

UNIVERSITÀ DEGLI STUDI DI NAPOLI “FEDERICO II”
DIPARTIMENTO DI STUDI UMANISTICI



Corso di dottorato in Mind, Gender and Language

**Exploring the applicability and effectiveness of
gender-sensitive language:
usage, attitudes, and cognitive aspects of grammatical gender
neutralisation strategies in written Italian**

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*A mia madre,
primo esempio di lotta, coraggio e resistenza.*

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List of abbreviations and notational conventions

A = alternant (gender)

CLIT = clitic pronoun

COM = common (gender)

DEF = definite article

F = feminine (gender)

FOG = Female-Only Group

Fr. = French

FUT = future (tense)

Ger. = German

Gr. = Greek

GS = Gender-Sensitive (language)

IND = indicative

INDF = indefinite article

It. = Italian

Lat. = Latin

lit. = literal

M = masculine (gender)

MGG = Mixed-Gender Group

MGNS = morphological gender neutralisation strategy

MOG = Male-Only Group

MR = mental representation

N = neuter (gender)

NB = non-binary (gender)

PIE = Proto-Indo-European

PL = plural (number)

PM = performative meaning

PRS = present (tense)

PTP = past participle

SG = singular (number)

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Abstract

This thesis investigates some formal, social, and cognitive aspects of grammatical gender neutralisation strategies in Italian as gender-sensitive language proposals. Gender neutralisation strategies aim at obscuring grammatical gender encoding to represent all gender identities in the language. The thesis explores the applicability and effectiveness of both standard (e.g., morphosyntactic rewordings) and sub-standard strategies (e.g., the use of letters and symbols such as * or ə, to replace referents' gender specification on nouns).

Chapter 1 provides a typological analysis of gender as a grammatical category, exploring gender systems across languages and focusing on the Italian system. Chapter 2 shifts to the social implications of gender in language, discussing how linguistic practice trigger processes of subordination, invisibilisation and marginalisation of female and non-binary identities. The chapter presents two studies on sub-standard gender neutralisation strategies, a questionnaire (Study 1) and a corpus-based study (Study 2), analysing speakers' usage and attitudes towards such new proposals. Chapter 3 adopts a psycholinguistic perspective, investigating the relationship between grammatical gender in written texts and cognitive outputs, specifically how individuals mentally represent people along with different grammatical gender encoding in the text. It explores the phenomenon of *male bias*, wherein masculine forms, although intended as generic, trigger male-specific mental representation, and assesses the impact of feminisation and neutralisation strategies on reducing this bias. Chapter 4 presents two experimental studies on gender inferences in Italian. Study 3 introduces an original methodology for a text comprehension task, testing the effectiveness of feminisation and standard neutralisation (achieved through the use of common gender nouns) strategies on reducing male bias in gender inferences. Study 4 test also the sub-standard neutralisation strategy by employing the symbol ə. Both experiments assess the effectiveness of different gender-sensitive strategies in eliciting balanced mental representations of mixed-gender group of people depicted by plural role nouns.

Key findings from Study 1 and 2 suggest that the use of sub-standard neutralisation strategies in Italian remains sociolinguistically marked, as they are predominantly employed in informal registers, mainly in writing, and especially among younger individuals. Furthermore, the results indicate that speakers who already use such strategies in everyday language do not follow a shared norm, and the application of symbols as neutralisation shows numerous morphosyntactic inconsistencies. The sub-standard neutralisation observed in the corpus demonstrates that symbols such as schwa can introduce performative meanings and political connotations beyond a new grammatical gender value.

In relation to the findings from Studies 3 and 4, feminisation strategies are the most effective in eliciting balanced mental representations of both men and women. Standard neutralisation strategies based on rewording and the use of so-called common gender nouns tend to evoke a stronger presence of men than women, while neutralisation using schwa suggests increased female visibility within the group (slight *female bias*). Yet, an interaction of the effect of schwa with participants' positive attitudes towards gender-sensitive language was found.

– Introduction –

The relationship between gender and language can be explored from various investigative perspectives, according to what is meant by *gender*, and through numerous disciplinary approaches within language sciences, including theoretical and typological linguistics, applied linguistics, sociolinguistics, psycholinguistics, neurolinguistics, and Natural Language Processing. Given this plurality of approaches, this introduction will clarify, particularly in terminology, the aspects of gender examined throughout this work. Additionally, each chapter will begin with a brief abstract outlining its main contents, while the terminology briefly introduced here will be elaborated upon whenever it is reintroduced in the text.

The first chapter approaches *gender* from the standpoint of theoretical and typological linguistics, treating it as an inherent category of nouns, primarily manifested through the phenomenon of morphosyntactic agreement (Corbett, 1991). The aim is to provide a general overview of gender systems across languages, which will later contextualise the functioning of the Italian gender system. Terminologically, for languages with a gender system, such as Italian, the distinction between *referential gender* and *grammatical gender* will be further clarified. Referential gender denotes “the extralinguistic gender of a referent to which a linguistic expression relates in a concrete utterance” (Doleschal, 2015, p. 340), more typically providing information on human referents (e.g., the Italian noun *maestra* has feminine referential gender since it designates a female teacher). Grammatical gender, in contrast, will be used to indicate a purely linguistic feature that does not necessarily align

with referential gender and is encoded even in inanimate nouns (e.g., the noun *mare* ‘sea’ has masculine grammatical gender in Italian but its French cognate *mer* is feminine).¹

The relationship between referential and grammatical gender is a central point of this work when it comes to designating human referents, becoming evident from the second chapter onwards. Chapter 2 examines the relationship between language and *gender as a social construct* (Butler, 1990), focusing on the roles, expectations, normative behaviours, and cultural representations of individuals within society, implied in being a woman or a man. The chapter’s primary aim is to highlight the *asymmetries* (Robustelli, 2012b) in the representation and visibility of the two referential genders (feminine and masculine) in Italian, based on how they are designated by grammatical gender in linguistic usage. It will address the efforts of Italian feminist linguistics to reduce women’s subordination and invisibility caused by *linguistic sexism* (Sabatini, 1986; 1987) and outline the key solutions and recommendations for feminising language developed over three decades of feminist linguistic research in Italy.

From the second chapter, further terminological clarifications will be required concerning *gender identity*, which the American Psychological Association (APA, 2015, p. 834) defines as “an individual’s profound and intrinsic sense of identifying as a woman, a man, a combination of both” distinguishing it from the biological sex assigned at birth. Focusing on gender identity, the second chapter will also delve into the social marginalisation of *trans** and *non-binary* individuals, often exacerbated by discriminatory linguistic practices such as *deadnaming* and *misgendering*. These involve mismatches between referential and grammatical gender, which can have severe consequences for socially subordinate groups, particularly those defined by specific gender identities or sexual orientations. The term *trans** will be used throughout the work to refer to a wide range of identities and experiences related to gender and sex variance, encompassing individuals undergoing

¹ Throughout this work, the various meanings of the term *gender* will be clarified as needed to indicate the specific aspect under discussion in each context. In this regard, it should be noted that, particularly in Chapter 1, when the term *gender* appears without further specification it will always refer to gender as a linguistic feature, even in expressions such as *gender system*, *gender value*, or *gender assignment*. Conversely, instances of *referential gender* or *gender identity* will be explicitly identified each time they occur, and the specification of *grammatical gender* will be provided when useful to disambiguate it from referential one.

a transition from their birth-assigned biological sex to another, as well as those who reassign their gender identity independent of medical or surgical interventions (Davidson, 2007; Doan & Johnston, 2022). The term *non-binary* will denote “people who identify outside of the binary system of male or female, and may see themselves as both, neither, or somewhere in between” (Matsuno & Budge, 2017, p. 11). Defining non-binary subjectivities helps in contextualising gender identity as a *dynamic, spectrum-based* trait (Monro, 2005), in contrast to the static, binary conception of sex assigned at birth.

Particularly, these terminological clarifications are crucial to understanding the focus of this work, namely the study of grammatical gender neutralisation strategies in Italian, thus linguistic strategies that allow for the expression of a referential gender different from specific male or female. This can be achieved, for example, by using syntactic reformulations avoiding grammatical gender specification, or by using symbols at the end of words to obscure their grammatical and referential gender (e.g., It. *bambin** ‘child’ vs. *bambina* ‘female child’ and *bambino* ‘male child’).

The explicit conceptual separation of gender identity from biological sex presents complex linguistic challenges. In a language such as Italian, where grammatical gender is strictly binary, sex- rather than gender(identity)-based, there is no provision for a distinct non-binary grammatical gender to designate individuals who do not identify as male or female. Additionally, the issue of grammatical gender neutralisation also relates to the desire not to *disclose* (Dembroff & Wodack, 2018, p. 392) one’s gender identity, thus prompting the need to *obscure* (Robustelli, 2012a) grammatical gender when referring to human beings. Often, particularly in the Italian context, these complex issues are reduced to a polarised debate, in favour or against, the search for a language policy able to better represent gender identity, as outlined earlier.

This study aims to restore nuance to the debate on grammatical gender neutralisation in Italian by moving beyond polarisation and presenting linguistic data to address the existing research gap. The research comprises four studies, with the first two presented in Chapter 2 and the remaining two in Chapter 4. The first study gathers data from Italian speakers through a questionnaire, specifically investigating when and how they first encountered strategies for neutralising grammatical gender,

understood as symbols conveying a gender value other than masculine or feminine and exploring the individual and social motivations driving their use in daily life, as well as the limitations they face in applying these strategies to Italian. The second study offers a qualitative and quantitative corpus-based analysis, examining how speakers from certain political communities employ gender neutralisation strategies.

The third and fourth studies shift focus to the cognitive effects these strategies have on speakers, particularly readers. These studies explore how grammatical gender encoding influences readers' mental representations of human referents in texts. To this end, the two studies in Chapter 4 are preceded by an introductory chapter outlining key theoretical models for experimental studies on gender inference, particularly the varying cognitive impact of grammatical gender and *social gender* information (Doleschal, 2015, p. 340), thus the stereotypical referential gender associated with a noun (e.g., *nurse* is typically associated with a female social gender). While the first two studies aim to provide a general overview of how speakers are currently using or intend to use grammatical gender-neutralisation strategies, the latter two assess the cognitive effectiveness of these strategies.

As is evident, each of the issues raised so far in relation to the topic of 'gender and language' provides ample opportunities for deeper investigation and debate, drawing on a range of disciplines with distinct methodologies and research objectives. This methodological diversity often results in necessarily partial analyses, as it is difficult to address with equal precision the complexity of gender systems across languages, the dynamics of social power inherent in language practices within a speech community, and the cognitive effects of such linguistic practices on individuals. However, this inherent partiality should not give rise to an *epistemological hierarchy*, where one analytical perspective is privileged over others as the *correct* or *primary* framework for research into language and gender.

Certainly, this work does not aim to provide an exhaustive analysis of all the dimensions involved in the relationship between language and gender. Yet, the evident plurality in research objectives and respective methodologies of analysis is aimed at recognising the equal importance of diverse approaches and firmly rejecting the idea that the relationship between language and gender,

particularly in the context of grammatical gender neutralisation, can be discussed independently of psychosocial factors.

Finally, while this research is shaped by the author's expertise, personal curiosity, and lived experience, including social and ideological positioning, it does not seek to promote a prescriptive view. Rather, it aims to contribute to the ongoing debate by adding information based on the analysis of linguistic data.

– Chapter 1 –

Formal aspects of gender in language

The first chapter provides a typological analysis of gender as a grammatical category, offering an introductory overview of gender systems in world languages. It begins by outlining key theoretical concepts, focusing on gender as a phenomenon in sex-based languages like Italian, where grammatical gender interacts with inflectional processes and number information. The chapter examines mechanisms of gender assignment, including both semantic and formal rules, and explores the variation in gender systems across languages. A particular focus is given to synchronic and diachronic processes that contribute to the expansion or reduction of gender values.

The discussion extends to genderless languages, describing the strategies they use to recover referents' gender information when morphological encoding is absent. This section (1.4), along with the subsequent discussion of diachronic aspects of neuter gender, mostly in Romance languages, serves to contextualise the issue of the search for a gender-neutrality in highly gendered languages, which will be examined in depth from Chapter 2 onwards.

A detailed analysis of the Italian gender system follows, examining its values, rules, and productivity. It also addresses the process of gender motion, focusing on both prototypical and non-prototypical shifts in grammatical gender. The relationship between the gender of human referents

and morphologically encoded gender is analysed, exploring cases of one-to-one correspondence and more flexible referential possibilities. The chapter concludes with a discussion of the unmarked status of masculine gender in Italian and other Romance languages, linking this to mechanisms of gender assignment and agreement, and introducing issues of markedness that will be explored further in Chapter 2.

1.1 Defining gender in linguistics

From a linguistic perspective, following Hockett's (1958, p. 231) definition, genders are understood as "classes of nouns that are reflected in the behaviour of associated words". Thus, gender is regarded as an inherent category to the noun, primarily manifesting itself through the phenomenon of agreement. In a similar vein, Corbett (2013) elaborates further, stating that:

The defining characteristic of gender is agreement: a language has a gender system only if we find different agreements ultimately dependent on nouns of different types. In other words, there must be evidence for gender outside the nouns themselves.

According to Inglese and Luraghi (2023, pp. 61-64), gender agreement provides a compelling illustration of the close interaction between inflectional and derivational morphology, thus highlighting the interplay between grammatical categories such as number and person, and lexical categories such as gender and actionality. Furthermore, the authors emphasise that it is both challenging and likely incorrect to draw a clear distinction between inflectional and derivational morphology. Instead, it is more productive to consider categories such as gender within a continuum of prototypicality between inflection and derivation. On one hand, prototypical inflectional morphology is said to *serve* syntax, being mandatory, primarily encoding grammatical meanings, and therefore highly predictable, in the sense that it maintains a stable denotation. Conversely, prototypical derivational morphology serves the lexicon, creating new lexemes, and is not obligatory. It encodes lexical meanings that are far less predictable, particularly as new lexemes formed through derivation often change their lexical class (e.g., *agire/azione*, 'to act/action').

In this opposition between prototypical categories, gender functions similarly to derivational morphology (Inglese & Luraghi, 2023, p. 62), but in a non-prototypical manner. This is primarily because, as previously mentioned, gender can trigger inflectional phenomena such as agreement in words that depend on the noun. In this context, the noun is referred to as the 'controller' of agreement, while all other elements dependent on it are 'targets' of the agreement (Corbett, 1991, p. 151); both controllers and targets need a reference domain where agreement takes place (Corbett, 1991, p. 147) such as a noun phrase (NP). The key difference between the gender value of the agreement controller

and that of the targets is that in the former case, we speak of inherent or ‘selective’ gender (Hockett, 1958, p. 230), as seen in words like *libro*, ‘book(M).SG’, which remains constant regardless of the context and stems from a unique gender assignment (1a). The gender of targets such as the adjective *bello*, ‘beautiful.M.SG’, on the other hand, is contextual or ‘inflectional’, as it entirely depends on the gender assigned to the controller and can, in context, exhibit an opposite value (1b) (Loporcaro, 2017, p. 10).

- | | | | | |
|-----|----|-----------------------|---------------|----------------|
| (1) | a. | <i>il</i> | <i>libro</i> | <i>bello</i> |
| | | DEF.M.SG | book(M).SG | beautiful.M.SG |
| | | ‘the beautiful book’ | | |
| | b. | <i>la</i> | <i>storia</i> | <i>bella</i> |
| | | DEF.F.SG | story(F).SG | beautiful.F.SG |
| | | ‘the beautiful story’ | | |

In languages that exhibit a gender system, this may be encoded either across nouns and all agreement targets, as seen in languages with grammatical gender, or only in certain linguistic elements, such as pronouns, as is the case in languages with natural gender, which will be discussed subsequently (see 1.2.1).

What renders derivational gender morphology less prototypical and somewhat akin to inflectional morphology is its higher predictability of meaning compared to other types of derivation. This is often referred to as the classificatory function of derivational morphology, as exemplified by agentive nouns such as *nuotatore* ‘swimmer(M).SG’, derived from the verb *nuotare* ‘to swim’, where the derivational suffix *-tore* and its feminine counterpart *-trice* typically classify the agentive meaning, distinguishing between male and female referents, thereby reducing the unpredictability of denotation commonly encountered in derivational processes that instead result in a change of lexical class (e.g., *paglia/pagliaio*, ‘straw(F).SG/haystack(M).SG’). However, the example *nuotatore/nuotatrice* ‘swimmer(M).SG/(F).SG’ illustrates a case where the grammatical gender marked on the noun is semantically motivated (Luraghi & Olita, 2006, p. 19), indicating a connection between meaning, in

this instance, the referential gender, and grammatical gender value. This situation is referred to as *referential gender*, as highlighted by Doleschal (2015, p. 340).

Referential gender denotes the extralinguistic gender of the referent to which a linguistic expression is linked in a concrete utterance. Referential gender can be male, female, mixed (e.g., in a group of male and female persons) or gender-indefinite (if the gender of the referent is unknown or abstracted from deliberately).

Such a correlation is not always present in gender systems, and even when it is, it does not necessarily manifest itself in all nouns. In fact, some nouns exhibit a gender value that does not correspond to any specific characteristics of the referent, and in such cases the grammatical gender value is assigned arbitrarily to a noun. This is particularly evident in the case of inanimate objects, where the arbitrary nature of gender assignment can vary significantly across different languages, as illustrated in (2). Furthermore, as highlighted by Doleschal (2015), instances of mixed or indefinite referential gender do not allow for the precise identification of the gender identity of individual referents. These cases will be examined in further detail in 1.7.2 concerning Italian.²

- | | | | | | |
|-----|----|----------------|-------------|-----------------|-----------|
| (2) | a. | <i>il</i> | <i>mare</i> | <i>profondo</i> | (Italian) |
| | | DEF.M.SG | sea(M).SG | deep.M.SG | |
| | | 'The deep sea' | | | |
| | b. | <i>la</i> | <i>mer</i> | <i>profonde</i> | (French) |
| | | DEF.F.SG | sea(F).SG | deep.M.SG | |
| | | 'the deep sea' | | | |

² The American Psychological Association (APA, 2015, p. 834) defines gender identity as an individual's profound and intrinsic sense of identifying as a girl, woman, or female; a boy, man, or male; a combination of both male and female; or another gender altogether. Issues about gender identity will be deepened in 2.1.3 and 2.2.2.

In addition to highlighting instances of non-prototypical derivation, Inglese and Luraghi (2023) emphasise the role of grammatical gender in cases of non-prototypical inflection. For example, grammatical gender of verb participles in languages such as Italian or French can lead to a change in lexical category, from verb to adjective or from verb to noun, thus indicating a derivational rather than an inflectional process. Furthermore, even agreement can be realised through derivation rather than inflection, as it occurs with the above mentioned Italian suffixes *-tore/-trice* in (3) (Inglese & Luraghi, 2023, p. 35).

- (3)
- | | | | |
|----|----------------------|-----------------|--------------------|
| a. | <i>uno</i> | <i>sguardo</i> | <i>rivelatore</i> |
| | INDEF.M.SG | glance(M).SG | revealing.M.SG |
| | ‘a revealing glance’ | | |
| b. | <i>una</i> | <i>risposta</i> | <i>rivelatrice</i> |
| | INDEF.F.SG | answer(F).SG | revealing.F.SG |
| | ‘a revealing answer’ | | |

The concept of agreement serves as both a necessary and sufficient element at an interlinguistic level for identifying the presence of a gender system within a particular language. It also plays a crucial role in determining the number of grammatical gender values available within that language. Two nouns can be classified under the same grammatical gender only if they exhibit the same type of agreement with target elements.

Therefore, genders are paradigmatic classes of nouns, established on syntagmatic evidence. This makes a crucial difference with respect to another kind of classes, that also proves relevant to the analysis of gender systems, viz. inflectional classes [understood as] “a set of lexemes whose members each select the same set of inflectional realizations” (Aronoff, 1994, p.182).

(Loporcaro, 2017, p. 10).

Unlike grammatical gender, membership in an inflectional class is established solely on paradigmatic grounds, i.e. it is determined by examining the full paradigm of the noun. In contemporary Romance languages, with the exception of Romanian, this paradigm typically includes only two forms: singular and plural. By observing the singular-plural opposition, one can identify a noun's inflectional class in many languages. And since it may happen that a particular inflectional class is typically associated with nouns with a specific grammatical gender, or that all nouns of a certain grammatical gender belong to a specific class, the information about the inflectional class can sometimes serve as a predictor of gender assignment in nouns. For example, in Italian, all nouns within the inflectional class that ends in *-a* in the singular and *-e* in the plural are feminine (e.g., *casa/case*, 'home(F).SG/PL'). However, since there are many exceptions, namely, feminine nouns in inflectional classes different from the one with *-a/-e* endings, it is not correct to assert that grammatical gender coincides with inflectional class.

Regarding grammatical gender, although it is an inherent property of the noun, it is not necessarily evident on the noun itself through morphology. Rather, it is obligatory on dependent target elements, which in some cases provide the only clues for determining the gender value of the controller (Doleschal, 2006). In some languages, such as the Bantu languages, which possess highly complex gender systems, gender marking occurs systematically through the use of prefixes. Conversely, in other languages, including some Romance languages like Italian, grammatical gender value is much less predictable and is not consistently indicated by the use of suffixes, except in specific instances. These include derivational forms such as agent or instrument nouns, or suffixes specifically dedicated to referential gender marking, such as the suffix *-essa* in Italian, *-euse* in French, or *-in* in German, as in *leonessa*, 'lion(F).SG'; *farceuse*, 'joker(F).SG'; *Tänzerin*, 'dancer(F).SG'.

While the nominal morphology of some languages includes nouns with overt grammatical gender within an inflectional class, such as *libro*, 'book(M).SG' or *sedia* 'chair(F).SG', the grammatical gender of a noun can only be determined with certainty through agreement, or partly through the inflectional class to which it belongs. When it is possible to predict the grammatical gender value of a noun from its morphology, its grammatical gender is referred to as *overt* (Corbett, 1991, p. 44;

Luraghi & Olita, 2006), a phenomenon that is relatively rare among the world's languages (Loporcaro, 2017, p. 10) (e.g., *bambino/bambina* 'child(M).SG/(F).SG'). Conversely, when grammatical gender is not encoded through nominal morphology, it is referred to as *covert* (Luraghi & Olita, 2006) (e.g., *presidente* 'president').³

In conclusion, when examining gender from a functional perspective, agreement continues to serve as the principal indicator of gender's function in world languages. Dahl (2000, p. 113) argues that it is incorrect to regard gender systems as mere classification systems. Rather, they should be viewed as mechanisms that facilitate understanding the relationships between sentence constituents, thus fulfilling a textual cohesion function. Gender becomes especially relevant for comprehension and cognitive processing in the context of anaphoric relations, particularly when human referents are involved. The presence of overt grammatical gender, especially when it is semantically motivated, can substantially shape the interpretation of a sentence's overall meaning and the mental representation of these human referents (see Chapters 3 and 4). However, gender encoding does not always convey a straightforward interpretable value, nor does the linguistic information provided by grammatical gender consistently aid in textual comprehension. In some cases, it can actually complicate understanding. The following sections will delve into the typological aspects of gender that have been introduced in this overview.

Before delving into the exploration of various gender systems within typology, it is necessary to clarify the terminological choice of using *gender* in this work rather than *noun class*. Linguistic typology studies related to gender were relatively rare until the nineteenth century, largely because, until then, research primarily focused on languages with relatively simple and similar gender systems, such as those in Indo-European or Semitic languages, which typically exhibit two or three gender values and are sex-based, thus semantically motivated by the sex of the referent (Luraghi & Olita, 2006). However, as European scholars began studying African languages, particularly Bantu languages, which have highly complex gender systems based on numerous distinctions (e.g., Swahili, which has eight genders), the terminology *noun class* was introduced to distinguish these complex

³ This type of nouns with covert grammatical gender will be further analysed in 1.7.2.

and not (always) sex-based systems from the simpler, more familiar systems previously studied. Some authors (Aikhenvald, 2000; Dixon, 2002), for instance, proposed reserving the term *gender* for systems with a limited number of values (up to four), which always include masculine and feminine values systematically associated with specific inflectional classes and exhibit more restricted agreement phenomena. In contrast, *noun class* was to be used for systems with many values and more extensive agreement phenomena. More recently, Mel'čuk (2013) further added that the only legitimate semantic motivation for gender should be the biological sex of the referent, thereby excluding systems based on other semantic features, such as animacy, which should instead be referred to as noun classes.

Certain scholars, including Corbett (2010) and Loporcaro (2017), maintain that making a terminological distinction between gender and noun class may undermine the central aim of typological studies on gender, which is cross-linguistic comparison. Such comparisons strive to evaluate the validity of claims regarding the gender category across different linguistic systems. By rigidly distinguishing gender as pertaining to sex-based systems and noun class to non-sex-based systems, one implies that the gender category functions fundamentally differently in non-sex-based languages compared to sex-based ones. This implication is not only inaccurate but also significantly restrictive. Such a separation impedes the comparison of sex-based languages with other languages worldwide that possess gender systems. According to the *World Atlas of Language Structures* (WALS), particularly in chapters dedicated to gender, Corbett (2013) refers to a sample of 257 languages, identifying 112 (43.58%) languages with a gender system and 145 (56.42%) without. Consequently, the present work adopts the terminology of linguistic gender even for more complex systems sometimes referred to as noun classes.

1.2 Gender assignment

The literature presents two perspectives on gender assignment, each grounded in different metaphors. The first view *assigns nouns to genders* (Thornton, 2009, p. 14) and conceptualises gender assignment as the classification of nouns into gender categories, with genders serving as containers for these nouns. The second view, instead, *assigns gender to nouns*, and treats gender assignment as the attribution of a gender feature to a noun, necessary for its syntactic function. Both views usually go undistinguished; therefore, this work will alternate between these perspectives, depending on the focus of each section.

As Thornton (2006; 2009) rightly highlights, it is erroneous to compile a set of rules and criteria for gender assignment in the world's languages without considering two crucial factors: who is assigning the gender and what the gender is being assigned to. According to Thornton, the principles underpinning gender assignment differ fundamentally depending on the perspective. A linguist writing a computational grammar of a language may base their criteria on principles of economy, which are not necessarily psychologically plausible. In contrast, a lay speaker might employ entirely different criteria. Furthermore, even among non-linguists, the criteria for gender assignment can vary significantly. As Thornton (2006, p. 57) observes,

Non è detto che i criteri utilizzati nell'acquisizione di una L1 siano gli stessi usati nell'acquisizione di una L2, e non è detto che i criteri usati da adulti, in singole occasionali circostanze che richiedono l'assegnazione di un valore di genere a un singolo nome, siano gli stessi usati da bambini, in una fase in cui si sta costruendo la propria competenza linguistica.

[The criteria used when acquiring a first language (L1) are not necessarily the same as those employed when acquiring a second language (L2), nor are the criteria used by adults in occasional instances where they must assign a gender to a single noun necessarily the same as those used by children who are in the process of developing their linguistic competence].

In this section, the focus will primarily be on the criteria identified from the perspective of linguists and grammars of languages, while also attempting to account for certain external influences on gender assignment beyond the linguistic code in other sections (cf. 1.5.7).

According to Corbett (1991), the ease with which native speakers of a particular language can memorise the gender assigned to each noun, along with the relatively low incidence of gender-related errors, suggests that gender information is not stored as data specific to each individual word in a separate and parallel manner. Instead, this information is likely stored by category and word class, supported by semantic and formal associations that facilitate both recognition and memory retention. This mechanism is further evidenced by the relative ease with which gender can be assigned to borrowings from other languages, as well as to pseudo- and invented words.

Doleschal (2006), drawing on the theory of grammaticalisation (Claudi & Heine, 1984; Heine & Reh, 1984; Lehmann, 1995), argues that grammatical categories, such as gender, always originate from notional categories, essentially, from a discernible semantic core. This does not imply a direct link between a semantic core and a grammatical category, but rather that certain *basic grammatical concepts* are connected to *basic semantic concepts*. Adapting the terminology of Wurzel (1984, pp. 61–62), examples of such semantic concepts include object numerosity, discourse participants, and other properties or states of the world. Each language ‘carves out’ meanings from these dimensions, which are then grammaticalised into categories. For instance, the dimension of numerosity is reflected in the grammatical category of number, with values such as singular, plural, and dual. The distinction between a semantic and a grammatical concept lies in that the former represents a well-defined meaning, whereas the latter is more abstract, not only representing the semantic concept but also being polysemous, potentially encompassing various meanings.⁴ Within this framework, gender too becomes grammaticalised, according to Doleschal (2006), originating from the basic semantic concepts of male and female, as depicted in Figure 1.

⁴ In Wurzel’s terminology, a grammatical *category* is understood as the value associated with each word, such as singular, plural, dual, masculine, feminine, or neuter. In this paper, however, the term *category* refers to containers of those values, such as number or gender.

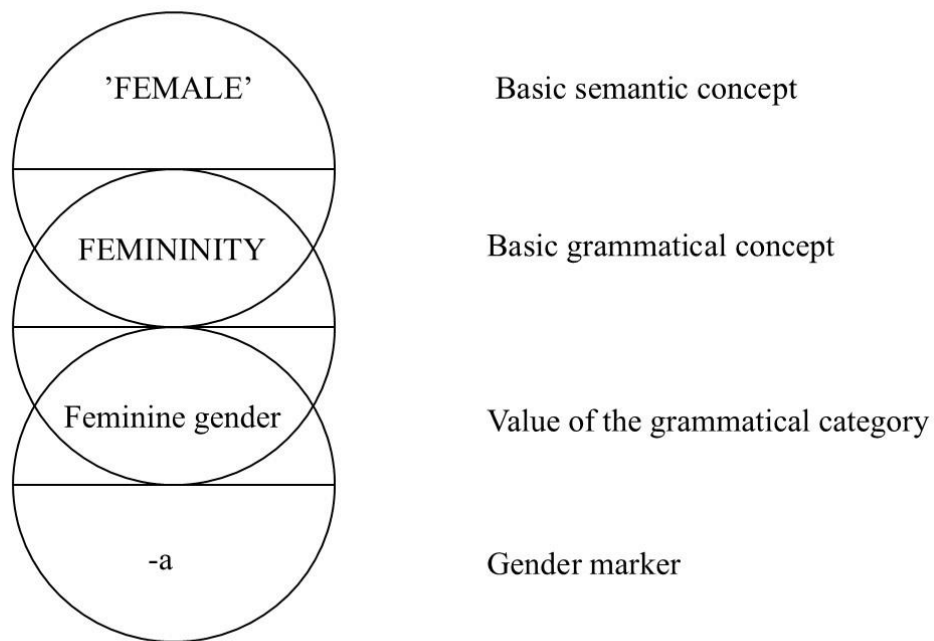


Figure 1. Gender category as a category of signs, adapted from Doleschal, 2006, p. 7.

Doleschal (2006) conceptualises the grammatical category of gender as a chain of Saussurean bilateral signs, wherein the signified of one element becomes the signifier of the next. In this framework, the basic semantic concept of ‘female’ as a real-world entity extends first into a basic grammatical concept, ‘femininity,’ then into the value of the grammatical category ‘feminine gender,’ and ultimately this value may be realised through the Italian gender marker *-a*. However, upon examining the intermediate stages, Doleschal posits that the basic grammatical concept of femininity comprises a set of more abstract and polysemous properties, which can be applied beyond the basic semantic concept of ‘female.’ For instance, in Italian, feminine words such *vittima*, ‘victim(F).SG’, or *guardia* ‘guard(F).SG’ share other semantic features with the initial concept of ‘female,’ such as animacy and humanness, but not necessarily ‘female’ itself. As a result, these nouns are often

classified as *gender indefinite* (Corbett, 1991) because their grammatical gender does not provide information about the actual gender identity or sex of the referent.

Thus, the semantic motivation underlying the linguistic category of gender, which in sex-based languages is defined as *natural gender* (Corbett, 1991; Manzelli, 2006), i.e., the difference between male and female in humans and certain animals based on gender identity and biological sex, can indeed serve as a starting point for gender assignment in nouns. However, this initial semantic link can undergo such significant extension that tracing the original semantic concepts becomes difficult, if not impossible. When the basic semantic concept is no longer discernible, it is necessary to identify other criteria, such as morphological or phonological ones, that justify gender assignment; indeed, the gender that lacks semantic motivation is often addressed as *grammatical gender* (Doleschal, 2015, p. 338). It is crucial to note that, likely due to the semantic core underlying grammaticalisation processes, no languages exist in which gender is assigned solely on formal criteria (Corbett, 1991). Therefore, the possible distinction lies between systems with gender assignment based exclusively on semantic criteria and those with a mixed semantic and formal basis.

1.2.1 Semantic assignment

In the chapters on gender in the *World Atlas of Language Structures* (WALS), based on a sample of 257 languages, Corbett (2013) distinguishes between 112 languages (43.58%) with a gender system and 145 languages (56.42%) without one (see Figure 2). Among those with a gender system, 53 languages (47.32%) rely on purely semantic criteria, while 59 (52.68%) combine semantic criteria with formal, morphological, and phonological ones.

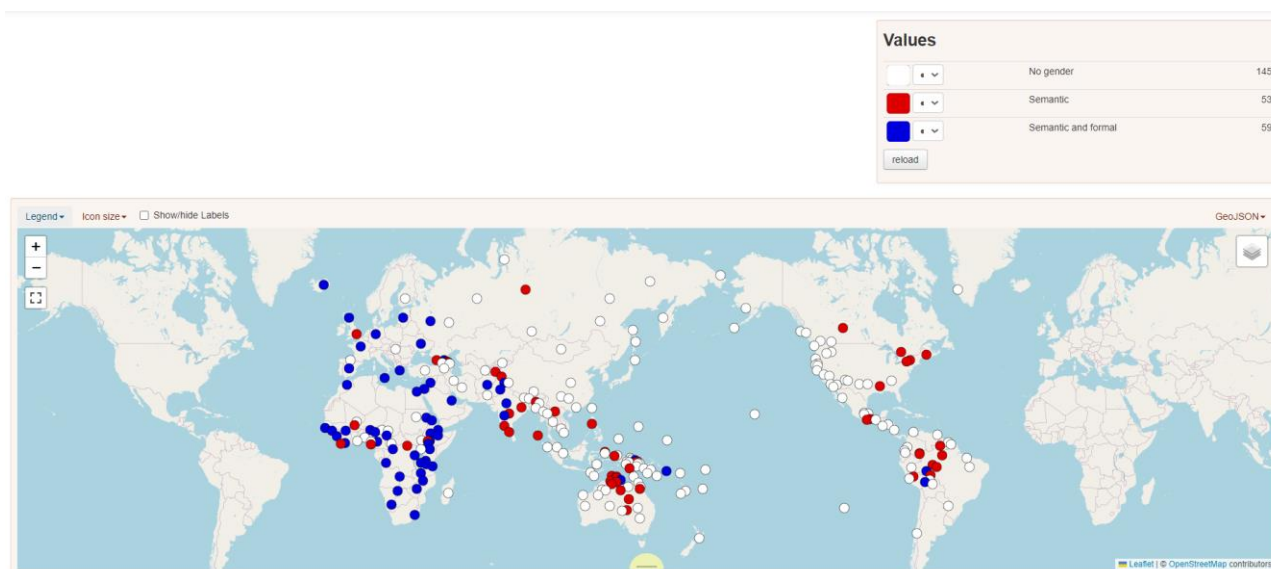


Figure 2. Maps of gender assignment according to the *World Atlas of Language Structures*.

