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Rehearsing and Conducting

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Conducting and rehearsal behaviors play a role in establishing an appropriate and effective rehearsal atmosphere. Situations in which conductors provide predominantly positive feedback result in better attitudes, attention, and performance. Fast paced rehearsals are usually the most effective, and comprise frequent and generally brief episodes of teacher talk and ensemble performance. Enthusiastic or dynamic rehearsing features stark contrasts of behavior at optimal times—loud and soft talk, expressive and neutral conducting, group and individual eye contact. Rehearsals should be structured to include processes of diagnosis, prescription, presentation, monitoring, and feedback, with brisk paced and clear directions. Essentially, a conductor should focus on making verbalizations efficient and keeping them to a minimum, while enhancing nonverbal behaviors to include large amounts of eye contact and clear and unambiguous conducting gestures.

"From the moment a conductor steps on the podium a special world is in the process of being constructed" (Faulkner, 1973, p. 149). By definition, conductors are leaders. Leadership requires competence, credibility, and charisma, and these qualities can influence musicians' attitudes and performances (Parasuraman & Nachman, 1987).

The current role of the conductor dates back to the late eighteenth century. Not until the mid-twentieth century, though, did a traditional focus on gesture or baton technique evolve to include issues of rehearsal technique. The application of scientific inquiry to rehearsing and conducting is a recent phenomenon, and the psychology of large ensemble leadership, even in a popular sense, remains insubstantially addressed.

One might consider conducting and rehearsing as distinctly separate acts, conducting being a nonverbal physical act, and rehearsing being conductor-led

ensemble preparation (largely verbalizations) for musical performance. It is our view that conducting and rehearsing are inextricably linked. When done well, they are complementary, even indistinguishable. In the school music environment, where the focus is on the nature of the rehearsal process with the concert serving to set a context (Reimer, 2000), rehearsing and teaching are analogous. One might argue that everything involved in rehearsing and conducting can be characterized via a teaching paradigm, even in a professional ensemble environment.

The Rehearsal

Rehearsal Atmosphere

Even actions that occur before the first words are uttered or downbeat given influence ensemble members' perceptions of a conductor's abilities. A hesitant approach to the podium, fumbling of materials, low levels of eye contact, and poor posture and hand position have a negative effect on perception of conductor competence, while the converse of these behaviors has a positive effect (Fredrickson, Johnson, & Robinson, 1998).

Conductor behaviors play a role in establishing authority. The likelihood that authority figures are persuasive is in part dependent on the extent to which they are viewed as decisive. Conductors who are inspiring and persuasive can be said to be exercising a form of domination over the performers (Faulkner, 1973). This domination, however, does not preclude the necessity of collaboration between conductor and ensemble. The rehearsal atmosphere must be such that the combination of conductor persuasiveness and collaboration results in an ensemble that is responsive and receptive to the conductor's verbal and nonverbal behaviors. Indeed, performances appear to benefit when ensemble members feel a part of the learning process rather than functioning as passive recipients of information (Hamann et al., 1990).

Feedback

Another aspect of conductor behavior that is relevant to rehearsal atmosphere is conductor feedback. Feedback is necessary in order to achieve the ultimate performance envisioned. Situations in which conductors provide predominantly positive feedback result in better attitudes, attention, and performance than ones in which conductors provide instruction without feedback (see Price, 1983). Indeed, positive rehearsal environments tend to result in better ensemble attentiveness and attitudes than do negative ones (e.g., Madsen & Yarbrough, 1985; Price, 1992). In contrast, there are accomplished conductors and teachers in instrumental music who use more negative than positive feedback, which results in successful performances and positive student attitudes (Cavitt, 1998; Duke & Henninger, 1998). It is important to consider that negative feedback delivered constructively is likely to function quite differently from that delivered angrily. Negative feedback is necessary and can function well if the combination of instruction and feedback, both negative *and* positive, leads to accomplishment of musical goals. If, however, the rehearsal is characterized by inordinate amounts of ensemble failures, the potential for negative feedback to be detrimental to attitude and attentiveness is increased.

Pacing

In general education, fast pacing of instruction has been linked to effective teaching, though it is recognized that in seeking an optimal pace one must consider the nature and complexity of the subject matter being taught as well as the sophistication of those being taught (e.g., Brophy & Good, 1986). Slow pacing is not necessarily an indication of ineffective teaching.

There is no unequivocal definition of rehearsal pacing nor of an optimal pace of activity. However, frequency and duration of ensemble performance episodes, conductor talk, lag time between cutoff and conductor talk, and conductor rate of speech are thought to be components of pacing. Experienced observers have been asked to view videotaped rehearsal examples and rate conductor pacing on a scale from very slow to very fast, and the responses correlated fast pace to fast rate of conductor speech (Single, 1990). This association is reinforced by findings in rehearsal settings, including a professional orchestra with Bruno Walter conducting that found most teacher/conductor verbal behaviors occurred in short bursts (Yarbrough, 1988).

In an attempt to describe pacing empirically, Duke, Prickett, and Jellison (1998) selected fast- and slow-paced videotaped examples of rehearsal conducting and music teaching, based on observers' personal perceptions of pacing, not on one prescribed definition. Fast and slow paces were then described according to the frequency and duration of conductor versus ensemble activities. They found that fast paced rehearsals comprised frequent and generally brief episodes of teacher talk and student performance.

