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# Sound And Silence, Rhythm And Harmony As The Basis For Prenatal Education Through Music Musical Pedagogical Experiences With Expectant Parents.

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## Abstract

Art begins with life: the construction of primary sounds begins in the womb. The voices of mother and father join in this “gestational symphony”, influencing its harmony with their interactions. The scientific community recognizes the key role of the prenatal period: international researches confirm the importance of a harmonious primary relationship. My own musical pedagogical work over the past several years has confirmed to me that the optimum medium for educating to listen and to live in harmony with the self and others, is provided by experiences based on the individual’s personal sensibility and fostering immediate reflection.

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## 1. Main text

Communication indisputably represents a "conditio sine qua non" for human life and consequently for social relationships; it is really true that from the outset of prenatal existence, human beings are engaged in a complex process of acquisition of the rules of communication, even though they are only partly aware of this (Verny, 1981;

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Soldera 1995; Liley 1972; Barzanò 1989). Sufficient scientific evidence has been reported to confirm that already during pregnancy a strong communicative bond is formed between mother and embryo-fetus-child (Nathanielsz, 1999; Verny, 1981; Tomkins, 1962). First, there is bodily contact, encompassing the entire set of perceptions that reach the child within the reassuring environment of the maternal “room”. Permanently immersed in the amniotic fluid, the unborn child receives waves of sound vibration that constantly soothe it to sleep while keeping it in unceasing communication with the outside world, facilitated by the touch-sound contact between the child’s skin and the fluid, the most primordial form of experience. (Jung, 1969; Neumann, 1991; Winnicott, 1975). The child receives multiple forms of nourishment from its mother: physiological nourishment, which is practically automatic, is combined with nourishment from the sounds that come almost exclusively from the mother’s own body. All the mother’s spontaneous movements and the noises they make, along with the sounds of her internal organs, heart-beat, breathing and voice constitute a primordial food for the fetus. In the course of the pregnancy the mother’s voice becomes the child’s favorite sound: it is the caress that transmits the most love, the child’s affective nourishment *par excellence* (Tomatis, 1992). It is from the sound of the mother’s voice that the fetus begins to assimilate the need to communicate, and it is this same sound that provides it with its first bases for communication, as well as its first stimulus for a key communicative function: listening. Listening is initially learnt in the womb: the mother becomes the medium preparing the child for its encounter with the world. Knowing how to listen will make the child more independent and more secure in embarking on new learning experiences, both in relation to the self and to the surrounding environment. This communication process is not unidirectional – that is to say, exclusively from mother to child; rather it is a process of interaction involving a continuous exchange of messages; in the course of the gestation period, thanks to the mother’s great sensitivity in this regard, the fetus begins to develop an intense relationship with its parents and with the surrounding environment. This relationship may be further enriched through the use of instruments that are much closer to us than we might imagine: sounds, voice and music (Zorrillo, 1998). Let us not forget that the very first musical instrument is the human being, insofar as part of the infinite sounds of nature. Immersed in this universe of sound, the first symphony that the child listens to from the moment of its conception is that of the womb, which will accompany it without cease for nine months. However, at the end of the nine months, this environment which is so complete in itself and reassuring, is disrupted in a way that makes both mother and child feel a great emptiness. Labor, contractions, pushing and expulsion make up an experience that must be planned for in order to minimize both physical suffering and the psychological and emotional suffering of mother and child. The music listened to with the child during moments of relaxation during the pregnancy, accompanied by many other types of contact and communication, can help to unite and sustain mother and child during and after the birth; the little songs and rhymes that the mother has chosen, learnt and begun to sing and speak to her child can provide a reassuring thread of continuity uniting prenatal life, labor and birth. Numerous studies in the field of psychology have found the mother’s attitude to be the single most important factor in the formation of the personality of the child (Winnicott, 1975; Bianchi, 1993; Delfrati, 1969). Rottmann at the University of Salzburg reached a similar conclusion: his research showed that the fetus is capable of making very fine emotional distinctions: it is not easily deceived and displays the ability to detect not only its mother’s general state of mind, but also her attitude towards itself (Rottmann, 1974). Music can help expectant couples to have a positive approach to the pregnancy by acting as a pleasant and readily accessible medium for communicating with their child in a relaxed and happy manner throughout the prenatal stage. It should be pointed out that, after nine months of harmonious fusion, in order to fill the emptiness caused by the physical separation occurring during “the trauma of birth”, it is important to immediately re-establish good tonic-affective dialogue so as to create an emotional link with the feeling of completeness experienced during gestation. This helps to address both the physical and the emotional emptiness experienced, giving the child the right kind of “welcome” by making it feel reassured and protected. Similarly to during the gestation period, at the moment of birth mother and child are united and mutually sustain one another, although in both cases (gestation and childbirth) they are two fully differentiated beings. Music and play, as mediators of this relationship, of this renewed encounter, form a natural part of the language that nourishes and sustains the union between mother and child. Both belong to the sphere of non-verbal communication, the type of communication that involves emotional states, body movements, images and physical perceptions; all of which precede the development of verbal language. Non-verbal communication comes into play when we relate to another person on the basis of a tonic-affective exchange based on the use of the body and involving perceptions, sensations and feelings. Tonic exchange and/or tonicity is based on the sensations arising from a hug, from hand contact, or simply from a look, and provides a sense of company, reassurance and completeness: it is like feeling that you are part of the other person and the other is part of you. It is a dialogue between two bodies, in which the tonic shades of

