

# Feature-Driven Disruption in French Gender Assignment: Effects of Initial Vowels, Pluralia Tantum, and Mass Nouns in L1 and L2 Speakers

Grammatical gender in French is challenging for both native and non-native speakers (Ayoun, 2018). When unsure about a noun's gender, French speakers typically rely on mental strategies, especially pairing the noun with an indefinite article (un/une) (Authors, 2025). However, certain types of nouns hinder or even block this usual strategy : nouns beginning with a vowel (Edmonds et al., 2020), nouns that occur predominantly in the plural (*pluralia tantum*, Corbett, 1991), and mass nouns (Acquaviva, 2020).

This study investigates how these three lexical features affect gender assignment, and compares their impact across different levels of L2 proficiency and degrees of linguistic distance. A total of 40 nouns (19F, 21M) with gender-neutral endings were selected and matched for length (either 2 or 3 syllables), and frequency, ranging from 0.15 to 1.5 per million in the Lexique 3.83 database (Lexique 2025). There were 10 for each of the three categories above (with no combination of them), plus another 10 reference words showing none of those features. They were presented online in their oral form, randomly sequenced after a practice word, one at a time, and participants were asked to click whether they considered each noun feminine or masculine. Participants were 251 adult native speakers of French (aged 32.9, sd 9.4) and 245 non-native speakers (aged 27.1, sd 6.1) from levels A1 to C2 representing six L1 backgrounds.

Although response time is taken to represent ease of retrieval, it appears to be a better, more precise instrument than a binary correct-incorrect score. However, no study on gender assignment has used it, which is a gap we seek to fill. Performance was thus assessed using two measures as dependent variables: gender accuracy and response times.

A mixed-effects logistic regression (accuracy) and mixed-effects linear regression (reaction times) showed differences in how lexical features interfered with gender assignment. For native speakers, the presence of an initial vowel produced the strongest disruption ( $\beta = -0.84$ ,  $SE = 0.21$ ,  $z = -4.02$ ,  $p < .001$ ), reducing accuracy significantly and increasing response times. Among non-native speakers, however, nouns predominantly encountered in the plural were the most difficult to classify ( $\beta = -0.71$ ,  $SE = 0.18$ ,  $z = -3.94$ ,  $p < .001$ ). Contrary to expectations, mass nouns exerted only a modest effect on both groups, with performance close to that of the reference nouns. Results are discussed in relation to lexical accessibility.

## Keywords

French as a second language; grammatical gender; French gender features; Initial vowel effect; L2 vocabulary acquisition

## References

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