

# Psycholinguistics, Friday September 15

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- Discuss: Has your team agreed on its policies for attendance, preparation, decision-making, etc?

# Same or Different?

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*AX discrimination task*

1A

1B

2A

2B

# Same or Different?

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What makes a difference of a given size easy to detect in some cases but hard in others?

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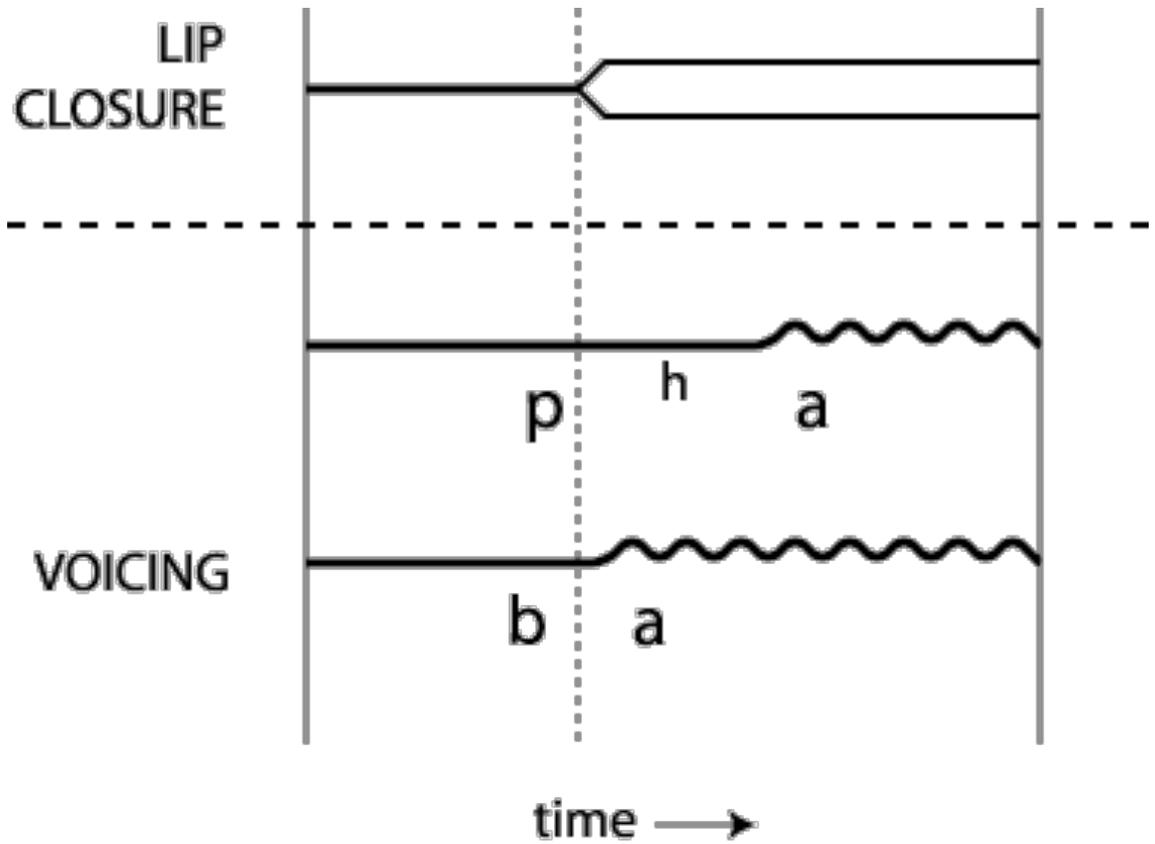
Weber's Law (1834)

