# Gender mismatch in ellipsis: French stripping 

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Ellipsis usually allows for agreement mismatches: person and number mismatch are allowed for gapping (1-2) and stripping (3, Abeillé et al. 2014, Bîlbiîe 2017, Abeillé \& Kim 2022):
(1) His brother lives in Boston and his parents (live) in New York. (Abeillé et al., 2014)
(2) Paul va à Paris et ses enfants (vont) à Rome. (Abeillé et al., 2014) 'Paul goes.3.sg to Paris and his children (go.3.pl) to Rome'
(3) Les acolytes se sont mis à poil. Moi aussi (je me suis mis à poil). (Sartre, A\&K2022) 'The cohorts stripped.3.pl down. Me too (I stripped.1.sg down)'
Such data show that the missing material in the elliptical clause need not to be identical to the material in the antecedent clause. They cast doubt on deletion under identity theories and call for a more abstract reconstruction (based on lexeme identity for instance).
Gender mismatch is more controversial: for French, Abeillé et al. 2014 have an example with a syncretic form, and Abeillé \& Kim 2022 have an example with a non-syncretic one:
(4) Paul est arrivé hier et Marie (est arrivée) ce matin (A2014)
'Paul has arrived.m.sg yesterday and Mary (has arrived.f.sg) this morning'
(5) Cette fois, je suis vraiment amoureuse, lui aussi (est vraiment amoureux). (Prin 2005, A\&K 2022) 'This time, I am really in-love.f.sg, he (is really in-love.m.sg) too'

For Spanish Aparicio et al. (2014) found a penalty for gender mismatch in the Nfem-Nmasc order:
(6) La asistenta e organizada e el jefe también. / El asistente e organizado e la jefa también. 'The.m/f.sg assistant. $\mathrm{f} / \mathrm{m} . \mathrm{sg}$ is organized. $\mathrm{f} / \mathrm{m} . \mathrm{sg}$ and the.m/f.sg boss.m/f.sg too.'
Following Merchant (2014) on Greek, Sprouse et al. (2022) found an asymmetry for gendered nouns in English, which they attribute to the acceptability contrast: Mary is an actor. vs *John is an actress.
(7) John is an actor and Mary too. / *Mary is an actress and John too.

We study French predicative adjectives, searching X être/paraître/sembler Adjective (et/mais) Y aussi/ non plus (' X be/seem Adj (and/but) $Y$ too/neither'), with $X$ the subject correlate and $Y$ the remnant, which returned 135 hits in Frantext (texts after 1980). We annotated several factors: gender mismatch, subject gender, humanness, pronominality, adjective frequency and syncretism. Our research questions are: (i) Is gender mismatch acceptable in French stripping and does ordering play a role? (ii) Is it favored by adjective's syncretism (Zwicky \& Pullum, 1986) or frequency (Haspelmath, 2006)? (iii) Is it sensitive to the subject's humanness and pronominality? We found a high rate of mismatch (5) (8a) (53\%), with no role of adjective syncretism (8b) (50\%).
(8) a. Il était américain. Elle (était américaine) aussi (Garat, 2008)
'He was American.m.sg. She (was American.f.sg) too.
b. Elle n'est pas revenue, lui (n'est pas revenu) non plus (Dorin, 1997)
''She has not returned.f.sg back, he (has not returned.m.sg) neither'
We also find that Xf-Ym order (5) (8b) outnumbers Xm-Yf (8a) in case of mismatch (60\%), unlike previous results on Spanish and Greek. This can be explained by a tendency for the elided form to be the masculine one, since we find $61.9 \% \mathrm{Xm}-\mathrm{Ym}$ in case of match (and $38.1 \% \mathrm{Xf}-\mathrm{Yf}$ ): this is compatible with Jacobson 1932's unmarked masculine hypothesis.
We also tested the relative frequency of Am/Af for our 102 lemmas, using Lexique (New et al 2001), assuming a more frequent form is more accessible in memory, hence more easily omitted, and found that Am (69.7\%o) was more frequent than Af (43.2\%o) overall. But even when Af was more frequent than Am, the most frequent order was Xf-Ym, so we could not confirm Haspelmath's hypothesis.
For (iii), we hypothesized an interaction with pronominality favoring gender mismatch, if the pronoun's gender is a discourse feature higher than nouns' lexical gender (Harley \& Ritter 2002). We had 60 nominal and 75 pronominal subject correlates, with a higher mismatch rate for pronominal (8) (62\%) than for nominal remnants (9) (48\%).
(9) Les rues de Paris sont froides, les regards (sont froids) aussi (Collignon, 1986)
'The street.f.pl of Paris are cold.f.pl, the stare.m.pl (are cold.m.pl) too'