Sex-based gender systems are prevalent in almost all areas where gender is present (Figure 3). Of the 112 languages with gender in the sample, three-quarters ($n = 84$) employ sex-based systems. The most significant non-sex-based systems are found within the Niger-Congo family in Western, Central, and Southern Africa, and the Algonquian family of North America. However, other examples

of non-sex-based semantic gender assignment exist within the Austro-Asiatic, Carib, and Khoisan language families (Corbett, 2013b).

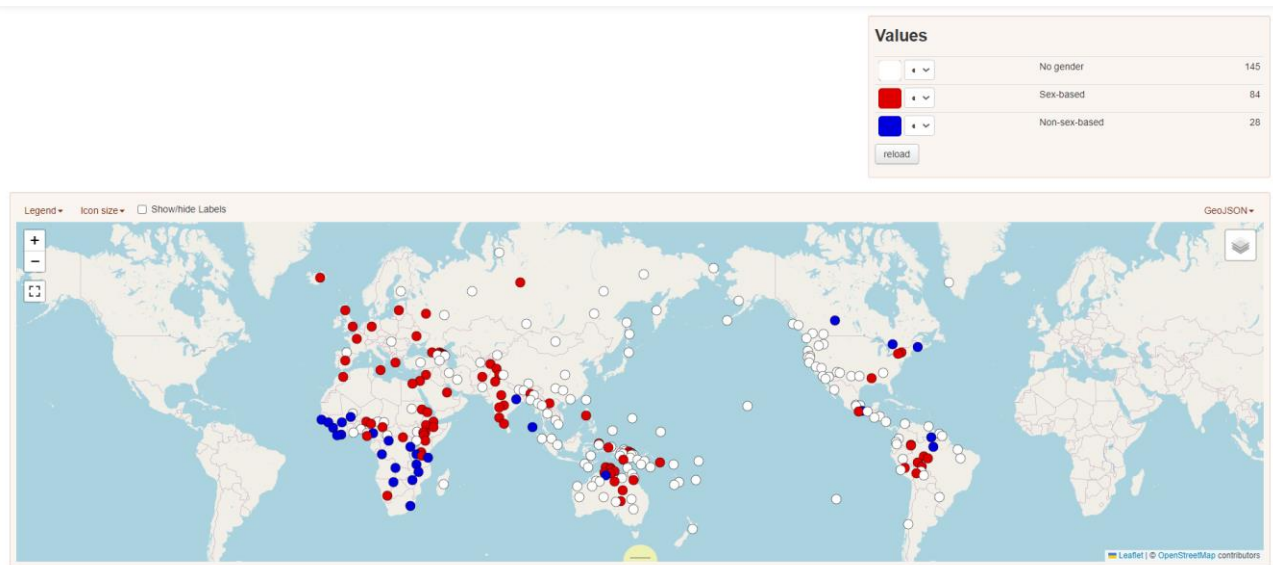


Figure 3. Sex-based and Non-sex-based systems according to the *World Atlas of Language Structures*.

Strict semantic gender systems occur where there is a direct semantic link between a noun and its referent, allowing one to infer meaning from the noun itself, with this meaning entirely determining gender assignment (Corbett, 1991, p. 8). This is evident in certain Dravidian languages, such as Tamil, where there is a consistent correspondence between ‘rational male’ and ‘rational female’ genders, which include male and female humans and deities, respectively. A third, neuter gender is assigned to non-rational entities, such as *maram* ‘tree(N).SG’ or *viitu* ‘house(N).SG’ (Corbett, 1991, p. 9). It is worth noting that such regular natural gender systems like Tamil’s are relatively rare in the WALS sample. English, for example, has a semantic or natural gender system, predominantly manifesting itself in personal, possessive, and reflexive pronouns, though still evident in some nouns (e.g., *actor/actress*). Similar to Tamil, male humans are classified as masculine, female humans as feminine, and other entities as neuter. However, variability exists, particularly with animals, domestic animals are often gendered according to their sex, and certain animals in children’s stories follow conventional

gender norms, such as assigning a feminine gender to sheep. While these principles apply to standard English, emotional and affective factors can override them, leading to variations, especially in colloquial usage, where inanimate objects may be referred to as *he* or *she* (Corbett, 1991, p. 12). In English, a neuter referential gender exists in pronouns (e.g., *it/they*), where *it* is used for designating inanimate entities, while *they*, in the plural, can refer to both animate and human entities. Sometimes, the pronoun *they* can also be used in the singular to refer to an unknown or generic individual, or to refer to someone with a non-binary gender identity. These aspects will be further explored in Chapter 2.

As previously mentioned, sex-based gender distinction is not the only semantic criterion applicable cross-linguistically. Instances of non-sex-based gender systems are found in languages such as Ojibwa (Mattiola, 2022, p. 259), an Algonquian language from the Algic family, where the semantic criterion of gender assignment is animacy, the most productive semantic criterion in non-sex-based gender assignment. This involves a binary gender opposition between animate and inanimate referents (Corbett, 2013c). Other binary oppositions significant in cross-linguistic gender assignment include human/non-human, strong/weak, augmentative/diminutive, and rational/non-rational (Corbett, 1991, p. 30).

Even in simpler semantic systems like Tamil's, there are elements that escape the primary criterion, rational male or female, and, where numerous, these elements can lead to the creation of an additional gender category to accommodate all *semantic residuals* (Corbett, 1991, p. 13), notably the neuter gender in Tamil.

Some languages, however, do not channel semantic residuals into a single class but manage them differently. A well-documented case in the literature is Dyirbal, an Australian language spoken in northeast Queensland (Corbett, 1991, p. 15). Dyirbal once had a four-gender system: the first included male humans and inanimates, the second female humans, water, fire, and entities related to fighting, the third non-flesh food, and the fourth all residuals. Nouns could be assigned gender based on three principles, despite many exceptions. First, mythological association: nouns linked to myths assume the gender of their mythological role, such as birds being assigned to gender II due to their

association with spirits of dead women. Second, conceptual association: nouns conceptually linked to entities that are assigned another gender, like fishing line, align with the gender of fish. Third, gender assignment can be based on a semantic property relevant to practical life: in Dyirbal, for example, harmful subsets, such as certain fish, are often assigned to gender II. Interestingly, the complexity of this system has diminished among younger Dyirbal speakers, who now report a simplified, reorganised system with more straightforward rules, assigning gender I an unmarked value for all animates except female humans, gender II a feminine value to designate women, and placing all residuals in class IV. This shift likely results from the decline of traditional beliefs and myths, with the influence of English contact contributing to the simplification of gender distinctions (Corbett, 1991, p.15).

Concluding, regarding semantic gender systems, Thornton (2003) highlights that, based on studies of gender assignment to loanwords, it is possible to derive a typology of semantic rules. These rules, adapted by Thornton (2003, pp. 469-470), are presented in decreasing order of generality in (4):

- (4) a. SEX → gender (for nouns referring to humans)
- b. SEMANTIC CATEGORY X, Y, Z → gender α , β , γ
- c. HYPERNYM GENDER → hyponym gender
- d. GENDER OF A SEMANTICALLY RELATED WORD (but not hypernym, not a translation, not a false friend) → gender of the assigned noun
- e. GENDER OF A TRANSLATION → gender of the assigned noun
- f. GENDER OF A 'FALSE FRIEND' → gender of the assigned noun
- g. GENDER IN THE SOURCE LANGUAGE → gender of the assigned noun

1.2.2 Semantic and formal assignment

Formal assignment rules often address the residual cases of semantic assignment and can be either phonological or morphological. Phonological gender assignment is based on the characteristics of individual noun forms, with particular emphasis on their endings. For instance, in certain languages like Yimas, a Papuan language, the combined semantic and phonological assignment processes are notably regular and thus highly predictable (Mattiola, 2022, p. 261). In Yimas, genders I-IV exhibit sex-based semantic assignment, with animacy playing a role in classes III and IV. Genders VI-XI, on the other hand, demonstrate phonological assignment, relying on the consistent application of strong formal markers, such as the ending *-mp* (e.g., *impramp*, ‘basket(VII)’) for all nouns in gender VII and *-uk* (e.g., *antuk*, ‘mouth(X)’) for those in gender X, while gender V encompasses residual forms (Corbett, 1991, p. 56).

In some languages, phonological criteria for gender assignment may appear relatively straightforward. For example, in Godié, a Niger-Kordofanian language, gender is determined by the binary opposition of frontness and backness in the final vowel (Corbett, 1991, p. 53). In other instances, syllabicity might also be relevant, as in German. In more complex cases, it becomes necessary “to see whether any constraints can be established which would preclude certain types of phonological information from being used in gender assignment” (Corbett, 1991, p. 62).

Looking at Romance languages, although none of them exhibits a generalised phonological gender assignment system, several studies have identified phonological cues that enable speakers to predict it (Loporcaro, 2017, p. 56). French, in this regard, has been described as an *opaque* system due to the apparent lack of clarity and predictability in the phonological rules proposed to explain residual gender assignment beyond the semantic level. The numerous phonological rules, based on the terminal sounds of nouns, alongside their many exceptions, have led to a perception of French gender assignment as largely random. However, Corbett (1991, pp. 57-61) challenges this view, arguing that French phonological criteria should be interpreted alongside morphological and other structural information within the language. This approach contextualises seemingly random data within a more coherent system of rules, indicating that the French gender system, despite its many

exceptions, possesses an underlying regularity and structure, balancing semantic and formal rules (see Tucker et al., 1977 for specific traits of gender assignment in French).

Turning to the other source of formal criteria, contrarily to phonological gender assignment, the morphological one requires the consideration of a word's entire inflectional paradigm. A clear example contrasting phonological (5b) and morphological (5a) criteria is provided by Loporcaro (2017, p. 57) considering the Italian language:

- (5) a. If a noun belongs to class 2 (in D'Achille & Thornton's 2003 listing: *rosa*, *-e*, 'rose, -s'), it is feminine.
- b. If a noun ends with *-a*, it is feminine.

Thornton (2003, p. 469) rightly observes that, despite the fact that criterion (5a) provides complete accuracy, Italian speakers rely more on the phonological criterion, even though it contains numerous exception; the Italian gender system will be discussed in greater detail in section 1.7.1. Generally, morphological assignment depends on the *declensional type* of a word form, thus the full set of case and number forms, as it happens when determining gender in Russian. In some instances, such as in German, even the derivational history of a noun provides crucial information for determining its gender.

A particularly well-studied case in the literature is that of Russian, an Indo-European Slavic language, since its gender assignment system derives from a complex combination of semantic and formal criteria. Corbett's (1991) description of the mixed semantic and morphological assignment system in Russian has been further developed by Doleschal (2000, 2001). Concerning semantic assignment, Russian features three gender values: masculine and feminine, associated with male and female human referents, and neuter, which encompasses inanimate nouns (Corbett, 1991, pp. 40-43; 2013b). Instead, residual nouns are distributed between the masculine and feminine genders based on morphological assignment rules that are, in turn, grounded in the four inflectional classes present in Russian. The combination of semantic and morphological criteria results in masculine gender being assigned to nouns denoting male animate referents and nouns of inflectional class I, feminine to nouns

denoting female animate referents and nouns of inflectional classes II and III, and neuter to all nouns of inflectional class IV.

Building on Corbett's algorithm, Doleschal (2000; 2001) explores the possibility of an algorithm that predicts the gender of Russian nouns without reference to declensional class. She specifically incorporates phonological criteria, noting that these rules apply productively to new lexical items, such as word formations or loans, and partially during language acquisition. Importantly, she proposes a precise hierarchical order for applying the three types of gender assignment criteria (semantic, morphological, and phonological) (for the specific order in assignment rules, see Doleschal, 2001, pp. 106-107).⁵

(6) **Semantic rules**

$M \rightarrow m$	"Nouns denoting males are masculine"
$F \rightarrow f$	"Nouns denoting females are feminine"
$state \rightarrow n$	"Nouns denoting states are neuter"
$river \rightarrow f$	"Nouns denoting rivers are feminine"
$organization \rightarrow f$	"Nouns denoting organizations are feminine"
$currency \rightarrow m$	"Nouns denoting currencies are masculine"
$foreign\ city \rightarrow n$	"Nouns denoting foreign cities are neuter" etc

Morphological rules

$suffix_m \rightarrow m$	"Nouns derived by a lexically masculine suffix are masculine"
$suffix_f \rightarrow f$	"Nouns derived by a lexically feminine suffix are feminine"
$suffix_n \rightarrow n$	"Nouns derived by a lexically neuter suffix are neuter"

⁵ In the following outline, the uppercase letters *M* and *F* indicate, respectively, masculine and feminine referential gender, while lowercase *m* and *f* signal the masculine and feminine grammatical gender assigned to nouns.

abbreviation → gender of head “Nouns derived by a lexically neuter suffix are neuter”
noun

Phonological rules

$C\# \rightarrow m$	“Nouns ending in a consonant are masculine”
$/Ca/[-\text{stress}] \rightarrow f$	“Nouns ending in unstressed /a/ preceded by a consonant are feminine”
$/V/ \rightarrow n$	“Nouns ending in a vowel are neuter”

(adapted from Doleschal, 2001, p. 107)

In concluding this brief survey on the rules governing gender assignment across various linguistic systems, it is important to note that while semantic and phonological rules, particularly those based on criteria such as sex, animacy, and individuation, can be typologically shared even among languages that are otherwise quite distant, morphological rules are inherently language-specific (Thornton, 2022, p. 14). This specificity arises from the highly arbitrary nature of the inflectional classes within each system, which Aronoff (1994) refers to as morphomic elements, meaning that their identities are not comparable across different languages. Moreover, gender assignment rules are frequently subject to violations across the world’s languages, as well as diachronic variations, and may lose productivity, becoming inapplicable at various stages in the evolution of a language.

1.2.3 Borrowings and conflicts in gender assignment

In the brief overview presented thus far on gender assignment, it is essential to address the role of borrowings for two main reasons: firstly, the observation of gender assignment in borrowings can confirm the general rules postulated for the native lexicon of a language. Audring (2004) highlights

that examining gender assignment in borrowings and neologisms enables the identification of psychologically valid and productive criteria that speakers employ during spontaneous gender assignment. Secondly, the treatment of borrowings is a key factor in determining whether a gender assignment rule is productive in a language. According to the criteria summarised by Thornton (2003, pp. 468-469) and previously postulated by Dressler (1997), a gender assignment rule can be considered productive only if it meets the conditions outlined in (7):

- (7)
 - a. It applies to phonologically and morphologically unintegrated borrowings (e.g., in Italian, nouns ending in a consonant, or in vowels not present in the Italian phonemic inventory, or in *-i*, *-u*).
 - b. It applies to borrowings that exhibit the same phonological and morphological characteristics as native words (such as the Italian nouns ending in *-a*, *-e*, *-o*).
 - c. It applies to native neologisms (not suffixed).
 - d. It results in gender change in already attested words.

Typically, borrowings adhere to the rules of the receiving language's system, whether semantic or semantic-formal. Consequently, when borrowings denote human referents, and the language in question has a sex-based semantic gender assignment, this will also apply to the borrowed term, regardless of the inflectional class in which the noun fits. For instance, in Russian, the borrowed noun *ledi* (from English *lady*) is assigned feminine gender due to its meaning, despite being indeclinable in Russian and thus not fitting into any typical feminine inflectional class. In cases where grammatical gender is not semantically motivated, the borrowed noun is usually accommodated within the morphological patterns of the language. This is seen with the Russian noun *komp'juter*, 'computer(M).SG', which takes masculine gender because of its alignment with the first declensional class. In other instances, borrowings undergo 'patterns of adjustment' to fit into one of the available declensional classes in the language. For example, English derivatives ending in *-ation* are adapted in Russian to *-acija*, reflecting the behaviour of the typically feminine second inflectional class. Moreover, some indeclinable borrowings, such as *taksi* 'taxi(N).SG', are assigned neuter gender. Therefore, the data from borrowings reinforce the previous observations: for sex-differentiable nouns,

semantic factors determine gender; otherwise, morphological information is required for gender assignment. Some loanwords may align with one of the regular inflectional class, and their gender follows automatically. However, the phonological form of certain borrowings means they do not fit into any inflectional class and thus remain indeclinable (Corbett, 1991, p. 72).

There are also instances where the gender of borrowings is influenced by special assignment mechanisms, such as *semantic analogy*. For example, the gender of an English loanword in Puerto Rican Spanish *la butterfly*, ‘the.F.SG butterfly(F).SG’ is determined by the feminine gender of the corresponding Spanish *la mariposa* (Corbett, 1991, p. 75). Another interesting case is the assignment of a default gender. A default gender is a class that typically encompasses the majority of nouns in a language, including a significant portion of borrowings (Poplack et al., 1982, pp. 21–23). Usually, the default gender corresponds to an unmarked value in terms of referential gender (see 1.1), and with respect to gender assignment, it does not involve specific rules. As Thornton (2003, p. 478) hypothesises, “in a language X with n genders, if gender α is the default, there can only be rules that assign $n-1$ genders, i.e., all except the default”.

Finally, gender assignment rules are subject to both diachronic and synchronic variation, which may even significantly impact the overall gender system. In some cases, changes in gender affect a small group of nouns without altering the functioning of the core gender system. For instance, in certain Russian dialects, some neuter nouns have shifted to feminine gender due to changes in their inflectional class, without affecting the broader gender system of the language (Inglese & Luraghi, 2023); a similar change happened to Italian’s nouns denoting cities, such as *Milano*, which were assigned masculine in the eighteenth century, but appeared feminine in a corpus of 20th-century Italian (Thornton, 2006, p. 59). In other cases, however, there is a change in the semantic core of a gender when the gender system of a language undergoes such a radical and systematic transformation that it may even alter its typological classification. For example, English has transitioned from a language with a mixed semantic and formal gender assignment system to one that is predominantly semantic, retaining gender marking only in pronouns. The reverse process (from semantic to morphological assignment) has occurred in some Bantu languages (Corbett, 1991, p. 103). One of the

reasons for such radical changes is the *semantic weakening* of the core meaning of a gender, due to what Corbett describes as a *Trojan horse effect* (Corbett, 1991, p. 98). This occurs when a gender opens up to exceptions, such as borrowings, which gradually increase in number. As these exceptions grow, they can no longer be considered as such and instead weaken the semantic core of the gender itself. In some Slavic and Romance languages, the masculine gender's semantic core has been significantly weakened due to the influx of new borrowings, leading to a loss of its original meaning and its evolution into a more unmarked value. In French, in the 1800s, nouns were almost evenly split between masculine and feminine genders, at 51% and 49%, respectively. However, from 1900 onwards, due to the considerable number of borrowings from English, the percentage of masculine nouns rose to 61% (Corbett, 1991, p. 82).

Looking at gender assignment in borrowings from a synchronic perspective, the fact that, in the early stages of a loanword's adoption, the assignment of gender is subject to variation is a common and indisputable phenomenon (Thornton, 2006, p. 70). An interesting case was documented by Grandi (2018) regarding the borrowed acronym of *VAR*, *Virtual Assistant Referee*, from English into Italian. According to the Italian rules (cf. 1.7.1), *VAR* should have been assigned masculine gender by default, visible only on the agreement targets (e.g., *Il VAR* 'the.M.SG VAR(M).SG'), as the word ends in a consonant and cannot belong to the typical feminine inflectional class in Italian. Additionally, the Italian translation of the acronym's head, *arbitro*, 'referee(M).SG', typically denotes a male referent, providing a strong semantic motivation for masculine gender. However, since the word's introduction in 2017, *VAR* in Italian has oscillated between masculine and feminine gender (e.g., *La VAR* 'the.F.SG VAR(F).SG'), an oscillation that has stabilised and is also influenced by diaphasic and diamesic factors. Sociolinguistic data collected by Grandi reveal a clear distinction between more formal contexts, such as generalist media or football-related magazines, which maintain the masculine gender or distribute equally between the two genders, and informal contexts, such as the football supporters' community, where the feminine construction *la VAR* predominates. The feminine realisation was also the first documented in the corpus chronologically, regardless of the source. Grandi explains that the grassroots tendency in common usage to assign feminine gender to *VAR* is due to the influence of the vowel *-a*, suggesting a possible phonological gender assignment rule associated with the feminine,

despite ending in a consonant and therefore not fitting into the typical feminine inflectional class *-a* (singular)/-*e* (plural). Furthermore, the choice of feminine gender may be influenced by the pressure of a semantically analogous feminine term, *moviola*, ‘slow-motion(F).SG’, which appears in similar syntactic contexts and the same football-related semantic sphere. This has led to a surprisingly rapid semantic reanalysis, confirmed by the adapted spelling *Var* rather than the capitalised one, which shifts the interpretation from the agent (referee) to the instrument (slow-motion).

A final consideration regarding gender assignment concerns the frequent conflicts between semantic and formal rules, for which the literature presents various and often conflicting models of resolution (Thornton, 2006, pp. 65-71). Starting with Corbett (1991; also Corbett & Fraser, 2000, p. 321) who has been the primary theoretical reference for the discussion thus far, it is asserted that, on a universal level, where a semantic rule conflicts with a formal rule in gender assignment, the semantic one generally prevails. This hierarchy of rules is supported by Audring (2004), although she argues that it should not be universally applied but rather should be language-specific.

Some scholars, such as Rice (2006), reject the existence of a hierarchy among gender assignment rules, instead resolving conflicts based on other parameters, such as the concept of markedness (which will be further analysed in 1.7.4). According to Rice’s *Optimal Gender Assignment Theory* (OGAT), different assignment rules carry equal weight within a language, with the only hierarchy established between the markedness values of the available genders. For example, in Russian, the three available genders are ordered by increasing markedness as masculine, feminine, and neuter. From this perspective, a loanword such as *mulla*, ‘mullah(M).SG’ would experience a conflict in gender assignment between the formal rule, which would place the word in the feminine inflectional class (class II), and the semantic rule, which recognises a referentially masculine gender. According to OGAT, this conflict is resolved not by the semantic rule prevailing, but because the masculine gender is the least marked (Thornton, 2006, p. 66). However, the OGAT seems to not adapt well to Italian, which calls into question its universal applicability. As Thornton (2006, p. 67; 2009) observes, a situation similar to that of *mulla* in Russian also occurs with words such as *squillo* ‘female prostitute(F).SG’ in Italian, where a semantic reason suggests assignment to one gender and a

phonological reason suggests assignment to the opposite gender. According to OGAT, such a word should be assigned to the masculine gender as the least marked, yet the semantic rule prevails.

There are also models that propose no hierarchy at all, neither among different types of rules nor based on parameters such as markedness. These models propose rule schemas, logical blocks of gender assignment based on a blend of semantic and formal rules, as in those suggested by Doleschal (2000; 2001; 2004) (see section 1.2.2) for gender assignment in Russian. In these frameworks, a single noun can be linked to multiple schemas, including those that assign different genders. Generally, the gender that is most frequently associated with the noun across these schemas is the one that is ultimately assigned. Furthermore, within this model, certain schemas are considered to possess a ‘prototypical core’ value for each gender (see section 1.2). For example, an ending in *-a*, combined with membership in the second declensional class in Russian, are schemas belonging to the prototypical core of the feminine gender, but a loanword like *mulla* is assigned the masculine gender because it also carries a referential masculine gender (Thornton, 2006, pp. 68-69). Therefore, although *mulla* has two schemas supporting its assignment to the feminine gender (the ending in *-a* and the second inflectional class, both of which are part of the prototypical core), it has three supporting its assignment to the masculine gender (male referent, *-a* also appearing in masculine nouns, and the second inflectional class also accommodating masculine nouns). The key point of these models is that the prototypical core may be constituted by either semantic or formal rules, without any hierarchy between them, and is based solely on the accumulation of compatible rules for each noun.

There are other perspectives as well, which view gender assignment as being influenced by the *probabilistic effect of all the rules* within the domain in which loanwords fall, affecting the fluctuation observed in the early stages of adaptation, eventually leading to a stable gender due to the pressure for uniformity within a linguistic community (Poplack et al., 1992). However, this does not appear to be the case in the observations made by Grandi (2018) or Thornton (2006, pp. 70-71), indicating that in the resolution of gender assignment conflicts, sociolinguistic variables such as the size of the reference community and the diversity of the sample in terms of diastratic, diaphasic, and diamesic variables must be considered as crucial factors.

1.3 Values and structures of gender systems

The exact number of gender values is based on the agreement classes available in a language; the WALS distinguishes among a sample of 112 languages: 50 languages with a binary gender system (animate *vs.* inanimate or masculine *vs.* feminine), such as Spanish; 26 languages with a ternary system (adding neuter), such as German or English; and more complex systems, including 12 languages with four gender values, such as Burushaski, an isolated language, and 24 languages with five or more values, such as Chichewa, a Bantu language from the Niger-Congo family (Inglese & Luraghi, 2022, pp. 52-54; Mattiola, 2022, p. 256).

The distribution of gender values does not strongly correlate with geographical regions; in fact, within the same area, languages can display very different numbers of gender values. Only languages with four or more gender distinctions show some areal concentration, particularly in Papua New Guinea, Northern Australia, the Caucasus, and sub-Saharan Africa. Bantu languages in central and southern Africa are especially rich, with up to 20 gender values (Corbett, 2013a).

As schematised by Loporcaro (2017, pp. 28–29), concerning Indo-European languages, historical linguistics research has traced the transition from a three-gender system in Proto-Indo-European (PIE) to two-gender systems, resulting from different reduction processes. In some cases, this led to a masculine-feminine binary, as seen in the Romance languages (except Romanian), certain Celtic and Baltic languages, some South Slavic dialects, and several Indo-Iranian languages. Alternatively, the binary can be based on animacy, creating a common gender/neuter distinction, as found in East Scandinavian, Danish, Swedish, and some Western Germanic languages like Dutch and Frisian. Some languages, like Greek, many Slavic languages, German, Icelandic, and parts of Indo-Iranian, have preserved the original three-gender system. In contrast, others, such as Armenian and several Indo-Aryan languages like Bengali, have lost gender distinctions. Importantly, despite these variations, no branch of the Indo-European family shows an increase in the number of gender values, at least considering standard national languages (Matasović, 2004, p. 72).

The semantic motivation for grammatical gender values follows referential characteristics such as sex and animacy in systems with up to three values. However, in systems with four or more values, finer-grained semantic and formal distinctions begin to operate. In certain African languages belonging to the Niger-Congo family, there exist agreement classes specifically dedicated to diminutives and augmentatives, irrespective of the referential gender or animacy of the referent (Grandi & Kortvelyessy, 2015). Bantu languages, in particular, have been the subject of extensive study due to the complex interaction between grammatical gender and number, which gives rise to numerous grammatical gender values, as for the Zulu language, which features 16 agreement classes indicated by prefixes (Inglese & Luraghi, 2023, p. 53).

Moreover, the feature of *individuation*, which arises from the opposition between mass and countability and the interaction between gender and number categories, can become an important semantic feature in increasing the number of available gender values in a language. Indeed, in the dialects of central and southern Italy studied by Loporcaro and Paciaroni (2011) and Loporcaro (2017), a fourth gender, considering masculine, feminine and alternant as the first three genders, for mass nouns (e.g., *water*, *salt*), defined by the authors as *neuter*, can be found (see Table 1).

It should be noted, however, that according to some scholars (Maiden, 2011), the distinction of four genders in the Agnonese and other Italo-Romance varieties of central-southern Italy cannot be considered as such, because the neuter gender provided for mass nouns would simply be a subclass of the masculine (see Loporcaro & Paciaroni, 2011; Loporcaro, 2017, pp. 145-154 for counterarguments). In these Italo-Romance varieties, the four-gender distinction applies only to the singular form, whereas the plural form distinguishes only three values, as shown in Table 1. Moreover, the third value identified by the authors is that of the so-called *alternant gender*, which is not unanimously considered a separate value in the literature, and has been studied particularly in Romanian (Loporcaro, 2017).

Table 1. The gender system of Agnonese, from Loporcaro and Paciaroni, 2011, p. 418.

	Singular	Plural	
Neuter	<i>lə mɔ̃lə</i>	∅	‘the honey’
Masculine	<i>ru kafeɥnə</i>	<i>rə kafiɥnə</i>	‘the peasant, -s’
Alternant	<i>ru ləndzuɔrə</i>	<i>lə ləndzeɥrə</i>	‘the bed-sheet, -s’
Feminine	<i>la volpə</i>	<i>lə vulpə</i>	‘the fox, -es’

Particularly, alternant gender refers to the gender of words that take one value in the singular and an opposing value in the plural, as systematically observed in Romanian, and in a more limited manner in a small group of Italian nouns, such as *uovo/uova*, ‘egg(M).SG/-s(F).PL’. When this occurs in a restricted group of nouns, the alternant gender is defined as *inquorate gender* (Corbett, 1991, pp. 74), referring to:

[those genders] which comprise a small number of nouns, and whose agreements can be readily specified as an unusual combination of forms available for agreement with nouns with the normal gender values.

Inquorate gender cases in Italian are highly recognisable because the plural forms often end in *-a* (e.g., *miglio/miglia*, ‘mile(M).SG /-s(F).PL’), and because the plural frequently conveys a different meaning from the singular, as in *fondamento/fondamenta*, ‘basis(M).SG/’foundations(F).PL’. These forms are also distinctive because they often have an alternative form that follows the more typical inflectional class of the singular gender; thus, nouns like *braccio* ‘arm(M).SG’ exhibit a plural with the opposite gender, such as *braccia* ‘arms(F).PL’, but also a less typical form like *bracci* ‘arms(M).PL’, which is usually associated with a secondary and different meaning, often due to metaphorical extension or specialisation of meaning (Loporcaro, 2017). In some cases, the feminine plural in *-a* for some of these masculine singular forms is found only in collocations with a specific semantics

(Thornton, 2013) This has led some scholars (Acquaviva, 2008, p. 148) to consider these feminine plurals as ‘lexical plurals’ rather than ‘morphosyntactic inflectional plurals,’ envisioning both gender and number as inherent to the lexeme.

However, when cases of alternant gender among controllers are systematic in a language, as in Romanian, the existence of a third gender value, in this case, neuter, can be postulated. Nevertheless, not all scholars agree on considering the *genus alternans* in Indo-European languages as a third gender (see Loporcaro, 2017, p. 92 for a review). The central issue in this debate concerns the presence of three controller genders, albeit through just two sets of distinct targets. The third set of agreement targets is contested because it selects the same agreement target as the masculine in the singular and the feminine in the plural, which means that there is no full distinguishability or autonomy of the third value from the perspective of its exponents on the targets. According to (Maiden, 2016, p. 113), this is not a neuter gender but simply a substantial set of nouns that distinguish between masculine and feminine gender based on number, due to their morphology.

The interaction between gender and number also concerns the distinction between *parallel* gender systems, such as that of Latin, in which each available gender value in the singular corresponds to a value in the plural, and *convergent* gender systems, such as that of German, where the three-way distinction present in the singular converges into a common gender value in the plural (Corbett, 1991, p. 155; Inglese & Luraghi, 2023, p. 49; Loporcaro, 2017, pp. 34-52). It is worth noting that the reverse would violate Greenberg’s Universal 37 (Greenberg, 1966): “a language never has more gender categories in nonsingular numbers than in singular”. In relation to the Romance languages, only parallel systems are attested in standard varieties, even if French is the closest language to having a convergent system, whereas, with the expansion of typological studies into dialects, convergent systems have been observed in different areas of Italy (see Loporcaro, 2017, pp. 40-52), for example in Milanese, where all determiners, personal pronouns, and pronominal clitics, and adjectives do not show any gender distinction in the plural (Beretta, 1980).

Concluding, regarding the interaction between gender and number, the literature highlights the intriguing phenomenon of *gender polarity* (Saeed, 1999), observed in Cushitic languages like Somali.

In Somali, nouns that are masculine in the singular show feminine agreement in the plural, as already stated about alternant gender, but this language also allows for the opposite phenomenon, thus having singular feminine nouns which become masculine in plural forms. Theoretically, this polarity suggests that inherent selected gender in Somali is more similar to the functioning of number in languages with grammatical gender such as Italian rather than gender which is inherent fixed (Mattiola, 2022, pp. 263-264).⁶ This demonstrates that the grammatical category of gender can assume different theoretical roles depending on the language.

1.4 Genderless languages

The absence of grammatical gender is a characteristic frequently associated with the Ural-Altaic language family, which includes Uralic (Ugric, Finnic, and Samoyedic) and Altaic (Turkic, Mongolic, and Manchu-Tungusic) languages. Although the genetic relationship between these languages remains unproven, they share structural traits, particularly their classification as agglutinative languages. Agglutinative languages such as Tamil and Dravidic present words composed of multiple morphemes that are easily segmented due to a clear sequential arrangement. Each morpheme serves a single, distinct function, maintaining a one-to-one correspondence between form and content, with each form conveying only one meaning without variation (Grandi, 2014). This agglutinative nature, where morphemes are affixed in sequences, might explain the lack of gender morphemes.

⁶ The interaction between gender and number may be also framed by the concepts of *inherent fixed* and *inherent selected gender* (Aikhenvald, 2000; Corbett, 1991; Iacobini & Thornton, 2016). When a noun possesses a stable, unchanging gender assignment, often based on semantic (e.g., biological sex) or formal (e.g., phonological or morphological) criteria, which remains consistent regardless of syntactic context, it can be referred as *inherent fixed gender*. Otherwise, gender may be *inherent selected* or *variable* (Iacobini & Thornton, 2016, p. 192) when it is context-dependent, thus, it changes depending on other linguistic features (e.g., number information) in syntactic agreement (adjectives, verbs, pronouns). According to this distinction, and with reference to the functioning of Italian, the small group of nouns such as *uovo/uova* ‘egg(M).SG/-S(F).PL’ previously treated as nouns with inquirate gender (Corbett, 1991), can be interpreted as nouns with inherent selected gender. This is because the information about number (plural) interacts with that about gender in such a way that the noun selects masculine agreement targets in the singular and feminine agreement targets in the plural.

However, this trend is not universal. For example, Basque, despite being agglutinative, marks gender in the second-person singular verb form. Similarly, certain Dravidian languages, like Tamil, extensively mark gender on nominal elements. Thus, while agglutination may correlate with gender omission, many agglutinative languages still exhibit morphological gender marking (Manzelli, 2006).

Greenberg's Universal 43 (Greenberg, 1976, p. 140) posits that "if a language has gender distinctions in nouns, it will also have gender distinctions in pronouns". Consequently, a language lacking gender marking in third-person pronouns may not have grammatical gender. However, exceptions exist. Northern Kurdish, derived from the Cizre-Botan dialect in Turkey, marks gender on nouns but uses a single third-person singular pronoun. Similar patterns are observed in Indo-Aryan languages like Hindi and Punjabi, and in Chechen. Familial and typological affiliations can influence the absence of gender, but not definitively. For instance, English and Afrikaans have nearly lost gender despite their Germanic roots, while Armenian lost gender by the 5th century AD, likely due to Georgian influence.

As will be demonstrated in the following discussion, genderless languages can still denote female and male referents; however, what classifies them as genderless (i.e., languages without grammatical gender) is the absence of *syntactic evidence* (Thornton, 2022) in agreement following the assignment of gender values to nouns. Consequently, they do not establish a genuine gender system as defined in the preceding sections.