# Weber's Law in everyday perception

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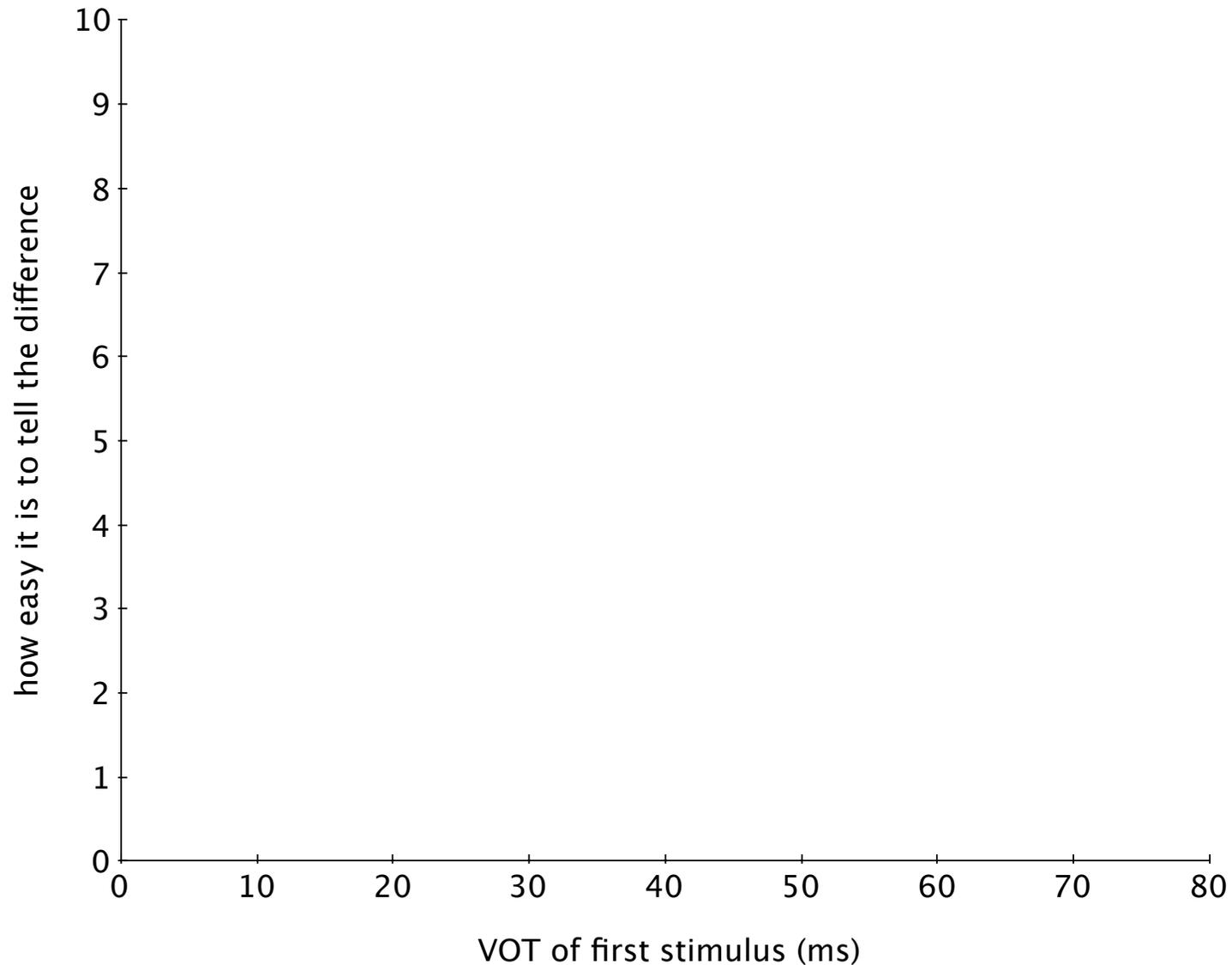
- How fast does the summer pass?
- Think of another example of Weber's Law in everyday perception. (Size, duration, loudness, etc.)

