

# *The* **POWER of MUSIC and TOUCH:** *The* **EDUCATIONAL ROLE of ADULTS** *and the* **ENVIRONMENT**

by Margré van Gestel  
The Netherlands

*Abstract:* This article will demonstrate the importance of combining our knowledge of early childhood music education with that of touching/massage and how we might structure our children's learning to create a more affective world. A typical "Music on the Lap" lesson will be offered as an example of how touch and music can be used with young children. A rationale as well as a means for re-introducing touch into the lives of children and parents will be presented.

**T**ouching people's hands without talking can be quite revealing. Some people's touch is demanding and gives no freedom and love. Other people keep their distance and offer a business-like touch which feels cold or removed. Finally some people offer an affective touch — one that feels safe and secure. Helen Keller was reputed to have said, "Their hands feel like a ray of sunshine and their touch gives you a warm feeling."

Hands touch us, but we are also touched by music. Without borders, music enters and resonates throughout the entire body. The healing power of music is used consciously in music therapy, hard rock music has been shown to agitate the heartbeat of a fetus, some people are moved to tears by a symphony or song, and others seem to use music unconsciously as a daily companion. Music plays an important role in the lives of people throughout our world. It encourages participation, becomes meaningful in a shared social setting, and unites us as a community. Music is essentially a social or participatory art, but participation demands structure. Participation means turn-taking, being aware of rules, and giving sensitive responses.

## **BEING TOUCHED FROM THE VERY BEGINNING**

Each of us began as an embryo whose existence was quite different from that of

an adult. An embryo moves as it grows. The process which begins after fertilization is a process of differentiation — not one cell dividing over and over, but a whole that differentiates and takes shape to form various organs. Cells arise from each other, but differ in function and form — not parts making a whole, but a whole creating the parts. The whole organism is primary and remains the same creation. The connection between form, function, and surroundings begins with life.

Adults express themselves *with* the body, but embryos express themselves *in* the body. For example, when we stretch our backs, our head goes up, our hands are used, the pelvis turns over, we pull ourselves up to stand, saying, "Here I am!" In the first year of life, a baby will use the same movements — lifting the head, using the arms, rolling to sit, and then pulling up to stand on two feet — "Here I am!" Embryos grow to make similar movements. In the sixth week of gestation, the head grows from the trunk, arms grow in an enclosing movement, legs grow in a stretching movement, and at the moment of birth everything unfolds to say, "Here I am!"

Young children develop in interaction with their surroundings. In their physical contact with other people, they experience pleasure and discomfort, safety and fear, calm and panic.

Jaap van der Wal said, "Later on, the human being will stretch in psychological ways as well."<sup>1</sup>

### **TOUCH: THE FIRST SENSE TO DEVELOP**

The first sense to develop *in utero* is touch. Conveyed through the skin, touch provides the fetus with information about heat, cold, comfort, and pain. The constant stimulus of the skin provides the brain with information to adjust for sensory and motor input. Here, the instrument through which information is received is the child's developing body.

The second sense to develop is hearing. The hearing apparatus has two important tasks. The outer ear receives and transfers sounds to be interpreted by the brain, while the vestibular system in the inner ear maintains balance. Since the fetus experiences all kinds of movements, the vestibular system is already programmed at birth to expect movement. Movement is necessary for stimulating the nervous system, with vestibular stimulation not only alerting but also calming the infant (as in the soothing effect that comes from rocking). If we were to use the metronome to monitor our own rocking pulse, we would discover that we spontaneously rock our babies at the same walking rhythm used during the later stages of pregnancy — around 60 or 70 cycles per minute. This is also the resting heart rate of the average mother who carries her baby throughout the nine-month sojourn. Rocking is a natural tranquilizer, with the movement reminding the baby of being in the womb. In soothing infants, we introduce cadence and patterning in our voices; we rock, walk, and have them suck on a pacifier — all forms of rhythmic stimulation associated with the temporal patterning of social interaction. Thus, music starts at the most basic level — with the tom-tom beat of the mother's heartbeat, rhythmic breathing,

and rhythmic movements — and this "music" stays in the lives of all human beings until death.

