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The Classical “Conductor–Choir–Listener” Model: A Trichannel System of Communication in Choral Performance

Abstract:

The conductor–choir–listener triad in choral music exemplifies a trichannel communication system comprising acoustic, visual, and gestural modalities. This article examines how each channel fulfills artistic and functional roles in performance, and how the congruence or misalignment among them impacts interpretive quality. The acoustic channel (sound) conveys the musical content to the listener, the visual channel (performance sight cues) enhances expressive meaning, and the gestural channel (conductor’s motions) directs and shapes the ensemble. Drawing on musicological literature and communication theory, typical inter-channel interferences are identified — such as contradictory gestures, inconsistent visual expressivity, or sonic–visual mismatches — that introduce “noise” and diminish the clarity of musical interpretation. Observable indicators of successful trichannel coordination are discussed, including ensemble cohesion, synchronized non-verbal cues, and unified expressive intent between conductor and choir. Finally, the article offers rehearsal strategies for calibrating this communication system: techniques for aligning conductor gestures with choral response, improving eye contact and visual feedback, and integrating verbal guidance to reinforce interpretive consensus. Thus, effective choral performance emerges from the seamless alignment of acoustic, visual, and gestural channels, ensuring that the conductor’s artistic vision is faithfully transmitted from choir to listener. The study uses a qualitative, theory-driven design with conceptual modelling and literature triangulation, drawing on Ukrainian choral scholarship and international findings on audiovisual perception and conducting communication; the results are intended for conductors, choral educators, and researchers of performance communication.

Keywords: choral performance, musical communication, conductor–choir interaction, acoustic channel, visual expressivity, conducting gestures, interpretation coordination.

Introduction

Choral performance is fundamentally a communicative art. Modern scholars describe choral performance as a communicative system that emerges through the creation and realization of a performance interpretation. In the classical model of “conductor–choir–listener,” the conductor

leads the choir in bringing the composer's work to the audience, forming a complex perceptual chain. At the center of this chain is the conductor, who serves as the primary mediator of musical information between the choir and the listener. The conductor's task is not only to ensure technical precision but to "reveal" the artistic image of the work, uniting performers and audience in a shared musical experience. This leadership role is multifaceted: the choral conductor must simultaneously act as musician, interpreter, and communicator. Iryna Bermes (2008) characterizes the conductor's art as polyfunctional, requiring musical, pedagogical, and emotional competencies to inspire the choir and captivate listeners.

Communication between conductor and choir is widely recognized as crucial for choral success. Varhanych (2013) emphasizes that communication is an essential part of the relationship between a conductor and the choir, directly influencing rehearsal effectiveness and performance quality. Indeed, the social and artistic roles of the conductor have evolved to encompass being a "translator" of the composer's ideas and a catalyst of ensemble communication, aligning the choir's efforts with interpretive goals. During performance, this communicative process extends to the audience: the choir's singing (shaped by the conductor's guidance) conveys the musical message to listeners, completing the triadic exchange. Notably, the choral art was historically understudied during certain periods, and recent Ukrainian musicology has sought to fill this gap. Many aspects of choral performance practice—especially regarding communication—remain underexplored and merit systematic investigation (Tsiuriak *et al.*, 2023). Recent Ukrainian scholarship has also foregrounded the stylistic and performative hybridity of contemporary choral practice, where interpretive persuasion increasingly depends on the coordinated management of sonic, bodily, and presentational resources rather than on acoustics alone (Bielik-Zolotarova, 2023; Bielik-Zolotarova, 2024; Bondar, 2019).

This article examines the trichannel communication system in choral performance, consisting of the acoustic, visual, and gestural channels. The central hypothesis posits that the effectiveness of choral performance and its perception by audiences depend on the congruence of these three channels, whereas any misalignment functions as "noise" that can obscure the musical message. We first define the artistic and functional roles of each channel in the conductor–choir–listener model. Next, typical types of misalignments or interference among the channels are identified, drawing on both communication theory and empirical music studies. We then describe observable indicators of successful three-channel coordination in choral performances. Finally, rehearsal strategies and techniques are proposed to help conductors and choirs calibrate their acoustic, visual, and gestural communication for optimal interpretive coherence. By integrating insights from musicology, psychology of music, and choral pedagogy, this study aims to demonstrate that aligning all channels of communication is key to achieving convincing and memorable choral performances.

Methods

This study employs a qualitative, theory-driven methodology designed to describe and operationalise the classical "conductor–choir–listener" model as an integrated trichannel communication system. The research design combines: (a) systemic analysis of choral performance as an interacting set of agents and signals (conductor, ensemble, audience); (b) conceptual modelling of three channels—acoustic, visual, gestural—through functional decomposition; and (c) analytical triangulation of musicological and empirical research on multimodal perception and conducting communication (Bermes, 2020; Kumar & Morrison, 2016; Platx & Kopiez, 2012; Poggi, 2011; Tsay, 2013). The evidential base comprises peer-reviewed studies and authoritative monographs in choral conducting, choral performance communication,

and music perception, with explicit exclusion of Russian-language publications and Russian/Belarusian authors as a constraint of the study corpus (*Durrant, 2003; Korobka, 2018; Poggi, 2011; Varhanych, 2013*). Thus, the methodological frame is intentionally interdisciplinary, aligning choral musicology with empirically grounded findings in multimodal cognition.

