

Early Sign Language Research in Two Settings: USA and Switzerland

Abstract

This contribution begins with my memories as a hearing American-Swiss researcher who began with research on American Sign Language (ASL) and afterward concentrated on Swiss German Sign Language (Deutschschweizerische Gebärdensprache, DSGS). The contribution includes memories of the first research team in German Switzerland: Claudia Murray Jauch, Katja Tissi, and Tanja Tissi.¹

Beginning with ASL

My first encounter with signing occurred after I had finished my BA in history at Carleton College (1964) and an MAT in English, linguistics, and education at Harvard (1968). I was working as a researcher at the Ontario Institute for Studies in Education (OISE) in Toronto but decided in 1969 I should return to Michigan to help my mother take care of my father, who had just had a stroke. I soon found that his doctors and therapists were doing all the really helpful work, so, with time on my hand, one day I contacted the Michigan State School for the Deaf, because I had learned in my linguistic studies that language is based on sound, and I simply wondered how deaf people learned English. When I thanked the school director

¹Penny Boyes Braem participated in Ursula Bellugi's ASL research lab at the Salk Institute in the early 1970s, founded in 1982 the Research Center for Sign Language (Forschungszentrum für Gebärdensprache, FZG) in Basel, and since then has often collaborated with sign language research projects of the Department of Computer Linguistics of the University of Zurich and of the Interkantonale Hochschule für Heilpädagogik, Zurich.



FIGURE 1. Boyes Braem with Stokoe at the 1983 Rome conference.

for the visit, to my astonishment he asked me if I could take over the high school English class the next day for the remainder of the spring semester. Although I had absolutely no training or experience in teaching deaf students—being young, naïve, and not having a job at the moment, I said “sure.”

In the several remaining weeks of that semester, I was faced with a tsunami of ASL. Fortunately, my deaf high school students' command of English was considerably better than my nonexistent ASL. Even though I was drowning, I was also becoming increasingly fascinated with this lively language. Just the recounting in the daily homeroom class about the previous evening's basketball game was a drama—nothing at all like the droning narratives I remembered from my hearing classmates in my high school days.

That fall, I was accepted to teach at the New Mexico School for the Deaf, where I was immediately thrown into an informal continuing education of learning ASL, not only from my signing pupils in the middle school but also from my deaf teaching colleagues, especially Shanny Mow. Shanny was teaching English and math in the upper school (and later went on to write and direct plays in sign language theaters, including the National Theater of the Deaf). From Shanny, I not only continued to learn to sign but found a lifelong friend whom I met with regularly on both continents until his death in 2015. Among my pupils were children from the New Mexico Spanish-speaking communities as well as from Indian Pueblos, such as Taos. This array of such different languages used in everyday life was a stimulating new experience for me, having grown up in a hearing monolingual environment.

In the late 1960s, the New Mexico school allowed signing in the middle and upper schools but followed a strictly oral approach in the elementary school, although they did accept the use of fingerspelling in addition to speech and lipreading in these grades. In my second year at the school, I was given a class of the very youngest residential pupils, some only four or five years old. It seemed to me that these small children could probably all learn many things much faster if they were allowed to sign as well as using fingerspelling and trying to speak. I submitted a small research proposal to the school director, asking to be allowed to use at least Signed English in this class, and was granted permission to do this for a year. Although this was a great experience for me, and hopefully for my pupils, it also soon became clear that my limited effort in this one class wouldn't make much of a dent in the school's general policy of "no signing with the elementary school kids." I decided to go back to graduate school for a PhD in order to get more knowledge about the structure and acquisition of language in general—and especially to learn more about sign language.

In 1971, I was accepted into the psycholinguistics program at the University of California, Berkeley, where I was extremely fortunate to be a student of Dan Slobin. Dan was involved in a large crosslinguistic spoken language acquisition study but didn't know anything about sign language. However, he happened to be a good friend of Ursula Bellugi, an old colleague from their time together a few years

earlier at Harvard. Dan made it possible for me to work with Ursie at her new lab for the study of sign language at the Salk Institute for Biological Studies in San Diego. My study years thus evolved into commuting between sessions at the Berkeley campus in northern California and the Salk Institute in southern California, nearly 500 miles (800 km) apart. One fruit of this was a pilot study of the acquisition of the handshake in ASL in the form of a Salk Working Paper (Boyes Braem 1975).

At Salk, I began to learn how to do linguistic research on ASL, not only from Ursie and her husband, Ed Klima, but also from the other young researchers in the lab at that time, such as Susan Fischer, Robbin Battison, Nancy Frishberg, and Marina McIntire—as well as the wonderful ASL interpreter, Sharon Neumann Solow. Here, I also first met Harlan Lane, who had just returned from France and with whom I then collaborated on my first publication on sign language in 1976.