### **BEING TOUCHED: THE FOUNDATION OF LIFE**

For centuries, family life was filled with touch — parents were at home, and children were frequently on the lap. Songs with affective touch were a daily part of life. Most people lived in small houses, grandparents lived in the same house or around the corner, and children often shared the same bed. Grandparents had an important task in passing on this music and affection.

Nowadays, many children have their own bedroom, their own bed, as well as their own TV set, video, and computer. The elderly have little contact with babies and toddlers, and in The Netherlands most grandparents live their own lives and see their grandchildren only four times a month (Research University of Utrecht, The Netherlands). Young parents lead busy lives and may work all day, and young children are not used to peaceful communication and touch. Instead, children are only touched during quick, daily care.

The consequences of such changes include emotionally-undernourished, mentally-overloaded, and developmentally-disordered children. Newspapers are dominated by aggression and are filled with articles about teasing and bullying, as well as about children who kill peers, teachers, and other students. Bravura behavior is getting out of hand, with various sectors of the population provoking each other. Mental health centers have long waiting lists, and in The Netherlands we find that young children need training in social defense — they need to learn to be secure in their contact with other people, to stand up for themselves in a healthy way, and to establish borders on behavior in their contact with peers. Meanwhile, in an effort to

adjust to modern society and provide social defense training, our educational system is unconsciously helping to create a downward spiral in terms of what we all need as human beings. While society values the knowledge part of our educational system, education in The Netherlands is moving into an individualized system where computers, videos, and TVs are used for teaching. Thus, knowledge is getting more valuation than are social and emotional capabilities.

***While society values the knowledge part of our educational system, The Netherlands is moving into an individualized education system where computers, videos, and TVs are used for teaching. Thus, knowledge is getting more valuation than are social and emotional capabilities.***



being introduced in several child care centers. Nursery schools in Belgium work with the project “Verbondenheid” (Connected), introduced by Anouk Depuydt.

In May 2001 a first meeting took place in The Netherlands to begin combining knowledge from the fields of early childhood music education with that of massage/touching. Participants learned about programs in Sweden and Belgium, as well as about research from the Touch Research Institute in Miami. More research about the importance of touch,

massage, and music in the development of young children is becoming available world-wide.<sup>2</sup>

The results of this research are clear—children touched in affective ways develop faster. Premature babies gain 47 percent more weight in the first three weeks of life. The bond between parents and children is positive and based on trust, and the children feel secure. Research has also shown that toddlers who have learned appropriate touch are more empathetic and less aggressive. Children 4 and 5 years old do not hit each other as much and react more alertly to their environment.

In addition to providing these social-emotional benefits, touching or massage on a regular basis also produces biochemical reactions in the body. The hormone oxytocin and the hormone serotonin play an important role in creating positive feelings. Produced in the brain, both spread through the body by way of the bloodstream. Oxytocin starts a mother’s labor pains as well as her production of milk and is also responsible for feelings of well-being, a peaceful state of mind, and a tendency to care for others. Serotonin is a mood-regulating hormone which works as a sedative. These hormones can be produced when we touch and stroke others (pets included) as well as when we are touched and stroked. Such information clearly demonstrates that touching and stroking are necessities of life and are vital to childhood development.

## **MUSIC LESSONS**

As we experience and learn more about the positive effects of music and touch and as we understand that affective touch combined with music is needed for healthy development and bonding, we realize that the next step is to implement music contact games in early childhood education with caregivers, babies, and young children. Games with touching and hugging are a normal part of children’s

In summary, society is rapidly changing and offers few opportunities for affective touch and singing together. With so little time for music and affective touch, we are seeing a decline in our knowledge of songs and touching games.