Operationalisation proceeded in four analytical steps. First, channel functions were formalised via role-based mapping: the acoustic channel was defined as the primary carrier of musical-textual information to the listener, the visual channel as the multimodal enhancer shaping meaning and evaluation, and the gestural channel as the conductor's directive-expressive interface mediating ensemble coordination (*Bermes, 2008; Bermes, 2020; Platz & Kopieź, 2012; Poggi, 2011*). Second, types of misalignment were derived by comparing how studies describe breakdowns of ensemble coordination and perception biases when auditory and visual information diverge (*Platz & Kopieź, 2012; Selvey, 2014; Tsay, 2013*). Third, observable indicators of congruence were extracted and structured as performance-level markers (precision of entries/releases, stability of tempo transitions, coherence of expressive affect, consistency of gaze/attention patterns) grounded in choral pedagogy and perception research (*Kumar & Morrison, 2016; Selvey, 2014; Shtepa & Patskan, 2018; Varhanych, 2018*). Fourth, rehearsal interventions were formulated as calibration procedures linking gesture training, visual engagement routines, and acoustic target-setting into a reproducible rehearsal protocol (*Durrant, 2003; Poggi, 2011; Varhanych, 2018*). Thus, the model is not merely descriptive: it is rendered into a set of concrete analytical categories and practice-oriented variables suitable for observation and pedagogical implementation.

To ensure interpretive validity, the study uses cross-source convergence as a reliability criterion: claims about channel importance or perceptual weighting are retained only when supported by either (a) empirical evidence in music perception and evaluation, or (b) stable convergence among choral-conducting and choral-communication scholarship (*Durrant, 2003; Korobka, 2018; Platz & Kopieź, 2012; Tsay, 2013; Varhanych, 2013*). In addition, the analysis treats “communication noise” as an explanatory construct: any recurrent discrepancy between intended meaning (conductor's interpretive concept), transmitted signals (gesture/visual presentation), and received outcomes (ensemble response/audience perception) is classified as noise-producing misalignment (*Bermes, 2020; Poggi, 2011; Selvey, 2014*). Thus, methodological rigor is maintained through explicit definitional boundaries, triangulated sourcing, and operational criteria linking theory to observable rehearsal/performance phenomena.

Literature Review

Ukrainian choral scholarship consistently conceptualises choral performance as a communicative process in which the conductor's role exceeds time-beating and becomes an integrative mediator of meaning, coordination, and artistic persuasion. Bermes frames the conductor's art as polyfunctional, combining interpretive, pedagogical, and organisational tasks that shape the ensemble's sonic result and its communicative effect (*Bermes, 2008; Bermes, 2020*). Within this perspective, the conductor's effectiveness depends on how efficiently musical intention is translated into collective vocal action and, subsequently, into listener comprehension—an approach that implicitly presupposes multiple channels of transmission (*Bermes, 2020; Kostyuk, 2003*). Ukrainian research also foregrounds the rehearsal as a space of negotiated meaning: Varhanych emphasises that conductor–choir interaction is grounded in communication (including verbal explanation and non-verbal cues), and that misunderstandings in this interaction directly impair performance coherence (*Varhanych, 2013; Varhanych, 2018*).

Thus, the Ukrainian literature provides a conceptual foundation for treating choral performance as a structured communicative system with identifiable mechanisms of success and failure.

A second Ukrainian strand addresses the multimodal expansion of choral communication in contemporary cultural conditions. Korobka analyses the functioning of academic choral ensembles within multimedia channels, highlighting how technical mediation reshapes communicative routes and intensifies the role of visual information in reception (*Korobka, 2018*). Related work on expressive resources in conducting and choral interaction—such as the analytical attention to facial expression (mimicry) as part of the conductor’s communicative apparatus—supports the claim that visual and gestural components are not ornamental but structurally decisive for ensemble response and audience perception (*Shtepa & Patskan, 2018*). Ukrainian discussions of interpretive adequacy additionally suggest evaluative criteria for how faithfully a performance “realises” meaning, thereby inviting operational indicators of congruence between intention, execution, and reception (*Voskoboinikova, 2011*). Thus, Ukrainian sources jointly motivate a model in which acoustic outcomes are inseparable from the visual-gestural means by which interpretation is produced and communicated.

International research strengthens this framework by supplying empirical evidence that music perception and evaluation are audiovisually integrated rather than purely auditory. Platz’s and Kopiez’s meta-analysis demonstrates systematic effects of visual presentation on perceived musical meaning and quality, establishing the visual channel as a measurable factor in reception (*Platz & Kopiez, 2012*). Tsay’s experimental work further indicates that observers—including expert judges—may overweight visual cues when identifying high-quality performance outcomes, revealing a robust perceptual bias that can amplify any sound–sight incongruence (*Tsay, 2013*). Studies focusing specifically on conducting and ensemble perception show that conductor gesture is interpreted by observers as information-bearing and can shape evaluations of expressivity and performance coherence (*Kumar & Morrison, 2016; Selvey, 2014*). Thus, the international empirical literature substantiates the hypothesis that alignment among channels is not a metaphor but a perceptual and evaluative reality affecting how performance is decoded.

