

## **Guidelines on the Mechanics of Cueing**

***(Approved by the NCSA Board of Directors, September 25, 1994)***

These guidelines are intended to supplement the National Cued Speech Association (NCSA) procedural guidelines for persons who desire to secure NCSA input during the production of Cued Speech instructional and practice materials, such as manuals, audio lessons and videocassette lessons. They will also be of help to teachers, parents and others seeking authoritative information on specifications for the mechanical details of the cueing process, not on teaching methods as such. Cuers, instructors, and persons preparing materials on Cued Speech should consult current sources of information on techniques and teaching methods for meeting these specifications, and for correcting deviations from them. The NCSA office will maintain an up-to-date list of such sources.

### **Physical Constraints**

Execution of the act of cueing is subject to some requirements that depend on the proportions of the cuer's body. In order that cueing shall be as consistent as possible for each cuer, that fatigue shall be minimized, and that readability of Cued Speech shall be enhanced, the following specifications should be met:

#### ***The Appropriate Arm Posture and the Side Placement***

The arm should hang comfortably from the shoulder, so that tension in the ligaments attached near the shoulder joint is at a minimum. The tips of the fingers should be at the level of the chin for the side placement, for most persons. The angle between the forearm and the horizontal should be in the range of 45 to 80 degrees for the side placement. The best angle and distance of the elbow from the body will depend on the cuer's body proportions, that is, on the ratio of the length of the forearm and extended hand to that of the humerus, the length of the neck, and the height of the shoulder joint. The forearm angle, and the positioning of the elbow, should be chosen so as to place the tips of the longest fingers at a horizontal distance of about four inches from the vertical plane bisecting the chin. Ideally, this should place the fingertips at the level of the tip of the chin. This side placement can be achieved easily by most people, resulting in a minimum of up-and-down movement in connection with the side-throat and side-mouth movements.

Some cuers' body proportions are such that the normal, comfortable positioning results in a lower side placement. Persons who suspect that their forearm-wrist-hand combination is too short to reach to the recommended chin-tip level without tension in the shoulder should get in touch with the NCSA office, which will either help them or refer them to qualified sources of help in determining (1) whether they actually need to use a lower side placement, and (2) how to select and use that placement if they should. This can be done by placing the elbow close to the body and raising the inclination of the straight forearm-wrist-hand combination to almost vertical (about 80 degrees above the horizontal). The shoulder must be neither raised nor lowered from the relaxed shoulder posture. If under these conditions the fingertips do not come up to the recommended chin-tip level, the level to which they come is the appropriate side placement level for the individual, who should use it consistently. Qualified guidance in carrying out this procedure and arriving at the right decision, preferably through face-to-face assistance, is essential. Individuals who find it necessary to use a side placement lower than the recommended one, and who thus need to keep the elbow close to the body, must be careful to follow the specification that the forearm-wrist combination shall be kept straight and moved as a unit.

If the cuer's body proportions result in a fingertip level above the recommended chin level, when the arm is close to the body and at an angle of 60 to 80 degrees, the inclination of the forearm should be reduced (to 45 degrees or so), so as to lower the fingertips to the chin level. This will require placing the elbow a little farther from the body.

The forearm inclination for the mouth placement will be essentially the same as for the side placement, or slightly less. That for the chin placement will tend to be less than for the mouth placement, and that for the throat placement still less. These differences, however, should be held to the minimum consistent with smooth, efficient, accurate cueing.

Beginning cuers should try to keep the forearm-wrist-hand combination straight, avoiding any bending of the wrist. As they become fluent and cue more and more rapidly, they will need to increase their effort to avoid excessive bending of the wrist. If beginners form the habit of bending the wrist at will, the tendency to increase the bending as they become fluent is likely to make them "floppy" cuers, which is undesirable. Cuers should also avoid any twisting of the wrist, unless they are cueing in one of the languages in which pronation of the wrist is used to indicate palatized or aspirated consonants, or nasal vowels.

The wrist and the back of the cueing hand should remain even with the forehead and chin, that is, in the same vertical plane with the forehead and chin, when cueing at the side, mouth and chin placements.

## ***The mouth, chin, and throat placements***

### The mouth placement

For the mouth placement, the tip of the pointer finger should touch just outside the corner of the mouth. Care must be taken not to let the site of the contact stray on to the mouth and cover part of it, but it needs to be very close to the corner. The pointer finger is the longest finger extended in the hand configuration, with one exception. For handshape 8, in which the index and middle fingers form a wide open "V", the middle finger is the pointer for the mouth placement. This differs from the chin and throat placements, for which the index finger is used as the pointer for handshape 8.

### The chin placement

For the chin placement the tip of the pointer finger should touch the very tip of the chin, at its geometric center, that is, in the plane dividing the right and left halves of the face. Care must be taken not to execute this placement higher on the chin, or to either side of the center line.

