

## The Maternal Womb: The First Musical School for the Baby

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**Abstract:** None available.

**Full Text:** In 1971 I began to tape sonorous rhythmic intonated expressions of many infants. It interested me how early infants could begin to sing, to repeat melodies and tap rhythms. I had the feeling that these manifestations had a special origin, that the cultural environment was not the only cause. As I had several ideas about it, I started taping the voices of babies who were full term, premature, or significantly retarded. I recorded their expressions from their birth up to fourteen months old. The taping took place in a children's hospital of Buenos Aires. As I listened to the babies' cries, I realized that if I separated the cry from the sounds included in it, it could be labeled as "musical". Analysis through electronic devices confirmed my hypothesis. Baby cries had the proper characteristics of sound: frequency, timbre, and intensity. When reviewing the bibliography about infant sounds, I did not find any systematic study of the first mass of sounds and their sonorous rhythmic structure in relation to musical activity. Infants' most elementary vocal rhythmic schemes make up the physiological matrix for future language and music acquisition. The analysis of infant cries led me to study their expressions from the very instant of their birth. I first undertook a longitudinal study of three newborns up to their first year of life. After this I studied triplets and a Cesarean-born child. The main feature of the first group was that one of the babies sang properly when she was 9 months and 7 days old. The processes used with these infants has been described in my book *The Beginnings of Musical Behavior* (1974). My work with infants from their birth on made me realize how important music is during the gestational period. I started teaching music to pregnant women. Both, the mother and the unborn baby benefited. What is the advantage of the musical stimulus? Mothers discovered personal characteristics they were unaware of as I encouraged them to create lyrics and tunes for their unborn babies. Through a questionnaire, I learned about their musical knowledge and preferences, as well as their doubts, fears, and hopes (Copies of this questionnaire are available from the author). As a result of my research, I decided to work with pregnant women. I was greatly moved by their anxieties, fears, and doubts. I also felt that if a pregnant woman sang to her baby as I had done with my two children, she would establish a closer bond with this baby. A video made at the Fernandez Hospital and at the San Martin Education and Cultural Center, reveals the mother's emotion, expression and interest in creating short songs. They did it shyly but with great tenderness. Many of the lyrics revealed their fear of losing the baby, or that it might be defective, and other worries. I had not expected to find these problems. Since I could not help, I suggested they consult a therapist. (I was afraid they would reject my suggestion and stop attending my classes but fortunately this did not happen.) The experience I had at the hospitals was very productive, in spite of the limited time and space I was given to work there. Pediatricians and neonatologists supported my work, but not the obstetricians and midwives. I will never forget a couple who attended the second class at the Fernandez Hospital bringing a guitar and a quena (Indian reed flute). The man sang the song they had composed for their unborn baby, and the woman introduced the song by playing the quena. I also remember when the mothers came to show me their newborn babies, they reported how they used music at the birth of their babies. This was also true of the single women. Every pregnant woman is a different world. I invited each to dream about their unborn babies, to imagine their unborn babies little bodies, to imitate the movements babies made inside the womb, to draw pictures for them, and to pamper them with words. They created, both a musical and a spoken language as I encouraged them to tell their babies where they were and what they were doing at the time, commenting on whether it was warm or cold, and such. It was quite an experience for them! The inner language of feelings, which is present in every human being, became a powerful form of expression

for these mothers, different from formal language. I remember when I had a similar experience with my two children, and how it brought me closer to the human being inside me. I believe the advantage of these activities is that they establish a prenatal bond which contains tenderness on the part of the parents to be, a promise of protection, and the wish to see and hold the baby in their arms. Pregnant parents created these songs naturally, songs that would stay with them the rest of their lives, invented in a period of love, anguish and expectancy. It is of great significance for babies to hear music, to hear parents talking to them, and to be gently massaged during the gestation period. The mother's emotional expressions benefit both herself and her baby. When pregnant women sing, the unborn babies answer by moving their bodies. They are little acrobats when they have enough space. These rhythmic movements of the unborn are certainly very important to motor development. And according to some experts, fetal movements provide an activity which contributes to the development of psychic functions as well. I worked most enthusiastically at the San Martin Cultural Center where women attended my classes of their own free will. At first, they came out of curiosity but they listened with great interest. These classes were also attended by male parents, doctors, and professionals who wanted to learn about musical training of mothers-to-be. In my opinion, these musical experiences should be offered at every maternity hospital and would improve the mental and emotional health of both parents and children. The last trimester of gestation is especially important and parents must make the most of this period of rapid growth. At times I worked with babies in incubators. All the sounds they had heard in the womb and were familiar, were now replaced by the noises of the incubators. The previous experience of natural sounds was lost. Therefore, I advised parents to record their voices and songs for their babies in incubators. Although nowadays, a radio is sometimes placed in incubators as a stimulus, I think the parent's voices are best. Mothers quickly demonstrated that music was not the property of elite members of society or those with advanced education. My students at the San Martin Education and Cultural Center and at the hospitals came from all different socioeconomic classes and different cultural levels. Each of them was able to create songs and to communicate with her baby in a personal and genuine way. Each of them found their own way and their own rhythm as they progressed through pregnancy. Not only did they realize they had conceived a human being but many of them discovered a way of communication they had never thought of before. In music, mothers would say things they would not express verbally. Although lack of communication, lack of essential stimuli, and other maladaptive problems are inevitable in some cases, I believe sincerely that babies and parents could avoid or resolve many of their difficulties if they were offered prenatal music classes at maternity hospitals. Beside the experiences I have shared briefly with you here, I can confirm by observing the babies from their birth onward that music was a formative element in their lives. When a baby has been stimulated by his mother with music, by the fifth month the baby already shows affective memory towards sound. At only nine months old, one of these babies was singing the song his mother had systematically sung throughout his prenatal days. Finally, I am hopeful that the scientific contributions of neuroscience, genetics, and psychology will help to illuminate the nature of the very early musical responsiveness which appears to be an innate function of all human beings.

