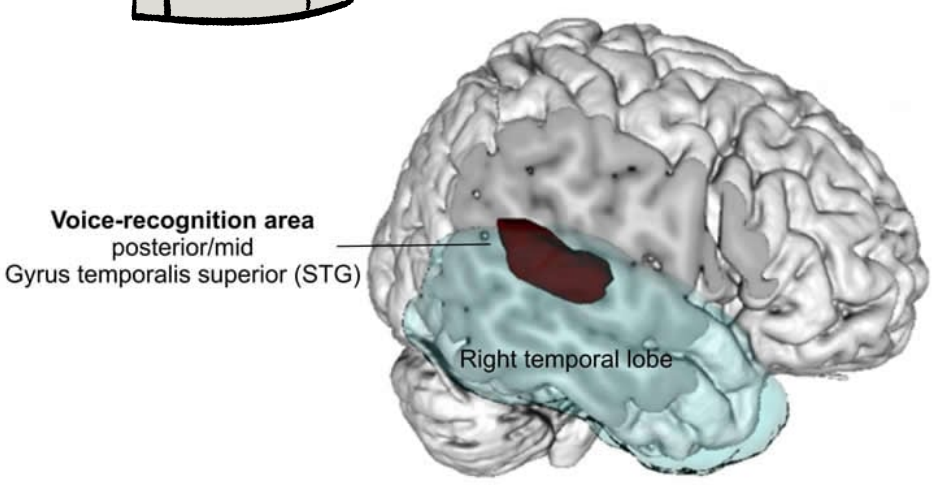
PHONAGNOSIA

What is it?



Agnosia is the inability to process sensory information

In this specific case, Phonagnosia is the inability to recognize voices

Auditory agnosia

Individuals with Phonagnosia have impairments in voice discrimination but do not suffer from comprehension disabilities

Individuals with Phonagnosia do not suffer from aphasia

Aphasia refers to when an individual has deficits in language skills (e.g., comprehension) because of deficits in their brain

This is a prime example showing how language comprehension is different from perception of the speaker and their voice

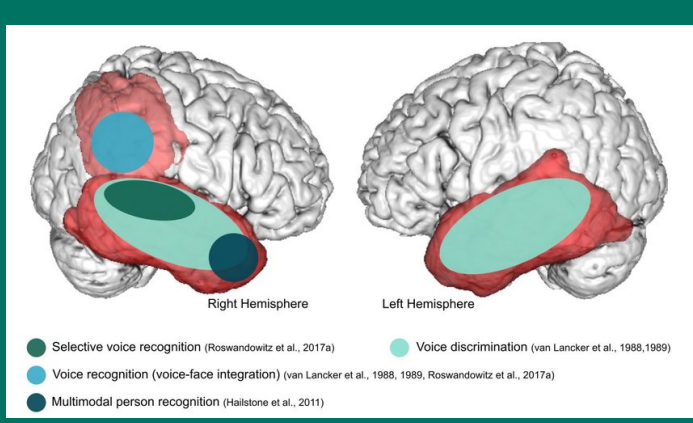
Nb: not explored as much as prosopagnosia (facial blindness)

Causes

Atrophy in the inferior and parietal regions in the right hemisphere is connected to deficits in recognition of familiar voices

Atrophy in temporal lobe of either hemisphere is connected to deficits in voice discrimination

For developmental phonagnosia it believed to be genetic



Symptoms

The loss of distinguishing between voices

- Either the inability to recognize familiar voices or impairments in voice discrimination

Phongasia does not, however, seem to cause impairments in emotional recognition

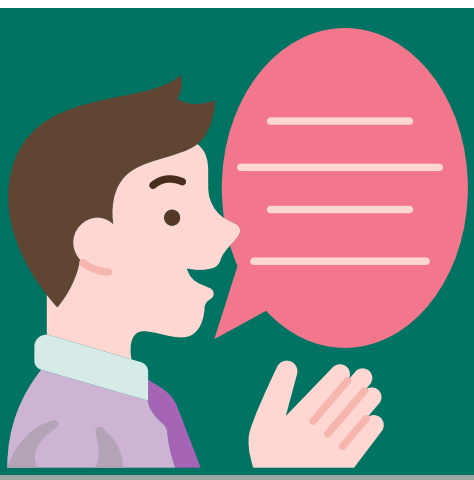
- Individuals with this disorder can match voices with emotions, and match facial expressions with emotions

Sometimes people might also have difficulties in distinguishing the sounds that musical instruments make, however this is not always the case and requires more research

Types

- Acquired Phonagnosia
- Ex. People can develop Phonagnosia after a stroke
- Developmental Phonagnosia
- Inborn; thought to be genetic
- Associative Phonagnosia

Refers to phonagnosia that develops with dementia or other neurodegenerative disorders



Treatment

There is no current treatment or therapy for Phonagnosia at the moment. More research is needed to develop methods of treatment.

The Vagus Project
Neuroscience Foundation

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References

https://www.sciencedirect.com/science/article/abs/pii/0278262682900161?via%3Dihub https://tu-dresden.de/mn/psychologie/ifap/kknw/forschung/phonagnosie?set_language=en#:~:text=The%20word%20phonagnosia%20is%20of,familiar%20people%20by%20their%20voices. https://www.sciencedirect.com/science/article/pii/S0028393209004874?via%3Dihub https://www.sciencedirect.com/science/article/pii/S0010945288800297?via%3Dihub https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2833414/ https://www.hindawi.com/journals/bn/2010/352490/ https://www.tandfonline.com/doi/abs/10.1080/01688638908400923 https://neurosciencenews.com/files/2017/12/voice-recognition-neurosciencnews.jpg