

THE RETURN OF THE GODDESS: FEMINIZATION OF NOUNS REFERRING TO PRESTIGIOUS PROFESSIONS

LE RETOUR DE LA DEESSE: LA FEMINISATION DES NOMS DESIGNANT
DES PROFESSIONS PRESTIGIEUSES

(Résumé)

La grammaticalisation extensive de la différence naturelle entre les sexes dans les langues romanes est, sans doute, la conséquence de l'évolution des variables cognitives et socioculturelles. La féminisation des noms désignant des professions prestigieuses pendant les derniers cinquante ans constitue la preuve des changements sociaux qui ont affectés le concept de femme dans la société européenne. En effet, c'est la conséquence du fait que la perception du genre naturel a évolué d'un modèle ancien reposant uniquement sur le monde naturel à un modèle sociocognitif reflétant les interprétations socioculturelles et religieuses d'une société patriarcale et, plus récemment, d'une société d'égalité sociale.

Mots-clés: féminisation, genre naturel, grammaticalisation, suffixes, variables cognitives, variables sociales.

As I hope to have demonstrated in a previous study (Manoliu 2009), the Latin grammatical gender oppositions reflected not only the natural gender differences but also the difference between inherent properties such as 'capability or inability of being effective'.

Nouns characterized by the inherent seme 'capacity of being effective' could be contextually assigned either the feature 'Doer' (active) or that of 'Affected entity' (passive). By turn, the nouns bearing the inherent feature 'incapable of being effective' could never be assigned the contextual feature of a 'Doer'. Since the nouns bearing the feature [Ineffective] can never occur in

a context where the feature is neutralized [Ineffective] constitutes the marked term of the opposition in question (see below Table 1).

According to Luraghi (2009: 10–11), who deals with the origins of feminine gender in PIE, the Animacy hierarchy should be reformulated taking into account features such as concrete, control, intentional, manipulated, discrete, and continuous¹. The feminine gender would have evolved later from the second cognitive category, characterized by the same capacity of being in control and non-manipulated as the first class. The third class, the inanimates, lacked the capacity of being in control and could be manipulated. Compare tables 2 and 3:

Table 1. Hierarchy of Virtual Efficacy

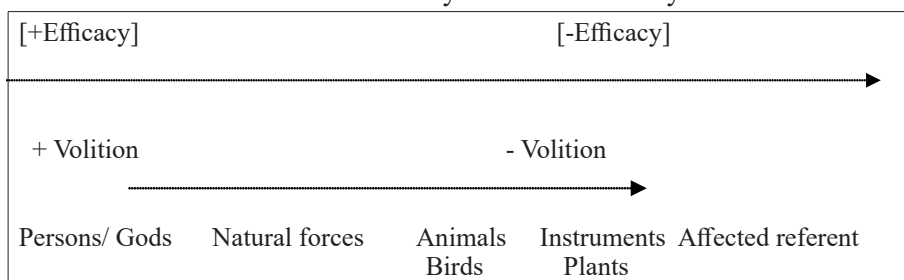


Table 2. Prototypical features of Proto-Indo-European genders

I HUMAN	II ABSTRACT	III INANIMATE CONCRETE
concrete	abstract, non-manipulated	concrete, manipulated
+intentional	-intentional	-intentional
+control	+control	-control
highly individuated	moderately individuated	non-individuated
plural count		collective

Table 3. The Indo-European gender system: summary of evolution

Stage 1	Animate	Inanimate	
Stage 2	Human	Abstract	Concrete
Stage 3	Masculine	Feminine	Neuter

It is far from easy to determine how long the semantic interpretation assigned to [±Ineffective] and [±Feminine] in various Early (Indo)European

¹ Tables 3 and 4 are reproduced from Luraghi (2009: 10 and, 11).

languages remained relevant for Latin speakers. What is beyond doubt is that the religious universe was full of representations reflecting the socio-cultural organization of the Latin linguistic community. One has only to think of the extent to which natural forces were represented in Latin and Greek mythologies by men (gods) and women (goddesses) living in a social setting similar to the patriarchal model of those times. It is interesting to note at this point that the Goddess-mother, viewed as a symbol of life (giving birth, nourishing, protecting) was the most important figure in the ancient Mediterranean religious universes¹. This type of beliefs was reflected even in the noun subcategorization. For example, the inclusion of nouns referring to several forces in the same grammatical gender as women reminds us of the most prototypical attributes characterizing the concept of the ancient goddess in the Mediterranean area, as well as in other ancient cultures such as Celtic cosmogony. As Eisler (1995: 36) emphasizes:

“In the mythical images of Crete – the Goddess Mother of the universe, and humans, animals, plants, water, and sky as her manifestations here on earth – we find the recognition of our oneness with nature, a theme that is today also reemerging as a prerequisite for economical survival”.

