Vernacular Explanations of Causation in Lay Health Discourse

Laurel Smith Stvan  
stvan@uta.edu  
Dept. of Linguistics & TESOL  
University of Texas at Arlington  
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Context:
Few linguistic works exam vernacular terms for health concepts rather than technical medical terms (cf. Rueda-Baclig & Florencio 2003). The prevalence of conversations on food, sleep, exercise, and illness—and the ordinariness of the words—leads to aspects of lexical misinterpretation remaining understudied. Lay terms with multiple senses are studied here to determine effects on misunderstanding of causality in health discussions.

Problem:
Studies of individual polysemy pairs have shown lexical conflation for fat, sugar, cold, health literacy, and stress (Stvan 2007, 2008, 2010). Assumption: word pairs with identical forms bring expectations that a trigger leads to a same-named outcome. Can we tell if this is what speakers believe? Goal: seek overt statements of causality in lay texts containing these pairs.

Instrument:
Five polysemy pairs hypothesized to implicate causation were collected, then a context width of up to 15 words between the words in the pair was scanned for causality predicates. Data was pulled from the Corpus of American Discourses on Health (CADOH), a set of vernacular texts from 1993-2013.

Polysemy Pairs

| cold_ADJ | cold_N  |
| cholesterol_N1 | cholesterol_N2  |
| fat_N | fat_ADJ  |
| stress_N1 | stress_N2  |
| sugar_N1 | sugar_N2  |

(Causality predicates are an open-ended set. Mihăelăi et al. (2013) found 347 unique triggers of causality in just 19 biomedical journal articles).

Examples:
1) “You know, you don’t GET a cold by going out in the cold weather after a shower despite what my mother told me.” (TV talk show, 2002)
2) “When you eat ice cream, the fat in the ice cream becomes fat in your body. So if you eat a lot of ice cream, you might BECOME fat. If you don’t, you’re gonna stay skinny.” (Movie script, 2006)
3) “Sure, they’re packed with cholesterol. But scientists now know that eating cholesterol doesn’t necessarily RESULT in high levels of harmful cholesterol in the blood, where the damage is done.” (Weekly magazine, 2003)
4) “Actually, you could GET a bigger rise in blood sugar after eating potatoes -- a baked potato, say – than you do from eating pure table sugar.” (TV news show, 2004)

Results:

<table>
<thead>
<tr>
<th>Polysemous Words</th>
<th># Lemmatized Tokens</th>
<th># of Pairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>cold</td>
<td>437</td>
<td>49</td>
</tr>
<tr>
<td>cholesterol</td>
<td>159</td>
<td>12</td>
</tr>
<tr>
<td>fat</td>
<td>574</td>
<td>11</td>
</tr>
<tr>
<td>stress</td>
<td>272</td>
<td>7</td>
</tr>
<tr>
<td>sugar</td>
<td>71</td>
<td>3</td>
</tr>
</tbody>
</table>

Table 1. Polysemous Pairs Ranked

Each of the investigated pairs was found with causality predicates. For stress, a triplet of meanings was found. Because all the conflated sets are low in frequency, a corpus is useful in compiling a dataset of examples, but for not making statistical claims comparing how often they occur. The pairs and predicates of causation are used in sections of lay discourse with the same rhetorical function—claiming causality. Even those discussions whose purpose is to deny causality have to deny it because the connection is so widespread. e.g., pairs also appeared in metadiscussions that raised the causality as a myth in order to dispute it.

Implications for Practice:
Identifying conflated senses reveals linguistic reinforcement of cultural beliefs about becoming ill, with ramifications for the wording of public health policies. By separating conflated interpretations, healthcare providers might counsel more effectively on preventive health.

References