In one of the few longitudinal studies of the rehearsal process, pacing was defined as change of focus of activity between director and ensemble (Yarbrough, Dunn, & Baird, 1996). An examination of rehearsals with the lowest and highest performance ratings found that the lowest performance rated rehearsal, which was the first rehearsal of a work, had a considerably slower pace than the higher rated and later rehearsal. These findings suggest that pacing should be examined as a change in activity and a function of the relative familiarity and difficulty of the literature being rehearsed.

A conductor might endeavor to quicken the rehearsal pace by speaking more succinctly, thus reducing the duration of talk episodes. While less-accomplished conductors stop and restart ensembles frequently, as is suggested by the preceding description of fast pace, they tend to do so without providing instruction (Goolsby, 1999). In addition, expert band conductors vary the rate of alternation between conductor talk and student performance episodes according to the issue being addressed (Cavitt, 1998). Thus advising a novice conductor to quicken the pace by working faster fails to acknowledge the fact that some performance errors and rehearsal conditions simply require more time to correct than others do.

Performance Error Detection

Related to conductor feedback and rehearsal pacing is the conductor's response to performance errors. How best to prepare prospective conductors to cope effectively with a "great confusion of sound" (Bruno Walter in Chesterman, 1976, p. 22) in rehearsal has been the object of study in performance error detection. There is no definitive hierarchy, by difficulty, across the different types of errors (pitch, rhythm, articulation, etc.) that may occur in rehearsals (Byo, 1997). A performance error is more or less audible depending on its type, its timbre, the texture and tempo of the music, whether the listener is conducting, and whether the listener opts for a focused or unfocused approach to the listening task (Byo & Sheldon, 2000). It may be advantageous for conductors to be aware of musicians' performance tendencies, such as rushing rather than dragging tempi and playing sharp rather than flat.

Conductors may improve their abilities to detect performance errors by practicing error detection (Byo, 1997). It is tempting to assume that tasks such as sight singing and harmonic dictation enhance skill in error detection. Research, however, shows that this may not be the case (Brand & Burnsed, 1981). It is likely that skill in error detection is most affected by practicing it directly. There seems to be pedagogical potential in structuring personal error detection practice experiences to begin with one line of music only. If one line of music is approached as the musically rich, comprehensive entity it can be (involving issues of tempo, pitch, rhythm, articulation, intonation, dynamics, and interpretation), it can present a formidable challenge to the intellect and ear of the conductor. The ability to detect errors effectively, in any context, begins with the ability to hear and evaluate one line of music completely and precisely. Further, there are indications that error detection skill increases when conductors go to rehearsal with a well-developed internal sound image of the score (Byo & Sheldon, 2000). This sound-based knowledge of the score can reduce or override aural distractions in rehearsal. Conductors should study scores in such a way that they are able to ask to what extent they hear from their ensemble what they expect to hear. Then, when the ensemble's performance fails to match their internalized images of the ideal sound, they will be able to begin the process of error detection.

Conductor Demeanor

In examining the effects of conductor enthusiasm on ensemble performance, attentiveness, and attitude, one might expect an enthusiastic conductor to be more interesting, if not more effective, than a dull one. However, the musicians in Yarbrough's (1975) study, in a statistical sense, did not perform better for, or pay more attention to, the enthusiastic conductor. This result caused the investigator to look more deeply at precisely what enthusiastic conductors do. A novice conductor who is not naturally dynamic might have the same concern. Yarbrough hypothesized that the enthusiastic rehearsal conductor is one who makes high levels of eye contact with the ensemble and varies it from group to individual, frequently approaches the ensemble by moving or leaning forward, manipulates

speech across a wide range of volumes, and gestures expressively with hands/arms and face (i.e., using a variety of movements and contrasts of facial expression).

Notice a recurring theme—that is, the behaviors of an enthusiastic conductor are not static; rather, they vary. Results of a detailed analysis that used an observation form designed to isolate these behaviors made apparent what was not readily seen through more casual observation—that *variation* in conductor behavior is perhaps more salient than doing *more* of a behavior (e.g., talking louder without contrast or conducting expressively without contrast). It appears that enthusiastic conducting (dynamic conducting, if you prefer) might best be described in terms of the conductor's ability to exhibit stark contrasts of behavior at optimal times—loud and soft talk, expressive and neutral conducting, group and individual eye contact (Byo, 1990). Much as music without appropriate variety and contrast is typically uninteresting, so is a rehearsal. By analyzing one's own conducting via videotape in combination with a conductor observation form, the aspiring conductor can apply a tested research procedure in order to see more clearly the behaviors related to enthusiastic rehearsing and conducting (Madsen & Yarbrough, 1985).

Of course, effective rehearsing and conducting extend beyond the mere delivery of information to include the accuracy of information conveyed by the conductor, both verbally and nonverbally, and the quality of the interaction between conductor and ensemble (Standley & Madsen, 1987). Conductors' abilities to create and sustain an intense rehearsal atmosphere hinge on their abilities to handle the subject matters of music, rehearsal, teaching, and group psychology accurately, appropriately, and in an engaging manner. This intensity can be reduced or lost by a conductor's mistake, slow or dull delivery, or casual demeanor (Madsen, 1990). For a conductor who lacks rehearsal intensity (or whose passion is not apparent to ensemble members), observation from analysis combined with videotape review can offer specific diagnosis of the problem and suggest corrective action (e.g., Cassidy, 1990; Kaiser, 1998).

