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A Pilot Study of the Expressive Gestures Used by Classical Orchestra Conductors

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A Personal Note About Ursie, Ed, and Music

Our first contact with Ursula Bellugi and Ed Klima came in the early 1970s when I (Penny) began my Ph.D. studies at Berkeley, with the intention of writing a dissertation on sign language. My advisor, Dan Slobin, recommended that I make contact with his old Harvard classmate, Ursie, who was just setting up a lab for sign language studies at the Salk Institute. The result for me was an exciting period of research with Ursie's team at Salk. Thüring was studying in the music department at Berkeley at the time and in his trips down to San Diego was included in the parties and dinners that Ursie and Ed would somehow find the energy to put on after working at least 14 hours straight on linguistics. We discovered that all four of us shared an interest in music, from different points of view (being a conductor, being related to a conductor, having been a dancer, etc.). Thüring and I have finally managed, after 25 years, to find a project on

which a sign language researcher and a classical music conductor could work together—namely, the hand gestures of conductors. We both are particularly happy that our joint effort can be included in a book for Ursie and Ed, in fond memory of the many spirited hours we spent with them, with conversations that roamed freely between the worlds of sight and sound.

INTRODUCTION

The purpose of this study is to extend the traditional analysis of the gestures that the orchestral conductor makes with the dominant hand, to those “expressive” gestures that are usually made with the nondominant hand. Our research questions are the following: Is there a repertoire of “expressive” gestures? If so, how do they compare with the hand gestures that accompany speech and with the more highly coded sign languages of the Deaf? Are conducting gestures systematized in any way beyond the organizing, structuring patterns of the classical orchestral conductor?

The music historian, Harvey Sachs (1993), in *Reflections on Toscanini*, recounted an anecdote that directly concerns these topics. The incident occurred during a performance of *Pictures at an Exhibition* by the Vienna Philharmonic orchestra in Budapest. Toscanini, who always conducted from memory, began to conduct the wrong episode. The principal bassoonist of the orchestra recounted the following:

Not one musician started to play! It was ghost-like, a little like a nightmare: Toscanini conducted in the air, and not one sound occurred! Toscanini, for a tenth of a second, was flabbergasted and stony-faced: how come nobody plays? But in another tenth of a second he realized that instead of *Tuileries* he had conducted the beginning of *Bydlo*, which was very different in dynamic character. And with an almost indiscernible nod, he gave the right dynamic sign for the beginning of *Tuileries*, and then the orchestra, most harmoniously, as if nothing had happened, started to play. Afterwards he said: ‘This is the greatest compliment an orchestra can pay me: I make a mistake, and the orchestra at once realizes I am wrong.’ Why? Because his *Zeichengebung*, his gesture for communication and conducting, is so unmistakable in its one possible meaning that you cannot take it as meaning anything else. . . . (From Sachs, 1993, p. 148)

There are two relevant observations in this incident: First, there was a gestural communication from the conductor that was so clear that a hun-

dred players reacted “correctly.” Second, there is something, in addition to the organizational signs that operate as a communicative entity, whether it be an “indiscernible nod” or the “stony-face,” that in a tenth of a second can give an unambiguous signal.

The conductor George Szell described Toscanini’s technique as “deceptively simple”:

Toscanini . . . made a distinction between the responsibilities of the right and left arms. His right arm generally moved in broad, clear, compelling strokes, not merely beating time but drawing the musicians into the music and helping them to progress through it, persuading them to bring it to life; it activated and shaped the music. His left hand was responsible for the fine tuning: from a position directly in front of him, where it was invisible to much of the audience, it cautioned and exhorted. (Sachs, 1993, p. 150)

THE TRADITIONAL DESCRIPTION OF THE CONDUCTING GESTURES OF THE DOMINANT HAND

Equally important to what is shown by the conductor is what is not shown. The conductor does not indicate all the important elements of the music that can be found in the printed score: the pitches and the rhythmic values. The dominant hand indicates the organization (the beginnings and ends), the tempo, and the rhythmic raster, or tact. The nondominant hand shows special dynamics, sound colors, uniquely occurring events, entrances, and articulation. Naturally, all of these parameters influence each other and whether they are signaled by the dominant or the nondominant hand is more of a general tendency than a firm rule. However, most books on conducting describe a general division of labor between the hands, an asymmetry of movements and functions that is one of the difficult techniques that students of conducting must master.

This view is also found in one of the most authoritative treatments of conducting, *The Grammar of Conducting* by Max Rudolf (1994). A conductor himself, Rudolf was also the musical director of the Metropolitan Opera in New York in the 1940s and thus was in constant contact with other conductors such as Toscanini, Walter, and Szell. Rudolf treated the basic patterns of the right hand (the neutral 2 pattern, the staccato, and the legato beats) and the organizational “details” shown by the left hand. The musically most impressive interpretations are, of course, not solely due to

these learnable techniques but are dependent on a thorough knowledge of the piece's structure and musical intent. Given that the conductor has this background knowledge, the dominant hand gestures are generally used to "direct the musical traffic." Examples for this directing function of the right hand are shown in the fundamental beating patterns represented in Fig. 10.1.