During these early years in the 1970s, my thinking was also influenced by several professors who were then at Berkeley. I was especially interested in George Lakoff's writings about metaphors, including his later (1980) book with Mark Johnson: *Metaphors We Live By*. My enticement with these ideas led to my PhD dissertation dealing with the visual metaphors underlying many signs in the ASL lexicon (Boyes Braem 1981).

From all of these experiences in my early years in the United States, there remained a fascination with bilingualism, language variation and contact, iconicity, and metaphors—topics that would accompany me in my research when I moved to Europe.

Continuing with Swiss Sign Languages

In 1973, I moved permanently to Basel, Switzerland, with my new Swiss husband. Alongside starting a family and finally completing my dissertation on ASL (1981), I was curious to find out how deaf people communicated with each other in my new country. I discovered Switzerland was home to three different sign languages used in the German-, French-, and Italian-speaking parts of the country. Although I lived in a German canton, my first work with sign language was with Swiss French Sign Language (LSF-Suisse) in Lausanne and Geneva, where I was asked to start the first Swiss interpreter training program

in 1982. They must have been fairly desperate, as not only was I not a trained interpreter, but also I only had high school French. Fortunately, LSF-Suisse has many similarities with ASL. Sharon Neuman Solow and Marina McIntire were our first interpreter trainers, and we had a wonderful workshop with Lou Fant, who showed us in detail how he translated a Shakespeare play into ASL. As there was no existing research on LSF-Suisse, in order to train interpreters, we had to do some basic research on this language, most of which never got published with the exception of a comparison of this language with Italian Sign Language (Boyes Braem et al. 1990).

After the first class of interpreter trainers was completed in 1986, for the rest of my professional life, I have focused on linguistic research on Swiss German Sign Language. I started a private research institution in the basement of my home in Basel in 1982, calling it the *Forschungszentrum für Gebärdensprache/FZG* (Research Center for Sign Language), a name for which there was no competition. The only official status of this new research center was the letterhead I had printed up for it.² Especially at the beginning, I was fortunate that I was married to a person who had a secure income.

One immediate problem was that there was no conventional name for the sign language used here (signers themselves called it *Gebärden*, which also means “gestures”), so in order to write a scientific description of it, I began calling it *Deutschschweizerische Gebärdensprache* (German Swiss Sign Language), or DSGS, in analogy to ASL for American Sign Language.

Could it be that difficult to move from analyzing ASL to analyzing this Swiss sign language? I naively assumed I could simply apply my linguistic analysis tools to another language. Wrong. The terrain for carrying out sign language research here not the same as that in the United States at the time—a much rockier and more difficult patch to work. At that time, there were not only no researchers of this language, but also no sign language courses, and no professionally trained interpreters. A social worker for the deaf in Basel informed me somewhat condescendingly—“Our deaf people here in Switzerland don’t sign.” That, of course, was not true. A musician friend of my husband told me his son was in a class with a child of deaf parents—and through such personal contacts, I found deaf signers in Basel, from whom I learned my first DSGS signs. Some of these signers had

grown up in different areas of German-speaking Switzerland and gone to different schools for the deaf, so they often had different signs for the same concept. This was a great place to begin plunging in with my research shovel and resulted in a first very small study on three of the five DSGS dialects (Boyes Braem 1983). I found first funding for the project, thankfully but somewhat bizarrely, by a Basel association of biologists.

As I could not find any Swiss academics who were already doing sign language research, I was lucky to meet Gottfried Ringli, the long-time director of the School for the Deaf in Zurich. Ringli, a very kind, open-minded, and generous person, invited me—a young foreigner who hardly spoke German—to his office, where he spent an entire afternoon explaining to me the deaf scene in German-speaking Switzerland. These were the years when educators of the deaf on both sides of the Atlantic were hotly debating whether or not to use a signed form of the spoken language (e.g., Signed German, Signed English, etc.) with their elementary school pupils. Ringli and some of his teaching staff had visited Gallaudet, where they undoubtedly could see with their own eyes that hearing and deaf students and faculty all signed, and not only survived but were thriving. They weren’t quite ready to allow this kind of signing into their school, but using signs to help teach German was becoming acceptable.

