The A-N vs. N-A asymmetry: French adjectives at the Syntax-Phonology interface

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Although a number of approaches have been proposed that the interaction of syntax and phonology is bidirectional (Breiss & Hayes, 2020; Zec & Inkelas, 1990), whether phonological requirements can affect syntactic choices is still a well-debated issue (Schlüter, 2003; Shih, 2017). Our study investigates the impact of prosodic factors on the ordering of a particular set of French attributive adjectives, unlike previous studies (Forsgren, 1978; Thuilier et al., 2012). The choice of adjectives was driven by the observation that variation with regard to the position is possible. This variation is created by the absence of syntactic and semantic constraints, thus the adjectives can occur in pre- and postnominal position with no apparent change of interpretation, as shown in (1).

(1) a. un charmant garçon
a charming boy
'a charming boy'

b. un garçon charmant
a boy charming

This, in our opinion, leaves room for phonological and prosodic factors to be decisive for the placement of these adjectives. Our first hypothesis is that the relative length of adjective and noun affects the positioning of the adjectives. The role of Length has previously been shown to influence the placement of constituents (Bresnan et al., 2007; Faghiri, 2016; Thuilier, 2012) and words in general (Benor & Levy, 2006; Forsgren, 1978; Yao, 2018). Since it has been claimed that constituents are inclined to appear in order of increasing length in SVO languages like French (Thuilier, 2012), the question arises whether this "short-before-long principle"(Hawkins, 2000; Thuilier, 2014) is reflected in the NP, too. Our second hypothesis is that the inadmissibility of some monosyllabic element in the second position of the A-N pair is due to a violation of a principle of rhythmic alternation (Schlüter, 2005). Interestingly, it has been previously stated that monosyllabic adjectives tend to occur prenominally (Thuilier et al., 2012; Wilmet, 1981). Similarly, when the noun is monosyllabic, the avoidance of juxtaposed strong syllables due to phrase-final prominence results in a preference for postnominal adjectives (2b.).

(2) a. [*] [*]
?/*un parfait lieu
a perfect place
'a perfect place'

b. [*] [*]
un lieu parfait
a place perfect

To test these two hypotheses, we conducted an online acceptability judgment task (7-point Likert Scale), examining the role of relative length and rhythmic alternation. The material testing length is designed according to six conditions, consisting of three length configurations (i. A is longer than N, ii. A is shorter than N, iii. A and N are equally long), each presented in two orders (A-N or N-A). The impact of rhythmic alternation was tested with a subset of the items, which include adjectives modifying a monosyllabic noun, thereby allowing for adjacent strong syllables. The task was completed by filler sentences. In both cases the sentences were presented in written format.

An initial analysis of the results from 104 participants showed no significant difference in the acceptability between the conditions testing both factors. Thus, we excluded all participants who did not judge the filler items accordingly, which left us with 23 participants (15f, 5m, 3d). *Figure 1* displays the ratings of the items testing the impact of length. As predicted, postnominal adjectives are rated significantly higher if they are longer than the noun than if they are shorter (post_longerA vs. post_shorterA). In the case of prenominal adjectives, shorter ones are rated significantly higher than longer ones (pre_longerA vs. pre_shorterA). When adjectives and nouns are equally long, postnominal adjectives are rated significantly higher

(post_equalA). In addition, a mixed-effects model was constructed in R (R Core Team, 2015) using the lme4 package (Bates et al., 2014) and lmerTest (Kuznetsova et al., 2017). The model predicted participant's RATINGS as a function of POSITION and RELATIVE LENGTH including PARTICIPANTS and ITEMS as random effects. The model revealed a significant effect of POSITION and the interaction of POSITION and RELATIVE LENGTH on the RATING. *Figure 2* displays the ratings of the items testing the influence of rhythmic alternation. As predicted, items are rated significantly lower when the adjective-noun pair involves a juxtaposition of two strong syllables (pre_longerAStrongStrong).

Our results show that native speakers prefer adjective-noun pairs that appear in order of increasing length and disprefer adjective-noun pairs that include two adjacent strong syllables. Thus, prosodic factors such as length and rhythm affect the positioning of French attributive adjectives. This supports the claim that phonological requirements can affect syntactic choices.

