

## An average voice is beautiful, say scientists

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(PhysOrg.com) -- Nobody wants to be average, so we are told, but scientists at the University of Glasgow have found that when it comes to vocal attractiveness, sounding average attracts more admirers.

Researchers in the Department of Psychology studied vocal attractiveness to find out how much voices influence our <u>perception</u> of what is beautiful.

The researchers used a series of <u>voice</u> recordings from 32 men and 32 women, and then created voice composites by merging an increasing number of voices - two, four, eight, 16 and 32 - and then asked 25 listeners to rate the voices' attractiveness.

The results, published in the latest edition of the journal <u>Current Biology</u>, showed that, in most cases, listeners found the composite voices more attractive than the original voices, and this attractiveness increased with



the number of voices merged to create the composite.

One reason for this, the scientists believe, is because the composite voices had higher harmonics-to-noise ratios - that is to say, they were smoother with fewer irregularities.

Lead author Professor Pascal Belin, who is from Paris, said: "Smoother, more regular voices may signal younger, healthier speakers."

Another, less intuitive, reason for their findings is that voice composites sounded more like the average voice and voices which were closer in <u>pitch</u> and timbre to the average population were also perceived as more attractive.

This conclusion was checked by manipulating the original voice recordings to create a smoother version, but of the same pitch, and when both were played to the listeners they rated the smoother version as more attractive.

The same outcome resulted when the researchers altered voices to make them closer to the average pitch and further away from it, with the most average voices being deemed most attractive.

Prof Belin added: "The human voice, in addition to its role as the carrier of speech, reveals valuable information regarding the speaker's biological characteristics. The attractiveness of a voice partly reflects that biological information: health, reproductive fitness, etc.

"Voices with pronounced sexually dimorphic features - for example a deep voice in males - are preferred by the other gender because it may signal better reproductive potential. However our results are the first to highlight effects of vocal attractiveness that apply irrespective of speaker's or listener's gender"



"Listeners also attribute more positive personality characteristics to people with attractive voices - a bias known as the 'what sounds beautiful is good' stereotype."

Previous observations made a century ago show that the same increase in attractiveness can be achieved by averaging faces to create composite images which are judged to be more attractive.

Professor Belin cautioned: "It's worth noting that these findings were obtained using brief vowels, so they cannot be easily generalised to realistic speaking situations in which a number of additional cues are present, including intonation, speaking rate, etc.

"Nonetheless, these findings have important implications for voice-based technologies, suggesting simple ways of enhancing the attractiveness of synthetic voices at a time when automated voice systems are becoming increasingly prevalent.

"To individuals, they suggest adjusting the average pitch of one's voice to the mean of the same gender population (a deep B for males and an A for women) as a simple but effective means of 'vocal make-up'."

Provided by University of Glasgow

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