The expression of referential gender in genderless languages manifests through various mechanisms that compensate for the absence of grammatical gender, revealing the intricate ways in which these languages adapt to convey referential gender distinctions despite lacking grammatical gender. Creole languages, for example, provide a compelling illustration of this phenomenon. These languages emerge from the stabilisation of pidgins, which often draw their lexicon from colonising languages such as Spanish, Portuguese, and French. Despite these origins, grammatical gender is typically discarded during the initial simplification process that creates a pidgin. As the language evolves into a creole, the reintroduction of grammatical gender is uncommon. Haitian Creole, based on French and spoken by the largest number of people among creole languages, neutralises the French

gendered pronouns *lui/elle* into *li* (Manzelli, 2006, p. 78). Yet, creole languages often employ alternative strategies to express referential gender, similarly to other genderless languages. Tok Pisin, a creole of Papua New Guinea derived from English, uses only one pronoun, *em*, rather than the English three pronouns *he/she/it*, but still marks referential gender for humans and animals using the lexicalised classifiers *man*, ‘man’ and *meri*, from ‘Mary’, meaning ‘woman’; this is evident in compounds such as *pikinini man* ‘boy’ and *pikinini meri* ‘girl’.

Classifiers in genderless languages are typically free forms, distinct from affixes, and serve to indicate the type of referent denoted by a noun. Unlike grammatical gender, classifiers are semantically motivated and do not trigger agreement, although in some cases, the same classifier may be repeated across multiple constituents, such as adjectives and determiners, as seen in Waorani, an isolated language spoken in Ecuador (Fiddler, 2011). Furthermore, classifiers differ from grammatical gender in their level of obligatoriness. While they often convey referential gender information, classifiers can also denote other characteristics of the referent. For example, in Kanjobal, a Mesoamerican language, classifiers distinguish humans from animals (Craig, 1992). A well-known example is Chinese, which has dozens of classifiers that specify meaning in intricate ways, such as distinguishing between glasses or objects with handles (Inglese & Luraghi, 2023, p. 60).

Moreover, many genderless languages retain what is known as *lexical gender*, thus the referential gender information highly semantically motivated which is not morphologically marked but encoded in the lexical entry. Lexical gender is particularly associated with kinship terms such as *mother* and *father* (Engelberg, 2001). However, this retention is not universal across all genderless languages. For instance, languages such as New Zealand Maori employ a single term, *matua*, to refer to father, mother, uncle, and aunt (Manzelli, 2006, p. 78). In order to specify referential gender in Maori, speakers create compounds by adding words like *tane* ‘man’ or *wahine* ‘woman’. Furthermore, the persistence of referential gender distinctions is more apparent concerning animacy. Many genderless languages differentiate between interrogative pronouns for ‘who’ and ‘what’, or use third-person singular pronouns exclusively for humans while employing demonstratives for animals, as seen in Hungarian and Finnish (Engelberg, 2002). Therefore, if gender is understood as a mechanism

that triggers agreement and creates nominal classes, it is more likely to be preserved where the semantic motivation is linked to animacy rather than sex-based traits (Manzelli, 2006). Indeed, looking at the Finnish genderless system, as described by Engelberg (2002), there are not distinctions between masculine and feminine third-person singular pronouns, which are neutralised in the pronoun *hän*, but it preserves an animacy-based distinction in the third-person demonstrative pronouns *se* ‘this, that’ referable to animals and *tämä* ‘that’ referable to inanimates.

Another strategy observed in some languages, particularly in Southeast Asia, involves the use of classifiers, which is sometimes associated with a broad concept of gender. Although Manzelli (2006) finds this connection debatable, Vietnamese provides a pertinent example where classifiers such as *anh* ‘older brother’, and *co* ‘aunt’, are used to indicate masculine and feminine referential gender, respectively. In contrast, other genderless languages rely on nominal compounds or lexicalised phrases to express referential gender distinctions. Basque, for instance, marks referential gender by adding terms like *arra* ‘male’ or *eme* ‘mother’ to nouns, as in *otso-arra* ‘male wolf’ and *otso-eme* ‘female wolf’. This practice is more pronounced in languages that employ nominal derivation, where formative morphemes vary in transparency regarding their origins. A case in point is Finnish, where the suffix *-ttare* is used to derive feminine nouns. Indeed, *-ttare* likely has Baltic origin and became a suffix after a process of grammaticalization from the word *tytär* ‘daughter’ (Engelberg, 2002, p. 113). Interestingly, Finnish does possess a limited number of female-specific suffixes, such as *-kkO*, *-tAr*, *-skA*, and *-nna*, used to indicate female reference in certain nouns. However, these suffixes are often archaic or colloquial, with some, like *-tAr*, still appearing in contexts such as sports terminology or traditional titles. Similarly, Armenian, the earliest recorded language without grammatical gender, demonstrates this through the Persian loanword *t’agouwrhi* ‘queen’, which evolved into the productive feminine suffix *-owhi*.

Moreover, some genderless languages use suprasegmental phonetics to mark referential gender. In these languages, vowel harmony plays a crucial role, whereby the vocalism of a word is influenced by the vowel in the first syllable. This phenomenon, observed in Uralic and Altaic languages,

associates back vowels with masculine meanings and front vowels with feminine ones, resembling the metaphony or *Umlaut* process found in gendered languages (Manzelli, 2006, p. 84).

Another method for marking referential gender, evident in English and other languages, involves the use of proper nouns paired with animal names to indicate referential gender, such as *tom turkey*, ‘male turkey’, or *billy goat*, ‘male goat’. Additionally, referential gender distinctions may be introduced into a language through borrowings from other languages. For example, Turkish retains referential gender distinctions in Arabic loanwords, thus preserving the gender of the borrowed terms (Braun, 2001). Furthermore, some genderless languages mark referential gender exclusively in their writing systems, such as in Chinese, where referential gender distinctions can be made in writing, even if they are absent in spoken language, and feminine classifiers often brings negative connotation instead of merely denoting female individuals (Ettner, 2002).

In conclusion, the expression of referential gender in genderless languages is multifaceted, relying on various strategies such as classifiers, nominal compounds, lexicalised phrases, borrowings, and even modifications in writing or phonetics. Residual referential gender distinctions, particularly in terms like ‘mother’ and ‘father’, also persist. However, what is consistently absent in these languages is grammatical gender agreement, with the notable exception of Tagalog, where agreement mechanisms have developed through contact with Spanish (Manzelli, 2006, p. 87).

Having addressed the key points concerning the functioning, allocation, and distribution of different gender systems in the world’s languages, the focus of the subsequent sections will shift to a more detailed analysis of the grammatical gender system in Italian. Through this exploration of the Italian gender system, certain considerations previously omitted will also be discussed, particularly those related to grammatical gender agreement and grammatical gender resolution strategies (see section 1.7.4). However, before delving into the specifics of the Italian language, section 1.5 will present some brief diachronic observations that are crucial for understanding how the current Italian gender system has developed.

1.5 Gender in diachrony

Starting from reconstructed Proto-Indo-European (PIE), one can observe an earlier system characterised by two grammatical genders (Figure 4), which was entirely based on the semantic criterion of animacy.

In a later phase, a three-gender system emerges, distinguishing masculine, feminine, and neuter, where the feminine grammatical gender begins to be marked by the suffix **-h2*.

This suffix originally indicated collective and abstract nouns, in addition to feminine nouns, and before it became specialised for feminine referential gender, it was also used to denote the neuter plural (Inglese & Luraghi, 2023, p. 66). Finally, a third phase is evident, where the distinction of masculine, feminine, and neuter grammatical genders appears as it is known, for example, in Latin and Greek, and as it has been preserved in certain modern languages such as German and Russian (Luraghi, 2006).

In the most ancient system, there were no grammatical gender markers, and the only way in which grammatical gender was discernible was through *differential object marking* (DOM), a phenomenon observed in several languages, whereby the object of a verb is marked to reflect specific syntactic or semantic properties, and its marking depends on various factors related to the individuation or prominence of the object, often involving its definiteness, specificity, and animacy value (Inglese & Luraghi, 2023, p. 65).

Initially, in PIE, which also included case as a nominal category, gender marking was confined to the nominative and accusative cases, which had specific endings for animate grammatical gender but none for inanimate one. The other cases did not exhibit differences between the two grammatical genders. However, agreement began to extend to all cases and became obligatory when the suffix for abstract and collective nouns, conventionally reconstructed as a laryngeal **-h2*, started to designate a class of nouns predominantly associated with women, thereby creating the feminine grammatical gender. The development of agreement was facilitated by the reinterpretation of this suffix, which already appeared on athematic nouns, as a mandatory thematic vowel (or inflectional class marker) for nouns in **-ā* (Luraghi, 2006). Thus, the prevailing hypothesis among leading historical linguists

(Martinet, 1956; Meillet, 1931; Tichy, 1993) is that gender in Indo-European arose due to the development of agreement mechanisms, which were not newly created to designate sex-based distinctions but rather emerged from the modification of pre-existing agreement mechanisms related to the animacy distinction.

Silvia Luraghi (2006) provides a detailed analysis of the emergence of the three-gender system and its semantic motivation as it is known in Latin or Greek. In Proto-Indo-European, the aforementioned suffix **-h2*, initially used for forming abstract nouns, gradually extended to collective nouns, as it often happens in many languages of the world, since the two categories share a low degree of individuation, making the transition from abstract to collective relatively seamless. A similar semantic evolution occurred with the emergence of the feminine grammatical gender. In early Indo-European languages, animate nouns, denoting entities with high levels of agency and control, contrasted with inanimate nouns, which, while concrete, lacked agency and control. However, certain abstract nouns, the *semianimates*, occupied an intermediary space; though inanimate, they were not concrete but rather denoted natural forces, impulses, and passions beyond human control. These semianimates gradually formed a distinct class marked by the **-h2* suffix. This class later evolved into a grammatical gender, recognisable in nouns with the **-ā-* themes in many Indo-European languages. This shift from animacy to gender was not purely semantic but was influenced, according to Luraghi (2006, p. 105) by social constructs, particularly the distinction between male and female referents. Thus, the feminine gender became associated with entities that were intermediate in agency between males and inanimates.

SINGULAR			PLURAL	
	ANIMATE	INANIMATE	ANIMATE COUNTABLE	INANIMATE COLLECTIVE
NOM	-(<i>o</i>) <i>s</i>	Ø / - <i>om</i>	NOM - <i>es</i>	$\left\{ \begin{array}{l} -h_2 > -a \end{array} \right.$
ACC	-(<i>o</i>) <i>m</i>	Ø / - <i>om</i>	ACC -(<i>o</i>) <i>nt</i>	

Other cases: animate = inanimate

Figure 4. The gender system of pre-Proto-Indo-European (adapted from Inglese & Luraghi, 2023, p. 67)

As noted by Inglese and Luraghi (2023, pp. 64-65), agreement mechanisms play a crucial role in the reduction or expansion of available grammatical gender values within a system over time. Among Germanic languages, Dutch presents an intriguing case of reduction, as the three-way distinction in third-person singular pronouns is not reflected throughout the rest of the linguistic system. Simplifying, Dutch exhibits only two agreement classes: neuter for inanimate objects and common gender for animate beings. In contrast, Russian has witnessed an expansion of its gender system. Since Medieval Russian, the masculine gender has begun to differentiate into two distinct agreement classes based on animacy, marked by differential object marking, which has led to the entrenchment of these two distinct classes. Furthermore, the grammaticalisation of derivational suffixes also contributes to the expansion of gender systems, as seen in certain Dravidian languages. In these languages, the suffix *-al*, which in Proto-Dravidian indicated a female human referent on nouns, has begun to appear on pronouns in Southern Dravidian languages, making them targets of agreement. In the case of Dravidian languages, what began as a system without agreement classes

In Latin, the neuter was an autonomous grammatical gender, evidenced by the ongoing renewal of its agreement paradigm and its ability to accommodate new lexical entries, including nouns

previously assigned to the other two grammatical genders (Loporcaro, 2017, p. 22). The neuter gender in Latin was primarily used to designate inanimate entities or collective nouns but was also employed in agreement with so-called *non-prototypical* or *non-canonical controllers*. These controllers vary between languages and may include clauses, infinitive phrases, nominalizations, interjections, other quoted phrases, and noun phrases in particular cases, such as subject noun phrases in an oblique case (Corbett, 1991, p. 225), as exemplified in Example (8) from (Touratier, 1994, p. 365).

- | | | | | | |
|-----|----------------------|-------------|------------------|----------------|------------|
| (8) | <i>dulce</i> | <i>et</i> | <i>decorum</i> | <i>est</i> | <i>pro</i> |
| | sweet.NOM.N.SG | and | fitting.NOM.N.SG | be.PRS.IND.3SG | for |
| | <i>patria</i> | <i>mori</i> | | | |
| | fatherland(F).ABL.SG | die.PRS.INF | | | |
- ‘it’s sweet and fitting to die for your fatherland’ (Quintus Horatius Flaccus, *Carmina* 3.2.13)

This function is preserved in all Indo-European languages that retain the neuter, such as German and Russian. Another function of the neuter in Latin was the so-called ‘pancake agreement’ (Corbett, 2006), where neuter grammatical gender targets agreed with a masculine or feminine controller. Scholars associate the use of the neuter in these cases with a *generalising meaning*, particularly in adjectives (Ernout & Tomas, 1964, p. 127). Additionally, the Latin neuter was employed in grammatical *gender resolution*, specifically in agreement phenomena where the controller is represented by multiple conjoined constituents, which may have either identical referential genders, posing no agreement problem, or mixed referential genders, necessitating a *resolution* between the grammatical gender values overtly or covertly encoded on the different conjuncts. Corbett (1991, p. 287) particularly notes that the neuter was used in all cases where the conjuncts had different grammatical genders but referred to inanimate entities. The generalising and grammatical gender resolution functions of the Latin neuter are illustrated in examples (9) and (10), adapted from Loporcaro (2017, pp. 24-25).

- (9) *turpitudō* *peius* *est* *quam* *dolor*
disgrace(F).NOM.SG worse.NOM.N.SG be.PRS.IND.3SG than pain(M).NOM.SG
‘shame is worse than pain’ (Cicero, *Tusculanae disputationes*. 2.3.1)
- (10) *sapientiam,* *temperantiam,* *fortitudem*
wisdom(F).ACC.SG restraint(F).ACC.SG courage(F).ACC.SG

copulatas *esse* *docui* *cum* *uoluptate*
related.ACC.F.PL be.PRS.INF teach.PST.IND.1SG with pleasure(F).ABL.SG

‘I have shown that wisdom, restraint, and courage are related to pleasure’
(Cicero, *De finibus bonorum et malorum*. 1.50)

In contrast to masculine and feminine grammatical gender in Latin, which could be semantically motivated (sex-based) or arbitrarily assigned to numerous inanimate nouns, the neuter grammatical gender was distinctly defined by animacy, encompassing only inanimate entities, with few exceptions such as *class-denoting terms* (e.g., *animal* ‘animal(N).SG’) and a small number of others like *mancipium* ‘servant(N).SG’, *prostibulum* ‘prostitute(N).SG’ (Adams, 2013, p. 389). The transition from Latin to the Romance languages involved a widespread reallocation of neuter nouns into the two remaining grammatical genders (Loporcaro, 2017, p. 14). Most singular neuter nouns were reallocated to the masculine gender, resulting in a change of gender but not number, as Lat. *folium*(N).SG > It. *foglio*(M).SG. Neuter plurals were typically reallocated to the feminine, leading to both a gender and number change, specifically a reinterpretation as feminine singular, as exemplified in Figure 5, Lat. *folia*(N).PL > It. *foglia*(F).SG / *foglie*(F).PL.

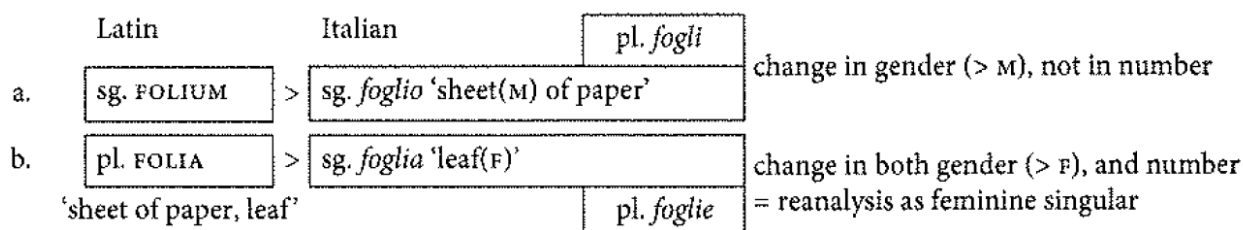


Figure 5. Gender reassignment from Latin neuter to Italian masculine and feminine (from Loporcaro, 2017, p. 14)

The plural forms in *-a* found in Romance languages, derived from Latin neuter plurals, are frequently cited as remnants of the neuter gender in contemporary gender systems, both in standard languages and Romance dialects, such as those in central-southern Italy and Corsica, which not only display numerous plurals in *-a* but also productively generate new such plurals. In Italian, these remnants often denote collective entities and usually present an alternative masculine plural with a distinct semantics, as illustrated in the cases of inanimate gender in section 1.3.

In summarising the transition from the Proto-Indo-European (PIE) gender system to that of the Romance languages, particularly Italian, it is important to note, in light of the discussions in Chapter 2, that although the neuter gender has left remnants in modern languages with a binary gender system and persists in some Italo-Romance varieties, such as Agnonese, in the form of alternant gender or a fourth gender for mass nouns (see 1.3), it has never served the primary function of designating human beings, nor has it ever carried a sex-based semantic motivation beyond the binary opposition of male/female. Furthermore, even in languages where the neuter grammatical gender has been preserved, it does not designate a third referential gender distinct from male and female. Among Romance languages, Romanian retains a neuter grammatical gender for inanimate nouns, although its status is contested in the literature, as it functions more as an alternant gender than a true neuter.

A similar situation is observed in Germanic languages, such as German, and, regarding pronouns, in English, where the pronoun *it* exclusively designates inanimate entities or serves as grammatical gender resolution with non-canonical controllers. In German, the neuter gender shares the same semantics as in English but is also used to mark all diminutives (Inglese & Luraghi, 2023, p. 56). Consequently, in German, even nouns designating human beings, such as *Mädchen*, ‘young girl(N), can appear as neuter due to the diminutive meaning, not because they designate an individual who identifies with a third gender identity distinct from male or female. Supporting this, such nouns are termed *hybrids* by Corbett (1991, p. 225-259) and exhibit particular agreement patterns, sometimes neuter, sometimes feminine, which will be discussed in more detail in 2.1.

Therefore, the revival of a third neuter grammatical gender, given its historical development from PIE to its current remnants in Indo-European languages, cannot be considered a viable strategy in proposals for gender-sensitive language that aim to organically integrate new gender values into the currently available systems. More detailed reasons for this difficulty in integration will be provided Chapter 2.

1.7 Gender in Italian

1.7.1 Gender assignment and inflectional classes in Italian

Italian is a fusional Romance language, making use of both prefixation and suffixation, characterized by a high degree of allomorphic variation, with morphs tending to encode cumulative exponence of gender and number, thus ensuing difficulty in segmenting words (Cennamo, 2015). Concerning gender, Italian has a sex-based grammatical gender system, which encompasses two grammatical gender values: masculine and feminine. The assignment of grammatical gender is semantically motivated in relation to nouns referring to human entities and (certain) animals, where gender identity or biological sex information is available. For inanimate referents, however, the assignment is arbitrary and governed by formal criteria.

With regard to the rules for gender assignment, the works of Thornton (2001, 2003, 2004, 2005, 2006, 2009) provide valuable insights into the Italian system, as well as into certain theoretical issues from a typological perspective. Referring to the criteria mentioned in example (4) in section 1.2.1, Thornton (2003) observes that in Italian, only rules 4a and 4d-4g, restated in (11), appear to hold. The Italian system does not seem to conform to rules 4b and 4c, which pertain to the association of particular semantic categories with a specific gender and the transmission of the hypernym's gender to its hyponyms. Moreover, Thornton questions whether these two rules can genuinely be distinguished (see Thornton, 2003 and 2009 for a full discussion).

- (11)
- a. SEX → gender (for nouns referring to humans)
 - d. GENDER OF A SEMANTICALLY RELATED WORD (but not hypernym, not a translation, not a false friend) → gender of the noun
 - e. GENDER OF A TRANSLATION EQUIVALENT → gender of the noun
 - f. GENDER OF A 'FALSE FRIEND' → gender of the noun
 - g. GENDER IN THE SOURCE LANGUAGE → gender of the noun

In contrast, Italian grammars present numerous generalisations that may be considered rules for gender assignment, such as SEMANTIC CATEGORY $X, Y, Z \rightarrow \text{gender } \alpha, \beta, \gamma$ and HYPERNYM $\text{GENDER} \rightarrow \text{hyponym gender}$ (see Thornton, 2003, p. 470 for a review), for example:

MASCULINE: trees and shrubs, chemical elements, days, months, prayers, winds, mountains, seas, rivers, lakes, cardinal points

FEMININE: fruits, cars, ships, continents, states, regions, cities, islands, streets

Thornton (2003) has challenged these presumed rules of semantic gender assignment, historically prescribed by Italian grammars, by offering alternative interpretations and demonstrating how the numerous inconsistencies and violations of such rules render them invalid. Below are two examples of refutations of semantic gender assignment rules, as they are particularly helpful in understanding the approach necessary for identifying productive gender assignment rules in Italian. The examples concern the masculine gender of prayer nouns and the feminine grammatical gender in the names of continents. In the first case, the author points out that the masculine grammatical gender systematically assigned to prayer nouns, such as *padre nostro*, is not assigned based on a semantic rule of the type $\text{PRAYER} \rightarrow \text{masculine}$, but rather as a *default* assignment. Nouns of prayers are, in fact, non-prototypical controllers (cf. 1.5.1), and, in Italian terminology, this specific type of non-prototypical controllers are called *nomi cartellino*, ‘tag nouns’, as they exhibit distributional behaviour similar to noun phrases and require agreement but lack inherent grammatical gender, being substantivised forms, often resulting from univerbation, that are treated as nominalised elements.

Regarding the feminine gender in the names of continents, Thornton (2003) provides two reasons to refute the semantic rule $\text{CONTINENTS} \rightarrow \text{feminine}$. First, the rule should be regarded as *vacuous* because, as in the case of categories like metals or cardinal points, it applies to closed classes of words, making it difficult to test for productivity. Furthermore, the name *Antartide* ‘Antarctica’ shows considerable oscillation between masculine and feminine grammatical genders, both

synchronically and when considering historical references. Additionally, all names of continents in Italian end in *-a* (*Europa, Asia, Africa, America, Oceania*), suggesting the influence of a phonological rule for assigning feminine grammatical gender, rather than the validity of a semantic rule.

Thus, beyond the specific reasons refuting the set of presumed semantic rules for gender assignment in both genders within Italian grammars, according to Thornton, the only genuinely valid semantic rules in Italian pertain to the feminine grammatical gender for the categories of cities and cars (Thornton, 2003; 2009). In support of this claim, the author emphasises that in the case of cars and cities, it is not only that all names in these categories belong to the same semantic group, but also that, in the case of cars, the rule applies to all loanwords, even those ending in *-i*, which are otherwise typically assigned to the masculine gender (e.g., *bikini* ‘bikini(M)’). Additionally, the semantic rule even modifies the gender of masculine Italian homophones, so-called ‘model words’, as in the case of the opposition between *panda* ‘panda(M).SG’, the animal, which is masculine, and the FIAT car model *Panda*, which is grammatically feminine. Finally, the semantic rule concerning cars extends to words ending in *-o*, such as *la Tipo* and *la Bravo*, defying the typical phonological assignment of masculine gender to nouns ending in *-o*, as well as the masculine gender of their respective model words *tipo* ‘type(M)’ and *bravo* ‘good.M’. Therefore, only the categories of cars and cities in Italian fulfil the previously mentioned criteria, namely grammatical gender assigned by a semantically related word, the gender of a translation equivalent, the gender of a false friend, or the gender of the source language.

Regarding phonological rules, Italian exhibits a regular pattern of gender assignment based on endings, with the feminine associated with *-a* (e.g., *sauna*(F), from Finnish) and the masculine with *-o* (e.g., *kimono*(M), from Japanese), even in the case of loanwords from languages without grammatical gender, such as Finnish or Japanese (Thornton, 2003, p. 476).

The difficulty in identifying rules for gender assignment, whether semantic or phonological, lies in the fact that grammars often observe gender assignment from a historical perspective, without considering current usage fluctuations or the gender assignment of loanwords from foreign languages, which, as previously mentioned (cf. 1.2.3), are essential for understanding the system as a whole. In

the case of phonological rules, Thornton (2003) describes as a ‘post hoc generalisation’ the rule that assigns feminine gender to words ending in *-i*. This is because numerous unadapted loanwords, whether recent or not, do not conform to the rule; for example, *taxi*, *kiwi*, and *bikini* are all masculine nouns. Additionally, some words initially assigned to the feminine grammatical gender, such as *la propoli*, ‘the.F.SG propolis(F).SG’, are now oscillating towards the masculine in a short period of time, *il propoli*, ‘the.M.SG propolis(M).SG’. What emerges from this reasoning is that it does not matter if there is a substantial number of nouns in Italian historically ending in *-i* and associated with the feminine grammatical gender: if this rule is not applicable synchronically, or to loanwords and neologisms, it cannot reasonably be considered valid.

Il caso dei nomi in *-i* è particolarmente istruttivo per due ragioni. In primo luogo, permette di illustrare con cogenza la differenza tra generalizzazioni a posteriori e regole di assegnazione produttive. È forse vero che una gran parte dei nomi in *-i* attestati in italiano, costituita da adattamenti di nomi femminili greci in *-sis*, è di genere femminile; tuttavia questa preponderanza numerica non si traduce in una regola che sia parte della competenza dei parlanti: un parlante, chiamato ad assegnare per la prima volta il genere a un nuovo nome in *-i*, spontaneamente lo accorda al maschile.

(Thornton, 2003, p. 477)

The case of nouns ending in *-i* is particularly instructive for two reasons. Firstly, it effectively illustrates the distinction between post hoc generalisations and productive gender assignment rules. While it may be true that a large proportion of nouns ending in *-i* in Italian, consisting of adaptations of Greek feminine nouns ending in *-sis*, are feminine in gender, this numerical predominance does not translate into a rule that forms part of speakers’ competence. When a speaker is called upon to assign gender to a new noun ending in *-i* for the first time, they spontaneously assign it to the masculine.

The fact that a significant number of loanwords ending in *-i* are spontaneously assigned masculine gender by speakers suggests the existence of a phonological rule governing masculine

assignment for nouns ending in *-i*. However, Thornton (2003; 2009) rejects the view that it is possible to identify any definitive rules, of any kind, for masculine gender assignment in Italian, exception made for sex-based assignment, proposing instead that any such assignment adheres to a default mechanism. From this perspective, even the phonological rule assigning masculine gender to nouns typically ending in *-o*, while useful for predicting nouns' grammatical gender, is insufficient to suggest the existence of a broader set of phonological rules for masculine assignment.

The reasoning behind this perspective is that, upon examining the numerous cases where masculine grammatical gender is assigned by default, such as with tag nouns, it becomes clear that this assignment may be applied in all instances involving masculine grammatical gender assignment. For example, in relation to semantic rules, the $SEX \rightarrow \text{gender}$ rule operates for both masculine and feminine genders, rather than being exclusive to the masculine. Moreover, for semantic rules to consistently govern the assignment of masculine grammatical gender, they would need to apply systematically beyond non-prototypical controllers. This would also require their applicability to nouns ending in *-a*, overriding the phonological rule typically assigning feminine gender. However, since these conditions are not met in the Italian language, it is plausible that there are not assignment rules for masculine grammatical gender in Italian.

Turning to the second type of formal rules, morphological gender assignment rules based on inflectional class cannot be proposed for Italian (Thornton, 2001; 2003). Italian displays six inflectional classes (see Table 2), yet only classes II and V assign grammatical gender unequivocally (Inglese & Luraghi, 2023, p. 47).⁷ Indeed, all nouns of the second class, which exhibit the singular/plural endings *-a/-e* (e.g., *casa/case*, 'house(F).SG/houses(F).PL'), are feminine (D'Achille &

⁷Concerning adjectives, according to the analysis of Iacobini and Thornton (2016, p. 204), Italian displays five inflectional classes. Class I contains *four-ending* adjectives, such as *bello/belli/bella/belle* 'beautiful.M.SG/M.PL/F.SG/F.PL'. Class II includes *two-ending* adjectives in *-e/-i*, thus masculine and feminine grammatical genders display the same endings (e.g. *l'uomo forte/gli uomini forti* 'the.M.SG strong.M.SG man/ the.M.PL strong.M.PL men'; *la donna forte/le donne forti* 'the.F.SG strong.F.SG woman/the.F.PL strong.F.PL women'). Class III contains those adjectives ending in *-a/-i* (masculine) and *-a/-e* (feminine), in which masculine and feminine gender values are discernible only in the plural, such as *idiota/idioti* 'idiot.M.SG/M.PL' vs. *idiota/idiote* 'idiot.F.SG/F.PL'. Class IV displays adjectives ending in *-e/-i* for masculine grammatical gender, and *-a/-e* for feminine one, such as *sorninione/sornioni* 'sneaky.M.SG/M.PL' vs. *sorniona/sornione* 'sneaky.F.SG/F.PL'. Class V includes all those invariable adjectives, such as *blu* 'blue.M.SG/M.PL/F.SG/F.PL'.

Thornton, 2003; Thornton, 2001). Meanwhile, class V comprises nouns already discussed, which exhibit alternant gender, or more precisely, *inquorate gender* (cf. 1.3), with a masculine singular and a feminine plural often attributable to remnants of the Latin neuter (e.g., *uovo/uova*, ‘egg(M).SG/eggs(F).PL’).

Table 2. Inflectional classes of Italian (adapted from Thornton, 2005, p. 25; D’Achille & Thornton, 2003)

Class	Endings (SG/PL)	Example	Gender
I	-o/-i	<i>libro/libri</i>	both
II	-a/-e	<i>casa/case</i>	feminine
III	-e/-i	<i>fiore/fiori</i>	both
IV	-a/-i	<i>poeta/poeti</i>	both
V	-o/-a	<i>uovo/uova</i>	alternant
VI	vary; invariable	<i>re; gru; brindisi; crisi; caffè, città; foto</i>	both

Class IV primarily comprises masculine nouns ending in *-a*, *-cida*, *-ista*, and *-iatra*, whose gender is partly semantically motivated as they typically denote professions, such as *astronauta/-i* ‘astronaut(M).SG /-s(M).PL’, *pilota/-i* ‘pilot(M).SG/-s(M).PL’, *psicanalista* ‘psychoanalyst(M).SG/-s(M).PL’, and *fisiatra* ‘physiatrist(M).SG/-s(M).PL’. An exception in this class is the noun *ala/-i* ‘wing(F).SG/-s(F).PL’ and *arma/-i* ‘weapon(F).SG/-s(F).PL’, which, although feminine, is not semantically motivated (Inglese & Luraghi, 2023).

It is noteworthy that the masculine nouns in this class only have a homophonic feminine counterpart in the singular (e.g., *un bravo astronauta* vs *una brava astronauta*, ‘a.M.SG good(M).SG astronaut(M).SG vs. a.F.SG good(F).SG astronaut(F).SG’). However, the derivational process of grammatical (and referential) gender motion, which will be discussed further in 1.7.3, as with other

types of nouns, not only alters the grammatical gender value but also changes the inflectional class of the homophonic form. Although there is no formal change in the singular, this form should be considered as belonging to Class II (-a/-e; *astronauta/astronaute*, ‘astronaut(F).SG/-s(F).PL’) rather than Class IV (-a/-i; *astronauta/astronauti*, ‘astronaut(M).SG/-s(M).PL’). Due to this feature, these nouns have sometimes been called common gender nouns (see section 1.7.2), or occasionally referred to as *epicenes*, thus human-referent nouns whose sex-based motivation is not relevant to grammatical gender assignment. Formato (2019), for instance, refers to them as *semi-epicenes* due to the homophony in the singular and the gender distinction in the plural. However, viewing *estetista*(M).SG and *estetista*(F).SG as a single lexeme with two available grammatical gender values, *estetista*(M/F).SG would imply the acceptance of an inherent selected gender in nouns, as that one pertaining to adjectives, instead of inherent grammatical gender encoding. The same argument applies to nouns in Class III, particularly certain deverbal agentive nouns such as *cantante*/-i ‘singer(M/F).SG /-s(M/F).PL’, which, as will be explored further in 1.7.2, are sometimes referred to as common gender nouns.

With regard to the other classes not yet discussed, the correspondence between inflectional class and grammatical gender is only partial. Nouns in Class I (e.g., -o/-i) are predominantly masculine but include exceptions, such as *mano*/-i, ‘hand(F).SG/-s(F).PL’. Nouns in Class VI have covert grammatical gender; they may be semantically motivated in terms of referential gender, possessing lexical gender as in the case of *re*, ‘king’, or may lack both semantic and formal motivation, with gender only deducible from agreement markers, as in the case of invariable nouns like *caffè*, ‘coffee(M).SG/(M).PL’ or *gru* ‘crane(F).SG/(F).PL’.

Precisely because of this partial correspondence between grammatical gender and inflectional classes, inflectional class information is much more useful for inferring number value online (Thornton, 2003) than for grammatical gender, as, according to the personal opinion of the author of the present work, speakers seem to rely more consistently on the ending of individual forms rather than the entire paradigm. As Thornton (2003, p. 469) notes:

Poiché i casi in cui un nome controlla elementi che si accordano con esso sono in italiano molto più frequenti dei casi in cui un nome occorre al plurale (cf. Thornton 2001:481-482), per un neoprestito o un neologismo la necessità di disporre dell'informazione di genere si presenta in italiano più spesso e più presto di quella di disporre dell'informazione sulla classe flessiva di appartenenza.

Since cases in which a noun controls agreeing elements are much more frequent in Italian than those in which a noun occurs in the plural (see Thornton 2001:481-482), for a recent loanword or a neologism, the need to establish gender information arises in Italian more often and earlier than the need to determine its inflectional class.

Therefore, since the compilation of a list of rules for gender assignment in a language must primarily reference what speakers spontaneously apply when assigning gender to loanwords and/or neologisms, the existence of morphological rules for gender assignment in Italian can be discounted.

The fact that speakers often confuse inflectional class endings with a rule for gender assignment largely stems from the contrast between nouns, although inflectional classes I and II allow for exceptions, and the four-ending adjectives (Iacobini & Thornton, 2016, p. 204), in which the endings *-o/-i*, as in *nuovo/-i* 'new.M.SG/new.M.PL,' systematically indicate the masculine grammatical gender in the singular and plural, whereas the two endings *-a/-e*, as in *nuova/-e* 'new.F.SG/new.F.PL,' indicate the feminine singular and plural, respectively. Indeed, 99% of singular nouns ending in *-o* are assigned to the masculine grammatical gender, while 87% of those ending in *-a* are assigned to the feminine one (data from Thornton, 2022, p. 19, based and adapted from Sgroi, 2008, p. 109; see Table 3). It is clear, then, that by focusing on individual forms rather than the entire paradigm, a strategy employed by the majority of speakers, phonological gender assignment appears far more informative than morphological gender assignment, the latter being primarily useful for understanding the nature of exceptions within each inflectional class.