Rehearsal Structure

Although originally it referred to the interaction of child with environment, Vygotsky's *Zone of Proximal Development* (ZPD) construct is pertinent to structuring rehearsals. ZPD, in the context of the rehearsal, can be thought of as the difference between what an ensemble can achieve without and with the direction of a conductor. It is the distance between what problems individuals can fix independently and the possible solutions that can be achieved in collaboration with peers or under the guidance of an authority (Vygotsky, 1978). As ensemble members become more sophisticated, they are increasingly independent of the conductor in their abilities to make appropriate decisions about the music and its performance. A group of students in a secondary school would require more basic direction about phrasing, articulation, and intonation tendencies than would a professional ensemble. It may be said that the conductor's task is to move the ZPD forward toward independence. Here the metaphor of scaffolding may be useful. It refers to establishing a situation in which musicians can achieve at

a higher level when provided external support. For example, a conductor might structure rehearsals and organize appropriate tasks so that an ensemble is better able to interpret and perform the music than if it were unaided. Studio teachers employ scaffolding strategies to help student progress across the zone by assisting students in moving from what they can accomplish dependently to reaching their potential to function independently (Kennell, 1989). With increased sophistication (independence), ensembles approach what may be comparable to self-regulation in individuals; thus less scaffolding is necessary to achieve a performance goal.

Rehearsing music is typically a process of successive approximations or small steps toward performance objectives. A rehearsal consists of any number of units or rehearsal frames in which the conductor identifies a problem in need of rehearsing, extracts it from the music, divides the problem into parts, rehearses the parts (by providing information, giving directions, asking questions, modeling, modifying a part for rehearsal purposes, providing feedback), and finishes with the problem being performed in context before the conductor moves on to other material (Duke, 1999/2000). "Accurate finger technique in the woodwind ostinato leading to letter D" might be considered a performance objective. A rehearsal frame would comprise all conductor and ensemble interactions as they relate to the development of accurate finger technique. A conductor's ability to clearly articulate and order instructional steps such that there is fairly constant improvement in the performance of this passage would likely be a major factor in an ensemble's perception of success—and perception of success by the ensemble is no trivial matter.

By viewing a videotaped rehearsal in these small units rather than as one complex whole, developing conductors are likely to see more clearly and with fewer distractions the elements involved in their decision-making processes. Knowledge of one's own sequencing of rehearsal instruction is possible through the use of formal observation tools designed to illuminate forward, failed, and repeated approximations of objectives (Duke & Madsen, 1991). Without structured videotape review of the rehearsal, it is difficult to obtain a precise evaluation of the conductor's ability to organize primarily in a forward or positive direction.

Basic to effective teaching in general education is a three-step sequence of instruction that involves (1) teacher task presentation, (2) student response, and (3) teacher feedback (Becker, Englemann, & Thomas, 1971). In music education, a parallel instructional model (conductor presentation of a task, ensemble interaction with the task, and conductor feedback) has been applied to and studied across many levels of ensemble sophistication (e.g., Arnold, 1995; Price, 1983; Tipton, 1996). Though many interaction patterns can be found in any rehearsal, the preferred complete sequential pattern is one that begins with the conductor providing a musical task for the performers, followed by the ensemble attempting to perform the task, and ending with descriptive, positive feedback from the conductor. In fact, experienced band conductors tend to use complete patterns more so than do less-experienced conductors (Goolsby, 1997). This three-step model holds promise for providing conductors with a scaffold on which to develop rehearsal structure. Again, videotape combined with relevant observation techniques helps one to see rehearsals in the context of these smaller units of instruction.

Rehearsing should be a process of diagnosis, prescription, presentation, monitoring, and feedback, with brisk-paced and clear directions. It can be characterized by frequent use of nonverbal communication, prioritization of rehearsal materials, task-related and contingent feedback, clear statement of rehearsal objectives, encouragement of ensemble-generated ideas, and, depending on the level of the ensemble, the teaching of musical in addition to performance skills (McCoy, 1985). Model secondary school choral conductors exhibit thorough preparation and maintain an appropriate atmosphere. Nonverbal communication tends to be positive. There is little sarcasm and a businesslike image is projected. Ensemble members talk little and disciplinary action is generally unnecessary (Fiocca, 1989).

Verbal Communication

Content

Verbal communication accounts for approximately 40 to 60% of ensemble rehearsal time (e.g., Single, 1990; Watkins, 1996; Yarbrough, 1988; Yarbrough & Price, 1989). While this is a large proportion of the rehearsal, it may be understandable, given some research evidence that indicates that ensemble members respond more accurately to verbal instruction than to conducting gestures (Skadsem, 1996, 1997).

In instrumental ensembles, conductors tend to focus on rhythm and tempo, although the sophistication of the conductor appears to have an impact on rehearsal emphasis. Experts tend to work more with overall ensemble sound, including more demonstrations, instruction on intonation, and guided listening, than do inexperienced conductors. Experienced conductors also address balance, style, and tone more than do novices (Goolsby, 1997, 1999).

Regardless of the content, less-experienced conductors tend to spend more time talking in rehearsals. They stop and restart ensembles more frequently without providing instruction and are less efficient, thus taking longer to prepare a piece for performance (Goolsby, 1999). Therefore, when conductors stop ensembles, they should make concise and substantive suggestions.

Experienced teachers not only talk less, but they provide more breaks between musical selections, spend more than half the rehearsal time performing, use more nonverbal modeling, and use less time getting started. They appear to be more proactive in that they use similar amounts of rehearsal time across pieces rehearsed, while less experienced conductors tend to spend more time on the first piece rehearsed, indicating that they are in a reactive mode. Evidently, inexperienced conductors get distracted from their rehearsal plans when responding to ensemble performance (Goolsby, 1996).

