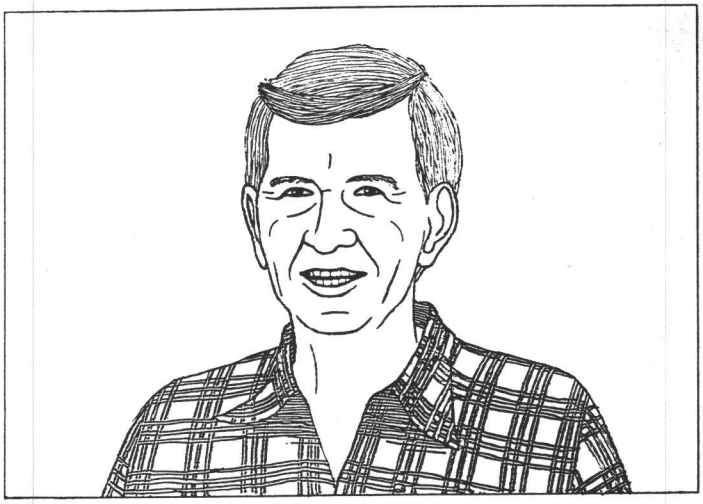

An interview with William C. Stokoe

In the late 1950's, Dr. William C. Stokoe, then Chairman of Gallaudet's English Department, began to apply the techniques of linguistic analysis to the sign language used by deaf people. He discovered that "American Sign Language," as he called it, is a sophisticated language, with a grammar and syntax distinct from spoken languages, elegantly suited to the capabilities of signers' eyes and bodies. Stokoe's books, Sign Language Structure: An Outline of the Visual Communication Systems of the American Deaf *(1960) and* A Dictionary of American Sign Language on Linguistic Principles *(1965), became milestones in the emergence of deaf culture as a field of study for scholars and source of pride for deaf people. As Director of Gallaudet's Linguistics Research Laboratory from 1971 to 1984, Stokoe published and lectured widely. He also supported generously the efforts of the many researchers who followed in his footsteps. The interview below was conducted on the occasion of Stokoe's retirement from Gallaudet in July, 1984.*

Q: What would you say have been the most important results, so far, of your research?

Stokoe: From the point of view of deaf people, the most important result is that sign language now has a great deal more respect in the scientific community and in the general public's eyes. In the educational community this respect is gradually coming along. There are maybe three or four institutions in the United States where the sign language of deaf people is being considered their first language and English is the second language they have to acquire. These institutions are using the best techniques of bilingual education to make this work. The Swedish government, whose policies are way ahead of ours in this area, now says that Swedish Sign Language is the native language of all deaf children in Sweden, that their second language will be Swedish and their third language, if they get one, will be English. I think this development, in itself, is evidence of the respect now given to American research in sign language.

Another important result of this research, though, is its contribution to our understanding of language itself. Understanding the nature of language is really like understanding the brain or the mind or thinking. It's understanding what makes human beings different from other animals. And I think the structure of sign language, the way it operates, the sensory-motor loops it involves are different enough from the sensory-motor loops involved in spoken language that, with the information from both these sources, you could find out things you couldn't have found out with one of them alone. I still have a strong suspicion that it was with signing, with communicating through visual symbols, that the human animal got the whole language business started.

Q: When you talk about English being the second language in a bilingual system in this country, what form do you mean? Are you talking about written language, spoken language, or manually encoded language?

Stokoe: Well, as an anthropological linguist, I'm thinking of none of those things, but of language as a system. And language is curious. It's an abstract system. It's probably a cognitive system, but it isn't exactly that. It's a cognitive system linked to some kind of physical system. And so, it's proving more and more true as I said many years ago that language is not something done by the mouth. Language is something done by the brain, and the mouth happens to be one way it can come out.

Now to answer your question about bilingual education, I have no ax to grind other than that the deaf person's acquisition of the English language should be as complete and as near to native competence as possible. And, of course, the possibility of not being able to hear others speak or themselves speak means that the outcome is going to be somewhere less than optimal for a spoken language. But English as a second language, for a deaf person who understands the world through his first language, can be very much up to native competence. Laurent Clerc was a deaf man. His second language was French, his third was English if it wasn't his fourth (I think he learned Latin before he learned English) and he wrote better than anybody else published in the *Annals* back in the 1840's and 50's. So, I would think that the first requisite of English as a second language for deaf children is to get the system inside, to know the difference, say, between the syntax of English and the syntax of sign language, to make the proper adjustment, the proper transition each time, going from one code to the other—to use code-shifting properly and completely.

