



How Cued Speech was developed

Dr R. Orin Cornett (1913 – 2002) was an American physicist and mathematician, born in Oklahoma. He taught in various universities including Harvard and held a Director post within the U.S. Office of Education. In 1965 he became Vice President at Gallaudet College (now university) the leading university for deaf and hard of hearing students and in his first year there he devised a phonemic system to render English **visually** rather than **acoustically**. Dr Cornett named his system Cued Speech, which now has been adapted for over 60 languages and dialects around the world. He completed development of the system in 1966 and by 1967 the first family were using it very successfully with their deaf child.

The following is taken from The Cued Speech Resource Book – For parents of Deaf Children. Authors R. Orin Cornett, Ph.D. & Mary Elsie Daisey, M.Ed. ISBN 0-9633164-0-0

‘A hearing-impaired child’s first problem, of course, is communication. Signing methods can solve this problem, but not the other major problems that are also typical: limited ability to read, very low ability to speech read, and limited ability to use speech for expressive communication.

‘The ultimate purpose of Cued Speech, and the reason it was developed in the first place, is to enable hearing-impaired children to become good readers. Reading is the only way of learning, for deaf children, that is under their complete control. Through it they can learn anything they want to learn, if they can read.

‘The hearing-impaired child’s lack of a clear, internalized model of the spoken language, primarily responsible for his/her difficulties in reading, is also responsible for typically very poor ability to speech- read, often inferior to that of even an untrained hearing person.

‘Though limited hearing makes it difficult for a child to learn to make speech sounds accurately, this is not the major speech problem. Even if taught to make the individual sounds of speech with reasonable accuracy, a deaf child is not automatically familiar with the pronunciations of the words, their meanings, and the way they must be put together in phrases and sentences in using speech. Hearing children can easily be taught to imitate words and even sentences in Spanish, but this does not make them able to communicate in Spanish. Likewise, deaf children cannot understand or use English just because they can pronounce some sounds and words. They need the internalized model of the spoken language developed through Cued Speech to guide their pronunciation.

‘Cued Speech is designed to overcome the following problems encountered by most children with severe or profound hearing impairment who have hearing parents.

1. The problem of limited communication with family in the early years, resulting in delayed personal and social development.
2. The problem of delayed development of verbal language. Rapid early verbal language growth rarely occurs in the prelingually deaf child through traditional

methods, with whom every word must be specifically taught. Cued Speech children can “pick up” language in essentially the same way hearing children do.

3. The failure of most prelingually profoundly deaf children to acquire an accurate mental model of the spoken language, including its sounds, its words and phrases, and its grammar. Without such a model stored in the brain a child cannot use speech effectively to speak to others, can speech read very little, and has little chance of becoming a good reader.

4. The lack of a convenient and easy-to-learn method of communication for use in the home, the classroom, and elsewhere—for instruction, for clearing up confusion, for instant reminder of the correct pronunciation, and above all for personal and enjoyable interaction with other people.

The Methods Debate

‘Those who advocate an exclusively aural/oral education for hearing-impaired children and those who support use of manual communication have debated for more than 140 years. The advocates of each approach find the others lacking in some respects.

‘Traditional aural/oral approaches attempt to train children to make maximum use of their residual (remaining) hearing, with the aid of amplification, and also to make maximum use of the incomplete information visible on the mouth. Speech and speech reading are intended to be the primary means of communicating. Manual communication is generally forbidden, though supporting natural gestures are used by most teachers, and are typically used extensively among the children. But the low rate of language acquisition attained by a majority of deaf children typically causes a shift to written language as the primary means of teaching language unless the children make exceptionally good progress.

‘Oralists seek to provide deaf people with skills essential for integration into general society. Their critics say that limiting deaf children to inaccurate oral communication and slow, written communication is frustrating and intellectually restrictive. Specifically, they say this approach fails to produce rapid, natural development of understanding and communication for a majority of deaf children.

‘The various manual approaches strive for early development of communication and early emergence of personality through the use of a clear visual mode of communication. Most of these are used in combination with speech and within the philosophy of Total Communication. Manually-coded English, of which there are several forms, uses signs as symbols for specific words and adds signed markers to indicate some grammatical details, such as the different forms of a specific verb. Sign languages, such as the American Sign Language (ASL), have their own grammar and idioms and are thus languages in their own right, distinct from verbal languages. The use of signs can enable a deaf child to learn to communicate before learning to speak, or even if he/she never learns to speak effectively. It also prepares the child for social access to the deaf community.