We also hypothesized an interaction with humanness (if grammatical gender is interpreted as social gender for humans, cf Corbett, 1991). We found a high proportion of human subjects (94), with a higher mismatch rate (5) (8) (57\%) than for inanimates (9) (44\%). This is compatible with the hypothesis that gender is an inflectional feature only for human nouns (Spencer, 2002; Bonami \& Boyé, 2019).
We ran an on-line acceptability judgment task, using a 1-10 scale, testing sentences with human nouns and non-syncretic adjectives, with a $2 x 2$ design ( $\pm$ ellipsis, $\pm$ mismatch) (11).
(11) Il est devenu fou, sa femme aussi. Il est devenu fou, sa femme est devenue folle aussi.
'He became insane.m,sg his wife too.' 'He became insane.m, his wife became insane.f.sg too.' We had 16 items and 16 distractors. For the experiment, we expected a preference for elliptical constructions (Amsili et al. 2016) and, in line with corpus findings, a preference for a masculine remnant. With regards to mismatch, previous studies found a penalty in acceptability, while our corpus showed no preference for match over mismatch. 83 native participants (age 19-78) were kept, after excluding those who did not score above $75 \%$ in simple comprehension questions. Results showed no difference in acceptability with and without match non elliptical conditions. We ran a mixed effects ordinal regression model and found that +ellipsis had better ratings overall (mean rate 9.09; estimate 0.825; pvalue $8.39 \mathrm{e}-10$ ) with a penalty for +ellipsis+mismatch (mean rate 8.90 ; estimate -0.876 ; p-value 9.19e4).

Both our corpus and experimental data confirm the acceptability of gender mismatch in French stripping, without syncretism, and without asymmetry. Corpus data also show that subjects' pronominality and humanness play a role, so that gender may be a cover term for different features. Experimental data confirms an interaction between ellipsis and mismatch, with no significant effects of mismatch alone.

## References

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|  | Factor |  | Gender-mismatch |  | Gender-match |  | All ellipsis |  |
| :--- | ---: | ---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Remnant <br> animacy | Animate | 57 | $79 \%$ | 39 | $62 \%$ | 96 | $71 \%$ |  |
|  |  | Inanimate | 15 | $21 \%$ | 24 | $38 \%$ | 39 | $29 \%$ |
| Remnant <br> gender | Feminine | 29 | $40 \%$ | 24 | $38 \%$ | 53 | $39 \%$ |  |
| Remnant <br> category | Masculine | 43 | $60 \%$ | 39 | $62 \%$ | 82 | $61 \%$ |  |
| Adjective <br> syncretism | Noun | 27 | $38 \%$ | 33 | $52 \%$ | 60 | $44 \%$ |  |
|  | Pronoun | 45 | $62 \%$ | 30 | $48 \%$ | 75 | $56 \%$ |  |
|  | Non syncretic | 36 | $50 \%$ | 35 | $56 \%$ | 71 | $53 \%$ |  |
| Syncretic | 36 | $50 \%$ | 28 | $44 \%$ | 64 | $47 \%$ |  |  |
| Total | 72 | $53 \%$ | 63 | $47 \%$ | 135 | $100 \%$ |  |  |

Table 1. X être Adjective (et/mais) Y aussi/ non plus ('X be Adj (and/but) Y too/neither') in Frantext (after 1980)

