

Aspects of the correlation between empathy and performance in music

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Abstract: *The present study is interdisciplinary, mixing music and psychology, and representing an attempt to highlight some behavioural aspects of the musician in his pedagogical act. The hypothesis of our study is the expression and highlighting of empathy in the personality of the instrument teacher and its correlation to the student's educational performance. The involvement and quality of the relationship, and the influence of the instrument teacher in the educational act are also determined by empathy. This is a psychic ability, to be close to others, perceiving their emotions, without distorting them or yours own. In the educational act, the teacher is the exponent of ethical, cultural, aesthetic values, transmitted at cognitive, emotional, volitional level. To a large extent, the student is the mirror of the teacher, an aspect constantly highlighted, through empathy, a mental process with real benefits, as long as the student becomes aware of the entire process. Our study emphasizes the complex educational act that is built on the chain between mirror neurons, emotions and emotional intelligence through the binomial of intrapersonal and interpersonal intelligences.*

Key-words: *empathy, music, psychology, emotions, mirror neurons, emotional intelligence.*

1. Introduction

Music is an artistic, scientific and spiritual dimension. Aesthetics, through the various facets of beauty, applied to creation and interpretation, define it as art. Mathematics reflected in the calculations arising from each element of sound, the algebra of their joining, the geometry of musical constructions, the theory of numbers that support harmony, the counterpoint of genres, the rigour of research methods in the field, confers it the title of musical science. And the ineffable detached from the two dimensions, through creation and interpretation, reunite materiality with immateriality, and attributes to it, the quality of being a spiritual dimension.

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In the complexity of the artistic didactic act, music is shared from teacher to student cognitively – theoretically-notionally, emotionally – through the interpretative dimension, and through motivational psychological procedures – offering its support in achieving artistic goals. In this context, the teacher is the exponent of ethical, cultural, moral, aesthetic values. The condition for the teacher to be able to share his knowledge and for the student to accept the flow of information is the state of empathy that is created between the two. “Didactic empathy is consumed, mainly, at the level of permanent interaction between teacher and student, the empathized model being perceived directly, and the psychological transposition of the teacher in the internal frame of reference of the student, simulating a convention” (Stroe 1997, 148).

2. Concepts

To support our study, we have considered several reference concepts, which give consistency to the research.

Emotions are the highlight of the fact that the lived reality is life. The etymology of the word, *emotionis*, which comes from Latin, refers to *impulse*. Professor and psychologist Mielu Zlate states that “Psychic processes that are generated by the relationships between object and subject in the form of feelings, sometimes attitudinal, are called affective processes” (Zlate 2009, 200). For example, life means experiencing a rainbow of emotions.

Haward Gardner implemented and presented, in 1983, through his work *Frames of Mind. The Theory of Multiple Intelligences*, the concept of multiple intelligences. **Intrapersonal intelligence** is the ability of an individual to orient towards his inner side, to know, master, correct mental patterns, providing for himself an existential psychic comfort. The construct presupposes the construction of one's own existential model, vital support that ensures one's self-awareness. **Interpersonal intelligence** is a complementary ability of the first, and denotes the ability to make social connections through verbal and non-verbal communication, to empathize with groups of people.

Emotional intelligence is a concept implemented (1990) by psychologists John Mayer (University of New Hampshire) and Peter Salovey (Yale), woven on the dense fabric of emotions. They are followed, with an improved concept (1995) from the perspective of both psychology and neuroscience, by psychologist Daniel Goleman. He defines emotional intelligence as “the ability to be able to motivate and persevere against frustrations; to control one's impulses and postpone one's satisfactions; to adjust moods and prevent troubles from darkening the thinking; to be persistent and to hope” (Goleman 2008, 62).

