The Cognitive Reality of Morphomes: Psycholinguistic Evidence from Italian

Chiara Cappellaro[1], Maria Ktori[1,2], Hélène Giraudo[3], Davide Crepaldi[4], Martin Maiden[1]

[1] *Faculty of Linguistics, Philology, and Phonetics, University of Oxford, United Kingdom*
[2] *Department of Psychology, University of Cyprus, Cyprus*
[3] *CNRS & Université Toulouse Jean Jaurès, France*
[4] *University of Pavia, Italy*

While many morphological patterns are tightly linked to sound structure or meaning, some recurrent inflectional distributions appear to be autonomously morphological, in that they cannot be synchronically reduced to phonological conditioning or functional feature specifications. Such patterns, known as *morphomes* [1], consist of abstract distributional regularities across inflectional paradigms. A well-known example is the L/U-pattern in Romance verbs, which groups the same verbal root across a subset of present-tense forms, including the first-person singular of the present indicative and the present subjunctive, independently of phonology or morphosyntax (see Table 1). Evidence for morphomes has so far come primarily from historical and comparative linguistic research, showing that these patterns persist over time and can analogically extend to new lexical items [2]. By contrast, psycholinguistic research on morphomes is extremely limited, and existing experimental findings provide mixed evidence for their role in language processing (cf. discussion in Cappellaro et al., 2023). As a result, it remains unclear whether such morphomic distributions are part of present-day speakers'internal grammar. The present study examined Italian speakers'representation of morphomic structure by assessing their ability to generalize the U-pattern across novel pseudo-verbs.

Methods. Forty adult native speakers of Italian took part in a sentence-completion task using a two-alternative forced-choice response format. Participants read sentences containing pseudo-verbs with root allomorphy modelled on the Italian U-pattern. In each trial, the first sentence displayed two inflected forms of the same pseudo-verb with different roots (e.g., *fe**lg**o* and *fe**gl**iete*, modelled on *sce**lg**o/sce**gl**iete* 'I choose/you (pl.) choose'), followed by a second sentence with a missing verb form (e.g., *Io felgo saltellando e voi fegliete camminando. Mi auguro che Luca ____ correndo.* 'I felgo while skipping and you (pl.) fegliete while walking. I hope that Luca ____ while running.'). Participants then chose between a U-pattern-consistent (e.g., *felga*) and a U-pattern-inconsistent (e.g., *feglia*) form, while choice responses, response latencies, and eye movements were recorded.

To test whether morphomic representations depend on surface phonological familiarity, pseudo-verbs were divided into three types: mimicking items with Italian-like root alternations (e.g., *fe**lg**o/fe**gl**iete*), non-mimicking items with alternations unattested in Italian (e.g., *le**m**o/le**p**ete*), and reverse-mimicking items using the same alternations as the mimicking condition but with the direction of the alternation reversed (e.g., *po**gl**io/po**lg**ete*). To test whether sensitivity to the morphomic pattern reflects generalization beyond stored lexical analogies, pseudo-verbs were further assigned to different conjugation classes (-ERE, the class richest in morphomic verbs in Italian, vs -ARE, a class without root allomorphy).

Results and Discussion. Preliminary analyses revealed reliable effects of pseudo-verb type and conjugation class on participants'behavioural responses (see Figure 1). Participants showed a robust preference for U-pattern-consistent forms in the mimicking condition, with stronger effects in the -ERE conjugation class, indicating sensitivity to familiar morphomic distributions. Crucially, above-chance selection of U-pattern-consistent forms was also observed for non-mimicking items, including in the -ARE conjugation class, demonstrating that speakers can generalize the U-pattern beyond familiar phonological alternations and beyond morphomically rich conjugation classes. By contrast, reverse-mimicking items elicited a shift toward U-inconsistent responses, indicating sensitivity to the directionality of root alternations rather than reliance on mere phonological similarity. Taken together, these results provide clear evidence that morphomic representations support both sensitivity to specific surface patterns and abstraction beyond stored lexical exemplars. More broadly, they suggest that morphomes

are part of contemporary speakers'grammatical knowledge and are accessible in explicit grammatical decision-making.

