Allomorphic competition and regular pattern selection in productive plural morphology: Evidence from European Portuguese

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Background. How does the morphological system resolve competition between productive inflectional patterns? When a language provides both a regular, lexically unrestricted rule and phonologically conditioned alternatives, the speaker must select among them. Pseudoword tasks offer a window into this process [1], because the target form cannot be retrieved as a whole, reflecting productive generalisation. European Portuguese nominal plurals provide an informative test case. Regular plurals involve simple suffixation of the plural morpheme (+[ʃ]). Nasal plurals (sg. -ão) present three competing allomorphs (-õe[ʃ], -ão[ʃ], -ãe[ʃ]). In Child-Directed Speech, -õe[ʃ] accounts for 68% of nasal plural tokens, but -ão[ʃ] rises to 20% (vs. 9% in adult corpora) [2], and this allomorph is formally identical to regular rule application, creating a competition landscape in which the regular form overlaps with a pattern-specific allomorph. Lateral plurals require /l/⟶[j] gliding: for -al plurals (-al⟶-a[jʃ]), gliding yields a transparent alternation; for -il plurals (-il⟶-i[ʃ]), gliding is followed by vowel–glide fusion [3], requiring two phonological operations. Nasals and laterals thus pose qualitatively different challenges: allomorphic competition for nasals and morphophonological complexity for laterals. Accounts of morphological learning suggest that learners may form pattern-based generalisations over phonological classes, which can compete with a default regular pattern [4]. If competition between these sources is resolved categorically rather than gradually, discrete learner profiles should emerge. We asked whether these sources of complexity give rise to such profiles, and whether the regular pattern retains a competitive advantage even when pattern-specific generalisations are available.

Method. We elicited plurals of 12 pseudowords using a pseudoword inflection task [5]. Items were distributed across the four plural patterns, with singular forms ending in the phonological contexts conditioning each type. Responses were coded as target or non-target, where target was defined as the pattern selected by the adult control group for each plural type; for nasals, the specific allomorph was also recorded. We tested 200 children (5;5–6;6) and 40 adults. A subsample of 159 children was assessed longitudinally (T1: age 5; T2: age 6). Data were analysed with mixed-effects logistic regression and latent class analysis (LCA).

Results. Target production followed a clear hierarchy: regular (97%) > nasal (34%) > -al (16%) > -il (5%), all contrasts significant (Fig. 1). Adults were near ceiling (95–100%). LCA favoured a two-class solution (ΔBIC = 103; entropy = .82): a *pattern-specific* group (36%) and a *regular* group (64%) (Table 1). The pattern-specific group's nasal target rate (.83) suggests that once the pattern-specific form is available, it tends to displace the regular form. The regular group's near-zero lateral performance (.07, .01) is compatible with generalised regular rule application. Among plural responses to nasal items, a two-way competition emerged between regular (-ão[ʃ], 52.5%) and target (-õe[ʃ], 41%), with the third allomorph (-ãe[ʃ]) never produced, despite representing 7% of adult forms. Longitudinally, 65% of children increased pattern-specific use, but 26% decreased pattern-specific, and 9% remained stable.

Discussion. The results are consistent with two distinct sources of difficulty in morphological production. Nasal plurals illustrate allomorphic competition shaped by input frequency and convergence with the regular pattern. Lateral plurals illustrate a different challenge: morphophonological alternations of varying opacity at the morphology–phonology interface. The contrast between lateral-low and lateral-high is informative. Both require gliding, but the additional fusion operation may make lateral-high the most resistant pattern. The two-class solution suggests that the data are better captured by discrete profiles than by a single gradient continuum: speakers show a strongly pattern-specific profile or a strongly regularising profile. The longitudinal regression to the regular pattern is compatible with the view that it remains active and can reassert itself even after pattern-specific forms have emerged. These

findings are relevant for models of morphological processing, suggesting that allomorphic competition and morphophonological alternation may constitute distinct processing demands, that competition resolution may yield discrete rather than graded profiles, and that the regular pattern retains a persistent competitive advantage even when pattern-specific forms are productive.

Class	n	%	Regular	Nasal	-al	-il
Pattern-specific	72	36	.97	.83	.68	.40
Regular	128	64	.86	.17	.07	.01

Table 1: Latent class profiles: mean proportion of target responses.

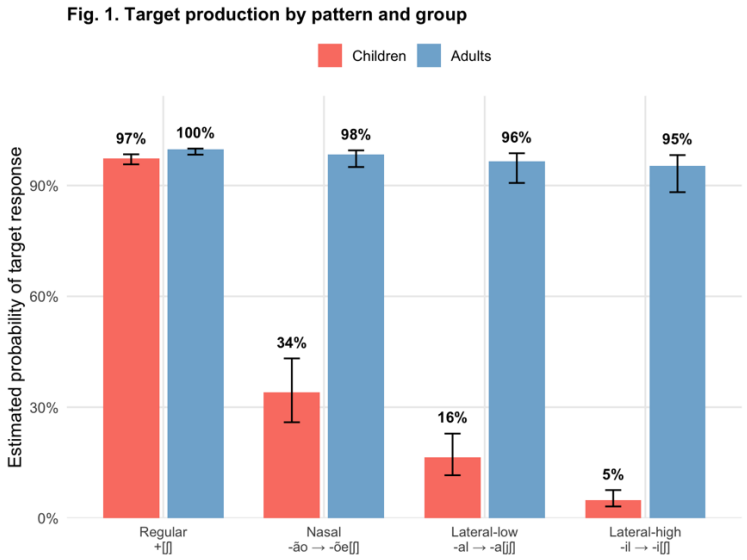

Figure 1: Target production by pattern and group (GLMM estimates with 95% CIs). Children: n = 200; Adults: n = 40.

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