

The development of the ability of audiation in listening to and performing music¹

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The term "audiation" is a neologism which refers to the ability to hear and comprehend music in our minds when the sound is not physically present.² The music may not be present when our auditory perception of it has just finished or it may have occurred in the past or when we predict sounds that have yet to be played while listening. It may not be present when we read a score in our head or when we improvise or write music.

We can draw an analogy with the concept of thought. As we listen to speech, apart from perceiving the sounds of words on an auditory level giving them meaning, we also retain in our memory those we have already heard in order to maintain the sense of the discourse and at the same time we make predictions regarding what will follow. Therefore our understanding of what we hear is not dependent on the sounds of words that are "physically present" at the moment they are produced or read, but rather on the mental processes which connect what is being said with what we have previously heard.

¹ This text is a shorter version of my article *L'apprendimento musicale in età prescolare: il concetto di audiation nella Music Learning Theory di Edwin Gordon* in Nuzzaci A., Pagannone G. (a cura di) *Musica ricerca e didattica*, Pensa Multimedia, Lecce, 2008: 203-224.

² The term audiation appears for the first time in GORDON E. E., *Learning Sequence and Patterns in Music*, Chicago, GIA, 1976. The need to create a neologism comes from the fact that the complex mental process described by the term had no existing word that corresponded to its exact meaning. Before coining the word "audiation" Gordon described the concept as «Hinged mosaic relationships linked to networks of comparative pattern structures» GORDON E. E., "Awaking the World through Audiation" cit., p. 4.

A similar process occurs when we listen, perform, improvise read or write a piece of music. We audiate the sounds only after having perceived them on an auditory level: "In aural perception we are dealing with immediate sound events In audiation, however we are dealing with delayed musical events".³

Audiation makes it possible to organise sounds we have heard, into a musically significant sequence and at the same time to mentally anticipate those that will follow allowing us to listen to or play music with understanding. We can therefore affirm along with the author that "sound itself is not music. Sound becomes music only through audiation, when as with language, you translate sounds in your mind and give them meaning".⁴

Before analysing the concept of audiation in greater depth we can attempt to define it with a simple example. "Let's imagine for one moment that we are present at a jazz concert. A trio made up of a piano, bass and drums are playing the well-known piece Summertime. While the melody is being played the public smiles and everyone follows the rhythm, moving their bodies indicating that they are following the music. Immediately afterwards however, when the trio begin to improvise the number of listeners who are smiling and appear to be following seems to be far fewer. To be able to follow improvisations on a well known theme without losing the musical thread requires possessing the ability to organise the sounds into a sequence which maintains the meaning".⁵

This example helps us to understand that audiation is an indispensable prerequisite for musical improvisation (amongst others).

Nowadays improvisation is limited to certain musical genres whereas it was extremely widespread. It requires the musician to be able to mentally assimilate and elaborate the piece on which the improvisation is based and so to return to our definition "to hear and comprehend in our minds music that is not physically present"⁶. The skill of audiation is not only fundamental in improvisation but also when listening to or playing music written with a degree of complexity. That this ability is generally so rarely developed in our society can be seen from the fact

³ GORDON E. E., *Learning Sequences in Music* cit., p. 4.

⁴ Ivi, p. 5.

⁵ APOSTOLI A., GORDON E. E., *Ascolta con lui, canta per lui*, Milano, Curci, 2005, p. 14.

⁶ The same is true for the understanding of any theme with variations such as Bach's Goldberg or the Symphonic Metamorphoses by Hindemith.

that the music composed with the aim of selling large quantities of discs, “commercial music” or “consumer music” usually has a simple syntax that does not require the function of audition to be understood and appreciated. Market forces based on the requirements of quantity rather than quality mean that whoever wants to sell a large quantity of discs is forced to ensure that the musical product is simple and repetitive and that it does not require audition to be enjoyed and remembered.

Listening to a complex piece of music, such as a symphony from the romantic period, requires us to use audition not only because of the syntactic complexity of the piece but for the length of time involved in the listening. In fact it is in the temporal dimension that a musical work of art takes on its form. The ability to keep what you are listening to in your mind for the duration of the piece and elaborate on it in order to understand the entire piece in its temporal flow becomes indispensable if we wish to really understand and appreciate it. Music that presents a motive that is repeated continually does not require this skill.



