

A recently published article by Birgit Mampe, Angela D. Friederici, Anne Christophe and Kathleen Wermke entitled "[Newborns' Cry Melody Is Shaped by Their Native Language](#)" shows evidence that newborns' cry melody is influenced by the native language of their mother. The authors analysed the melody contours of 1254 cries (selected from 2500 recordings) from 30 French and 30 German monolingual families. They normalized each cry duration and measured the time at which the maximum pitch was reached and the time at which the maximum intensity was reached. Babies from both German and French group produced various cries with very different melodies, but in mean there was a significant difference between the melody of German baby cries and of French baby cries. We can therefore conclude that, on average, the baby cries' melodies are closer to the melody of their mother's tongue than to that other tongues (but see [Mark Liberman Language Log post](#) for some methodological issues).

This study provides the first evidence of the fact that newborns sound production is influenced by the language of their parents. From previous studies we knew that newborns prefer to hear language to which they have been exposed prenatally (e.g. DeCasper, A.J., and Fifer, W.P. (1980). "[Of human bonding: Newborns prefer their mothers' voices](#)". *Science* 208, 1174-1176) and we also knew that infant's babbling is heavily influenced by the language of their caregivers (see the work by Bénédicte de Boysson-Bardies, e.g. B de Boysson-Bardies, L Sagart, C Durand (1984). Discernible differences in the babbling of infants according to target language. [Journal of Child Language](#)). Yet, babbling only starts at around 7 month of age and by that time infants have already learned specific features their mother tongue, they can already categorize vowels for instance. So it is quite a surprise to see that newborn's cries can be influenced by their mother tongue.

To me, this suggests an interesting evolutionary hypothesis. If newborns are able to produce language-specific cries from their very first day, it could be because the production of such cries increases the likelihood that mothers and other caregivers take good care of the newborn. Note that under this hypothesis, the fact that newborns' cry melodies are similar to their caregivers' tongue melody is not necessarily related to the fact that they are learning a language. We could imagine two perfectly independent systems. On the one hand a baby crying system tuned to the caregivers' tongue prosody to elicit attention and on the other hand a baby language production system maturing more slowly. Of course, the alternative hypothesis is that when they are born, newborns' language systems have already matured to the point where sound production is influenced by previous exposure to their linguistic stimuli. And this may, or may not, help elicit response by caregivers.

A first step to tackle this issue would be to see whether new mothers are more reactive to cries of babies raised by mothers speaking their own tongue rather than to cries of baby raised by foreign language speaking mothers. Of course an implicit measure would be best, such as the level of such or such hormone that relate to stress and anxiety. But a crude, explicit measure could also do the trick, so let me simply ask: can you tell the language of the mother from the following baby cries?

{/music}/images/users/nicolasclaidiere/BabyCries/{/music}

[Find which cry belongs to which baby here!](#)

We would like to thank the authors of the paper for having kindly provided the recording of the cries.