had no lab space over there, and it was a real disadvantage for a student. So I never tried to do that again. But it was great having graduate students here.

DPS: I think Ignatius [Mattingly] had several grad students at Yale.

CAF: Linguistics students probably.

DPS: Yeah. I don't know whether he was their official advisor.

CAF: Probably not.

DPS: Yeah.

CAF: Yeah. I was the major advisor only of one student at Yale. I think I was on Heidi Wenk's committee, although maybe not, because she ended up doing...She's a yoga instructor now and she ended up doing something related to that. But yeah, I don't think I was on any...I did a lot of reading of dissertations in linguistics [at Yale], but I don't remember being on anybody's committee.

DPS: There's not enough days in the week for that kind of job you had. It must have been pretty difficult.

CAF: I know! Well, I chose to live half way between the two places [Haskins-Yale, UConn] so that it wasn't very onerous to get to either place.

OK So number 8 says: "You were president longer than anyone else, I believe. What were the most rewarding aspects of the job? The most onerous?" So I think for sure Frank Cooper was president longer than me.

DPS: Right. I stand corrected.

CAF: And Caryl Haskins might have been as well. So I think we've already discussed...I think the most rewarding aspect of being at Haskins was being able to maintain it as a very rich environment for intellectual exchanges. Just having this high density of people with common interests is just such an important thing about the Laboratories that being able to keep that going was the most rewarding thing.

18:50

And of course part of that is bringing in visitors, which we always had a lot of. And post docs. So those were...just being able to keep that was the most rewarding thing. I guess the most onerous thing was just the worry that funding would run out all the time. I mean we just never had a big enough endowment that we could live on that if funding didn't come through. And there were lots of lean times.

DPS: We had..yeah...we had back up for a few months at most if the grant [A40] failed. And it was really serious for people... We had some people like Bruno Repp or Doug Whalen for most of his time there who were 100% on Haskins money. And it was especially difficult for them. Because there were times when Bruno went down to 0 income. And Doug went down to low amounts and Anders Lofqvist I think as well. So that;s the most worrying aspect, because unlike Ken [Pugh] or maybe Al [Lieberman] as well, I don't know, I was not linked into the Washington environment. Reid Lyon did not especially want to fund me..or Peggy McCardle, the way that , say, Kavanagh wanted to fund Lieberman and both...

DPS: He [Al] had a very special relation with Kavanagh.

CAF: Yeah, and I think I was lucky to be kind of on the coattails of that. But I was never a person who was really linked in in Washington and I think that's a very... a thing that has maybe saved the Lab about Ken's being president. That he does have those ties. Not really sure...Is Peggy McCardle still...?

DPS: No she's retired now.

CAF: I thought she had too. Yeah. Do you know who's the person that would be in charge of A40 if A40 were to come up for renewal again?

DPS: I'm embarrassed that I can't think of his name.

CAF: Oh, it's a he. Uh huh.

DPS: Young man. He was at the Lab as a post doc for a while. I'm sorry.

CAF: Oh! Do you mean Brett?

DPS: Brett, yeah.

CAF: What was his last name? I don't remember.

DPS: Brett Miller.

CAF: Brett Miller! yeah. Really!

DPS: I think it would be Brett. I think it would be Brett.

CAF: Oh, that's a good thing. That's probably a good thing. OK.

DPS: Because Weijia [Ni] has been sort of kicked upstairs.

19:40

CAF: Has he! Well that has worked out for him as long as...

DPS: It's worked out very well for him, because he's a very hard worker.

CAF: Yeah, I don't know if he regrets not having been able to stay in research, but he's done a lot for research for other people.

DPS: He probably made a wise move. But I used to tease him by calling him Boss Weijia.

CAF: Well, that's true. OK so "Has the relation between Haskins Labs and the two universities changed over time?" My answer here is that I don't know. Because, for..beginning in 1969 or '70, there was one kind of formal relationship between Haskins, Yale, and UConn, which was that the president [of Haskins] had an adjunct professorship in linguistics and psychology at Yale but a full professorship at UConn. The president taught a course in the fall at UConn for graduate students and a course at Yale in the spring. And that was maintained through Al [Lieberman], and Michael [Studdert-Kennedy] and me. I don't think it's in place any more. And in exchange for that, Yale and UConn paid 9 months of the president's salary. My guess is that that's still in place. I just don't think that the obligations are there for Ken [Pugh] anymore; I'm not sure.

DPS: I was probing for something more or less, maybe less tangible about the...

CAF: Uh huh. Yeah, I don't think that it did. I was always very happy with the relationship between UConn and Haskins. [It was] close. We shared a lot of faculty, we shared a lot of graduate students, and people could freely flow back and forth. With Yale, it just wasn't as tight. It didn't seem like the commitment was there. I do think the relationship thanks to Stephen Anderson maybe, the relationship with the Linguistics department maybe did grow a bit stronger over the years. But it never was like the relationship between Psychology at UConn and Haskins Laboratories. And except for Bob Crowder, except for Ruth Day, psychology was absent...

DPS: My feeling is that the relationship with the department here and the Lab has been very solid all along. But in the upper administration that's not always been the case. There was a lot of push back that we were not doing our share of bringing grants to the university. And one after another the provosts and...

CAF: Well, that's completely understandable, isn't it.

DPS: ...the deans would remind us of this.