The word **empathy** has its origins in the Greek language, *empathēia*, and has the meaning of compassion, of being in solidarity with the self of another. Empathy is a complex concept in the morphological structure of which Marcus Stroe distinguishes four attributes: psychic phenomenon, psychic process, psychic product, psychic attribute (Stroe 1997, 24). Daniel Goleman states that empathy is “understanding the feelings of others and learning their perspective, as well as respecting the differences in the way people feel about certain things” (Goleman 2008, 338). Cyndi Dale defines the concept of empathy as “the ability to share and understand the emotions and needs of others as if they were our own” (Dale 2016, 23). Marcus Stroe considers that “the nodal point of the concept of empathy is the conduct of reliving the states, thoughts, actions of the other, through a process of substitutive transposition into the psychology of the partner” (Stroe 1997, 17). Empathy is a multidimensional construct, meeting, according to Marcus Stroe, four qualities: psychic phenomenon, psychic product, psychic process, component of personality. It designates a special ability to be close to others, perceiving their emotions, without distorting them or yours own.

3. Methodology

3.1. Hypothesis

The hypothesis of our study is the expression and highlighting of empathy in the personality of the instrument teacher and the correlation with the student's educational performance. Professor and psychologist Marcus Stroe emphasizes the imperative need of this psychic ability in building an act of real performance; “Empathy takes on the status of psychic quality, becoming the ability to successfully achieve, at the above-average level, an activity that involves interpersonal relationships” (Stroe 1997, 27). The theme proposed and studied was built around the comprehension of the relevance of the psychological phenomenon of empathy in the educational act, this time, the relationship of empathy from teacher to student.

3.2. Tools

In support of the hypothesis according to which empathy favours and supports the accomplishment of the educational act, achieving the goal in the relationship between the instrument teacher and his students, we have resorted to the QMEE Empathy Scale, Mehrabian-Epstein. The scale that checks the degree of empathy has got 33 questions. We applied the questionnaire to three important and appreciated concert pianists and teachers from Constanța, PhD. associate

professor, Gabriela Oprea, "Ovidius" University of Constanța, PhD. lecturer Andreea Bratu, "Ovidius" University of Constanța, PhD. aspirant Sabina Oprea, *Gheorghe Dima* Academy of Music, Cluj-Napoca. The rating of their answers verifies the hypothesis of the study, falling within the limits $-66 + 99 =$ good empathy. The questionnaire is attached at the end of the study.

4. Interpretation of data

The high degree of empathy of the three teachers confirms the laudatory result of their pupils and students, in class, in national and international competitions. It turns out that through the presence and awareness of empathy, through mirroring, we feel and understand the emotions and behaviour of another person, so as to increase the efficiency and performance in the musical teaching act.

Music is an artistic, scientific and spiritual dimension. Aesthetics, through the various facets of beauty, applied to creation and interpretation, define it as art. Mathematics reflected in the calculations arising from each element of sound, the algebra of their joining, the geometry of musical constructions, the theory of numbers that support harmony, the counterpoint of genres, the rigour of research methods in the field, confers it the title of musical science. And the ineffable detached from the two dimensions, through creation and interpretation, reunite materiality with immateriality and attributes to it, the quality of being a spiritual dimension. The three qualities of music: art, science and spiritual dimension, are its manifestations, from different perspectives, being always polished, through and with the help of emotions. They promote it at the rank of an art through which people prove their quality of social beings, through interaction and transfer of emotions (Rucsanda, Cazan, Truța 2018).

Culture, a word that comes from Latin, is a concept that belongs to the Roman philosopher and orator Marcus Tullio Cicero, and means to cultivate, to take care of. Cultivating ethical, aesthetic values, rules and assets that mirror them, can be a definition of culture. Education is a consequence of expressing the characteristics of culture, it is a level of life that allows the assimilation and exchange of information, in order to prepare, engage and participate in the evolution of mankind. Music is an art that participates intensely and transformatively in education, and this is why, we can call it a social art. This component ensures the relationship through communication, through the permanent and dynamic exchange of notions and emotions. "Emotions determine our quality of life. They are manifested in any close relationships, at work, between friends, family, and in the most intimate relationships" (Ekman 2003, 13).