In books on conducting and in conducting courses, the use of the non-dominant hand has usually been mentioned in a more general way, giving the impression that it is up to the individual conductor to develop gestures that will show other aspects of the music, such as sound texture, foregrounding of instrumental voices, density, atmosphere, and expression. Exactly how the nondominant hand (together with the facial and body expression and eye gaze) actually manages to communicate all these aspects of the conductor's message has never, to our knowledge, been studied in detail.

ANALYSES OF THE CONDUCTING GESTURES OF THE NONDOMINANT HAND

Theoretical Bases

In this pilot study of the gestures of the nondominant hand of the conductor, the theoretical starting point is not historical or technical but is based

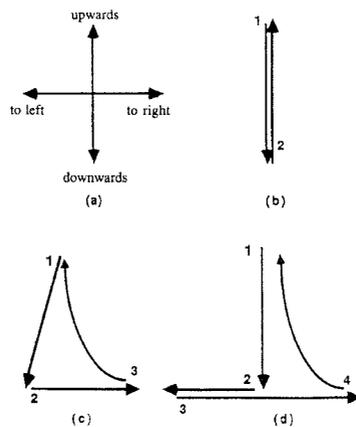


FIG. 10.1. Dominant hand (from the conductor's perspective): (a) traditional division of the conducting space, showing the temporal organization of the music; (b) 2 beats; (c) 3 beats; (d) 4 beats.

instead on the componential analysis of the signs of Deaf sign languages as well as of gestures that hearing people use to accompany speech. These gestural components are then considered from the point of view of cognitive linguistic theories, which postulate the metaphoric underpinnings of much of human conceptualization.

The Componential Analysis of Hearing Gestures and Deaf Signs

Linguists who have studied the visual-corporal sign languages used by Deaf persons have found that the signs in these language are not global, nonanalyzable units but instead are composed of several distinct parameters, some of which are manual and others nonmanual (cf. for example Stokoe et al., 1965; Klima & Bellugi, 1979; Boyes Braem, 1995). The manual parameters that have been found to be important for this form of language include the location of the hand, its handshape and orientation, as well as its movement. The significant nonmanual parameters include the facial expression, position, and movements of the head and trunk and direction of eye gaze. Within these parameters, there are limited sets of subcomponents used in the individual sign languages. For example, of the many handshapes the human is physically capable of making, only a limited number are used linguistically in any one sign language.

In a subset of signs (productive or polymorphemic verbs with classifier handshapes), the handshapes can convey distinct meanings, depending on how they are combined with the other parameters and the context of the message. For example, the concept of "grasping an object" can be denoted by some of these verbs, in which the category of object being grasped is indicated by a specific handshape (cf. Fig. 10.2).

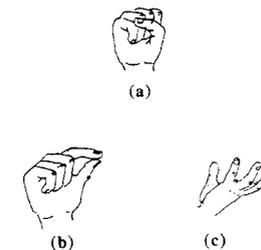


FIG. 10.2. "Grasp" handshapes for different kinds of objects; (a) for heavy objects (e.g. a suitcase); (b) for small, light, thin objects (a thread); (c) for fairly large, roundish objects (a ball, a pipe).

In other combinations of the parameters, the handshapes shown in Fig. 10.2 can convey other, nongrasping, meanings. The fist handshape in Fig. 10.2a, for example, when combined with a repeated linear movement, can mean “pounding” or “beating.” The “pincer” handshape in Fig. 10.2b, if combined with repeated short, sharp, downward movements, could mean “pecking.” In other words, the handshapes themselves are not tied to any one meaning but are polysemous, capable of conveying several meanings, depending on the context of the other parameters.

Calbris (1990) found this same polysemy in her study of the gestures that hearing French people use with speech, as did Boyes Braem (1998) for the interpretation of signs from Italian Sign Language by nonsigning hearing persons from several European countries.

The Metaphoric Basis of Conceptual Thinking

Although speech-accompanying gestures are polysemous, this does not mean that any one handshape can be substituted for another. One would not use a “fist” handshape, for example, to accompany a meaning that had to do with “small, fine detail,” “precision,” and so forth.

Polysemous gestures are thus constrained by a more basic system that, we propose, is that which several cognitive linguists have argued structures most of our conceptual thinking and spoken language (Johnson, 1987; Lakoff & Johnson, 1980; Lakoff & Turner, 1989; Sweetser, 1990).

According to Lakoff and Johnson (1980), much if not all thinking and communication about abstract concepts is made possible through the use of metonymic and metaphoric structures. Of particular relevance to this study of conducting gestures are their comments on the concepts humans have of “object,” “substance,” and “container”:

We experience ourselves as entities, separate from the rest of the world—as containers with an inside and an outside. We also experience things external to us as entities—often also as containers with insides and outsides. We experience ourselves as being made up of substances—e.g., flesh and bone—and external objects as being made of various kinds of substances—wood, stone, metal, etc. We experience many things through sight and touch, as having distinct boundaries, and, when things have no distinct boundaries, we often project boundaries upon them—conceptualizing them as entities and often as containers (for example, forests, clearings, clouds, etc.). (p. 58)

Several researchers have proposed that this kind of metaphoric–metonymic thinking not only underlies spoken languages but also Deaf sign languages and speech-accompanying gestures used by hearing persons (cf. e.g., Boyes Braem, 1981; Brennan, 1990; Taub, 1997; Wilcox, 1993 for sign language research; Boyes Braem, 1998; Kendon, 1995 for studies of hearing persons’ gestures.)