‘Signs are visual symbols for concepts, just as words are spoken or written symbols for concepts. Because signs have no code relationship to words, as Cued Speech and fingerspelling do, learning the meaning of a sign does not cause a child to be able to identify, understand, or produce the corresponding word in either spoken or written form. Thus, all the words have to be specifically taught to the child until and unless he/she becomes able to read well enough to learn new words through reading.

'The limitations of methods utilizing signs, according to those who argue against them, are that they do not of themselves cause the learning of spoken or written words, do not force dependence upon (and therefore do not develop) speech and speech reading, and do not provide an adequate foundation in verbal language. Proponents of signing argue that deaf children have a right to learn and use the language of deaf people, that signing is "natural" to a deaf child, and that verbal language, speech, and speech reading can be taught later to a signing child.

'Many people, including Alexander Graham Bell, Edmund Lyons, G. Dewey Coais (1930), and Z.F. Westervelt, recommended and sought the development of a means of making spoken language visible to deaf people. But the phonetic (based on sounds) methods that were developed were too complex and/or did not consider the possibility of only supplementing the information available visually from the lips.

'Among these were the Danish (Mouth-Hand) System, developed by Georg Forchhammer in 1923, and Baghcheban's Speech Aid, developed in 1928. All used specific hand configurations and/or motions for specific consonant sounds, making it unnecessary to rely on the lips in the identification of the sounds. It is noteworthy that Coats (1930), deaf himself, expressed the opinion that the ideal system of communication for deaf people would be one based on syllables (as Cued Speech is), but he indicated that to develop such a system would be very difficult because there are so many syllables. He was overlooking the possibility that a system could represent syllables as combinations of smaller units (phonemes, or individual speech sounds) thus requiring fewer individual components. Cued Speech requires only 12 cues.

Requirements for a Suitable Method

'The following requirements for an adequate and practical system were drawn up by Cornett in advance of his development of Cued Speech (Comett, 1967, above publication p. 5):

1) It must be clear, making all the essential details of the spoken language visibly evident.

If all the sounds of a spoken language were distinctly different from each other on the lips of the speaker, a hearing-impaired person would easily pick up the language and become able to speech read precisely. He or she would accomplish through vision exactly what the hearing child accomplishes through hearing. But many words look alike. Look in a mirror as you say met, bed, pet, mid, bid, pin?, pit, mean, bin. There are at least 60 other words or syllables that look essentially the same as these on the mouth. The task is to provide a way for deaf children to see differences among all the words.

To make every speech sound and each syllable look different from all the others, Cued Speech uses eight hand shapes in four hand locations, executed in synchronization with speech. The combination of these "cues" with what is seen on the mouth results in different visual patterns for all the syllables and sounds of speech. Syllables that look the same on the mouth look different on the hand. Syllables that look the same on the hand look different on the mouth. There is a visual difference between all syllables or words that *sound* different.

2) It must be oral, so that there is consistent use of and dependence on the information visible on the mouth.

The "cues" (handshapes and locations) alone do not identify individual sounds or syllables. The visible mouth-teeth-tongue movements and formations are essential in receiving Cued Speech.

Every sound is read from the mouth—with the aid of what is seen on the hand. The hand serves to identify groups of sounds and syllables that are different from each other on the mouth. No individual sound or syllable can be read from the hand alone.

3) Any information added to what is available from seeing the mouth must be compatible (in timing, significance, etc.) with what is being said.

4) The system must be learnable by a very young deaf child through the process of consistent exposure to it in the home.

5) It must be learnable by hearing parents of average ability who are willing to make a reasonable effort to help their child.

6) It must be usable at near-normal speaking rates, at distances of up to 20 feet.

To fit the requirements above, it was necessary to develop a system that makes each syllable and each speech sound visually distinct from all others. That is, each syllable and each sound must look different from all others either on the hand or on the mouth. Many syllables and sounds look the same on the mouth. Many look the same on the hand. But, none look the same on both the hand and the mouth, so the deaf child can always see a difference, just as the hearing child can hear a difference between different sounds and spoken syllables.

‘In English, Cued Speech uses eight hand shapes and four hand locations in synchronization with speech to make all the sounds and syllables of speech look different from each other, either on the hand or on the mouth. In some languages (German, French) five locations are required; in others (Spanish, Japanese) only three are needed.’

How Cued Speech came to the UK – author June Dixon-Millar

‘In 1970 Dr Cornett gave a talk on Cued Speech at the International Congress on the Education of the Deaf in Stockholm. As a result of this, Cued Speech was introduced into schools for the deaf in every state in Australia. Mrs Winifred Tumim went to Gallaudet College to learn Cued Speech from Dr Cornett and, with him, adapted it into Standard English. She then taught it to June Dixon, who used it from 1971 to instruct Mrs Tumim’s daughter and other deaf children.