There is an evolution of focus over time as performance approaches, from fundamental issues of accuracy and precision to more general concerns of nu-

ance and interpretation. As the quality of performance increases or as a concert approaches, conductors tend to talk less and focus more on ensemble performing in rehearsals (Davis, 1998).

Aural Modeling

Aural modeling alone and in combination with language is among the most frequent verbal modes in rehearsals. It generally consists of a conductor providing a demonstration—vocal, acoustical or MIDI instrument, recording—followed by ensemble kinesthetic, vocal, or instrumental response. Models can be effective in demonstrating both appropriate and inappropriate performances and can be used to minimize verbalizations. Conductors pervasively use sung or quasi-sung sounds or other means of demonstration (e.g., clapping, tapping), both imitating salient features of what was previously performed and presenting examples of what they would like to hear (Weeks, 1996).

Ensemble directors' abilities to model have a strong relationship to the quality of instrumental music student performance, and strong modelers tend to spend more rehearsal time modeling than do less skillful modelers (Sang, 1987). Modeling is critical to a rehearsal, and experienced ensemble directors use more nonverbal instruction (e.g., modeling and demonstration) and talk less than do novices (Goolsby, 1996).

Conceptual Teaching

While considerable proportions of rehearsals are spent in verbal activity and modeling, principally on the part of the conductor, little of it elicits higher order or conceptual thinking on the part of the performers. General music and ensemble classes generally involve students in lower cognitive processes, emphasizing mechanics of performance almost to the exclusion of the application and accumulation of musical knowledge and the abilities to think about music (Goodlad, 1983). Conductors' efforts appear to be weighted toward providing guidance on how to make corrections or presenting exact solutions, by saying things such as "you need more air" or "the percussion need to play softer." This limits opportunities for self-correction on the part of the ensemble through slight hints or scaffolding (Weeks, 1996). In these situations, ensemble members function much like simple machinery, rendering only specific responses to specific instructions about a specific point in a specific piece of music.

Conversely, conceptual rehearsing reinforces or introduces concepts in ways that encourage the transfer of concepts from one passage to another passage or work. Statements can be as simple as "whenever you see a terraced dynamic, take care not to anticipate it with a slight crescendo or decrescendo" or as sophisticated as "this section is the recapitulation; what does that mean?" In secondary school choral settings, approximately 1% of rehearsal time is spent attempting to evoke higher order thinking, such as analysis, synthesis, or evaluation (e.g., Watkins, 1996). This same automatonlike approach to rehearsing has also been found in secondary school instrumental rehearsals, where less than 3% of

rehearsal time is spent in attempts to improve the grasp of musical concepts (Blocher, Greenwood, & Shellahamer, 1997). The literature, the bulk of which comes from the United States, is quite clear with regard to learning: unless one teaches for the transfer of ideas, there is no transfer.

Even though it appears that there is little encouragement of higher order thinking and the development of concepts in rehearsals, it would seem that planning and employing strategies to promote these throughout the rehearsal would be most effective in the long-term growth of performers and ensembles. Without these attributes, a conductor is condemned to reteach an idea every time a similar passage or concept is encountered, as opposed to musicians making connections cognitively and transferring knowledge and skills to new situations. More sophisticated performers have likely attained higher order music skills through inductive reasoning as a result of synthesis of many experiences; thus conductors of highly skilled ensembles are better able to attend to the performance nuances that help make music rapturous.

Nonverbal Issues

Facial Expression

The research in interpersonal communication indicates that the face is the primary nonverbal means of conveying six emotions—happiness, sadness, anger, fear, surprise, and disgust (Bull, 1983; Ekman & Friesen, 1975; Izard, 1997). Though it is tempting to assume that a conductor must somehow look like the music facially in order to achieve maximum effect, there is not a research base in music to support this notion. Research that isolates the conductor's face has only focused on approving, disapproving, and neutral expressions (e.g., Byo & Austin, 1994; Madsen & Yarbrough, 1985; Price & Winter, 1991). The face has been viewed as a means for conductors to respond approvingly (e.g., smile or nod) to appropriate ensemble performance or disapprovingly (e.g., furrowed brow) to inappropriate performance.

Seldom has the face been examined as a means to convey musical information (Berz, 1983; Mayne, 1993). In fact, one conductor-training technique involves mask work (covering the face) to prompt the conductor to focus on the expressive potential of the trunk and shoulders (Tait, 1985). This focus away from the face and toward the communicative power of the torso and breath in conductor training is a concept borrowed from theater and mime (Oertle, 1999). It appears that novice conductors should first develop a varied repertoire of nonverbal skills in gesture and body (see Conductor demeanor earlier). The area of greatest concern facially is eye contact.

Eye contact

The communicative advantages of eye contact are well documented in several research literatures (Burgoon et al. 1984; Fredrickson, 1992). Greater conductor

eye contact with an ensemble is associated with increased attentiveness by ensemble members (Yarbrough & Price, 1981). There is evidence, however, that directors of school ensembles look at the score more than the ensemble (Fredrickson, 1992; Sherrill, 1986).