Looking back at the last three thousand years, one realizes that, in Latin and Neo-Latin languages, the distinction between the cognitive categories of ‘male’ and ‘female’ has steadily assumed the most important role in the grammar of gender following the evolution of the corresponding cultural context².

The importance of sex-based differences in noun sub-classification seems to be a rather general characteristic of all kind of language families. According to Dahl (2000: 102):

“The pervasiveness of sex as gender criterion is striking. There are many possible ways of classifying animates, in particular human beings, that might be used as a basis for gender, such a social status, ethnic origin, profession,

¹ For interesting data about the Mediterranean interpretation of the relation between culture and religious beliefs see, for example, Gimbutas, Marija, 1991, *The Civilization of the Goddess. The World of Old Europe*, edited by Joan Marlen, San Francisco, Harper and Eisler, Riane (1987¹, 1995). *The Chalice and the Blade. Our History, Our Future*, New York, Harper-Collins.

² It has been suggested that, in Western cultures dominated by patriarchal thinking, languages which have only two gender agreements (masculine and feminine), feminine nouns often encode the feature [Passivity]. Most passive objects such as urns, vessels, sheaths, and holsters (all waiting to be filled), along with doorways, gates, and thresholds (through which one passes), tend to be feminine (Shlain 1999: 387).

age, hair color, etc., but none of them except perhaps age seems to play important role in gender assignment. The frequency of sex-based gender distinctions to some extent hides the importance of animacy”.

The ample grammaticalization of sex distinctions in Romance languages is the result of the evolution of cognitive and social variables. The feminization of nouns designating prestigious professions within the last fifty years is a proof of the changes affecting the concept of ‘femaleness’ in the European society. In fact, it is a consequence of the fact that the perception of the natural gender evolved from a model reflecting the ancient socio-cultural and religious interpretations of the natural world to a model determined by social variables reflecting first a patriarchal society and, more recently, a partnership society.

Let us now examine the various ways of encoding social variables by gender assignment to nouns in Romance languages.

1. Encoding social variables

For more than half a century, the feminization of the nouns referring to prestigious professions has been the topic of a rich literature (especially on French), which proves, once more, that this linguistic innovation was not easily acceptable within the boundaries of the predominant social patriarchal model. In France, where *Salic law* excluded the possibility of a queen regnant, *la reine* ‘the queen’ referred only to the queen consort. The idea the masculine has become a neutral term which makes no reference to natural gender has been nurtured for a long time by academic bodies such as l’Académie française or the Real Academia Española. There is even 18th-century evidence for this type of sociolinguistic rule in Queen Christina of Sweden’s practice of signing herself (1):

- (1) *nous, Christine, roi de Suède*
‘we, Christine, king of Sweden’

See also:

- (2) *Catherine le Grand*
‘Katherine the[MASC] Great[MASC]’
(in reference to the Russian empress).

It is interesting to notice that even in English, a language in which gender is not encoded in the agreement between a noun and its modifiers (except anaphors), the feminine suffixes were considered less respectful. It is, for example, the case of suffragist in the second part of the 19th century, which was considered more appropriate than suffragette, although most of the people fighting for women’s rights, such as suffrage, were women. See, for example, (3):

(3) Jack: - ... ‘Or was [mysterious] – until you came here with your suffragettes friends’

Nealie cleared her throat: - ‘Actually, Jack, the respectful term is suffragist, properly referring to persons of either gender who advocate...’ (Lysa Plumley, *The rascal*, 269).

