Expected Utility of Later Context Mediates Maintenance of Subcategorical Information in Word Recognition

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Motivation

Questions: Do listeners typically maintain subcategorical information about words after processing? What mediates this process?

Hypothesis: No maintenance if experience suggests it wouldn’t be beneficial

General Method

Use right-context effects to address these questions (see [1,2,3,4])

Basic logic: if listeners use both VOT & right context in categorization responses, they’ve maintained subcategorical information about the “?’ sound (VOTs used: 10, 40, 50, 60, 85ms)

Study 1: Listeners maintain subcategorical information

Replicate right-context effect with new materials and more naturalistic stimuli (n=106)

When stimulus distributions more like everyday language (unlike [2,4]), much clearer evidence for uncertainty maintenance

Study 2: Maintenance of subcategorical information is typical of language use

Method: Test whether participants show significant integration of VOT & context even before they have significant experience with the task

→ Use data from Study 1 groups & Study 3 exposure phase (informative context exposure group)

Study 3: Maintenance of subcategorical information is influenced by expected utility

Vary whether right-context is informative to word recognition (n=120)

Right-context uninformative during exposure leads to: no maintenance at the beginning of test

Conclusions & Future Work

Listeners typically maintain subcategorical information in memory during language processing, but this can be modulated by how useful they expect maintenance to be

Future work: is this a strategy employed during more naturalistic language use?

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