Table 3. Percentage of masculine and feminine nouns according to different word endings. Data from Thornton, 2022, p. 19, based and adapted from Sgroi, 2008, p. 109

Word ending in singular form	Masculine nouns	Feminine nouns	Nouns suitable for male and female referents
-a	5.1%	86.8%	7.9%
-o	99%	0.4%	0.4%
-e	50.9%	40.6%	8.5%
-i	35.2%	54%	10.6%
-u	83.1%	5.3%	11.6%
Stressed vowel or consonant	51.6%	43.7%	4.7%
total	52.42%	42.2%	5.3%

1.7.2 Defining gender values according to the type of human referent

In Italian, when considering only the grammatical gender of animate beings, such as humans and (certain) animals, it is commonly stated that grammatical gender is always semantically motivated. This is due to the one-to-one correspondence between the gender identity or sex of the referent and the grammatical gender of the noun denoting it. However, as will be demonstrated in this section, exceptions to this rule do exist. There are not only several nouns for which this biunivocal correspondence with the referent is not apparent, at least when examining the isolated lexeme without syntactic context, but also instances where the agreement triggered by the noun does not result in a single, clearly defined grammatical gender (issues of atypical agreement will be addressed in section 1.7.4 and 2.1).

To simplify the concepts that will be discussed here, it is important to recall the distinction between *referential gender* (Doleschal, 2015, p. 340), which refers to the gender of the referent in the extralinguistic context, and grammatical gender, encoded in the noun itself, independent of the nature of the referent it designates. The instances in which referential gender exhibits a one-to-one correspondence with grammatical gender are presented in (12):

(12a) MASCULINE REFERENTIAL GENDER = MASCULINE GRAMMATICAL GENDER (e.g., one known man = (M).SG)

(12b) MASCULINE REFERENTIAL GENDER = MASCULINE GRAMMATICAL GENDER (e.g., more known men = (M).PL)

(12c) FEMININE REFERENTIAL GENDER = FEMININE GRAMMATICAL GENDER (e.g., one known woman = (F).SG)

(12d) FEMININE REFERENTIAL GENDER = FEMININE GRAMMATICAL GENDER (e.g., more known women = (F).PL)

The referential gender aligns unequivocally with the grammatical gender in cases where the referents are known, when referring to singular entities, or in instances where, in the case of plurals, the group consists of specific referents that all share the same gender identity or, in the case of animals, biological sex. While the majority of Italian nouns allow for this one-to-one correspondence, there are numerous instances where, either from an extralinguistic perspective it is impossible or irrelevant to ascertain the gender identity/sex of the referent, or, from a purely linguistic standpoint, certain forms permit the designation of more than one referential gender. Following the framework proposed by Thornton (2022, p. 20), an attempt is made to account for cases where this correspondence holds, as well as those where it does not.

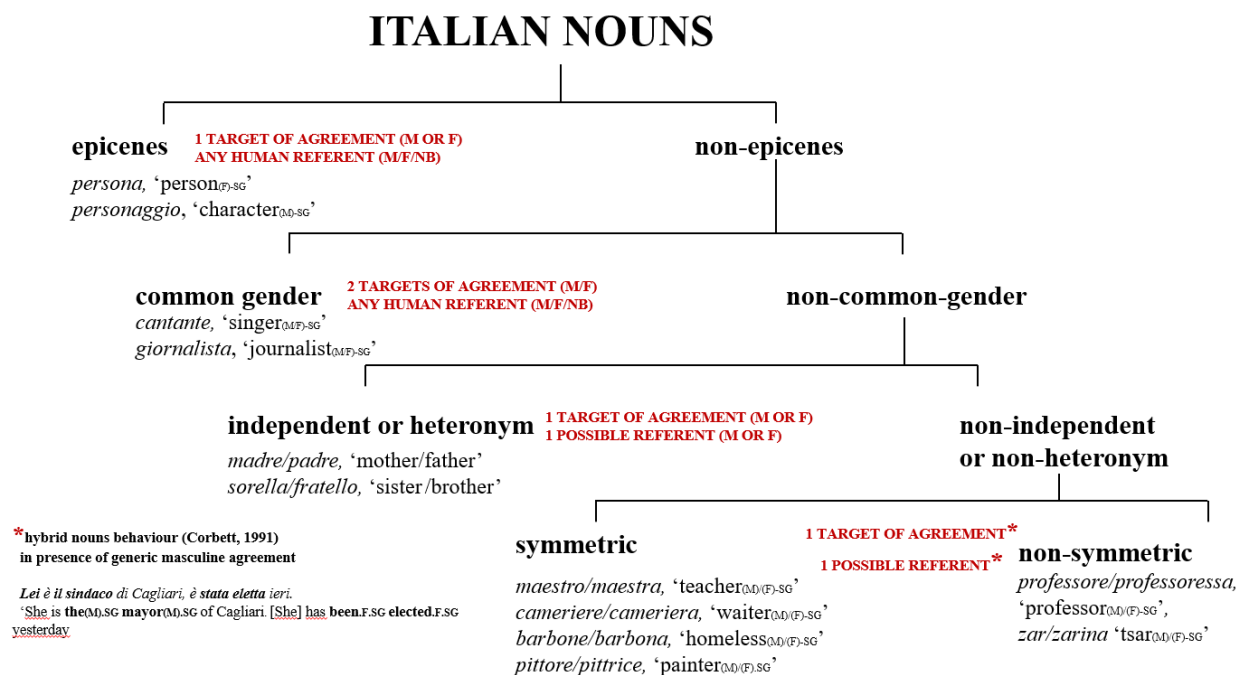


Figure 6. Italian nouns according to the relationship between referential and grammatical gender (adapted from Thornton, 2022, p. 20)

In Figure 6, Italian nouns are primarily categorized into *epicene* and *non-epicene* forms. Epicene nouns are those that have a fixed grammatical gender, either masculine or feminine, but can refer to individuals of any sex/gender identity. For example, nouns like *persona*, ‘person(F).SG’, *vittima*, ‘victim(F).SG’, *personaggio*, ‘character(M).SG’, *ostaggio*, ‘hostage(M).SG’ present a potential disjunction between the referential gender and the grammatical gender inherent in the noun. This disjunction is purely a grammatical phenomenon, as demonstrated in example (13). Here, the masculine referential gender of the proper noun *Sergio* leads to masculine agreement on the adjective *buono*. However, when the feminine anaphoric element *persona* is introduced, agreement shifts to the feminine forms *una* and *severa*, even though it describes a man.

- (13) *Sergio è buono, ma è una persona severa*
 Sergio be.PRS.IND.3SG good.M.SG but be.PRS.IND.3SG INDF.F.SG person(F).SG strict.F.SG
 ‘Sergio is good but is a strict person’

Continuing with the schema, we encounter non-epicene nouns, and specifically, *common-gender* nouns, such as all deverbal agent nouns ending in *-nte*, like *presidente*, ‘president(F).SG/(M).SG’, *docente*, ‘teacher(F).SG/(M).SG’, or other nouns from Class III in *-e/-i*, such as *nipote*, ‘nephew/niece’ and *preside*, ‘dean(F).SG/(M).SG’. It is essential to emphasise that, in this context, the term *common gender* refers solely to referential gender, that is, the fact that the same noun can designate any human referent. In contrast to other languages, where referential and grammatical common gender are conflated, such as German or Dutch, in Italian, there is no autonomous common gender within the system. Common gender nouns are sometimes confused in terminology with epicene nouns precisely because they can admit both referential genders (Formato, 2019, p. 47; Giusti, 2022, p. 2; Thornton, 2022, p. 21); however, according to the terminology of ancient grammarians, *epicene* (Gr. *ἐπίκοινον*, Lat. *promiscuum*) was a term reserved for nouns that appear in a single gender but can refer to individuals of both sexes, as is the case with many names of non-domesticated animals (Thornton, 2022, p. 21). Therefore, the term seems more appropriately applied to nouns such as *persona* or *vittima* rather than those like *nipote* or *presidente*.⁸

According to the theoretical perspective adopted in this work, in which grammatical gender is an inherent feature of nouns, as previously outlined in section 1.7.1 for class IV nouns, common gender nouns are also to be understood as two homophonic lexemes, masculine and feminine, with respect to their grammatical gender. This holds true in both singular and plural forms, in contrast to

⁸ The present work will always adopt Thornton’s terminology (2022, p.20) concerning the distinction between common gender and epicene nouns.

nouns ending in *-a*, which differ only in the plural. Given this theoretical stance, a gloss for these nouns is proposed as in (14).

- (14) *un nuovo cliente* vs *un nuovo cliente*
 INDF.M.SG new.M.SG customer(M).SG vs INDF.M.SG new.M.SG ***customer(M/F).SG**
una nuova cliente vs *una nuova cliente*
 INDF.F.SG new.F.SG customer(F).SG vs INDF.F.SG new.F.SG ***customer(M/F).SG**
 ‘a new customer’

Envisioning these nouns as homophones establishes a one-to-one correspondence between referential gender and grammatical gender, in the sense that the inherent covert grammatical gender of the noun will then be overtly marked as masculine or feminine on agreement targets, according to the referential gender. Therefore, even if one were to consider this group of nouns as having a common gender from a referential perspective, such a statement would hold true only when encountering a noun in isolation or in particular cases of agreement with targets that also possess covert grammatical gender. However, this assertion would be false when the noun is part of a more typical agreement chain (see examples 15-17).

- (15) *essere pazienti felici*
 be.PRS.INF patient(M).SG?/(F).SG? happy.M.SG?/F.SG?
 ‘being happy patients’

- (16) *diventate pazienti oncologiche*
 become.PST.PTCP.F.PL patient(F).SG oncological.F.SG
 ‘became oncological patients’

- | | | | |
|------|-------------------------------|-----------------|--------------------|
| (17) | <i>essere</i> | <i>pazienti</i> | <i>andrologici</i> |
| | be.PRS.INF | patient(M).SG | andrological.M.SG |
| | ‘being andrological patients’ | | |
-
- | | | | |
|------|--------------------------|-----------------|----------------|
| (18) | <i>essere</i> | <i>pazienti</i> | <i>anziani</i> |
| | be.PRS.INF | patient(M).SG | elderly.M.SG |
| | ‘being elderly patients’ | | |

In sentence (15), grammatical gender is covert in all three constituents of the clause because the verb is in the infinitive form, and the noun, which belongs to class III, agrees with a two-ending adjective (Iacobini & Thornton, 2016, p. 204) that also has covert gender and ends in *(-e/-i)*. In this instance, the noun *pazienti* may reasonably be considered as having common gender, both from a referential and grammatical standpoint, as the sentence does not provide any information regarding the referential gender. This presents a rare example in which the Italian language permits the neutralisation of grammatical gender, a phenomenon that will be explored further in Chapter 2.

In contrast, if other target elements exhibit overt grammatical gender, such as the past participle in (15) and the adjective in (16-17), which are respectively feminine and masculine, the grammatical gender of the noun *pazienti* will be determined through masculine or feminine agreement, resolving the ambiguity of the controller both on the referential and grammatical levels. Another case, exemplified in (18), will be discussed in the end of the present section. This case concerns the use of the default masculine as a referential indicator applicable to any type of referent. In such cases, the masculine grammatical gender in the target adjective *anziani* does not limit the designation to male referents only but also includes elderly women.

Returning to the initial premise regarding so-called ‘common gender’ nouns, the postulation of a single lexeme would present two available grammatical gender values that are simultaneously present (in the sense of being ‘available’) and absent (in the sense of being ‘marked’). However, this

uniqueness of the noun cannot be envisaged, for (at least) three reasons: firstly, this situation is only valid when grammatical gender is also covert on the adjective, as in (15), whereas in all other instances, agreement disambiguates the gender value of the noun. If this were truly a case of common gender, this double grammatical gender value should manifest itself consistently or at least more frequently, even with target elements. However, given that two-ending adjectives (Iacobini & Thornton, 2016, p. 204) (e.g., *-e/-i*, for masculine and feminine grammatical genders) are significantly outnumbered by four-ending ones (e.g., *-o/-i* for masculine grammatical gender; *-a/-e* for feminine one), and since covert grammatical gender cannot appear in Italian past participles, and exception made for some specific circumstances, in determiners, this *alliterative common gender agreement* seldom occurs.⁹

The second reason pertains to the fact that, if nouns like *cantante* had truly a common gender, (also called *ambigender* by Giusti, 2022, to emphasise the double values), thus possessing two gender grammatical values for each form, this would differentiate such animate nouns from other types of animate and inanimate nouns, even those within the same inflectional class (*-e/-i*; III), such as *fiore*, ‘flower(M).SG’, or *chiave*, ‘key(F).SG’, which instead display a single grammatical gender value. Such an analysis would introduce irregularities within the paradigms of Italian nouns, some exhibiting only one grammatical gender value, while others possess two (see Bonami & Boyé, 2019 for an analogous phenomenon in French).

The third reason why it is implausible to conceive of common gender nouns as nouns with two gender values lies in the fact that some of these nouns undergo derivational processes of feminine formation (see 1.7.3) from a masculine base, which is implied as the default inherent grammatical gender value. This is consistent with the pattern observed in most nouns subject to gender motion. This occurs both through the *hypercharacterisation of the feminine* (Luraghi & Olita, 2006; Thornton, 2004), as seen in the masculine and feminine alternatives *studente/studentessa* (‘student(M).SG/(F).SG’),

⁹ The definite articles *lo/la* ‘the(M).SG/(F).SG’ can exhibit covert grammatical gender, as in *l’*, when preceding nouns ending in *-e* or nouns of class IV that begin with a vowel, such as *l’esule* ‘the.M.SG?/F.SG? exile(M).SG?/(F).SG?’, *l’atleta* ‘the.M.SG?/F.SG? athlet(M).SG?/(F).SG?’.

conte/contessa (‘count(M).SG/(F).SG SG’), and through the addition of negative or ironic connotations, as in *presidenta* (‘president(F).SG’) (see 1.7.3.1). For these reasons, henceforth, so-called ‘common gender’ nouns will be understood as nouns that admit any referential gender, akin to epicene nouns, but that exhibit two distinct sets of agreement targets, thereby keeping the notions of grammatical gender value on agreement targets and grammatical gender value on controller nouns clearly separated.

Concluding the analysis of the outline in Figure 6, Italian displays *independent* or *heteronymic nouns*, such as *madre/padre* ‘mother/father’. In these cases, grammatical gender is lexically encoded, and the noun only inflects for number, *madri/padri* ‘mothers/fathers’. Since these nouns are inherently feminine or masculine, they are expected to refer exclusively to the corresponding gender identities.

Among the non-independent nouns, there are *symmetric* nouns, which represent the most typical noun type in Italian, where the feminine form is obtained from the masculine one through gender motion. These nouns have a single grammatical gender value on agreement targets and one possible referential gender for each noun, as in *amico/amica*, ‘friend(M).SG/(F).SG’. Thornton (2022, p. 20) further categorises *non-symmetric* nouns to highlight not only the different processes of gender motion leading to feminine forms since, by analysing the semantics of pairs such as *maestro/maestra*, ‘teacher(M).SG/(F).SG’ and *zar/zarina*, ‘tsar(M).SG/(F).SG’, one observes a lack of perfect semantic overlap. In the latter pair, the change in the gender of the referent is accompanied by a *relational meaning*, in this case, marital status (‘wife of’). However, the agent noun does not denote the same professional role (e.g., a *zar* and a *zarina* did not hold the same roles or powers) (see 1.7.3.2 for further discussion).

With respect to Thornton’s proposed outline (2022, p. 20), the asterisk introduced in the present adaptation (Figure 6) aims to signal that symmetric nouns cannot, in all instances, be considered as having a single referent and one grammatical gender on agreement targets, both in terms of how speakers employ grammatical masculine gender and in the prescriptive usage outlined by grammars. In all referential contexts beyond those listed in (12), there is no one-to-one correspondence between

referential and grammatical gender. Specifically, this asymmetry can be observed in the following cases (Maturi, 2020): referring to a person whose gender identity does not conform to the binary categories of man/woman (this issue will be explored in Chapter 2); mentioning individuals of undefined gender (19) whose identity has not been or cannot yet be assigned to any specific referent; referring to job positions open to applicants of any gender identity (20); describing groups composed of individuals with mixed gender identities (21); and referring to groups whose members' referential genders remain unspecified (22) (see a summarising outline in Table 4).

(19) *il desiderio di avere un figlio*
 DEF.M.SG wish(M).SG to have.PRS.INF INDEF.M.SG **child(M).SG**
 'the wish to have a child'

(20) *il sindaco sarà eletto domani mattina*
 DEF.M.SG **mayor(M).SG** be.FUT.IND.3SG **elect.PST.PTCP.M.SG** tomorrow morning(F).SG
 'the mayor will be elected tomorrow morning'

(21) *Meryl Streep and Jack Nicholson are*
 Meryl Streep and Jack Nicholson be.PRS.IND.3PL
i miei attori preferiti
 DEF.M.PL 1.POSS.M.PL **actor(M).PL** **favourite.M.PL**
 'Meryl Streep and Jack Nicholson are my favourite actors'

(22)	<i>gli</i>	<i>abbonati</i>	<i>possono</i>	<i>contattare</i>
	DEF.M.PL	subscribe(M).PL	can.PRS.IND.3PL	contact.PRS.INF
	<i>il</i>	<i>numero</i>	<i>verde</i>	
	DEF.M.SG	number(M).SG	toll-free.M.SG	
	'subscribers can contact the toll-free number'			

Table 4. Summary outline on cases of asymmetry between referential and grammatical gender in Italian

Cases of asymmetry between referential and grammatical gender in Italian			
Type of reference	Number	Designed referent(s)	Grammatical gender
specific	singular	non-binary person	masculine
	plural	group of people with mixed gender (men, women, non-binary people)	
generic	singular	indefinite person; abstract job role	masculine
	plural	group of people with unknown gender	

In all these instances, as well as in the previously mentioned case in (18) involving so-called ‘common gender’ nouns agreeing with four-ending masculine adjectives in *-o/-i* (Class I; Iacobini & Thornton, 2016, p. 204), it is true that only one agreement target, the masculine, is present. However, it is not accurate to suggest that this agreement is associated with a single human referent, as the masculine grammatical gender, often referred to as *generic masculine* (Gygax et al., 2021), *unmarked masculine* (D’Achille, 2021), *versatile masculine*, or *neutral/universal masculine* (Formato, 2019), can also include female and non-binary referents at an extralinguistic level.

The central focus of the present study is the usage of masculine grammatical gender in referential contexts also involving referents different from male individuals. Nonetheless, in this initial chapter, dedicated to the analysis of gender as a linguistic category, attention will also be given to understanding the reasons behind the status of the masculine grammatical gender as the default gender within the Italian system (cf. 1.7.4), as well as examining certain morphosyntactic phenomena triggered by these different uses of the default masculine. The fact that these uses will be analysed in this chapter solely from a morphosyntactic perspective, without addressing sociolinguistic and psycholinguistic aspects, is due to the intention of exploring, critiquing, and challenging these aspects in the subsequent chapters of the present work.

1.7.3 Gender motion in Italian

The term *mozione* refers to all word-formation processes used to derive nouns denoting human or animate beings of a particular gender or biological sex from nouns denoting beings of the same species or function, but of the opposite gender/sex (Thornton, 2004). Typically, gender motion progresses from masculine to feminine nouns, although the reverse direction is also possible, as will be discussed later in this section. Gender motion concerns, or *should* concern, only non-independent nouns, whether symmetric or not, while it should not apply to epicene nouns, common gender nouns, or independent nouns (cf. 1.7.2).

With respect to non-independent symmetric nouns, the most classic example of motion is found in cases of root conversion, with assignment to the prototypical inflectional class for each grammatical gender (Thornton 2001), that is, Class I for masculine and Class II for feminine (see 1.5.1). This process is exemplified in pairs such as *amico/amica* ‘friend(M).SG/(F).SG’. This type of motion is particularly productive in contemporary Italian, especially in the creation of new feminine agent nouns.

There are also cases of motion involving masculine nouns ending in *-e*, such as *infermiere*, ‘nurse(M).SG’, or *accattone*, ‘beggar(M).SG’ which form the feminine by ending in *-a*, yielding *infermiera* and *accattona*. This entails a shift from Class III to Class II. This process, which operates exclusively in the masculine → feminine direction, is typical of specific categories of nouns, such as those ending in *-iere*, *-one*, and some in *-tore*, *-sore*, or *-ore*, such as *pastore*, ‘shepherd(M).SG’, *assessore*, ‘assessor(M).SG’ and *controllore*, ‘controller(M).SG’. Other masculine deverbal agent nouns in *-tore*, such as *autore*, ‘author(M).SG’, form the feminine with the suffix *-trice*, as in *autrice*, ‘author(F).SG’. Although feminine forms ending in *-a*, such as *tintora*, ‘dyer(F).SG’, for the corresponding masculine entries, also exist, they are less frequent and often regarded as occasionalisms (Thornton, 2004; 2022).

Turning now to the motion of so-called ‘common gender’ nouns (Thornton, 2004, p. 222), a significant terminological distinction must be made: nouns in Class IV, ending in *-a*, such as *astronauta*, ‘astronaut(M).SG’, *pediatra*, ‘paediatrician(M).SG’, or *fisioterapista*, ‘physiotherapist(M).SG’, are classified by the Italian grammars (as outlined by Thornton, 2022, p. 20) as common gender nouns for two reasons. First, as thoroughly outlined in 1.7.2, this category refers to referential gender. Secondly, grammars classification is based solely on the singular form of nouns, which, as noted in 1.7.1, makes a substantial difference in the case of Class IV nouns. In discussing these nouns in relation to the motion process, the same author explicitly considers it incorrect to classify such nouns as common gender nouns.

Tuttavia, non è corretto considerare questi nomi di genere comune, poiché il maschile e il femminile appartengono a diverse classi di flessione: i maschili hanno il plurale in *-i*, i femminili in *-e*. I femminili in *-a* corrispondenti a maschili in *-a* possono quindi essere analizzati, al pari dei femminili in *-a* corrispondenti a maschili in *-o* o in *-e*, come conversioni di radice con assegnazione del nome convertito alla classe di flessione tipica dei femminili (cf. già Doleschal 1990, 247).

(Thornton, 2004, p. 222)

[However, it is incorrect to consider these nouns to be of common gender, since the masculine and feminine belong to different inflection classes: masculine nouns have the plural in *-i*, feminine nouns in *-e*. Feminine nouns in *-a* corresponding to masculine nouns in *-a* can therefore be analysed, like feminine nouns in *-a* corresponding to masculine nouns in *-o* or in *-e*, as root conversions with assignment of the converted noun to the typical feminine inflection class (cf. already Doleschal 1990, 247)].

Regarding the phenomenon of masculine nouns ending in *-a*, the grammatical gender shift, although it does not result in any difference in the singular form, nevertheless triggers a change in the inflectional class, causing the feminine form to follow the typical *-a/-e* endings of singular and plural. This type of gender motion is certainly less common than those previously discussed, as it affects only the plural form and not the singular. However, this reduced typicality does not correspond to any difference in the meaning conveyed by the word through this shift. On the contrary, as will be demonstrated in the following sections, Italian presents cases where a gender motion process in so-called common gender nouns may lead to the addition of meanings not usually associated with gender shifts.

1.7.3.1. Non-prototypical gender motion

Non-prototypical gender motion can also apply to epicene nouns, nouns of common gender, and independent nouns with lexical gender (cf. 1.7.2), which would typically not permit such a process. However, in all these cases, gender motion serves an expressive function, mainly aimed at adding ironic or negative connotations to nouns that would not normally carry such meanings, and it involves virtually all the types of motion observed in section 1.7.3.

For instance, it is possible to find the noun *maiala*, ‘pig(F).SG’, a feminine form derived from the masculine *maiale*, which exists alongside the correct and canonical feminine form *scrofa*, ‘sow’,

an independent noun with lexical gender. The motion in *maiala* serves to derive a strongly negative metaphorical use of the noun, referring to women and never used to designate the animal. More generally, when gender motion concerns inanimate nouns, the gender motion allows the nouns to acquire a meaning that refers to humans or animate beings, as in the case of *cogliona*, ‘asshole(F).SG’ (from *coglione* ‘asshole(M).SG’, *lit.* ‘testicle’) often used adjectivally to express negative qualities of a woman (Thornton, 2004, p. 221), while the masculine base term *coglione* also denotes the testicle in informal Italian, even if the metaphoric use is possible.

Alongside these examples, there are instances of gender motion forming masculine agent nouns from feminine ones, such as in *casalingo*, ‘housekeeper(M).SG’, *mammo*, ‘mum(M).SG’, and even masculine forms of inanimate nouns like *pillolo*, ‘(contraceptive) pill(M).SG’. Cases like *mammo* were instrumental to Acquaviva’s (2013) definition of ‘partial gender motivation’ in Italian. Specifically, in instances of referentially determined gender, such as with *mamma*, the shift to *mammo* illustrates that it is not the noun itself that is inherently classified by grammatical gender. Instead, grammatical gender serves to reclassify or modify the meaning of the noun. This distinction becomes clearer when considering instances of semantic asymmetry, which will be discussed further in section 2.1.

Although less frequent than the formation of feminine nouns, these examples nonetheless confirm the existence of a bidirectional dynamic in the process of gender motion. Additionally, they reveal certain cultural and ideological elements ingrained in common sense to the point they necessitate explicit linguistic representations. Observing the diachronic evolution of these connotations associated with masculine gender motion can provide insights into some ongoing cultural changes, such as in the case of *casalingo*. The term’s ironic connotation is gradually being lost, leaving only its denotative meaning of a man performing domestic work, reflecting social and cultural shifts in the perception of gender roles. Similarly, in the case of *mammo*, which exists alongside an independent lexical alternative, *papà*, ‘dad’, the additional connotation is clearly rooted in the sociocultural context in which the word is situated, as seen in the 2004 Italian TV series *Il Mammo*, where the protagonist is a widowed father who, as (unfortunately) described in Wikipedia,

“finds himself not only acting as a father but also as a *mammo* to his three children”.¹⁰ Clearly, in the early 2000s, and it is not entirely excluded that such an idea may persist, the social role associated with the word *papà* did not prototypically include the meaning of ‘childcare’, which was instead relegated to *mamma*. The case of *pillolo*, ‘(contraceptive) pill(M).SG’, is similarly imbued with cultural significance, in this instance stemming from the fact that contraception has historically been seen as a responsibility tied to women’s reproductive health. In this case, unlike *mammo*, where the semantic motivation is related to the male referent, the motivation is semantic but with a *telic nuance*: the referent remains inanimate and not gender-motivated, yet the gender reflects the male referent to whom the object is directed.

Finally, when reviewing instances of non-prototypical motion in common gender nouns, an interesting example of motion in common gender nouns ending in *-nte* or *-a* can be found in the ungrammatical forms *presidenta*, ‘president(F).SG’ and *pediatro*, ‘paediatrician(M).SG’. In the former case, the term was falsely attributed by the Italian press to a supposed explicit request by the then-President of the Camera dei deputati, Laura Boldrini, to have her gender made explicit in the assembly (see Villani, 2020). Although this media controversy had no basis, it nonetheless spread the term *presidenta* as a possible alternative, despite being ungrammatical. In this case, the added connotation is one of derision toward Laura Boldrini, but it also highlights a polemical stance against the debate on non-sexist language (cf. Chapter 2). Similarly, the use of the ungrammatical masculine motion **pediatro* (Gheno, 2021, pp. 151-155) signals the same polemical stance, in this instance showing that speakers associate masculine and feminine grammatical gender values with the phonological rule of *-o/-a*, rather than observing the paradigm of the inflectional class, as already mentioned in section 1.7.1.

While cases where non-prototypical motion involves the formation of masculine forms are not lacking, this strategy has almost always been employed to designate negative qualities in women, emphasised through more or less plausible ungrammatical forms. However, as Thornton (2016)

¹⁰ The Wikipedia page can be accessed via the following link: https://it.wikipedia.org/wiki/Il_mammo (accessed 03.09.2024).

suggests, regardless of the creation of ‘well-formed words’ or non-prototypical motions such as those just discussed, the creation of a feminine form, particularly in agent nouns designating prestigious professions, has invariably led to an additional connotative layer of derision or stigma, as in the case of feminine forms derived with the suffix *-essa*, which will be addressed in the following section.

1.7.3.2 Less (or un-)productive strategies of gender motion in Italian: the suffixes -essa, -ina, and compounds

The derivation of feminine nouns from masculine ones using the suffix *-essa* represents a non-productive morphological process in contemporary Italian (De Cesare, 2021). This suffix is primarily found in nouns that historically referred to noble titles or religious roles, such as *duchessa*, ‘duchesse(F).SG’ or *sacerdotessa*, ‘priestess(F).SG’. It also appears in certain agent nouns that have become standardised in usage, such as *studentessa*, ‘student(F).SG’, *dottoressa*, ‘doctor(F).SG’, *professoressa*, ‘professor(F).SG’, or *poetessa*, ‘poet(F).SG’ (it is also possible to find the alternative *poeta*) but the suffix is no longer used to form new nouns.¹¹ Notably, many of these terms have acquired pejorative connotations, particularly during the late 19th and early 20th centuries, reflecting a negative societal perception of the women they denote (Luraghi & Olita, 2006).

However, the pejorative or humorous connotations associated with certain feminine forms are not exclusive to the *-essa* suffix but have historically affected numerous female professional titles (especially prestigious ones) (Thornton, 2016). For example, until the 19th century, *dottoressa* referred to a ‘pedantic, know-it-all woman,’ while *ministra*, ‘minister(F).SG’, the feminine form created according to the regular morphological pattern seen in *amico/amica*, was marked as

¹¹ The feminine noun *poetessa* has been in competition with the noun *poeta*, which is homophonous with the masculine noun, since the 1970s. This shift is largely attributed to the request of the poet Patrizia Cavalli, who insisted on being called *poeta* rather than *poetessa*. Cavalli argued that the use of the feminine form would “undermine her credibility and prevent her from being taken seriously” (Scorranese, 2020).

‘humorous’ in major Italian dictionaries until the late 20th century. It was only in 2000 that the Zingarelli dictionary updated its entry to define *ministra* as ‘a woman who holds the office of minister,’ and in 2003, it finally acknowledged the term as ‘a woman who heads a department’ (Thornton, 2016, p. 27). These examples of *dottoressa* and *ministra* reveal two key insights: firstly, that feminine forms of professional titles initially tend to acquire negative connotations regardless of the means by which they have been formed, and secondly, that continuous and consistent usage over time can significantly diminish these pejorative connotations, restoring their simple occupational denotation, as is now evident in *dottoressa* and, though not entirely, in *ministra* (see Guarino, 2022, for further analysis of the current use of these feminine nouns).

Interestingly, the specific pejorative connotation of the *-essa* suffix has also been confirmed through experimental tests, as demonstrated in the work of Merkel et al. (2012). The authors compared the perceived social prestige associated with different types of feminine forms that compete in Italian, both being grammatically acceptable, but one being termed *traditional* (e.g., *-essa*, as in *avvocatessa*, ‘lawyer(F).SG’) and the other *modern*, as the form in *-a* (e.g., *avvocata*, ‘lawyer(F).SG’) was, in 2012, considered a neologism. The study’s findings reveal that forms in *-essa* trigger a lower perception of prestige for the profession of lawyer compared to the alternative formation in *-a*.

Luraghi and Olita (2006) discuss the exceptional and stereotypical perception of professions when the *-essa* suffix is applied to nouns of so-called common gender (cf. 1.7.2), such as *vigile*, ‘traffic officer(M).SG/(F).SG’ or *giudice*, ‘judge(M).SG/(F).SG’ In these cases, the suffix marks an anomaly in the professional role performed by a woman, a phenomenon that, in 2006 and to some extent still today, remains uncommon.

According to Luraghi and Olita (2006), in cases where the masculine form ends in *-e* and the feminine is created with the suffix *-essa* (e.g., *vigile/vigilessa*), sometimes the suffix *-essa* is in strong competition with more productive processes; moreover the suffix highlights a semantic asymmetry in several agent nouns (e.g., *doge/dogaressa*, ‘doge(M).SG/(F).SG’; *console/consolessa*, ‘consul(M).SG/(F).SG’). In these cases, the suffix denotes the spouse’s role rather than the official

position (Luraghi & Olita, p. 35), thereby implying a subordinating connotation for the woman in relation to the man.

In contrast, the second feminine suffix, *-ina*, unlike its German counterpart *-in*, whose use remains productive (Luraghi & Olita, 2006, p. 17), is even more limited in Italian, being confined to attested forms and no longer productive in gender motion. Despite its limited productivity, this suffix has generated terms for traditionally female occupations, such as *mondina*, ‘rice worker(F).SG’ or *filandina*, ‘silk mill worker(F).SG’. The use of evaluative suffixes in Italian can also result in grammatical gender shifts, as seen in the pair *donna/donnone*, ‘woman/big woman’, where the masculine noun derived with an augmentative suffix still designates a woman of tall stature and/or markedly masculine features (Inglese & Luraghi, 2023, p. 48).

Finally, among the least productive processes of gender motion are non-derivational compound formations, such as *donna ministro*, ‘female minister, *lit.* woman minister(M).SG’, where the compound is based on an independent noun with a lexical gender, or *volpe maschio*, ‘male fox(F).SG’, where *volpe* is an epicene noun. These compounds (e.g., *mamma cinghiale*, ‘mummy boar(M).SG’; *nonno marmotta*, ‘grandpa marmot(F).SG’) combine a noun with a defined referential gender (e.g., *mamma*, ‘mum’) and a profession, or a kinship term related to epicene animals (e.g., *cinghiale*, ‘boar(M).SG’). Although less common, *uomo*, ‘men’, is also used as modifier in masculine compounds, such as *babysitter uomo*, ‘male babysitter’ or *maschera uomo*, ‘male usher(F).SG’ (Thornton, 2004, p. 225).

A similar outcome can be achieved by using the noun *donna* ‘women’ as a modifier, as in *candidato donna*, ‘female candidate(M).SG’, or *poliziotto donna*, ‘female police officer(M).SG’, or *maschio/femmina*, ‘male/female’ for the explicit gendering of epicene animal nouns, which can also occur syntagmatically through the use of prepositions (e.g., *una femmina di camoscio*, ‘a female chamois(M).SG’). This type of feminine formation mirrors the hyper-characterisation observed in cases like *vigilessa* and *giudicessa*. For these reasons, both the formation of feminine nouns through the suffix *-essa* and compound formations were discouraged in the *Raccomandazioni per un uso non*

sessista della lingua italiana by Alma Sabatini (1986, 1987), which will be discussed in greater detail in Chapter 2.

1.7.4 Gender markedness and default agreement cases in Italian

In previous sections, it was observed that masculine gender in Italian, as in many Romance languages, functions as the default or unmarked gender, particularly in the assignment of a grammatical gender value to loanwords and neologisms (see 1.2.3). This section will offer a more focused analysis of the reasons that establish masculine grammatical gender as the *default* gender in Italian.

The concept of markedness is a highly useful tool in typology for comparing languages across the world (Colombo & Graffi, 2017; Grandi, 2014). Originally developed by the Prague School to analyse phonetic and phonological features, such as the binary features of sounds (e.g., voiceless vs voiced in consonants), markedness theory postulated a series of generalisations based on binary oppositions, where the unmarked member always bore *zero marking*, and the marked member exhibited an overt mark, consistently identifiable and reducible to a binary opposition (see Croft, 1996 for a critical analysis of the Prague School's markedness theory).

As this binary feature-based theory was insufficient for facilitating cross-linguistic comparison, a more recent and now predominant theory of markedness is based on typological gradients (Croft, 2000). In this approach, markedness pertains to paradigmatic members of the same class that may exhibit asymmetrical properties. Thus, for a linguistic phenomenon to be marked, it must not involve only two members, but rather allow for the formulation of a markedness hierarchy, generate implicational universals with predictive value, and be identifiable in at least three manifestations: structural, inflectional, and distributional (Grandi, 2014; Grandi & Kortvelyessy, 2015).

