**How Your Eyes Help You Hear a Performance**

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**Intro**

When people purely listen to a musical performance, they use their ears as their main source of intake for the music. How about when people watch a performance live? Do the ears have as big of an influence as visual cues? If a performer can play all of their notes accurately but has no body movement then does that performer truly intrigue their audience? I argue that body movement and facial expressions made by pianists help audiences hear how to interpret the music, and often have more influence than the listeners’ ears.

Many studies have been completed in search of supporting the idea that audience members use their eyes more than their ears in a live performance. Livingstone claims that facial expressions are meant to provide better results of emotions felt during a musical performance rather than only relying on how emotions in music are perceived.[[1]](#footnote-1) Without these facial expressions, audience members are not able to relate to the performer as well. Another study suggests that audiences rely on their eyes and visual cues in order to determine better pianists. This research included judges predicting the winners of a piano competition already completed through audio only and then through visuals only. The judges were able to predict the winners more accurately based off the video that included strictly visual cues.[[2]](#footnote-2) This theory is supported by another researcher who discusses how recordings have affected the performance experience. Tsay discusses how audiences can perceive a performer’s emotion through their facial expression which in turn often encourages viewers to also make facial expressions while watching a performance.[[3]](#footnote-3) If this is true, then does a pianist’s facial expression and physical movements carry more weight in their performance than the skills needed to perform difficult repertoire?

 Studying the specific visual cues that deem a pianist successful will help all pianists in how they should approach the stage and movements on the stage. The idea of live performances focusing on visual cues will be supported through an explanation of the changes in keyboards throughout the years, studying pianist's technique portrayed through visual aids and previous successful pianists who have used dramatic movements and facial expressions to intrigue their audiences.

**Piano Versus Harpsichord**

When considering the pianists of past and present, one must also recognize the type of instrument they played on. For instance, the harpsichord and piano are two different types of instruments that require different techniques and body movements in order to produce the correct sound. However, pieces originally written for harpsichord are still played on today’s modern-day piano. J. S. Bach was a great performer and composer who preferred to play on the clavichord, which was similar to the harpsichord except the strings are plucked on a harpsichord and struck on a clavichord.[[4]](#footnote-4) Bach was one of the first people to use all five fingers when playing the keyboard. Up until the eighteenth century, the thumb and pinky were rarely used “due to the difference in length between the three middle fingers and the thumb and little finger.”[[5]](#footnote-5) However, when considering the technique used at the early pianos, one must remember that the “keys of these instruments was little more than half the depth to which we are accustomed on the modern piano.”[[6]](#footnote-6) Therefore, keyboardists of that time did not have the same fingering as pianists of today and used different technique caused by the difference in the key length.

Due to the light action of the keys on the harpsichord and clavichord, Bach and other performers during his time did not require as much body movement to create the proper sound. In fact, Bach’s body has been described as “motionless” while performing with his hands “scarcely” moving except up and down on the keyboard.[[7]](#footnote-7) Today’s modern-day piano has heavier keys and thus requires more body movement in order to produce various dynamic levels that pianists tried to achieve for many years. Had Bach been playing on a modern-day piano, he probably would have used more body movement in order to create the rich tone he was always searching for. He once stated that he preferred the clavichord to harpsichord because of the “charming touch” it had, but it still did not produce sufficient “soul” for him.[[8]](#footnote-8) However, today’s piano can create a charming touch that Bach was searching for on his instruments.

The modern piano has a cast iron frame that the clavichord and harpsichord did not have. In Blackham’s explanation of the physics of the piano he states, “The development of the full cast-iron frame gave the sound of the piano much greater brilliance and power. The modem frame is cast in one piece and carries the entire tension of the strings; in a large concert-grand piano the frame weighs 400 pounds and is subjected to an average tension of 60,000 pounds.”[[9]](#footnote-9) Today's pianists are working with a larger sound, heavier keys and more detailed keyboard action than the performers on the harpsichord. Trying to compare performers on these two instruments is not valuable for this research due to the vast differences in the two instruments that require different techniques and approaches. Therefore, studying body movements of harpsichord players like Bach and pianists like Liszt will not be compared.

**Technique**

Interpretation is a part of live music that varies between each performer. However, technique must be used by all pianists and can be observed with or without sound. One advantage of observing a performance live includes being able to watch firsthand how performers produce their sound. Experienced audience members are more likely able to discern a decent pianist from a phenomenal pianist purely from the technique they are using that includes certain bodily gestures. These gestures include using arm weight as support for each key being depressed and angling the wrists to aid in creating the proper quality of sound.