A further line of scholarship conceptualises conducting as multimodal leadership communication, where gesture, facial expression, and bodily stance function as a semantically rich language. Poggi analyses the choir conductor’s communication as inherently multimodal, capable of simultaneously conveying temporal instruction and affective meaning through coordinated signals (*Poggi, 2011*). Conducting pedagogy, represented in internationally used frameworks, likewise treats gesture as an embodied representation of musical character and phrasing, not simply a metrical device; Durrant emphasises the conductor’s role in shaping ensemble response through communicative clarity and shared musical imagination (*Durrant, 2003*). In this view, the gestural channel is intrinsically linked to both the choir’s acoustic output and the audience’s visual reading of intention, making it a central hinge of the conductor–choir–listener triangle (*Durrant, 2003; Poggi, 2011; Selvey, 2014*). Thus, the convergent literature base justifies modelling choral performance as a trichannel system whose interpretive effectiveness depends on systematic congruence among gesture, sight, and sound.

The results are intended for choral conductors, choir trainers, and scholars of choral performance and music communication, as well as for adjudicators and educators who evaluate or teach interpretive coherence in ensemble performance

Results

Roles of Acoustic, Visual, and Gestural Channels in Performance

Acoustic Channel (Sound). The acoustic channel is the primary medium through which musical information is delivered to the listener. It encompasses all auditory aspects of performance: the singers' vocal production, intonation, blend, dynamics, timbre, and the expressive nuances encoded in sound. The artistic role of the acoustic channel is to realize the score's content—melody, harmony, rhythm, and text—and to convey the emotional and aesthetic substance of the piece through sound. Its functional role is to serve as the conduit of musical data in the communication chain: the choir, under the conductor's direction, transforms written notes into organized sound waves that reach the audience's ears. In essence, the choir's collective voice is the instrument that communicates the composer's message. Because choral music is an auditory art form at its core, the acoustic channel carries the heaviest informational load in expressing the work's structure and meaning. However, acoustic communication in choral performance is not merely about correct notes and rhythms; it also involves interpretive elements like phrasing and tone color, which imbue the performance with affect. A well-tuned, balanced choral sound can captivate listeners and evoke intended emotions, effectively “*speaking*” to the audience in musical language (*Kostynuk, 2003*). In turn, listeners actively process this sonic information, detecting qualities such as expressivity and technical excellence. The performance's interpretive adequacy—how faithfully and convincingly it realizes the score—is largely judged by what is heard (*Voskoboinikova, 2011*). Thus, the acoustic channel is the foundation of the trichannel system, providing the literal musical message that the other channels support.

Visual Channel (Performance Sight). The visual channel comprises all the visual information available to performers and observers during a choral performance. This includes the sight of the conductor's movements, the choir's appearance and stage demeanor, facial expressions, eye contact, and any other observable behaviors. The artistic role of the visual channel is to complement and enhance the musical expression. Visual elements can reinforce the mood and character of the music: for example, unified facial expressions of sorrow during an elegiac piece or an energized posture in an upbeat chorus can intensify the audience's emotional experience. From the audience's perspective, choral music is a multimodal phenomenon—seeing the performers can significantly influence the perception of the music's meaning. Researchers have demonstrated that the visual component is not marginal but rather an important factor in communicating musical meaning. In fact, audiences often rely on visual cues (such as performers' expressiveness and stage presence) when evaluating performance quality. Tsay (*2013*) famously showed that even expert judges in music competitions, when forced to rely on visual information alone, could identify winners more accurately than when relying on sound alone—indicating a subconscious overweighting of visual input in judgments. The functional role of the visual channel within the conductor–choir interaction is also crucial. Singers depend on seeing the conductor's beat patterns, cues, and expressive motions (as well as subtle signals like eye contact and facial cues) to coordinate their entries, cut-offs, and dynamic changes. Furthermore, singers may take visual cues from one another (such as breathing together or watching section leaders) to maintain ensemble unity. Previous studies suggest that visual information is a salient resource for ensemble coordination and for observers' evaluation of performance expressivity (*Platę & Kopieć, 2012; Selvey, 2014*). Therefore, the visual channel serves both an ensemble-coordination function on stage and an expressive communication function toward the audience. A vivid example is when choir members and conductor share meaningful glances or smiles during a particularly expressive passage—a non-verbal affirmation of musical intent that both unifies the choir and projects emotional content to listeners. Thus, the visual channel adds a layer of meaning and clarity to the choral performance, engaging observers' eyes to support what their ears are hearing.