# Voice Onset Time (VOT)



# What would Weber's Law predict for a VOT discrimination task?

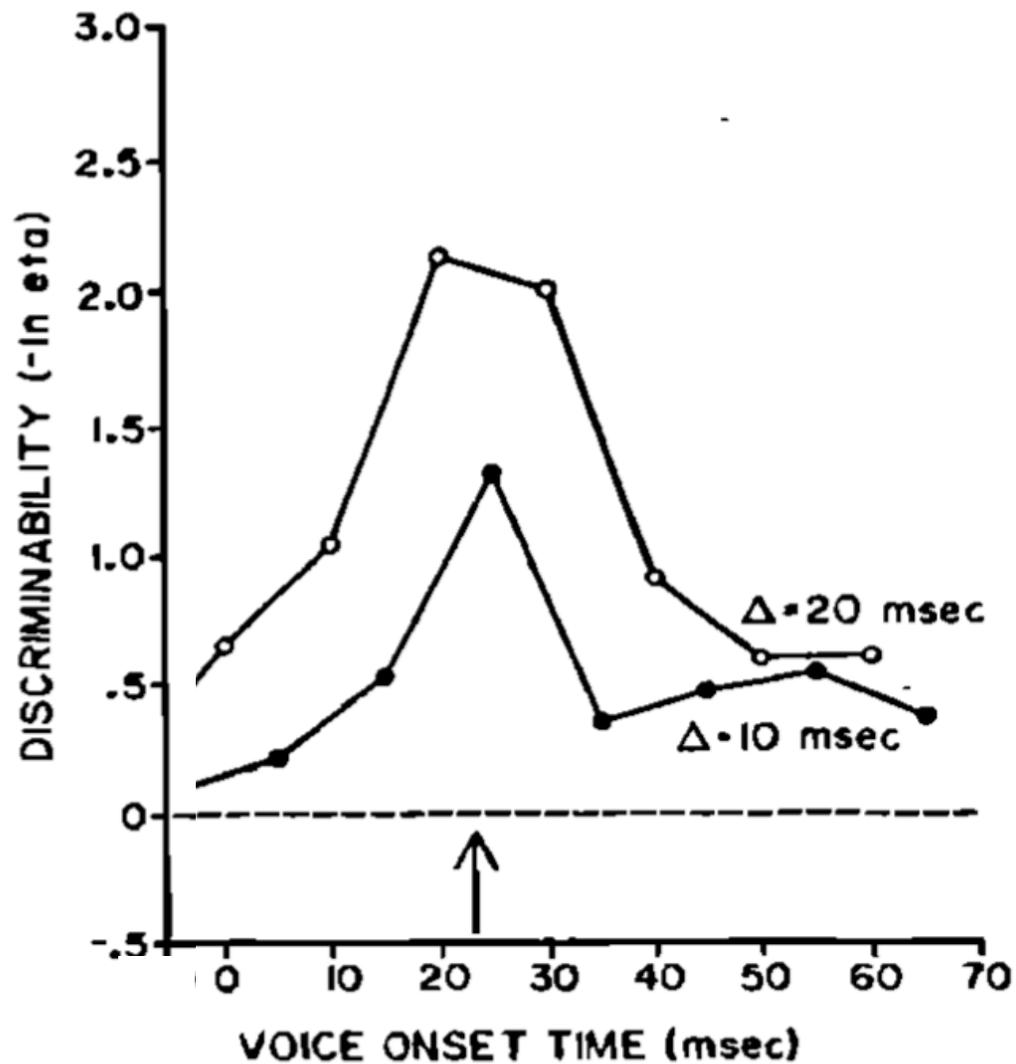
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# Discrimination Function for VOT