In 1984, the French Minister for Women’s Rights, Mme Yvette Roudy, set up a special committee charged with the task of studying terminology relating to the vocabulary of women’s activities. Its recommendations were published in the *Journal officiel* (March 15, 1986). In Quebec, the Office de la langue française has approved the text of a proposal entitled *Titres et fonctions au féminin: essai d’orientation de l’usage* (April 4, 1986). In Canadian French there has been an earlier increasing tendency to create specifically feminine forms (especially by adding a *-e muet*), such as *la professeure* ‘the[FEM] professor’, *l’auteure* ‘the[FEM] author’, *l’avocate* ‘the[FEM] attorney’, etc., on the basis of the corresponding masculine forms *professeur*; *auteur*; *avocat*, but hesitations could still occur in the language of the media. Compare (4) and (5):

(4) *Mme. Cheryl Little, avocat du Centre de Refuge Haïtien, [...], a indiqué qu’elle tenterait d’obtenir les 500 millions de dollars du couple Duvalier... (France-Amérique, 28. 1–3. 1988: p. 2).*

‘Madame C.L., attorney[MASC.SG] of the Haitian Center of Refugees, [...], has indicated that she would try to obtain Duvaliers’ 500 million dollars’.

(5) *Le Washington Post vient de consacrer un long article à Mlle Patricia Littlefield, avocate au ministère de la Justice à Washington qui a donné sa démission au Justice Department pour devenir apprentie chef de cuisine en France. Elle découvrit sa passion pour la cuisine française à Washington et devint même, pendant son travail au ministère, apprentie dans des restaurants washingtoniens comme le Gaulois et le Pavillon (France Amérique, 6.9 – 2.7. 1987: p. 14).*

‘The Washington Post has devoted a long article to Miss P.L., attorney[FEM.SG] at the Justice Department in Washington who has forwarded her resignation to the Justice Department in order to (go to France and) become an apprentice[MASC.SG] chef in ‘(French) cuisine’. She discovered her passion for French cuisine in Washington and became an apprentice[FEM.SG] in Washingtonian restaurants such as *Le Gaulois* and *Le Pavillon*’.

If in (4) the masculine form is preferred, in (5), one year earlier, the feminine form is used to refer to a Ms. Patricia Littlefield. Recently, the feminine *avocate* may be found even in Parisian newspapers (6):

- (6) *Enlèvement d'une avocate parisienne (Le Monde. fr., 12, 25, 2009)*
Kidnapping of a[FEM] lawyer[FEM] Parisian[FEM]
'The kidnapping of a Parisian lawyer (a woman)'.

See also the feminine form *la chancelière* in (7):

- (7) Frédéric Lemaître (Correspondant à Berlin):
Les Allemands semblent plutôt reconnaissants à Angela Merkel de ne pas avoir paniqué et d'avoir remplacé l'Allemagne au cœur du débat européen. Alors? Comme l'a reconnu la chancelière à la fin du mois d'août, c'est sans doute une question de style (Le Monde. fr., 9.28, 2010).

See also other feminine forms in (8–10):

- (8) *Moers, co-autrice de l'étude et professeure en biodiversité (Le Monde. fr., 08, 29, 2012).*
- (9) *la romancière et poète Andrée Chedid (Le Monde. fr., 02, 7, 2011).*

The tendency of using both masculine and feminine forms for prestigious professions is very well attested in the section of 'Job Opportunities' (*Offres d'emplois*) in French newspapers. See a few more recent examples in *Le Monde* (on-line edition):

- (10) a. *Directeur(trice) de Sciences Po Avenir (h/f) (11, 24, 2009).*
(10) b. *Directeur/Directrice du Centre des Amériques à la Direction des Affaires Internationales et des Echanges (h/f) (11, 24, 2009); Chargé(e) de recherche (h/f) (12, 11, 2009).*

When the noun ends in *-e*, the (pre)determiners mark the gender distinction:

- (11) *La juge de paix était une femme avec un curriculum excellent (Le monde. fr: 05.03.2010)¹.*
- (12) *La Ministre de la Santé, favorable à une augmentation... (Le Monde. fr: 07.12.2010).*
- (13) *la juge d'instruction parisienne Nadine Berthélémy-Dupuis (Le Monde. fr: 06, 21, 2010).*

¹ See however, *Madame le juge* in the movie *Ivresse du Pouvoir*, 2006.

In Spanish the feminization of nouns referring to prestigious professions started earlier than in France (see 14–16):

(14) *El 3 de setiembre en el Hotel Regente se llevó a cabo un desayuno de trabajo del Foro de Mujeres del Mercosur. Se inauguran así un ciclo presentación estuvo dedicada al tema: El avance de la mujer en lo político y social. Fueron panelistas, Marisa Rivera Albert, Presidenta del National Hispanic Institute y la Embajadora Ellen Sauerbrey, representante de los Estados Unidos par la Estatus de la Mujer ante la Comisión de las Naciones Unidas (Línea Natural, Argentina 9. 2003 on-line edition).*

‘On September 3 a working breakfast of the Forum of Women from Mercosur took place in the Hotel Regente. This inaugurated a cycle of monthly talks with renowned protagonists. The presentation in question was dedicated to the topic: “The advancement of women in the political and social arenas”. The panelists were: Maria River Albert, President:FEM of the National Hispanic Institute and the Ambassador[FEM] Ellen Sauerberry, representative of the United States of America for the Status of Women before the Commission of the United Nations’.

