Exclamative sluices in French: An experimental study

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Sluices have been analyzed as underlyingly sentential (Ross, 1969; Merchant, 2001), or as dialogically-specified constructions (Ginzburg & Sag, 2000; Culicover & Jackendoff, 2005). Exclamative sluices (henceforth Excl. sluices), as in *What a beautiful day!*, have been understudied compared to interrogative sluices. Ginzburg and Kim's (2023) analysis of the spoken parts of the BNC, COCA, and London Lund Corpus shows that: (i) Excl. sluices are more prevalent than verbal Excl. (e.g., in BNC, 82.1% sluices with *what a N!* and 67.2% with *how Adj*); (ii) Excl. sluices cannot be embedded, unlike verbal Excl. and interrogative sluices, and (iii) Excl. sluices are predominantly interpreted as exophoric and frequently lack a clear verbal paraphrase. A corpus study on Excl. sluices in French (*Quel génie !* 'What a genius!') showed similar results: (i) Excl. sluices are more frequent (72.3%), (ii) they are rarely embedded (3.9%), (iii) the majority of interpretations were exophoric, in addition (iv) exclamatives were found to be embeddable under non-factive verbs (27.6%), suggesting that they denote propositions rather than facts, aligning with Marandin's (2008) ego-evidentiality property of exclamatives. That is, the truth of the proposition is linked to the speaker's judgment. We conducted an acceptability judgment experiment to further test the embeddability of Excl. sluices, the factivity of the embedding verbs, and the preference for elliptical vs. non-elliptical (verbal, as opposed to non-elliptical verbless, which are allowed in French, e.g., *Libération, quel vocable !* 'Liberation, what a word!' (Eaubonne, 1980)) exclamatives. The experimental items followed a 2x2 design with two predictors: Construction, with two levels: matrix vs. embedded, and Form, with two levels: verbal vs. sluice (see (1)). A total of 24 experimental items, 24 fillers (items of an experiment on interrogative sluices with *lequel* 'which') and 12 control items (grammatical sentences and their ungrammatical counterparts caused by an agreement attraction error) were used. Each item consisted of a short dialogue. Speaker A's utterance is a context sentence and Speaker B's is the target utterance to be rated on a scale of 1 to 5. 67 native speakers of French participated in the study. The results showed that the matrix sluice condition received the highest ratings (m = 4.35), followed by the matrix verbal condition (m = 3.99), the embedded verbal condition (m = 3.88), and the embedded sluice condition, which received the lowest ratings (m = 3.52) (ungrammatical controls: m = 2.76). The data were fitted to a Bayesian mixed-effects ordinal regression model (see Table 1). The model shows weak evidence for the dispreference of embedded Excl., strong evidence for the preference of sluices and for dispreference for embedded sluices. The verbs were controlled for factivity following Hooper's (1975) distinction between semi-factive (SF), non-factive (NF) and true-factive (TF) verbs. Embedded exclamatives were found to be as acceptable under SF verbs (m = 4.04) as under NF (m = 3.71) and TF verbs (m = 3.41). These results confirm the corpus findings, where exclamatives were also embeddable under NF verbs (which are mainly communication verbs, such as *dire* ('to say')). The embedded data were analyzed with a Bayesian mixed-effects ordinal regression model including dummy-coded Factivity and Form, with participants and items as random factors. Results (Table 2 show evidence that embedded sluices are dispreferred, weak evidence for a preference of embedding exclamatives under SF verbs, and weak evidence for the dispreference for TF verbs in embedded sluices. A directional hypothesis test comparing SF and TF supports moderate to strong evidence that SF is rated more acceptable than TF ($\widehat{\beta}$ = 0.57, Est. Error = 0.37, 95% CrI = [–0.04, –1.18], Evid. ratio 15.67, P($\widehat{\beta} > 0$) = 0.94), indicating graded acceptability among factivity levels, with SF tending to be more acceptable than TF. The findings suggest

that, unlike interrogative sluices and verbal exclamatives, Excl. sluices disfavor embedding in French, are more frequent in matrix contexts, and support Marandin's (2008) suggestion that exclamatives denote propositions. The results overall align with the dialogically-constructionist approach and the direct interpretation framework. They pose challenges for sententialist theories, which predict uniformity between sentential and non-sentential constructions, as well as among seemingly similar elliptical forms.

(1) Speaker A: Alice a encore gagné. 'Alice won again.'
Speaker B's responses varied across four conditions:

a. Quelle chance ! (lit. 'What luck!') (matrix sluice)
b. Quelle chance elle a ! ('What luck she has!') (matrix verbal)
c. Tu as vu quelle chance ! (lit. 'Did you see what luck!') (embedded sluice)
d. Tu as vu quelle chance elle a ! ('Did you see what luck she has!') (embedded verbal)

Predictors	Estimate	Est.Error	95% CrI	Post. Prob.
Intercept[1]	-2.56	0.19	[-2.95, -2.18]	1
Intercept[2]	-1.63	0.18	[-2.00, -1.27]	1
Intercept[3]	-0.85	0.18	[-1.21, -0.50]	1
Intercept[4]	0.26	0.18	[-0.10, 0.61]	0.93
Construction (Embedded)	-0.15	0.19	[-0.53, 0.22]	0.8
Form (Sluice)	0.62	0.18	[0.27, 0.98]	1
Construction x Form	-1.06	0.18	[-1.42, -0.72]	1

Table 1: Bayesian mixed-effects ordinal regression model predicting ratings by dummy-coded predictors: Construction x Form.

Predictors	Estimate	Est.Error	95% CrI	Post. Prob.
Intercept[1]	-2.52	0.28	[-3.08, -1.99]	1
Intercept[2]	-1.48	0.26	[-2.02, -0.97]	1
Intercept[3]	-0.65	0.26	[-1.17, -0.14]	0.99
Intercept[4]	0.44	0.26	[-0.08, 0.94]	0.95
SF	0.33	0.35	[-0.37, 1.02]	0.84
TF	-0.24	0.36	[-0.97, 0.47]	0.76
Embedded sluice	-0.32	0.28	[-0.86, 0.24]	0.88
SF:Embedded sluice	0.06	0.42	[-0.77, 0.90]	0.56
TF:Embedded sluice	-0.38	0.40	[-1.19, 0.41]	0.84

Table 2: Bayesian ordinal model: (Embedded data) Factivity x Form

We consider effects strong when the posterior probability $P \geq 0.9$ and CrIs exclude zero; weak when $0.8 \leq P < 0.9$; and absent when $P < 0.8$.

Selected references

Ginzburg, J., & Kim, J.-B. (2023). Exclaiming non-sententially: exclamative sluices and the (non-elliptical) nature of ellipsis constructions. *Glossa: a journal of general linguistics*, *8*(1). doi: 10.16995/glossa.9639

Ginzburg, J., & Sag, I. A. (2000). *Interrogative investigations: The form, meaning, and use of English interrogatives*. Stanford, CA: CSLI Publications.

Marandin, J.-M. (2008). The exclamative clause type in French. In S. Müller (Ed.), *Proceedings of the 15th International Conference on Head-Driven Phrase Structure Grammar, National Institute of Information and Communications Technology, Keihanna* (pp. 436–456). Stanford, CA: CSLI Publications. doi: 10.21248/hpsg.2008.25