Q: Is it important, in your opinion, for deaf children to learn sign language at an early age?

Stokoe: Absolutely! I think that more and more evidence is piling up to show language begins almost at birth. Aaron Cicourel, a sociolinguist from the west coast, points out that sign language is the native language of all deaf children. Well, a lot of people would question that: "But 90-95% of deaf children don't have deaf parents who sign. How the heck can it be a native language to them?" His answer is simple. They can't use spoken language. They can't hear it. And they haven't been trained or taught to use their voices. So they're communicating in the world with their eyes and their bodies. And, in that sense, it is a sign language that comes naturally and first.

Q: So, do you think the hearing parents of a deaf child, if they want to communicate with their child, should learn American Sign Language?

Stokoe: Oh yes. I think they should certainly make an effort at it. It's not all that hard to learn. It may be hard to learn to sign so well that you can't be distinguished from a deaf native

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William C. Stokoe, *Continued from page 3*

signer. But it's hard to learn *any* language that well when you're an adult. The amount of sign language needed to communicate with one's deaf children, if they're young children or infants, isn't all that great, and then the children can grow up using it. The problem is not just linguistic. [Hearing parents] find something's wrong with the child. They go through all kinds and degrees of mental challenge up to the point of real mental illness sometimes and very often to the divorce or estrangement of parents, because they don't agree on whose "fault" it was. Of course, it's nobody's "fault;" it's natural, like brown eyes or blue eyes. Often, it's genetic. And so, there are all kinds of difficulties, blockages, rejection of the deafness, rejection of the child, unwillingness to believe that this is the case, and so forth. All this interferes with the learning of the language. Some hearing parents of deaf children believe that if they would learn sign language, it would just be an admission of defeat. That they can't cope. Should be the other way around. It would be the beginning of a new life for the child.

Q: Some people believe you can manually encode English and transmit the language to a child using gestures. Do you feel that that is a feasible system?

Stokoe: My answer is no. I don't believe you can encode English manually. You can't even encode English into a writing system completely. Language is too much a human, natural system to be held down by formal rules and, therefore, the attempt to represent all that goes on in the spoken language with some motions of the hands and fingers was doomed to fail. For one thing, sign language doesn't use the hands and fingers exclusively. It uses hands, and arms, and faces, and bodies, and mouths, and eyes, and everything.

Q: Do you think schools for deaf children should promote a two-culture point of view where the children are taught both English and American Sign Language?

Stokoe: I don't think that you need to emphasize the separation of the cultures, but I think you have to have full recognition that it's there. That is, that certain things are second nature to hearing kids because they hear, and other things are second nature to deaf kids because they *see,* not hear, and you're always surprised when you realize what those differences are. No, I don't think there should be a lot of *emphasis* on the differences in culture, but I think there should be some *awareness* of them.

Q: Can you tell me a little about what you plan to do during your retirement? And, related to that, can you tell me what direction you feel linguistic research into sign language should take in the future?

Stokoe: That's a big question with a whole lot of parts. I am helping to write a proposal on some communication research that will be looking at the feasibility of the videophone, a device that uses line pictures instead of full video pictures. The effect looks much the same as the illustrations in sign language books done by a good artist, but it's not done by artists. You can even recognize the person. The pictures are done electronically by something called edge-detection, so it operates in actual time. The input to it is a video camera and on the screen you see animated drawings instead of full pictures. The advantage of that is that you can send it over telephone service instead of needing the bandwidth of the television picture. So it would make workable videophones much more practical in the near future. We'll be testing it to see if it really works well enough so the signers can understand each other, including fingerspelling, facial expressions and lip movements. That's in the grant awarding stage now. It should be producing exciting results soon.