Gestural Channel (Conductor's Technique). The gestural channel refers specifically to the conductor's physical gestures and body language used to communicate with the choir. Conducting is a form of non-verbal musical communication, where motions of the hands, arms, face, and body convey real-time information about tempo, dynamics, phrasing, articulation, and expression. The artistic role of the gestural channel is to interpret the score's expressive markings and style through movement—essentially embodying the music's character so that the choir can mirror it in sound. Conducting pedagogy emphasises that gesture should emerge from musical intention and expressive logic, rather than functioning as mere time-beating (Kolessa, 1973). The functional role of conducting gestures is directive and unifying: they provide the ensemble with clear timing (ictus and tempo), preparatory signals (upbeats and cues), and interpretive shaping (molds for dynamics and articulation). A competent conductor must do more than indicate the beat; they must “reflect in gesture the style, expression, and dynamics of the score”, fulfilling both a temporal and an inflective purpose. For example, a sharp, angular motion might signal a *marcato* or accented style, whereas a flowing circular motion might invite *legato* singing. The conductor's left hand and face often contribute to shaping tone and emotional nuance (e.g., a gentle palm to calm the volume, an encouraging smile to brighten the choir's tone). Choral conducting pedagogy, from Mykola Kolessa's foundational *Fundamentals of Conducting Technique* (1973) to contemporary manuals, underscores that clarity and expressiveness in gesture are fundamental to effective conductor–choir communication. Notably, gesture is a multi-dimensional language: beyond arm movements, it encompasses eye contact, facial expressions, posture, and even breathing cues. Each of these components can transmit specific messages—a raised eyebrow might implore more intensity, or a preparatory inhalation can unify the choir's breath before an entrance. Research by Poggi (2011) analyzes how conductors use multimodal gestures to convey emotions and technical instructions simultaneously. For instance, a conductor might enact an expression of pain or longing on their face and in their posture while conducting a lament, in order to make the singers *feel* that emotion and channel it into their sound. This gestural mirroring technique effectively links the conductor's internal conception of the music with the choir's interpretive output, and ultimately with the audience's perception. Thus, the gestural channel is the linchpin of the conductor–choir communication: it translates interpretive intentions into visible actions that align the choir's performance, bridging the gap between the silent score and its sounding realization.

Thus, each of the three channels—acoustic, visual, and gestural—plays a distinct but complementary role in choral performance. The acoustic channel delivers the primary musical message through sound, the visual channel reinforces and clarifies that message through sight, and the gestural channel orchestrates the entire process by facilitating synchronization and expressivity. Together, they form an integrated system in which the conductor and choir collaborate to communicate the composer's art to the listener. When these channels are used in harmony, the result is a rich, multi-sensory musical experience in which performers and audience share a deep understanding of the music's intent.

Misalignments and Interference Among Channels

In practice, the three communication channels do not always align perfectly. Misalignments or interference can occur when one channel conveys information that conflicts with or fails to support the others. Such discrepancies act as “*signal noise*” in the communication system, potentially confusing performers or audience and diminishing the performance's overall impact. Identifying typical types of misalignments is important for diagnosing interpretive problems in choral performance.

One common misalignment is between the gestural and acoustic channels. This happens when a conductor's beat or expressive gestures do not match the sound that the choir produces. For example, a conductor might indicate a broad, legato phrase with smooth, expansive motions, but if the choir does not interpret these gestures correctly, they might sing in a choppy or detached manner. Conversely, a choir could be singing with great intensity or volume while the conductor's gestures remain small and restrained, sending mixed signals. Such gestural–acoustic incongruence often stems from unclear conducting technique or a lack of ensemble responsiveness. It introduces “noise” by forcing the choir to guess the conductor's intent, potentially leading to ragged entries or dynamic imbalances. Varhanych (2018) notes that while conductors employ various communication modes, clear manual gestures remain the primary tool for achieving ensemble unity; when those gestures are ambiguous, the resulting sound may suffer. In worst-case scenarios, serious miscommunication can cause the choir to come apart (e.g. entering at different times or singing at unintended tempi)—a breakdown of the conductor–choir link that is immediately perceptible to listeners as a performance flaw.

Another type of interference arises between the visual and acoustic channels as perceived by the audience. Ideally, what the audience sees on stage should reinforce what they hear. Misalignment occurs when the visual cues send a different message than the music. For instance, if a choir is singing a joyful, triumphant piece (acoustically conveying excitement) but the singers' faces and body language appear dull or disengaged, the audience receives conflicting information. The expressive intent becomes muddled—the music says “*exultation*” while the visuals say “*boredom*”. This inconsistency can reduce the emotional impact and credibility of the performance. Research indicates that expressive movement enhances audience perception of musical expressivity only when the musical sound is of good quality; if the sound is poor, excessive visual expressiveness can actually distract and detract from the performance. In essence, a mismatch where visuals outshine sound can make shortcomings in the acoustic channel more apparent. A striking example is noted in studies of choral adjudication: when choirs with weak tone quality employ highly animated motions, judges often perceive the exaggeration negatively, as it draws attention to the disparity between what is seen and heard (Platz & Kopiez, 2012). Conversely, misalignment can occur if the choir's stage presentation is too static or impassive while the music is dramatically intense. Listeners might then underrate the performance's excitement because the lack of visual energy unconsciously biases their evaluation of the sound. Tsay's findings underscore this phenomenon: observers placed disproportionate weight on visual cues, even “*over-weighting*” them relative to auditory information. This suggests that when visual and acoustic messages conflict, audiences may inadvertently favor the visual—a situation that can lead to misjudgment of the performance's true quality (Tsay, 2013).