Thus, the instrumental musical education is focused on the direct and participatory relationship between the teacher, who often has the role of mentor, and the student (generically called, regardless of his level of education), apprentice. The elements that connect the two are their passion for music and their deep sensitivity, sometimes visible, sometimes worn discreetly. In fact, the intimate, psychological spring of this beautiful and beneficial relationship is the growth of oneself, of each participant. For art must be understood "as a means of communication of the subconscious" (Goleman 208, 269).

The instrument teacher (I, generously, express the possibility to include all instruments, from the human voice to the largest instrument built by man, the large concert organ) is always the polisher of his student's skills. Much of this process of becoming a young instrumentalist is due to the teacher who brings along his educational skills, communication, emotional intelligence. Thus, when a teacher is involved in the educational path of a student, especially on a path of performance, two realities are configured: that of educating the student and, at the same time, of educating himself, in the sense of permanent transfiguration. In my research, I highlight some means by which an empathic connection is established between an instrument teacher and his student.

About the neurobiological foundation of empathy: mirror neurons. We consider that the first step in supporting our hypothesis is to highlight the research of neurosciences, by discovering an essential element of physiology, not only human, which allows the expression of empathy, mirror neurons. In the ninth decade of the last century, the twentieth, the neurologist Giacomo Rizzolatti, together with his team from the University of Parma, discovered, after many years of research, a type of neurons called mirror neurons. Their location and role were studied by the entire team, and further research in the field of neuroscience confirmed the following: "especially Broca's area, in mediating the sensory-motor transformations underlying imitation is already well established" (Molnar-Szakacs and Overy 2010, 238). Through these mirror neurons, children and young people quickly learn behaviours and rules from people close to them, but also from the group that can have a great influence. Thus, just as the parents of young people are a permanent source of lessons and attitudes, later, the teacher takes over a part of this mission, participating actively in their education. "Mirror neurons play another important role in the uniqueness of the human condition: they allow us to imitate" (Ramachandran 2011, 206). The mechanism that intervenes in the teacher-student relationship is the same, mirroring the knowledge, behaviours, beliefs of adults in those of young people. Advanced research in neuroscience explains that mirror neurons are stimulated through emotions, implicitly through the action of neurotransmitters, which activate and shape this ability, called empathy (Molnar-Szakacs and Overy 2006, 237).

Researchers have explicitly highlighted this relationship between the psychic process of empathy and mirror neurons, which “allows us to see the world from someone else's *visual perspective*” (Ramachandran 2011, 200).

Even from the choice of the repertoire, from the consensual discussions about composers and their creations, the teacher is suitable to show inclination towards some desiderata of the student. Some of the eminent psychologists, Jean Piaget, Jean Guillaumin believe that experiencing a certain situation, living it and becoming aware of it, allows you to understand and accept it. Thus, empathy is materialized through the two psychic mechanisms, **introjection and projection**. For example, the teacher can assimilate the student's opinion as if it were his own, and then advance towards the projection (projecting his own opinions on the other, such as technical skills, interpretation concepts, emotional states). It is about the experiences of the teacher during his studies, he, unconsciously mirroring them in the current relationship. The projection may be a mechanism encountered in younger teachers, but over time introjection balances and corrects, being a mechanism of assimilation, therefore of growth of the ego.

The performance of the instrumentalist student is certainly conditioned by the academic intelligence of the teacher (IQ), but especially by his **emotional intelligence**. Musical performance, in the sense of a true and expressive interpretation, in the consensus of a revelation of adequate stylistics of the repertoire, of a true ethos, can be achieved only if there is a bridge between the two participants, through trust and complex affectivity of expressing superior emotions. The emotional intelligence of the teacher is given by his balanced presence in the knowledge of the aspects of technique and interpretation, correlated with other fulfilling disciplines of the instrumental act. The empathic teacher correlates the altitude of his knowledge with a permanent training of psychological support, motivation, appreciation towards the student, even when there are unfulfilled stages throughout his activity, non-performing interpretations. Daniel Goleman believes that the emotional intelligence of the individual reveals “the ability to be able to motivate and persevere against frustrations; to suppress impulses and to postpone satisfactions; to adjust moods and to prevent troubles from darkening the thinking; to be persistent and to hope” (Goleman 2008, 137).