Structural markedness posits that the marked member of a class will have an equal or greater number of morphemes than the unmarked member. In terms of grammatical gender, examples of

feminine gender motion obtained through the suffix *-essa*, such as *principe/principessa*, ‘prince/princess’, (see 1.7.3.2), or the systematic gender motion through *-in* in German, (e.g., *Gutsherr/Gutsherrin*, ‘squire/squiress’), reflect structural markedness (even in the English translation), as the masculine counterpart contains fewer morphemes. Yet, as noted in section 1.7.3.2, this type of gender motion is no longer productive. If markedness were based solely on a binary opposition, as proposed by the Prague School, the group of feminine nouns formed with *-essa* would not be sufficient to prove markedness. However, the broader, gradient definition of markedness better explains feminine structural markedness. By examining various feminine-formation strategies from a contrastive perspective (Hellinger & Bußmann, 2001; 2003; 2004), whether through composition or modification, feminine markedness becomes clearer. In Italian, this is evident in the typical gender motion from masculine to feminine, with the reverse process being less common and more marked, since gender motion process from feminine to masculine nouns often brings additional connotations. (cf. 1.7.3.1).

Still concerning morphology, inflectional markedness refers to greater paradigmatic elaboration, observed when the marked member displays fewer or an equal number of inflectional distinctions compared to the unmarked member. In many languages, particularly Romance languages with sex-based gender systems, the feminine grammatical gender is more marked from an inflectional perspective. This is evident in the reduction or loss of grammatical gender distinctions in relation to number, as discussed in 1.3. In Romance languages, intriguing cases of convergence can be found, such as in the Gallurese dialect of Northern Sardinia or Southern Corsican (Loporcaro, 2017, p. 44). Here, while the rest of Corsican varieties retain a parallel gender system distinguishing masculine and feminine endings in *-u/-a* in the singular, and *-i/-e* in the plural, in the Southern variety the plural loses gender distinction of masculine and feminine, converging in a common gender which takes the same endings of the masculine plural in other Corsican varieties (e.g., *-i*).

In Italian, a case of inflectional markedness concerning the feminine grammatical gender can be observed in an ongoing change within the pronominal system. The Italian pronominal system is considered *hypertrophic* (Berretta, 1985; Leone, 2003), as it distinguishes between free pronominal

forms (subject and complement), clitic pronouns (direct or indirect object), and also differentiates the feature of animacy (e.g., *egli/esso*, ‘he(M).SG/it(M).SG’) and the informational status of the constituent, marking the anaphoric-background vs deictic-focal opposition (e.g., *egli/lui*, ‘he’). Due to this complexity, the system is undergoing reduction and convergence. In relation to gender, Andorno (2006, p. 131) found, analysing the LIP corpus of spoken Italian, that the free pronominal pairs *egli/ella*, ‘he/she’, *esso/essa*, ‘it(M).SG/(F).SG’, *essi/esse*, ‘[non-human]they(M).PL/(F).PL’, are being all replaced by convergent forms *lui, lei, loro*, ‘he/she/they’. However, while masculine forms (*egli/esso*, ‘he/it’) remain rare but still in use, for example in certain formal registers or with highly accessible human referents, their feminine counterparts are completely absent from the corpus. The inflectional markedness of the feminine is also evident in certain reductions observed in *neostandard* Italian (Berruto, 2012) such as the loss of the *gli/le* dative distinction in clitic pronouns, with the overextension of the masculine *gli*. This is also seen in more widely accepted cases (De Santis, 2022), such as the use of combined unstressed forms, where the masculine *glielo* can be used even when referring to women.

In considering distributional markedness, the focus shifts to syntax, where the marked form occurs in fewer or the same number of syntactic contexts as the unmarked form. This concept does not refer to the *absolute frequency* of occurrence, which may be relevant to other types of markedness, such as sociolinguistic one, but specifically to the occurrence of a particular form in a given syntactic position. From a syntactic perspective, in many Romance languages with parallel gender systems (see 1.3), the masculine grammatical gender can be considered unmarked as it “systematically occurs on agreement targets in default contexts” (Loporcaro, 2017, p. 34). Clearly, when combining cases in which the use of masculine is semantically motivated with default usages, the masculine grammatical gender exhibits significantly more syntactic occurrence contexts than the feminine, thereby justifying the markedness of the latter.

One clear instance of default masculine agreement arises from the fact that in languages like Italian, French, and Spanish, lexical direct objects no longer control agreement, resulting in the selection of the unmarked form, as illustrated in (23):

- (23) *Fabio ha pulito la casa*
 Fabio have.PRS.IND.3SG **clean.PST.PTCP.M.SG** DEF.F.SG house(F).SG
 ‘Fabio has cleaned up the house’

In example (23), the feminine form *pulita* would be possible but significantly rarer. Another instance where the masculine functions as the default gender is in agreement with non-prototypical controllers (see 1.5.1), such as when the controller is an entire clause, as in (24), or when, despite agreement with a feminine adjective, clitic pronouns refer back to a nominal or adjectival predicate rather than an argument, as in (25).

- (24) *andare al cinema è stato bello*
 go.PRS.INF to_the.M.SG cinema(M).SG be.PRS.3SG **be.PST.PTCP.M.SG** **cool.M.SG**
 ‘going to the cinema was cool’

- (25) *Anna è alta. Lo=è sempre stata*
 Anna be.PRS.IND.3SG **tall.F.SG** 3M=be.PRS.IND.3SG always be.PST.PTCP.F.SG
 ‘Anna is tall. She always has been’

Corbett (1991, p. 223) refers to this mechanism as *neutral* or *enforced agreement* because the gender marked on these elements does not follow the typical patterns of gender assignment in the language. In some instances, languages allow the use of an *evasive form* to address these agreement issues. For example, in Catalan, the direct object pronoun *ho*, ‘it(N).SG’, replaces the default masculine used in other Romance languages in cases such as (25) (Loporcaro, 2017, p. 36). Similarly, in English, the *singular they* functions as an evasive form to resolve agreement with a non-canonical controller, such as an unknown referent (Corbett, 1991, p. 223), since it is typically used in the plural. However,

Italian lacks a neuter or an evasive form in such agreement issues, and therefore uses the masculine gender in all cases of gender resolution, including when the controller is represented by conjoined constituents, as seen in (26).

(26)	<i>Franco</i>	<i>e</i>	<i>Maria</i>	<i>sono</i>	<i>appena</i>	<i>arrivati</i>
	Franco	and	Maria	be.PRS.IND.3PL	just	arrive.PST.PTCP.M.SG

‘Franco and Maria have just arrived’

Languages worldwide employ various strategies to resolve cases like (26). In some instances, the gender of the nearest conjunct is selected, as in Swahili, while in others, such as Slovenian, the referential gender of the first conjunct is chosen (Corbett, 1991, pp. 265-266). In certain languages, there appears to be no fixed strategy; instead, the grammatical gender of the resolving element changes depending on context. For example, in Dyirbal, when referring to a mixed-gender group, if the most senior person is female, or if the majority are women, a more typically feminine form (class II nouns) may be preferred (Corbett, 1991, p. 223). Turning to Italian, despite proposals for alternating or closest agreement with mixed-gender coordinated conjuncts (cf. Chapter 2), the most frequent and prescribed strategy is resolving gender agreement by default masculine.

Moreover, in languages with fully semantic gender assignment, such as Tamil, semantic criteria alone govern agreement issues. However, in languages with both semantic and formal assignment, such as Italian, French, Spanish, Portuguese, and other Romance languages, gender resolution follows both semantic and formal, primarily syntactic, criteria, which can be summarised in the following generalisations (Loporcaro, 2017, p. 38):

- a. If all conjuncts are feminine -> feminine plural
- b. If one conjunct denotes a male animate -> masculine plural
- c. Elsewhere -> masculine plural

Moreover, masculine agreement is applied regardless of the relationship between referential gender and grammatical gender (see 1.7.2). A clear example where semantic agreement overrides syntactic agreement can be found in (27) and (28).

- (27) *Luca e Carla sono fratelli*
 Luca and Carla be.PRS.IND.3PL **brothers**

‘Luca and Carla are siblings’

- (28) *La sentinella e sua moglie sono arrivati*
 DEF.F.SG sentinel(F).SG and 3.POSS.F.SG wife be.PRS.IND.3PL **arrive.PST.PTCP.M.SG**

‘the sentinel and his wife arrived’

In the first case, in Italian there are no nouns with lexical gender able to designate both women and men, like the English counterpart *siblings*. Therefore, in the presence of a *brother* coordinated with a *sister*, the plural will have masculine resolution in the form with lexical gender *fratelli*; in this case, the resolution of the agreement follows rule b) given the presence of an animate masculine conjunct (Corbett, 1991).

On the other hand, example (28) represents a rare case in which semantic agreement, prevailing over syntactic one, constitutes an exception to rule (a). At the syntactic level, the sentence has two feminine constituents: *moglie*, ‘wife’, is a noun with feminine lexical gender, and *sentinella*, ‘sentinel’ is an epicene noun formally marked as feminine, although it can designate any human referent. Thus, the referential gender of *sentinella* governs the agreement. The example of the epicene noun *sentinella*

is particularly fitting since the job role is mainly carried out by men, therefore, imagining a male referent is particularly immediate, despite the formal marking of the feminine. Another exception to the above generalisations occurs in some cases of agreement in which the animate feminine constituents are coordinated with an inanimate masculine as in (29).

- (29)
- | | | | | |
|----------------|----------------------|-----------|----------------|---------------|
| <i>Luisa,</i> | <i>Rosalba</i> | <i>e</i> | <i>il</i> | <i>freddo</i> |
| Luisa | Rosalba | and | DEF.M.SG | cold(M).SG |
| <i>sono</i> | <i>arrivati</i> | <i>in</i> | <i>gennaio</i> | |
| be.PRS.IND.3PL | arrive.PST.PTCP.M.SG | in | January | |
- ‘Luisa, Rosalba, and the cold arrived in January’

In such cases, the masculine form *freddo* ‘cold(M).SG’ governs agreement, even when referring to an inanimate noun. One possible explanation for this exception could lie in poetic anthropomorphisation, which may align nouns like *freddo* more closely with a male animate referent than with an inanimate one. However, this exception persists even with more typical inanimate nouns, such as *pacco* ‘parcel(M).SG’ in example (30)

- (30)
- | | | | | |
|----------------|----------------------|-------------|------------|--------------|
| <i>Luisa,</i> | <i>Rosalba</i> | <i>e</i> | <i>il</i> | <i>pacco</i> |
| Luisa | Rosalba | and | DEF.M.SG | parcel(M).SG |
| <i>sono</i> | <i>arrivati</i> | <i>alle</i> | <i>tre</i> | |
| be.PRS.IND.3PL | arrive.PST.PTCP.M.SG | at | three | |
- ‘Luisa, Rosalba, and the parcel arrived at three o’clock’

So, wanting to take these exceptions or less typical usages into account, Loporcaro's (2017, p.38) generalisations could be reinterpreted as follows:

- a) If all conjuncts are *semantically motivated as feminine* -> feminine plural
- b) If one conjunct denotes a male animate *or inanimate* -> masculine plural
- c) Elsewhere -> masculine plural

It is important to note, as Corbett (1991) explains, that the concept of markedness accounts for masculine gender resolution only in languages with both semantic and formal gender assignment systems, particularly in those, like Italian, that have only two gender values. In languages with a neuter grammatical gender, such as Polish, the notion of markedness no longer explains gender resolution (see Corbett, 1991, pp. 290-293 for further discussion). Corbett argues that even in binary gender systems, such as French or Italian, masculine resolution should be understood more as a *convention* than as the selection of an unmarked gender.

Distinguishing between 'masculine by convention' and 'unmarked masculine' is particularly useful for this work, as it allows for the isolation of cases where the use of the masculine grammatical gender presents no social implications, such as with non-prototypical controllers listed in (23-25), from cases where such use has been, and continues to be, problematic. In this regard, from the next chapter onwards, the discussion will examine cases where the formal markedness of the feminine grammatical gender is accompanied by sociolinguistic markedness. This will introduce instances where the use of the masculine can still be defined as *default*, that is, selected by convention, but no longer as *unmarked*, especially when the psychosocial effects of certain linguistic usages on both speakers and listeners are considered.

– Chapter 2 –

Social aspects of gender in language

The chapter begins by analysing key instances in which the relationship between grammatical gender and the gender identity of the referent can produce negative psychosocial effects on both individuals and society. Specifically, it addresses cases where linguistic usage contributes to the subordination, invisibilisation, and marginalisation of female and non-binary identities in relation to male one. The focus of this chapter thus extends beyond purely linguistic considerations to incorporate extralinguistic factors, which will nonetheless be contextualised within the framework of the Italian gender system, as previously outlined.

The chapter then examines proposals for gender-sensitive language in Italian, discussing both earlier efforts aimed at feminisation and more recent strategies for neutralisation, the latter being the main focus of the chapter. In particular, the chapter explores what this work defines as sub-standard neutralisation strategies. Two studies are presented concerning the use of and speakers' attitudes towards the introduction of symbols and letters that convey gender values distinct from the grammatical masculine or feminine. The first study involves a questionnaire assessing speakers' knowledge, dissemination, communicative practices, and opinions regarding these symbols. The second study involves a quantitative and qualitative analysis of a corpus of Facebook posts by a transfeminist political movement.

2.1 Problematic cases of asymmetry between grammatical and referential gender in Italian

2.1.1 Subordination processes: semantic and sociolinguistic markedness of the feminine grammatical gender

In the first chapter, starting from the concept of markedness in linguistic typology, several morphosyntactic phenomena were identified to explain the unmarked status of masculine grammatical gender in Italian. This includes, for example, cases of structural and inflectional markedness, or its role as the *default gender* in relation to gender assignment and resolution rules outlined in section 1.7.4.

Some of these cases were referred to as uses of the masculine ‘by convention’, contrasting this with the more widespread term ‘unmarked masculine’, which, while particularly useful in typology, proves less suitable when the analysis takes gender identity into account. In this section, the focus will be on cases where the use of the masculine by convention can have psychosocial repercussions, i.e., cases where the structural markedness of the feminine gender, which is unproblematic in itself, is accompanied by sociolinguistic markedness, which is less innocuous.

Starting with semantic observations, the markedness of the feminine is evident in the differing frequency and meaning of pairs of terms, where the unmarked member can refer to a greater number of referents compared to the marked member. As a result, the meaning of the unmarked term has greater extensiveness property and therefore occurs more frequently, as in the case of the masculine *gatto* ‘cat_{(M).SG}’, which can denote any referent of the feline species, in contrast to the feminine *gatta* ‘cat_{(F).SG}’, which only denotes female specimens (Luraghi & Olita, 2006). In this instance, as in all other cases concerning inanimate objects or animals, the use of the masculine by convention is unproblematic. The problematic cases from a semantic perspective arise with humans’ designation, specifically in phenomena where the use of the masculine grammatical gender by convention can lead to the subordination of women to men for reasons of prestige.

Subordination is evident in cases of *semantic asymmetry* (or *dissymmetry*, according to Sabatini’s terminology; 1987) (Robustelli, 2012b), where in pairs of nouns with opposite grammatical

gender, such as *ostetrico/ostetrica* ‘obstetrician_{(M).SG/(F).SG}’, a prestige imbalance favours the masculine noun to such an extent that it alters the very denotation of the term. For instance, in the pair *ostetrico/ostetrica*, the profession of a doctor is contrasted with that of a specialised nurse (midwife), implying a professional subordination of the latter to the former. This phenomenon is also observable in pairs like *segretario/segretaria* ‘secretary_{(M).SG/(F).SG}’, where the masculine term refers to a prestigious professional position, often associated with institutions, political parties, or important organisations, whereas the feminine counterpart denotes any worker in a back-office role. Consequently, the feminine noun, when considered alongside its masculine counterpart, demonstrates a sociolinguistic markedness. The use of *segretaria* in a context such as a party secretariat, for instance, though grammatically correct, may appear unusual and less acceptable than the masculine alternative *segretario*. The semantic asymmetry becomes semantic polarisation (Robustelli, 2012b, p. 8) when the meaning of the feminine form of a word is not only lower in prestige but also carries a specific negative and judgmental connotation towards women, as seen in the opposition between *passeggiatore* ‘male walker’ and *passeggiatrice* ‘female walker’, or *uomo libero* ‘free man’, and *donna libera* ‘free woman’. The masculine terms simply refer to a man who enjoys walking or a man who is generally free from constraints; in contrast, both feminine forms, although they could denote similar meanings when applied to women, are instead used to refer to ‘woman of loose morals’ or ‘a woman who gets around’ or , with an additional judgmental undertone.

Sociolinguistic markedness is thus based on extralinguistic parameters, and in the case of feminine forms of professional nouns, on the diaphasic (e.g., formality of register, relationships between interlocutors) and the diamesic axis (e.g., the contrast between written and spoken language) (Berruto, 2012). From this perspective, the unmarked member can be used in all communicative contexts without eliciting negative reactions or misunderstandings from the interlocutor. By contrast, the marked form, although linguistically correct and capable of conveying meanings identical or analogous to the unmarked form and being perfectly intelligible, may provoke different negative reactions in both the speaker and the listener (Grandi, 2014).

A clear example of sociolinguistic markedness can be seen in the asymmetrical use of feminine agent nouns. As noted in section 1.7.3, although these terms can be considered *well-formed* words in Italian, they have historically been used less frequently than their masculine counterparts. The sociolinguistic markedness of feminine agent nouns is evident firstly because, as highlighted in section 1.7.3.2, they have often been associated with derogatory or stigmatising connotations (Thornton, 2016), prompting a preference for the masculine term, referred to as ‘prestige masculine’ (Giusti, 2022, p. 10). Moreover, the use of certain feminine professional nouns, particularly in highly qualified professions, remains limited. This is partly because, even in the view of many women, using the feminine form would imply a lowering of the prestige associated with the profession. As Giuliana Giusti points out (2022, p. 6) the sociolinguistic markedness is further confirmed by the available variety of alternatives of feminine nouns for some prestigious professions which does not help establish a strong female identity within the profession. This is the case with professions such as *avvocato* ‘lawyer_{(M).SG}’, where the feminine form alternates between several competitors, created through both morphological (e.g., *avvocata*, *avvocatessa*) and syntactic strategies (e.g., *donna avvocato*, *avvocato donna*).

Regarding sociolinguistic markedness, Voghera and Vena (2016) collected data on the use of feminine forms of agent nouns for self-designation among sixty female academics from three Italian universities. They found that their colleagues preferred to use the masculine form for self-designation in formal, highly controlled written contexts, such as in a curriculum vitae. Moreover, the use of referential masculine and feminine gender observed in written Italian was subsequently compared with its use in spoken language. Specifically, this comparison was conducted through a separate data collection, in which the analysis was narrowed to a limited set of particularly recurrent nouns identified in the previous study of CVs (e.g., *segretario/segretaria* ‘secretary_{(M).SG/(F).SG}’, *direttore/direttrice* ‘director_{(M).SG/(F).SG}’, *professore/professoressa* ‘professor_{(M).SG/(F).SG}’, *ricercatore/ricercatrice* ‘researcher_{(M).SG/(F).SG}’). In this case, the analysis of spoken language focused on spontaneous conversation, particularly in more informal spoken contexts, such as interviews on radio or television programmes.

This study clearly demonstrates how the co-occurrence between diaphasic and diamesic effects prompts a sociolinguistically marked use of the feminine nouns, which are not subject to sanction in informal contexts, contrasted with a more normative use of the masculine counterparts in contexts where language production is more closely regulated.

Particularly, their study of grammatical gender alternation in *professore/professoressa* ‘professor_{(M).SG/(F).SG}’, shows that the use of the masculine by convention for women’s self-designation is motivated solely by social bias linked to prestige, and not by any linguistic reason. Indeed, unlike many other feminine agent nouns, *professoressa* is one of the rare cases of a feminine noun obtained by gender motion process through the suffix *-essa* that is widespread in contemporary Italian and no longer associated with negative connotations (cf. 1.7.3.2). However, this sociolinguistically unmarked use of the term *professoressa* primarily concerns teachers in lower and upper secondary education, a profession with lower prestige than that of university professors. In this case, the choice to avoid the feminine designation, which is grammatical and widely used in standard language, is clearly intended to highlight a career distinction, thus drawing a boundary in terms of *social class* rather than (or in addition to) gender identity.

Il desiderio, non sempre conscio di dar risalto al diverso livello di carica, è forse spesso il motivo che induce molte donne nei gradi più alti a preferire il titolo maschile [...], in questo caso strettamente connesso al sesso maschile, è il più autentico detentore di prestigio e potere e che la donna, se vuole salire di grado, ad esso si deve adeguare.

(Sabatini, 1986, p. 30)

[The desire, not always conscious, to emphasise a higher status is often the reason why many women in more senior positions prefer the masculine title [...], as this title, closely associated with the male sex, is perceived as the true bearer of prestige and power. If a woman wishes to ascend the ranks, she must conform to it].

According to Giuliana Giusti (2022, p. 8), “a woman who self-designates using the masculine form expresses her adherence to a professional model perceived as inherently masculine, which is seen as canonical, as opposed to a feminine form regarded as having less or no prestige. In doing so, that woman asserts a position of superiority over other women in the same role and a stance of equality with men”.

It is important to note that the data on the occurrence of the masculine grammatical gender in the study by Voghera and Vena (2016) is independent of the referential context that the women under examination made of professional titles. In fact, the use of masculine by convention was not restricted to the designation of abstract professional roles but also appeared in contexts where the role was concretely instantiated. In such cases, where the referent is known, and the woman is self-designating, a semantically motivated use of the feminine grammatical gender across the agreement chain would be expected. In this regard, the use of masculine agent nouns to designate women causes these titles to behave as what Corbett (1991, pp. 225-259) describes as *hybrid nouns*, whereby the same controller governs agreement with target elements marked for the opposite grammatical gender. These are nouns with conflicting semantic and morphological properties, which are reflected in their syntactic behaviour. Consider example (1), imagining that the minister in question is a woman:

(1)	<i>il</i>	<i>ministro</i>	<i>è</i>	<i>arrivato</i>	<i>ieri</i>
	DEF.M.SG	minister(M).SG	be.PRS.IND.3SG	arrive.PST.PTCP.M.SG	yesterday
	<i>di</i>	<i>lei</i>	<i>sappiamo</i>	<i>già</i>	<i>tutto</i>
	about	her	know.PRS.IND.1PL	already	everything

‘the minister arrived yesterday. We already know everything about her’

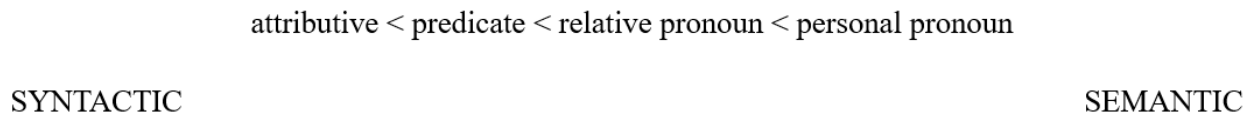
In Italian, nouns that exhibit hybrid gender agreement are not frequent in the system, as they are in other languages. A prototypical example of a hybrid noun is German *Mädchen*, which, despite semantically justifying the choice of a feminine gender by denoting a young girl, is grammatically marked as grammatically neuter due to the diminutive suffix *-chen*. In German, hybrid agreement occurs because all agreement targets display neuter grammatical gender, except for personal pronouns, which take the feminine form (Corbett, 1991, pp. 227-228).

In Italian, there is no such conflicting gender assignment, as the masculine grammatical gender of *ministro* in example (1) is not morphologically marked like the neuter *Mädchen* but is, indeed, an optional usage due to convention. Moreover, since this is not a referential case involving the designation of an abstract role or an indefinite referent, it cannot be considered a default masculine (cf. 1.7.4). The hybrid agreement is therefore triggered by the sociolinguistic markedness mentioned earlier, which associates greater prestige with the masculine grammatical gender, even though the known referent is a woman. In this regard, such uses of professional titles are termed *semi-marked* from a sociolinguistic perspective by Federica Formato (2019), as they occupy an intermediate space between the masculine by convention, which would involve entirely masculine agreement, and a sociolinguistically marked use of the feminine, with corresponding agreement on the targets, which is rarer and linked to lower prestige.

Instances of hybrid agreement in grammatical gender in Italian are extremely rare and occur, for example, with the feminine pronoun *lei*, used as a formal address, or with titles such as *vostra maestà* ‘your_{F.SG} majesty_{F.SG}’ and *sua santità* ‘SG.POSS.F.SG holiness_{F.SG}’, which are grammatically marked as feminine but allow for masculine agreement on personal pronouns (Corbett, 1991, p. 227). Aside from these exceptions, other cases of hybrid agreement are motivated by sociolinguistic factors.

Concerning hybrid nouns, one can observe *semantic agreement* (or *ad sensum agreement*), where agreement is based on the referential gender of the controller, or *syntactic agreement* (or *ad formam agreement*), as seen in all cases where the masculine is used by convention for female referents in professional titles, thus “consistent with the gender as it would be assigned by morphological or phonological assignment rules” (Corbett, 1991, p. 226). The hybrid agreement in

the aforementioned sociolinguistically marked context in Italian aligns with the typological behaviour observed in other languages with hybrid nouns, as it adheres to the *Agreement Hierarchy* (Corbett, 1991, p. 226), where “as we move rightwards along the hierarchy, the likelihood of semantic agreement will increase monotonically (that is, with no intervening decrease)” (see Figure below).



(Figure 7. Agreement hierarchy. Source: Corbett, 1991, p. 226)

For this reason, in example (1), the past participle *arrivato* agrees with the masculine grammatical gender of *ministro*, whereas the anaphoric reference with the personal pronoun *lei* uses the feminine grammatical gender, semantically motivated by the fact that the referent is a woman.

Finally, it is worth briefly mentioning that the semantic asymmetries between masculine and feminine grammatical gender in Italian are not limited to the nominal domain but extend to the level of discourse, particularly related to the lexical choices people make to describe women compared to men. For instance, this is evident in the use of stereotyped adjectives to describe women and men in professional roles (e.g., *la bellissima campionessa di scherma Valentina Vezzali* ‘the very beautiful fencing champion Valentina Vezzali’ vs. *l’imbattibile campione di scherma Aldo Montano* ‘the unbeatable fencing champion Aldo Montano’). Furthermore, the stereotyping of women is often reinforced by their frequent association with the roles of mothers or wives, which is commonly exaggerated through the use of diminutives or affectionate terms such as *mamma*, *mogliettina* ‘mammy, wifey’. Such references are entirely inappropriate in contexts where women are being recognised for their professional achievements (Robustelli, 2012a, p. 8; Sabatini, 1986).

Therefore, although discourse as a broader unit of analysis falls outside the aim of the present work, it is worth highlighting that merely promoting a more frequent use of feminine agent nouns is not enough. To reduce the sociolinguistic markedness of the feminine and address such instances of asymmetry, it is necessary to develop greater sensitivity towards the relationship between grammatical and gender identity in all its manifestations.

2.1.2 Invisibilisation processes. Masculine by convention in gender resolution cases

Alongside the effects of subordination triggered by certain uses of the masculine grammatical gender by convention, there are also effects of invisibilisation. These are instances in which the conventional choice of the masculine grammatical gender prevents gender identities other than male from being fully represented in the text and the communicative context.

Returning to the topic of gender resolution discussed in section 1.7.4, when the controller consists of a series of conjoined constituents with mixed referential gender (i.e., both men and women), the convention in Italian, as in other Romance languages, prescribes masculine gender agreement in all targets. This inevitably results in the invisibilisation of feminine identities within the designated group, both cognitively and socially. From a cognitive perspective, the use of masculine grammatical gender by convention in the text, so-called *generic masculine* (Gygax et al., 2008), can lead the reader to imagine a male referent or an entirely male group composition, in cases of plural nouns (Gygax et al., 2021). This specific cognitive processing, referred to as *male bias* in the psycholinguistic literature (Gygax et al., 2008), becomes particularly significant when the invisibilisation of non-male identities occurs in extralinguistic contexts such as the workplace, education, or healthcare. In these contexts, the perception of social inclusion and belonging is a crucial factor for an individual's well-being (Stout & Dasgupta, 2011). These aspects will be explored in greater detail in Chapters 3 and 4. For now, a linguistic exploration of certain gender resolution strategies that can circumvent the issue of masculine by convention is provided.

This convention, as documented in some languages, has not always been historically valid. Different strategies were employed in the past. As Merkel and colleagues (2017) explain, referring to Larousse’s studies (1865), in Greek and Latin, as well as in Quebec French before the 17th century, plural agreement with conjoined constituents was established based on the grammatical gender of the last conjunct before the agreement target, thus, based on the referential gender of the last person mentioned. Consequently, in these cases, the convention did not yet prescribe the use of the masculine by convention but instead followed the *rule of proximity* (Merkel et al., 2017, p. 50), also known as *closest conjunct agreement* (Giusti, 2022, p. 11; Thornton, 2023, p. 229). This could occur both when the conjoined constituents preceded the feminine target (2) or followed it (3).¹²

- (2) *Asia* *Mario* *e* *Roberta*
Asia *Mario* *and* *Roberta*
sono *andate* *al* *parco*
be.PRS.IND.3SG **go.PST.PCP.F.PL** to_the.M.SG park(M).SG
‘Asia, Mario, and Roberta went to the park’

- (3) *Pensavo* *di* *invitare* *a* *cena*
Think.IMP.F.IND.1SG of invite.PRS.INF for dinner
le *mie* *compagne* *di* *corso*
DEF.F.PL **1.POSS.F.PL** **mates(F).PL** of class
Giulia, *Giada,* *Elisa* *e* *Stefano*
Giulia Giada Elisa and Stefano
‘I thought to invite my classmates Giulia, Giada, Elisa and Stefano for dinner’ (Merkel et al., 2017, p. 52)

¹² Example (3) does not represent a true case of agreement, as is observable in (2). Rather, the conjoined constituents *Asia*, *Mario*, and *Roberta* are grouped through the cataphoric element *le mie college* ‘[DEF.F.PL] my.F.PL colleagues(F).PL’. Nonetheless, example (3) has been included to facilitate the subsequent discussion on the acceptability of different forms of closest conjunct agreement.

In Italian, closest conjunct agreement is regarded as a grammatical violation (Giusti, 2022; Merkel et al., 2017). Therefore, as for the hybrid agreement discussed in the preceding section, it is evident that sociolinguistic factors shape both the use and the prescription of masculine forms in Romance languages. For example, in Quebec French, where feminine agreement based on the closest conjunct was historically permissible but forbidden from the 18th Century in favour of masculine by convention, the Office Québécois de la Langue Française (2013) advised positioning the masculine conjunct nearer to the masculine agreement target. This ensured that the masculine convention applied to the target element aligned with the rule of proximity, blending spontaneous linguistic usage with a newly instituted normative regulation.

Regarding Italian, although it is currently deemed a violation, the phenomenon of closest conjunct agreement is certainly attested and has even been referenced in various grammars, as noted by Thornton (2023, p. 230):

Diverse grammatiche della lingua italiana trattano l'argomento, non sempre in modo concorde. Fornaciari (1881, p. 316) osserva che «il sostantivo più vicino (quando si tratti di cose inanimate) suole spesso dar norma all'aggettivo»; l'esistenza di casi di accordo con l'elemento più vicino è riconosciuta anche da Serianni (1988, par. v.25), che osserva però che questa possibilità si ha solo quando i sostantivi controllori dell'accordo sono plurali e si riferiscono a entità inanimate. Tuttavia, casi in cui il fenomeno si manifesta anche con sostantivi riferiti a persone sono attestati occasionalmente.

[Various grammars of the Italian language address the topic, though not always in agreement. Fornaciari (1881, p. 316) observes that 'the nearest noun (when referring to inanimate objects) often determines the adjective's agreement'; the existence of cases of agreement with the nearest element is also recognised by Serianni (1988, par. v.25), though he notes that this possibility only arises when the controller nouns are plural and refer to inanimate entities. However, cases where the phenomenon occurs with nouns referring to people are occasionally attested].

Furthermore, the closest conjunct agreement can also be observed in Italian about number:

Ad esempio, un aggettivo singolare che segue la coordinazione di due singolari può essere interpretato come modificatore di entrambi i nomi, come in: il popolo e il senato romano, oppure: *senatus populusque romanus*, dove a rigor di logica ci aspetteremmo l'aggettivo plurale. Si noti che il senato e il popolo romani, viceversa è meno accettabile anche se segue le regole normative.

(Giusti, 2022, p. 11)

[For example, a singular adjective that follows the coordination of two singulars can be interpreted as modifying both nouns, as in the_{M.SG} people_{M.SG} and the_{M.SG} Roman_{M.SG} Senate_{M.SG}, or *senatus populusque romanus*, where, strictly speaking, one might expect a plural adjective. It should be noted that the_{M.SG} people_{M.SG} and the_{M.SG} Roman_{M.PL} Senate_{M.SG}, on the other hand, is less acceptable, even though it follows normative rules].

Concerning acceptability, in a study conducted by Merkel et al. (2017), the acceptability of the closest conjunct agreement was tested using two hypotheses. The *proximity hypothesis* posits that feminine grammatical gender marked on the target element is perceived as less incorrect when the nearest conjunct is referentially feminine (e.g., a woman). The *primacy hypothesis*, instead, suggests that the violation is perceived as less incorrect when the first-mentioned conjunct has a feminine referential gender. By combining the factors of proximity and primacy (see also 4.2.5.2 and 4.2.5.3 on the effects of order of mention), Merkel et al., (2017) found that agreement with a feminine form by convention, or *generic feminine*, concerning conjoined constituents of mixed gender, was recognised as ungrammatical in any condition. However, it was judged as most acceptable when there was a co-occurrence of the proximity and primacy effects, that is, when the masculine referential gender conjunct (e.g., the male referent) was positioned far from the target element and not mentioned first, as illustrated in (3).

Among different conditions, order of mention had a lesser impact on acceptability judgments compared to the proximity effect, which was decisive in determining whether the sentence was accepted.

Two other significant findings from this study pertain to the fact that these effects were observed both in structures where the conjuncts preceded the agreement, as in (2) (Noun-Verb-Structures), and in Pronoun-Noun-Structures, as in (3). Moreover, from a sociolinguistic perspective, the authors reported a difference between male and female participants, with men being less sensitive to grammatical violations than women.

Corpus-based studies can also enhance the debate by introducing a quantitative perspective when investigating other processes that contribute to the linguistic invisibilisation of women. For example, in her analysis of the written Italian corpus *itTenTen16*, Federica Formato (2019) observes that the grammatical gender of *pediatra* ‘paediatrician_{(M).SG/(F).SG}’ displays masculine agreement in 86% of cases, despite data from the Ministry of Health in 2012 indicating that 63% of paediatric professionals were women, compared to only 37% men (see Formato, 2019, p. 63). The reduced visibility of the feminine grammatical gender in the corpus can be attributed to the fact that masculine agreement, triggered by *pediatra*, occurs both in abstract references and in cases referring to a specific woman, as previously noted in discussions on prestige, even in instances of self-designation.