Technique must be studied properly from an early age in order for pianists to focus on the musicality and visual cues that can be used to intrigue their audience. In an interview conducted by David Dubal, he speaks with John Browning (American pianist known for his collaboration with Samuel Barber) about technique. Browning points out that tendinitis often comes from poor training and tightness at the keyboard. Browning states, “You cannot develop a major technique after the age of sixteen... It has to be done from the age of four on.”[[10]](#footnote-10) Tightness at the piano can be examined from how a pianist sits at the piano, along with observing the engagement and release of specific muscles during a performance. Rachmaninoff also shares his ideas on technique with Harriette Brower. He states, “The study of pure technic includes scales, chords, arpeggios, trills and octaves... If I wish to keep my playing mechanism in condition, I, too, must practice scales, arpeggios, trills, chords and octaves. There is no other way to keep fit.”[[11]](#footnote-11) Without these technical exercises one would not be able to perform as well or play difficult passages included in advanced repertoire. If pianists are more comfortable with technical exercises and difficult passages in their pieces, then they will be able to focus on giving the proper visual cues as they expand on their musicality.

Without the proper use of body movement, technique exercises are not beneficial for pianists. Moritz Rosenthal (pupil of Liszt) took a break from the concert field for six years. Upon his arrival back to the field, “He caused amazement by his marvelous technic and endless physical endurance.”[[12]](#footnote-12) Rosenthal used technique less as a source of musical expression and more as an aid in order to produce the proper sound. Rosenthal used arm weight movements that “aide in the beautiful tones which he generally draws from the instrument.”[[13]](#footnote-13) During an interview with Brower he states, “In early stages the pupil should naturally learn principles of touch and movements for arm, wrist and fingers.”[[14]](#footnote-14) For octaves Rosenthal advises both “elevated and low wrist.”[[15]](#footnote-15) These technical qualities must be supported by the body and cannot be played properly if the pianist is motionless, like Bach was able to play on the harpsichord.

As Browning suggests, tightness at the piano can lead to tendinitis. Claudio Arrau demonstrates the use of physical gestures to support technique and quality of sound during a performance of Beethoven’s Op. 109. In one section of this piece, Beethoven instructs a sforzando sound. In Arrau’s performance he presses his wrists downward into the keys to avoid a harsh sound. Arrau teaches the use of arm weight in order to avoid a tone that is undesirable while still producing a strong sound.[[16]](#footnote-16) This gesture cannot be done without the physical movement of wrists. While audience members may not realize it, this shape and approach to the keyboard is visually supporting what they hear after a key is depressed. Therefore, audience members can determine the accuracy of a pianist by the agility in their fingers and hands, controlled arm weight and other body movements that can be observed with or without sound.

**The Importance of Visual Cues**

The studying of audio versus visual performances began after recordings became popular. Prior to recordings, music was purely an “experiential audiovisual event.”[[17]](#footnote-17) However, as recordings and technology began to rise in the music industry, researchers began to study how bypassing the visual aspect of performances effects the connection between the audience and performers. This connection is made through visual cues such as facial expression and eye contact. Audience members can understand and enjoy the music more if the performer relates the emotion being portrayed through facial expressions and eye contact. Livingstone supports this idea by stating, “Researchers have shown that the more frequently a performer looked toward the audience, the higher observers rated the performance in terms of enjoyment, happiness, and performance expressiveness and communicativeness.”[[18]](#footnote-18) This form of connecting with the audience can only be done in a live performance and plays a critical role in audience members enjoying a performance.

Pianists do not have the advantage of singers or other instrumentalists in terms of making eye contact with their audience. However, they can use the time that they bow and walk onto stage to visually connect with audience members. Platz and Kopiez completed a study that determined a quantifiable amount for how much visual cues effect an audience's perception of music in a live performance.[[19]](#footnote-19) The two researchers calculated “the average effect size of the visual component in music performance appreciation by subtracting ratings for the audio only condition from those for the audio-visual condition.”[[20]](#footnote-20) Based on their calculation that included 15 studies, the results were in the positive range for being able to enjoy music more based off visual enhancements. Therefore, pianists must know which visual cues have been used in the past to consider using in their own performances. In the following pages I will discuss the exact movements that have been observed among successful pianists.

**Performance Habits by Piano Virtuosos**

**Franz Liszt**

One pianist who is known for intriguing his audience visually is Franz Liszt. He has been recognized as the artist who invented the solo recital and used his performances to put on a visual as well as aural show for his audience members. Robert Schumann is often quoted saying, “But he must be heard – and also seen; for if Liszt played behind the screen, a great deal of poetry would be lost.”[[21]](#footnote-21) Some audiences viewed his dramatic performances as a compromise to his legitimacy as a pianist since his body movements distracted listeners from his sound. However, Liszt supporters only promoted his movement and facial expressions as part of his performance and claimed that they helped listeners comprehend his music.[[22]](#footnote-22)