Here, we argue that this kind of basic metaphoric thinking is also the basis for the communicative gestures that conductors make with their non-dominant hand. The gestural space of the conductor is like a small stage, on which the actors are the conductor’s hands, body, face, and eye gaze, all of which play out specific aspects of the musical score through the indication of basic metaphors. The size of this stage is about the same as that of the “signing space” of Deaf sign language, ranging vertically from the top of the head to the waist, and horizontally, an arm’s length to either side and to the front. The effective conductor typically does not move his whole body much, as this would make it difficult for the musicians who are also concentrating on their scores to quickly focus on the conductor standing in front of them.

The conductor’s stage is often a metaphorical container in which there are objects that one can manipulate: hold (“tenuto”), “pick-up,” “drop,” “push-away,” “pull towards oneself,” “touch,” “stroke,” “scratch,” and so forth. The orchestra is the primary public for this gestural theater. It understands the gestural message and translates the underlying metaphors into sounds for the audience, a process of translating a theater for the eye (Greek *theaomai* = to see) into one for the ear.¹ Essential for this transfer of the musical message from the printed score to the musicians’ musical thinking is a conceptual system of essentially body-based metaphors.

METHODOLOGY AND GENERAL FINDINGS

The data for this study are based on the analyses of the videotaped gestures of a variety of different conductors. This chapter deals only with manual gestures, although it is clear that facial and body expressions as well as eye gaze are also very important in the conductor’s communication. The nondominant hand gestures used by these conductors were notated according to their subcomponents as well as their musical meaning.

¹For the use of metaphors in theater, see Rozik (1992).

The compositional analyses of the gestures was done by the coauthor Boyes Braem, who is a sign language researcher; the interpretation of the musical intent of the gesture was made by the coauthor Bräm, who is himself a classical orchestra conductor and a teacher of conducting. For the illustrations, Bräm has also reproduced examples of all the gestures discussed.

Compared to the relatively large number of different handshapes that are phonological components of sign languages, the number of handshapes regularly used by conductors seems to be quite limited (cf. Fig. 10.3). In this respect, conducting gestures are similar to gestures used to accompany speech. The limited set of handshapes includes those found in most sign languages of the world, and those that are used first by young Deaf children learning sign languages. It is quite probably the fact that this is a basic, limited set of handshapes which makes the conducting gestures so easily interpretable by musicians in orchestras around the world, even when they are confronted by a conductor who has never directed them before and might be from a different culture. Most of these handshapes are also sufficiently different from each other that they can be easily distinguished. This is important, because in large orchestra formations, many musicians are seated at some distance from the conducting podium. As the dominant hand of most conductors of classical music is usually grasping a baton and beating the musical structure, most of the gestures for indicating "expression" are one handed.

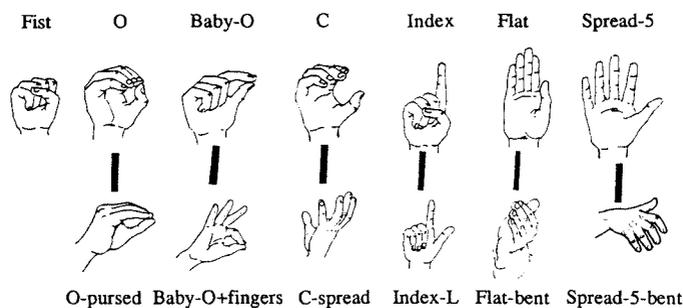


FIG. 10.3. The limited set of handshapes used by the conductor in non-dominant hand gestures.

A REPERTOIRE OF NONDOMINANT HAND GESTURES

The gestures that were used repeatedly by the conductors in this data seem to be based on the kinds of metaphoric associations that have been found in studies of the lexicon of sign languages and in speech-accompanying gestures used by hearing persons.

They can be grouped into the following categories, according to the source domain of the metaphor on which they are based:

- (a) manipulating objects
- (b) showing the path or form of an object
- (c) indicating direction
- (d) portraying an object
- (e) indicating a body part
- (f) holophrastic interjections

(a) Manipulating Objects = Sound Quality, Structure, Articulation, Musical Development, Psychological Motivation

A great many conducting gestures fall into the category of manipulation of objects. These are gestures that represent a grasping of an object, a touching, holding, or letting go of an object, hitting or chopping, painting, playing something.

"Pulling out an object"

In this gesture, a rounded "pincer" handshape moves in a straight line from a musician toward the conductor, who is metaphorically pulling a sound, like a thread, out from the musicians' mouth. The pincer handshape (see Fig. 10.4a) indicates that a thin sound is desired and is typically used for flute sounds and vocalists. For the drawing out of a fuller sound (e.g., from a brass instrument), all the components of the gesture remain the same (location, movement, orientation of the hand), but a full cupped grasp handshape would be used instead of the pincer handshape (Fig. 10.4b).

