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When does the formation of the musical personality begin?

Petrică-Eugen PREDOI[1]

Abstract: *Starting from the premise that the musical personality develops gradually, each stage having an integrative character, we consider that the first two stages of the evolution of the individual, prenatal and infantile, have a substantial role in terms of both the formation of the musical personality and its thorough understanding. The family is the first social microsystem in which the individual acquires feelings, skills, knowledge and personality traits. In conclusion, the social environment specific to the first two stages of the evolution of the individual, through its characteristics, has a substantial contribution in shaping the future musical personality, an aspect that confirms, without any possibility of denial, the importance of the quality of the educational process, informal or non-formal, ensured in this stage, especially by the family.*

Key-words: *family, environment, education, hearing, reactive listening, psycho-auditory settings, musical personality*

1. Introduction

By extending the concept of formativity – from the restricted educational sphere, to the comprehensive ontogenetic perspective –, we can say that the musical personality is a consequence of the continuous interaction between the individual and the formative factors, this taking place from the embryonic stage to the end of existence. The mind of the individual, through the senses, is in a continuous process of collecting and processing information – positive or negative, insignificant or complex, useful or useless –, which are going to mentally determine specific beliefs, attitudes and behaviors regarding what looks at the music.

The assimilation of everyday information, often involuntary, may seem unimportant, like a drop from the ocean. However, this huge accumulation of formative drops constitutes the essential condition for the development of the

[1] Colegiul Naţional „Anastasescu”, peterbrevis@yahoo.com

musical personality. Therefore, we consider it important to pay the necessary attention to aspects related both to the sensory evolution specific to the early stages of life, as well as to the incidence of audio or audiovisual information in the plane of the psychic functions and processes indispensable to human evolution: thinking, intelligence, memory, creativity, inventiveness and affectivity.

At the same time, certain collateral elements that condition the development of psychic components with a decisive role in defining the musical personality of the individual cannot be omitted. From this perspective we remember the spoken language, which represents much more than a means of communication and interaction through which the individual transmits or receives information. In fact, the spoken language opens the way to inventiveness and creativity, superior psychic activities that can not be lacking in the musical activities of any level.

Starting from the premise that the musical personality develops gradually, each stage having an integrative character - in the sense that „the new structure does not abolish the previous structure, on the contrary, it re-values and recodes everything that has accumulated in the previous stages" (Piaget and Inhelder 1970, 128) –, we consider that the first two stages of the evolution of the individual, prenatal and infantile, have a substantial role in terms of both the formation of the musical personality and its thorough understanding.

2. Prenatal (0 - 9 months)

The family is the first social microsystem in which the individual acquires feelings, skills, knowledge and personality traits, therefore, it plays an important role in the evolution of the individual, at least in this first stage of life. The whole existence of man is dominated by this social group, we all come from a family, we establish a family and, most of the times, we adopt the traditions, beliefs and attitudes of the family in which we were born.

Since pregnancy, the fetus can be considered not only a companion of the mother, but also a member of the family, feeling and reacting to stimuli more than we think. Until the early 1980s, the researchers believed that the fetus develops in a „hermetic space", without interacting with the interior environment and, implicitly, with the outside one.

Today, from the scientific point of view, it is demonstrated that the fetus is a multi-sensory being, whose senses develop and get into action in a predetermined order as follows: first the tactile sense, then the chemical one, that of balance, hearing and, finally, seeing. The early development of the fetal senses will facilitate the channeling of external stimuli to the central nervous system, a process that will

determine, on the one hand, the growth of neuron groups (synaptic connections), and on the other, the onset of cognition and training activities for the outside world.

In the 25th week of pregnancy, the fetus's ear is structurally complete, the mother's voice, due to the intensity level, being the one with which she becomes accustomed to in a short time. Research in this direction has shown that the small being has the ability to identify, without error, auditory stimuli such as the voice and the heartbeat. Thus, the fetus is able to distinguish and prefer the voice of its mother over the voice of another woman, the newborn calming in the presence of rhythmic sounds, similar to the sounds produced by the beats of the mother's heart, these having the capacity to induce familiarity and emotional comfort. This is why psychologists recommend that both parents, not just the mother, talk and sing to the baby even during pregnancy.

Researchers Peter Hepper and Sara Shahidullah from Queen's University in Belfast (Hepper; Shahidullah 1994), Ireland, have shown that reactive listening begins at 16 weeks, two months earlier than previous measurements showed. In a study that used 400 subjects, the researchers, through a speaker placed on the mother's abdomen, designed pure sound waves with frequencies between 100 and 3000 Hz. In this way, with the help of the ultrasound, they identified obvious behavioral reactions such as fetal mimicry, alteration of the pulse and metabolism, body movements, etc.