### The throat placement

For the throat placement the pointer finger should make contact at the site of the larynx, or 2 to 3 inches below the tip of the chin. Cuers who find the larynx sensitive to touching may touch below this level, but should not make contact lower than the hollow which marks the junction of the collarbones with the breastbone.

### The importance of consistent touching

The mouth, chin, and throat placements have the advantage of furnishing a tactile response to the cuer if he/she is careful to touch the designated location. The tactile response serves two important purposes: (1) furnishing tactile feedback to the cuer that the placement and timing are correct, and (2) making sure that parallax (the error that results if the cue placement is away from the face and is viewed from an angle) does not give a false impression of the placement for the reader, even when that placement is in front of the right location.

Touching is important in maintaining synchronization of cues with the visible manifestations of speech, which is advantageous to decoding. Cuers should take care to touch consistently at these placements. When they cue faster, they will need to exert more concentration in order to maintain touching as consistently as possible. They will encounter most difficulty in maintaining consistent touching at the throat placement.

### Acquiring, and maintaining consistent synchronization

The synchronization of handshapes and placements with the visible manifestations of speech is an important part of the mechanics of Cued Speech. It is essential that beginners form the habit of accurate synchronization and endeavor to maintain it as they become fluent. Even expert cuers need to guard against poor synchronization at the side placement, particularly for final consonants. Techniques for preventing and overcoming synchronization problems are available in published materials listed by the NCSA office.

## ***Execution of Handshapes***

In executing handshapes the fingers not specifically bent to form the target handshape should be extended parallel to each other and in contact throughout their length, except in the case of handshape 8, for which the index and adjacent finger are separated as much as possible to make an open "V." For all handshapes the bent fingers (and the thumb, if not extended) should be out of sight of the cue-readers. This is accomplished by careful maintenance of the plane of the cueing hand parallel to the plane of the face and chest, plus keeping the thumb out of sight when it is not extended. In English the wrist should never be twisted.

In executing the handshapes for which the thumb is free to hold the bent fingers in position, it should do so. For example, in executing handshape 3, the thumb should actually hold the bent index finger in position, not just touch it, in order to make sure that the thumb and finger are out of view.

## ***The Timing Movements***

The execution of each cue must include a discernible movement or event that clearly indicates the time at which the key articulatory action takes place. This is needed because the mouth does not consistently furnish such information on an adequate basis.

### Touching at the Appropriate Cue Placements

Touching at the throat, chin, and mouth placements furnishes the cuer a tactile verification of timing that is essential in maintaining synchronization of cues with speech. To the decoder of Cued Speech, synchronized touching in these placements furnishes the timing information needed in fully utilizing the cues.

### Successive Touching

When a cue is executed at mouth, chin, or throat placement, and another cue or a repetition of the same cue is to follow immediately at the same placement, the fingertips are lifted slightly from the contact location, and replaced. This provides a tactile timing verification for the cuer and a visual timing indication for the Cued Speech reader.

### Timing Movements in the Side Location

When a cue is executed at the side location there is nothing for the cueing hand to touch to indicate the initiation of articulation. Thus, some kind of specific movement or change in movement is necessary, as a timing signal.

**Vowel sounds /ah/ and /oe/.** For the vowel sounds /ah/ and /oe/, or a CV syllable containing one of them, a forward motion of about one inch is made. If another cue is to follow in the same location, the hand must first be moved back to the original location, so that the second forward movement made for the second syllable--if there is one--is initiated from the same location. Thus, /photo/ [foetoe] is cued 5 side forward and back, 5 side forward. Similarly, /polo/ [poeloe] is cued 1 side forward and back, 6 side forward; and /ha-ha/ [hah-hah], 3 side forward and back, 3 forward.

**Beginning neutral vowel sounds.** If an utterance begins with the neutral vowel [ə], spelled /u/ or /uh/ (stressed in Funeemik Spelling), or includes a CV syllable containing the neutral vowel, the timing is indicated by a downward movement of about ½ to ¾ inch. As in the case of a forward movement, if another cue is to follow immediately in the side location, the hand must be returned to the original location before the next cue is made. Thus /uh-oe/ is cued 5 side down and up, 5 side forward. Similarly, /sofa/ [soefuh] is cued 3 side forward and back, 5 side down; and /buffalo/ [bufuloe] is cued 4 side down and up, 5 side down and up, 6 side forward.

**The “flick” rule.** “When the same handshape is executed twice in succession in the side placement, the second occurrence must be accompanied by a flick to supply timing information. Example: /left/, 6 chin, 5 side, 5 side flick.”

Cornett's interpretation of the flick rule is that it applies whether or not a vowel occurs between the two successive executions of the same handshape at the side placement. Examples of cueing for this interpretation are: /coke/ [koek], 2 side forward and back, 2 side flick; /pop/[pahp], 1 side forward and back, 1 side flick; /coves/ [koevz], 2 side forward and back, 2 side flick, 2 side flick; /source/ [soers], 3 side forward and back, 3 side flick, 3 side flick.