## **BEING TOUCHED AGAIN**

One out of four mothers in The Netherlands now signs up for a course in baby massage. In Sweden the method “Taktiel Stimulering” (with Gunilla Birkestad) is

songs and early childhood music lessons, and Dutch children's songs are not the only ones which include hugging — hugging is a universal component of songs for little children. Thus, preparing a baby lesson that includes touching, singing, and playing is not that difficult, especially since a baby-on-the-lap cannot yet walk away! Babies are always interested in sounds, language, and music, and they thrive on contact through touch.<sup>3</sup>

Music classes began in The Netherlands in 1989 with a course for parents and babies entitled "Music on the Lap." These courses have become a regular offering in many music schools, and Music on the Lap teachers have made touch games and hugging moments a normal part of each lesson. Today's classes include parents with children from 4 months to 4 years — for the 4- to 12-month-olds in groups of 6 to 8 children and for the 1- to 2-, 2- to 3-, and 3- to 4-year-olds in groups of 8 to 10 children.

In addition to Music on the Lap courses, 60 SKON daycare centers in The Netherlands provide early childhood music lessons. SKON is a national foundation that provides daycare with special attention to music, in which a qualified Music on the Lap teacher gives one music lesson to each group every week. The daycare teacher attends the lesson, learns the songs and games, and repeats the songs and activities during the week. This helps the teacher remember the songs and games as well as understand the goals of each activity.

Most of the approximately 11,000 daycare and kindergarten teachers in The Netherlands have a limited repertoire of songs. Few of them read music, and many choose songs that are too long and difficult for the children to sing on their own. The daycare provider sings too low and offers little possibility for movement or games. As a result, special music courses have been developed for daycare and kindergarten teachers in collaboration with

Music on the Lap specialists and a national education institution for teacher training (K & P Opleidingen).<sup>4</sup> Ideas about how to provide structured lessons that combine music and touch have been implemented in the following ways:

- Music on the Lap courses for various settings, including daycare centers, nursery schools, kindergartens, as well as homes for the elderly. In the latter case, each Music on the Lap group has four or five elderly people who join in, sing along, and play touch games with the babies or toddlers.
- Refresher courses organized by the National Institute for Elementary Schools.
- Workshops at national congresses for preschool teachers as well as at the national congress for music teachers and teachers interested in music at elementary schools.
- Development of touch games combined with songs for different age groups that include a card system for nursery schools and daycare centers. Each card shows a game and a song and describes the way of touching. In order to provide parents, nursery schools, and daycare centers with a repertoire of music contact games, a first set of songs on CD with related pictures has also been published. Teachers can choose some songs, while children can choose other songs from the corresponding picture.

The challenge for early childhood music teachers lies in constructing well-balanced lessons with contact games for children from birth to age 4, while taking into account the various mother-child relationships (In The Netherlands all children go to primary school at the age of 4). For securely attached children, music contact games pose no problem. Toddlers enjoy music and contact games and will come back to the caretaker for reassurance when they have pains, sadness, or insecure feelings. Even though their curiosity about the world is great, they will always return to the safety of the lap.

Insecure or unattached infants panic easily, cry angrily, and may hit, kick, or throw toys offered to them. They cry for long periods and often do not start playing again. Children also get distressed when their mother's behavior does not match or respond to their own signals (Murray & Trevarthen, 1985)<sup>5</sup>. These children are never sure of their mother's reactions because her signals are not predictable, reliable, or consistent. These infants learn quickly how to prevent unwanted rejection by focusing on play and looking serious much of the time. To avoid rejection, they learn to shut off their mothers in a socially acceptable way.

To create a well-balanced and well-structured lesson, early childhood music education must take into consideration all kinds of mother-child relations. Here, lessons should offer structure, contrast, and balance between the following:

1. movement ↔ rest activities,
2. new ↔ familiar activities,
3. doing things together ↔ doing things alone,
4. activities with ↔ activities without manipulatives,
5. experimenting, improvising, free play ↔ directed games,
6. singing ↔ playing instruments,
7. use of CDs ↔ use of your own instrument.