MILESTONES IN THE CAREER OF PROF. RUTH FRIDMAN 1930-1940. Studies in the American Grammar and High School, Buenos Aires, Argentina 1936. Graduation, Prof. of Music, with honors, City School of Music, Buenos Aires 1950-1962. Advanced studies in musical composition with Professors J. Ficher, J. Bautista, E. Leuchter and Juan Carlos Paz, Buenos Aires 1957. A founder and member of Young Composers of Argentina 1964. Advanced studies in ethnomusicology with Prof. Carlos Vega, Buenos Aires. 1966. Cuentos musicales (Twelve musical stories). Buenos Aires: Eudeba Editors 1966 and in 1970. Invited by the Dept. of Culture and Education, Hungary, to visit nurseries, state schools, and study the music methodology of Zoltan Kodaly. 1967. Advanced studies in ethnomusicology with Prof. Isabel Aretz, University of Salvador, Buenos Aires. 1968. Record. Cantemos con mama. (Let's sing with mama!). Buenos Aires: Columbia Records. 1968. Canciones para crecer. (Songs to grow on). Buenos Aires: Ricordi 1969. Canciones para la mama: la maestra y los niños (Songs for the mother, the teacher and the children.). Buenos Aires: Centre Editor. 1970. Music and society.

Paper presented to the International Society for Music Education, Moscow. 1972. Fulbright Grant. Lectured on The sonorous rhythmic expressions of infants at the University of Connecticut and Cornell University. Addressed the Linguistics Circle, and the Center for Cognitive Systems, Peabody College, Nashville, Tennessee and lectured in the psychology department, University Of California, Berkeley, CA. 1973-1990. Taught groups of pregnant women at different hospitals of Buenos Aires. 1973. The first cry of the newborn: Basis for the child's future musical development. *Journal of Research in Music Education*. 21, 264-269. 1974. Musical activities in babies. Paper presented at the First Brazilian Congress of Music Therapy. San Pablo, Brazil. 1974. The beginnings of musical behavior. Buenos Aires: Paidos Publishing Company. 1974. Affective communication through sonorous expression in relation to mental health and future musical activity. Paper presented to the 11th International Society for Music Education (ISME), Perth, Australia. In *Challenges in music education* (pp. 94-97). Dept. of Music, University of Western Australia. 1974. Lecturer, 14th International Congress of Pediatrics, Buenos Aires. 1975. Proto-rhythms of musical and articulated languages. Paper presented to First International Congress of Music and Communication, Mexico City. 1975. Composed music for piano, voice and string quartet, performed by different artists in Buenos Aires. 1975. Early responses to music. *New Zealand Journal of Speech Therapy*, pp. 12-16. 1975. Sonorous rhythmic expression of babies. Paper presented to the Council for Educational Research, New Zealand. 1975. The genesis of musical activity in human beings. Paper presented to First Brazilian Congress of Artistic Education, San Pablo, Brazil. 1975. Affective communication through language. Paper presented to the First International Conference of the Organization for PreSchool Children (OMEP), Rio de Janeiro, Brazil. 1975. Early responses to music. *Journal of Speech Therapy*, pp. 12-16. New Zealand. 1976. Calesita de canciones para jugar (Merry-go-round of songs for play). Buenos Aires: Paidos 1976. Calesita de canciones para cantar (Merry-go-round of songs to sing). Buenos Aires: Paidos 1977. Affective-sonorous communication related to language development: An analysis of the first rhythmic vocal schemes of the newborn. San Pablo, Brazil: Center of Brazilian Research. 1977. Vocal rhythms of the newborn: The first day of life, with Dr. Antonio Battro. In: *Estudos Cognitivos (Cognitive Studies)*. San Pablo, Brazil: UNESP 1977. La musica para el nino por nacer (Music for the unborn child). Salamanca, Spain: Amaru Ediciones. 1977. The birth of musical intelligence. With Dr. Antonio Battro. *Medicine and Hygiene*, 40, 3642-3645. 1977. Affective-sonorous communication related to speech therapy. *Speech Therapists Journal*, New Zealand. 1977. Proto-rhythms of musical and articulated languages. Presentation to 2nd World Congress of Music Therapy, Buenos Aires. 1980. Proto-rhythms: From nonverbal to language and musical acquisition. In: Mary R. Key, (Ed.), *The relationship of verbal and nonverbal communication*, (pp. 71-79). Paris, The Hague, and New York: Mouton Publishers. 1980. Fellowship, Finland Ministry of Education, Department of Pediatrics, Central University of Helsinki, directed by Dr. Ole Wasz-Hockert. Lectures at different universities of Finland. 1980. My research at the Sibelius Academy of Helsinki. Presented to School of Music and Dance, Mexico City. 1980. Lecturer, Karolinska Institute, Department of Pediatrics, Stockholm. Invited by Dr. John Lind and Prof. Jan Winberg, Stockholm, Sweden. 1981. Nuevas tecnicas para neonatos prematures en incubadoras (New techniques for premature infants in incubators). Presented to 3rd World Scientific Congress of Music Therapy, San Juan, Puerto Rico. 1981. La musicoterapia en el desarrollo human education de la familia (Music therapy in the development of the family). Presented to 3rd World Scientific Congress of Music Therapy, San Juan, Puerto Rico. 1982. Invited lecture, 1st Latin-American Congress of Biodanca (Biological Dance), Rio de Janeiro, Brazil. 1982. Estudios sobre el llanto normal y patologico del recién nacido. (Studies of the normal and pathologic cry of newborns). Presented to Argentine Society of Music Therapy (ASAM), Buenos Aires. 1982. My work and experiences in Finland. Presentation to Argentine Society of Music Therapy (ASAM), Buenos Aires. 1983-1990. Worked with pregnant women in different hospitals in the city of Buenos Aires. 1983. My musical experiences with pregnant women. Presented to Department of Pediatrics, The Italian Hospital, Buenos Aires. 1983. Invited Lecturer. Folk Arts Communication and Education (FACE.), Festival of Twitas and La Mama, Cultural Plan for World Communications, annual conference held at the United Nations, New York. 1983. Analysis of