Misalignment can also occur internally within the visual–gestural domain. If members of the choir are not consistently following the conductor's cues, the ensemble's visual cohesiveness breaks down. Audience members may notice some singers watching the conductor intently while others appear glued to their scores or gazing elsewhere. This not only undercuts the aesthetic unity of the choir's presentation but often correlates with small ensemble inaccuracies (like staggered cut-offs or lack of unanimity in phrasing) that attentive listeners will detect. In such cases, the gestural guidance is effectively reaching only part of the ensemble, creating an internal communication gap. Another interference in this domain is when a conductor's body language contradicts their intended interpretation. A conductor might verbally exhort the choir to sing a passage delicately, yet if their posture and face look tense or aggressive, the choir receives mixed messages. Such inconsistency can confuse singers, leading to a hesitant or dynamically uneven

delivery. It also conveys an ambiguous atmosphere to the audience, who subconsciously read the conductor's affect.

Technological and environmental factors can introduce further noise into the channels. For example, performing in low-light conditions or with obstructed sightlines can impair the visual channel (singers cannot clearly see the conductor's gestures, or the audience cannot see performers' expressions). Acoustically, poor venue acoustics or microphone issues in amplified settings can distort the choir's sound, altering the acoustic message regardless of the conductor's intentions. As Tatiana Korobka (2018) points out, the rise of multimedia channels – such as live broadcasts or recordings—adds new layers where misalignment can occur, like a video director's camera cuts not aligning with musical highlights, which might confuse the viewer's focus. In modern choral performances that involve multimedia, careful coordination is needed to keep the traditional conductor–choir–listener communication clear and effective (Korobka, 2018).

The consequences of channel interference range from subtle reductions in interpretive clarity to overt mistakes in execution. Even when not catastrophic, any misalignment tends to diminish the interpretive quality as hypothesized, because the audience must work harder to reconcile conflicting signals, and the emotional or artistic intent does not register as strongly. A performance with outstanding singing can be undercut by distracting visuals or a confusing conducting display; conversely, an inspiring conductor and elegant stage presence cannot fully compensate for sloppy singing. In essence, the channels carry redundant information, and when they diverge, the audience's and performers' ability to decode the musical intent is impaired.

Thus, any incongruence among the acoustic, visual, and gestural channels introduces “noise” into the choral communication system, impeding the smooth transmission of the musical message. Misalignment of gesture and sound can lead to ensemble errors; discrepancies between what is seen and heard can mislead or disengage the audience; and inconsistent visual following within the choir betrays an internal communication breakdown. Recognizing these interferences is the first step for conductors and choirs in adjusting their approach to restore alignment, ensuring that all channels work synergistically rather than at cross purposes.

Indicators of Successful Trichannel Coordination

When the acoustic, visual, and gestural channels are harmoniously aligned, the results are discernible in both the performance itself and the audience's response. Several observable indicators signal successful trichannel coordination in a choral performance, reflecting an optimal conductor–choir–listener connection.

One key indicator is ensemble cohesion and precision. Musically, this is evident when the choir enters and cuts off together with pinpoint accuracy, maintains steady tempo and rhythm, and achieves balanced dynamics as a unified body. These qualities imply that the choir is responding to the conductor's gestures in a coordinated fashion, and that the gestural channel is effectively guiding the acoustic output. Listeners will notice a well-synchronized choir as having a tight, homogeneous sound where no section lags or rushes. Such precision is often attributed to clear conductor communication and attentive choir following (Varbanych, 2013). For instance, perfectly unified releases at phrase endings demonstrate that singers are watching and reacting simultaneously to the conductor's cut-off gesture. Clean ensemble attacks and transitions, especially in complex music, indicate that the conductor's preparatory cues are being universally received and interpreted correctly by the choir. When a choir performs with this level of togetherness, it confirms that the gestural channel (conductor) and acoustic channel (choir's execution) are in full alignment.

Another indicator is the expressive congruence between conductor and choir. This can be observed in the way interpretive nuances manifest: if the conductor shows a subtler, softer gesture for a piano passage and the choir's sound immediately softens with matching sensitivity, it is a sign of successful communication. Likewise, a conductor's passionate, sweeping gestures during a climax mirrored by an outpouring of rich, intense choral sound reflects alignment of intent. Audiences can often sense this congruence intuitively—it feels as though the choir is an extension of the conductor's will, “*breathing*” and phrasing as one organism. In such cases, the visual and acoustic expressions of the music reinforce one another, heightening the emotional impact. Research supports this: high conductor expressivity tends to correlate with higher ratings of ensemble expressivity by listeners. In a study by Selvey (2014), performances where conductor and choir were judged as collectively more expressive were those in which observers noted a clear synchrony between what the conductor emoted and how the choir sounded. Moreover, Selvey's (2014) *Model of Choral Expressivity* suggests that a conductor's expressive gestures strongly predict the choir's expressivity as perceived by audiences. Thus, when a choir's dynamic shadings, articulations, and emotional tone align visibly with the conductor's motions, it signals that all three channels are delivering a unified interpretive message.

A further indicator involves choir members' engagement and focus. In a well-coordinated performance, singers exhibit consistent focus on the conductor and a cohesive stage presence. You will notice the choir frequently looking up (rather than buried in their scores), especially at transitions or expressive moments—evidence that they are actively taking cues. Their posture tends to be uniform and attentive, and their facial expressions often reflect the mood of the music in unison. For example, in a somber requiem, multiple singers sharing a solemn, concentrated expression (as opposed to a mix of expressions or blank looks) implies that they collectively understand and internalize the piece's affective intent. This collective visual engagement is usually the product of effective rehearsal communication: the conductor has conveyed the emotional context and perhaps even coached the choir on the importance of facial involvement (Shtepa & Patskan, 2018). An engaged choir that watches the conductor closely also feeds back into acoustic excellence—entrances are confident and diction is together, because everyone is cued into the same signals. From the audience's viewpoint, a choir that appears unified in purpose and emotion is compelling to watch, and it validates the sincerity of the performance. Audience members often report being more moved by performances where the choir's emotional expression seems genuine and shared across the ensemble, which is a direct outcome of strong conductor–choir rapport on the visual/gestural level (Durrant, 2003).