Given the potential for conductor eye contact to interact with other nonverbal behaviors to result in an intensified message (e.g., Burgoon et al., 1984; Price & Winter, 1991), it is clear that conductors should look at the ensemble more often than not. One of the variables that separates accomplished and novice conductors is the tendency of accomplished conductors to combine expressive nonverbal behaviors (eyes, arm/hands, body movement) for optimal effect (Byo & Austin, 1994). By analyzing their own conducting via videotape and in combination with research-based observation techniques, conductors can formulate a clear picture of their eye contact tendencies and, if change is desired, create a plan of action (Byo & Austin, 1994; Madsen & Yarbrough, 1985).

While there is little research that examines ensemble member eye contact with the conductor, it is likely that the extent to which ensemble members are aware of their rehearsal and performance surroundings bears heavily on whether they are in a position to receive the full impact of nonverbal messages. Byo and Lethco (2001) examined musical events and conductor-related conditions during which student musicians tend to look at the conductor. High school band musicians looked up with much greater frequency during slow music than fast music where the demands of the music superseded effects of eye contact and expressive gesture. School-based conductors might promote watching the conductor by teaching ensemble members to look up for specific reasons at predetermined places in the music, for example, at entrances, releases, rehearsal numbers or letters, changes in meter, tempo, and dynamics, and the beginning and end of the piece or movement.

Conductors should be aware of two research findings that bear on issues of eye contact by ensemble members: (1) eye contact by ensemble members increases with musical sophistication, a result that is consistent with research findings in the recognition of specific conducting gestures (Mayne, 1993; Sousa, 1988), and (2) singers performed a dynamic change most successfully following concise verbal instructions from the conductor, despite having predicted that they would respond best by watching the conductor (Skadsem, 1997).

Gesture

Conductors must possess a large repertoire of nonverbal behaviors from which to choose in order to impart expressivity within the context of the structure and style of any composition. They must interpret and shape the elements that contribute to musical expression. Expressiveness/musicianship or musical effect is one of the primary factors in assessing performances (Bergee, 1995; Burnsed & King, 1987). The often-quoted statement by Seashore "beauty in music largely lies in the artistic deviation from the exact or rigid" (1938/1967, p. 249) would relate to both a conductor's interpretation and ability to demonstrate these "deviations." Otherwise, a metronome at varying tempi would serve as well as a person to lead an ensemble.

Employment of movement techniques by Rudolf von Laban, among the most influential figures in dance and movement education in the twentieth century, can result in superior performance than that achieved by typical verbal ensemble instruction (Holt, 1992). Laban characterized effort as having eight basic motions—thrusting, slashing, floating, gliding, wringing, pressing, flicking, and dabbing (Preston-Dunlop, 1980). Each of these and their permutations have analogues in conducting gestures and music performance. A conductor who has a physical command and understanding of these could draw upon them as needed; for instance, the appropriate employment of flicking, pressing, and thrusting may yield the exact representation desired of a specific *marcato* style within a passage. Given a lack of body movement coverage in conducting textbooks and traditional conducting courses, the application of principles of Laban to the pedagogy of conducting has been advocated. Laban Movement Analysis (Laban, 1975) is a framework within which conducting movement has been viewed and analyzed (Benge, 1996) and through which expressive gestures may be enhanced (Miller, 1988). A better understanding of movements and their possible interpretive meanings might well strengthen the communication between conductors and ensembles.

Whether individuals interpret other nonverbal behaviors consistently has been the focus of research on conducting emblems. Sousa (1988), adopting language from Ekman and Friesen (1969), applied the term *emblems* to conducting gestures whose meanings were interpreted reliably by musicians (e.g., changed conducting pattern size to indicate *piano*, *subito forte*, or *crescendo*; lowering of the left hand for *decrescendo*; or reboundless pattern for *staccato*). Among secondary school and college musicians, the ability to identify emblems on a paper-and-pencil test increases with years of instrumental music experience. With inexperienced musicians, even brief instruction in the recognition of emblems that reflect expressive musical characteristics such as *crescendo*, *staccato*, *legato*, and *tenuto* results in increased ability to derive meaning from gestures and perform accurately in response to them (Cofer, 1998; Kelly, 1997).

In studies that have examined the effects of conducting gestures on performance quality of high school musicians, investigators have found expressive gestures to elicit better performance quality than unexpressive ones (Grechesky, 1985; Laib, 1993; Sidoti, 1990). In research that involved young band students, however, expressive gestures did not result in better performance quality (Price & Winter, 1991). These results taken together are consistent with the positive relationship between performance experience and emblem recognition. It may be expeditious to specifically teach emblems of conducting to less-experienced musicians so they can better interpret them.

While conducting, a form of nonverbal communication, is a complex task, it can be learned outside the traditional apprenticeship and course modes. Basic conducting skills have been enhanced in research that focused on systematic self-observation of behavior—precise definitions of conducting skills, opportunities to practice, reinforcement through videotape feedback, and self-analysis (e.g., Madsen & Yarbrough, 1985; Price, 1983).

Conclusion

Everything conductors and ensemble members do in rehearsals should be of consequence, from the moment when everyone is assembled before the first passage is rehearsed to the concert performance. Conductors therefore need to establish their authority and expertise immediately and willfully decide on the rehearsal atmosphere to be created.

A conductor must engage the ensemble in such a way that an intense rehearsal atmosphere is established and then maintained. This will not happen if conductors fail to control the nature of their interactions with ensembles, lack overt enthusiasm for the task at hand, provide inaccurate information either verbally or nonverbally, or allow the pace of the rehearsal to be slow. It is the conductor's responsibility to bridge the gap between what the ensemble can do independently and what it could do with carefully crafted rehearsals under the guidance of an expert who uses well-ordered instruction. The rehearsal must be proactive, structuring scaffolding that will allow for successive approximations in which every effort will likely result in progress.