"Taking out of view"

Another common left-hand gesture used by many conductors is based on the metaphor of "taking something away from the visual

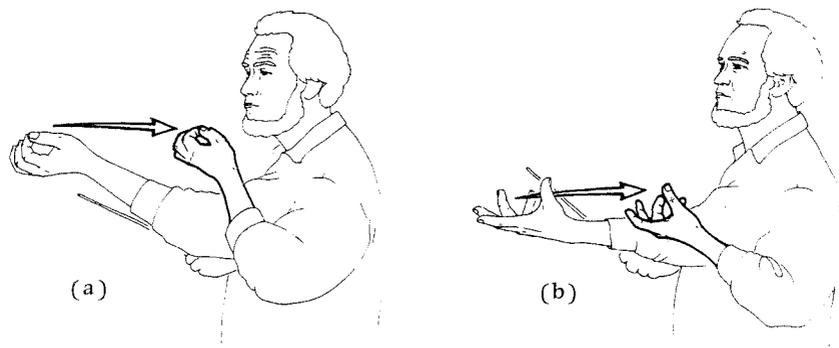


FIG. 10.4. "Pulling out an object": (a) thin sound and (b) a full sound.

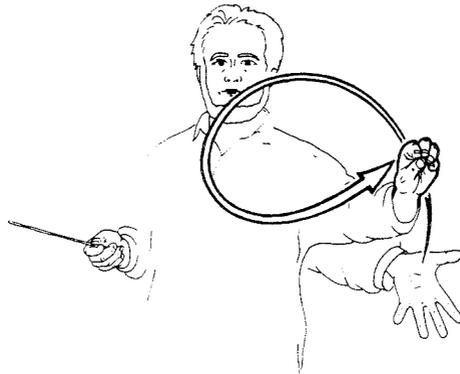


FIG. 10.5. "Taking out of view" = stop playing!



FIG. 10.6. "Gathering objects" = homogenous sound quality.

field" (see Fig. 10.5). In this case, what is being metaphorically taken away is all the sound. The gesture is used at the end of the piece or section to indicate "stop the production of sound." For this purpose, an open hand closes to a closed grasp hand and can be combined with a movement toward the conductor or with a movement to "off-stage," which can be in a direction out of the conducting space (i.e., below the waist, to the side, even to behind the back). Which of these movements are used seems to be up to the personal preference of the individual conductor, many of whom seem to have their trademark "taking out of view" gesture. The manner of the closing of the hand into the grasp handshape can indicate more precisely how the music should end: an abrupt cut-off with a fast movement; a slowly dying sound if the fingers close successively while the hand moves out of sight.

Several other types gestures have been observed in the data that involve the handling of an object are described briefly next:

- "Gathering objects," or individual sounds, in order to elicit a homogenous sound quality or an increasingly focused one (Fig. 10.6);
- "Supporting an object" to sustain a solid sound quality (Fig. 10.7);
- "Hitting a hard object," which, depending on the type of movement with which it is combined, is used for a hard and precise or heavy sound quality (Fig. 10.8a). If the orientation of the hand is turned, the association becomes more specifically one of "hacking, as in hacking wood" and is used for different grades of staccato (Fig. 10.8b). If a less hard attack is desired, the handshape component of this gesture can be changed to that of an open flat hand, palm oriented downward.
- "Pushing an object," which pushes the sound away (out in front, upward or downward) to where in the beat the point of playing—the attack—begins, as well as how strong the attack should be (Fig. 10.9).
- "Touching a surface," which, depending on the type of movement and the handshape can indicate, for example, a smooth, homogeneous sound with the full flat handshape (Fig. 10.10) or a scratchy sound (claw handshape).
- "Feeling a substance" such as moving the hand through flour, honey, water, kneading bread dough, squeezing clay, and so forth, to elicit

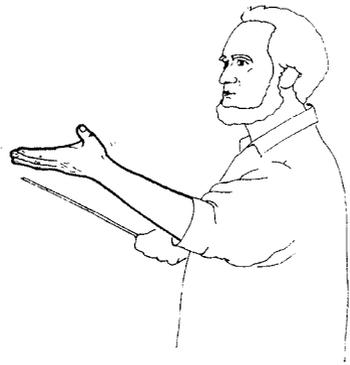


FIG. 10.7. "Supporting an object" = sustained sound.



FIG. 10.10. "Touching a surface" = sound quality (e.g., homogeneous sound quality).

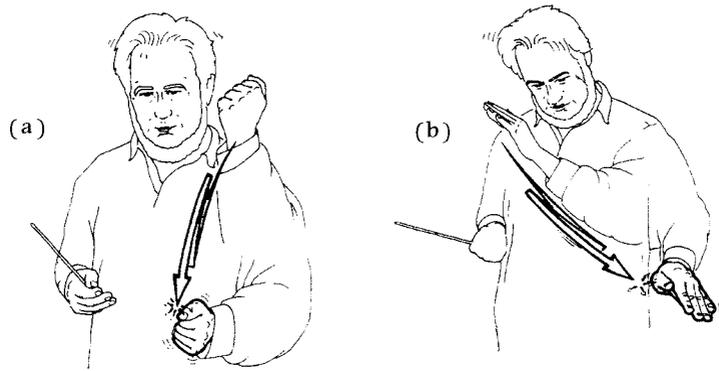


FIG. 10.8. "Hitting an object" = (a) hard or (b) hacking sound quality.

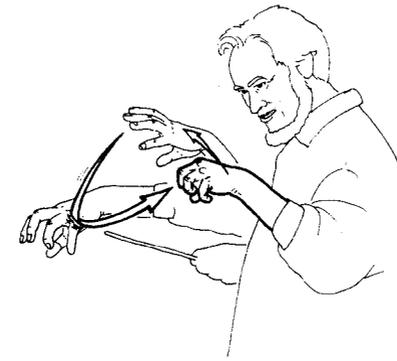


FIG. 10.11. "Feeling a substance" = sound quality (e.g., thick, dense).