A differing interpretation is that the rule does not apply when a vowel occurs between the two successive executions of the same handshape. According to this interpretation the words used as examples above should be cued as follows: /coke/ [koek], 2 side forward and back, 2 side; /pop/ [pahp], 1 forward and back, 1 side; /coves/ [koevz], 2 side forward and back, 2 side, 2 side flick; /source/ [soers], 3 side forward and back, 3 side, 3 side flick.

Until research results or other considerations enable the NCSA board to resolve this difference in interpretation of the flick rule, both interpretations will continue to be taught and used by their supporters.

**The flick with isolated consonants.** The flick (a quick movement of about ¼ inch forward and back) is necessary in cueing an isolated consonant, as speech teachers may do in instructing. If one wishes to cue an isolated consonant sound several times in succession, as in transliterating a stuttered utterance, such as “t-t-t-Tommy” or “m-m-m-mee,” one must make a flick with each isolated consonant, else the cueing furnishes no timing indication. Thus, “t-t-t-Tahmi” is cued 5 side flick, 5 side flick, 5 side flick, 5 forward, 5 throat, and “m-m-m-mee” is cued 5 side flick, 5 side flick, 5 side flick, 5 mouth.

## Other Relevant Specifications

### ***Cue What Is Said***

The cardinal rule governing cueing is that one must cue what one says exactly the way one says it on that occasion. This requires accurate rendition of such options as variations in pronunciation, elision, liaison, assimilation etc. Current sources of information on these subjects is available in several publications. Cuers, instructors, and preparers of materials should consult such sources in order to apply the principles in this document accurately in cueing exactly what is said.

### ***Adequacy and Normalcy of Mouth Movements***

About half the visual information provided by Cued Speech is delivered by the mouth and face movements. The readability of Cued Speech is greatly dependent on the adequacy and normalcy of the information delivered by the mouth and face.

It is a responsibility of Cued Speech instructors to emphasize and work on the development of accurate, normal mouth movements for beginning cuers, and to furnish suggestions (mirror work, etc.) for self instruction in this aspect of production of Cued Speech. **All instruction materials for Cued Speech should address and emphasize this aspect of the development of competency in Cued Speech, not just competency in executing the cues.**

### ***Ability to Cue With Either Hand***

The advantages of acquiring the ability to cue with either hand should, be made clear in Cued Speech materials and emphasized by instructors. Beginners should be encouraged to either learn initially to cue with the non dominant hand, or practice cueing with both hands enough to be able to use either hand. Then, they should regularly cue enough with the non-dominant hand to become reasonably proficient with it. Being able to use either hand at will is useful when one hand is occupied, as in writing on the chalkboard using the telephone, or when one hand/arm is tired or otherwise incapacitated. It is also important in transliterating for rapid indication of changes in speakers.

### ***Angle of the Cueing Hand***

As has been specified, the wrist and hand are supposed to form straight extension of the forearm. The angle of the elbow (the angle) between the upper arm and the forearm) changes with the placements. The inclination (from the horizontal) of the forearm-wrist-hand for the mouth placement will be very nearly the same as for the side placement, or slightly less. The inclinations for the chin and throat placements will tend to be progressively less, as required for smooth, comfortable cueing.

Charts showing the handshapes, either in isolation or in relation to the face, should position the handshapes at an appropriate angle above the horizontal, not vertically or horizontally. Charts showing them in horizontal or vertical orientations, which have appeared in the past, have caused some people to try to cue that way. Charts included in instructional materials should orient the handshapes at about 45 degrees above the horizontal.

### ***Cueing of Intonation***

In tonal languages the level of voice intonation is indicated approximately by the angle of the cueing hand, in relation to its normal angle for a given placement. This makes it possible to distinguish the phonemically significant "tones" of tonal languages, as Thai, Igbo, Mandarin, Cantonese, etc. In English this technique can be used to indicate changes in intonation, but is rarely used except by speech therapists working on voice pitch problems and monotone speech, or in helping deaf children learn to carry a tune. More details are available in *The Cued Speech Resource Book For Parents of Deaf Children*, pp. 171-72.

### ***The Ubiquitous ũhũ***

One of the most frequent utterances in American English is the expression commonly spelled *uh huh*. The nasal vowel in this expression was inadvertently omitted from the original Cued Speech chart because it was not listed among the phonemes of English in phonetics books. This and the negative form, *huh uh*, are only in slang dictionaries, yet are used by

most Americans many times a day. It is the nasal counterpart of the neutral vowel, the schwa. This vowel is a legitimate phoneme of American English, with at least one minimal pair.

The vowel ũ(as written in Funeemik Spelling) should be cued at the throat, as it is in French. Authors and producers of materials on Cued Speech should add this phoneme to the Cued Speech charts.

Many Americans also use the same expressions with the vowel suppressed, keeping the mouth completely closed and saying: mmmm hmmm and hmmm mmmm. These non-vocalic expressions can be cued at the side, but the forward motions must be reduced to flicks, else vowels would be indicated.

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