Rehearsal models must be accurate and need to address all learning styles and modalities by providing visual, aural, and kinesthetic experiences. Providing information in a multimodal (sensory) fashion is most effective, for example, conducting (visual) while providing a singing (auditory) model or having ensemble members move (kinesthetic) while singing their parts.

The conductor must have an arsenal of verbal and nonverbal skills. Instruction is most effective when it is substantive and delivered concisely, clearly, and without sarcasm. It should help move ensemble members beyond their current knowledge and conceptions to higher order musical thinking. Conductors need to maintain and elicit eye contact and have command of a large repertoire of facial expressions, conducting emblems and movements, and other means of communicating musical expression and precision.

In short, capable conductors must be remarkably prepared and have complete knowledge of the score and how to realize it. They need to know what they should be hearing, how it differs from the current rehearsal performance, and how to get to the level needed for concert performance. All aspects of the rehearsal should be planned. Components such as teaching conceptually and giving feedback are not done in isolation; the rehearsal should be imbued with these and other activities continuously.

Not only do aspects of conducting and rehearsing develop through experience and practice, but rehearsals also need to be audio- and videotaped and reviewed by conductors. There is a consistent theme in the literature that regards the benefits of systematic self-observation and feedback in enhancing podium skills. This helps us to see ourselves objectively or as others do.

It is an extremist perspective to suggest that either conducting or verbalization is unnecessary in an ensemble setting. There are those who hold the view that if a conductor could manage to present gestures that are perfect models, lacking in any ambiguity, there would be no need for talk. Conversely, there are those who suggest that most of the productive work in a rehearsal is done when the conductor verbally and directly tells performers what is wanted. It is true that nonverbal and verbal forms of communication must be done exceptionally well; however, both are necessary.

Visual communication (nonverbal, inaudible, symbolic, or demonstrative behavior) alone is significantly less effective in improving ensemble performance than visual communication in combination with verbalization (oral use of meaningful words to convey information) and modeling (demonstration of behaviors). The combination of verbal and modeling communication is also more effective than visual communication alone. However, the combination of verbal, modeling, and visual communication is the most effective approach (Francisco, 1994). All must be done effectively, skillfully, and efficiently to have optimal rehearsals for excellent performances.

References

Arnold, J. A. (1995). Effect of competency-based methods of instruction and self-observation on ensemble director's use of sequential patterns. *Journal of Research in Music Education, 43*(2), 127–138.

Becker, W. C., Englemann, S., & Thomas, D. R. (1971). *Teaching: A course in applied psychology.* Chicago: Science Research Associates.

Benge, T. J. (1996). Movements utilized by conductors in the stimulation of expression and musicianship. (Doctoral dissertation, University of Southern California). *Dissertation Abstracts International,* 58(01), 18A (University Microfilms No. 9720183)

Bergee, M. J. (1995). Primary and higher-order factors in a scale assessing concert band performance. *Bulletin of the Council for Research in Music Education, 126,* 1–14.

Berz, W. L. (1983). The development of an observation instrument designed to classify specific nonverbal communication techniques employed by conductors of musical ensembles (Doctoral dissertation, Michigan State University). *Dissertation Abstracts International,* 44(09), 2702A (University Microfilms No. 8400532)

Blocher, L., Greenwood, R., & Shellahamer, B. (1997). Teaching behaviors of middle school and high school band directors in the rehearsal setting. *Journal of Research in Music Education, 45*(3), 457–469.

Brand, M., & Burnsed, V. (1981). Music abilities and experiences as predictors of error-detection skill. *Journal of Research in Music Education, 29*(2), 91–96.

Brophy, J. E., & Good, T. L. (1986). Teaching behavior and student achievement. In M. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed.) (pp. 328–375). New York: Macmillan.

Bull, P. (1983). *Body movement and interpersonal communication.* New York: Wiley.

Burgoon, J. K., Buller, D. B., Hale, J. L., & deTurck, M. A. (1984). Relational messages associated with nonverbal behaviors. *Human Communication Research, 10*(3), 351–378.

Burnsed, V., & King, S. (1987). How reliable is your festival rating?. *Update: Applications of Research in Music Education, 5,* 12–13.

Byo, J. L. (1990). Recognition of intensity contrasts in the gestures of beginning conductors. *Journal of Research in Music Education, 38*(3), 157–163.

Byo, J. L. (1997). The effects of texture and number of parts on the ability of music majors to detect performance errors. *Journal of Research in Music Education, 45*(1), 51–66.

Byo, J. L., & Austin, K. R. (1994). Comparison of expert and novice conductors: An approach to the analysis of nonverbal behaviors. *Journal of Band Research, 30*(1), 11–34.

Byo, J. L., & Lethco, L. (2001). Student musicians' eye contact with the conductor: An exploratory investigation. *Contributions to Music Education, 28*(2), 21–35.

Byo, J. L., & Sheldon, D. A. (2000). The effect of singing while listening on undergraduate music majors' ability to detect pitch and rhythm errors. *Journal of Band Research, 36*(1), 26–46.

Cassidy, J. W. (1990). Effect of intensity training on preservice teachers' instruction, accuracy, and delivery effectiveness. *Journal of Research in Music Education, 38*(3), 164–174.