The audience's reception and feedback can itself be an indicator of trichannel success. While more subjective, one can gauge how well the communication landed by observing audience behavior: rapt attention (even leaning forward in their seats) during the piece, or a noticeable emotional reaction (such as tears in an expressive piece, or broad smiles and energy during an upbeat number) suggest that the performance effectively communicated its message. When channels align, listeners often describe the music as “*coming alive*” or “*speaking to them directly*”, which is essentially the goal of eliminating communication noise. In formal evaluations, high adjudication scores or positive critiques often cite clarity of interpretation and emotional impact. For instance, Bielik-Zolotarova (2024) notes that convincing choral performances captivate both singers and audiences with a “*convincing interpretation*”, implying that all elements coalesce to transmit the artistic image persuasively. Another concrete measure is how consistently the audience perceives the intended interpretation. If multiple listeners or critics independently discern the same expressive narrative or nuances in the performance, it indicates that the message was delivered clearly through the channels. This aligns with Voskoboinikova's (2011) concept of

adequacy criteria for performance interpretation: one might say the performance is adequate (or faithful) in interpretation when the listener's understanding matches the conductor's and choir's intended expression—a result achievable only when communication channels function in unity.

Finally, successful trichannel coordination is often evident in the choir's confidence and responsiveness in real time. During the performance, one might notice that the choir can execute spontaneous interpretative adjustments at the conductor's behest—e.g., a slightly prolonged fermata or a sudden *pianissimo subito*—with no hesitation or disruption. This flexibility is a hallmark of a finely tuned conductor–choir connection. It means the singers are so attuned to the conductor's gestural channel that they can react instantly and uniformly to unplanned impulses, and the acoustic output adapts smoothly. Such moments, when executed seamlessly, can be thrilling for audiences and performers alike, and they underscore the trust and understanding within the ensemble. Anita Kumar and Steven Morrison (2016) found that observers could detect subtle contrasts in how conductors shaped musical lines through gesture, and that these were reflected in the ensemble's sound. A choir that can follow every nuance of the baton or hand and translate it into sound demonstrates the highest level of channel alignment—essentially, the visual gesture is instantaneously converted into acoustic result with no loss of information.

Thus, indicators of a successfully coordinated trichannel communication system in choral performance include a tightly unified ensemble sound, visible expressive synergy between conductor and singers, uniformly engaged choir demeanor, and a clearly conveyed interpretation that resonates with the audience. When these signs are present, one can infer that the acoustic, visual, and gestural channels are congruent and reinforcing each other. In such performances, the conductor–choir–listener triangle operates seamlessly: the conductor's intentions flow through gestures to the choir's voices, and the audience receives a coherent artistic message without distortion.

Rehearsal Strategies for Calibrating the Communication System

Achieving and maintaining alignment among the acoustic, visual, and gestural channels requires conscious effort and strategy during the rehearsal process. Conductors and choirs can employ several techniques to calibrate their communication system, ensuring that what the conductor envisions is exactly what the choir delivers and the listener perceives. The following are key rehearsal strategies and techniques aimed at strengthening each channel and their congruence:

1. **Establishing a Clear Gestural Vocabulary:** In rehearsal, the conductor should develop and reinforce a consistent set of conducting gestures and signals that the choir learns to interpret reliably. This involves not only the basic beat patterns but also specific motions for cueing entries, dynamics, articulation, and cut-offs. For example, a conductor might demonstrate early in the rehearsal process how a small left-hand pinch gesture indicates an immediate drop to piano, or how a raised palm means “*watch for a fermata*”. By codifying these gestures, the ensemble builds trust in the gestural channel. A recommended exercise is the “*silent rehearsal*”: the choir sings or vocalizes while the conductor communicates solely through gestures, without speaking. This forces singers to actively watch and react to the conductor's non-verbal commands. Initially, the conductor can stop and clarify any misunderstood signals, effectively teaching the choir their gestural vocabulary. Over time, this improves precision; as Bahar Güdek's research highlights, deliberate use of body language (hand shapes, facial cues, posture) by the conductor can measurably enhance choral performance quality. Furthermore, recording video of rehearsals can be a valuable tool—both conductor and choir can review whether the intended gestures elicited

the desired musical response. If, for instance, the video reveals that a gesture meant to cue a softer entrance went unnoticed by some singers, the conductor can adjust that gesture (making it larger or more explicit) or remind the choir to be attentive at that moment. Through iterative refinement, the rehearsal builds a shared non-verbal language that becomes second nature in performance. Empirical evidence also indicates that the conductor's body language can measurably influence perceived musical quality, which supports systematic rehearsal work on gestural clarity and expressive consistency as a performance-quality variable rather than a purely aesthetic add-on (*Coşkunsoy & Güdek, 2019*).