Over time, experiencing achievements and failures, the teacher polishes his personality, reaching his psychological and also social growth. His vocational growth implies the **acceptance** of human diversity, of the plurality of personalities to which he relates. David R. Hawkins, the doctor and researcher who established a logarithmic scale of consciousness, between 1 and 1000, considers that “At the level of Acceptance, we are no longer polarized by conflicts or oppositions; we understand that other people have the same rights as us and we respect that,

because we value fairness" (Hawkins 2007, 184).

Verbal, non-verbal and paraverbal communication. Psychologist Mielu Zlate notes about communication that it needs to be "understood in its broadest sense, as a transactional act, inevitable in interactive situations, becoming essential, fundamental for both personal and social life of the individual" (Zlate 2009, 2013). Language, the way in which the student communicates, is also amplified by the influence of the cultural, social, psychological dimension in which this communication takes place. Studies by psychologists A. Mehrabian and M. Weimer (1967. *Decoding of inconsistent communications. Journal of Personality and Social Psychology*) show that the highest percentage in interpersonal communication is proved by non-verbal communication 55%, 38% paraverbal communication and only 7 % verbal communication. In music, communication has a predominantly emotional substrate that supports and explains the power of empathy. Research draws attention on the emotional function, which falls within the scope of our artistic-musical field: "The emotional function of communication consists in highlighting the internal states of the sender. Interjections, some verbal forms (conditional tense), epithets and a whole variety of stylistic means through which we express our soul reactions in contact with a certain reality, have a very high emotional value" (Tran and Stanciugelu 2001, 75).

The verbal language is direct, loaded with message information, adequate to the communication that builds and supports empathy: "the speaker must be open to all interlocutors, trying to understand their situation, the positions from which they adopt certain points of views, their attitudes, showing kindness and friendship at the same time" (Tran and Stanciugelu 2001, 86). An appropriate and supportive verbal language of the teacher for the student has qualities such as clarity, sincerity, diction.

The paraverbal language is in direct fusion with the verbal language, like a polyphony in two voices. They manifest simultaneously. The verbal language transmits the information linguistically, and the paraverbal language supports its decoding, expressing the symbolic load. Thus, a hypostasis that facilitates empathy between the two people is the **voice**. It carries significant signals. The voice supports social relations, contributes to the human aspect of socialization. Also, in and through music, through an aesthetic expression, the voice elevates the human consciousness. According to the experience and science of the soprano Sivia Voinea, "the voice is a series of vibrations that propagate from the speaker (transmitter) to the listener always having the same sound path" (Voinea 2002, 42). As far as the emotions transmitted are concerned, during the conversation, the teacher's voice fluctuates at the level of four parameters of sound, pitch, intensity, rhythm and timbre, influencing and impressing the interlocutor. The vibrational

structure of the voice, which is supported by the emotion of a transmitted message, vibrates consonantly or dissonantly in the ear and psyche of the student, in fact of both, making, thus empathy possible. "Emotion, especially how it is communicated by the face, body and voice is an active motor process. Emotion and action are interconnected on several levels, and this motor-affective coupling can provide the neural basis of empathy" (Molnar-Szakacs and Overy 2006, 238).

The non-verbal language is directly correlated with empathy, the two parts proving a strong interaction, by decoding the meaning and symbolism of verbal language. "It has been suggested that the perception of emotions in music may arise in part from its relationship to physical posture and gesture" (Molnar-Szakacs and Overy 2006, 238). Communicating through facial expressions, looks, body posture, gestures, the expression of emotions becomes more fluid and plastic. "Emotions mean nonverbal" (Goleman 2008, 139).