‘Encouraged by the increased ease of communication combined with the rapid acquisition of vocabulary and linguistic acceleration, and swift growth in reading ability of her pupils, June Dixon sought assistance to establish The National Centre for Cued Speech in 1975. It was generously incorporated into *KIDS*, the registered charity for children with a disability, and officially opened by the late Lord Ashley.

‘The National Centre for Cued Speech became an independent charity in 1980 as a result of the growing interest in Cued Speech. The Centre helped to establish Cued Speech in a number of overseas countries and made adaptations of Cued Speech into several languages with the assistance of Dr Cornett.

'In the mid 80's the National Centre for Cued Speech was moved from London to Canterbury in Kent, where The Centre provided an excellent venue for courses in Cued Speech and a base for visitors from the Continent. The work of The National Centre for Cued Speech was recognised by The Commission of Enquiry into Human Aids to Communication in 1992. This recommended that Cued Speech Translitterators should be trained and certified and that they should receive equal status and remuneration as Sign Language Interpreters, and also that they should have equal status to other Human Aids to Communication.

'In 1999 the Centre moved to Devon with Anne Worsfold as Executive Director and was renamed the Cued Speech Association UK.

About Dr Cornett

Dr. Cornett remained vice president of Long Range Planning at Gallaudet University until 1975 when he became Research Professor and Director of Cued Speech Programs, a position he held until 1984. During this time, he adapted Cued Speech to 52 languages and major dialects, others have continued this work to this day. Dr Cornett wrote and published audio-lessons in 34 of these languages and dialects.

In addition, from 1981 to 1983, he was also Chairman of the Centre for Studies in Language and Communication at Gallaudet. When he retired in 1984, Gallaudet University awarded him the status of professor emeritus.

Cornett's mother was a kindergarten teacher and director who played an important role in his philosophy of life. She taught him the value of education and the importance of teaching in such a way that a child could understand it easily. He applied this thought process to the development of Cued Speech in 1965.

After developing Cued Speech, Dr. Cornett received grants from the Office of Education and other agencies to do parent education, training, and research. He also became a widely sought after lecturer on the international scene.

Cornett said "I had supposed that deaf persons were bookworms, served by reading as their one clear window on the world. A few months of study convinced me that the underlying cause of their reading problem was the lack of any reasonable way to learn spoken language, without which they could not use speech for communication, become good lip readers, or learn to read (as opposed to being taught the recognition of each written word). So, I really started with the conclusion that what was needed was a convenient way to represent the spoken language accurately, through vision, in real time. That was the problem I set out to solve, the perceived need that set my direction." He wrote and published hundreds of articles and several books on mathematics, physics, higher education, deaf education, Cued Speech and other subjects as well as serving as editor of several publications, including the Cued Speech Resource Book for Parents, a guidebook for parents.

Among Cornett's achievements were three honorary doctorates, the 1963 Award for Outstanding Alumni Achievement from Oklahoma Baptist University, the Nitchie Award in Human Communications from the New York League for the Hard of Hearing in 1988, and the Distinguished Service Award of the National Council on Communication Disorders in 1992.

Dr. Cornett was listed in the Marquis Who's Who in America continuously beginning in 1956, and was also in Who's Who in the World, Who Knows What, American Men of Science, The Blue Book:

Leaders of the English-Speaking World and other biographical dictionaries.

In addition, Dr. Cornett presented his findings at seminars and conventions around the world. A pattern of presentations repeated a dozen or more times was four-or-five-day Cued Speech camps for families and professionals, with attendance ranging from 75 to as many as 330 persons. The week-long family Cued Speech Learning vacations at Gallaudet University, held annually for a decade, became so large and unwieldy that they were replaced by multiple smaller family programs, some at Gallaudet and some elsewhere. However, these workshops were a research tool for Dr. Cornett, who learned from the feedback of parents and later modified the rules of Cued Speech.

According to Dr. Jacqueline Leybaert of the University of Brussels, Dr. Cornett's *"work constitutes an invaluable gift not only to the deaf community, but also to the community of scientific research. Our many studies have confirmed what Dr Cornett expected from the Cued Speech system: the delivery of accurate information about spoken language has a strong and positive effect on the development of linguistic and cognitive abilities of deaf children."* After Cornett's retirement from Gallaudet University in 1984, he continued to work closely with members of the international Cued Speech community from his Laurel, Maryland home.

Both Orin Cornett and his beloved wife of 59 years, Lorene, died in 2002.