2. Integrating Verbal Communication and Metaphor: While gestures carry the immediate communication in performance, verbal explanation during rehearsal is vital for aligning interpretive understanding. Conductors should discuss the artistic intent behind passages—the desired mood, color, or character—so that singers have an internal concept that matches the conductor's. For example, describing a section as “like a distant prayer, floating on air” gives the choir an image to strive for in both sound (soft, blend, legato) and demeanor (calm faces, uplifted expressions). Varhanych (*2018*) notes that verbal interaction is a primary means of achieving mutual understanding between conductor and choir; it complements gestures by clarifying any ambiguities. Rehearsal time can be used to explain the rationale for certain gestures: “When I make this circular motion, I’m showing the phrase should broaden.” This way, the next time that gesture appears, singers recall the verbal coaching and execute accordingly. Conductors may also invite feedback by asking the choir how a gesture was perceived or if an entrance felt clear—engaging singers in the communication loop can reveal disconnects to fix. Using metaphors and imagery in explanations taps into singers’ imaginations and fosters a unified emotional approach. For instance, telling the choir, “Imagine you’re a single organism breathing together,” before a tricky entry can drastically improve ensemble timing and blend, because everyone internalizes the same concept. In essence, effective verbal communication in rehearsal sets the stage for minimal verbal needs in performance; the choir carries a collective interpretive vision that the conductor can trigger with a simple gesture or glance.

3. Strengthening the Visual Channel for Performers: Rehearsals should address how the choir presents itself visually, since this impacts both internal communication and audience perception. Conductors can encourage singers to practice performing with appropriate facial expressions and stage presence. This might involve mirror work or video playback for the choir: seeing themselves can be eye-opening if, for example, a dramatic fortissimo piece is being sung with blank looks. Simple exercises include singing a piece twice—once exaggerating happy facial expressions, once with sad expressions—to make singers comfortable with emoting visually. The choir can discuss which visual approach fits each piece best and strives for consistency. Another tactic is what some call the “eyes-up” rehearsal: run a section where all singers must look up at the conductor for every cue, memorizing if needed. This builds the habit of maintaining eye contact and relying on visual cues. It also trains peripheral vision—singers learn to keep the conductor in their sight even while concentrating on music. Directors like Charles Durrant emphasize developing mutual eye contact as a form of trust; when singers see the conductor's expressive intent in the eyes, they are more likely to mirror it (*Durrant, 2003*). Additionally, seating or standing arrangements in rehearsal can be tweaked to ensure everyone *can* see the conductor; sometimes simply re-spacing the choir or elevating the conductor's podium solves sightline issues that cause miscommunications. In modern contexts, Korobka (*2018*) suggests adapting to multimedia conditions, so choirs might rehearse once in the performance venue or with any technology (like camera presence) to adjust their visual focus and avoid surprises that could disrupt communication. By the end of the rehearsal process, each singer should feel that

watching the conductor is indispensable—and each should also be aware that their own facial and bodily engagement contributes to the ensemble’s communicative power.

4. Alignment of Acoustic Expectations: Calibrating the acoustic channel goes beyond learning notes. A conductor should clearly convey acoustic goals—balance, tone quality, diction—and relate them to both gesture and visual aspects. For instance, if a certain gesture is intended to elicit a softer dynamic, the conductor can rehearse the choir to immediately adjust tone when that gesture appears. Techniques such as breathing together are vital: a conductor can rehearse the choir’s preparatory breaths (often by exaggerating their own inhale gesture) to unify phrase starts. Over time, the choir learns to take cues from the conductor’s breath and posture, aligning their acoustic preparation. Tuning and blend issues, which are acoustic in nature, often improve when the choir trusts the conductor’s indications for adjusting volume or who should be prominent. During rehearsal, a conductor might physically move between sections to demonstrate how sound needs to balance, or use hand signs to show one section to pull back while another comes forward. The choir, seeing and hearing these adjustments, becomes adept at responding instantly to similar cues in performance. Moreover, rehearsing in performance-like conditions—doing run-throughs without interruption—helps solidify the channels’ integration. The conductor can treat these as *simulated performances*, focusing on communicating through gesture and expression rather than stopping for corrections, while the choir practices delivering the piece with full attention on the conductor and awareness of their own expressivity. This bridges the gap between rehearsal and concert, ensuring that the acoustic, visual, and gestural coordination achieved in practice carries over under pressure.

5. Building Ensemble Trust and Responsive Culture: A less tangible but crucial aspect of calibration is fostering a rehearsal atmosphere that encourages open communication and trust. When choir members feel comfortable, they are more likely to indicate if they missed a cue or didn’t understand a directive, allowing the conductor to clarify before performance. Regularly reinforcing a sense of teamwork—e.g., acknowledging when the choir follows a difficult *ritardando* successfully—motivates singers to stay alert to the conductor. Conductors can also rotate where they stand during some rehearsals or have section leaders conduct small sections; this can reveal what cues singers rely on most and build empathy for the conductor’s role. Another strategy is rehearsing without the conductor for brief passages (having the choir sing together uncondacted). This tests the ensemble’s internal communication and listening. When the conductor steps back in, the choir often appreciates the value of his/her gestures anew, and the conductor can note any self-sufficiency or issues in ensemble that occurred, adjusting technique accordingly.