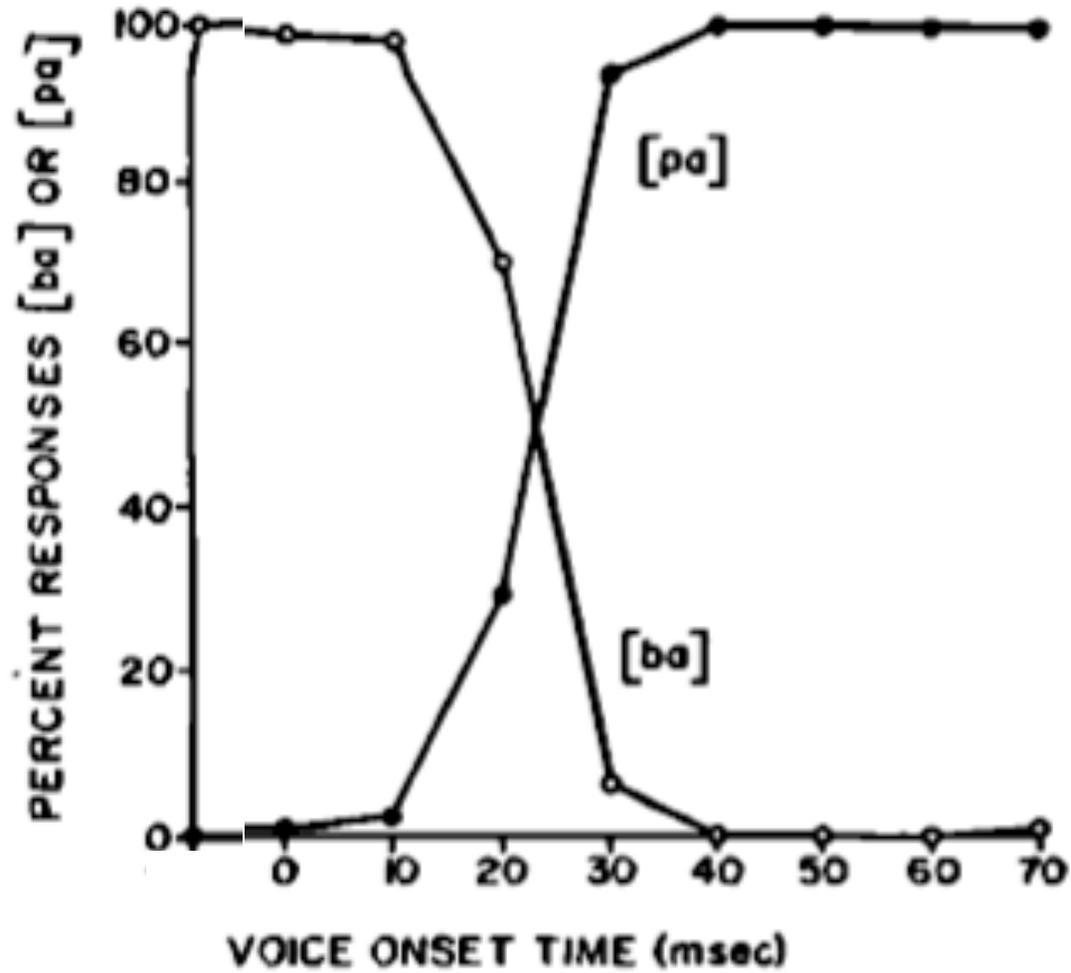
(Wood, 1976)

VOT discrimination is categorical.



# Identification Function for VOT

(Wood, 1976)