During Liszt’s time as a performer, he took full advantage of an audience. His visual cues were often not only for good technique, but also for his public appearance as a performer. Gooley states, “Liszt asked his audiences to listen in new ways, and thereby presented a challenge to his general acceptance.”[[23]](#footnote-23) Liszt used his entire body to support the virtuosic sound he produced. When performing “La ci darem la mano” from Don Giovanni, he would depict the two characters from the opera as he performed through differing facial gestures.[[24]](#footnote-24) The following describes some of Liszt’s bodily motions he used during his performances:

The independence that characterized Liszt’s hands and fingers extended to his body as a whole. In performance he stamped his feet, lifted his arms far above the keyboard, and on the whole denied his body a stable center of gravity… this is a body on the verge of complete dismemberment, a body abandoned by a sovereign will… No system of words can accurately describe the power which Liszt possesses of dividing himself, as it were, into two, or sometimes, even, three performers.[[25]](#footnote-25)

His heavy use of body movements created many critics of his performances. Some audience members enjoyed his bodily movements and thought it supported his live performances, as expressed by Schumann.[[26]](#footnote-26) However, others thought he should get rid of the excessive motions. These critics believed “Liszt had control over his bodily motions, that he could stop them, that they were indeed subordinate to his sovereign will.”[[27]](#footnote-27) Pianists of today can learn from Liszt’s performance style to determine how they want to use their body in performances. Knowing how involved his body was in his performance supports the idea that one can only fully experience a musical performance when given the opportunity to see the performance live and encounter the visual cues. Pianists should also keep in mind that not everyone will enjoy the extra movements that might be used during a live performance. However, without the live experience, audience members are not able to discover how the music moves the pianist or reflect on the music being produced throughout the pianists' entire body.

**Claudio Arrau**

In a dissertation by a student at the University of Toronto, Chongvattanakij’s observes performance habits used when he performed Beethoven’s Op. 109, along with habits that he discovered while watching his senior recital video. He then compares his performance to other pianists playing Beethoven’s Piano Sonata, Op. 109, to see which bodily and musical gestures were like the other pianists and which ones were different. One pianist he studied playing this sonata includes Claudio Arrau. He is a great pianist to observe concerning body movement at the piano because as a teacher, he found it difficult to show his students specific musical concepts without also demonstrating the body movement involved in creating the unique sound.[[28]](#footnote-28) Arrau once stated that he felt often like a dancer when playing the piano. In the following paragraphs I will state which movements make him, along with other pianists, feel like a dancer.[[29]](#footnote-29)

In studying Arrau through his Beethoven Op. 109 performance, one can see the many movements he uses to help support his sound and emotion being portrayed. Horowitz has been quoted stating, “to see (Arrau) is to hear him.”[[30]](#footnote-30) According to Chongvattanakij’s observations, Arrau’s head seemed to “float” to the left along with raising the inner corners of his eyebrows at the beginning of the piece. The eyebrow motion might be supporting the dolce marking by Beethoven at the start of the piece. Arrau seems to make this same facial expression during other lyrical moments in the sonata. This facial expression can give off a sense of sadness supported by the melody and floating head movements.[[31]](#footnote-31) The idea of floating body parts continues into his right hand. This floating right hand is used to indicate a breath mark that Arrau had written in his music.[[32]](#footnote-32) Pianists can learn physical gestures from Arrau such as the floating hand to signify a breath in music. Without the physical gesture supporting the idea of a slight breath or break in music, audience members may not be aware of the composer's intentions.

Arrau continues his movement from his face into his arms as he performs Beethoven’s sonata. He and many other professional pianists utilize the idea of wringing a note through imitating the bebung movement.[[33]](#footnote-33) This movement is a type of vibrato that was historically used on the Clavichord and is similar to the vibrato produced on a violin, except it is produced by creating varying pressures from the arm weight onto a key on the Clavichord. Along with the wringing movement, Arrau often nods his head. In one particular place, he nods his head twice while Chongvattanakij only nods his head once.[[34]](#footnote-34) Throughout his performance, he also “flicks” his head as if he were emphasizing certain notes throughout his entire body. These flicks give the audience a clear visual cue to signify the importance of the notes he is emphasizing. While both performances were most likely deemed successful, the two pianists played slightly differently. This is part of the rewarding aspect of watching a performance live versus an audio recording. All pianists will engage with their audience in different ways in order to present their music accurately. However, the level at which audience members will engage and appreciate the pianist may vary based on the visual cues given. Arrau believes that an inactive hand should remain in contact with the piano. He states, “People watch you, and [when] you lift your hand, they do not feel the connection.”[[35]](#footnote-35) Therefore, pianists cannot only think about the way they personally connect to the music, but how their audience will connect to the music based on their performance.