Finally, the designation of women by relational terms relative to their husbands, fathers, brothers, or male mentors inevitably leads to the obscuration of women’s merit and professionalisation within the communicative context (Robustelli, 2012b; Sabatini, 1987). An example of this invisibilising usage would be calling the deputy and coordinator of the Italian Left party Elisabetta Piccolotti as ‘Nicola Fratoianni’s wife’.¹³

For all these aspects of the subordination and invisibilisation of women in language, driven by the use of the masculine by convention and other discursive strategies linked to linguistic sexism, it

¹³ Nicola Fratoianni is an Italian politician, member of the Chamber of Deputies and Secretary of Italian Left from 2017 to 2019 and again since 2021. https://it.wikipedia.org/wiki/Nicola_Fratoianni (accessed 21/09/2024).

is crucial to promote practices of feminisation (see 2.2.1). This is not only due to the continued pressing need for such practices, but also because, as demonstrated in both Chapter 1 and the present chapter, there are no significant barriers to effectively representing women within the Italian language. However, this same ease does not extend to the invisibilisation of transgender and non-binary identities, where linguistic marginalisation is a more fitting description.

2.1.3 Marginalisation processes: misgendering of trans and non-binary individuals*

Social marginalisation refers to “the process by which certain individuals or groups are systematically excluded from meaningful participation in social, economic, political, and cultural life. Marginalisation can occur due to various factors, including gender identity, sexual orientation, social class, economic status, language, geographical origin, religion, disability, or neurodivergence. Those who are marginalised typically lack access to resources, opportunities, and rights that are readily available to others in mainstream society, leading to reduced agency, inequality, and social isolation” (UNESCO, 2017, p. 3). Just as linguistic practices may reinforce social subordination and invisibilisation, marginalisation can also be partially rooted in language.

Consider once again the asymmetry in the use of masculine and feminine grammatical gender in terms of subordination and invisibility, as illustrated in examples (4) and (5):

- (4) *L' assessore è incinta*
 DEF[M.SG] councillor(M).SG be.PRS.IND.3SG pregnant.F.SG
 ‘the councillor is pregnant’

(5)	*L'	<i>assessora</i>	<i>ha</i>	<i>un</i>
	DEF[F.SG]	councillor(F).SG	have.PRS.IND.3SG	INDF.M.SG
	<i>tumore</i>	<i>ai</i>	<i>testicoli</i>	
	cancer(M).SG	of_the.M.PL	testicles(M).PL	
	'the councillor has testicle cancer'			

Both examples exhibit a phenomenon of *misgendering* (McLemore, 2015), wherein the grammatical gender marked in the text does not align with the gender identity of the referent. However, in example (4), due to reasons of prestige previously discussed, the misgendering does not incur grammatical nor sociolinguistic sanctioning, as it represents a customary use. Conversely, example (5) is grammatically incorrect because standard Italian does not allow for a generic use of feminine nouns, except for certain epicene nouns such as *persona*, *vittima*, *sentinella* (cfr. 1.7.2), and because feminine agent nouns can be subject to sociolinguistic sanction. From a referential perspective, an example like (5) could arise in the case of a trans* woman diagnosed with testicular cancer. In this scenario, an individual born with male biological sex, but who identifies as a woman, and has not undergone surgical transition, would need to designate herself as a woman in language as well.¹⁴ However, the use of the feminine for self-designation by trans* women is still sociolinguistically marked in Italian. According to the definition of sociolinguistic markedness provided in section 2.1.1, this usage cannot occur across all communicative contexts without triggering reactions from the interlocutor, despite posing no grammatical anomaly.

The sociolinguistic sanctioning of feminine designation for trans* women is rooted in a presumed one-to-one correspondence between grammatical gender and the biological sex of the referent in sex-based languages. First and foremost, information regarding the biological sex of

¹⁴ The asterisk in *trans** serves to emphasise its role as an umbrella term that includes a wide range of identities and experiences related to gender and sex variance. Rather than having a singular, fixed meaning, *trans** encompasses fluid, evolving understandings of gender identity. Activists commonly use this umbrella term to reflect changing identities and political strategies within the transgender community, informing efforts toward social change and inclusion (Davidson, 2007; Doan & Johnston, 2022).

individuals is almost never available with certainty. Therefore, what typically occurs is a simplification, whereby it is presumed that a person has a particular biological sex based on their *gender expression*, thus the external manifestation of an individual's gender identity, commonly expressed through behaviour, clothing, hairstyle, voice, and other characteristics that are socially regarded as masculine, feminine, or a combination of both (American Psychological Association, 2015, p. 384). Yet, as discussed in section 1.7.2, this correspondence holds for certain noun classes but not for others, such as epicene or common gender nouns. More importantly, violations of this correspondence do not seem problematic for male individuals, and to a lesser extent for female individuals, as shown by the various uses of masculine forms by convention discussed thus far.

The marginalisation of trans* identities in these communicative practices manifests in two key ways. Firstly, the linguistic (e.g., the grammatical validity of feminine agent nouns) and social arguments (e.g., the need for inclusion, recognition, and equal professional prestige), which have supported feminist linguistics' efforts to increase women's visibility in language (see 2.2), lose their force when they could be applied to another marginalised group, trans* people, who remain subordinate not only to men but also to women. The 'prestige masculine' historically symbolised superiority over other women and parity with men (Giusti, 2022, p. 10). However, for Trans-Exclusionary Radical Feminists (TERFs), even the use of feminine grammatical gender by trans* women is viewed not as an expression of gender identity, but as a prestige-driven choice aimed at achieving equality with women, rather than a genuine reflection of identity like that of any other individual.¹⁵

The second aspect of marginalisation is that misgendering is inherently harmful to trans* people. Clinical and social psychology categorises misgendering acts as *microaggressions*, alongside insults, slander, and verbal abuse, which can trigger chronic health issues, persistent anxiety, stress, hypervigilance, feelings of isolation, anger, fear, and shame (Kapusta, 2016). When analysing acts of

¹⁵ TERF (Trans-Exclusionary Radical Feminist) refers to a subset of radical feminists who are characterized by their exclusion of transgender women from the category of women and their opposition to transgender rights, particularly in relation to issues like access to women's spaces, and recognition of transgender women within feminist discourse. (Serano, 2013).

misgendering, it is crucial to consider the speaker's intent, as deliberate slander is undoubtedly more damaging than accidental one (McLemore, 2015). Accidental misgendering can occur when the speaker is unaware of the referent's gender identity and refers instead to secondary sexual characteristics (e.g., breasts, beard) or to their gender expression. In contrast, *aggressive or political misgendering* (Simpson & Dewaele, 2019) occurs when the speaker deliberately reveals the individual's transgender identity against their will, intending to embarrass them, or when the speaker knows the trans* person's gender identity but refuses to validate it.

This includes the more specific act of *deadnaming* (Turton, 2021), where the speaker uses the person's pre-transition name, pronouns, or grammatical gender. In the case of example (5), using the masculine form for a trans* woman whose transition is known constitutes an act of deadnaming, reinforcing a gender hierarchy where trans* women are deemed less *entitled to self-respect* (Seglow, 2016) than *cisgender* women (Kapusta, 2016), those whose assigned biological sex at birth aligns with their gender identity.

Linguistically, misgendering in a highly gendered language such as Italian has a particularly profound impact on trans* individuals, as the frequency of exposure to this discriminatory phenomenon is much higher compared to less gendered languages like English or Finnish. Moreover, the severity of misgendering is exacerbated by the fact that, unlike other types of racist, sexist, or homophobic insults, the use of one's deadname or grammatical gender as slander does not allow for the reversal or reappropriation of the offensive label as a means of group identification and affirmation of identity (Turton, 2021; see also Motschenbacher, 2022; Orrù, 2023 on slurs reappropriation).

It is important to stress that comparisons between more or less gendered languages do not imply any value judgement of such languages, nor do they suggest a direct causal relationship between a language's capacity to mark grammatical gender and the social inclusion or well-being of various gender identities. The phenomena of misgendering and deadnaming are pertinent to the themes explored in this work but extend beyond these linguistic instances. They also include non-linguistic acts, such as requesting documents and certificates from before the individual's transition or compelling trans* individuals to use spaces such as bathrooms or changing rooms designated for the

gender with which they do not identify (Knutson et al., 2019). Therefore, linguistic phenomena must be understood within a broader discriminatory context, which encompasses the social inclusion policies of each country and the sociocultural environment in which trans* individuals exist.

Linguistically marginalising acts of misgendering and deadnaming are particularly significant in individual psychology, especially when pre-existing psychopathological conditions are present, such as gender dysphoria (Saketopoulou, 2014), the mismatch between the individual's gender identity and biological sex. Misgendering, when co-occurring with such conditions, is classified by psychoanalyst Saketopoulou (2014) as a *massive gender trauma*, as it shares features of traumatic experiences, including anxiety disorders, emotional regulation difficulties, and dissociation. These symptoms are often subsumed under the umbrella term *minority stress*, as theorised by Meyer (2003), initially to describe the psychosocial condition of homosexual individuals and later expanded to encompass the distress experienced by trans* people. According to this theory, the stress caused by microaggressions and systemic discrimination compounds everyday stressors faced by all individuals, forcing those in discriminated minorities to expend additional effort to manage daily challenges.

Broadening the analysis of misgendering beyond its traumatic implications, McLemore (2015) asserts that when an individual is often miscategorised, their sense of belonging to the social community and their psychological need for coherence are undermined, thereby harming the process of gender identity formation and validation.

This discussion highlights an additional issue regarding the relationship between grammatical gender and gender identity in Italian: the lack of a grammatical gender value to designate non-binary individuals, whose referential gender does not align with either masculine or feminine grammatical gender (see Corona, 2022 for the use of *non-binary* in Italian). In a system like Italian, which is based on binary sex-based gender values, referring to such individuals inevitably results in frequent instances of misgendering, further marginalising these identities compared to the trans* identities already discussed. The absence of linguistic tools for designating non-binary individuals, both in nominal and pronominal domains, may prevent non-binary individuals, particularly adolescents, from

receiving external validation of their self-perception, which is crucial for perceiving reality as more predictable and for fostering authentic social interactions that enhance emotional well-being (McLemore, 2018).

The Italian linguistic system, due to its structure and the lack of a neutral grammatical gender for non-binary reference (cf. 1.5.1), cannot resolve the controversies surrounding the designation of non-binary individuals. However, the inherent structure of a natural-historical language does not exempt its speakers from the collective responsibility of finding alternative solutions for such designation, given the psychosocial weight that even unintentional misgendering practices can have on non-binary individuals. Proposals for neutralising grammatical gender in Italian, as well as suggestions for new symbols to represent non-binary identities, will be addressed in the following section.

2.2 Proposals for a gender-sensitive language in Italian

2.2.1 Feminisation strategies

Since the 1970s, feminist linguistics, particularly in the United States, has seen the emergence of a reformist movement with diverse approaches, all aimed at fostering gradual awareness (*consciousness-raising*, see Cameron, 1995) of gender discrimination through language. Moderate perspectives advocated the development of reform guidelines, while more radical views argued that the entire language was deeply embedded in patriarchal culture, rendering it incapable of representing female subjectivity (Luraghi & Olita, p. 30).

A pivotal work contributing to the early debate on the invisibility and subordination of women in language was Robin Lakoff's *Language and Woman's Place* (1973), where she asserted that women's marginal societal role was reflected in expectations about their speech and the way they were spoken about. Thus, the intersection of society and language became central to feminist

demands, first in the U.S. and later in Europe. The idea took hold that to overcome social discrimination against women, linguistic inequalities must also be addressed, both in terms of quantitative representation (how much women are visible in language) and, more crucially, the qualitative strategies used in discourse to refer to women, how they are spoken about, and how they are spoken to.

Rooted in American feminist studies of the 1970s, the concept of ‘gender’ was introduced to underscore the fundamentally social nature of the sex-based distinction, highlighting the normative and relational components of gender while rejecting biological determinism and *essentialism* (DeCecco & Elia, 1993; DeLamater & Hyde, 1998), the idea that biological influences precede cultural ones and set predetermined limits to the effects of culture, so that sex assigned at birth dictates distinct social behaviours for men and women, along with power and subordination dynamics.

Now distinct from biological sex, gender is understood by feminist scholars as a symbolic mechanism and a social construct formed by:

l’insieme dei *significati* associati al femminile o, meglio, la somma dei suoi *abiti*, cioè delle interpretazioni che nel corso della Storia hanno di volta in volta definito la sessualità e il corpo delle donne rispetto, e in contrapposizione o in opposizione a quello degli uomini. Il soggetto femminile si costituisce cioè come soggetto sessuato introiettando determinate rappresentazioni di genere, facendole proprie. Questo significa che la natura discorsiva del genere ha effetti non soltanto simbolici, ma anche materiali, concreti, incidendo nella vita delle donne come degli uomini.

(Demaria, 2006, p. 207)

[The set of *meanings* associated with the feminine, or more accurately, the sum of its *habit*, that is, the interpretations which throughout history have defined women’s sexuality and bodies in relation to, and often in opposition to, men’s. The female subject is thus constituted as a gendered being by internalising specific gender representations and making them her own. This indicates that the discursive nature of gender has not only symbolic effects but also material, tangible consequences, impacting the lives of both women and men]

Building on this new conception of feminine gender social construct in opposition to earlier essentialist descriptions, feminist academic debate has explored how semiotic practices, including linguistic ones, contribute to shaping both individual and, more importantly, collective identities. Specifically, scholars questioned how *technologies of gender* (De Lauretis, 1989) such as education, family, media, art, or literature, with their respective semiotics, contribute to the process of *engendering* female subjectivities (Demaria, 2006), namely, the construction of such social identity, and which of these semiotic and linguistic strategies might be advantageous or discriminatory for women.

Turning to linguistics, the concept of gender as a social construct was already gaining space among sociolinguistic studies. In variationist research, this view of gender was an important factor in isolating specific traits that distinguish the language of women from that of men. However, the variationist approach has since been challenged in sociolinguistics, where gender (identity) is now considered one of many sociolinguistic variables, influencing language production and reception only when combined with other factors such as age, geographic origin, and social class (Bazzanella et al., 2006). Beyond sociolinguistics, in the 1980s, social construct of gender gained prominence in other linguistic fields, particularly in efforts to develop language policies aimed at gender equality. In the Italian context, Robustelli (2012a, 2012b) highlighted the importance of such conceptualisation of gender and its relationship with language representation, as follows:

In quel periodo infatti la diffusione in Italia della nozione di gender (l'insieme di caratteristiche di tipo sociale e culturale che si accompagnano all'appartenenza all'uno o all'altro sesso), che sostituisce quella di sesso, innesca una revisione del concetto di parità fra uomini e donne: non si tratta più di cercare la parità di diritti attraverso l'omologazione della donna al paradigma socioculturale maschile ma attraverso la valorizzazione del genere femminile (fortemente discriminato), operazione che richiede il riconoscimento e l'affermazione delle differenze di genere. La consapevolezza che il linguaggio gioca un ruolo potente in questo processo lo rende subito uno dei campi privilegiati per la ricerca di stereotipi, usi sessisti, formulazioni discriminanti, ecc.

(Robustelli, 2012a, pp. 6-7)

[During this period, the introduction of the concept of gender in Italy (referring to the set of social and cultural characteristics associated with belonging to either sex), which replaced the notion of sex, triggered a reassessment of gender equality between men and women. No longer was the aim to achieve equal rights by assimilating women into the male sociocultural paradigm, but rather by valuing the feminine gender, which had been heavily discriminated against. This approach required the recognition and affirmation of gender differences. The growing awareness of language's powerful role in this process made it a key area for investigating stereotypes, sexist usage, discriminatory formulations, and similar issues].

The distinction between American and Italian feminist movements in raising linguistic awareness lies not only in timing but also in approach. In the United States, academic interest and related associations were involved early on, followed by federal efforts to create specific guidelines. In Italy, the flow was reversed (Luraghi & Olita, 2006, p. 33). Linguistic claims were never a political priority for the Italian feminist movement (Nardone, 2016). Instead, the official institutional debate began in the late 1980s with Alma Sabatini's publication of *Raccomandazioni per un uso non sessista della lingua italiana* (Recommendations for non-sexist use of the Italian language) (1986), followed by *Il sessismo nella lingua italiana* (Sexism in the Italian language) (1987), two works where Sabatini, based on the representation of women in language through media texts and job advertisements, proposes several guidelines, that will be described shortly, to solve the dissymmetry between women and men representation.

The recommendations saw limited application over time, both in institutional settings and in areas such as journalism and textbooks (Nardone, 2016; Sulis & Gheno, 2022). A notable exception was the *Codice di stile delle comunicazioni scritte ad uso delle amministrazioni pubbliche* (Style Code for Written Communications), a document published in 1993 by the Department of Public Administration which aimed to simplify administrative language and specifically dedicated one chapter (the fourth) to the discussion of non-sexist and non-discriminatory uses of language in public communications (Thornton, 2023, p. 215).

Despite the initial institutional backing, Sabatini's recommendations faced criticism and ridicule, even from academia. Scholars like Cortelazzo & Pellegrino (2003) criticised the potential prescriptiveness in administrative contexts, arguing that textual typology, particularly the need for clarity and accessibility in official writing, had been overlooked (Robustelli, 2012a). Accessibility for the general public remains a central issue in debates on gender and language, including more recent discussions on neutralisation strategies (see Chapter 3). In addition to these valid concerns about readability, the recommendations were publicly denounced as unnecessary impositions on linguistic freedom, with figures like the intellectual Pietro Citati mocking Sabatini's work as "one of the greatest comic masterpieces of Italian literature" (Sulis & Gheno, 2023, p. 159).

Academically, the first engagement with Sabatini's proposals came from Lepschy (1987), who recognised both the innovation and the difficulties of her ideas. Over the years, various theoretical and applied contributions have emerged from Italian linguists. Cecilia Robustelli, particularly since the 2000s, has extensively explored the relationship between feminine gender identity and language across different text typologies and varieties of Italian (Robustelli, 2000, 2007), clarifying the use of feminine forms of agent nouns and contributing to the *Linee guida per il linguaggio amministrativo* (Guidelines for Administrative Language) (Robustelli, 2012b; see also 2012a; 2014, 2016). Other important contributions include Cavagnoli's work on legal language (Cavagnoli, 2013; Cavagnoli & Ioriatti Ferrari, 2010), Giuliana Giusti's research (2009, 2021, 2022), applied to school and university education (Giusti, 2015, 2018), and Anna M. Thornton's theoretical studies on the gender system in Italian (Thornton, 2003, 2004, 2006, 2009), which also laid the foundation for her promotion of feminine grammatical gender in the designation of women (Thornton, 2012, 2016, 2020, 2023).

Building on the processes of subordination and invisibilisation observed in 2.1, as well as the language policy proposals from Sabatini's Recommendations (1987) to the present, the following lines will address the main strategies of feminisation employed in Italian. These include morphological, syntactic, and lexical strategies that enhance the visibility of women and reduce gender asymmetries in representation, both structurally and semantically.

Among the grammatical asymmetries, as defined by Sabatini (1987), are those in the morphosyntactic domain, notably the (self-)designation of women using the masculine grammatical gender. This use of masculine by convention becomes particularly problematic in professional contexts, where the masculine form, viewed through sociolinguistic factors of prestige and stigma (cf. 2.1.1), can further entrench inequality. The recommended strategy for feminisation at the morphological level is to always use the feminine form derived through gender motion, regardless of the masculine form's type (e.g., masculine nouns ending in *-o*, *-iere*, *-tore*, *-sore*). In forming feminine professional titles, Sabatini's recommendations advise against using the suffix *-essa*, even when there are variable options of gender motion (e.g., *avvocata/avvocatessa* 'lawyer(F).SG'; *vigile/vigilessa* 'vigilant(F).SG'; *presidente/presidentessa* 'president(F).SG') to avoid hypercharacterisation of feminine forms (Luraghi & Olita, 2006). The exception to this rule applies to widely accepted forms (e.g., *dottoressa*, 'doctor(F).SG' *professoressa* 'professor(F).SG') (cf. 1.7.3.2). This hypercharacterisation is also evident in compound forms where the word *donna* 'woman' acts as a modifier (e.g., *donna poliziotto*, *poliziotto donna* 'police-woman').

Moreover, gender motion is recommended in cases where the opposition between masculine and feminine forms results in semantic asymmetry or polarisation (e.g., *segretario/segretaria*, 'secretary(M).SG/(F).SG', cf. 2.1.1). However, the application of feminisation, understood as highlighting the feminine gender identity in text, should not be *mechanical* (Robustelli, 2012b), as this may sometimes undermine women's perceived prestige. An example is the practice, less common today than several decades ago (De Cesare, 2023), of placing a feminine definite article before a woman's surname but not before a man's (e.g., *La Meloni* vs **Il Fratoianni*), with the exception of the surnames of renowned authors or historical figures (e.g., *Il Manzoni*). This practice once again highlights sociolinguistic, as well as formal, markedness of feminine forms in contrast to the masculine equivalent, aimed at emphasising that a woman is occupying a prominent position without any underlying pragmatic necessity.

Moreover, concerning mechanical application of split form feminisation strategy, Thornton (2023, p. 232) states:

[...] va presa in considerazione l'applicazione della cosiddetta "soluzione creativa", che consiste in una riformulazione radicale di parti di un testo, in modo da eliminare il più possibile contesti in cui siano richiesti, per esempio, accordo con sintagmi nominali congiunti o altre strutture che possono infastidire o mettere in difficoltà chi scrive e chi legge.

[...] consideration should be given to applying the so-called 'creative solution,' which entails a radical rephrasing of parts of a text in order to eliminate, as much as possible, contexts that require, for instance, agreement with conjoined noun phrases or other structures that may inconvenience or challenge both the writer and the reader].

Along with this view, Pauwels' (2003, p. 555) terminological suggestion of *symmetrisation* is particularly useful, as it refers to the rebalancing of gender identities representation in language. This contrasts with the more commonly used term *feminisation*, since the mechanical application of morphological, syntactic, and lexical strategies to highlight female presence in discourse is insufficient without a thoughtful linguistic analysis that identifies the formal and sociolinguistic markedness of the feminine grammatical gender.

Further supporting this, when considering feminisation from an interlinguistic perspective, in systems with gender assignments different from Italian, such as English, the morphological marking of certain feminine forms (e.g., *actress*, *waitress*) can pose significant challenges for English-speaking women. In a linguistic system where gender is rarely morphologically marked, making women more visible through suffixation does not confer prestige or greater representation but rather reinforces social and professional distancing, as seen in Italian hypercharacterisation phenomena.

Turning now to the second case in which feminisation is applied, one of the grammatical asymmetries concerns the use of the masculine grammatical gender to designate mixed-gender groups (men and women). To enhance the visibility of women within such groups, agreement controllers

may employ mixed-gender coordinated conjuncts rather than masculine plural form by convention (cf. 1.7.4 and 2.1.2) (e.g., *i ballerini/le ballerine* vs *i ballerini* ‘the_{M.PL/F.PL} dancers_{(M).SG/(F).SG}’).

In academic literature, the strategy of feminising coordinated conjuncts with differing grammatical genders is referred to by various terms. Common international terms include *split forms* (Gabriel et al., 2018), *double forms* (Tibblin et al., 2023a; 2023b), and *gender doublets* (Nadal & Bove, 2024). Moreover, there is a distinction between syndetic coordination, also known as *full splitting* (e.g., *i camerieri e le cameriere* ‘the_{M.PL} dancers_{(M).PL} and the_{F.PL} dancers_{(F).PL}’) (Motschenbacher, 2014), and asyndetic coordination, which lacks coordinating conjunctions and involves juxtaposing elements with graphical signs such as slashes or hyphens (e.g., *i/le camerieri/cameriere* the_{M.PL/F.PL} waiters_{(M).PL/(F).PL}’) or through *abbreviated splitting* or *contracted double* (Tibblin et al., 2023a; 2023b), where only the feminine ending is indicated (e.g., *Lo/a scolaro/a* ‘the_{M.SG/F.SG} pupil_{(M).SG/F.SG}’). In terms of order of mention in split forms, placing the feminine constituent first enhances the prominence of the feminine gender identity. Indeed, Sabatini (1987, p. 108) recommended alternating the male-first and female-first order to ensure equal visibility of both referential genders. Furthermore, as discussed in 4.2.5.2, placing the feminine constituent first in coordinated conjuncts has cognitive implications, increasing the perceived proportion of women in the group in the minds of recipients (Gabriel et al., 2008; Hegarty et al., 2016; Kesebir et al., 2017; Misersky et al., 2014).

Regarding the challenges posed by agreement targets, such as adjectives and participles (Giusti, 2022, p. 10), the conventional use of the masculine grammatical gender for agreement in coordinated conjuncts can be avoided through closest conjunct agreement (cf. 2.1.2), whereby the feminine constituent is placed closer to the agreement target, triggering feminine grammatical gender agreement. For the splitting of determiners in noun phrases, particularly definite articles (e.g., *le/i* ‘the_{F.PL/M.PL}’), lexical quantifiers such as *un gruppo di* ‘a group of’ can be used as a reformulation before listing the coordinated constituents (e.g., *un gruppo di scalatori e scalatrici* ‘a group of climbers_{(M).SG} and climbers_{(F).SG}’).

As previously mentioned, the strategy of feminisation through splitting, when applied to all agreement targets, can negatively impact text economy and readability, particularly in directive texts (Robustelli, 2012a). While the use of split forms throughout the entire agreement chain may be inefficient and visually cumbersome, regarding the readability and accessibility of texts employing split forms, experimental studies are not unanimous in confirming a significant negative impact (Gygax & Gesto, 2007; Nadal & Bove, 2024) (see 3.4.2 for data on French and Spanish). As Thornton (2023, p. 232) suggests, a practical approach to improving readability involves applying splitting to entire phrases rather than splitting word by word, as in (6a) rather than (6b).

- (6) a. *Un* *professore* *o* *una* *professoressa*
 INDF.M.SG professor(M).SG or INDF.F.SG professor(F).SG
- b. *Un/a* *professore/professoressa*
 INDF.M.SG/F.SG professor(M).SG/(F).SG
- ‘A female or a male teacher’

Additionally, the issue of coordinated conjuncts can also be addressed through reformulations that avoid specifying referential gender. These strategies, which will be discussed in detail in section 2.2.2, fall under the broader category of *neutralisation* strategies.

Finally, some of the more radical proposals within European feminist linguistics advocate for the use of the feminine grammatical gender by convention, known as the *universal feminine* (Formato, 2019), as a means of resisting androcentric structures. This approach applies both to cases of gender resolution with feminine agreement targets, regardless of proximity or primacy factors (cf. 2.2.1), and to the *absolute universal feminine* (Bengoechea, 2015, pp. 6–11), where the feminine grammatical gender is used to designate unknown or indefinite referents in place of the masculine by convention.

In previous sections, semantic asymmetries have been briefly examined (cf. 2.1.1 and 2.2.2), such as the use of stereotypical adjectives, diminutives, and affectionate terms to describe women, as well as other highly discriminatory expressions, such as synecdoches that refer to a woman by a body

part (e.g., *la moretta* ‘the brunette’) or essentialist presuppositions like *donna in carriera ma con figli* ‘career woman [but] with children,’ where the implicit meaning of *but* suggests that women must choose between motherhood and a prestigious career. These issues can also be resolved through feminisation strategies, in this case understood as broader textual modifications based on a comprehensive reflection on discourse. This research is particularly relevant to linguistic studies in *Critical Discourse Analysis* (Fairclough, 1992; Flowerdew & Richardson, 2018), which address linguistic sexism by framing discriminatory structures as “involved in the larger formation of gender and sexuality discourses” (Motschenbacher, 2014, p. 258). These studies aim to deconstruct discriminatory implicits, as well as the power relations and gender subordination embedded in communicative practices repeatedly enacted within a social community, moving beyond simple language policy proposals based on structural changes.

From this perspective, this work introduces the term *gender-sensitive language* (European Institute for Gender Equality, 2024) to encompass all strategies of both feminisation and neutralisation, which will be discussed shortly. The term *sensitive* is intended to highlight the need for a thoughtful *sensitivity* to the complex relationship between gender identity and language, rather merely promoting a language policy to be applied to the whole language, independently from sociolinguistic factors such as register, extralinguistic context, text type, and power relations between speakers.

2.2.2 Neutralisation Strategies

Although grammatical and semantic asymmetries have not yet been fully resolved in Italy, as shown by recent studies (Castenetto, 2020; Cettolin, 2020; Galeandro, 2021; Robustelli, 2016, 2018), a more recent debate has begun to address the concerns of the queer and non-binary communities. The possibility of moving beyond the male/female distinction has been explored, with linguistic research aiming to *obscure* grammatical gender (Giusti, 2022) to represent all gender identities, rather than

just the female one (Comandini, 2021; Gheno, 2022a, 2022b; Giusti, 2022; Maturi, 2020a, 2020b; Sulis & Gheno, 2022). The range of morphosyntactic solutions used for this purpose is classified as *neutralisation* strategies (Comandini, 2021; Galeandro, 2021).

Returning to the concept of gender, understood as a social and cultural construct, further conceptualisations of gender have been observed, this time focusing on the individual rather than the collective dimension. In Western psychology, it has recently been recognised that an individual's genitalia do not necessarily correspond to their self-perception of masculinity or femininity (Harrison et al., 2012; Kuper et al., 2012). A distinction has therefore been made between sex, which is assigned at birth and based on external genital appearance, and gender identity, which relates to an individual's self-perception within a cultural context. Gender identity has been described by the American Psychological Association (APA, 2015, p. 834) as a “deeply felt, inherent sense of being a girl, woman, or female; a boy, man, or male; a blend of male and female; or an alternative gender”.

Two key conclusions can be drawn from this definition. First, the binary distinction between man and woman has been deemed inadequate to represent the diversity of gender identities in society, which has been reorganised as a spectrum (Monro, 2005), with man and woman as its two extremes, leaving space for various non-binary identities. Second, gender identity, whether understood as a feature of individual identity or as a social construct, is seen not as a stable trait but as a dynamic characteristic that can evolve over time (Lev, 2004).

Conceptualising gender identity as a dynamic trait across a spectrum has posed new challenges for language, distinct from those concerning female visibility. On the individual level, linguistic solutions are required, within a language policy framework, to designate non-binary individuals. On the collective level, the challenge has been framed internationally as the deconstruction of linguistic phenomena and structures that reinforce gender binarism and biological essentialism, views that deny the existence and recognition of non-binary identities in both social and political contexts.

These two challenges have been contrasted by Dembroff and Wodak (2018), who introduced the terms *Moderate Claim* and *Radical Claim* to describe two different approaches. The Moderate

Claim refers to the effort to represent a new, non-binary gender identity as a third alternative to male and female, while the Radical Claim seeks to eliminate any form of gender specification (Motschenbacher, 2014) in language.¹⁶ Before examining the neutralisation strategies available in Italian to address these two approaches, the ideological positioning behind them will be briefly outlined.

The Moderate Claim can be considered advantageous in terms of accuracy, as the link between grammatical and referential gender would be preserved, thus reducing the psychosocial consequences caused by misgendering (cf. 2.1.3). Moreover, it may be beneficial for empowerment and social agency, as introducing a non-binary gender value may promote awareness of non-binary identity in social discourse, stimulating greater reflection on gender identity as a dynamic trait. However, a single third gender value would compress the wide spectrum of non-binary identities into a single category, inadvertently reinforcing the division between what is normal (the male/female binary) and what is deviant (non-binary identity). On the other hand, explicitly specifying non-binary referential gender may, according to Dembroff and Wodak (2018, p. 392), pose a privacy concern, as *disclosing* one's gender identity could lead to insecurity, stress, and potential social stigma.

Moreover, the proliferation of numerous gender values to represent each identity on the spectrum would be unsustainable, both due to learning difficulties and the complexity of processing such distinctions in spontaneous conversation in a language like Italian, which historically only accommodates two gender values (cf. 1.3).

The Radical Claim, by contrast, has been framed as the desire to completely eradicate gender binarism from both society and language. From this perspective, grammatical gender is seen as linguistic information that often violates Grice's maxim of relevance (Grice, 1975) by being unnecessary for message comprehension (Dembroff & Wodak, 2018, p. 397; 2021). Gender

¹⁶ The two stances proposed by Dembroff and Wodak (2018) concern the philosophical debate underlying the use of *singular they* in English, either as a recognition pronoun for non-binary individuals or as a gender-neutral pronominal solution replacing the alternation of *he* or *she* in cases of full splitting. However, from a strictly philosophical perspective, Dembroff and Wodak's reflections are also useful for examining the Italian case.

specification is considered pragmatically irrelevant in referential cases, such as those previously discussed (examples 19-21 in 1.7.2), where the referent is singular, specific, but unknown (Thornton, 2023, p. 218). This occurs, for instance, with the expression *il sottoscritto* ‘the.M.SG undersigned(M).SG’ in an unfilled form, or with *qualcuno mi aiuti* ‘someone.M.SG help me’, where the masculine grammatical gender encoded in the indefinite pronoun has no bearing on the gender identity of the person providing assistance. Another example includes a single, generic referent, as in the job title *il Presidente del Consiglio* (‘the.M.SG Prime Minister(M).SG’) in Article 92 of the Italian Constitution, where grammatical gender does not necessarily correspond to a referential gender since the referent may not yet be instantiated in the communicative situation (Thornton, 2023, p. 218).

According to Dembroff and Wodak (2018, p. 395), reducing the frequency of gender encoding in language could help diminish biological essentialism and stereotypes associated with both binary and non-binary gender identities, particularly in professional contexts where stigma and prejudice against minority social groups may be decisive, such as in responses to online job adverts. Moreover, through the extended use of neutralisation, non-binary identity would lose its immediate *exotic* connotation (Dembroff & Wodak, 2018, p. 402), granting individuals the right to choose when and whether to publicly disclose their identity. However, the Radical Claim has been criticised for posing a challenge to previous feminist linguistic efforts aimed at increasing the visibility of women in language (Giusti, 2022; De Santis, 2022). Additionally, neutralisation could be problematic for the trans* community, as full recognition within the desired binary gender, whether male or female, is often crucial for identity affirmation during the transition process (cf. 2.1.3).

Regardless of whether a moderate or radical approach is adopted as the basis for neutralisation strategies, the cases in which these strategies can be applied to language are summarised in (7):

- (7) a. **Singular specific referent who identifies as non-binary**
e.g., *Vale is skinny, blonde, and identifies as genderfluid.*
- b. **Plural specific referents who identify as non-binary**
e.g., *Gio and Simo are non-binary activists of ARC young association.*

c. **Singular generic referent whose gender identity is pragmatically irrelevant**

e.g., *To become a parent takes commitment.*

e.g., *Someone has stolen my bag.*

e.g., *The new CEO will be announced tomorrow.*

d. **Plural generic referents whose gender identity is unknown or gender-mixed**

e.g., *Good morning to all of you. It's good to meet you for the first time.*

e.g., *The students are allowed to have a quick break at 11:00.*

As can be observed, some of these examples have already been mentioned in Table 4 (section 1.7.2), as cases of asymmetry between referential gender and grammatical gender, where Italian, like other Romance languages, prescribes the use of the masculine by convention. Additionally, only cases (7a) and (7b) necessarily require a neutralisation strategy, whereas in cases (7c) and (7d), strategies of feminisation may also be employed, depending on the communicative context and the ideological stance of the speaker producing the message; notably, case (7d) has been extensively discussed in relation to the splitting strategy and closest conjunct agreement.

European languages have addressed the referential cases in (7) through various approaches according to their different gender systems (see Hekanaho, 2021; Renström et al., 2023 for Finnish; Gustafsson Sendén et al., 2021; Wojahn, 2024 for Swedish; Kaplan, 2022; Knisely, 2020 for French; Papadopoulos, 2022; Silva & Soares, 2024 for Spanish; Hord, 2016 for English).