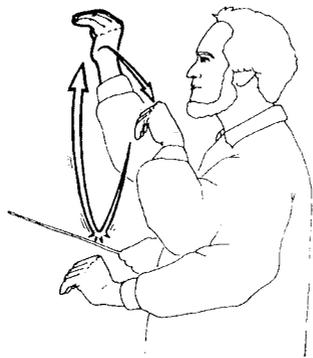


FIG. 10.9. "Pushing an object" = point and strength of attack.

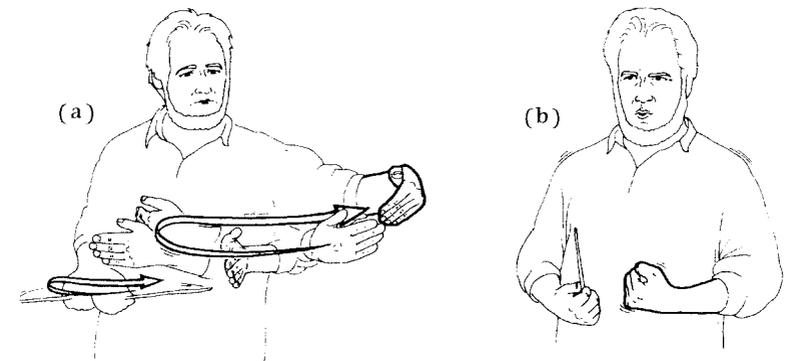


FIG. 10.12. "Playing an instrument" = play out your instrument (a) strings or (b) brass.

specific sound qualities such as “feather light,” “sticky,” “thick,” and “fur-like” (Fig. 10.11).

“Playing an instrument” mimics the hand and body motions as well as facial expressions typically used by players of particular instruments (bowing for strings, beating for timpani, showing an embouchure for winds, strumming strings for harp, rippling a keyboard, etc.) to encourage the musicians to thoroughly savor and “play out” this passage on their instrument (Fig. 10.12a and 10.12b).

“Drawing or painting,” in which an open, flat hand is held downward, and moves like a brush between two locations to “smooth together the surfaces” (Fig. 10.13a); a pincer handshape, as if holding a small brush or pen, when combined with repeated, short jabbing movements, marks important points in the musical passage, which often are turning points in the musical development (Fig. 10.13b).

(b) Showing the Path or Form of an Object = Structure

Some gestures are indicators of musical paths in that they show where a musical development begins and in which direction it develops. These paths can be the development of the content or motive of the music, or be a purely “geographical” indication of the movement of the playing of the motive first by one musical group, then another. The significant components here are the locations where the gesture begins (for geographical indications, the group of musicians who play the beginning of the development), and the location where it ends (the group that continues the development). The handshape can be a traditional deictic index finger or a flat whole hand handshape with digits together or separated, or even a lightly cupped handshape. The manner of movement as the hand moves from group to group can be varied to indicate more details of the development: slow, brisk, abrupt change, and so forth (Fig. 10.14).

The general structure of a musical “form” is indicated either by an index finger alone to stress the sound “line,” or by a full, flat hand in an arcing movement to indicate a fuller structure, usually a combination of harmony and “grain” (Fig. 10.15).

(c) Vertical Direction = Dynamics

Vertical levels within the conducting space can indicate the dynamics of the music: high level = more = louder; low level = less = softer. These lev-

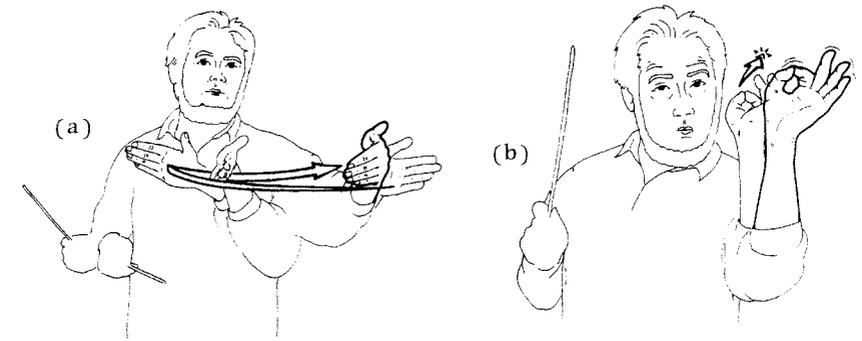


FIG. 10.13. “Drawing, painting” = (a) connected musical sequence; (b) important points, pivots in musical passage.

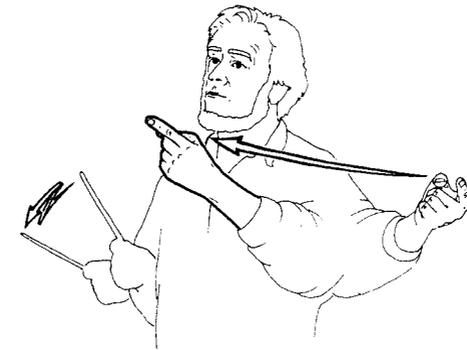


FIG. 10.14. “Path” = movement of musical material between instruments.