In 2001, two teams of researchers, Canadian and French, studied the effect produced by hearing the work Song of a Swing, by Johannes Brahms, by children born prematurely (Kisilevski; Hains; Jackuet; Granier-Deferre; Lecanuet 2004). It has been found that these children gain weight faster if, six times a day, in sequences of ten minutes, they hear the above work. Other studies show that listening to music with moderate speeds, appropriate intensities, non-aggressive rhythms and rhythms positively influences the fetus's mood and contributes to cognitive development. On the other hand, these findings reveal the complexity of hearing and, at the same time, support the idea that receptive hearing begins with the formation of the skin and the skeletal frame, the skin being a multi-receptor organ that takes over signals transmitted through vibrations.

This is why, in this universe dominated by sensations, the small being becomes fearful in the presence of loud noises. Therefore, her movements will always reflect the mother's state of calm or agitation, or of the environment in which she is, and a few days before she is born, immersed in the amniotic fluid, she will prepare intensely for the external life by exercising her exercises breathing, accompanied by a mimic that suggests trying the vocal chords.

In conclusion, the sound environment, specific to the first stage of the evolution of the individual, has a substantial contribution to the configuration of the main psychosomatic functions, or, going further with the argument, a good

part of the psycho-auditory settings with a decisive role in shaping the future musical personality realizes much earlier than we think.

3. Childhood (9 months - 3 years)

Immediately after birth, when the sensory and perceptual capacities are almost completed, the complex and direct interaction of the child with the external environment is triggered, an activity that facilitates the accumulation of primary level information about the world in which it is about to evolve. The newborn's auditory sense is almost as effective as an adult's. Defective reception and localization of high frequency sounds, practically the only hearing impairment of the child, being caused by the small size of the head and, implicitly, of the auditory conduit.

Research has shown that the hearing sensitivity of the newborn, as compared to an adult, is reduced by 15-20 dB for high frequency sounds. Regarding the ability of the child to locate the sounds, in fact to perceive the environment spatially, the experiments carried out on children between the ages of five and eight months have been completed in the affirmative. Thus, at sound stimuli with frequencies between 1000 and 3000 Hz, the child turns his head precisely locating the sound source after a few seconds.

Also, before the age of eight months, it was found that the child's attention increased when the mother's voice speaks the words with special intonations by exaggerated variation of the tone, unless the same words are used with the usual variation of tone. Regarding the reception and perception of sounds with rhythmic temporal variations, it has long been known that, from two months, the child can notice the rhythm.

In this evolutionary stage of the individual, also called „social pre-adaptation" (Ciofu 1989, 16), human communication, an easy way to exchange information, plays a decisive role and is realized in two variants: that of social communication, in which symbols are used learned during social interactions, and that of spontaneous communication, inherited biologically and using the signs as a means of communication.

In these conditions, the complex process of communication becomes the basis of learning, the relational complementarity between the two components, communication-learning, being found in the mother-child relationship. Therefore, in this unique situation, arising from the fact that the levels of competence of the two are so different, the mother, as a broadcaster, will have to demonstrate adaptive ability in formulating statements at the child's level of understanding.

Between the two types of inter-human communication, verbal and extraverbal, psychologists unanimously agree that the first variant represents for the child the main instrument for obtaining information about the surrounding

world. Thus, through speech, the transition from the external material action to the inner mental action is realized. This is how, under the influence of this substantial condition, the intellect, both functionally and especially evolutionarily, becomes dependent on the quality of the language, its eloquence.

The reputed psycho-pedagogue Ioan Nicola considers that „it is impossible to conceive the development of thinking, memory, imagination, affectivity, sociability and other psychic components of personality outside their correlation with language" (Nicola 2003, 89). Verbal communication, a function entirely specific to the human being that allows the expression of one's thoughts, desires or aspirations, is the obligatory preamble for the individual's passage to written communication, one of the most important achievements of mankind.

Regarding the origin of music, a hypothesis issued in the eighteenth century supports the possibility that the spoken language represents the starting point in the development of musical language, between the two being revealed certain cognitive and physiological similarities. One of the supporters of this theory is the Italian philosopher and historian Giambattista Vico. In his suggestive work called Scienza Nuova (New Science) (Vico 1972, 118), he states that mankind cycle through three „ages" (stages) and, together with them, three specific variants of language: 1) the age of the gods – corresponding to the first stage in human history; 2) the age of heroes – associated with the first forms of social organization when the spoken language, becoming articulated, was loaded with symbols; 3) the age of the people or the reason – when the spoken communication was based on conventionally established words.