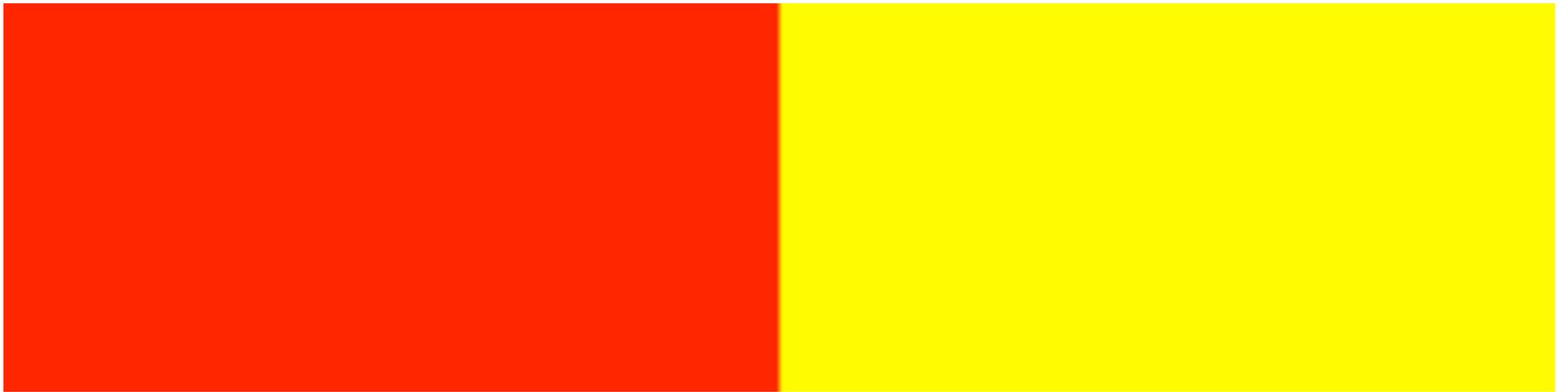
# Continuous Change in Visual Stimulus

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# Two Discrete Visual Categories

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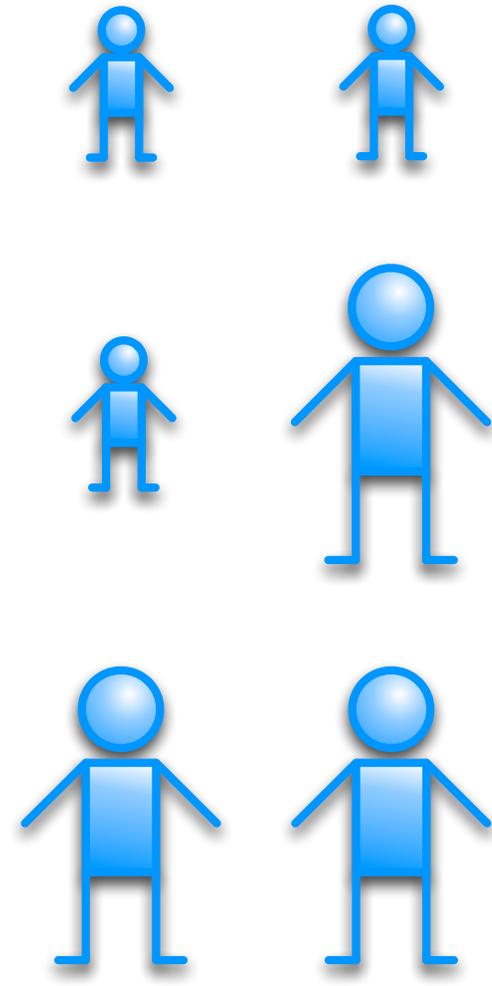
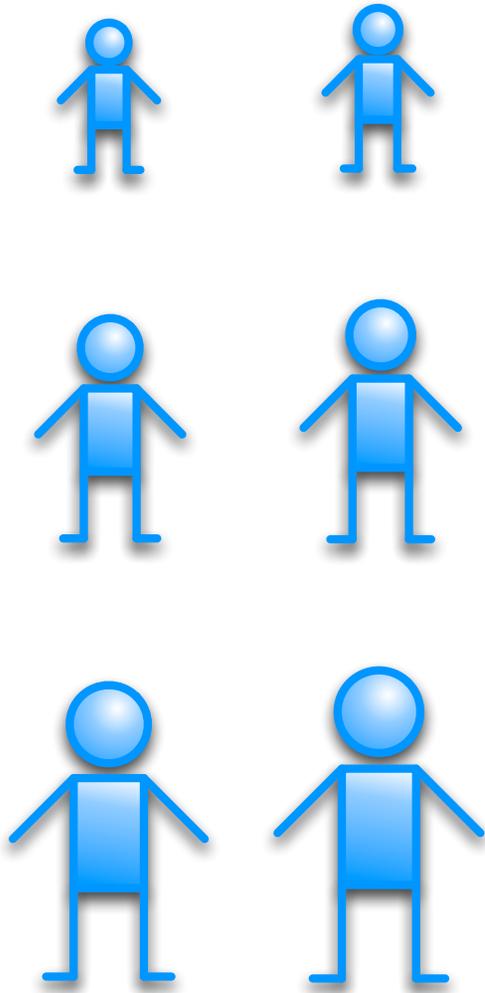
## Go back to your everyday example...

