Background - representation and processing of mass and count nouns

**QUESTION: How is the mass/count distinction encoded morpho-syntactically?**

<table>
<thead>
<tr>
<th>Indefinite Determiner</th>
<th>Plural Morphology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mass</td>
<td>eat a spinach</td>
</tr>
<tr>
<td></td>
<td>eat nutritious</td>
</tr>
<tr>
<td>Count</td>
<td>eat a noodle</td>
</tr>
<tr>
<td></td>
<td>eat noodles</td>
</tr>
<tr>
<td>Dual</td>
<td>eat a zucchini</td>
</tr>
<tr>
<td></td>
<td>eat zucchini</td>
</tr>
</tbody>
</table>

**RESULTS:**
- Count nouns are represented by counting nouns: by measuring functions.
- Dual nouns either pattern with count nouns, or are associated with greater costs than mass nouns (6).
- Mass terms (bare singular and plural nominals) are costly compared to count terms.
- Partially replicated [3] finding for younger adults: low frequency mass nouns evoke slower LDTs than low frequency count nouns and dual nouns.

**CONCLUSIONS:**
- Mass nouns evoke slower lexical decision times than count nouns.
- Dual nouns either pattern with count nouns, or may be associated with a polysemic advantage.

**Other Accounts:**
- Mass nouns do not consist of individuals (Bloom, 1999), are inherently plural (Chierchia (1998) or are specified only by world knowledge (Gillon, 1996).
- Experiment 1 - Single Word Lexical Decision

**Question:** How are mass and count nouns processed in sentence context?


**Discussion**
- Although there are distributional differences between count nouns, such that some are more appropriate in mass and count environments than others, there is no categorical difference between count nouns and dual nouns.
- Although nouns such as stone and potato are judged equally acceptable in both mass and count environments, in an online processing task, we find that mass environments are more costly to retrieve/process than count nouns, although the effect seems to depend on age and lexical frequency.

**Selected References**