Morphology and Grammatical Class
Noun and Verb Roots in Italian Complex Words

Davide Crepaldi
MoMo Lab, Department of Psychology, University of Milano-Bicocca, Italy
Lisa Saskia Arduino
LUMSA University and ICST, CNR, Roma, Italy
Claudio Luzzatti
Department of Psychology, University of Milano-Bicocca, Italy

BACKGROUND
Morphologically complex words are broken down into their constituting morphemes during visual identification (e.g., Grainger et al., 1991; Tafft & Forster, 1975).

A substantial amount of experimental evidence suggests that grammatical class is an organizing principle of the human lexical system (e.g., Hillis & Caramazza, 1995; Luzzatti et al., 2002; Mahon et al., 2007).

No morphological theory addresses the issue of how grammatical class is implemented in the visual word identification system (e.g., Baayen et al., in press; Crepaldi et al., 2010; Gonnerman et al., 2007; Rastle et al., 2004).

RESEARCH QUESTION
Do nouns and verbs sharing their roots (e.g., depart, departure) contact the same morpheme representation? Or rather we have separate, grammatical class specific representations for noun and verb roots like depart-?

PREVIOUS STUDIES
Laudanna et al. (1989; 2002) suggest separate representations, as they found that nouns and verbs sharing their roots inhibit each other in lexical decision tasks. But they tested unrelated words with homographic roots (e.g., porte, doors, and portare, to carry), rather than truly related nouns and verbs.

Relevant data on genuine morphological relatives were obtained in Hebrew (Deutsch et al., 1998; Frost et al., 1997). Related nouns facilitate each other when they share a root (e.g., taklit, a recording), but not when they share a word pattern (e.g., taklit, and targli, an exercise). Related verbs instead facilitate each other in both cases.

On the basis of these data, Deutsch et al. (1998) propose a model whereby noun and verb roots share their representations, although they never tested cross-class morphological priming directly.

EXPERIMENT 1

Methods
- 61 participants
- Reading task
- Main design:

\[
\begin{align*}
\text{camminata - CAMMINARE vs. mozzarella - CAMMINARE} \\
\text{(the) walk - TO WALK} \\
\text{vs.} \\
\text{mzzarella - TO WALK} \\
\text{(the) step - TO WALK} \\
\text{passo - CAMMINARE vs. borsa - CAMMINARE} \\
\text{(the) step - TO WALK} \\
\text{vs.} \\
\text{bag - TO WALK}
\end{align*}
\]

- We also checked for the role of SOA (100 ms vs. 300 ms) and for priming direction (nouns priming verbs vs. verbs priming nouns)
- Related and control primes were matched pairwise for written and spoken frequency, and for length in letters and in syllables

Results
Genuine cross-class morphological priming is observed, independently of SOA and prime direction

CONCLUSION
Genuinely related nouns and verbs facilitate each other in word naming, indicating that noun and verb roots share their representations.

These data are in line with Deutsch et al.'s (1998) proposal. Although cross-class priming has never been shown directly in Hebrew, there seems to be interesting converging evidence from languages with completely different morphological systems.

REFERENCES