spontaneous creative musical expression by an infant 18 months old. Paper presented to the 4th International Congress of Music Therapy, Paris, France. 1988. Lecturer. Baby expressions, Music Conservatory Juan Jose de Castro, La Lucila, Buenos Aires. 1988. Video. Songs for unborn babies. Presented to the 18th. Congress of the International Society for Music Education, Canberra, Australia. 1988. The birth of musical intelligence. Buenos Aires: Guadalupe Editors. 1988. Elected President, International Music Society for Prenatal Development (IMSPD) at Brisbane, Australia. 1988. Seminar. On baby expressions. Oran Hospital, Salta, Argentina. 1990. Music in human beings. *Journal of Music Therapy*, 1 (4), 9-14. Music Therapy Association of Buenos Aires. 1991. Proto-rhythms: Basis for music and language expression. *Preand Peri-Natal Psychology Journal*, 6 (2), 181-198. 1992. Some aspects of music for the unborn child. *Newsletter of the International Music Society for Prenatal Development*, No. 5. 1996. Is there prenatal intelligence? A paper based on David Chamberlain's interpretation of multiple intelligences in the works of Steinberg and Gardner (1992). Presented to the 2nd Congress of Music Therapy, San Pablo, Brazil. Published in *Revista Brasileira*, volume 1 (1), 67-79, 1996. 1998. Seminar, School of Music, La Serena, Chile. 1999. Medal given by Compositores Unidos de la Argentina (Young Composers of Argentina) for being one of the founders of the organization in 1957. 2000. Director, experimental research project to study the effect of music in pregnancy. In collaboration with faculty at University of Salvador, Buenos Aires. **AuthorAffiliation Editor's Note:** Prof. Ruth Fridman has been a pioneer in revealing the important effects of the first sounds that babies hear including the sound of mothers singing to them in the womb, at birth and as infants. We were proud to publish her paper, Proto-Rhythms: Basis for the Birth of Musical Intelligence and Language Expression, in this Journal, Volume 6(2), Winter, 1991. In this issue we honor her for her inspirational work teaching pregnant mothers to compose lullabies and sing to their babies. At the end of this article, we have attached an impressive list of her many presentations, travels, books, and song books-some of the milestones in her career. Ruth is President of the International Music Society for Prenatal Development (IMSPD). Please direct any correspondence to her at Coronel Diaz 1564, 1425 Buenos Aires, Argentina or via email to: [ruthf@iudad.com.ar](mailto:ruthf@iudad.com.ar).

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