Before describing the actual process of audition in greater detail we should try to widen our understanding of it through comparison with other similar concepts whilst at the same time clarifying the reasons that lead Gordon to create a neologism. The majority of terms which describe the mental activity connected to the act of listening to or playing music, improvising and composing refer to the concept of “image” and thus the sense of vision rather than that of hearing. This has given us the concepts of “interior audition based on the imagination” (Willems, 1946),⁷ and that of “internal representation of music” (Sloboda 1985)⁸ or “mental framework” (Delfrati 1988).⁹ Other terms that refer on the other hand to the auditory sense such as “interior ear” (Jacques-Dalcroze

⁷ WILLEMS E., *L'oreille musicale*, vol. II, Genève. Pro Musica, 1946 (trad. it. *L'orecchio musicale*, a cura di G. Vianello, vol. II, Padova, Zanibon, 1977 (ristampa 2006), pp. 87-90.

⁸ SLOBODA J. H., *The Musical Mind: The Cognitive Psychology of Music*, Oxford, Clarendon Press, 1985 (trad. it. *La mente musicale*, Bologna, Il Mulino, 1988).

⁹ DELFRATI C., “L'insegnamento del solfeggio”, in R. CASELLA (a cura di), *Avvio alla pratica strumentale*, Milano, Ricordi, 1988, pp. 85-99.

1898-1919)¹⁰ do not really describe the complicated circular process involved with the concept of audiation, in particular the aspect of understanding what has been heard internally.

We also have to make another important distinction between audiation, internal imitation, and memorisation. The first aspect to attract our attention, once again regards understanding. In fact audiation is “hearing internally and comprehending” whereas the fact of having referred a series of previously memorised sounds to the mind (internal memorisation) does not automatically contemplate the fact of having understood the meaning and syntax of the music. Furthermore imitation and memorisation can be distinguished from audiation by the fact that “audiation is excitingly circular, back and forth motion, and not like imitation and memorization which are boringly linear”.¹¹

The circularity of the process can perhaps be understood better if we remember that “when you are listening to music you are giving meaning to what you just heard by recalling what you have heard on earlier occasions. At the same time, you are anticipating or predicting what you will be hearing next [...] you are summarizing and generalizing from the specific music patterns you have just heard as a way to anticipate or predict what will follow. Every action becomes an interaction. What you are audiating depends on what you have already audiated.”¹² This ability is acquired through a sequential process that lasts in time, it develops, progresses and becomes continuously more complex thanks to the previous occasions in which it has been used. It is interesting to note how other definitions of concepts similar to audiation come from personalities from the music world who are not directly concerned with music education. Of particular interest are some concepts expressed by Robert Schumann in his “Musical Rules at Home and in Life”

[44] Was heißt denn aber musikalisch sein? [...] Du bist es aber, wenn du bei einem

¹⁰ JACQUES-DALCROZE É., *Il ritmo, la musica e l'educazione*, a cura di Louisa Di Segni-Jaffè, Torino, EDT, 2008, p. 89.

¹¹ GORDON E. E., *Learning Sequences in Music* cit., p. 6.

¹² Ivi, p. 5.

neuen Stück das, was kommt, ohngefähr ahnest, bei einem dir bekannten auswendig weißt, – mit einem Worte, wenn du Musik nicht allein in den Fingern, sondern auch im Kopf und Herzen hast.

[But what does it mean to be musical? You show that you are musical if when you play a new piece you manage to anticipate what is coming ahead, or if you remember what will happen afterwards in a piece you already know, in a word, when you not only have music in your fingers but also in your head and heart]

[55] Suchst du dir am Clavier kleine Melodieen zusammen, so ist das wohl hübsch; kommen sie dir aber einmal von selbst, nicht am Clavier, dann freue dich noch mehr, dann regt sich in dir der innere Tonsinn. – Die Finger müssen machen, was der Kopf will, nicht umgekehrt.

