What your voice reveals—or doesn't reveal—about your feelings

"I can hear it in your voice."

It's what we might say to a friend or relative who we think sounds highly emotional. But psychology researcher Doron Atias says the operative word here is "think," as the meanings behind intense emotional vocalizations are more complex than we realize.

Atias, an Azrieli Graduate Studies Fellow in the Affective Neuropsychology Lab at the Hebrew University of Jerusalem, says that most research in this area uses posed vocal reactions by actors, which may be oversimplified and stereotypical. This led him, together with his PhD advisor, Professor Hillel Aviezer, to conduct a more ecological experiment—meaning that it's based on observation of real-life phenomena—in which participants were asked to compare genuine and staged vocal reactions to winning the lottery.

A total of 200 participants listened to real-life vocalizations of 153 lottery winners in Israel who had won prizes ranging from the equivalent of roughly US$5,000 to $130,000. Participants were asked to rate the valence, or affective quality, of the vocalizations using a Likert scale from one (extremely negative) to nine (extremely positive). They then listened to and rated a set of lottery-win vocal responses performed by amateur actors.

The participants perceived the real-life vocal reactions as positive for the lower-sum wins and negative for the higher-sum wins; for the posed vocalizations, they assigned positive valence ratings for all wins. These results confirm what Atias and Aviezer had hypothesized: that we underestimate the intensity of an emotional reaction when judging by vocalizations alone. The complete results are available in the journal article "Real-life and posed vocalizations to lottery wins differ fundamentally in their perceived valence" (*Emotion,* November 2020).

The study's findings challenge how we perceive the feelings of others. Atias says such reconsideration could be useful in mental health diagnostics, where accurate assessment of patients is critical to effective treatment. He says the findings are also relevant to the fast-growing voice recognition software market, where technology companies endeavour to develop computer algorithms that can accurately distinguish different emotions in voices.

"These results reflect the inherent ambiguity of vocal expressions in everyday life, and highlight the critical role of context in understanding the emotional state of others," Atias says. ●