Other aspects to consider when planning lessons include:

**Environment (Where)** — Consider the culture, the music (pitch, key, scale), the materials (room, toys, music instruments). Children feel more secure in an orderly environment.

**Behavior (What)** — Realize that listening, moving, playing, dancing, and singing should be linked to childhood development.

**Capacity (How)** — Create balance and contrast in structuring early childhood music lessons. Use a predictable sequence of activities (from the greeting to

the good-bye song), as well as logical and musical transitions between activities. Repeat songs at least 5 to 6 times during the lesson. Be a good musical model: sing on the right pitch with a good voice, and play your instruments musically.

**Conviction (Why)** — Provide enough suitable songs, games, and music for parents and children to play at home without your musical guidance.

**Identity (Who)** — Be respectful and aware of physical contact, matching behavior and communication, rule setting, safety, and real affection. Understand that a respectful atmosphere is especially important when guiding this age group in meaningful music making.

**Spirituality** — Ask yourself: "What moves me to be involved musically in the children's lives? What is my mission?"

## CONCLUSION

The influence of the home environment, the musical training of the caretaker, the mother's affective responses, and the meaning given to the children's musical actions are all important in overall and musical development (Jenkins, 1976; Kirkpatrick, 1962)<sup>6</sup>. One of the mothers told me she doubted whether she would enroll her disabled son for the next Music on the Lap course (at age 1, he was not expected to sit, walk, or talk). She thought he enjoyed the lessons but wasn't quite sure since he could not tell her. A week before the course started, the little boy (then 2 years of age) took his songbook with the pictures and showed it to his mother. He made it clear that she had to sing the songs he chose. She attended every course after that! Now he is 5 years of age and has started to talk — but singing and making music are still his favorite activities. This demonstrates how music and touch are not only important in early childhood education but continue to be important in the lives of older children — with the support of parents and the dedication of teachers.

The power of touch has been known throughout all ages and cultures. We find

the use of hands in therapy in the Eber Smith Papyrus, dating back to early Egypt. Both touch and music begin at the most basic level — with the senses of feeling and hearing. Music and touch are vital for all human beings, and the body needs this sensory input to develop. By providing music and affective touch, children can grow up in a harmonic way as they experience and integrate a full range of feelings as part of their sense of self. The power of combining music and touch lies in shared activities that focus on security, unity, love, and friendship. Through music and touch, we learn to accept and communicate respectfully with each other. We now know that an affective world is the best place for a child to grow up in and that connecting the power of music and touch makes our lives worth living.

**PRACTICAL IDEAS:  
HOW TO CONNECT  
MUSIC & TOUCH IN  
CHILDREN'S LIVES**

Touch and music call up deep emotions. In working with parents and teachers, we explain that such emotions are not uncommon and that everyone should feel comfortable in expressing his/her feelings. We also ask parents to be sensitive to the emotions of their child and to use their touch with respect and love. As seen in the following sample lesson (page 26), our goals are simple and yet vitally important. These goals include:

- Body awareness
- Self-esteem
- Self-awareness
- Sensory stimulation
- Emotional development
- Social development
- Bonding
- Communication
- Language development

**MUSIC & TOUCH REMINDERS:**

- Babies prefer stimuli that are familiar and safe and continuously varied.
- Cultures high in infant physical affection are rated low in adult physical violence (Prescott, 1975)<sup>7</sup>.
- Babies who are touch-denied will self-rock, as will primates. They do this to feed their vestibular system (Ayres, 1973)<sup>8</sup>.
- Babies traditionally carried throughout infancy directly experience the rhythm of the mother's movement. This may explain why rhythmic music dominates African life and culture.
- Babies stop moving when overloaded with sensory input. When constant and inescapable noise bombards their nervous systems, babies will shut down. This causes a stress sleep which bypasses light REM sleep and goes directly to deep sleep.
- Some children constantly react negatively and intensely to sensory stimuli. They cannot distinguish between harmless and harmful stimuli. They remain in an alarm mode, ready to *fight* or *flight* — or, in the extreme, *freeze* when all their energy turns inwards.
- Sensory defensiveness is becoming a modern phenomenon.
- The relationship between mother and child can be greatly influenced by offering the affective communication provided by music and touch. Even during an 8-week course, phenomenal changes in mother-child relationships can be seen as the child becomes more securely attached.

