Main Point
This study investigates how voice onset time (VOT) and word duration are affected by lexical frequency for words read in isolation and in phrasal context. The VOT is shorter for hi-frequency words in phrasal context, and the word duration is shorter for both hi-frequency words and words in phrasal context.

Summary of results:

<table>
<thead>
<tr>
<th></th>
<th>hi-frequency</th>
<th>lo-frequency</th>
<th>change in duration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOT</td>
<td>73.8</td>
<td>71.8</td>
<td>-2.0</td>
</tr>
<tr>
<td>isolated</td>
<td>79.9</td>
<td></td>
<td>-6.4</td>
</tr>
</tbody>
</table>

Results can be accounted for in a usage-based model (e.g., exemplar, prototype), but pose substantial theoretical and implementation problems for a traditional linguistic model.

Background
1. The traditional linguistic model depends on a. discrete, invariant features b. economy of linguistic/phonetic features c. lexical representation similar to orthography d. a 'competence' versus 'performance' dichotomy
3. The factors above have been observed in several domains: quality (sonority, voicing, etc.), alternation (consonant substitution, assimilation, metathesis, etc.), and quantity (elision, shortening, etc.)—but relatively little literature on VOT.

VOT and word duration: effects of frequency

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Research Questions:
1. Is VOT shorter in high frequency words? 2. Is overall word duration shorter in high frequency words? 3. Is the frequency effect the same as in words in isolation?

Materials:

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Conclusions
1. The duration of hi-frequency words is slightly shorter than lo-frequency words (about 5%), and much shorter in phrasal context than in isolation (about 30%).
2. The VOT of hi-frequency words is not systematically shorter, but was shorter by 18%, or about 12 ms, in phrasal context. We do not know why.
3. Since frequency information is apparently stored with each lexical item, these effects support a "usage-based model" that records frequency information in memory.

References