But the main thing I have in mind when I retire is doing a lot of writing, work that I have been putting off because other chores get in the way. I've got a number of papers that I've started, and a book, and projects that I've got part-way along, and they just get pushed aside when other things come up. I want to take a look back at the whole picture of sign language research from the days when it started in the fifties until now. It's grown exponentially. I don't know that I can do it justice, but I have a publisher who wants to see how it all looks through one person's eyes. And then there's the editing of the quarterly journal [*Sign Language Studies*]. The journal only comes out four times a year. But, if you don't get ready to start the next one when the first one is out, then the next one is going to be late. And it gives me a great deal of pleasure. The subscribers' list is increasing and we're getting contributions from all over the world. So, it's very rewarding work. And then, there are other editing duties besides, because nobody, but nobody, would take a chance on publishing sign language books when I started. I started publishing my own. Now there are plenty of publishers, but there's still no market for the kind of scholarly books that appeal to a small audience that's very specialized in its knowledge and requirements.

Q: Where is your own sign language research heading?

Stokoe: Well, I have been thinking about it and doing little bits of tasks on this for a long time, looking at the motor side of signing. Much as Charlotte Baker-Shenk looked at the facial, nonmanual activity of signing, I'll look at the manual-brachial activity; that is, the hands and the arms. I'll try to see—perhaps with the help of one of those edge-detecting devices and a personal computer—what's really going on there. It's a matter of finding some simpler, still simpler explanation of what's happening. The laws of physics bring us down to some very simple rules. There's not enough attention paid to that basic physical component of it, I think.

Annual Report of GRI available

The GRI recently completed a report of its activities for 1983-84. The report contains summaries of projects completed or in process during the year, a listing of projects planned for 1984-85, lists of publications and presentations of GRI researchers, and other information. The 1984-85 *Annual Report* is available free of charge from the Office of Research Applications, Gallaudet Research Institute, 800 Florida Avenue, N.E., Washington, D.C. 20002.

Gallaudet Research Institute

Newsletter

Fall 1984

Putting research to use

GRI to provide genetic information and counseling

Hereditary factors account for at least 50% of cases of profound prelingual deafness, but many people whose deafness is hereditary are unaware of this important fact. Many are also unaware that certain medical problems are sometimes associated with genetic forms of deafness. According to Dr. Kathleen Shaver, a GRI geneticist, "all deaf individuals have a right to reliable information regarding the genetic causes of deafness and associated medical problems, and they can get such information through genetic counseling services.

"There are over 150 genetic causes of deafness," Shaver says, "yet awareness of the importance of genetics in deafness is low in the medical community and all but nonexistent in the deaf community. This lack of knowledge combined with communication barriers has led to vast underutilization of genetic services by deaf people."

The Bureau of Maternal and Child Health at the U.S. Department of Health and Human Services has responded to Shaver's concern by awarding the GRI a $400,000, three-year grant to find ways to improve and expand genetic services for deaf people. The primary goal of the project, which Shaver is directing, is to establish a comprehensive genetic services program at Gallaudet College. This program will include genetic screening and evaluation, diagnosis and counseling, and referral and follow-up services to be provided by medical geneticists knowledgeable about deafness. An educational program in human genetics will also be developed to provide information to families of deaf people, faculty, staff, and health professionals. This program will incorporate human genetics into the biology curriculum of Gallaudet College and Gallaudet's Model Secondary School for the Deaf.

The genetic services program at the College will also endeavor to integrate its work into the existing network of services provided by the District of Columbia Genetic Services Program. The resulting cooperative effort should increase the availability of genetic services to the deaf population of the D.C. metropolitan area, whether or not this population is associated with the College. "We are hoping," Shaver says, "that this demonstration project will have regional and national impact. It should lead both to increased use of genetic services by deaf people and to better awareness among health professionals of deaf people's special needs for such services."

What factors predict success in reading?

Standardized tests consistently indicate low average achievement levels in reading among hearing impaired students. A study now underway at the GRI may provide, within a few years, some valuable clues to parents and educators who want to help these students improve their reading and writing.

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The Gallaudet Research Institute and the Deafness Research Foundation present a

Symposium on Hearing Technology: Its Present and Future

at Gallaudet College
Washington, D.C.
Wednesday, December 5, 1984
8:30 A.M. to 5:00 P.M.

This all day symposium will bring you up to date on advances in the design and fitting of hearing aids and the status of the newest aid to hearing, cochlear implants. Leading scientists will explain the new developments and how they may affect your future professional activities.

Registration is $20 and must be received by November 21. For registration forms or more information, call Zeda Daniel at 202-651-5440.