One of the most important visual cues that Arrau gives in his performance includes wringing his arms up and down as he holds a diminished seventh chord. Chongvattanakij states, “While this gesture does not produce any audible effect, it certainly succeeds in grabbing my attention... Arrau is probably conveying to the audience that something momentous is about to happen.”[[36]](#footnote-36) This movement seems to mainly prepare the audience (and himself) for what is to come and is not necessarily for a better quality of sound since the notes have already been depressed before he begins giving the wringing arm movement. While body movement can prepare the audience for what is to come, it can also physically represent what the audience is hearing. In measure 81, Arrau allows his body to droop down and his facial expression “conveys the anguish of someone weeping.”[[37]](#footnote-37) Whether one is listening to Arrau perform, or is purely watching his visual cues, they would be able to interpret the mood he is setting through his saddened facial expression.

Through the use of floating wrist motions, head flicks, arm movements, and excited as well as saddened facial expressions, one can assume the mood Arrau is setting, with or without audio. These movements will guide listeners through how they should experience the live music but must appear natural for the observers to truly be able to interpret what the pianist is trying to convey. Therefore, pianists should also practice visual cues, such as the ones Arrau used, to help intrigue their audience.

**Daniel Barenboim**

Barenboim has a similar viewpoint as Arrau when it comes to the correlation of body movement and control. According to Chongvattanakij, “Barenboim believes that a unity of body and mind is necessary for achieving naturalness in piano playing.”[[38]](#footnote-38) Barenboim begins body movement in his performance before even playing the first note. He begins his performance with circular motions in his upper body. This shows that he and most likely other pianists, begin playing before their first note is even depressed.[[39]](#footnote-39) Barenboim’s circular motions are eventually interrupted by a left shoulder jerk that that accompanies the arrival point after a large crescendo.[[40]](#footnote-40) This jerk not only signifies the arrival point for Barenboim but also gives the audience a visual cue for the arrival they have just experienced with Barenboim. Without this jerk, audience members may not recognize the significance of the arrival point and abrupt ending to the upper body circular motions.

In contrast to Barenboim’s shoulder jerk, he also uses fluid movements to accompany his playing. He prepares one of Beethoven’s subito piano markings by floating his right hand upward. According to Chongvattanakij, this movement helps him “measure the extra time required for the abrupt dynamic contrast.”[[41]](#footnote-41) However, it also gives the audience visual support while listening to the quick dynamic contrast. Along with shoulder and hand movements, Barenboim also uses his head to convey the “authoritative novelty” of the arrival of D major. During the rise to the D major progression, Barenboim “presses his head downward while tensing his facial muscles.”[[42]](#footnote-42) Without the assistance from Barenboim’s facial expression and head movement, audience members (especially nonmusical members) may not understand the novelty and importance of the D major arrival point.

In one section of Op. 109, Arrau consistently “flicks” his head. However, Barenboim allows his body to be a larger part of this musical experience by pressing his entire body forward and following these movements with “clockwise revolutions.” These revolutions are also supported through Barenboim stomping his left foot at the beginning of his second and third loop.[[43]](#footnote-43) He uses his feet again at the beginning of the second movement by spreading them apart. Chongvattanakij states, “...his feet spread apart, giving me the impression that he has inadvertently run into a thick wall of massive sound.”[[44]](#footnote-44) While particular audience members may not relate this movement to the massive sound being produced, they will most likely notice his feet spreading apart and enjoy watching his entire body assist in producing sound rather than having little to observe while listening to his performance.

Barenboim continues to use his entire body, including his eyelids to support his musicality being expressed. Chords played throughout the sonata are played with an “expression of sadness, as conveyed by the raised inner corners of the eyebrows, drooping eyelids with the eyes looking downward, and the lip corners pulled down.”[[45]](#footnote-45) Like Arrau’s performance, these facial expressions allow the listener to relate to the pianist in a different way than purely listening to music. Not everyone knows how to play Beethoven’s Op. 109, but everyone can relate to the emotions being conveyed through Barenboim's and Arrau’s facial expressions. These visual cues help guide the audience in discovering how they should perceive each part of the piece, musically and emotionally. Without the support of the facial expressions it may seems like pianists are not invested in the music they are playing.

**Conclusion**

Visual cues not only support a live performance, but also influence how audience members perceive the music they are hearing. Through body movements and facial expressions audience members can interpret the music being played and better connect with the pianist. Through determining the specific visual cues given by professional pianists such as Franz Liszt, Claudio Arrau and Daniel Barenboim, pianists can determine how to enhance their performance and engage with their audience better. While some may argue that visual cues do not affect a live performance, I do not find this to be true due to the vast amount of live performances and road tours still used by musicians of all types. While I have studied specific visual cues used by pianists of the past, I would like to investigate how visual cues given from musicians of different genres and instrumentalists effects their audience. For instance, do pianists and guitarists use the same visual cues? No matter the type of bodily movement or facial expressions used, audience members will better understand pianists if they can relate to them through other avenues than purely listening.

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