CAF: Well, it's completely understandable. I mean, you know, Haskins really depended on the relationship being the one that it was that way that grants go through Haskins. But I can see the university saying, you know, if it weren't for Haskins we'd have these grants based here.

DPS: Of course, the answer to that partly was that the university got free facilities for graduate education at Haskins.

CAF: True. Yep. That's true.

DPS: That was always Al's rejoinder whenever this came up.

CAF: Right, right. I guess we should just say: there was the possibility of Haskins moving to UConn at one point. Now, I'm forgetting: I know Claudia [Carello] was extremely in favor of it, so it wasn't long, long ago.

DPS: Yes, and Michael [Turvey] too, I think.

CAF: Oh, yes. I mean Claudia left the Laboratories when we didn't...she didn't leave in terms of the Board, but she left in terms of being a researcher at Haskins and I think it was because she really wanted this move.

DPS: It was a really wrenching time, wasn't it?

CAF: It was, and I think it would have been bad for the Laboratories, because Storrs is just not the kind of hub that New Haven can be if you're in New York City or you're in Boston, it's easy to get to New Haven and it's hard to get to Storrs.

DPS: It would have been hard to solve that problem.

CAF: I don't see how that could have been solved, so I think it was good for the Lab not to do it. And it's not like we were going to be moving into a building shared with Psychology or Linguistics. We were going to be over on Horse Barn Hill Road. And just getting over there was going to be a hike.

DPS: Yeah. It might have been just. as...The psychological distance might have been as great as...

CAF: I think so. Because, when I was at Dartmouth, the labs for me were in a different building from the main psychology building, and I almost never went to the main psychology building. I just lived in my lab as did George Wolford and other of my colleagues and you just didn't see people in the department that didn't have labs in that particular building. And it was like a half a block away. You know, it just wasn't the same building. So I think it would have been bad.

24:12 (check the preceding)

That would have changed things a lot.

OK so: "How do you see your research situated within psychology and the related sciences? Has this changed since you began your research career?" I would say that my research has always fallen into cognitive science. But at the... always focusing on the kind of bottom tiers of cognition: perception, production and phonology.

Never...Except...Right now, I am hoping to write a book on ecology of language and try to make some sense of the tiers of language that most people care most about.

But I think, over my pre-retirement research career, it really has been in cognitive science but at the bottom tier. I have always been a fan of the field of linguistics and have tried to pay attention to the related theories in that domain as well. But I certainly didn't do linguistics, I did psychology.

DPS: Well, cognitive science is certainly something that was not on the...

CAF: The name wasn't.

DPS: The name wasn't and, to some extent, the ideas were there, but they hadn't coalesced into...

CAF: Well cognitive psychology was really starting up, so...you know, I think Ulric Neisser wrote the first book with that title, *Cognitive psychology*, that book that we read in Turvey's course. Probably the early sixties is when it started.

DPS: Well obviously cognitive science and cognitive psychology overlap quite a bit, but cognitive science ropes in...

CAF: More disciplines

DPS: More disciplines: computer science, philosophy, linguistics in a more definite way

CAF: Right, and even there, my research is really more in the cognitive psychology sort of linguistics domain, but not in philosophy, not in computer science for sure.

OK: "What are your hopes/fears concerning the future of Haskins Laboratories?"

You know, my hopes are that it's...I don't really have a feel for it right now the way that you do, because I don't go very often, and I am somewhat fearful of what it's....So I think it's completely fair that Ken is a very different kind of president than me, who really did, I think, remake it in his own vision. But since I don't share that vision, my fear is that it is changing in ways that I don't recognize, and I'm not as excited about. But that's sort of my selfishness. I think it's...What Ken probably has done is made the Lab continue to be viable by turning it towards research domains that you really need to turn it to if it's going to survive. And I don't just mean brain research, but I mean more applied kinds of domains than what I had to care about when I was president, and really didn't want to care about a whole lot. I mean I was proud of the fact that Susan [Brady] and Anne [Fowler] and you and other people were doing research that did matter to kids with reading disabilities and so on. But it wasn't my vision for the labs that that be our focus.

DPS: In a long..in an APA address from a long time ago, George Miller expressed his ideas about giving psychology away. And this has always struck me as an important thing to do.

CAF: I don't know that.

DPS: What he meant was...of course was finding ways to make psychological science...

CAF: Matter

DPS: do good work in the world. And this has always seemed to be something very important to me.

CAF: Right, right.

DPS: And I was always proud that Haskins was a part of this.

CAF: I agree that it's a good thing. I wouldn't want it to be a main thing, not because it's not important, but I think... I just have this reverence for basic research.

DPS: Well, I think it's well placed.

CAF: Yeah.

DPS: I mean...That... you need to think hard and deep about the foundations of a field and keep thinking about them. And the Lab ought to be a place where that's done.

CAF: Yeah. To me that was the heart of the Laboratories.

DPS: I really agree with that.

CAF: Yeah. No but..And we always did...I mean we had the reading research, but we also had occasional aphasia research. I mean there were always touches into the world of application.

DPS: And it's a two way street, too. You get a perspective on the field when you struggle with some of these applied problems.

CAF: True. Yeah.

OK. "What did I neglect to ask you that I should have?" I couldn't think of anything.

DPS: Well I'm glad that we covered everything that was important.

CAF: Yeah we did a good job.