

# Preposition omission in French sluicing: An empirical approach

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## Abstract

We show that omitting prepositions in French sluicing, a non-Preposition-stranding language, is acceptable, contrary to syntactic analyses based on syntactic reconstruction and deletion (Merchant, 2001). We tested Nykiel (2013&2017)'s theory, which predicts preposition omission under sluicing to be favored by nominal remnants/correlates, which are more informative than pronominal ones. We conducted two acceptability judgment experiments using pronominal correlates and remnants in the first one (*qui* 'who') and nominal ones in the second (*quel* 'which' +noun), and a corpus study (Frantext). Preposition omission under sluicing is acceptable in French and is rated higher/more frequent with nominal correlates and remnants than with pronominal ones. The effect of informativeness of the remnants and correlates confirms cognitive and information-based hypotheses on preposition omission under sluicing.

## 1 Introduction

Sluicing is a type of ellipsis where only a wh-word (i.e. remnant) is left (Ross, 1969). There are two main syntactic approaches: a fragment-based analysis with direct interpretation (Ginzburg & Sag, 2000; Culicover & Jackendoff, 2005) and syntactic reconstruction with deletion under identity (Ross, 1969; Merchant, 2001). According to the former, preposition omission comes from the choice between a PP or an NP correlate (1a). According to the latter, preposition omission is derived from preposition stranding (1b), and should not be allowed in non-preposition-stranding languages like French (2).

- (1) a. Kim talked [to [someone]], but I don't know [**who**] / [**to who**]  
b. Kim talked to someone, but I don't know to who ~~she talked~~/who ~~she talked to~~
- (2) a. Anne l'a offert à quelqu'un, mais je ne sais pas à **qui** /\*qui (Merchant 2001:115)  
'Anne offered it to someone, but I don't know to who/\*who'  
b. \*Anne l'a offert à quelqu'un mais je ne sais pas qui ~~elle l'a offert à~~  
'Anne offered it to someone, but I don't know who she offered it to'

Nykiel (2013, 2017) suggests that preposition is optional in most languages and relies on a cognitive hypothesis for preposition omission, based on Hawkins (2004, 2014)'s minimize Form (MiF). MiF is the possibility of minimization or reduction of an element if its syntactic and semantic features are rendered obvious by the surrounding context. Nykiel found less omission with pronominal correlates (*someone*) and more with nominal correlates (*a friend*) in both English and Polish (a non P-stranding language), and henceforth the preposition has more chances to be omitted with a more informative remnant/correlate. In the same line, we consider Uniform Information Density (UID) (Levy & Jaeger, 2006), initially proposed for *that* omission, since a fragment with a preposition is more informative than a fragment without.

## 2 Experiments

In a corpus study on *-ça* (*that*) questions, Smirnova & Abeillé (2021) found two cases of preposition omission in matrix sluices (3), therefore, we tested the acceptability of preposition omission in French sluicing.

- (3) a. – L'adresse de Rosine Portinari, tu l'as pas? – Qui ça? (Thérème, 1985)

- the address of Rosine Portinari you it have NEG ? - who ça  
 'You don't have the address of Rosine Portinari? – Who?'
- b. « La ville de Jaufré Rudel ! » « Qui ça? » (Garat, 1984)  
 the city of Jaufré Rudel ! who ça?  
 « The city of Jaufré Rudel! » « Who? » (Smirnova & Abeillé, 2021, p. 249)

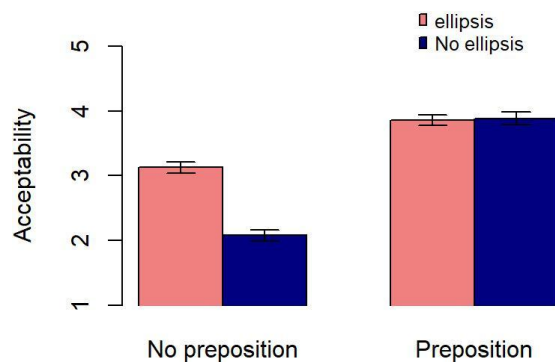
We tested preposition omission in two on-line acceptability rating tasks, with a 2x2 design: ± ellipsis, ± preposition, with half *à* ('to') and half *de* ('of'), which are the most frequent prepositions in French.