A hearing teacher at the Zurich school, Benno Caramore, who had done his MA thesis on the signs used at the Zurich school in 1981, was another important early supporter of more research on sign language. He became president of a small private association (*Verein zur Unterstützung der Gebärdensprache*, or VUGS) that was founded in 1983 by deaf and hearing persons first specifically to support my research center and later expanded to research on sign language and Deaf culture in general. Between 1984 and 2015, the association published one or two booklets each year written by both hearing and deaf persons with reports of linguistic studies of DSGS and other sign languages, as well as on linguistic and cultural issues important to the deaf community. These booklets were especially important in the early years, as there was not yet much information available in German about sign language and deaf culture. Six of the association’s publications in 1986–88 were based on the first sign language linguistics lectures I gave as an introduction to the new courses for learning

DSGS that were beginning to be organized by the Swiss German Deaf Association. These six booklets were later developed into one of the first books written in German on sign language research (Boyes Braem 1992/1995). The book was published by Signum, a publishing company that had been founded in 1989 by Siegmund Prillwitz in Hamburg for producing books, videos and CDs on the themes of sign language, Deaf culture and language minorities.

I then also found academic colleagues in neighboring European countries who were themselves the first researchers of their sign languages. Beginning with a small workshop in someone's living room in London, and followed by other small European workshops or conferences, I met some of the pioneer researchers of British Sign Language (Bencie Woll, Mary Brennan, and William Edmonson), Scandinavian Sign Language (Brita Bergman, Inger Ahlgren, Elisabeth Engberg-Pedersen, and Marit Vogt-Svendsen), German Sign Language (Siegmund Prillwitz and his colleagues in Hamburg, including Regina Leven, with whom I wrote one of my first publications in German in 1984), and Italian Sign Language (Elena Radutzky and the Rome team of Virginia Volterra, with whom, over the following years, I have frequently collaborated).

I was very fortunate to have highly qualified deaf native signers on the team for the first DSGS research projects: Claudia Jauch, Katja Tissi, and Tanja Tissi. None of the early deaf research team members had academic degrees, as they had all graduated from secondary schools for the deaf, which didn't award the special "Matura" diploma necessary for entry into Swiss universities. However, they had all participated in a new training program for teachers of DSGS, begun in the 1980s in Zurich, led for years by Patty Hermann Shores, another immigrant in Switzerland, but this one a deaf native ASL signer from Canada. This training program developed into something like a "mini-Gallaudet" for German-speaking Switzerland, where Deaf students could learn more about the linguistic structure of their language as well as how to teach their language and culture to adult hearing learners.

The following are some memories from these first three deaf researchers (figure 2) about the experiences that moved them to become increasingly interested in looking more closely at their first language.



(a)



(b)

FIGURE 2. Team members of the first research projects: (a) Tanja Tissi and Claudia Jauch; (b) Katja Tissi.

The transcribed excerpts are from a WhatsApp chat held in DSGS that the three had in Fall 2022.

Claudia

I've grown up in a deaf family where we've always used sign language. My first motivation for getting into research came from my valuing what I, myself, can do well. My language is my life (my family, my school, my friends). I can pass it on, show it openly, spread it. The immediate trigger for my interest in learning about my language was a December 1984 broadcast of the German-Swiss television program *Sehen statt Hören* (Seeing instead of Hearing). The program was about the first sign language courses in Zurich, which involved lectures by Penny Boyes Braem, as well as the deaf signers, Ruedi Graf and Katja Tissi. Somewhat later, Katja then asked me about attending a weekend workshop for deaf persons interested in signing. I immediately said "YES!" I had a deep feeling that sign language is right for us; spoken language is not right for me, is foreign to me.

Tanja

Although I was unaware of it, I was also influenced by my sister, Katja, who was a kind of role model for me, leading me to increasingly deal with my language identity until I became motivated to participate in doing something connected with all this. So, when Penny Boyes Braem asked me to collaborate on a sign language research project, I immediately accepted. I did this alongside the sign language teacher training I was doing and my work at the Zurich school for the deaf, as I now wanted to learn even more.

Katja

Around 1982, our hearing sister, Pierina, was studying to be a teacher of the deaf, for which she had to do an internship at the school for the deaf in Zurich. The director of this school, Gottfried Ringli, had since 1979 been encouraging the school to think about involving sign-supported speech (a form of Signed German) in the classrooms. I think another trigger for my interest was the fact that the year 1981 was the Year of the Disabled, during which there was a growing movement among the deaf for the recognition of their language and culture. Pierina asked me questions like, "Should the children at the deaf school learn signs early? Would this be good? What do you think? Is it true?"

My sister's questions disturbed me a lot—they made me think for the first time about my language. Before that, I never thought our signing was worth anything! It was more like a dark package, that should only be used in an emergency. In addition, it was something

that was, for us, intimate. But I began to deal with our language, and also began to collaborate with the sign-supported speech project at the school for the deaf. There followed a long period for me of wrestling with the idea of sign-supported speech until I freed myself by realizing that this was not really our language; our language is rather something else.