FIG. 10.15. “Form” = harmony and “grain” of a musical motive.

els are indicated by a gesture with an open flat hand, moving upward or downward, palm held horizontally (Fig. 10.16a, and 10.16b). An accompanying lateral spreading or closing of the digits can augment the “louder” or “softer” effect. (An analogous opening = louder and closing = softer metaphor can be indicated by the arms moving horizontally apart or together.)

(d) Portraying an Object = Sound Quality

A gesture in which a closed hand, palm oriented up, opens into a spread-5 handshape is used for a particular timbre of the sound, a light, radiating quality (Fig. 10.17). In many sign languages, this opening gesture is the metaphoric base of signs associated with “radiating” objects (streams of water, rays of light, etc.). In the conducting gesture, the metaphor is “radiating sound.” If the movement component of the hand is changed, from moving upward to moving out toward the orchestra, and is combined with a sharp, emphatic opening of the digits, the gesture means “louder and more brilliant.”

(e) Indicating a Body Part = Intensity, Focusing, Intonation

Gestures that involve pointing to particular parts of the body can metonymically refer to functions of that body part or, in further derivation, to metaphoric meanings associated with it in particular cultures:

Heart/Solar plexus: In pointing to these parts of the body, the conductor is indicating that at this passage of the music, there should be an emotional intensity, or (in the case of the solar plexus), that a “concentrated/centered” quality of playing is desired. (Fig. 10.18a).

Ear: When a conductor points to, touches, or grabs his ear, he is making an association with the ear’s biological function, which is hearing, and thereby indicating to the musicians, “Listen!” Specifically, this gesture is used when the conductor wants the musicians to pay closer attention to or correct their intonation (Fig. 10.18b).

Lips: The indication of the lips can have at least two different meanings:

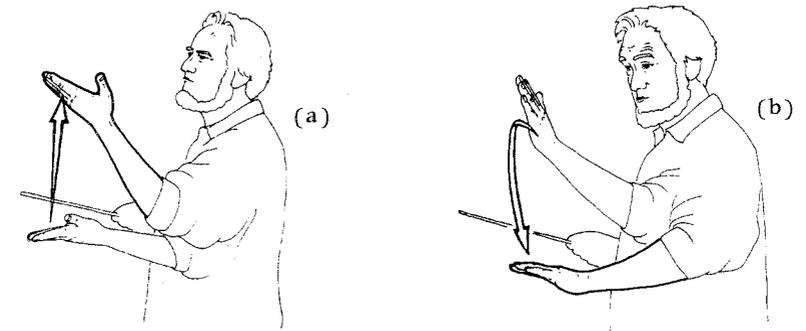


FIG. 10.16. (a) Upward = louder; (b) downward = softer.

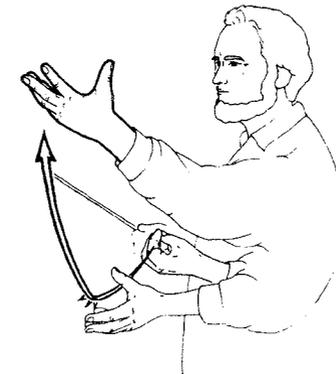


FIG. 10.17. “Rays” = sound quality (radiating, bright timbre).

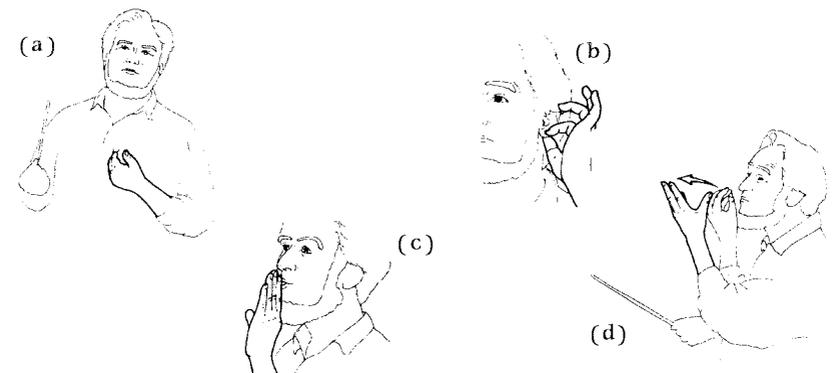


FIG. 10.18. Body parts = sound quality (a) heart/solar plexus = play with emotion/concentrated; (b) ear = correct intonation; (c) lips = softer or more sensuous; (d) nose = light “perfumed” sound.

- The widely conventionalized meaning of “shh, keep quiet” is used by the conductor to indicate “play softer!” (Fig. 10.18c).
- If a “pursed” handshape is used as in Fig 10-8(d) and the hand is brought close to the lips, the association is that of something that tastes good. The gesture is used by the conductor when a “sensuous” sound quality is wished.

Nose: The indication of the nose by conductors is interesting, in that—unlike the largely negative associations that the nose has in gestures used by speakers (“stinks,” “odious,” “snotty,” “snobby” and so forth), the association for an orchestra is generally that of a positive sensuous quality. The flat O handshape is used, often together with a slight intake of breath, to indicate that a lightly “perfumed” sound is desired (Fig. 10.18d).