Cavitt, M. E. (1998). A descriptive analysis of error correction in expert teachers' instrumental music rehearsals. (Doctoral dissertation, University of Texas–Austin). *Dissertation Abstracts International*, 59(06), 1958A (University Microfilms No. 9837917)

Chesterman, R. (Ed.) (1976). *Conversations with conductors*. London: Robson.

Cofer, R. S. (1998). Effects of conducting-gesture instruction on seventh-grade band students' performance response to conducting emblems. *Journal of Research in Music Education, 46*(5), 360–373.

Davis, A. P. (1998). Performance achievement and analysis of teaching during choral rehearsals. *Journal of Research in Music Education, 46*(4), 496–509.

Duke, R. A. (1999/2000). Measure of instructional effectiveness in music. *Bulletin of the Council for Research in Music Education, 143*, 1–48.

Duke, R. A., & Henninger, J. C. (1998). Effects of verbal corrections on student attitude and performance. *Journal of Research in Music Education, 46*(4), 482–495.

Duke, R. A., & Madsen, C. K. (1991). Proactive versus reactive teaching: Focusing observation on specific aspects of instruction. *Bulletin of the Council for Research in Music Education, 108*, 1–14.

Duke, R. A., Prickett, C. A., & Jellison, J. A. (1998). Empirical description of the pace of music instruction. *Journal of Research in Music Education, 46*(2), 265–280.

Ekman, P., & Friesen, W. V. (1969). The repertoire of nonverbal behavior: Categories, origins, usage, and coding. *Semiotica, 1*(3), 49–98.

Ekman, P., & Friesen, W. V. (1975). *Unmasking the face*. Englewood Cliffs, NJ: Prentice-Hall.

Faulkner, R. A. (1973). Orchestra interactions: Some features of communication and authority in an artistic organization. *Sociological Quarterly, 14*, 147–157.

Fiocca, P. D. H. (1989). A descriptive analysis of the rehearsal behaviors of exemplary junior high and middle school choir directors. *Contributions to Music Education, 16*, 19–33.

Francisco, J. M. (1994). Conductor communication in the ensemble rehearsal: The relative effects of verbal communication, visual communication, and modeling on performance improvement of high school bands. *Dissertation Abstracts International*, 56(08), 3045A (University Microfilm No. AAC 95-42638).

Fredrickson, W. E. (1992). Research on eye contact with implications for the conductor: A review of literature. *Update: Applications of Research in Music Education, 11*(1), 25–31.

Fredrickson, W. E., Johnson, C. M., & Robinson, C. R. (1998). The effect of preconducting and conducting behaviors on the evaluation of conductor competence. *Journal of Band Research, 33*(2), 1–13.

Goodlad, J. I. (1983). *A place called school*. New York: McGraw-Hill.

Goolsby, T. W. (1996). Time use in instrumental rehearsals: A comparison of experienced, novice, and student teachers. *Journal of Research in Music Education, 44*(4), 286–303.

Goolsby, T. W. (1997). Verbal instruction in instrumental rehearsals: A comparison of three career levels and preservice teachers. *Journal of Research in Music Education, 45*(1), 21–40.

Goolsby, T. W. (1999). A comparison of expert and novice music teachers' preparing identical band compositions: An operational replication. *Journal of Research in Music Education, 47*(2), 174–187.

Grechesky, R. N. (1985). An analysis of nonverbal and verbal conducting behaviors and their relationship to expressive musical performance (Doctoral dissertation, University of Wisconsin-Madison, 1985). *Dissertation Abstracts International, 46*(10), 2956A (University Microfilms No. 8513459)

Hamann, D. L., Mills, C., Bell, J., Daugherty, E, & Koozer, R. (1990). Classroom environment as related to contest ratings among high school performing ensembles. *Journal of Research in Music Education, 38*(3), 215–224.

Holt, M. E. (1992). The application of conducting and choral rehearsal pedagogy of Laban effort/shape and its comparative effect upon style in choral performance. *Dissertation Abstracts International*, 53 (02), 437A. (University Microfilm No. AAC92–14439).

Izard, C. E. (1997). Emotions and facial expressions: A perspective from differential emotions theory. In J. A. Russel and J. M. Fernandez-Dols (Eds.), *The psychology of facial expression*. (pp. 57–77). Cambridge: Cambridge University Press.

Kaiser, K. A. (1998). The effect of differentiated high- versus low-intensity teaching on band musicians' evaluation of teaching effectiveness. *Dissertation Abstracts International*, 59(03), 764A. (University Microfilms No. 9827669)

Kelly, S. N. (1997). Effects of conducting instruction on the musical performance of beginning band students. *Journal of Research in Music Education, 45*(2), 295–305.

Kennell, R. P. (1989). *Three teacher scaffolding strategies in college instrumental applied instruction*. Unpublished doctoral dissertation, University of Wisconsin.

Laban, R. (1975). *Laban's principles of dance and movement notation*. Boston: Plays.

Laib, J. R. (1993). The effect of expressive conducting on band performance (Doctoral dissertation, University of Georgia, 1993). *Dissertation Abstracts International*, 54(02), 3258A. (University Microfilms No. 9404667)

Madsen, C. K. (1990). Teacher intensity in relationship to music education. *Bulletin of the Council for Research in Music Education, 104*, 38–46.

Madsen, C. K. and Yarbrough, C. (1985). *Competency-based music education*. Raleigh, NC: Contemporary Publishing.

