Suzanne Dekker & Anja Goldschmidt
UiL OTS, Utrecht University, The Netherlands
s.v.dekker@uu.nl & a.goldschmidt@uu.nl

Hitting playfully and kissing angrily:
A self-paced reading study on force inferences

2. Experimental Stimuli & Controls (examples)

Stimuli force decrease (12 sentences in total):
Els stompte Harry vriendelijk, en tegelijk vrij krachtig, op zijn arm.
Els punched Harry friendly, and simultaneously rather forcefully, on his arm.

Control force decrease (12 sentences in total):
Els stompte Harry pijnlijk, en tegelijk vrij krachtig, op zijn arm.
Els punched Harry painfully, and simultaneously rather forcefully, on his arm.

Stimuli force increase (18 sentences in total):
Jet sloeg Harry boos, en tegelijk vrij zachtjes, op zijn schouder.
Jet hit Harry angrily, and simultaneously rather softly, on his shoulder.

Control force increase (18 sentences in total):
Jet sloeg Harry speels, en tegelijk vrij zachtjes, op zijn schouder.
Jet hit Harry playfully, and simultaneously rather softly, on his shoulder.

Stimuli: inference triggered on 1st adverb (friendly, angrily) and cancelled on
2nd adverb (forcefully, softly)

Controls: inference triggered on 1st adverb (painfully, playfully), but not cancelled
on 2nd adverb (same force direction for both)

4. Results & Linear Mixed Effects Analysis

Table 1: P-values

<table>
<thead>
<tr>
<th></th>
<th>RT1 (hard/zacht)</th>
<th>RT2 (op)</th>
<th>RT3 (zijn)</th>
<th>RT4 (schouder)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase</td>
<td>p=.005**</td>
<td>.235</td>
<td>p=.005**</td>
<td>.005**</td>
</tr>
<tr>
<td>Decrease</td>
<td>n.a.</td>
<td>.012*</td>
<td>.082</td>
<td>.45</td>
</tr>
</tbody>
</table>

In all instances except one (RT 1, decrease), the stimuli condition was read slower than the control condition. The table gives the p-values, significant differences are marked * (p < .05) or ** (p < .01).

5. Explanation in Neo-Davidsonian Terms

Lexicon:
hit: λe. [FORCE (e, f) & magnitude (f, v)]
hard: λe. [FORCE (e, f) & magnitude (f, high)]
lightly: λe. [FORCE (e, f) & magnitude (f, low)]
playfully: λe. [playfully (e)]
friendly: λe. [friendly (e)]

Composition:
(a) Nancy hits Oliver hard.
3e [hit (e) & agent (e, nancy) & patient (e, oliver) &
3f [FORCE (e, f) & magnitude (f, high)]]

(b) Nancy hits Oliver friendly.
3e [hit (e) & agent (e, nancy) & patient (e, oliver) & friendly (e)]
3f [FORCE (e, f) & magnitude (f, v)]

Inferences:
language ↔ concepts ↔ perception
hit friendly ↔ “be kind,” “no risk” ↔ low force
∀e [friendly (e) & force (f, v)] ↔ magnitude (f, low)