Importantly, rehearsal strategies should aim to minimize the potential for misalignment discussed earlier. If a particular miscommunication happened (e.g., a *ritard* was executed unevenly), the conductor can isolate that moment and perhaps change the conducting pattern or explicitly tell the choir what to watch for (“On my cue, everyone watches my right hand for the slowdown”). By anticipating and correcting misalignments in rehearsal, the performance can be free of them. In mediated and technology-saturated performance contexts, systematic audio–video self-review can support alignment by revealing discrepancies between intended expressive focus and what is actually perceived visually and acoustically (*Korobka, 2018*)

Thus, through a combination of clear gesture training, interpretive discussions, visual expressivity practice, and ensemble responsiveness drills, conductors and choirs can effectively calibrate their trichannel communication system. A well-prepared choir will know exactly what the conductor’s gestures mean, will anticipate and mirror the conductor’s emotional intent, and will project a unified sight-and-sound experience to the audience. These rehearsal investments

pay off in performance: the channels align seamlessly, and the focus can shift from mechanics to musical artistry.

Discussion

This study refines the classical “conductor–choir–listener” triad into an operational trichannel model; however, its central problem remains practical and epistemic: how can congruence among acoustic, visual, and gestural signals be secured under real performance constraints without reducing interpretation to a set of externalised cues? Empirical research confirms that visual information can systematically reframe perceived musical quality and meaning, and that evaluators may overweight visual cues even when acoustic information is available. In choral contexts, this creates a specific risk: interpretive intention can be acoustically coherent yet visually/gesturally “noisy”, producing reception-level ambiguity rather than expressive depth.

At the same time, Ukrainian choral scholarship stresses that conductor–choir interaction is built through communicative competence and rehearsal-based alignment, not through isolated technical correctness. A further complication is contemporary mediation: multimedia channels can intensify the load and selectivity of visual signals, transforming “*stage behaviour*” into a structurally decisive factor of reception. Hence, the topic demands continued discussion around thresholds (how much mismatch constitutes “*noise*”), context (live vs mediated reception), and training (how calibration procedures are internalised by ensembles).

The manuscript therefore raises the following questions for further scholarly and practical debate:

1. Which channel dominates meaning-decoding across different choral genres and venues, and how stable is this dominance across listener expertise levels?
2. What minimal set of observable indicators best predicts perceived interpretive adequacy in choral performance evaluation?
3. How can rehearsal protocols balance explicit instruction with the cultivation of tacit ensemble responsiveness to gesture and visual affect?
4. To what extent does conductor body language function as a measurable “*quality variable*” independent of acoustic output, and how should this be assessed in choral settings?
5. How should the trichannel model be adapted when multimedia framing alters visual salience (camera work, streaming, close-ups), potentially reshaping the conductor–choir–listener triangle?

Thus, the proposed model is validated as a coherent explanatory framework, yet its applied effectiveness depends on future empirical and practice-based work clarifying channel weighting, thresholds of mismatch, and calibration transfer from rehearsal to performance.

Conclusion

This article operationalised the classical “conductor–choir–listener” triad as a trichannel communication system and tested the guiding hypothesis that interpretive effectiveness depends on the congruence of acoustic, visual, and gestural channels.

In the Methods and Literature Review, a system-analytic and triangulated design was adopted to connect Ukrainian choral-communication scholarship with international empirical evidence on audiovisual perception and conducting multimodality.

In the section defining channel functions, the acoustic channel was established as the primary carrier of musical-textual information, while the visual channel was framed as a meaning-

and evaluation-modulating layer, and the gestural channel as the directive–expressive interface translating interpretive intention into ensemble action.

In the analysis of misalignments, recurrent “*noise*” types were identified: gestural–acoustic incongruence (unclear cueing or contradictory shaping), visual–acoustic disparity (stage affect not supporting sonic character), and internal visual discontinuities within the choir that undermine coordination.

In the indicators section, congruence was operationalised through observable markers—precision of attacks/releases, stability of tempo transitions, coherence of expressive affect, and consistent attentional patterns—linking rehearsal outcomes to reception-level interpretive legibility.

In the rehearsal-calibration section, a practice-oriented protocol was articulated: codifying gestural vocabulary, reinforcing shared imagery through verbal work, training visual engagement and facial expressivity, and using feedback tools (including video review) to stabilise transfer from rehearsal to concert.

Across these interim results, the central inference is consistent: choral interpretation is decoded multimodally, and visual signals can systematically modulate perceived quality; therefore, channel congruence is not an aesthetic luxury but a structural condition of communicative success.

At the same time, Ukrainian perspectives on conductor polyfunctionality and ensemble communication emphasise that congruence must be cultivated as a stable professional competence rather than enforced as external choreography.

Overall, the study confirms the hypothesis: when acoustic, visual, and gestural channels align, the conductor’s interpretive concept is transmitted with minimal distortion from ensemble to listener; when they diverge, “*signal noise*” increases and interpretive adequacy weakens. Thus, the trichannel model provides a dense analytical and pedagogical framework for diagnosing choral-performance problems and designing rehearsal interventions that stabilise interpretive clarity under contemporary conditions of live and mediated reception.

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