

# In tune or out of tune – people with no formal musical training versus professional musicians

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No need for a trained ear: even people with no formal musical training are capable of identifying singing that is out of tune. Credit: Shutterstock

Not everyone has the ability to sing. But is everyone capable of hearing when a song is out of tune? "Pop Idol", "The Voice of Germany"... there are many music casting shows and talent contests based on viewers' voting. However, the television viewership is not comprised of professional musicians, but of laypersons. Are they really capable of judging non-professional singers?

A new study by Pauline Larrouy-Maestri, researcher at the Max Planck Institute for Empirical Aesthetics and her colleagues shows that laypeople do have the ability to evaluate peers. Laypersons are very good at judging pitch accuracy of untrained singers in familiar songs. A layperson is defined as a person having no formal training in music, unlike professional musicians. However, laypersons are sensitive to musical structures of their respective culture and can detect

melodic errors from an early age on. "Melodic errors are, for example, violations of melodic contour, deviation of interval size and changes in tonality", says Larrouy-Maestri.

## 166 x Happy Birthday

Is this "sensitivity" for melodic errors enough to make an expert? In order to answer this question, Larrouy-Maestri and her colleagues presented 166 different versions of the song "Happy Birthday" to musical laypersons – all versions performed by peers. Each listener was asked to rate each sample twice, on a scale of its perceived accuracy.

Afterwards, the judgments were compared to experts' judgments from a previous study (Larrouy-Maestri, Lévêque, Schön, Giovanni, & Morsomme, 2013). The results show that there is a high overlap in the definition of pitch accuracy between laypersons and experts when hearing familiar melodies. Even though the definition is not exactly the same for laypersons and professional listeners, the laypersons were particularly consistent, i.e., keeping the same definition and strategy from one time to the other, and clearly using musical criteria in evaluating pitch accuracy of untrained singers. Layperson listeners are thus trustable judges of pitch accuracy in familiar melodies.

Still: the next time you hear "Happy Birthday" and find yourself thinking: "Now, that sounds out of tune", remember: "Happy Birthday" has to come from the heart – no matter what it sounds like!

**More information:** "Layman versus Professional Musician: Who Makes the Better Judge?" *PLoS ONE* 10(8): e0135394. [DOI: 10.1371/journal.pone.0135394](https://doi.org/10.1371/journal.pone.0135394)

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