



## **Sexual superiority comes down to your voice**

New research findings discovered that Choirboys can actually use their voices to sexually compete to win favour with the opposite sex.

In a research study combining science and the arts, Professor Peter Keller from The MARCS Institute at Western Sydney University settled an age-old evolutionary debate by showing that music, unlike most other behaviours, allows selfish sexual competition without threatening social cohesion.

Professor Keller said much like insects and frogs, when in group settings human males use competitive mechanisms, in this case their singing voices, to jam rival signals from other suitors to gain attention.

Acoustic analysis of the renowned St. Thomas Choir of Leipzig revealed that, in the presence of female listeners, boys with the deepest voices enhanced the brightness of their vocal sounds.

Professor Keller believes this vocal enhancement may be a reflection of sexually mature males competing for female attention in a covert manner that did not undermine collaborative goals.

“Music is found in all human cultures but its evolutionary roots have always been mysterious,” he said.

“Some researchers argue that music originated from competitive sexual displays *or* from cooperative social signaling in other species.

“But our research suggests that both accounts may be true. Similarly to how male insects in synchronous “choruses” attract females by modifying their signals to outshine rivals, the choirboys subtly increased the high-frequency content of their vocal spectrum in the presence of female audience members (adolescents aged 15-16 years).

Professor Keller said the presence of these subtle changes only within older boys (aged 16–19 years) with the deepest voices might be associated with testosterone, which lengthens the vocal tract by causing the larynx to descend in males during puberty.

This lengthening of the vocal tract lowers the overall frequency of the voice while reducing spread in high-frequency regions of the vocal spectrum, ***which has been found to increase perceived attractiveness and dominance.***

“Overall, our results point to a likeness between human choral singing and chorusing displays in non-human species (crickets, cicadas, and frogs) where congregations of males produce rhythmically coordinated signals that collectively serve as a beacon to attract female mates.

“The findings of the study are remarkable because they suggest that, even during highly formalised types of musical interaction, performers are free to introduce unsanctioned behavioural embellishments that allow them to enter into covert competition for the attention of potential mates without undermining collaborative goals related to emotional communication and artistic expression.”

**ENDS**

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Behaviour and Development

This research study was carried out in collaboration with Western Sydney University and the Max Planck Institute in Leipzig, Germany.

The published research paper is available at:

<http://journal.frontiersin.org/article/10.3389/fpsyg.2017.01559/abstract>