## 2.1 Experiment 1

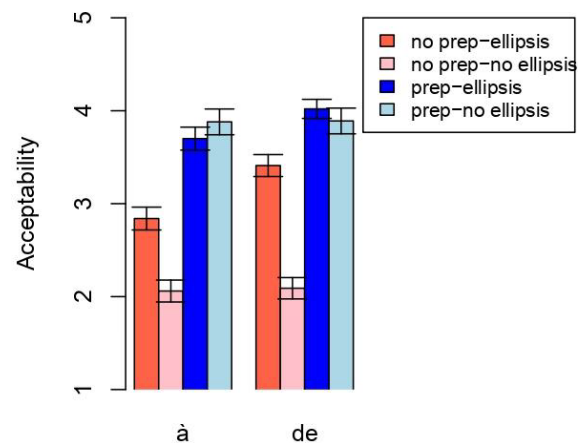
We tested *qui* (animate) remnants and PP nominal correlates (4). We had 20 target items and 20 fillers from an unrelated experiment. The participants read sentence pairs and rated the acceptability of the second sentence on a 1-5 Likert scale. 40 native speakers were recruited on Prolific and paid 1.8 GBP. The results are shown in Figures 1 and 2, and table 1 below. As expected, (4d), which is ungrammatical in French, was rated lowest. Contrary to Merchant's theory, (4c) was rated much higher. There was no difference between ellipsis and no ellipsis in the +prep conditions but an interaction between prep and ellipsis so that -prep was rated higher with ellipsis (mean: 3.2) than without (mean: 2.1). We also found a difference between *à* and *de*, where *de* was rated higher than *à* with ellipsis, with or without preposition (Figure 2). No effect of preposition type is expected if the -prep condition is supposed to be ungrammatical.

- (4) Context sentence : *J'ai parlé à un ami.* ('I talked to a friend')
- +prep+ellipsis: *À qui?* ('To who?')
  - +prep-ellipsis: *À qui as-tu parlé?* ('To who did you talk?')
  - prep+ellipsis: *Qui?* ('Who?')
  - prep-ellipsis: *Qui as-tu parlé?* ('Who did you talk?')

**Figure 1:** Acceptability judgment results



**Figure 2:** Rating differences between *à* and *de*



**Table 1.** Cumulative link mixed model results of Experiment 1

Conditions	Rating results ( $p$ -values)
prep / no prep	6.62e-16 ***
ellipsis / no ellipsis	0.0148 *
Interaction: prep: ellipsis	1.52e-09 ***

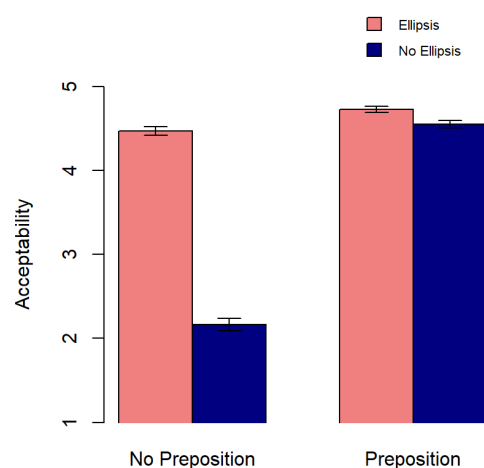
## 2.2 Experiment 2

The design is similar to experiment 1. In Experiment 2, we tested nominal remnants *quel*+noun (5). 47 native speakers were recruited on Prolific and paid 1.8 GBP. Results in Figure 3 and Table 2 show that examples like (5d), which is ungrammatical in French, were rated lowest. (5c) was rated much higher than in Experiment 1, and as high as (5b) (+prep-ellipsis), as predicted by Nykiel's hypothesis. No rating differences between *à* and *de* were detected (figure 4).