Sometimes adopted strategies were consistent with the system, offering fully grammatical solutions already present in the linguistic repertoire with different degrees of acceptability by the linguistic community and institutions. Alternatively, strategies have involved repurposing elements within the linguistic system, assigning them a new referential function, such as the use of the *singular they* in English (Ackerman, 2018; Foertsch & Gernsbacher, 1997; Stormbom, 2021), historically employed for unknown referents before the masculine was conventionally prescribed (Bodine, 1975), and now used as a personal pronoun not only for unknown referents but also for non-binary

individuals. In other instances, neutralisation strategies have been introduced entirely anew, occasionally conflicting with the linguistic system's functioning.

In the case of Italian, Gloria Comandini (2021, p. 44) suggests reusing terminology proposed in sociolinguistics by Berruto (2012), which distinguishes between neutralisation strategies belonging to *standard* and *neo-standard* Italian. These refer respectively to the set of normative and institutional uses of the language, as well as to those previously sanctioned by grammar but gradually losing their sociolinguistic markedness. Alternatively, there are sub-standard neutralisation strategies, where the term does not carry a negative moral connotation but highlights the fact that, in Berruto's (2012) diasystem, these strategies are sociolinguistically marked along the diaphasic, diastratic, and diamesic axes. Indeed, their use is predominantly restricted to informal, digital, written varieties of Italian, employed by specific speaker communities such as non-binary individuals within the LGBTQAI+ community, as well as transfeminist activist groups (Bettcher, 2017; Koyama, 2020), although numerous exceptions to this restriction now exist, as it will be discussed in 2.5.4.¹⁷

Among the standard neutralisation strategies, originally proposed by Alma Sabatini (1987) to contrast linguistic sexism and reiterated in more recent guidelines both nationally (MIUR, 2018) and internationally (European Institute for Gender Equality, 2024), are all those outlined in (8-12):¹⁸

(8) Using *epicene nouns* (Thornton, 2022, p. 20) (cf. 1.7.2) to avoid explicit specification of referential gender. For example, when employing the noun *persona*, 'person(F).SG' as the controller, the agreeing target elements assume the feminine grammatical gender, irrespective of the referential gender.

¹⁷ Transfeminism is a strand of feminism that embraces transgender and non-binary individuals. It promotes gender equality by opposing both patriarchal structures and transphobia, highlighting the experiences of transgender women. Additionally, it broadens feminist theory to explore how gender identity and expression intersect with various other forms of social inequality (Koyama, 2020).

¹⁸ Some examples in (8) are taken from Comandini (2021, p. 49).

a. *Fede è una persona non binaria*
 Fede be.PRS.IND.3SG INDF.F.SG person(F).SG non- binary.F.SG

vs. *Fede è non binaria/ non binario*
 Fede be.PRS.IND.3SG non binary.F.SG/M.SG

‘Fede is a non-binary person’

b. *I soggetti aderenti all’ abbonamento*
 DEF.M.PL subjects(M).PL join.PRS.PTCP.PL to_the.M.SG subscription(M).SG

vs. *Gli abbonati/ Le abbonate*
 DEF.M.PL subscribers(M).PL DEF.F.PL subscribers(F).PL

(9) using so-called *common gender nouns* (Thornton, 2022, p. 20) (cf. 1.7.2), also replacing gendered determiners with ungendered quantifiers. Moreover, finding modifiers with covert gender (cf. 1.1) in order to keep referential gender ambiguity in targets of agreement.¹⁹

a. *un gruppo di docenti*
 INDF.M.SG group.M.SG of professors(COM).PL

vs. *alcuni professori/ alcune professoresse*
 some.M.PL professors(M).PL some.F.PL professors(F).PL

‘a group of professors’ vs ‘some professors’

¹⁹ As will be noted, the gloss provided in the linguistic examples will include the indication of a grammatical common gender ‘COM’ for nouns such as *docente* ‘teacher’. In the previous chapter, these nouns were glossed as (M) or (F) based on the grammatical gender marked on the agreement targets, as this was useful for explaining the functioning of standard Italian. However, since the upcoming examples aim to describe the neutralisation of grammatical gender, such nouns will be glossed as ‘COM’, as they can refer to human referents regardless of their gender identity, whether known, unknown, or mixed. The same ‘COM’ indication will appear for nouns neutralised by symbols or letters (e.g., *, @, x, u), which will be discussed shortly. This is a personal choice by the author to simplify the understanding of the proposals and data that will be presented later, and in no way implies the existence of a common grammatical gender value in the Italian standard system, as already indicated in section 1.7.2.

(10) using ungendered relative or indefinite pronouns instead of gendered nouns/pronouns:

a. *chi legge*

REL.SG read.PRS.IND.3SG

vs. *i lettori/ le lettrici*

DEF.M.PL readers(M).PL DEF.F.PL readers(F).PL

‘the readers’

b. *il seminario è aperto a chiunque*

DEF.M.SG seminar(M).SG be.PRS.IND.3SG open.PST.PTCP.M.SG to everyone

vs. *il seminario è aperto a tutti/tutte*

DEF.M.SG seminal(M).SG be.PRS.IND.3SG open.PST.PTCP.M.SG to everyone(M).PL/(F).PL

‘The seminar is open to everyone’

(11) using collective nouns instead of gendered non-independent nouns (Thornton, 2022, p. 20) (cf. 1.7.2);

a. *il pubblico*

DEF.M.SG audience(M).SG

vs. *gli spettatori/ le spettatrici*

DEF.M.PL spectators(M).PL DEF.F.PL spectators(F).PL

‘the audience’ vs. ‘the spectators’

(12) using other syntactic or lexical reformulations to avoid referential gender specification

a. *la comunità student-esc-a*

DEF.F.SG community(F).SG student-ADJ-F.SG

vs. *gli studenti/ le studentesse*

DEF.M.PL students(M).PL DEF.F.PL students(F).PL

‘the students’ community’ vs. ‘the students’

Since no third-person singular pronouns with a common or neutral grammatical gender exist in Italian, D’Achille (2021b) proposes replacing such pronouns (*lui/lei* ‘he/she’) with the repetition of the proper noun in an abbreviated form, as shown in (8a). This approach avoids, in very few cases, disclosing the referential gender. Regarding pronouns, as mentioned in 1.7.4, the reduction of the pronominal system in neo-standard Italian (Andorno, 2006), which involves the overextended use of the masculine oblique pronoun *gli* for female referents in place of *le*, could, according to D’Achille (2021), allow *gli* to be used as a neutralisation strategy. However, as it is formally masculine, the use of the masculine grammatical gender as a neutralisation strategy does not appear to be effective cognitively, as speakers automatically infer a masculine referential gender (Thornton, 2023, pp. 226-227), as discussed in Chapters 3 and 4.

Turning to sub-standard strategies not accepted by Italian grammar, these involve internal modifications to single words. From this point forward, such modifications will be called Morphological Gender Neutralisation Strategies (MGNSs). MGNSs refer to the set of letters and symbols used to modify overt grammatical gender markers (cf. 1.1) of the controller of agreement and all dependent target elements. Key examples include the letters *x*, *y*, *u* (e.g., *ballerinu*, ‘dancer’), and symbols such as ***, *@*, and *ə* (*ballerin** ‘dancer’), the latter of which has played a significant role in the Italian debate (cf. 2.3).²⁰ Based on the relationship between grammatical and referential gender outlined in Figure 4 (cf. 1.7.2), it can be inferred that MGNSs would not alter epicene, common gender, or independent nouns. For instance, common gender nouns, due to their covert gender, are already appropriate for referring to non-binary individuals. In such cases, an MGNS would only be required to neutralise overtly gendered target elements in agreement with the controller (e.g., *Alex è un* cantante italian** ‘Alex is an.NB.SG ItalianNB.SG singer(NB).SG’). In contrast, independent nouns (e.g., *madre/padre* ‘mother/father’) appear semantically restricted to male or female individuals, as they lexically encode gender, and therefore do not allow for morphological neutralisation.

²⁰ The examples in this sentence have not been glossed in relation to the gender value of MGNSs, as this will be discussed in the following lines. However, in further examples the gloss ‘NB’ will indicate the gender value ‘non-binary’. Such gender value will be explicitly glossed in each example that contains a clear reference to a person who identifies with non-binary gender identity.

Nevertheless, as discussed in 2.5.3.1, there are notable examples of MGNS usage within this type of nouns.

The schwa symbol ə, already used in the International Phonetic Alphabet (IPA) to represent the mid-central vowel, has gained significant popularity in the Italian debate (cf. 2.3). Unlike other symbols used over the years as MGNSs within transfeminist activism, the schwa has received public endorsement. The proposal dates to 2015 with the creation of the website *italianoinclusivo.it* by the LGBTQAI+ activist Luca Boschetto and was later adapted in 2020 by the sociolinguist Vera Gheno (2020b), with some modifications. The main difference between these proposals lies in how number is encoded. On the one hand, Boschetto (2020) suggests using two distinct symbols for singular and plural, which he calls *short* and *long* schwa, ə/3 (Figure 8, respectively the red and the blue circles), though 3 vowel cannot be considered a schwa, nor vowel length is a distinctive feature in Italian phonology (Giusti, 2022). On the other hand, Gheno (2022b) proposes using a single symbol, since number information can be easily inferred through syntactic agreement, particularly by the verb (e.g., *lə maestrə sta arrivando* ‘the teacher is coming’ vs. *ə maestrə stanno arrivando* ‘the teachers are coming’).

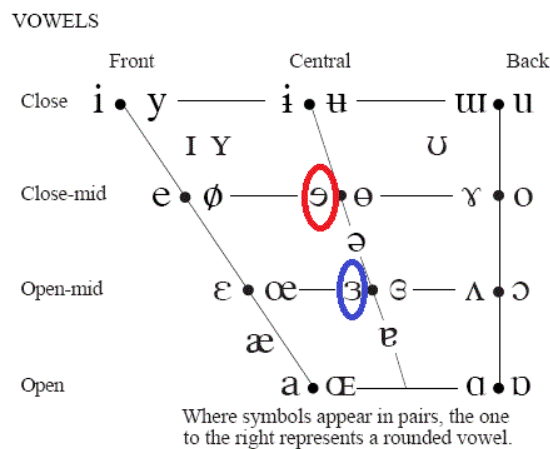


Figure 8. Symbols for vowels in the International Phonetic Alphabet (adapted from IPA official website)²¹

²¹ <https://www.internationalphoneticassociation.org/content/ipa-vowels> (accessed 25.10.2024)

Regarding the use of schwa to neutralise determiners' grammatical gender, Table 5 contrasts the distinct proposals made by activist Luca Boschetto (2020) on his blog *Italianoinclusivo* and sociolinguist Vera Gheno (2020a).²²

Table 5. Boschetto's and Gheno's proposals of neutralization of determiners

Number	Articles		Prepositions+article	
	Boschetto	Gheno	Boschetto	Gheno
Singular	<i>lə; unə</i>		<i>dellə; allə; dallə; sullə; nellə; collə</i>	
	<i>lə; unə</i>		<i>dellə</i>	
Plural	<i>lɜ</i>	<i>ə</i>	<i>dellɜ; allɜ;</i>	<i>deə; aə;</i>
			<i>dallɜ; sullɜ;</i>	<i>daə; suə; neə;</i>
			<i>nellɜ; collɜ</i>	<i>coə</i>

Aside from the issue of number, the *ə* proposals focused mainly on addressing practical problems such as how to apply the symbol to words where grammatical gender neutralisation is not straightforward, such as with definite articles, articulated prepositions, or agent nouns formed with the suffixes *-tore/-trice* (13). In such cases, alterations like *lavoratorə* or *lavoratricə* (example 13c) neutralise the final vowel, which conveys number information, without fully neutralising the grammatical gender conveyed by the suffix, as illustrated in the segmentation in example (13).²³

²² These proposals were made by Vera Gheno on her public Facebook page: <https://www.facebook.com/photo/?fbid=10159924131355915&set=a.301450905914> (Accessed 04.10.2024).

²³ Only example (13) will provide morpheme-by-morpheme glossing, in order to highlight gendered suffixes.

- (13) a. *lavora-tor-e* *lavora-tor-i*
work-er(M)-SG work-er(M)-PL
- b. *lavora-tric-e* *lavora-tric-i*
work-er(F)-SG work-er(F)-PL
- c. *lavora-tor-ə* *lavora-tric-ə*
work-er(M)-(COM).SG?PL? **work-er(F)-(COM).SG?PL?**
- ‘worker(-s)’

Italian linguists hold differing opinions on this issue. Gheno (Ghenò, 2021, p. 23) suggests that deverbal agent nouns ending in *-tore/-trice* could be neutralised as *-torə*, given that some feminine nouns present the alternatives in *-trice* and *-tora* (cf. 1.7.3). In line with this argument, Thornton (2004, pp. 222–224; 2022, p. 39) acknowledges that while this may be a plausible solution, according to the Dictionary Nuovo De Mauro, only 12 nouns exhibit a feminine form in *-tora*, and these forms are primarily used in the regional Italian spoken in Tuscany; moreover, the feminine formation in *-ora* usually occurs with roots that do not contain *-t-*, such as in *assessore/assessora* ‘councillor(M).SG/(F).SG’ (Giusti, 2022, p. 15). Gheno extends the same principle to nouns ending in *-sore*, proposing their neutralisation as *-sorə* (e.g., *assessorə* ‘councillor(COM).SG’). However, Giusti contends that suffixes as *-torə* and *-sorə* could be perceived as a ‘masked masculine forms’, further erasing the visibility of women (cf. 2.1.2).

The debate around masked masculine and feminine forms also touches on issues of phonetics and phonology (Giusti, 2022). This is evident with non-independent symmetric nouns (Thornton, 2022, p. 20) such as *amica/amico* ‘friend(F).SG/(M).SG’, where the plural forms differ for phonological reasons (e.g., *amiche/amici* ‘friends(F).PL/(M).PL’). The velar consonant [k] present in the singular forms *ami[k]a/ami[k]o* undergoes palatalisation in the masculine plural *ami[tʃ]i* but not in the feminine plural *ami[k]e*. This occurs because the close-front vowel [i] sometimes triggers

palatalisation. Since schwa [ə] is a mid-central vowel, it should technically not cause palatalisation, meaning that the gender-sensitive plural forms with schwa should be written as *amicə* and pronounced as *ami[k]ə* (Giusti 2022). However, the phonological status of schwa as a MGNS remains ambiguous. For instance, in Gheno (2019, p. 185), the form *collegħə* ‘co-workers(COM).PL’ is found instead of *collegə*, indicating that /ə/ is perceived as a front vowel despite being phonetically central. Given this lack of a consistent phonological interpretation of [ə], linguists have debated to what extent forms like *amicə* or *amichə* can be considered gender-sensitive, rather than ‘masked masculine or feminine forms’ (Giusti 2022; Thornton 2022).

Great ambiguity has also arisen regarding the gender value associated with -ə. Pietro Maturi (2020a) suggests an upstream reflection on whether MGNSs should hold a categorising or decategorising function. This raises the question of whether MGNSs should open a third category for non-binary individuals, coexisting with the two binary genders, masculine and feminine (Moderate Claim), or whether they should obscure grammatical gender entirely, removing any grammatical gender encoding defining human beings (Radical Claim). Structurally, implementing the Radical Claim would involve a typologically unusual modification of the Italian gender system (Thornton, 2022, p. 46) (Table 6). Currently, Italian has two grammatical gender values (F/M) in the singular with parallel ones in the plural, used for both animate and inanimate entities. If the use of schwa were incorporated into the system for designating humans, as proposed under the Radical Claim, this would reduce the F/M values to a single gender, both grammatically and referentially. However, for inanimate nouns, which are excluded from gender-sensitive proposals for obvious reasons, the F/M gender distinction would remain.

Ora, un sistema in cui si abbia un’opposizione tra due valori di genere nei nomi con referenti situati nei gradi più bassi della gerarchia di animatezza (Comrie 1983: 253), ma nessuna opposizione nei nomi con referenti situati ai gradi più alti di tale gerarchia (cioè pronomi personali e nomi designanti esseri umani) appare tipologicamente piuttosto anomalo. (Thornton, 2022, p. 46)

[A system in which there is a gender value opposition in nouns referring to entities lower on the animacy hierarchy (Comrie 1983: 253), but no opposition in nouns referring to those

higher on the hierarchy (i.e., personal pronouns and nouns denoting human beings), appears to be typologically rather anomalous].

Table 6. Reorganisation of the Italian gender system according to radical gender neutralisation proposals.

ANIMACY		NUMBER	
inanimates	singular	plural	
	feminine	feminine	
	e.g., <i>casa</i> ‘house(F).SG’	e.g., <i>case</i> ‘houses(F).PL’	
	masculine	masculine	
	e.g., <i>tavolo</i> ‘table(M).SG’	e.g., <i>tavoli</i> ‘tables(M).PL’	
animates	Common		
(humans)	e.g., <i>maestra</i> ‘teacher(COM).SG/(COM).PL’		
(animals)	feminine	feminine	
	e.g., <i>gatta</i> ‘cat(F).SG’	e.g., <i>gatte</i> ‘cat(F).PL’	
	masculine	masculine	
	e.g., <i>gatto</i> ‘cat(M).SG’	e.g., <i>gatti</i> ‘cat(M).PL’	

Additionally, the loss of number information resulting from the use of MGNSs (not only schwa), at least when observing words in isolation outside of agreement contexts, leads to a further reduction, this time causing a convergence into a single gender value for both singular and plural (Table 6). Unlike the cases of gender convergence, such as that observed in German (cf. 1.3), this (anomalous) convergence applies to the parameter of animacy. The anomaly does not end here, as, although not specified in publications concerning MGNS proposals, the sex-based grammatical gender of certain animals (e.g., *gatto/gatta* ‘cat(M).SG/(F).SG’) would have no social rationale for being neutralised, thus preserving the binary distinction in marking. In such circumstances, the Italian gender system would need to introduce an additional distinction between the *sex-based* semantic motivation for animate beings, in this case animals, and the *gender-based* motivation for humans (Table 6).

As reported by Thornton's (2022) analysis on the use of schwa in written Italian as used by the publishing house effequ, as well as in the present work (see 2.5.2), there is currently a fluctuation between the use of MGNSs to designate a grammatical and referential common gender and cases where they are used to refer to specific non-binary individuals. Notably, the latter represents the first chronological application of the symbol by the publisher, which began using the schwa symbol for indefinite or unknown individuals later (Thornton, 2022, p. 33). By adopting the schwa exclusively to designate non-binary individuals, the Italian gender system would undergo a less profound modification than that shown in Table 6. In this case, a third gender value for animate humans (non-binary, NB) would simply be added to the binary F/M values for both singular and plural in inanimate nouns, with homographic or distinct forms for singular and plural, depending on whether Gheno's or Boschetto's proposal is adopted. Since most symbols used as MGNSs do not inflect for number, this would place the nouns modified by these symbols into Italian inflectional class VI (cf. Table 2, Chapter 1), which includes invariable nouns such as *città* 'city(F).SG/(F).PL'.

As can be inferred from this initial overview of the standard and substandard neutralisation strategies available in Italian, the application of these proposals is not straightforward and cannot be mechanical in any case. Indeed, the standard neutralisation proposals require a metalinguistic reflection that cannot be assumed for every speaker of Italian. The substandard strategies, on the other hand, present significant structural limitations (cf. 2.3). However, these limitations have not prevented the spontaneous spread of MGNSs in certain communicative practices within transfeminist communities. Before looking at the concrete use of sub-standard neutralisation strategies in Italian, the next section will briefly outline the main arguments for and against the use of such strategies (Safina, 2023, pp. 339-344), as they could be useful in the light of the linguistic studies that will be proposed in this chapter.

2.3 The polarised debate on sub-standard gender neutralisation strategies in Italian

The MGNSs proposal have generated a heated debate, which has increasingly polarised into positions either for or against them, as it happened in similar ways in other European countries (Coady, 2024, for French; Meuleneers, 2024; Pfalzgraf, 2024, for German; Szajbel-Keck, 2024, for Polish; Wojahn, 2024, for Swedish). As Robustelli (2021a) points out, the primary factor contributing to such polarisation in both academic and media discourse is the lack of dialogue between the analytical methodologies of traditional linguistics and those of (trans)feminist linguistics. Indeed, a close examination of both sides reveals a significant heterogeneity in the motivations behind their positions, but more importantly, in the ways in which these positions are expressed. In this regard, the following lines highlight only a few key aspects of the debate, particularly those that most clearly illustrate the polarisation.

The more moderate views, both for and against the use of MGNSs, first structure their argumentation around the enumeration of the advantages or limitations that such proposals present concerning the current functioning of the Italian language. The limitations can be summarised as it follows:²⁴

Phonetic and phonological limitations

- Unpronounceability of MGNSs represented by symbols (@; _; *);
- Possible assimilation of standard Italian pronunciation to that of central and southern regions, both in the use of the IPA symbol for the mid-central vowel [ə] and the letter *u* (e.g., central and southern dialect varieties, as well as Sardinian varieties, where the use of *u* is pervasive);
- Non-existence of /ə/ in the phonological inventory of standard Italian;

²⁴ For a detailed analysis, refer to Giusti (2022) for phonetic and phonological aspects, Thornton (2022) for typological and morphosyntactic issues, and Gheno (2022a, 2022b) and De Santis (2022) for textual and extratextual limitations, particularly with reference to the educational system. Some aspects related to phonology and morphosyntax will be further discussed in Study 1 and Study 2.

- Presence of the [ə] sound in stressed syllables (e.g. third-person singular neopronoun *l'ai*, '[singular] they'), which is typologically uncommon.

Morphological, syntactic, and textual limitations

- Absence of the neuter grammatical gender in standard Italian (cf. 1.5.2);
- High stability of Italian orthography and morphology, making it extremely difficult to introduce changes, except in the case of pronouns, which are more prone to variation (1.7.4 and 2.2.2);
- Loss of number information, thus automatic difficulty in identifying the referent in long chains of anaphoric references; difficulty in establishing agreement between the controller and the other elements related to the noun phrase (see further discussion in 2.3.3);
- Limitations in syntactic phonetics (issues in selecting euphonious variants; the elision or truncation of articles and adjectives is also governed by the grammatical gender of the noun).

Extralinguistic limitations

- Possible difficulty in producing italics and capital letters in handwritten texts;
- Possible reading challenges for individuals with dyslexia, dysgraphia, and neurodivergence;
- Inability of vocal synthesisers to interpret symbols, posing challenges for blind or visually impaired individuals;
- Possible difficulty in processing information for elderly people, immigrants, or those with low levels of education.

As it emerges from this (non-exhaustive) list, the limitations are sometimes introduced by a *denial of existence* (e.g., the absence of the neuter gender in standard Italian, the lack of the schwa

symbol in the phonological repertoire, and so on). With some exceptions, this denial does not appear to involve the search for further solutions to the issue of grammatical gender neutralisation, at least on a morphological level. Indeed, Paolo D'Achille (2021) suggests “calmly accepting” the impossibility of seeking new grammatical gender values; similarly, De Santis (2022) for the Special issue of Treccani Online *Lingua, grammatica e società: senza, con e oltre lo schwa*, concludes her argument on the schwa proposal by titling the final section “To end it (once and for all).”²⁵

This explicit denial of the existence of innovative elements within the system is sometimes accompanied by an implicit denial, this time referring to the minority group originally designated by the innovation: non-binary people, who generally occupy a very limited space in the argumentation against MGNSs. Sometimes, they are only briefly mentioned, or, as in the *Petition against the use of ə* promoted by Massimo Arcangeli (2022b) on Change.org, non-binary people are not mentioned at all.

Moreover, confusion has also emerged between *non-binary* people and *intersex* or *hermaphroditic* people (Robustelli, 2021b), where the former term refers to gender identity and the latter to biological sex, which is irrelevant in promoting gender-sensitive language (cf. 2.1.1). Furthermore, non-binary identity is sometimes presented obliquely. In supporters' opinions, verbs such as *being*, *identifying*, *adopting* (Acanfora, 2022; Gheno, 2022a; Maturi, 2020a) can be found, while in the opposing contributions, references are made to “a generation that considers it appropriate to ask and specify the desired pronoun” (De Santis, 2022), or individuals are described as “discovering themselves as people with (lit. Italian, *portatori di* ‘carriers of’) fluctuating identity” (Arcangeli, 2022a), where even the choice of *carriers* could be problematic, given its frequent use in medical contexts (e.g., *portatori di handicap* ‘people with disability’).²⁶

²⁵ All quotations from Italian authors will be added to the text directly in English. Sometimes the page number is missing in Author-Year reference since it was an online publication (websites or ePub files).

²⁶ The entry for *portatore* in the Treccani online dictionary defines it as both an adjective and a noun derived from the Latin *portator/-oris* ‘carrier(M).SG’. [...] In medical language, the term describes “an individual affected by a pathological condition, such as someone suffering from heart disease, a duodenal ulcer, etc”. From this, the now common expression *portatore di handicap* emerged, referring to a person with a physical or mental impairment.

More radical attacks are directed to MGNSs supporters. These include ridicule and trivialisation (Wojahn, 2024), for example: “now, to avoid discriminating against them, do we also call out numbers? What if the semicolon takes to the streets?” (Arcangeli, 2022a); and even insults and personal attacks, primarily focused on professional discredit, generically described as *linguistic populism* (De Santis, 2022) or explicitly conveyed through rhetorical tools such as lists with ascending climaxes (Barotto & Zanchi, 2023), as seen in Arcangeli (2022a): “Experts in name only, influencers by profession, (socio)linguists in their own way,” or “a disjointed army of bloggers, activists, radical chic people, influencers, social media hangers-on, and amateurish dabblers [...] obsessed with attention-seeking.”

The portrayal of supporters’ opinion as fashionable, metonymically confined to *private salons* or quantified as an *intellectual niche* compared to the vastness of the entire speaking community (Moro, 2022), contrasts with the final strategy of representation, that of a power group or subversive organisation. Again, in Arcangeli (2022a), the reference is expressed in inflammatory tones, for example, “inclusivist Taliban,” and “inclusive vaccination’s no-passers”; all lexical choices are strongly and finely connoted in a negative sense.

The representation of the proposal as a threat becomes even more evident in the predication. The MGNSs proposal is not described as a proposal, but as a demand from those “in the service of an ideology” (D’Achille, 2021) who seek to impose their law, sometimes depicted as the *will of an individual* (De Santis, 2022); there is also talk of the “dictatorship of the sign that punishes anyone who tries to evade it” (Arcangeli, 2022b). As can be observed from the citation of Arcangeli (2022b), while supporters are sometimes described as a minority intellectual niche, at other times they are portrayed, through a reversal strategy (Van Dijk, 2004), as a threatening power group under whose influence the entire Italian-speaking community loses agency and “succumbs to the dominance of the few, bending to obedience” (Arcangeli, 2022b).

Full description can be accessed at the following link: <https://www.treccani.it/vocabolario/portatore>) (accessed 04.10.2024).

The most radical argument is built upon the warning of an *out-of-control proliferation* (Arcangeli, 2022a), of a *dangerous drift* aimed at “erasing centuries of linguistic history and evolution” (Arcangeli, 2022b). The audience is called upon to “censor without mercy,” to “raise barricades and raise them now” (Arcangeli, 2022a), in order to restore to the *truly excluded* minorities, identified as the elderly, children, the disabled, and sometimes even migrants, the “dream of a common language” (De Santis, 2022), a historical-natural language with the memory and identity of a people, as opposed to an *artificially engineered language* (Moro, 2022) that introduces post-humanism.

The supporters’ stance, on the other hand, focuses on strengthening the *us* perspective in the ideological dichotomy *us/them* (Van Dijk, 2004), but also opens a third position: the others. The opposing side is promptly described as comprising “people well-versed in linguistics” (Acanfora, 2022), whose arguments are “scientifically impeccable” (Gheno, 2022a). Considerable space is devoted to the description of non-binary identity and the linguistic demands of transfeminist movements.

Federica Formato (2022), studying the case of the Italian language, interpreted the use of MGNS on Twitter as extratextual references that immediately position the text’s producer in explicit alliance with the LGBTQIA+ movement, drawing on the four modes of allyship proposed in social psychology by Radke et al. (2020, p. 292) to describe the motivations that drive individuals from privileged social groups to act in support of disadvantaged social groups.²⁷ This aspect is first emphasised in the positioning of those who express pro-MGNS opinions, with explicit references such as “I, as an enthusiastic member of the LGBTQIA+ community” (Gheno, 2022b), or “as someone belonging to at least a couple of minority categories” (Acanfora, 2022).

According to this model, allyship may be motivated by a *focus on the subordinate status of the minority group* in question; indeed, with regard to MGNS, the goal of “creating a more fertile

²⁷ According to some social psychologists (Radke et al., 2020), allyship may stem from four distinct social motivations. Specifically, the authors suggest that advantaged group members may choose to support minority social and political groups (a) with the goal of improving the status of the disadvantaged group, (b) provided that it does not diminish their own group’s standing, (c) to fulfill personal needs, or (d) because such support aligns with their moral convictions.

communal environment for the affirmation of queer subjectivities” (Ghen0 2022a) is often made explicit. Secondly, allyship can provide *personal benefits or support for other minority groups* to which one belongs. Frequently, references are made to linguistic battles for female visibility, as well as to recent efforts to raise awareness about more accurate language use concerning neurodivergence (Acanfora 2022; Ghen0 2022a, 2022b). In this sense, the debate surrounding MGNSs becomes just one of many discussions on language and inclusion, contributing to the broader promotion of related causes. Finally, according to Radke et al. (2020), allyship can be motivated by *moral reasons*. When non-binary individuals are not explicitly named as the target group of the proposed innovations, the discourse often includes periphrasis introduced by a general reference, sometimes *politically loaded*, as in “those who have always lingered on the social and linguistic margins of our world” (Ghen0 2022a), or less pointed expressions like “those who use the language every day”. The latter phrase is noteworthy because it suggests an urgent, widespread, and shared linguistic and social need, further supported by references to *broad sectors of society* (Ghen0, 2022a), or by the use of indefinite quantifiers such as *molte* or *many individuals* (Acanfora 2022), as well as by repeated allusions to the *significant international resonance* of the issue. It is thus moral motivation that portrays MGNSs as the only solution addressing the need for non-binary individuals to feel represented. Although, as mentioned earlier, MGNS are not used exclusively to refer to this social minority but also in a generic sense. The minimal attention given to the minority group by opponents is seized upon by supporters as an open sign of indifference towards certain social diversities (Acanfora, 2022; Manera, 2021), to which they respond with a firm “I Care” (Ghen0, 2022a, 403), citing Don Lorenzo Milani, and framing inclusive language as an “act of care, an expression of love”; a means of achieving peaceful “coexistence of differences” (Acanfora, 2021, 2022; Ghen0, 2022a, 2022b).²⁸

Among the arguments supporting MGNS, the *performativity of language* (Bianchi, 2022; Austin, [1962] 1975; Bianchi, 2024, in press) is often cited, particularly regarding that of grammatical gender in language (Manera, 2021). This idea represents one of the most radical aspects of the

²⁸ Lorenzo Milani was a priest and educator dedicated to caring for the weakest, who greatly inspired Italian school pedagogy with regard to language issues.

argument, since it attributes to morphology the same role in influencing and representing reality and society that has traditionally been reserved for lexicon and discourse. As for opponents, call to actions can be found even among those who favour MGNS. As Manera suggests, we should “speak as an authentic subjectivity, [...] showing our perspective to those who listen to us, displacing that traditionally considered– mistakenly– *neutral and universal* ego” (Manera 2021, 58).

However, the more radical positions are promptly tempered by the fact that the use of MGNSs has always been promoted as an experiment, a temporary solution among many, a “homemade tool” (Gheno, 2022a), which does not aim for universality or for changing the entire language. Specifically, in Gheno’s (2022a) proposal, the idea is to use the schwa sparingly, acknowledging its existence but advising it be avoided, with preference given to alternatives already present within the language system. On this point, Robustelli (2021a) highlights that proposing such a limited or even avoidant use could undermine the profound identity and political significance that MGNS has had within transfeminist movements long before the issue gained the attention of journalism or academia.

Since the debate has focused only on the prescriptivist perspective of MGNSs, leaving a lack, as far as the author is aware, of data on the concrete use that speakers make of MGNSs in Italian and on the motivations that drive speakers to employ such strategies, the following sections propose considerations in the light of the present debate but based on linguistic data.

2.4. Study 1: knowledge, usage, and attitudes towards Italian MGNSs elicited through a questionnaire

2.4.1 Methodology

The first study involved a questionnaire designed to investigate the use, prevalence, and attitudes towards MGNSs among speakers with a certain degree of familiarity with gender-sensitive language. Its purpose was to identify concrete linguistic challenges and the social needs of those

already engaged with these strategies. The administration of a questionnaire made it possible to investigate the speakers' controlled linguistic use, i.e. production based on explicit metalinguistic reflection. Uncontrolled use will instead be investigated by means of a corpus-based analysis in Study 2 (cf. 2.5).

The questionnaire was divided into five parts (Appendix A): the first asked for sociodemographic data, including age, educational background, geographic origin, and gender identity. The second one explored when, where, and how participants had first encountered MGNS. The third looked at the social and linguistic contexts in which MGNS are currently employed. The fourth section asked participants to assess the acceptability of MGNS in certain morphosyntactic contexts where neutralisation is ambiguous or problematic. The fifth examined participants' social and linguistic goals in using MGNS.

Participants' consent was explicitly asked before starting the questionnaire by an item of the Google Module. The questionnaire was distributed online between November 2022 and March 2023, receiving 314 responses, of which 243 were accepted, with incomplete responses discarded.

According to Part 1, the sample comprised 314 respondents, primarily Italian speakers who declared native or at least intermediate level of proficiency in Italian, acknowledged for their engagement in the topic. The respondents ranged in age from 18 to 66 years, with 60% being under 30 years old, and 36% falling within the 26-30 age bracket. In terms of educational background, participants varied from middle school graduates to those holding PhDs, with 37% holding Master's degrees and 53% having studied Humanities. Geographically, participants originated from various regions, including Northern, Southern, and Central Italy, as well as from foreign countries, with 40% being from Southern Italy. Regarding current domicile, 34% resided in Northern Italy, 32% in the South, 18% in Central Italy, and 16% abroad. Gender distribution indicated an unbalanced representation, with 50% identifying as female, 25% as male, and 25% as non-binary.

2.4.2 Results: reception and diffusion of MGNSs

The results will be displayed in an order useful for explanation rather than the actual order in which the questions were presented to the participants. The questionnaire responses were not analysed with statistical models; however, some quantitative measurements will be provided to the reader in order to describe the main trends.

Part 2 asked participants, through multiple choice questions, to indicate where and when they first encountered gender-sensitive language. Then, it asked them how often they use such language in their daily lives. In reviewing the results from Part 2, concerning initial exposure to MGNSs (Figure 9), participants reported encountering these symbols as early as 2007, with 70% indicating first contact before 2020. This contradicts claims made by opponents that MGNSs only emerged in the past three years due to top-down imposition by intellectuals in Italy (Arcangeli, 2022b; Moro, 2022). The second chart confirms this trend (Figure 10), showing that first contact with MGNSs occurred primarily through informal channels such as social media, transfeminist activism, or friendships.