## Model for Integrating Touch in a "Music on the Lap" Lesson for Babies 4 to 8 Months of Age

Minutes	Activity	Layout	Activity goal	Comment
3	"Hello" Greeting song	Circle: Baby on the lap	<ul style="list-style-type: none"> <li>- personal greeting</li> <li>- self-awareness</li> <li>- recognize melody</li> <li>- structure</li> <li>- listening attitude</li> <li>- contact</li> <li>- transfer positive emotions</li> <li>- bonding &amp; involvement</li> </ul>	Quiet tempo Keep the right distance Touch only when child approves Caretaker caresses the child.
3	"Two Little Feet"	Children on the lap; eye contact	<ul style="list-style-type: none"> <li>- sense of rhythm</li> <li>- foot patting rhythm</li> <li>- chanting rhythm</li> </ul>	Children with bare feet. Parents massage feet with firm pressure from heel to toes. Both feet alternate using the patting rhythm.
4	"Washing song"		<ul style="list-style-type: none"> <li>- body awareness</li> <li>- sense of rhythm</li> <li>- parent-child contact</li> <li>- vocal training (blowing)</li> </ul>	Daily care: bathing song. Washing the feet, legs, hands, arms, etc., with firm pressure of thumbs. Use wash cloths made of different materials to activate sense of touch.
3	"Spider song"	Children on floor on a towel or playing carpet	<ul style="list-style-type: none"> <li>- stimulate sense of touch</li> <li>- awareness of whole body</li> </ul>	Parent touches child by walking the fingers all over the body. At the end of the song, take time for a hugging moment. Repeat song at least 6 times.
3	Rondo allegro: "Eine kleine Nachtmusik"		<ul style="list-style-type: none"> <li>- music/no music</li> <li>- emotional development (handling tension)</li> <li>- listen to classical music</li> </ul>	Alternate touch and no touch. Child learns how to deal with tension in a healthy way. (Prepare a tape with stops.)
4	Walking through the room	Free to go	<ul style="list-style-type: none"> <li>- explore room</li> <li>- feel rhythm</li> <li>- stimulate looking around</li> <li>- feel safe with parent</li> </ul>	Adapt to child's natural curiosity. Carry child in a basic supporting way. Child should feel support and security in being carried. Only then can the child feel secure to investigate the world.
3	What do I hear?	Circle: On the floor	<ul style="list-style-type: none"> <li>- listening attitude</li> <li>- eye-hand coordination</li> <li>- sense of touch</li> <li>- small motor development</li> </ul>	For instance, use rattles made of different material to activate senses of touch and hearing. Give the child time to explore and experiment with material.
1	Switch: Melody of next song played on recorder		<ul style="list-style-type: none"> <li>- moment of listening</li> <li>- parents get used to melody of new song</li> </ul>	A new sound turns the children's attention toward the outside world again.
4	Touching hands		<ul style="list-style-type: none"> <li>- moment of rest</li> <li>- sense of rhythm</li> <li>- parent-child contact</li> </ul>	Peaceful ending to the lesson. Sing song several times, letting parents sing it together. Perhaps accompany with a recorder after a while, or do this in the next lesson.
2	"Washing song" with new words		<ul style="list-style-type: none"> <li>- variation with words</li> <li>- structure</li> <li>- clear ending to lesson</li> </ul>	A song to use when children put on outer garments. The melody is also used at the beginning of lesson.

