Earwitness Identification: Is Just Once Enough?

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The validity of voice identification as a reliable process is to a great extent unknown. Research into factors affecting a listener's ability to identify an unfamiliar voice is ongoing and highlights a number of potential issues to consider in its forensic application (extensively reviewed by Broeders and Rietveld (1995). Where guidelines are in place governing the construction and delivery of a voice line-up, such as the MacFarlane Guidelines in the UK (Home Office Circular, 2003), the stipulation is that the earwitness should be presented with a selection of voices – suspect plus foils – and asked whether they believe any of those to belong to the criminal. This method appears uncontested and involves the earwitness selecting one voice on one occasion. The evidence provided by this method is binary, with one single selection made either in favour of the prosecution or defence.

A possible solution to this binary result is to test the reliability of the earwitness's identification by asking them to make more than one judgement. There are methodological and ethical problems with using either more than one line-up of foils or having a time delay between repeating identical tests. The present study will instead investigate the viability of short-term repeated tests.

Listeners will be exposed to one target voice and then hear a selection of six voices. Rather than hear the line-up of voices once, as in a traditional voice line-up, listeners will instead hear each voice three times in a different order without being told any voices are repeated. The utterances from any given speaker will differ so that the only link between the three samples is the voice. Each time a sample is heard, the listener will be asked to rate how likely they think it is that the voice belongs to the target speaker (0-10).

The target voice and each of the foils will thus be given three ratings per listener and so a listener's likelihood-of-being-the-target rating can be calculated for each voice (0-30). It is predicted that the target voice will produce a higher rating than any of the foil voices. Comparisons will be drawn with a control group, who will use a traditional single identification procedure. The rates of correct identifications will be compared, where a higher rating for the target voice than any of the foil voices is treated as indicative of a correct identification within the test group.

The ratio of the ratings given to the each voice compared to all others will be considered in order to assess whether the strength of these ratings provides an indication of voice identification reliability. It is predicted that higher ratios will be recorded for the target voice relative to the foil voices. The effect of repeated testing will also be considered, with ratios also calculated for each of the three phases in the test.

The results will be discussed and possible implications for earwitness identification will be considered.

References

Broders, A. & A Rietveld, A. (1995). Speaker identification by earwitnesses. *In:* J. P. Köster, J. P. & A. Braun (Eds.), *Studies in Forensic Phonetics,* Trier: Trier University Press.

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