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- how would perception of that difference change if it were categorical?

# Categorical Perception Violates Weber's Law

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How does categorical perception help with the challenge of speech perception?

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# Our “theory” so far...

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**Problem: lack of invariance**

**Observation: categorical perception**

**Theory: perception is linked to production**

“What is common to /d/ before all the vowels is that the articulatory tract is closed at very much the same point.

Lieberman et al. (1967)

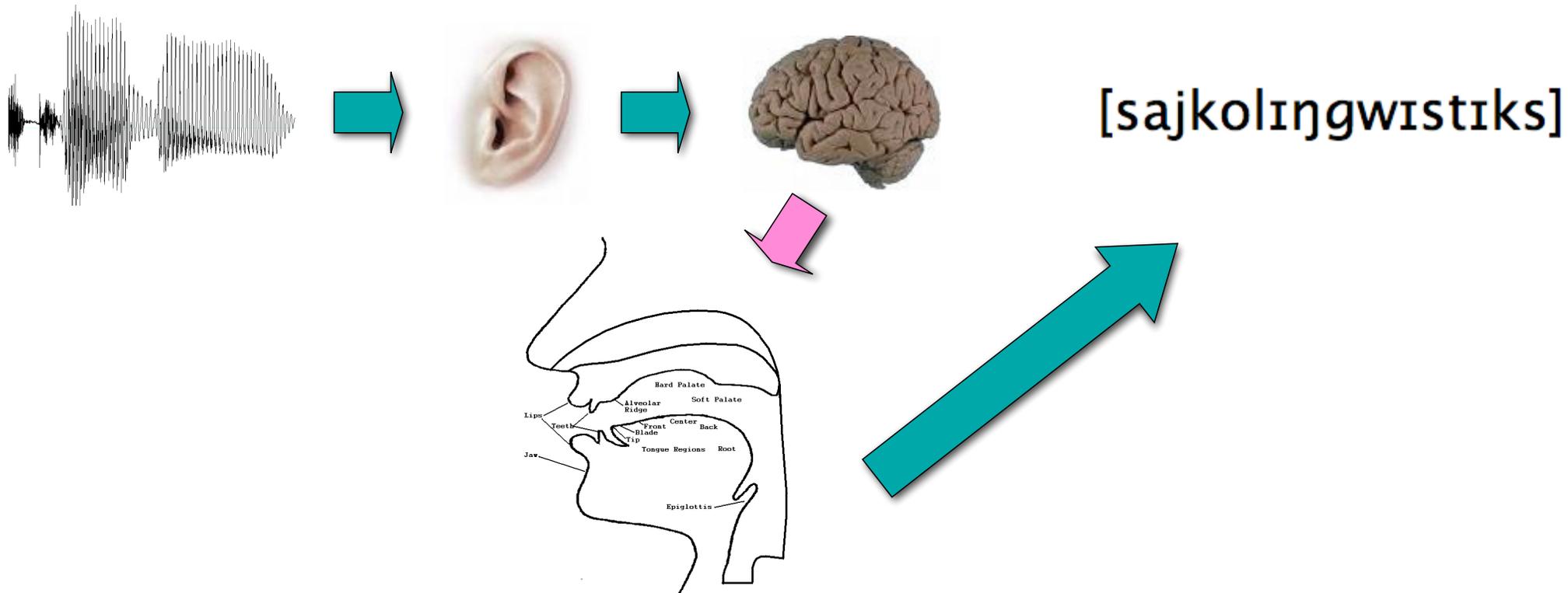
“

The objects of speech perception are the intended phonetic gestures of the speaker.

