

PREVIOUS RESEARCH

Macauley & Brice (1997): Study on the distribution of social gender in constructed examples in English syntax articles and textbooks.

- References to men were far more frequent than references to women (967 male referents (74%) compared to 336 female referents (26%).
- Men are more often referred to via proper names and pronouns; women are more often referred to via descriptions. **Important asymmetries in social gender according to grammatical function and thematic roles.**
 - Women are much less often subjects than men (8% vs 49%).
 - Women are much less often agents than men (10% vs 56%).
- Female authors made more references to women than male authors.

Pabst et al. (2018) replicated Macauley & Brice on syntax textbooks published between 2005 and 2017. They observed the same patterns 21 years later.

This paper: A replication of Macauley & Brice's study in the articles from a major French linguistics journal: *Langue Française*.

- Two times periods: earliest articles (3 issues from 1969-1971) and most recent articles (2 issues from 2008-2017).
- Extracted all constructed examples and coded each noun phrase for social gender (if relevant). Whole dataset = 5564 noun phrases across 2598 examples.

CODING FOR SOCIAL GENDER IN FRENCH

French (in)animate nouns are sorted according to grammatical genders: masculine and feminine (Hockett 1958, Corbett 1991), which can be observed on adjectives, determiners etc.

- (1) a. Les nageuses sont fortes.
DEF.PL swimmer-F.PL are strong.F.PL.
The female swimmers are strong.
- b. Les nageurs sont forts.
DEF.PL swimmer-M.PL are strong.PL.
The (male) swimmers are strong.

Controversy on the interpretation of masculine nouns (1b):

- Prescriptivist grammars claim that masculine grammatical gender may have a gender neutral or 'generic value' (Grevisse & Goose 2008, Académie Française),
- Psycholinguists (Chatard et al. 2005, Brauer & Landry 2008, Gygas et al. 2008, 2012, Misersky et al. 2014, among others) show that uses of masculine lead to a socially masculine bias in interpretation.

We coded every noun phrase according to the social gender of its referent: **M**(ale), **F**(emale), **O**(ther), **MG** (masculine 'generics').

Social Gender	Number of Occurrences	% of Total
O (other)	3107	56%
M (male)	1705	30%
F (female)	379	7%
MG ('generic' masculine)	373	7%
Total	5564	100%

Table 1: Distribution of social gender of noun phrases

ANALYSIS 1: MALE/FEMALE REFERENTS

We first look only at clear cases of socially male referents (2a: subject) and socially female referents (2b), not masculine generics (2a: predicate).

- (2) a. L'homme que tu as rencontré hier était un de mes amis.
The man you met yesterday was one of my friends.
(Dubois, J. *Langue française*, n°1, 1969. pp. 41-48).
- b. La ménagère achète des légumes.
The housewife buys vegetables.
(Dubois, J. *Langue française*, n°1, 1969. pp. 41-48).

Factors coded:

- Social factors:** Author gender (*M vs F*), Time period (*old vs new*).
- Pronominalization:** *pronoun vs full noun phrase*.
- Syntactic and thematic roles:** Syntactic position and thematic role are not independent (eg. only 1 object agent in corpus), so combined factor: *agent subject, experiencer subject, non-agent subject, object, other*.