Spanish verb *salir* 'to go out' (Root A /salg-/ vs. Root B /sal-/)

	1SG	2SG	3SG	1PL	2PL	3PL
PRS.IND	/salg-o/	/sal-es/	/sal-e/	/sal-imos/	/sal-is/	/sal-en/
PRS.SBJV	/salg -a/	/salg -as/	/salg -a/	/salg-ámos/	/salg-áis/	/salg-an/

Italian verb *scegliere* 'to choose« (Root A /ʃɛlg-/ vs. Root B /ʃɛʎ-/)

	1SG	2SG	3SG	1PL	2PL	3PL
PRS.IND	/ʃɛlg-o/	/ʃɛʎ-i/	/ʃɛʎ-e/	/ʃɛʎ-amo/	/ʃɛʎ-ete/	/ʃɛlg-ono/
PRS.SBJV	/ʃɛlg-a/	/ʃɛlg-a/	/ʃɛlg-a/	/ʃɛʎ-amo/	/ʃɛʎ-ate/	/ʃɛlg-ano/

Table 1: Paradigms illustrating the L-pattern in the Spanish verb salir and the U-pattern in the Italian verb scegliere.

Note. Abbreviations used in the table are as follows: PRS.IND = present indicative; PRS.SBJV = present subjunctive; SG = singular; PL = plural; 1, 2, 3 = first, second, and third person. IPA transcriptions are broad and intended to illustrate root alternations rather than precise phonetic detail.

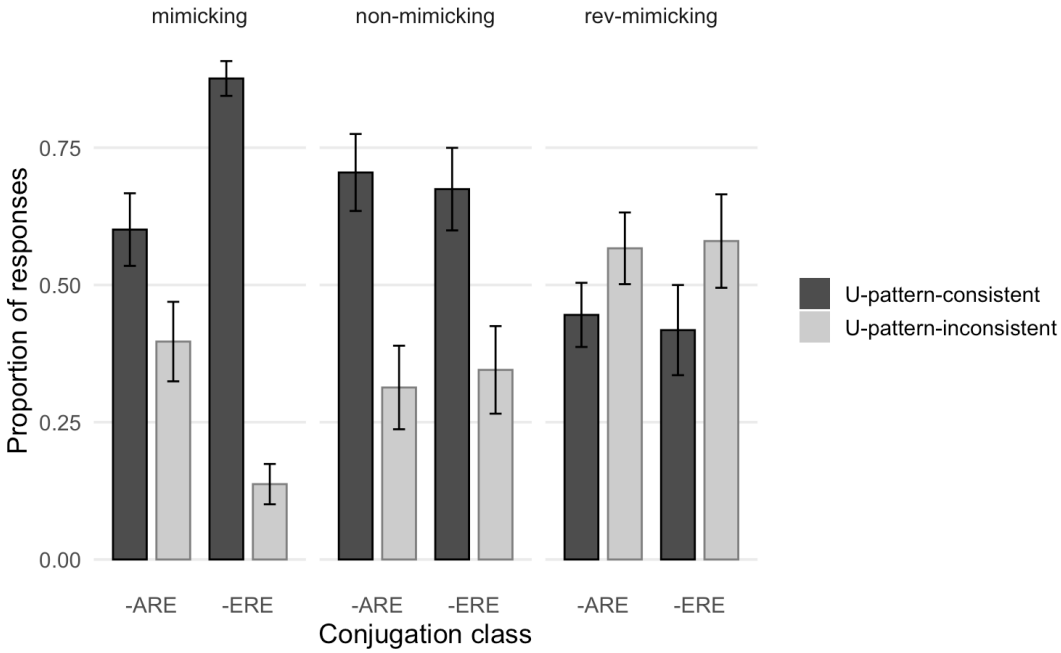

Figure 1: Mean proportion of U-pattern-consistent and U-pattern-inconsistent responses by surface familiarity (mimicking, non-mimicking, reverse-mimicking) and conjugation class (-ARE, -ERE). Error bars indicate within-subject 95% confidence intervals.

References

[1] Aronoff, M. (1994). *Morphology by itself*. MIT Press.

[2] Maiden, M. (2018). *Morphomic structures in synchrony and diachrony*. Oxford University Press. https://doi.org/10.1093/oso/9780199660216.003.0002

[3] Cappellaro, C., Dumrukcic, N., Fritz, I., Franzon, F., & Maiden, M. (2024). The cognitive reality of morphomes. Evidence from Italian. *Morphology*, *34*(1), 33–71. https://doi.org/10.1007/s11525-023-09419-2