(15) *La presidenta de Filipinas, Gloria Macapagal Arroyo, aprobó hoy el levantamiento del estado de excepción... (La Vanguardia, Madrid, 02, 12, 2009, on-line edition).*

‘The[FEM] President[FEM] of Philippines, Gloria Macapagal Arroyo, approved today to lift the state of emergency...’

(16) *periodista y escritora (American TV Spanish channel 24 – 09, 14, 2010. ‘journalist[FEM] and writer[FEM]’.*

In Romanian the use of the feminine forms is governed by various socio-cultural constraints. For example, the feminine forms are less likely to occur in polite forms of address (17), while the feminine forms might be used when referring to the person in question in narration (18)¹:

(17) *Doamnă ministru* and not **Doamnă ministră* or worse **ministreasă*
‘Madam Minister[MASC]’ but not *‘Madam Minister[FEM.SG]’.

(18) *Doamnă doctor* and not **Doamnă doctoriță*
‘Madam doctor[MASC]’ ‘Madam doctor[FEM]’

but see (19) in Romanian colloquial discourse:

¹ For more details concerning Romanian, see Vintilă-Rădulescu 2013.

- (19) *doctorița mea mi-a recomandat un nou medicament pentru reumatism*
 ‘my doctor[FEM]) has prescribed me a new medicine for my arthritis’

For some speakers, the use of feminine forms such as *profesoară* may be used when referring to an educator in high school, lyceum, but not to a university professor. Compare:

- (20) a. *Doamnă profesoară* and b. *Doamnă profesor*

However, for others, the feminine form in polite formulae of address is acceptable even in an academic environment, since it would carry an affective connotation, testimony of the students’ appreciation of their teacher.

2. Agreement and prestigious professions

In contemporary Romance languages gender assignment in determiners of nouns denoting top rank professions takes into consideration a social variable allowing the control by referential characteristics. The agreement with the natural gender of (pre)determiners is attested in Spanish much earlier than in other Romance languages (21–22):

- (21) Sp. *la primer ministro británica*
 the[FEM.SG] Prime Minister[MASC.SG] British[FEM.SG]
 ‘the British Prime Minister’ (referring to Margaret Thatcher) (*La Vanguardia*, 08, 1983).

On May 7, 2010, in the hotel ‘Madrid Meliá Hotel Princesa’, I saw a poster announcing a:

- (22) *Conferencia de Directoras*, which the concierge translated, with a wink, as ‘Conference of CEOs-ladies’.

In French the feminine forms for prestigious professions is in continuous progress. Compare conservative Fr. (23) and Canadian French and contemporary French (24):

- (23) Fr. *Madame le professeur*
 Madam the[MASC.SG] professor[MASC.SG]
- (24) Canad. *Madame la professeure*
 Madam the[FEM.SG] professor[FEM.SG]

It is worth mentioning the fact that, even in the late eighties, a French professor from Sorbonne always used the formula (23) in his letters addressed

to me, whereas, in the same period, I received a letter from the Chancellor of L'École Polytechnique de Montréal, which started with formula (24). Nowadays, however, the use of the feminine article in such forms of address is acceptable even in France.

The most frequent and early marking of natural gender differences occurs in (pre)determiners:

(a) definite articles (25–27):

(25) *Lettre ouverte à la population, à Mme la ministre de la santé et à M. le ministre de l'intérieur, par Mathieu Bellahasen et Lorraine Brunessaux (Le Monde fr. 12, 24, 209).*

'Open letter to the population, to Madam the[FEM] Minister of Health and to Mr. the[MASC] Minister of Interior, by Mathieu Bellahasen and Loriane Brunessau'.

(26) *l'appel de 400 chercheurs à la ministre de la recherche; la glaciologue britannique Louise Sime (Le Monde. fr. 04, 01, 2010).*

'the appeal of 400 researchers to the[FEM] minister of the research; the[FEM] British glaciologist Louise Sime'.