(f) “Holophrastic Interjections” = Tempo, Structure, Motivation

Another kind of category of conducting gestures is based on more culturally encoded gestures used by speakers for “holophrastic interjections,” such as exhortations to the addressee to “go on, continue,” or “be careful.”² The following are examples of this kind of gesture in the conducting data:

- A gesture meaning “keep moving!” in which the most important component is a repeated forward circling movement of the hand. If tempo of repetitions is increased, it means “move faster” (Fig. 10.19).
- The vertically extended index finger, which in many cultures means “pay attention!” is usually used by the conductor as a preparation for something new or important that is coming up in the music (Fig. 10.20)
- The “offering” gesture seems to have a psychological function of encouraging the musicians to whom it is directed to “take this

²We are grateful to Isabelle Poggi for her suggestion of the term “interjections” for this category of conducting gestures. She defines interjections as the only case in spoken language of a “holophrastic signal.” A holophrastic signal “cannot be separated into subsignals without completely losing its meaning—[it] conveys all the meaning of a Communicative Act, i.e. both its performative and its propositional content” (Poggi, 1998, pp. 8–9). An example of a holophrastic gesture in the Italian culture is one that has an open, flat handshape, palm down, fingers forward, combined with an up-and-down movement. The meaning of this gestures is “come here” and includes the predicate (to come), the arguments (hearer should come to speaker), and the performative (a command). (See also Poggi, 1987.)

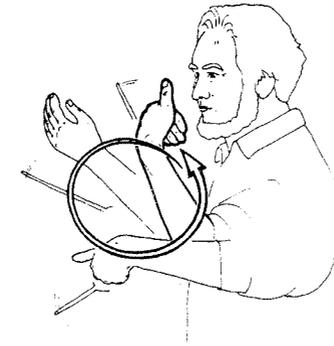


FIG. 10.19. “Keep moving!” = “continue playing as you are.”



FIG. 10.20. “Pay attention” = “important change is coming up.”

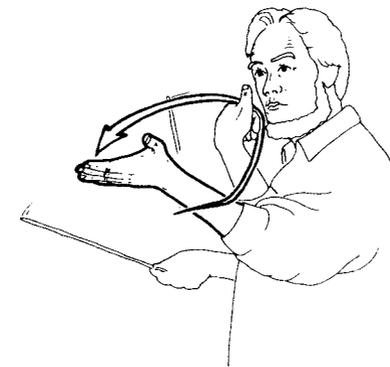


FIG. 10.21. “Offering” = “take it, it’s your turn.”

passage,” in the sense, “it’s your turn, carry it on” (Fig. 10.21). The form of this gesture is the flat hand held with palm facing upward, the fingertips pointed forward, sometimes simply held or combined with a slight movement toward the orchestra. Important to this gesture is the simultaneous eye contact, raised eyebrows, and positive facial expression. This “offering” gesture is similar to one of the first gestures that young children use in their prelinguistic communications. Kendon (personal communication, Berlin, April 1998) suggested that in its derived sense (“it’s your turn”), it is used by speakers as a kind of conversational regulator, which is also how it seems to function in the context of the orchestra.

- The “pursed” handshape, with palm oriented upward (Fig. 10.22) is, according to Kendon (1995), used in some European cultures by speakers to focus on some aspect of the accompanying speech. Some conductors use this gesture in an analogous way to indicate a focus on some aspect of a musical passage.
- Another more culturally encoded gesture used by some conductors is similar to the “cut-off,” or “finish” gesture used by umpires in sport matches. This is a two-handed gesture, in which the open flat hands, palms down, are initially crossed over each other in front of the torso, then the arms move rapidly out to the side. The conductor uses this gesture for indicating abrupt endings to musical passages.

Different gestures are often produced successively, to give a series of instructions; for example, a “moving through a thick substance” gesture followed by a “radiating burst” gesture, finishing with a “supporting/sustaining” gesture.

DISCUSSION

The gestures described here are a representative but certainly not exhaustive list of the repertoire of gestures used by conductors. Further analyses from a wider variety of conductors would undoubtedly add gestures to the



FIG. 10.22. Pursed handshape = focused element.

list. However, the added gestures would probably involve one of the limited set of handshapes. Furthermore, they would probably fall into one of the major categories discussed in the previous section. This is because most conducting gestures are based on metaphoric–metonymic connections between aspects of the music and physical experiences that human beings have with objects in everyday life. Some of these experiences have to do with handling objects (grasping, letting go, supporting, touching, etc.) whereas others have to do with biological functions of the body (smelling, hearing), and still others have to do with describing visible forms (drawing lines, painting surfaces). Or the conducting gesture would be borrowed from a culturally encoded gesture used by speakers as a “holophrastic interjection.”

Factors Influencing Range and Choice of Gestures Used

Perhaps because many of the expressive gestures of conductors have so much in common with other aspects of human experience and communication, they can function effectively—with no accompanying verbal explanation—with musicians from a wide variety of cultures. There very probably are, however, some differences between cultures as to which gestures from the repertoire are preferred. European-trained conductors seem to use many of the “handling” gestures in which aspects of the music are metaphorically conceptualized as concrete objects or lines to represent musical paths and turning points. Instead of the line, some Japanese-trained conductors prefer gestures that indicate the turning points as dots in a pattern. Seiji Osawa, for example, is known among conducting students as having a “painterly” style. For many Europeans, Bernstein has a typical “American” style. Even for conductors from the same culture, there are clearly different styles of conducting, a different selection of the gestures in the repertoire described earlier, and a difference in the frequency of use of nondominant hand gestures. These stylistic differences are influenced by several different factors in the communication situation: the musical setting, the nature of the audiences, the style of the work, and the personality of the conductor.