(Liberman & Mattingly, 1985)

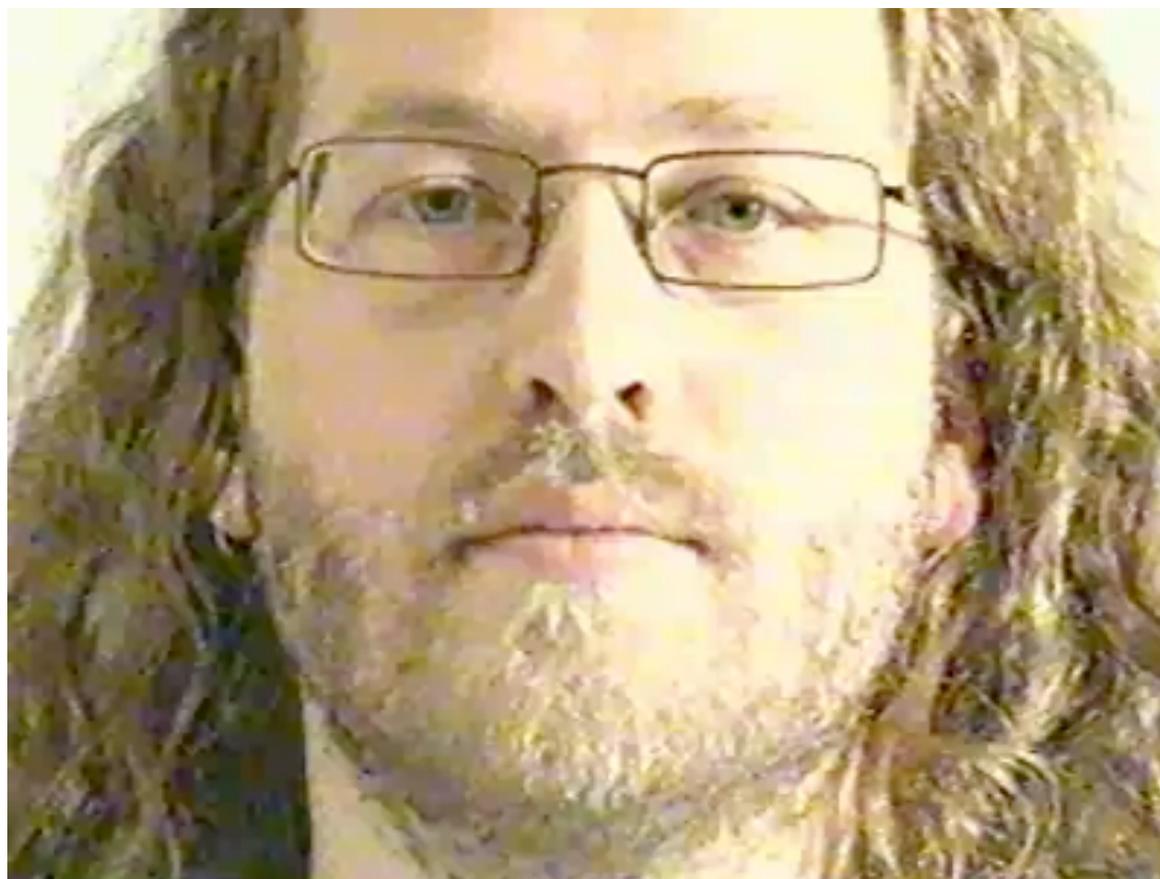
# The Motor Theory of speech perception

**"innately specified"**



What syllable is he saying?

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**Theory: perception is linked to production**

**Observation: McGurk effect**

**Conclusion: perception must be linked to production!**

## Weighing the evidence (in groups of 2 or 3)

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- pick a paper & do your best to understand it
  - what did participants do? what did researchers compare? measure?
- what do these results mean for the Motor Theory?