(27) *La cinéaste néo-zélandaise réalise sa première minisérie, "Top of the Lake", diffusée à partir du 7 novembre sur Arte. Une intrigue policière autour de personnages féminins forts (Le Monde. fr. 11, 7, 2013).*

'The[FEM.SG] New-Zealander[FEM.SG] film-producer produced her first mini-series, "Top of the Lake", which was broadcast from November 7 on Arte. A crime-drama about tough women'.

(b) indefinite article:

(28) *Le Centre Technique de Coopération Agricole et Rurale (CTA), organisation internationale basée à Wageningen, Pays-Bas recherche un(e) Responsable des ressources humaines (Le Monde. fr. 12, 23, 2009).*

'The Technical Center of Agricultural and Rural Cooperation (TCA), an international organization based at Wageningen, North Holland, is looking for a[MASC(FEM).SG] accountant in charge of human resources'.

3. Conclusions

In the evolution of Romance gender, an increased number of noun suffixes specialized as markers of gender differences. In this way nouns have also acquired grammatical morphemes of gender. The distinction between masculine and feminine had steadily won the most important role in the grammar of Romance gender and has two main functions:

(i) a phatic function, i.e. it became the main criterion for subclassifying nouns into distributional classes according to the constraints they impose on the choice of gender in their determiners (even in the case of neuter nouns – masculine in singular and feminine in plural)

and

(ii) a semantic function, since it expanded in order to semantically remotivate the differences between ‘men’ and ‘women’ within the class of persons.

The last function is a consequence of the fact that the concept of ‘femaleness’ evolved from a model linked to the natural world, encoded in semantic features such as ‘fertility, rebirth’, etc., to a model more socially oriented, encoded in the seme of ‘social equality’, within the framework of a partnership society.

SELECTED REFERENCES

- Achard, Michel and Suzanne Kemmer, 2003, *Language, Culture and Mind*, Stanford. Calif: CSLI. Bristol: University Presses Marketing.
- Becquer, Annie, et al., 1999, *Femme, j'écris ton nom. Guide d'aide à la féminisation des noms de métiers, titres, grades et fonctions*, Paris: CNRS INALF.
- Bonfante, Giuliano, 1982, “Il genere e il sesso”, *AGI*, 69, p. 140–142.
- Brick, Noelle & Wilks, Clarissa, 2002, “Les parties politiques et la féminisation des noms de métier”, *French Language Studies*, 12, p. 43–53,
- Bubenik, Vit, John Hewson & Sarah Rose (eds.), 2009, *Grammatical Change in Indo-European Languages. Papers presented at the Workshop on Indo-European Linguistics at the XVIIIth International Conference on Historical Linguistics*, Montreal, 2007.
- Burr, Elisabeth, 2003, “Gender and language politics in France”, in *Gender across languages*, 3, Amsterdam/Philadelphia, John Benjamins, p. 119–139.
- Christie, Christine, 2000, *Gender and language: Towards a feminist pragmatics*, Edinburgh, Edinburgh University Press Ltd.
- Conrick, Maeve, 2000, “The feminization process in Francophone countries: principle and practice”, *IJFS* 3, 2, p. 89–105.
- Dahl, Östen, 2000, “Animacy and the notion of semantic gender”, in Unterbeck *et alii* (eds.) 2000, p. 99–115.
- Eckert, P. & S. McConnell-Ginet, 2003, *Language and Gender*, Cambridge, Cambridge University Press.
- Eisler, Riane, 1987¹, 1995, *The Chalice and the Blade. Our History, Our Future*, New York, Harper- Collins.
- Hock, Hans Henrich, 2009, “Default, animacy, avoidance: Diachronic and synchronic agreement variations with mixed-gender antecedents”, in Bubenik, Hewson, Rose (eds.) 2009, p. 29–42.
- Houdebine, AnneMarie, 1984, “La féminisation des noms de métiers ou les femmes devant la langue”, *Bulletin du CRIF*, 5, p. 13–17.