Moreover, Vico thinks that the founders of the heathen nations reached their first languages by singing, an argument in this regard being the diphthongs of contemporary languages, which were much more numerous in the past. From this theory, another, much deeper and at the same time, linked to the force of significance of music transpires, which will be discussed in detail in the essay on the origin of languages by Jean-Jacques Rousseau, one of the most important thinkers of Enlightenment.

Rousseau considers language as "the first social institution" (Rousseau 1998), at its occurrence competing only with natural causes such as joy, passion, fear, emotion or remorse, in fact, the mental states and processes characteristic of the human being. Like Vico, Rousseau appreciates the sung language as the only form of inter-human communication during primordial civilizations, the melody, the main element in the sound art, having a much greater efficiency in transmitting states than the word.

In Rousseau's view, passions were expressed before the reasons, poetry being the essence of the initial language, which is why he calls it "the language of poets". According to Rousseau, this language had a perfect expressiveness, a

quality determined by the melody that was confused with the inflections of the speech, but also by the accents and rhythms characteristic of both the language and the music, all resulting in a perfect symbiosis between speech and music. However, with the passage of time, the expressiveness was gradually diminished due to the fact that the music, being aestheticized, became detached from language becoming art.

This is how, in Rousseau's opinion, the dichotomy of primordial poetic language, in fact the separation of speech music, has generated two major shortcomings: on the one hand, the decline of spoken language, a consequence of excessive rationalization in the desire to achieve concision and clarity through the application of grammatical rules and the elimination of subtle intonations, and on the other hand, the reduction of the capacity of meaning of the music, following its transformation into art by replacing the communicative function with the aesthetic one, but also with the sometimes confused ideas promoted by the musical language.

The hypothesis of the common origin of the two ancestral forms of expression characteristic of man, music and speech, generated and supported by the undoubted similarities between them, determined the continuation of research on this subject. However, till now, there has been no evidence to clarify and fully support this possibility. Also, the researchers have not yet been able to fully explain the function of speech, inherited genetically and specific to the human being.

The first and most consistent evidence of cognitive development, revealed by the child at the end of the first year of life, consists in the ability to use verbal language, family-specific activity and in which the mother plays a substantial role. Being a system of symbols, verbal language means much more than a means of communication through which the child transmits or receives information, it opens the way to abstraction, a higher psychic process through which things can be redefined, but also to inventiveness and creativity.

From a functional point of view, the speech is made by emitting sounds, from the vocal forms preceding the speech (the vocalizations), passing to consonants and syllables, and to words and phrases characteristic to the complex system of verbal communication of the adult. Following the research conducted by psycholinguists (Handbook of Psycholinguistics 2006), the following aspect was highlighted: the development of verbal language in children is a relatively standardized process in which the same steps have been taken. Moreover, starting from the premise of the existence and use of about 6000 languages at present, children in any country or social environment learn to speak at the same age.

Because of the everyday character, speech can be considered as a simple instrument necessary for communication, an accessory that is part of each individual's endowment, thus losing sight of its complexity. Following a summary analysis, it is found that speech cannot be impersonal or monotonous, but very

prosaically nuanced, each language having its own melodic-rhythmic characteristics.

Prozodia, the vocal-auditory part of the speech, is defined, on the one hand, by the intonational path determined by the use of sounds with different heights and intensities, and on the other, by the rhythm and speed of the speech. In the early stage of speaking, prose plays an important role, with the child first learning the intonational features of the language he is learning, and then penetrating the meanings of the words.

The melodic inflections of the voice of the individual are determined by many factors – of which we mention the social environment, the mental state in which the speaker is, the subject of the communication or the relationship with the person (s) to receive the message –, which is why the intonation is appreciated as being the most complex element of the prosody. Thus, at the age of four months, the child notices and reacts to the prosodic elements included in the adult's speech, following which, after six months, through the rhythmic emission of the vowels, he himself exercises the intonation.

In the first stage of learning the spoken language, the child utters a few words with phonetic distortion, but he fills this shortcoming of the communication by the intense use of the prosody, that is, the intonational inflections through which he can print various meanings of the expression. In order to be able to speak spontaneously in some context, not by imitating the one with which it interacts, the child must be aware of the symbolic and semantic meanings of the words. In this complex evolutionary process that involves the acquisition of verbal language, interaction with a social environment in which it is spoken is an essential condition, the family obviously having a decisive role.

From a neuropsychological point of view, at birth, both cerebral hemispheres are equal in functionality and potential, after which, over time, each will specialize in certain functions. Following research by American neuropsychologists Buck Ross (University of Connecticut) and Duffy Ryan (University of Florida) (Ross, Ryan 1980, 351-362), it turned out that the left hemisphere holds the function of symbolic communication and is responsible for analytical cognition, while the right hemisphere specializes in general cognition, connecting and synthesizing information.