5. Conclusions

Music is no longer just art, science, spirituality. It is a field where, out of passion for the ineffable conjunctions between sounds, people try and learn to relate, to know themselves and others. As far as working in the classroom, the teacher goes through natural steps in different stages, emphasizing that working with the inner side is the most important and challenging aspect. Following the constructive relationship, teacher-student, and the beneficent process, self-knowledge, it is possible to develop empathy as a multidimensional construct. "Empathy is constituted and organized, ontogenetically, as a common personality trait, being able to acquire, from case to case, aptitude-type valences" (Stroe 1997, 9). Thus, in order to have a good relationship between teacher and student, empathy is manifested, within the limit of sensitivity genetically inherited, but it also develops, exercises and acquires awareness. "Therefore, empathy is the conscious or unconscious, apparent or inapparent transposition of oneself into the psychology of another, nevertheless keeping present the consciousness of one's own identity" (Stroe 1997, 35). In the musical field, the need and consciousness to create, implicitly to interpret past and present creations, is supported by the uninterrupted connection of empathy. Teachers empathize with students, conductors with instrumentalists, performers among themselves in choral, instrumental or vocal-symphonic ensembles.

Empathy is one of the essential psychic processes that builds a constructive relationship between teacher and student, it is "the talent to know how others feel" (Goleman 2008, 137). But the complete educational act is built on the dimension of

academic intelligence, of emotional intelligence, which imply the binomial of intrapersonal and interpersonal intelligences, of verbal, non-verbal and paraverbal communication. "A didactic competence involves the interaction between the complete average interpersonal cognitive style and the empathic style as an integrative structure able to optimize the teacher-student relationship" (Stroe 1997, 122).

At the end of the study, I highlight some necessary features in creating an empathic connection between teacher and student: self-awareness, tact, gentleness, acceptance, receptivity, generosity, will, moral and cultural values. "Empathy requires enough calm and receptivity, so that the subtle signals of the other's feelings can be received and imitated by one's own emotional brain" (Goleman 2008, 147).

QMEE Scale, Mehrabian-Epstein

1. It saddens me to see a stranger sitting alone in a group.
2. People show too much emotion towards animals.
3. I find the manifestations of affection in public out of place.
4. I can't stand people who keep complaining about their fate when they are unhappy.
5. I get nervous if I feel others around me unhappy.
6. I find it silly that people cry of happiness.
7. I live the problems of some friends.
8. The words of a love song can impress me deeply.
9. I lose my temper when I have to give bad news to someone.
10. The people around me have a great influence on my moods.
11. The strangers I met seemed cold and insensitive.
12. I would rather be myself than prepare others.
13. I can't relax (enjoy) because a friend is simply in a bad mood.
14. I like to watch when someone unpacks gifts.
15. Lonely people are unfriendly.
16. It troubles me to see people crying.
17. Certain songs make me feel happy.
18. I live the emotions in novels.
19. I am angry to see that someone is being treated badly.
20. I can stay calm even if those around me are worried.
21. When a friend starts talking about his problems, I try to change the subject.
22. The laughter of another doesn't necessarily make me laugh.
23. At the cinema, I'm amused that some people around me sometimes cry.
24. I can make decisions without hindering the feelings of others.
25. I can't feel good if those around me are sad.
26. It's hard for me to understand how certain things can upset people so much.

27. The suffering of an animal turns me upside down.
 28. I find it silly to be impressed by books or movies.
 29. I'm impressed when I see helpless old people.
 30. The sight of tears impresses me more than it makes me sympathetic.
 31. I find that I can stay cold despite the hustle and bustle around me.
 32. Young children cry for no reason.
- + 4 = always true
 + 3 = most of the times true
 + 2 = often true
 + 1 = sometimes true
 -4 = always untrue
 -3 = most of the times untrue
 -2 = often untrue
 -1 = sometimes untrue

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