The Musical Setting. The conducting style can vary, depending on whether the situation is a concert, rehearsal, radio, or TV recording. For example, the gesture of grasping the ear to indicate that intonation should be corrected is used during a rehearsal but usually not during a

concert. The acoustic environment is also influential—different styles of conducting will be used depending on the room size, its resonance, if the concert is outdoors, and so forth.

The Style of the Work. Very important is the style of the music: The works of Bach, Mozart, Bruckner, Johann Strauss, Webern, Berlioz, or Lutoslawski all require a selection of different gestures from the repertoire.

The Audiences. A conductor has two audiences: the orchestra and the listening public. For the orchestra, not only are the size and nature of the musical ensemble important, but also how well the conductor and the orchestra know each other. If the two know each other very well, the conductor can be much more economical with gestures than would be the case with doing a first concert with an orchestra. In the older films of the first generation of European conductors (e.g., Richard Strauss), a more limited set of gestures seems to be used as compared to many modern conductors. Although there could be many reasons for this, one certainly is that in that time, a conductor did not jet around the world, conducting a different orchestra every week, but stayed in one place and gave regular weekly concerts with one orchestra. The musicians of these orchestras perhaps did not need additional indications through gestures, as they knew their permanent and long-time chief conductor and his styles of interpretation very well.

Another audience factor is whether the ensemble is professional or amateur. When conducting an amateur chorus, many more creative, “improvised” gestures are needed than when standing in front of a professional chorus, with whom the same effect can be elicited with a small smile.

The public as audience is a factor, depending on the personality of the conductor. The early conductors did not constantly conduct in front of film and television cameras and so perhaps did not feel the temptation to conduct for the audience as well as for the musicians. Some conductors seem to conduct more for the public than for the orchestra, using gestures that are correspondingly dramatic when viewed from behind.

The Personality and Culture of the Conductor. This brings us to another important factor—the personality and cultural background of the conductor. Conductors have different images of themselves and of their functions as a conductor. The different personality types we observed include the following: Organizer, Interpreter of the Score, Animator, Hypnotist, Trainer, Buddy, Self-Realizer, and Showman. The strong contrast

between the styles of Leonard Bernstein and Sergiu Celibidache, for example, is probably due in large part to their basically different personality types.³ The New Yorker—Bernstein—is a Showman type, using many expressive gestures in his conducting. A videotape of his rehearsals of “Romeo and Juliet” with a student orchestra, during which he often stops the music to explain some aspect of the story to the musicians, provides good evidence that the gestures he uses in conducting are similar in quantity and quality to those he uses to accompany his speech. The Rumanian—Celibidache—on the other hand, was a Hypnotist type, who relied more on the power of his eye gaze than on his gestures. The gestures he did use, both in his conducting and in videotaped conversations, although quantitatively fewer, do fall into the categories proposed here.

How effectively the individual conductor uses the nondominant hand gestures described here depends also on how well he has, somehow, learned them. The more control the conductor has over this repertoire of gestures for specific musical purposes, the more likely the gestures will be used spontaneously and appropriately to model the sound and bring out its many meanings. The effective use of these gestures for conducting does seem to be something that has to be learned, as indicated by the sometimes awkward, often inappropriate and distracting gestures of young conducting students. Perhaps the “repertoire” of nondominant hand gestures, with their underlying metaphoric associations between experiences in the physical and in the musical worlds, could be dealt with more systematically in the curriculum of conducting courses.

CONCLUDING REMARKS

The expressive gestures of orchestral conductors, like signs of Deaf sign languages and speech-accompanying gestures, seem to be composed of a limited set of subcomponents that can be associated with several different kinds of meanings. I. Poggi (personal communication, Berlin, April 1998) suggested that these conducting gestures might be best classified as “descriptives which are used as directives.”

Unlike sign language, the conducting gestures are polysemous entities

³These observations are from the following videotapes: Bernstein—“Takt schlagen kann jeder” (Rehearsals and performance of Berlioz’s “Romeo and Juliet,” Schleswig-Holstein Music Festival); and Celibidache conducts Bruckner (Symphony No. 6 in A Major), Munich Philharmonic, Recorded at the Müncher Philharmonie am Gasteig, November 26–30, 1991. Sony Classical Production, 1992.

whose exact meaning is only clear when set in a specific context. At one level, the meanings of these gestures are accessible through metaphoric–metonymic association with actions that the body can make, or with body parts, or, like conventionalized gestures (“emblems”), have more specifically encoded cultural meanings. At this level of interpretation, these gestures might be termed “iconic” in the sense that a broad range of persons would be able to associate an appropriate general meaning to them (e.g., “grasping something,” “raising something up,” etc.). However, the special derived meaning of these gestures (“tenuto,” “staccato,” “marcatissimo,” “stress the sound line”) is only interpretable to persons who know the second target domain of these gestural metaphors, the playing of classical orchestral music.

Grosjean (1998) made a comparison between improvisation in music and the creative production of new sentences in everyday language use. In contrast, the performance of classical orchestral music is to a large extent bound to the interpretation of works that have been notated in a fixed written form. In this context, the expressive gestures of the conductor become even more important, as they allow the addition of individual interpretation and spontaneous, even surprising, elements to the preprogrammed structure of the musical work.

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