Another important aspect, according to the aforementioned researchers, is that the emotions, or rather the hyperemotions generated by the right hemisphere, lead to the diminution of the function of the symbolic communication located in the left hemisphere. It goes without saying that the two major processes of development, cognitive and emotional, cannot be isolated, their interdependence generating an unquestionable proportionality between the level of intelligence and the versatility of the use of spoken language.

This is why, in the first three years of a child's life, the family environment becomes a decisive factor in the balanced development of both cognitive processes (perception, reasoning, memory, etc.) and affective processes (emotional amplitude, joy, fear, selfishness, etc.). Regarding the behavior of children in the first year of life, research has revealed a consistent potential both at the sensory level and at the cognitive level, but also that the development of this potential is determined by the characteristics of the environment in which the individual is, more precisely by the quality and the amount of life experiences that stimulate the evolution of the psychic processes related to this age.

From the first day of the child's life, the mother, through her ancestral swing song, can make her first direct contact with the music. Starting from the two hypotheses mentioned above – that is, each language spoken has its own prose characteristics and all children, regardless of the social environment in which they are found, understand the language spoken at the same age – we can conclude: at birth, any human being holds in dowry its genetic minimum of musical aptitudes, this constituting the necessary prerequisite for the acquisition of the wheat.

Analyzing the evolution of the individual from the point of view of the general musical capacities, we find that the differences between the children of older ages are generated by two main causes: 1) genetic dowry, the one that can determine above average musical aptitudes; 2) the quality of the social environment from which the child comes, this aspect conditioning his level of musical training.

The cradle song can be, on the one hand, the means by which indestructible emotional bridges are built not only between mother and child, but also between father and child, and on the other hand, the main way of humanizing and musicalizing the child in the first years of life. At the same time, cradle songs, along with the instinctively musicalized dialogues or monologues from parents, represent the easiest way to learn the language spoken by the child, or, according to Rousseau, an instinctive access to the primordially hidden „poetic language" in the depths of the subconscious mind, in which music and speech represented a unitary whole.

The musical assortments listened by the family members will complete the sound environment and, at the same time, will be received involuntarily by the child, this influencing its neuropsychological evolution. In the contemporary society, dominated by the desire to own everything that is modern, the technology makes its adverse effects felt even from the first days of human life. Some toys are equipped with sound devices that repeat impersonal songs in order to reassure the child, but which ultimately do nothing but lead to alienation and, implicitly, to adverse psycho-auditory configurations.

If at all of that we add the existence of a television, to which the child, assuming the possibility, will watch hypnotized for hours, parents considering that

they have a quiet child, or an audio device that plays swing songs assorted with synthetic orchestras, we can conclude that the premises are fulfilled so that, in the near future, the individual will manifest behavioral problems.

From this perspective, neuropsychologists appreciate that family environments with educational deficiencies affect the cognitive-intellectual development of children in a much higher percentage than perinatal events (premature birth, fetal hypoxia, etc.) (LaFortune). Thus, individuals from families lacking in education regarding child rearing and education will find it difficult to adapt, as they are difficult to be sociable and sometimes aggressive, due to emotional deficiencies. This aspect reconfirms without the possibility of denial the importance of the instructional-educational process provided at this stage by the family.

4. Conclusions

From a musical point of view, the harmonious development of the human being is conditioned by the optimal action of the formative factors on it, respectively of the way in which they model the main dimensions specific to the musical personality: thinking, memory, character, intelligence, imagination, creativity, affectivity, temperament, attention, will, perseverance, dignity, respect and attitude.

Therefore, the sound environment in which the small being develops plays a decisive role in this training process, because, as I said, the configuration of neural networks under the influence of sound stimuli, implicitly of neuropsychic functions, starts from the prenatal stage. This leads to the hypothesis that not only parents play a formative role at this stage, but also indirectly through the media through its audio means. The sound environment, musical and not only, that the family generates will be inadvertently received by the little being with the consequences of rigor.

After birth, the auditory sense of the newborn is almost as performant as that of an adult, and, from a perceptual point of view, after the age of two months the child can notice the rhythm, respectively the sounds with rhythmic temporal variations, this representing one of the most important prerequisites for learning the spoken language. The fact that at the age of one year, all children, regardless of the social environment they are in, speak the spoken language, is a definite proof that every human being, at birth, has a minimum of musical skills, necessary condition to acquire the prose characteristics of wheat.

In conclusion, the social environment specific to the first two stages of the evolution of the individual, through its characteristics, has a substantial contribution in shaping the future musical personality, an aspect that confirms,

without any possibility of denial, the importance of the quality of the educational process, informal or non-formal, ensured in this stage, especially by the family.

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