

# Place and temporal theory

Psychology



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Place and temporal theories Place theory Place theory is defined as a hearing theory that stands for the idea that our sound perception relies on where each and every minute frequency causes vibrations along the basilar membrane. A pitch of a harmonic that fall under this category is believed to be reverberating to tonotopic organization of the primary auditory neurons (Foley & Matlin, 2010). Place theory of pitch perception associates more direct to the frequency analysis determined by the basilar membrane whereby different frequency components of sound inputted stimulate different places or positions in the membrane. The major problem with place theory is that it does not explain the appropriate accurate degree that is observed in terms of human pitch perception.

#### Temporal theory

Temporal theory of hearing postulates that the human perception of sound relies entirely on the patterns made on the temporal platform with which neurons respond to sound in the cochlea (Foley & Matlin, 2010). This means that a pitch of pure tone would be established by the timing of neuron firing patterns or signatures (Foley & Matlin, 2010). Volley theory lends a hand by explaining the single or group neurons that describe the firing patterns.

Temporal theory of pitch perception can therefore be said to be based on the fact that sound waveform embedded with a strong musical or harmonic pitch repeats. The theory relies solely on timing of the neural firings in the corti that result as vibration mechanism response of the basilar membrane. The major problem with this theory is that not all pitch perception abilities taken note of can be solidly distinguished.

#### Reference

<https://assignbuster.com/place-and-temporal-theory/>

Hugh James Foley, M. W. (2010). *Sensation and Perception*. New York: Pearson Education, Limited.