Mayne, R. G. (1993). An investigation of the use of facial expression in conjunction with musical conducting gestures and their interpretations by instrumental performers (Doctoral dissertation, Ohio State University, 1992). *Dissertation Abstracts International*, 53(08), 2729A (University Microfilms No. 9238229)

McCoy, C. W. (1985). The ensemble director as effective teacher. *Update: Applications of Research in Music Education, 3*(3), 9–12.

Miller, S. (1988). The effect of Laban Movement Theory on the ability of student conductors to communicate musical interpretation through gesture (Doctoral dissertation, University of Wisconsin-Madison, 1988). *Dissertation Abstracts International*, 49(05), 1087A. (University Microfilms No. 8809040)

Oertle, E. (1999). Bud Beyer: Bodyspeak. *Journal of the World Association for Symphonic Band and Ensembles, 6*, 19–21.

Parasuraman, S., and Nachman, S. A. (1987). Correlates of organizational and professional commitment: The case of musicians in a symphony orchestra. *Group and Organization Studies, 12*(3), 287–303.

Preston-Dunlop, V. (1980). *A handbook for modern educational dance* (new rev. ed.). Boston: Plays.

Price, H. E. (1983). The effect of conductor academic task presentation, conductor reinforcement, and ensemble practice on performers' musical achievement, attentiveness, and attitude. *Journal of Research in Music Education, 31*(4), 245–257.

Price, H. E. (1985). A competency-based course in basic conducting techniques: A replication. *Journal of Band Research, 21*(1), 61–69.

Price, H. E. (1992). Sequential patterns of music instruction and learning to use them. *Journal of Research in Music Education, 40*(1), 14–29.

Price, H. E., & Winter, S. (1991). Effect of strict and expressive conducting on performances and opinions of eighth-grade band students. *Journal of Band Research, 27*(1), 30–43.

Reimer, B. (2000). Why do humans value music? In C. K. Madsen (Ed.), *Vision 2020: The Housewright symposium on the future of music education* (pp. 25–48). Reston, VA: MENC: The National Association for Music Education.

Sang, R. C. (1987). A study of the relationship between instrumental music teachers' modeling skills and pupil performance behaviors. *Bulletin of the Council for Research in Music Education, 91*, 155–159.

Seashore, C. E. (1938/1967). *The psychology of music.* New York: Dover.

Sherrill, M. H. (1986). An analytical study of videotaped rehearsal and conducting techniques of selected junior high and senior high school band conductors (Doctoral dissertation, University of Rochester, Eastman School of Music, 1986). *Dissertation Abstracts International, 47*(04), 1231A. (University Microfilms No. 8614150)

Sidoti, V. J. (1990). The effects of expressive and nonexpressive conducting on the performance accuracy of selected expressive markings by individual high school instrumentalists (Doctoral dissertation, Ohio State University). *Dissertation Abstracts International, 51*(10), 3270A. (University Microfilms No. 9105212)

Single, N. A. (1990). An exploratory study of pacing in instrumental music rehearsals. *Contributions to Music Education, 17*, 32–43.

Skadsem, J. A. (1996). The effect of verbal, written, gestural, and choral stimuli on singers' performance responses to dynamic changes in music. *Missouri Journal of Research in Music Education, 33*, 28–44.

Skadsem, J. A. (1997). Effect of conductor verbalization, dynamic markings, conductor gesture, and choir dynamic level on singers' dynamic responses. *Journal of Research in Music Education, 45*(4) 509–520.

Sousa, G. (1988). Musical conducting emblems: An investigation of the use of specific conducting gestures and their interpretation by instrumental performers (Doctoral dissertation, Ohio State University, 1988). *Dissertation Abstracts International, 49*(08), 2143A. (University Microfilms No. 8820356)

Standley, J. M., & Madsen, C. K. (1987, Summer). Intensity as an attribute of effective teaching. *Quodlibet*, 15–20.

Tait, M. (1985). Striving to become a creative artist. *CBDNA Journal, 2*(1), 25–28.

Tipton, D. G. (1996). *The use of sequential patterns in select children's, youth, and adult Southern Baptist choir rehearsals.* (Doctoral dissertation, University of Alabama).

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes* (Michael Cole, Vera John-Steiner, Sylvia Scribner, and Ellen Souberman (Eds.). Cambridge, MA: Harvard University Press.

Watkins, R. E. (1996). Nonperformance time use in high school choral rehearsals: A follow-up study. *Update: Applications of Research in Music Education, 14*(1), 4–8.

Weeks, P. (1996). A rehearsal of a Beethoven passage: An analysis of correction talk. *Research on Language and Social Interaction, 29*(3), 247–290.

Yarbrough, C. (1975). Effect of magnitude of conductor on students in selected choruses. *Journal of Research in Music Education, 23*(2), 134–146.

Yarbrough, C. (1988). Content and pacing in music teaching. *Proceedings of Symposium on Current Issues in Music Education, 13*, 9–28.

Yarbrough, C., Dunn, D. E., & Baird, S. L. (1996). A longitudinal study of teaching in a choral rehearsal. *Southeastern Journal of Music Education, 8*, 7–31.

Yarbrough, C., and Price, H. E. (1981). Prediction of performer attentiveness based upon rehearsal activity and teacher behavior. *Journal of Research in Music Education, 29*(3), 209–217.

Yarbrough, C., and Price, H. E. (1989). Sequential patterns of instruction in music. *Journal of Research in Music Education, 37*(3), 179–187.