

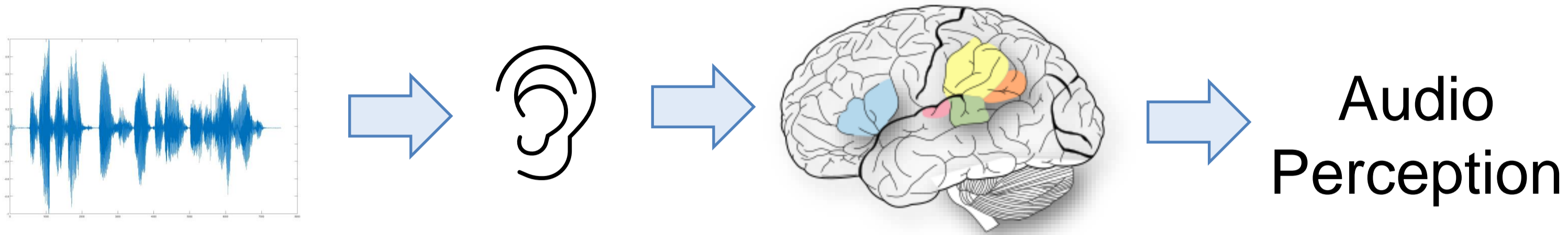
Auditory perception Illusions

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Introduction

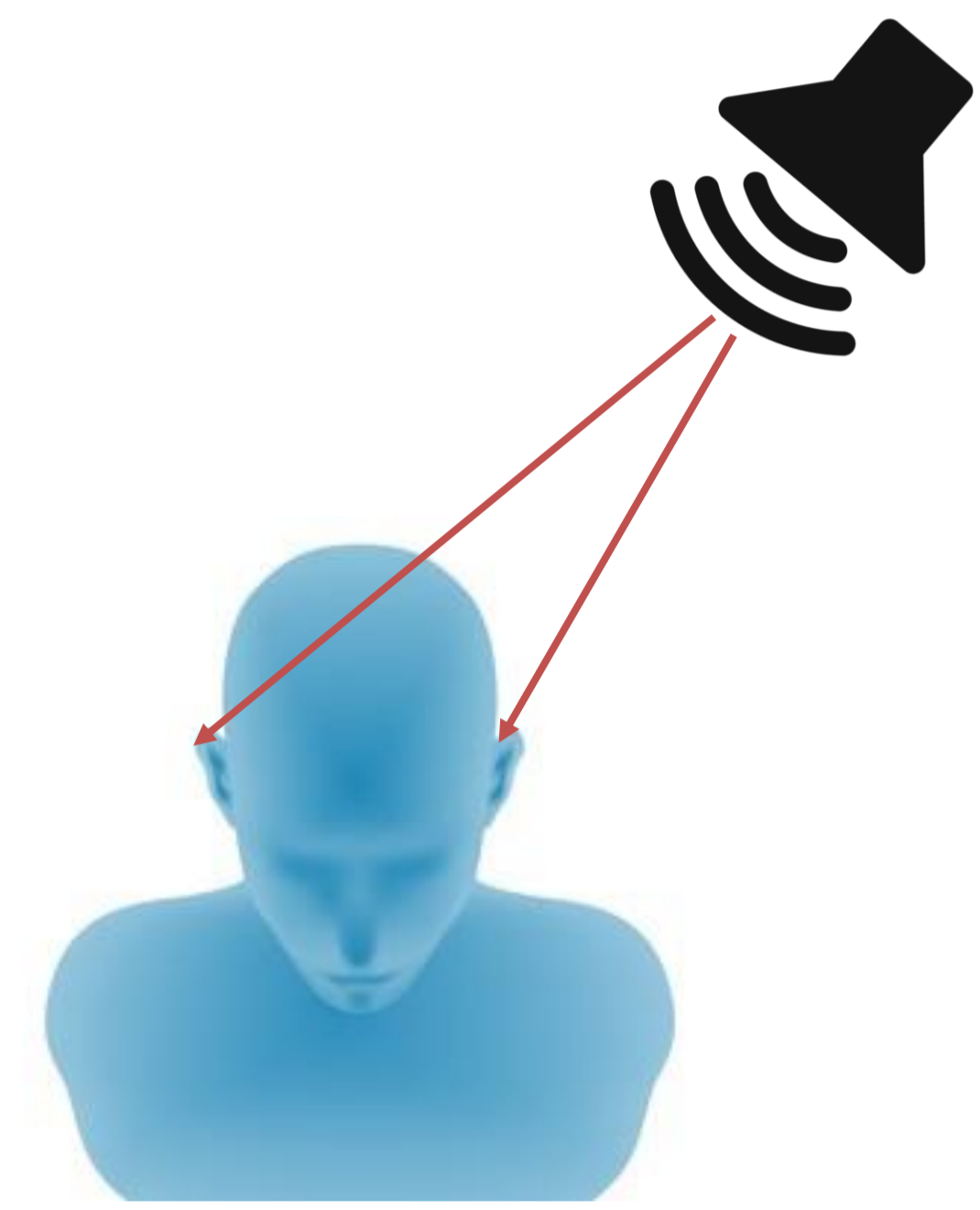


Does our brain need two ears?
Does it care about vision in auditory perception?
Does our brain fill the gap from sensors?