meaning, impossible to translate into verbal language, are perceived in their totality and only at the bodily level. Indeed it is this very characteristic of untranslatability that endows non-verbal language – which plays an indispensable role in the formation of relationships – with its unique, primary, primordial, intimate and essential nature. Tonicity encompasses bodily experience and the associated sensations that form the basis of life experience right from the womb; touch is the first of the sense organs that allows us to relate to our external surroundings and is thus referred to as archaic communication. This level of experience characterizes the entire pregnancy and the first months of life and is critical to these phases in which the child communicates solely or prevalently through touch: skin-to-skin contact, the heat and scent of the body, hugs and all forms of bodily closeness. In relation to tonic communication exchanges, adults will do well to remember that the newborn child is much more sensitive than they are in terms of its ability to perceive whether bodily contact is made with love, tenderness or reluctance; or whether it is sincere or indifferent. In the relationship between parents and child, the tonic relationship established before birth and spontaneously and freely maintained afterwards, will help to lay the tonic-affective bases for long-term open, sincere communication and to establish communication proper in the first place. This relationship will therefore take on profound and key meanings for the child, helping it to make the transition to each new stage of its development without experiencing conflict and to construct its self-image, find its identity and progressively acquire self-esteem. Many mothers who have attended my courses in “preparing for childbirth through music” have reported becoming more sensitive towards their unborn children and how their own stronger sense of involvement also positively influenced their partners. For example, Eliana, mother of a newborn baby and a student of Musictherapy and Educational Science had followed the program that I recommend (Zorrillo, 2000) consisting of play with the voice (singing sounds and little songs chosen by the mother herself), massage, rhythm and dance (designed to focus on and relax the parts of the body involved in childbirth), as well as listening to music during relaxation and speaking positive thoughts to the child in preparation for the moment of birth and the future meeting between mother and child. At the post-partum sessions, the mothers share the most moving aspects of their musical experience during pregnancy. Eliana had been very surprised to discover that a rhythm tapped on her belly three times a week at the same time of the day over the last three months of pregnancy had put her into direct communication with her unborn child. Her rhythmic finger tapping was followed by an equally rhythmic response from her child. Thanks to this experience, Eliana and her partner, developed a great capacity to sensitively listen to their child’s nonverbal communication; this also made them much more aware of communicating with their child at a deep level and sensitive to any type of message exchanged amongst themselves that could be picked up by the child. Research in the fields of neurology, physiology, psychology and biochemistry provides authoritative evidence for the fact that the child in the womb, from the sixth month of gestation onwards, is not alone able to hear and remember but also to learn. The neural brain circuits of the unborn child, claims Dr. Mortimer Rosen of Columbia University’s College of Physicians, are on a par with those of the newborn. Dr. Nathanielsz, at Cornell University in New York, is more cautious and does not refer to learning on the part of the fetus but to recognition: “The fetus recognizes both frequencies and configurations of sound: if its mother whispers into one ear and its father into the other, the newborn child will almost invariably turn towards its mother; if it is whispered to by its father from one side and a male stranger from the other, in 80% of cases it will turn towards its father”. In his book *A time to be born*, Dr. Nathanielsz tells of a pianist who was expecting a baby. During the final weeks of pregnancy, she had to repeatedly practice a difficult passage from a piece that she was preparing for a concert. After the child was born she did not play the piece in question for months. When she finally played it again one day while the child was resting in its playpen, when she got to the difficult passage, the child turned pleadingly towards her as though asking her to stop (Nathanielsz, 1995). The French researcher Busnel, who studied movement and variations in heart rate during the last three months of gestation, discovered that the fetus can distinguish between the sounds of two different syllables, a familiar and unfamiliar story, a male and a female voice, when its mother is addressing it and when she is addressing others (Verny, 1981). Other experiments involving repeated listening to the mother’s favorite music during pregnancy, have shown that the newborn child recognizes and reacts to it in a certain way. Specifically hearing these familiar pieces has a calming and relaxing effect on the newborn child, similar to the effect of hearing its mother’s voice. These findings demonstrate how important it is for parents to speak, sing and tell stories to their children from before birth. Marie Louise Aucher, musician and researcher, is the founder of a long-established project in Pithiviers (France) involving singing groups for pregnant women, aimed at helping them experience “sung motherhood”. Aucher claims that the vibrations produced favor balanced development of the nervous system and that the sounds are not only perceived via the sense of hearing but by the whole body. It is also interesting to note the personal experience of Boris Brott, director of the Philharmonic Orchestra of Hamilton, Ontario, who tells of his surprise as a boy on discovering that he was able to perform to perfection pieces that he had never played before, as

well as knowing what was coming next in a previously unseen cello part before turning the pages of the score. One day, when speaking with his mother, a professional cellist, he discovered that all the scores that he knew at first sight, were of pieces that his mother had been practicing and therefore had played many times while she was pregnant with him (Verny, 1981). It is therefore critically important to be aware that during pregnancy appropriate stimulation can help establish a good relationship between mother and child or rather between parents and child, and that music and play, as mediators of this relationship, are naturally complementary to language in nourishing and sustaining it. Turning to current school life, we cannot but ask: If music can truly foster listening and lay the bases for prosocial behaviour, can it act as a mediator in “difficult relationships” – between adults and children – throughout development? And if so, how? These are the issues that I intend to reflect in my research, drawing on my experience in the field over the past 30 years.

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