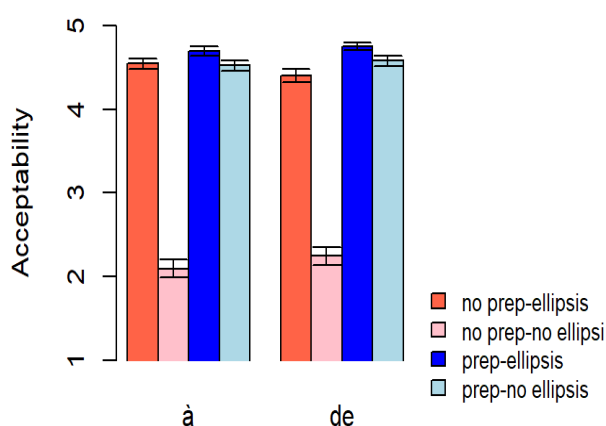
(5) Context sentence : *J'ai parlé à un ami.* ('I talked to a friend')

- a. +prep+ellipsis: *À quel ami?* ('To which friend?')
- b. +prep-ellipsis: *À quel ami as-tu parlé?* ('To which friend did you talk?')
- c. -prep+ellipsis: *Quel ami ?* ('Which friend?')
- d. -prep-ellipsis: *Quel ami as-tu parlé?* ('Which friend did you talk?')

**Figure 3:** Acceptability judgment results



**Figure 4:** Rating differences between *à* and *de*



**Table 2.** Cumulative link mixed model results of Experiment 2

Conditions	Rating results ( $p$ -values)
prep / no prep	4.05e-12 ***
ellipsis / no ellipsis	2.67e-15 ***
Interaction: prep: ellipsis	1.24e-10 ***

## 3. Corpus study

In a corpus study (Frantext database, texts after 1980), we extracted 245 sluices with a PP correlate (6) (table 3). We found an overall 44.9% prep omission rate, which stands between English (67%) and Polish (18.3%). We annotated various factors: nominal/pronominal remnant/correlate, definite/indefinite correlates, preposition type and matrix/embedded sluices. We found that the remnant type plays a role: 74.8% omission with nominal remnant (*quel*+noun) vs 10.5% with a pronominal correlate (*qui, quoi* 'who, what'). We also found that matrix sluices favor prep omission with 51.3% vs. 24.1% for embedded sluices. The other factors that favored prep omission are reprise sluices, nominal correlates and stand-alone prepositions (e.g. *pour, contre, avec*, etc.).

- (6) a.— Je venais d' apprendre la mort de quelqu'un . — **De qui ?** (Gavalda, 2008)  
 'I just learnt the death of someone. - Of whom ?'

- b. – Je ne sais pas. Demande à ton amie. – **Quelle amie** ? (Labruffe, 2019)  
 ‘I don’t know. Ask to your friend. - Which friend ?’

**Table 3.** Extracted sluices from Frantext (with a PP correlate)

Sluices	Matrix	Embedded	Total
Prep + <i>qui/quoi</i>	67	9	76
$\emptyset$ <i>qui/quoi</i> ?	7	9	16
Prep + <i>quel</i> + noun	24	35	59
$\emptyset$ <i>quel</i> + noun	89	5	94
Total	187	58	245

#### 4. Conclusion

We conclude that preposition omission under sluicing is acceptable in French, contrary to Merchant’s theory, and that the same factors play a role as in English and Polish (Nykiel 2014 & 2017). Preposition omission in French sluices is preferred with a nominal correlate and a nominal remnant (*quel* ‘which’), which are more informative than their pronominal counterparts. Preposition alternation in French sluicing is thus compatible with Nykiel’s theory and also in line with the Uniform Information Density hypothesis.

This is problematic for deletion based analyses based on a full syntactic interrogatives (Merchant 2001). An alternative deletion based analysis has been proposed by Rodrigues et al 2009, which suggests a it-cleft source (7a). However, such a source is problematic for additive sluicing (what else?). We do find preposition omission with additive sluices in French (7b)

- (7) a. Anne a parlé à quelqu’un mais je ne sais pas qui e’est  
 ‘Anne talked to someone, but I don’t know who it is’  
 b. Cela retombe sur vous — **qui d’autre**, puisque vous êtes le seul [...] ? (Debray, 1966)  
 ‘This falls back on you - who else, since you are the only one?’

Our results thus speak in favor of a fragment-based analysis with direct interpretation (Ginzburg & Sag 2000, Culicover & Jackendoff 2005, Ginzburg 2012).

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