Beginning in 1983, preparations were underway in Europe for the first sign language courses that were to begin in 1984/5 in France and other countries. About this time, I also met Penny Boyes Braem from the research center in Basel, who asked me to collaborate as an illustrator and sign language informant. Then Penny recommended I go to a one-week workshop of a group of sign language teachers and researchers that was to take place in Leksand, Sweden. Our teachers were Carol Padden, Ted Supalla, and Lars Wallin. Heiko Zienart and Alexander Schmidt (who both later began working with Prillwitz in Hamburg) were also there. At that point, it struck me like a bolt of lightning that I only wanted to work in this area. I was twenty-four years old.

All three researchers also discussed how much of their teaching was first done with little conscious knowledge of the linguistic structures of DSGS. Although how to teach these structures was often described and explained in German in the teachers' manual, and they all mentioned that they were often unsure if they had understood correctly what was being described. They recalled how they discovered the linguistic structure of their own language through teaching it.

Claudia

I remember we once had a weekend at Pizol [a Swiss alpine town] to prepare the new sign language courses. There was a lot of discussion about how sign language works, its grammatical structure. I couldn't believe it—for example, sometimes the sign ICH appeared twice in a sentence such as ICH GEHÖRLOS ICH (I DEAF I). I became aware of different kinds of constructions. This was clearly not like German; it was different.

Katja

I never really thought much about the sentence level of signing, but rather always just assumed that signing communicated everything that was necessary. At that time, I was rather more preoccupied with signing at the single sign level.

Claudia

In my early sign language classes, the hearing participants often told me that I had just before used a different sentence structure for the

same thing. I wasn't aware of this, but I began to notice that it was true—I did unconsciously use many different sentence structures. I had to learn in the sign language teacher training program why any particular structure was used, and this opened me up to more awareness of my language.

The team's growing linguistic awareness was also widened through a "learning by doing research" process as they began to painstakingly analyze their language with the technological tools then available.

Tanja

In the linguistic course that Penny taught in the training program, we were required to do analyses of videotaped DSGS narratives from different signers. I got a lot of insight into, and understanding of, different linguistic structures and functions from these analyses.

Claudia

All of this was made visible to us thanks to video analyses, which one could watch in slow movement so that we could pay attention to details like mouthings. We also learned in these analyses to pay attention to subtle differences in signed narratives—the movements of the head, the shoulder, facial expressions, tongue movements, extended mouthings, and the segmentation into smaller and larger chunks of signing. This period of learning about my language was a great time. Research was like a hunger; we tried to understand everything, as we felt we were beginning from zero. We had learned so little about it in school. However, it took me a long time to understand what was going on in the teacher training program. It was certainly not easy for Penny to get through to us either; she often had to try hard to convey things clearly. Fortunately, Katja always could jump in with other examples, so I could better understand exactly what it was about. We needed a lot of examples.

Katja

All of our video analyses of signing took a lot of time and effort. We used a 35 mm printer to record stills of single signs or signed sequences. This was all necessary in order to see how our language functions. With time, I began to see new connections and had new insights about things I did not understand before so that today, I see much clearer, and can make more connections. At the beginning, we created much of our teaching materials together in groups of three or four. We understood better "why" from each other; we were very creative together in those days. This isn't always the case any more for sign language teachers. However, today the quality of

teaching is also better, and we are no longer assessing sign language competence based on our gut feelings but can now use assessment tools. For all of this, however, one needed time.

For the first larger research project that I worked on with this team, I applied to the Swiss National Science Foundation (SNF). As no dictionaries of DSGS existed, something on the lexicon seemed at first to be a logical place to begin. However, when I asked my colleague François Grosjean in Neuchâtel for his opinion, he wisely advised me to "go first with what interests you most." So our first large project turned out to be a comparison of the signing of deaf persons who had learned DSGS in their early years with those who had learned it after early childhood. This choice might have been partly motivated by my own experiences in having had to learn new languages, both spoken and signed, as a late learner myself.

A more scientifically important reason was that the data collected in this first project would be connected discourse that could later be mined further for other research questions. This turned out to be the case when we found, among other things, differences in the use of mouthings in the early and later learner's data. European sign language researchers generally seemed to focus quite early on the actions of the mouth. Many of us who were doing this finally got together in 1998 at the University of Leiden to share our research, which then became the basis for one of the first books on mouth actions, entitled *The Hands Are the Head of the Mouth: The Mouth as Articulator in Sign Languages* (Boyes Braem and Sutton-Spence 2001a). DSGS signers, who then as now use little fingerspelling, had used mouthings for—among other things—functions that fingerspelling served for signers of other languages, such as ASL. However, the role or even the necessity of mouthing became a subject of debate within the DSGS and German Deaf communities:

Katja

At that time, I was aware that our deaf colleagues in Germany were arguing that sign language is better if it has no mouthings at all. I wrestled with this question; but with time, I increasingly understood that we need mouthings in our [Swiss German] sign language—they just must be authentically necessary, not merely pretentious, to show off how much German one knew.