- Houdepine, Anne-Marie, 1998, *La féminisation des noms de métiers: en français et dans d'autres langues*, Paris, L'Harmattan, cop.
- Hovdhaugen, Even, 1986, "Genera Verborum Quot Sunt? Observations on the Roman Grammatical Tradition", *Historiographia Linguistica: International Journal for the History of the Language Sciences* 13, 2–3, p. 307–321.
- Hoybye, Paul, 1944, *L'accord en français contemporain*, Copenhague, Host. H.
- Kimmel, M., 2004, *The gendered society* (2nd ed.), New York, Oxford University Press.
- Krambschi, Claire J., 2003, *Language and Culture*, Oxford [U.A.], Oxford University Press.
- Luraghi, Silvia, 2009, "The origin of the feminine gender in PIE: An old Problem in a new perspective", in Bubenik, Hewson & Rose (eds.) 2009, p. 3–13.
- Luraghi, Silvia and Anna Olita (eds.), 2006, *Linguaggio e genere. Grammatica e usi*, Roma, Carocci.
- Manoliu, Maria, 2009, "The Animacy Fallacy: Cognitive Categories and Noun Classification", in Bubenick, Hewson, Rose (eds.) 2009, p. 15–28.
- Matasovic, Ranko, 2004, *Gender in Indo-European*, Heidelberg, Winter.
- Meillet, A[ntoine], 1921, *Linguistique historique et générale* [Tome 1], Paris, Champion.
- Meillet, A[ntoine], 1937, *Linguistique historique et générale* [Tome 2], Paris, Champion.
- Ojeda, Almerindo E., 1993, *Linguistic Individuals*. [CSLI lecture notes, 311], Stanford: CSLI.
- Parent, Monique, 1994, "Féminisation et masculinisation des titres de professions au Québec", *La Linguistique*, 30.1, p. 123–135.
- Pauwels, Anne, 1998, *Women Changing Language*, New York, London.
- Poynton, C., 1985, *Language and Gender. Making the Difference*, Geelong, Victoria, Deakin Univ. Press.
- Prado, Marcial, 1982, "El género en español y la teoría de la marcadez", *Hispania*, 65.2, p. 258–266.
- Pretto, Annamaria, 1982, "Il genere grammaticale", in Franchi De Bellis, Annalisa Savoia, Leonardo M. (eds). *Sintassi e morfologia della lingua italiana d'uso: Teorie e applicazioni descrittive; Atti del XVII Congresso Internazionale di Studi, Urbino 11–13 settembre*, Roma, Bulzoni (Pub. della Soc. di Ling. It. 24), p. 289–309.
- Rémy, Monique, 1982, «Féminisation des titres et des professions: Dissonances à propos du *la*», in Debusscher, Gilbert, Van Noppen, JeanPierre (eds.). *Communiquer et traduire: Hommage à Jean Dierick*, Brussels, Eds. de l'Univ. de Bruxelles, p. 109–118.
- Schafroth, Elmar, 2003, "Gender in French", in *Gender across languages*. V.3. Amsterdam, Philadelphia, John Benjamins Publishing Company, p. 87–117.
- Shlain, Leonard, 1999 (1998¹), *The Alphabet versus the Goddess. The Conflict between Word and Image*, London, New York, Penguin/Compass.

- Silverstein, Michael, 1985, “Language and the Culture of Gender: At the Intersection of Structure, Usage, and Ideology”, in Mertz, E., Richard J. Parmentine (eds.). *Semiotic Meditation: Sociocultural and Psychological Perspectives*, Orlando, Florida, Academic Press, p. 219–159.
- Spence, N. C. W., 1986, “Gender and Sex in Personal Names in the French Language”, *ZRPh*, 102, 3–4, p. 331–356.
- SurrIDGE, Marie E, 1995, *Le ou la? The Gender of French Nouns*, Clevedon [England], Philadelphia, Multilingual Matter.
- Talbot, M., 1998, *Language and Gender*, Cambridge, Oxford, Malden, Polity Press in association with Blackwell Publishing Ltd.
- Tischer, A., 1998, «Madame l’ambassadrice», *Le Monde* 05.09, p. 15.
- Trudeau, Danielle, 1988, «Changement social et changement linguistique: la question du féminin», *The French Review*, 62.1, p. 77–87.
- Vintilă-Rădulescu, Ioana, 2013, «Le Parlement Européen à la féminisation des noms de fonctions, grades et titres en roumain et en français», in *Actes des 26^e Congrès de Lingüística i Filologia Romàniques*, Berlin, W. de Gruyter, p. 653–663.
- Wolfe, Susan J., 1975, “Gender and Agency in IndoEuropean Languages”, *Papers in Linguistics*, 3. 4, p. 773–794.
- Yaguello, M., 1978, *Les mots et les femmes*, Paris, Petite Bibliothèque Payot.
- Yaguello, M., 1989, *Le sexe des mots*, Paris, Editions Pierre Belfond.

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