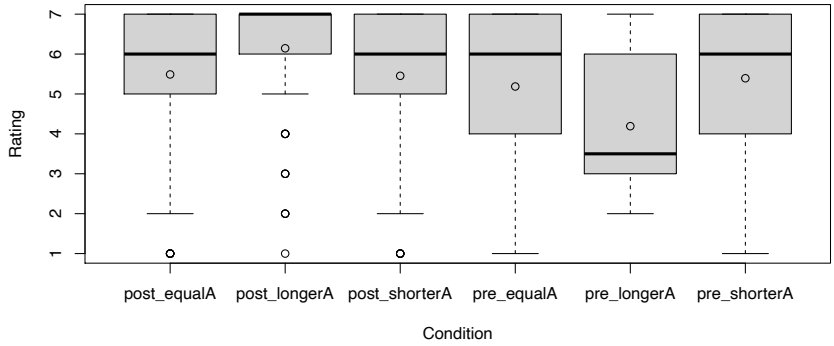

Figure 1 Ratings of the experimental items testing length according to the six conditions

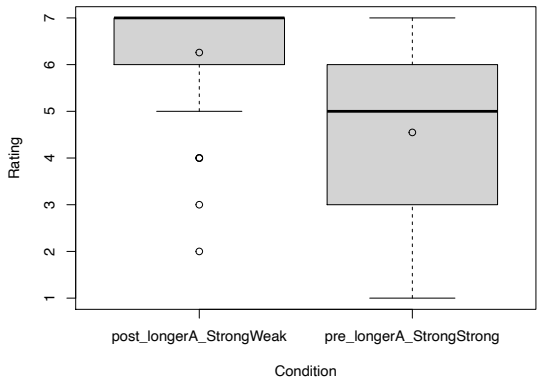

Figure 2 Ratings of the experimental items testing rhythmic alternation

References:

Bates, D., Maechler, M., Bolker, B., & Walker, S. (2014). **lme4**: Linear Mixed-Effects Models Using Eigen and S4 (R package version 1.1-25). **Benor, S., & Levy, R.** (2006). The Chicken or the Egg? A Probabilistic Analysis of English Binomials. *Language*, *82*(2), 233–278. **Breiss, C., & Hayes, B.** (2020). Phonological markedness effects in sentence formation. *Language*, *96*(2), 338–370. **Bresnan, J., Cueni, A., Nikitina, T., & Baayen, R. H.** (2007). Predicting the Dative Alternation. Royal Netherlands Academy of arts and sciences. **Faghiri, P.** (2016). *La variation de l'ordre des constituants dans le domaine préverbal en persan: Approche empirique*. Université Sorbonne Paris Cité. **Forsgren, M.** (1978). *La place de l'adjectif épithète en français contemporain: Étude quantitative et sémantique*. Univ.; Almqvist & Wiksell international (distr.). **Hawkins, J. A.** (2000). The relative order of prepositional phrases in English: Going beyond Manner–Place–Time. *Language Variation and Change*, *11*(3), 231–266. **Kuznetsova, A., Brockhoff, P. B., & Christensen, R. H. B.** (2017). **lmerTest** Package: Tests in Linear Mixed Effects Models. Journal of Statistical Software, 82(13). **R Core Team.** (2015). R: A Language and Environment for Statistical Computing. (2022.07.2). **Schlüter, J.** (2003). Phonological determinants of grammatical variation in English: Chomsky's worst possible case. **Schlüter, J.** (2005). *Rhythmic grammar: The influence of rhythm on grammatical variation and change in English*. Mouton de Gruyter. **Shih, S. S.** (2017). Phonological Influences in Syntactic Alternations. (pp. 223–252). Oxford University Press. **Thuilier, J.** (2012). *Contraintes préférentielles et ordre des mots en français*. Université Paris-Diderot - Paris VII. **Thuilier, J.** (2014). An Experimental Approach to French Attributive Adjective Syntax. **Thuilier, J., Fox, G., & Crabbé, B.** (2012). Prédire la position de l'adjectif épithète en français: Approche quantitative. *Lingvisticae Investigationes*, *35*(1), 28–75. **Yao, Y**. (2018). NP weight effects in word order variation in Mandarin Chinese. *Lingua Sinica*, *4*(1), 5. **Zec, D., & Inkelas, S.** (1990). Prosodically constrained syntax. In S. Inkelas & D. Zec (Eds.), *The Phonology-syntax connection*. University of Chicago Press.