

## Wombdrums

*What does it sound like baby?*

Ray Charles (in Tom Dowd and the Language of Music DVD)

Imagine yourself five months along in the womb. You have been through the stage of looking like a reptile, you have passed through the mammalian phases and are looking more like a human baby every day. And your ears are opening up to all the sounds around you as your brain grows. You are unable to swim or dance, but you are living in a sea of regular and irregular rhythms mediated by fluidity. Dark in there. Nothing to see. Nothing to feel but rhythms taken into the body as sound and massage: billions of rhythm-sound-massage-messages to the central nervous system.

The mother's heart beat, source of all life and energy, constant and nearby, establishes a deep sense of tempo, pulse and power as the brain is growing. This is probably why we have agreed upon 60 seconds or heartbeats to the minute, and 60 minutes to the hour. Whale clocks and bird clocks would be different. Our clocks keep human time, heart beat by heart beat. The average polka, like the average march, has sixty musical measures to the minute. Our brains learned this tempo in the womb.

The sound of a heart beat is complex, not a simple thump, but the mix of valves opening and closing, the sound of synchronized contractions and releases echoing through the womb second by second, minute after minute, hour after hour, day after day, as the brain grows by discriminating complexity in unity, responding to multiple echoes of valve work clustered as one complex sound, one big beat made up of smaller beats almost, but not quite, coinciding.

And we must be aware of our own heartbeat reverberating into the fluid all around us. Where does it exist in time? Is it in counterpoint to the mother's heart beat? A call and response pattern?

The mother breathes. A slower tempo than the heart, a steady meter of in and out as the lungs fill and empty, swell and recede, ten or twelve times a minute. Like the heart, this meter is also a massage, the womb slightly pressured by the steady expansion and contraction of the chest cavity. So the brain has two different mother meters to process, two different tempos to reconcile or play between, and the fetal heart beat playing against them both.

Three different regular pulsations, at three different tempos, with three different sound qualities, are felt by the growing body and feed the growing central nervous system around the clock, second by second, minute by minute, hour after hour in a dark world where massage-rhythms are the only stimulations.

The three regular rhythms are not the only rhythms. What about the rhythms of digestion? Peristalsis? Probably too slow to register. But the gurglings and churnings of the stomach and gut must add some kind of internal counterpoint. And then there are all the other regular rhythms of mother's daily life: walking, toe tapping, talking, dancing, whatever is going

on with Mom and whatever else may be happening “outside” will come to the womb drum as sound in the surround and as counterpoint to the three regular but different meters inside.

In sum, to the extent that stimulation grows the body and the central nervous system during the last three months of gestation, all of that stimulation is coming to the womb as a complex rhythmic mix of different steady sound pulses and many counterpointing rhythms variably reinforced by physical pressures. 100% of the support for the maturing central nervous system is musicking massage.

Which is why I think each child is born to groove on reality through musicking.

Perhaps the last three months in a womb, where the senses of sight, taste and smell are limited while hearing and passive touch (being pulsed/massaged) are continuously saturated, is just a phase we go through. Perhaps birth is meant to be a decisive break with this unbalanced sensorium. Smell, taste and vision come into their own and the central nervous system is completed, filled out and filled in, by stimulation from a new, fuller and better ratio of sensations. Life in the womb was certainly limited, and once born we are destined to appropriate the world: smelling, grabbing, eating, seeing and believing, going for self. Perhaps.

But I think one of the reasons we all hunger for more music, magic and touch in our lives, and rightly so, is that the womb drum that grew our brains is suddenly missing. The break between aural dark womb drum and the bright, visual world is too harsh. The deprivation is too sudden and we crave a restoration of participation. We want to be inside all those polymeters and polyrhythms once more.

From the moment of birth, we want the groove again. And the best reason to be out of the womb is to dance.

Pat Campbell:

What does it sound like inside the womb? What sounds from outside the womb are audible inside it? When Sheila Woodward placed hydrophones (a miniature microphone designed for use in liquid atmospheres) inside the wombs of pregnant mothers in early stages of labor (by their consent, of course), she found that unborn human babies could hear not only the beating heart and the rushing blood, but also their mothers' speaking and singing voices. Other external sounds penetrate as well: voices of fathers and other men and women within arm's reach of the mother, the sounds of “live” cellos and marimbas, and recordings of classical and jazz music. The ear reaches an advanced level of structural maturity by six months and the auditory nerve is developing then, so womb-babies can process sounds in their brains. From two to three months before birth, babies show startle responses to noise and sudden musical “starts”, and may kick wildly when mother attends a live music concert. They know what's going on in their sound-worlds, and they carry it with them in their long-term memory past birth and into their childhoods. In fact, even adults are known to have an uncanny

knowledge of music which the mother listened to or performed regularly during her pregnancy. It seems that the development of musical language and musical understanding (and even musical taste) begins to seep in and be shaped some time sooner than we could have imagined. What might this mean for inspired mothers, fathers, caregivers, and teachers in the way of a very early education in music? Lots of music in the “diet” of mothers-to-be in order to get the groove growing in their little ones.

For your reading pleasure on intrauterine music, seek out these reports:

Arabin, Benjamin, 2002. Music during pregnancy. Ultrasound in Obstetrics and Gynecology 20, 425-430.

Lecanuet, Jean-Pierre, 1996, Prenatal auditory experience, in Musical Beginnings, ed. by Irene Deliege and John Sloboda. Oxford: Oxford University Press.

Woodward, Sheila C. and F. Guidozzi, 1992. Intrauterine rhythm and blues. British Journal of Obstetrics and Gynaecology 99: 787-790.

Whitwell, Giselle E., 1999. The importance of prenatal sound and music. Journal Of Prenatal & Perinatal Psychology & Health 13, 255-262.