[It will be a nice thing if you manage to build a simple melody at the piano, but you should be even happier if one day these melodies come you alone, without the piano, because this means that the inner sense of music is growing inside you. The fingers must do what the head wills, not the opposite].¹³

There are various concepts present in this writing that recall aspects of the complex process that Gordon has described with the word audiation. In particular the concept of “innerer Tonsinn”, that *inner sense of music* which seems to anticipate so many future attempts to describe what we nowadays know as audiation, without falling back on definitions that refer to auditory perception or the imagination (in the strict sense of the word). In fact in German the noun ‘Sinn’ is the equivalent of “sense” in the physio-psychological “sense organ”, “sensorial perception” as well as logical conceptual “sense” and “meaning”.


We will not dwell on the other concepts present in the two extracts that are relevant to the topic of the current paragraph : the ability that Schumann indicates as a fundamental requirements for “being musical” and the skill of being

¹³ SCHUMANN R., *Musikalische Haus- und Lebensregeln: Faksimile mit Übertragung und Textabdruck*, a cura di Gerd Nauhaus, Sinzig, Studio, 2002 (“Schumann-Studien,2) pp.53 e 55.

able to anticipate what is coming ahead in a new piece and of "having music in the head".

We may find it rather curious that these fundamental aspects of learning music, which were published in 1850 by one of the most important composers in the history of music, have been so little present in the programmes and teaching methods in Conservatories of Music.

Before concluding this paragraph I would like to focus our attention on the fact that the word "audiation" is also used by Gordon to indicate a product that derives from the process he describes. "Consider language, speech, and thought. Language is the result of the need to communicate. Speech is the way we communicate. Thought is what we have communicated. Music, performance, and audiation have parallel meanings. Music is the result of the need to communicate. Performance is how this communication takes place. Audiation is what is communicated".¹⁴

With this step the word audiation which up to now has indicated a process, a mental function and an ability, indicates an product, an object and a content . In this sense the analogy with the concept of thought, which also describes both a process and an product, is clear. 

To round off we shall examine the various areas in which audiation may occur and the modalities through which the processes involved take place in the mind.

Diverse types of audiation can occur¹⁵ corresponding to many different situations of listening , performing, reading, writing and improvising music. For example when:

- Listening to familiar or unfamiliar music where it is given meaning through the mental retention of sounds that have already been heard; hearing sounds that are physically present while contemporarily predicting those to come;
- Reading familiar or unfamiliar music and giving musical meaning to the written notation whose sounds are obviously not present;
- Writing music from dictation when we associate the musically signified with the signifiers that are written and this involves a time lapse where the writing

¹⁴ GORDON E. E., *Learning Sequences in Music* cit., p. 6.

¹⁵ Ivi, pp. 13-17.

- is deferred in relation to actually hearing the sounds;
- Recalling familiar music from memory in as much as it is not physically present in the environment;
- Writing familiar patterns in familiar music that we organize and recall through audiation;
- Creating or improvising music using both familiar and unfamiliar patterns in silence or during actual performance;
- Reading both familiar and unfamiliar patterns and at the same time creating or improvising new, unfamiliar, music in silence or during actual performance;
- Writing familiar or unfamiliar patterns and at the same time creating or improvising unfamiliar music
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The process of audiation is explained by the author in sequential and accumulative stages¹⁶ which, as I have already suggested follow one another in a continuous and circular manner when we listen to and perform music:

- Momentary retention of the sounds in the mind;
- Internal imitation, audiation of tonal patterns and rhythm patterns present in the piece, recognizing and identifying a tonal centre and macrobeats;
- Establishing objective and subjective tonality and metre;¹⁷
- Retaining tonal and rhythmic patterns in audiation that have been organised mentally in a sequence and thereby in musical phrases;
- Recalling tonal patterns and rhythm patterns organized and audiated in other pieces of music which have been heard before.
- Anticipating and predicting tonal patterns and rhythm patterns.

To conclude, I would like to underline the importance of audiation for those who like to listen to music with understanding and appreciation, as well for musicians in

¹⁶ *Ivi*, pp. 18-23.

¹⁷ By objective tonality and metre the author simply means 'on that where there is agreement (GORDON E. E., *Learning Sequences in Music* cit., p. 377).

as much as it allows for the performance of music with understanding and expression, and finally for those who musicians in the field of improvisation for whom the faculty of audiation is a fundamental prerequisite.