## ENDNOTES:

- 1 Wal, J. C. van der (1987). *The speech of the embryo*, p. 13.
- 2 For a list of research about touch, contact The Touch Research Institute in Miami ([www.miami.edu/touch-research](http://www.miami.edu/touch-research)).
- 3 Montagu, Ashley. (1986). *Touching: The Human Significance of the Skin*.
- 4 K & P Opleidingen: a national institute in The Netherlands offering in-service training (also music courses) for daycare providers and playgroup teachers.
- 5 Murray, Lynne, & Trevarthen, Colwyn. (1985). Emotional regulation of interaction between two-month-olds and their mothers. In T. M. Field & N. A. Fox (Eds.), *Social perception in infants*. Norwood, NJ: Ablex.
- 6 Jenkins, J. M. D. (1976). *The relationship between maternal parents' musical experience and the musical development of two- and three-year-old girls*. Doctoral dissertation, University of North Texas.
- Kirkpatrick, W. C. (1962). *Relationships between the singing ability of pre-kindergarten children and their home environment*. Doctoral dissertation, University of Southern California.
- 7 Prescott, James W. (1975). Body pleasure and the origins of violence. *The Futurist*.
- 8 Ayres, Barbara (1973). Effects of infant carrying practices on rhythm in music. *Ethos* vol. 1, no. 4.

---

## FURTHER READING:

- Albers, M., & Rikhof, R. (1998). *Muziek tussen school en school*. ISBN 90-6020-738-6
- Albers, M., Van Gestel, M., & Van Maurik, M. (2000). *Supplementary course material — Music on the lap* (Only available in Dutch).
- Baloti, D. Lawrence (1983). *Massageworks: A practical encyclopedia of massage techniques*. New York: Putnam. ISBN 90-6134-274-0
- Cass-Beggs, Barbara. (1978). *Your baby needs music*. ISBN 0-312-89767-7
- Derks, L., & Hollander, J. (1996). *Essenties van NLP*. ISBN 90-6325-478-4
- Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. New York: Basic Books.

- Greenspan, S., & Breslau, Lewis N. (1999). *Building healthy minds*. (Translation: Wat gaat er in dat hoofdje om). ISBN 90-215-9771-3
- Langedijk, Pieter (1996). *Strelen, masseren en aanraken*. Deventer. ISBN 90-202-0090-9
- Meijer, Liane (1996). *Massage voor jonge kinderen*. ISBN 90-6963-364-7
- Pollmann Wardenier, W. (1986). *Verkenningen in de haptonomie*. ISBN 90-229-5457-9
- Soesman, Albert (1998). *De twaalf zintuigen*. (Translations available in French, German, English, and Japanese). ISBN 90-6038-424-5
- Velten, Heidi, & Bruno, Walter (1998). *Baby massage* (Original title: Harmonische babymassage. Dornier Medienholding GMBH Berlin). ISBN 90-243-7029-9
- Verhulst, F. C. (1991). *De ontwikkeling van het kind*. ISBN 90-232-2642-9
- Walter, Kristine (2000). *Handreflexologie*. ISBN 90-6963-460-0
- Woolfson, Richard C. (2001). *Bright baby*. London: Hamlyn. (Translation: De pientere baby). ISBN 90-213-3073-3
- Woolfson, Richard C. (2001). *The bright toddler*. (Translation: De pientere peuter). ISBN 90-213-3074-1

---

**Margré van Gestel** trains and supervises students in music, pedagogy, and communication skills in several educational institutes in The Netherlands. She is a music pedagogue, a conductor of three choirs, and a supervisor for Children's Theatre training with 25 years of experience as a primary school music teacher. She also trains practitioners in "Music on the Lap" courses, which works with parents and their young children between birth and age 4. Margré van Gestel has published songs and contact games for children from birth to age 6 and is co-author of a music teaching methodology book for primary school teachers: *Moet je doen*. Among other subjects, she has given Music on the Lap presentations at congresses in The Netherlands and Belgium and at ISME Early Childhood Music Commission conferences in Japan (1992), Missouri (1994), England (1996), South Africa, (1998), and Denmark (2002).