

## READING PASSAGE 2

You should spend about 20 minutes on **Questions 14–26**, which are based on Reading Passage 2 below.

### The Role of Mothers in the Origins of Music

Music is an important part of our lives. We connect and interact with it daily and use it as a way of projecting our self-identities to the people around us. The music we enjoy – whether it's country or classical, rock 'n' roll or rap – reflects who we are.

But where did music, at its core, first come from? It's a puzzling question that may not have a definitive answer. One leading researcher, however, has proposed that the key to understanding the origin of music is nestled snugly in the loving bond between mother and child.

In a lecture at the University of Melbourne, Richard Parncutt, an Australian-born professor of systematic musicology, endorsed the idea that music originally spawned from 'motherese' – the playful voices mothers adopt when speaking to infants and toddlers.

As the theory goes, increased human brain sizes caused by evolutionary changes occurring between 1,000,000 and 2,000,000 years ago resulted in earlier births, more fragile infants and a critical need for stronger relationships between mothers and their newborn babies.

According to Parncutt, who is based at the University of Graz in Austria, 'motherese' arose as a way to strengthen this maternal bond and to help ensure an infant's survival.

"If babies were born earlier, it is clear they would need better care in order to survive ... this would involve the baby communicating its state and needs more clearly to the mother," says Parncutt.

"All that makes it very likely that motherese evolved as an evolutionary adaptation in response to this development. To that story we can add a large amount of modern empirical evidence for the musical nature of motherese and for the musical abilities of infants," he adds.



Although it may sound cute – even nonsensical – on the surface, ‘motherese’ is actually a sophisticated form of communication. According to Parncutt, it contains structural musical elements such as rhythm and melody, and codes that babies and mothers can understand.

It also contains cross-cultural similarities with regard to the physical gestures and movements it incorporates – an important consideration when examining the origin of music.

“The sonic-gestural vocabulary tells both mother and infant about the current physical and emotional state of the other, as well as the current state of play between them,” says Parncutt.

“Here, emotions such as surprise and disappointment are learned for the first time in a social and musical context. It is about survival in that it motivates the mother to care for the infant and gives her information about the infant’s needs.” For example, mothers will be able to understand when their babies are tired or hungry, he explains.

Another important element of the ‘motherese’ dialogue is its prenatal origins. A foetus begins hearing nearly four months before birth, during which time it regularly hears its mother’s voice, footsteps, heartbeat, and digestive sounds – all of which provide information to the baby about its mother’s emotional state.

After birth, the baby will recognise these sound patterns and its mother’s correlating mood, and respond accordingly, says Parncutt.

Gary McPherson, head of the University of Melbourne’s School of Music, reiterated the importance of this prenatal association, saying a human’s ability to interact with music is seen in the earliest stages of life.

“Music is the very first form of intelligence to reveal itself – even before a baby is born, they can recognise music and sound patterns,” he says.

That music originated from the mother-child bond and humans’ most primal instinct – survival – is an interesting take on a hotly disputed topic, one that has several competing theories.

Parncutt based his research on a grading system he created to assess these various theories, the objective being to measure their validity against a comprehensive set of criteria – what he called universal aspects of music.

Some of the key aspects are as follows: music is acoustic; it is meaningful and can be used to communicate information; it involves some degree of movement and gesture; it has certain structural components like rhythm, melody, repetition and form. It performs certain social functions; music is emotional and can compel people to behave a certain way; it is

intentional, meaning musicians must have a certain degree of mental sophistication in order to manipulate the emotions of others; and it is intrinsically spiritual.

According to Parncutt, “a good theory of music’s origin should explain or be consistent” with all the universal aspects he described.

Using these criteria, Parncutt evaluated several current theories. There’s the theory suggesting that musical talent is inherent in animal behaviour, for example, birds singing as a part of the courtship ritual or wolves howling to mark their territory.

Others suggest that it exists to give us pleasure, somewhat like a drug; or that it developed as a way for men to attract sexual partners, with the most skilled musicians being rewarded with the best mates; and that music evolved as a tool of play to help youngsters learn and acquire other non-musical skills.

While Parncutt’s work hasn’t disproved these ideas, it suggests that ‘motherese’ offers the most complete explanation for music’s origins.

“I think it can account for just about every universal aspect of music, both the similarities with language and the differences,” says Parncutt, calling it the “least speculative” of the bunch.

“In framing this research, his contribution has been to tackle the existing theories head-on,” says McPherson. “He’s not just accepting something that is sexy – he’s really deconstructing this whole research area. By examining all the different theories he is actually building up a very powerful argument. It’s a wonderful contribution.”

Despite the value of Parncutt’s research, the evidence propping up the ‘motherese’ theory is far from concrete and some experts wonder whether the origin question can even be answered at all.

“There are many speculations about the origins of music, but don’t forget for a minute that they’re only speculations – wild ones,” cautions Sandra Trehub, a psychology professor at the University of Toronto Mississauga, who has done extensive research on ‘motherese.’

“Vocal music, like speech, doesn’t leave traces that allow us to discern its origins in ancient times... None of these theories can be proven.”

Another criticism is that the theory doesn’t account for the origin of non-vocal types of music. Neil McLachlan, a music psychologist at the University of Melbourne, points to the traditions of using music in work and in warfare.

“There certainly isn’t one social function of music. It’s quite possible that certain musical behaviours have developed from demands other than learning,” he says.

"Music has been used in warfare to inspire marching armies and distract them from their impending doom. And in work traditions it could be used to distract people from repetitive tasks."

According to McLachlan, there is likely a plurality of different origins spanning across an historical timeline. "Motherese may be the earliest origin, but it doesn't account for all music – particularly non-vocal expressions like rhythmic entrainment."

Parncutt himself openly admits that the evidence is inconclusive and that there may be a combination of factors contributing to the origin of music.

But he maintains that 'motherese' provides the most complete explanation right now – especially because it accounts for the curious link between music and spirituality. "No other theory has clear things to say about the link between religion and music in all cultures," he said.

According to Parncutt, infants lack an independent sense of self and therefore view themselves as an extension of their mothers. This deep emotional connection between two people is one example of spirituality.

"I am leaving the normal, usual, solid foundation of science by talking about these things, but since they are of such central importance to the human condition, I would prefer not to ignore them – as most researchers on the origins of music have done to date."

## References

Myles Gough. "The origins of music." *Cosmos Magazine*, March 3, 2011.

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