Tanja

As my schooling had been orally oriented, it was easy for me to understand signing with mouthings—without mouthings, it was much more difficult. Maybe I'm too strongly influenced by the spoken language. However, over time, I put less stress on mouthings unless they were necessary for expressing some content clearly. I feel it is not possible with no mouthings but is possible with fewer.

Claudia

I agree—the mouthings do help somewhat with the many manual homonyms in our language (e.g., to distinguish between the meanings of *BROTHER*, *SAME*, *RELATED*, *COUSIN*, which all have similar manual components). But I feel a more developed “pure” manual sign language is nicer, stronger, and has clearer content. If a sign language had a lot of mouthings, I'd feel like a fool—I personally don't want to let orally oriented deaf persons influence me.

During the annotation of the data from this first study, the deaf DSGS researchers often commented that it was more difficult to annotate the signing of the late than the early learners. When questioned about this, they said they felt the difficulty was somehow connected with the prosody of the signing. Following up on this, we found that the deaf early learners in our data tended to use a rhythmic side-to-side movement of the torso as a kind of prosodic binding of sequential manual components, while the deaf late learners tended to make torso movements only to one side and mainly to accompany stressed lexical items, much like hearing persons do when speaking (Boyes Braem 1999).

For our next large SNF project, we went back to the initial idea of a DSGS lexicon. The aim of the second project was to develop a multimedia database for all five regional dialects of DSGS, as well as the forms used by different generations of signers (first reported in Boyes Braem 2001b). This original databank was done with a commercial databank software (FileMaker), but thanks to frequent contact with Siegmund Prillwitz and Thomas Hanke in Hamburg throughout the 1980s, I became increasingly intrigued with the new iLex software they were developing for linking a central lexicon of the language to corpora of annotated data. The advantage of being a small part of a small country is that we now have a central iLex lexicon for research

purposes with links to an ever-growing corpus of videotaped data, which all use the same glosses for lexical items.

For this project and many others in the following years, we cooperated with the Heilpädagogisches Seminar in Zurich,³ which was then a college for training special education teachers. The first scientific research on DSGS thus owes a lot to the openness—one might even say courage—of an institution that allowed us to research a form of communication that was not yet allowed in most of the future classrooms of the teachers it was training.

Final Thoughts

As the years went by, our small team was no longer alone in trying to make linguistic descriptions and documentation of this sign language. More large projects were started; more student papers were produced from the training programs for DSGS teachers and interpreters. Also influential were the wider sign language awareness campaigns and leadership training programs conducted by the national Swiss Deaf Association (SGB-FSS).

Looking back, I and the first deaf researchers all remember our pioneering research as having been done with a great deal of enthusiasm, with a sense we were “discovering” something—even though actually we were only putting an academic focus on something that had long existed. Tanja put it this way:

For us at that time, it was like the falling of a wall around sign language, something accomplished with much commitment, effort, and energy. It was a real awakening—everything felt so NEW.

For me, it was also being in the right place at the right time. My first research in this field occurred during the same period that both the American and Swiss German Deaf communities were, for several reasons, taking a new pride in their language which they were beginning to publicly not only use but also to celebrate. I personally feel a deep gratitude to have been a fascinated and engaged researcher at the edge of this great sign language feast.

As of the writing of this article, the three Swiss sign languages have still not been officially recognized by the Swiss federal government,

although it has recommended that they be used in education, training, and conveyance of information. The Swiss parliament is scheduled to decide by 2025 a legal recognition of these sign languages as part of a proposed law for the equal treatment of the handicapped.

Notes

1. Claudia Jauch and Tanja Tissi are no longer involved in DSGS research. Katja Tissi is still an active DSGS researcher; one of her current projects is an online handbook of DSGS grammar (<https://dsgs-handbuch.ch>) with explanations and examples in DSGS accompanied by German translations.

2. In 2012, the still private FZG in Basel became an associate member of the Zurich Competence Center for Linguistics of the University of Zurich.

3. This college has evolved into today's University of Teacher Education in Special Needs in Zurich (Hochschule für Heilpädagogik/ HfH), and with whom we collaborated on many later research projects on DSGS.

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