Audio illusions can help us understand how our Brain processes audio signals it receives from Ears and ultimately what we perceive.

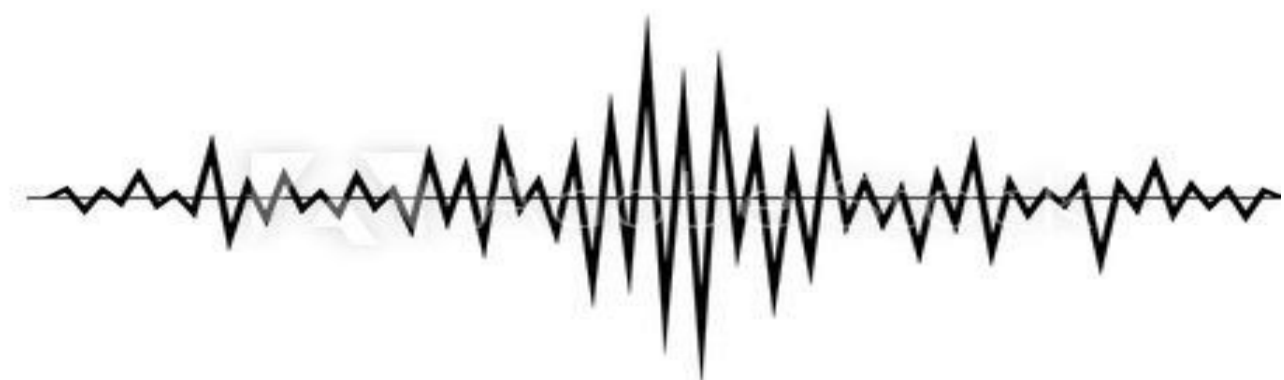
Sound Localization

How do we figure out the audio spatial source?



Time difference taken by sound to reach both ear, intensity of sound are used by our brain to locate the sound spatially

Do you hear what you see?



Brain Storm or Green Needle

Can same sound create different perception if what you see changes?

The answer is yes, in this remarkable illusion we can see that auditory perception is affected by presence of visual stimulus.

It demonstrates that auditory processing is not independent of vision!!

Temporal Induction illusion

Your Brain likes to fill in g_ps

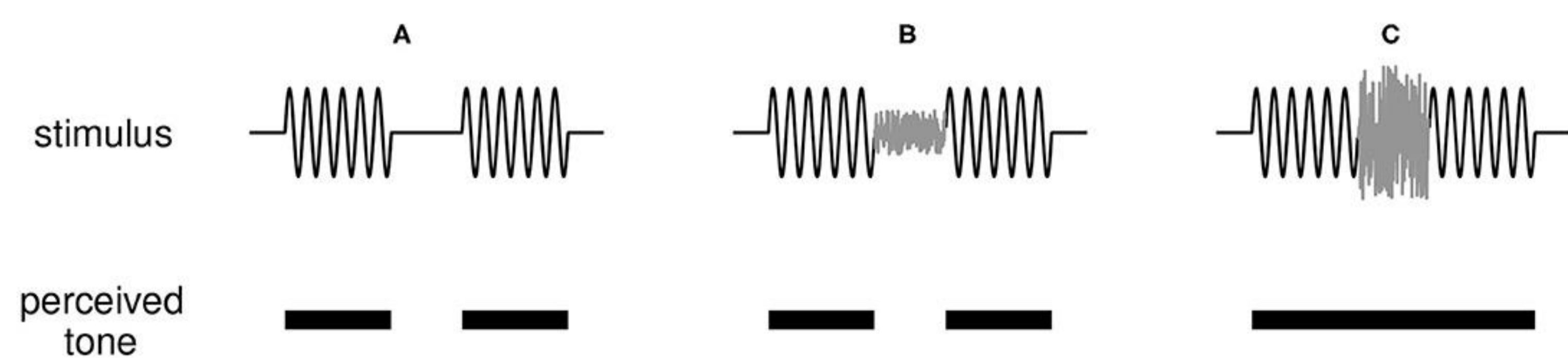


Figure from Cao et al.

In this illusion we see that our brain fills up the missing phenome in a sentence if there is a particular noise in place of missing phenome and not when it's empty.

References

1. Cao, Q., Parks, N., & Goldwyn, J. H. (2021). Dynamics of the auditory continuity illusion. *Frontiers in Computational Neuroscience*, 15, 676637.
2. Wallach, H. (1939). On sound localization. *The Journal of the Acoustical Society of America*, 10(4), 270-274..