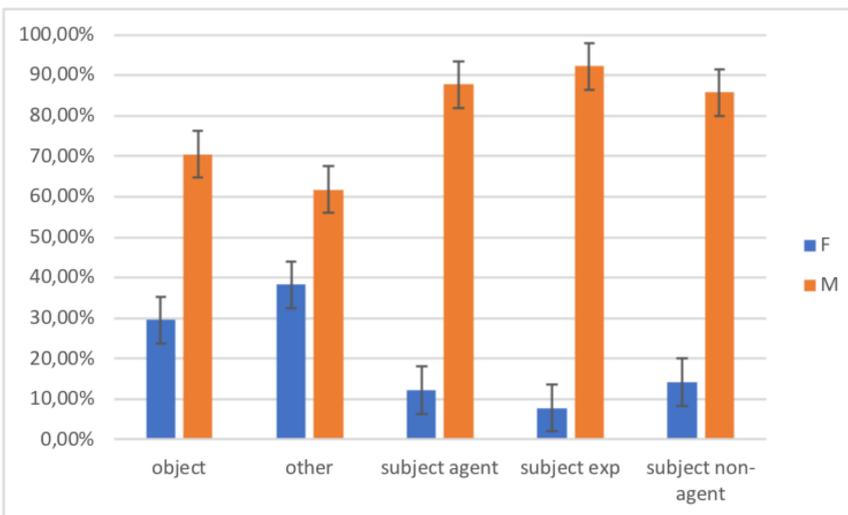


Figure 1: Reference to men/women by syntactic and thematic role

	Estimate	Std. Error	z value	Pr(> z)	
(Intercept)	1.9278	0.8312	2.319	0.0204	*
Linguistic factors					
Other noun phrases	-0.3482	0.2141	-1.627	0.1038	
Agentive subjects	1.1266	0.2150	5.241	1.60e-07	***
Experiencer subjects	1.9735	0.2846	6.935	4.07e-12	***
Other subjects	0.9345	0.2306	4.052	5.07e-05	***
Pronouns	0.4428	0.1747	2.535	0.0113	*
Social factors					
Male author	-0.1788	0.4605	-0.388	0.6977	
Year (1969-1971)	-0.6978	0.4760	-1.466	0.1427	

Table 2: Fixed effects of the generalised linear mixed model. Intercept : older female author, objects, full noun phrases (Random effect: author)

DISCUSSION

No effect of gender/time period, but same grammatical asymmetries as English.

- Men are more likely to be referred to via pronouns and appear in subject position.
- Hypothesis:** Men are more likely to be **discourse topics**, which are more likely to be pronouns and in subject position (Brennan 1995, Grosz et al. 1995, among others).

How do masculine 'generics' fit into this picture?

ANALYSIS 2: MASCULINE 'GENERICS'

Previous studies on interpretation have shown that masculines 'generics' are biased towards a male interpretation.

- Prediction:** If MGs have predominantly male referents in the corpus, they should show the same pattern as noun phrases with categorical male referents.

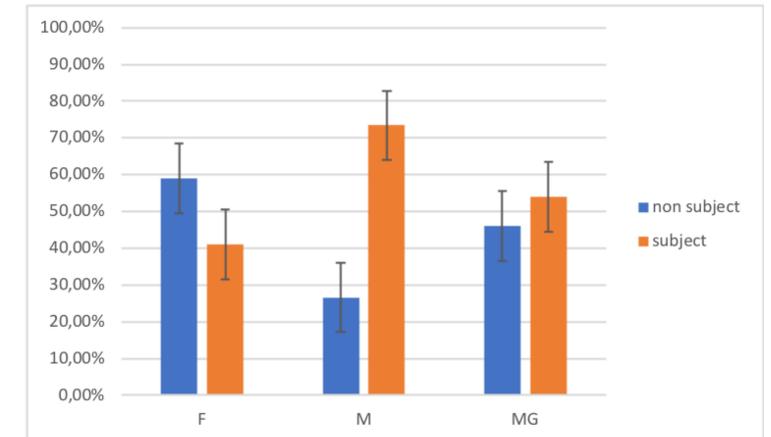


Figure 2: grammatical functions within gender (full NPs only)

	Estimate	Std. Error	z value	Pr(> z)	
(Intercept)	0.3750	0.2126	1.764	0.07772	.
Women	-0.5676	0.1983	-2.862	0.00421	**
Men	0.9869	0.1631	6.051	1.44e-09	***

Table 3: Fixed effects of GLMM. Intercept: MG, non-subject. (Random: author)

DISCUSSION

Masculine 'generics' are more likely to be non-subjects than male referring NPs; in fact they do not show an asymmetry with respect to syntactic position.

- No evidence for strong male bias.

How to reconcile this with psycholinguistic results on interpretation?

Hypothesis 1: Production/interpretation asymmetry. Perhaps male bias in MGs is similar to object-bias in implicit causation verbs (Stevenson et al. 1994, Kehler & Rhode 2015).

- (3) Alex detested Dominique. She _____.

Hypothesis 2: Register variation. Gygas et al. 2012 show that, when participants are reminded of the prescriptive rule that masculine 'generics' have gender neutral-reference, male bias is reduced.

- Most linguistics articles use an academic register which could favour the prescriptive gender neutral use.

Hypothesis 3: Informativity-based reasoning. Categorically male NPs are more informative **with respect to social gender** than 'generic masculines'.

- Speakers wishing to refer primarily to men will use categorically male NPs.
- Use of a masculine 'generic' in this context implies gender neutral reference.

SELECTED REFERENCES

Brauer, M., & Landry, M. (2008). Can a secretary of state become pregnant? The influence of the masculine generic on mental representations. *Année Psychologique*, 108.

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Kehler, A., & Rhode, H. (2015). Pronominal Reference and Pragmatic Enrichment: A Bayesian Account. *In CogSci*.

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