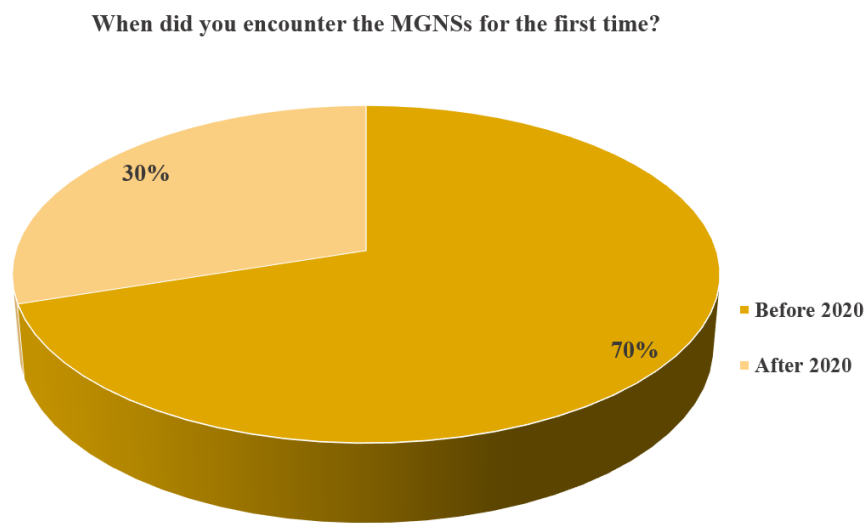


Figure 9. Time interval of the first contact with MGNSs

Where did you encounter the MGNSs for the first time?

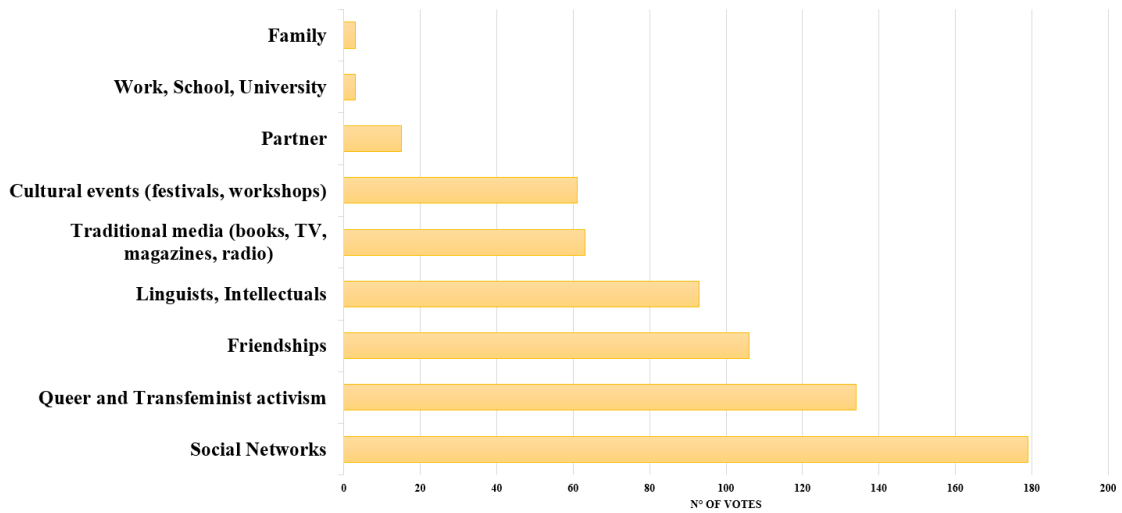


Figure 10. Social context of the first contact with MGNSs

As for participants' preferences regarding specific symbols used as MGNS (Figure 11), while nine different symbols were identified (including the deletion of the gender and number morpheme, the third most popular strategy), the asterisk and schwa were the most preferred. Since subsequent sections of the questionnaire required familiarity with MGNS, respondents who indicated that they never used gender-sensitive language were excluded from the analysis (Figure 12).

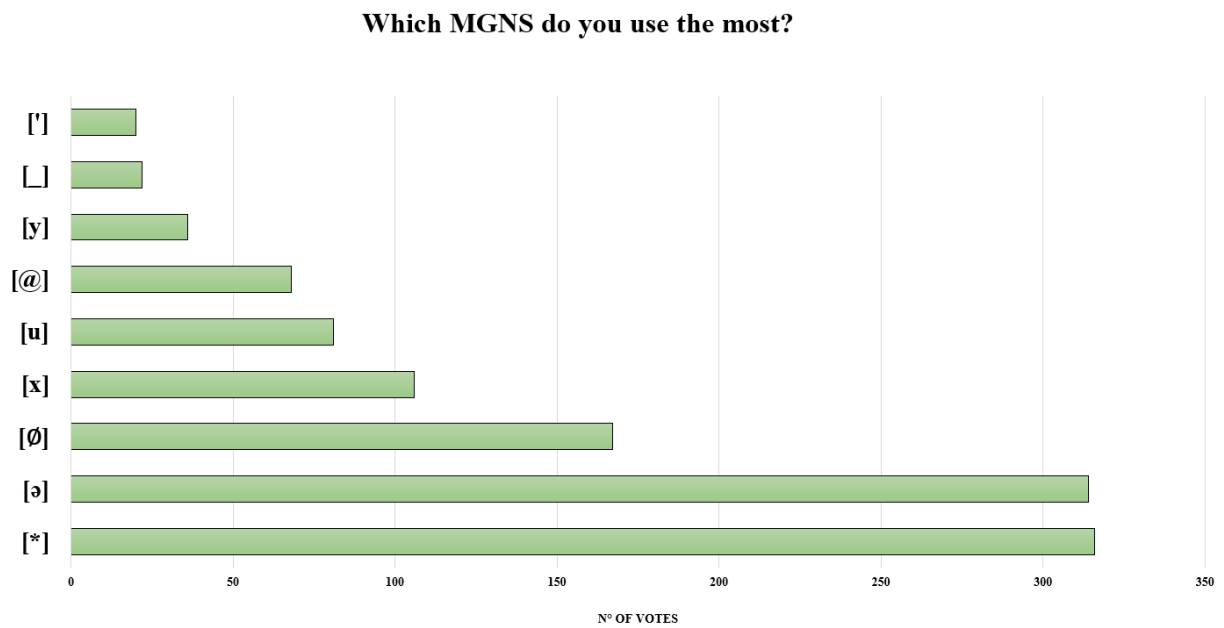


Figure 11. Preference for symbols or letters among the different MGNSs

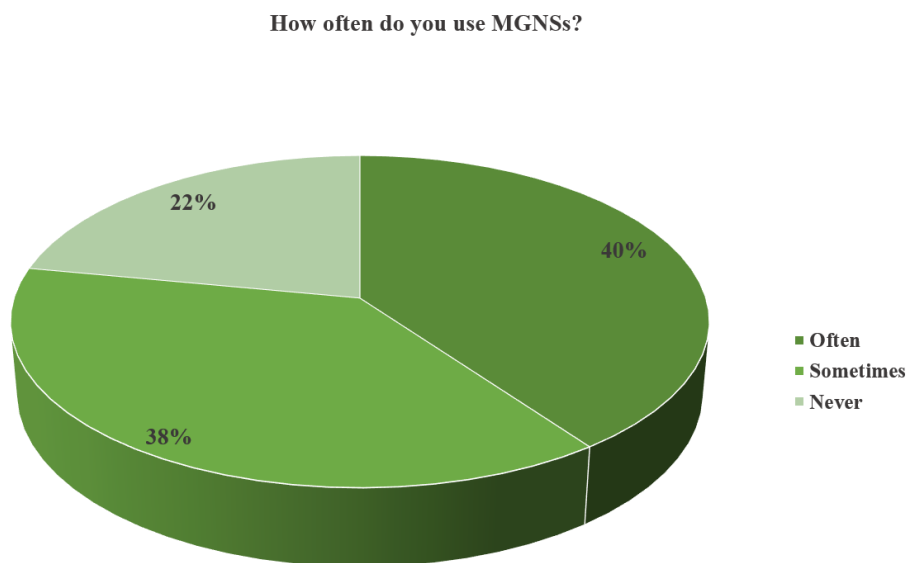


Figure 12. Frequency of MGNSs usage in everyday life

In Part 5 of the questionnaire, participants were asked to indicate their agreement or disagreement (using a five-point Likert scale, 1 = strongly disagree, 5 = strongly agree) with various sentences regarding MGNS. For each question, both the mode and the percentage of responses at the most frequently selected level were recorded.

Particularly, participants were asked a series of questions to gauge their agreement with *Moderate and Radical Claims* on the social objectives of MGNS, as described by Dembroff and Wodak (2018; cf. 2.2.2). The highest level of agreement was with the moderate opinion, which advocates recognising a third, non-binary gender identity without altering the men/women binary (mode = 5; 47% of responses). In contrast, the more radical position, advocating for the deconstruction of the gender binary in society, received slightly less support (mode = 4; 30% of responses).

To assess linguistic objectives, participants were asked to indicate the referential contexts in which they most agreed with using MGNSs, based on the referential contexts listed in (7) in 2.2.2. The participants' preferences on referential contexts reflected their social objectives, since the highest percentage of strong agreement was observed for the use of MGNS when referring to specifically non-binary individuals (e.g. *Alex è bell**, 'Alex is cool.NB.SG') (mode = 5; 49% of responses).

. Agreement declined for contexts involving mixed-gender groups (e.g. *tutt* l* ballerín**, 'all.COM.SG the.COM.SG dancers(COM).SG') (mode = 4; 39% of responses). There was even less agreement regarding the hypothetical use of MGNS in a more generalised, non-referential manner, such as in contexts that obscure grammatical gender marking for unknown, indefinite individuals or professional roles (e.g. *elezioni de* sindac* di Roma*, 'elections [of the(COM).SG] mayor(COM).SG of Rome') (mode = 4; 38% of responses).

It is important to acknowledge that the unsupervised online submission of the questionnaire may have resulted in less reliable responses (Kim et al., 2023). As the data suggest, none of the questions elicited widespread disagreement. Although participants were explicitly asked to consider only their *primary* social and linguistic objectives, they generally expressed favourable opinions

towards all the proposed objectives. This ambivalence may be attributed to the evolving and provisional nature of MGNS usage in contemporary Italian (Ghen0 2022a; 2022b; Comandini 2021).

Moreover, it is noteworthy that the distribution of preferences followed a grammatical gradient concerning linguistic objectives. While all referential uses of MGNS are strongly sanctioned by the Italian grammar (cf. 2.2.2 and 2.3), it seems more plausible to anticipate an adaptation of the system to accommodate a new non-binary grammatical gender, limited to specific referential contexts, rather than a wholesale removal of grammatical gender encoding across the entire language.

2.4.3 Results: sociolinguistic aspects of MGNS usage

In Part 3 of the questionnaire, participants were asked to indicate their preferences through multiple-choice questions regarding the linguistic registers and social contexts in which they use MGNSs most frequently.

Regarding linguistic registers (Figure 13), the bar chart displays participants' current usage, in green, and their expected future usage, in blue. The eight categories in the bar chart are derived from the intersection of diaphasic and diamesic variables, specifically: written/spoken; public/private; formal/informal. Combining these three dimensions revealed that MGNSs are currently predominantly used in informal, written, public contexts, as indicated by the high percentage of choices related to personal chats or public social media posts (Figure 13, first two bars from below).

The public dimension slightly surpasses the private one; however, excluding social media from the calculation would show a strong predominance of private usage. When considering future expectations, participants anticipate MGNSs being used in higher registers, including formal written and spoken contexts, signalling a shift towards broader adoption in the public sphere. As for social contexts (e.g., family, work) where MGNSs are currently employed (Figure 14), the data align with the trends seen for registers: MGNSs are primarily used in informal contexts such as activism, social

media, and friendships. Although both family and partner contexts are informal, usage declines significantly in these settings.

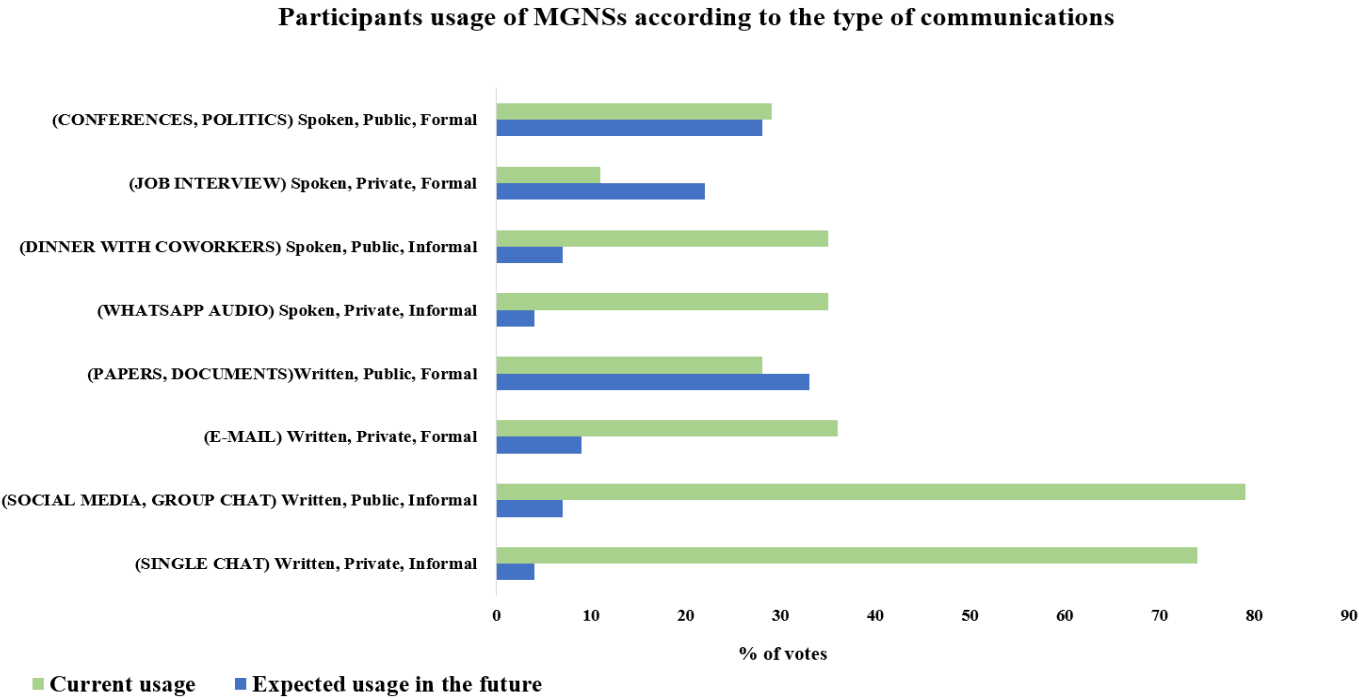


Figure 13. Participants’ usage of MGNSs according to diaphasic and diamesic factors

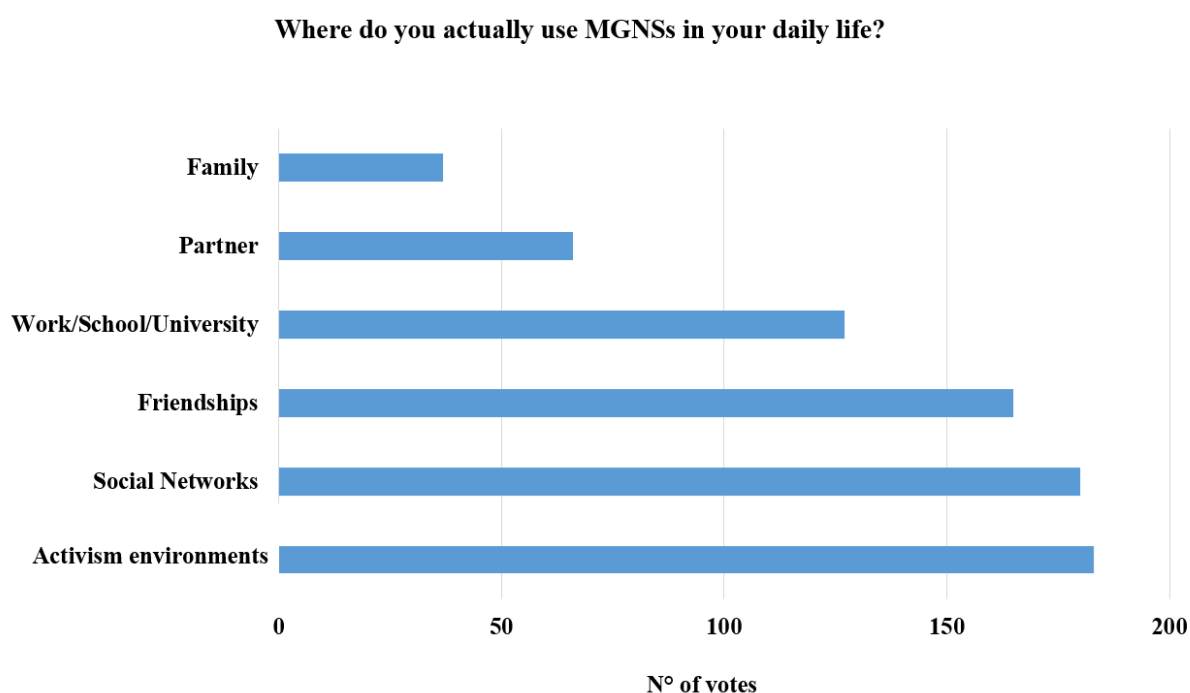


Figure 14. Participants' usage of MGNSs in different social contexts

Participants were then asked to explain their preferences in an open-ended question. All responses were compiled into a small corpus and qualitatively analysed to highlight the most common topics in participants' motivations.

The dominant reason for MGNSs being used predominantly in informal settings is *the need for a safe space*, which explains the strong preference for transfeminist environments, and suggests that family ones are perceived as dangerous to come out as non-binary. Moreover, responses frequently cited *the importance of respecting all identities* in socially diverse environments, such as those found in political activism, as well as *the need to conform to the language practices of transfeminist communities* (Pusterla, 2019). This reflects the role of language in shaping the identity of minority social groups through a shared linguistic code (Corbisiero, 2016). Notably, the preference for social media contexts was often attributed to metalinguistic considerations, such as the difficulty of

pronouncing many MGNSs or to process a third grammatical gender in spontaneous spoken language. Finally, a small subset of responses expressed a *desire for proselytism*, aiming to promote the use of MGNSs across as many social contexts as possible.

Another open-ended question asked participants to indicate the sectors or social contexts in which they would like to see MGNS used in the future. The most frequent response was the desire for MGNSs to be adopted within the education system, and more broadly, for them to coexist with the Italian gender system. Traditional media, including television news, cinema, and print journalism, were also mentioned, alongside the corporate sector. Contrary to the author's expectations, references to the healthcare sector were much rarer, despite its significance in managing non-binary issues (cf. 2.1.3). Finally, it is interesting to note that around 30 out of 252 responses did not specify any particular sector, but instead expressed the hope for MGNSs to be extended to all social contexts, aligning with the earlier mentions of proselytism.

2.4.4 Results. Participants' preferences among the alternatives of neutralisation using the schwa

In Part 4 of the questionnaire, participants were tested about their preferences among different realisations of the application of the schwa symbol. By proposing five multiple choice and three open questions, Part 4 was aimed at investigating the following aspects:

- *Preferences in encoding number information with schwa*: Participants were asked whether they preferred the use of a single symbol ə for both singular and plural forms (thus losing number information in morphology), as proposed by Gheno (2020a), or the alternation of two distinct symbols to encode number as well, i.e., ə/3, as proposed by Boschetto (2020) (cf. 2.2.2). The results of the questionnaire reveal a strong preference for the single symbol ə.
- *Preferences in neutralising agent nouns*: participants indicated their preference for neutralisation using ə starting from the masculine or feminine derivational suffix in agent

nouns (cf. 2.2.2), particularly in nouns ending in *-tore/-trice*. Here, too, the responses indicate a preference for Gheno's (2020a) suggestion, namely the formation of *-torə* by analogy with feminine forms ending in *-tora* (Giusti 2022; Thornton 2022). Similarly, some questions asked participants to modify certain plural nouns that present phonological challenges (Giusti 2022; Thornton 2022, cf. 2.2.2), as the neutralisation in these cases could also lead to masked masculine or feminine forms (e.g., *amici/amiche*, 'friends(M).PL/(F).PL'). The preferred neutralisations were those based, at least orthographically, on the masculine nouns (e.g., *amicə* 'friends(COM).PL').

- *Preference in neutralising determiners*: this series of questions highlighted the considerable difficulty participants experienced in identifying a coherent strategy for neutralisation through the use of schwa. The greatest variability in responses occurred in the modification of articulated prepositions and possessive adjectives, elements that have been addressed only peripherally in practical advice on the use of schwa (Gheno 2020a, 2022a, 2022b; Boschetto 2020), compared to nouns. For instance, when asked to rewrite a phrase containing an articulated preposition and a possessive in masculine form (e.g., *dei miei amici*, 'of.M.PL my.M.PL friends(M).PL'), participants produced hybrid forms where the preposition remained unneutralised, but the possessive adjective was (e.g., *dei miə*, 'of.M.PL my.COM.PL'), forms similar to those suggested by Gheno (2020a) (e.g., *deə mieə*, 'of.COM.PL my.COM.PL'), or entirely new forms unrelated to the advice offered by either source (e.g., *də mə*, 'of.COM.PL my.COM.PL').
- *Metalinguistic awareness of schwa applicability according to nouns' referentiality*: participants demonstrated metalinguistic awareness about the applicability of schwa to nouns that, by their nature, would not require modification (e.g., epicene nouns, common gender nouns with lexical gender). Participants were able to correctly identify non-independent nouns (Thornton 2022, p. 20) that could accommodate neutralisation with schwa (es. *maestra/maestro* -> *maestrə* 'teacher(M).SG/(F).SG -> teacher(COM)SG'), as opposed to common

gender nouns (es. *cantante* ‘singer(COM)SG’), independent nouns (es. *padre/madre* ‘father/mother’) and epicene nouns (es. *vittima, membro* ‘victim(F).SG, member(M).SG’) (cf. 1.7.2).

2.4.5 Discussion

The use of MGNSs largely pertains to a written variety (Thornton, 2022) of informal digital Italian, primarily confined to LGBTQAI+ and transfeminist activism. The informal and provisional nature of MGNSs is reflected in the high degree of variability observed in the morphological and syntactic application of MGNSs across different sentence structures in Part 4 of the questionnaire. This variability demonstrates the absence of a shared norm, intended as a common practice, among the speakers who declared to regularly use MGNSs in everyday communication.

Nevertheless, the public promotion of the schwa as a preferred strategy over other previously common methods has likely influenced speaker perceptions. Indeed, concerning the integration of MGNSs into the linguistic system, participants expressed a desire for their use to move beyond transfeminist communities and social media communications, extending towards institutional language, particularly in education and politics. Additionally, the aspiration to incorporate MGNSs into the Italian gender system is driven by concerns about social stigma and the anxiety of misgendering non-binary individuals (cf. 2.1.3). The respondents do not appear to challenge the binary grammatical gender system of standard Italian, but instead hope for the expansion of options to include a third grammatical gender value, capable of representing all non-binary identities.

Finally, the questionnaire results highlight a clear need for the formal legitimisation of gender-sensitive strategies through institutional reform, rather than relying on informal and spontaneous bottom-up stabilisation within the Italian linguistic community, as is typical with sociolinguistic innovations (Berruto, 2012). According to the participants, such top-down legitimisation would

enable the use of MGNSs in all social contexts, from familial and intimate relationships to the workplace.

2.5 Study 2. The use of Italian sub-standard GNSs in uncontrolled writing. A corpus-based study²⁹

2.5.1 Methodology

In addition to the Italian studies examining morphological gender neutralisation strategies as part of language policy, there is a diverse body of research addressing the production, reception, and perception of gender-sensitive language. In studies on English, French and German, this research is particularly prominent in the fields of psycholinguistics (see Chapter 3 and 4) and social sciences (Horvath et al. 2016; Stout & Dasgupta 2011), and frequently employs questionnaires (e.g., Hekanaho 2021; Hord 2016; Knisely 2020) and experimental methods (e.g., Richy & Burnett 2021; Sato et al. 2016; Tibblin et al. 2023; Xiao et al. 2022).

However, studies based on non-elicited language data, gathered in less controlled environments (Kim et al., 2023), remain limited. Additionally, corpus-based research primarily focuses on the rise of neo-pronouns (Cordoba, 2020, 2023; Stormbom, 2021) or the development of lexical classifications related to gender identity. Only a small number of studies, such as Kaplan (2022), have delved into the morphosyntactic aspects of MGNSs within a gendered grammatical framework.

Comandini (2021) and Thornton (2022) explore the use of MGNSs as a potential variety of written Italian, emphasising the key linguistic traits that distinguish this innovation, both in the informal language of queer communities (Comandini 2021) and in the formal writing practices of an independent publisher (Thornton 2022). Drawing upon these works, the current study conducts a detailed quantitative and qualitative analysis, employing manual annotation to explore the spontaneous morphosyntactic use of MGNSs online.

²⁹ The methodology design and the results of the present study have been already accepted for the following publication: Safina, E. S. (2024, forthcoming). "INOSTRX CORPX RESISTONO". A corpus analysis of Italian Gender Neutralization Strategies in transfeminist online communities". In Burnett S. & Francesca Vigo (Eds.). *Battlefield linguistics: Contemporary contestations of language, gender, and sexuality*. Berlin: De Gruyter-Mouton. The original version of the results discussion has undergone slight modifications due to research advancements.

The MGNS_NUDM corpus, developed with the assistance of the Urban/Eco Laboratory in Naples, is used to investigate how MGNSs are employed in specific communities, such as transfeminist activist groups in online settings. The corpus includes data from four local Facebook pages associated with the political collective *Non Una Di Meno* (NUDM) from Bologna, Cagliari, Naples, and Pavia. The NUDM movement has highlighted its interest in gender-sensitive language, both in relation to feminisation strategies prior to the debate on non-binary gender identity, and more recently concerning neutralisation strategies (Pusterla, 2019). In 2017, in *the Feminist plan against male violence against women*, the movement declared:

Il linguaggio non è solo un'istituzione sociale o uno strumento di comunicazione, ma anche un elemento centrale nella costruzione delle identità, individuali e collettive. La lingua italiana è una lingua sessuata, che già dalla sua grammatica riproduce e istituisce un rigido binarismo di genere (tra nomi, pronomi e aggettivi che cambiano a seconda se maschili o femminili) e una specifica gerarchia, in cui predomina il maschile, presentato come universale e neutro. In questo Piano abbiamo scelto di svelare la non neutralità del maschile utilizzando non solo il femminile, ma anche la @ per segnalare l'irriducibilità e la molteplicità delle nostre differenze. Consapevoli che le lingue mutano e si evolvono, proviamo a rendere il nostro linguaggio inclusivo per avere nuove parole per raccontarci e per modificare i nostri immaginari.

(Non Una Di Meno, 2017).

[Language is not only a social institution or a tool for communication, but also a central element in the construction of identities, both individual and collective. The Italian language is gendered, and from its very grammar, it reproduces and establishes a rigid gender binary (through nouns, pronouns, and adjectives that change depending on whether they are masculine or feminine) and a specific hierarchy, in which the masculine predominates, presented as universal and neutral. In this plan, we have chosen to reveal the non-neutrality of the masculine by using not only the feminine but also the @ symbol to signal the irreducibility and multiplicity of our differences. Aware that languages change and evolve, we are attempting to make our language inclusive to create new words to describe ourselves and reshape our imaginations.

The corpus comprises 2,819 Facebook posts, totalling 98,173 words, and was compiled between November 2021 and January 2022, with post dates ranging from January 2019 to December 2021.

To facilitate the quantitative analysis, the MGNS_NUDM corpus was manually annotated by the author, based on the following tagset:

- Year of publication of the post (available values: *2019;2020;2021*).
- Presence of MGNSs in the post (available values: *yes;no*)
- Type of MGNS (available values: *∗;ə;x;@;u;&;_*).
- Referential context for each occurrence of MGNS in a single word according to the possibilities outlined in (7), thus denoting specific individuals who identify as non-binary, or generic individuals, for example in abstract job role references, whose gender identity is not pragmatically relevant. The available values for this category are *specific singular* and *specific plural* (glossed as non-binary, NB.SG/NB.PL, in linguistic examples), and *generic singular* and *generic plural* (glossed as common gender in linguistic examples, COM.SG/COM.PL). The annotation presented also the label *not classifiable*.³⁰
- Part of speech for each occurrence of MGNS in a single word (available values: *noun; pronoun; adjective; verb at past participle form; article; preposition; ∗other*).³¹
- Overt encoding of number information for each occurrence of MGNS in a single word, thus, the encoding of singular and plural forms by using different symbols (*yes/no*).³²

³⁰ The value *not classifiable* indicates the 29 cases in which MGNSs were used to convey a different meaning than a referential gender. The reader will be provided with a description of such cases in 2.5.3.1.

³¹ The value ‘∗other’ refers to each occurrence of MGNSs in parts of speech that do not traditionally encode grammatical gender, such as verbs (as distinct from past participles), adverbs, interjections, and conjunctions.

³² This label applies only to the schwa, given the public promotion of two different symbols for singular and plural forms (ə/3) by the website *Italianoinclusivo*. <https://italianoinclusivo.it/scrittura/> (accessed 09/10/2024).

Further annotations were made to pick out instances of morphosyntactic incoherence or unexpected uses of MGNSs.

2.5.2 Results. Quantitative analysis

The quantitative data reveal a consistent pattern of neutralisation exclusively with non-independent symmetric nouns (Thornton, 2022, p. 20, cf 1.7.2) which display highly typical ending of the Italian inflectional class I for masculine nouns (e.g., *maestro*, *-i* ‘teacher(M).SG, -s(M).PL’, and class II for feminine nouns (e.g., *maestra*, *-e* ‘teacher(F).SG, -s(F).PL’), replaced with a symbol or a letter, such as in *maestr**. Another noticeable trend is the increasing frequency of MGNS usage over time, as shown in Table 7.

Table 7. Proportion of MGNSs per year

Year	Posts with MGNSs	Posts without MGNSs	Total posts
2019	150 (12,21%)	1,078 (87,79%)	1,228 (100%)
2020	152 (18,65%)	663 (81,35%)	815 (100%)
2021	189 (24,36%)	587 (75,64%)	776 (100%)
Total	491 (17,42%)	2,328 (82,58%)	2,819 (100%)

A total of 491 out of 2,819 posts contained MGNSs, accounting for 17.42% of the corpus. The proportion of posts with MGNSs increased steadily, from 12.21% in 2019 to 18.65% in 2020, and further to 24.35% in 2021. Regarding the types of MGNSs, Table 8 identifies seven different morphological strategies, distributed in descending order as follows: * (48.68%), *ə* (20.37%), *x* (9.98%), *u* (6.11%), @ (5.09%), _ (1.22%), and & (0.2%). Additionally, Table 9 details a subset of

41 posts where users neutralised grammatical gender by using more than one MGNS within the same post, such as combining * and *x*.

Table 8: Distribution of different types of MGNSs in the corpus

Type of MGNS	Number of posts containing each MGNS	% of posts containing each MGNS	Number of occurrences tokens of each MGNS
*	239	48,68%	579
ə	100	20,37%	327
x	49	9,98%	127
mixed	41	8,35%	[see Table 9]
u	30	6,11%	46
@	25	5,09%	70
–	6	1,22 %	11
&	1	0,20%	3
Total	491	100%	1163

Table 9: Different combinations of mixed MGNSs in single posts

Mixed	Number of posts
MGNSs	containing mixed MGNSs
* + @	9
* + ə	8
* + x	7
* + u	5
ə + u	3
ə + x	3
@ + _	1
@ + x	1
@ + u	1
& + *	1
* + x + u	1
* + x + @	1
total	41

While seven distinct symbols were identified as conveying new gender values, the majority of posts (69.04%) utilised either the asterisk or schwa, with the asterisk being more prevalent. However,

when examined over time, a noticeable shift emerges, showing a decline in the use of the asterisk and a growing preference for the schwa, as illustrated in Table 10.³³

Table 10: Distribution of different types of MGNSs over the years

Year	2019		2020		2021	
Type of MGNS	Posts (%)	Occurrences	Posts (%)	Occurrences	Posts (%)	Occurrences
*	98 (69,5%)	202 (73,45%)	88 (63,77%)	236 (66,11%)	53 (30,99%)	141 (26,55%)
ə	0 (0%)	0 (0%)	7 (5,07%)	19 (5,32%)	93 (54,39%)	308 (58%)
X	2 (1,42%)	3 (1,09%)	32 (23,19%)	63 (17,65%)	15 (8,77%)	62 (11,68%)
@	17 (12,05%)	42 (15,27%)	7 (5,07%)	25 (7%)	1 (0,59%)	3 (0,56%)
U	19 (13,48%)	19 (6,91%)	2 (1,45%)	9 (2,52%)	9 (5,26%)	17 (3,2%)
—	4 (2,84%)	6 (2,18%)	2 (1,45%)	5 (1,4%)	0	0 (0%)
&	1 (0,71%)	3 (1,09%)	0	0 (0%)	0	0 (0%)
Total	141 (100%)	275 (100%)	138 (100%)	357 (100%)	171 (100%)	531 (100%)

The schwa first appeared in the corpus on 20 November 2020 and, by late 2021, was present in over 50% of posts containing MGNSs. This increase can likely be attributed to the intensifying public debate on the use of the schwa symbol during this period. Additionally, schwa's prominence may be

³³ The 41 posts containing mixed GNSs are not included in Table 10.

due to it being one of the few MGNSs that can be pronounced in speech, making it the first public proposal explicitly tailored for the Italian language.

As previously noted, the manual annotation also identified the specific words modified by MGNSs. Labels were assigned to specify both the part of speech affected and the referential gender value. In Table 11, the total occurrences of MGNSs across the corpus, rather than the number of posts, serve as the denominator. Specifically, the percentages below indicate which parts of speech were modified by MGNSs from a total of 1,163 instances between 2019 and 2021.

Table 11: Distribution of MGNSs in parts of speech

Part of speech	Occurrences	Percentages
Pronoun	445	38,26%
Noun	262	22,53%
Adjective	260	22,36%
Verb (past participle)	125	10,75%
Preposition	39	3,35%
Article	31	2,67%
*Other (verb)	1	0,09%
Total	1163	100%

MGNSs were most commonly applied to indefinite pronouns, such as *alcun** ‘someone.COM.PL’, and *molt** ‘many.COM.PL’. Notably, neutralising the pronouns *tutti/tutte* ‘all.M.PL/F.PL’ accounted for 29.42% of all instances in the corpus. Nouns and adjectives were neutralised at similar rates, constituting 22.53% and 22.36% of MGNSs, respectively, while past

participle verbs (10.75%) and determiners, including articles and prepositions (6.02%), were less frequently neutralised. These overall trends remained consistent over time, except for determiners, whose usage gradually increased, as shown in Table 12.

Table 12: Distribution of MGNSs in parts of speech over the years

Part of speech	2019	2020	2021
	N° of occurrences (%)	N° of occurrences (%)	N° of occurrences (%)
pronoun	106 (38,55%)	153 (42,86%)	186 (35,03%)
noun	76 (27,64%)	62 (17,37%)	122 (22,98%)
adjective	61 (22,18%)	75 (21,01%)	126 (23,73%)
verb (past participle form)	25 (9,09%)	44 (12,32%)	56 (10,55%)
determiner_preposition	3 (1,09%)	17 (4,76%)	19 (3,58%)
determiner_article	3 (1,09%)	6 (1,68%)	22 (4,14%)
**other (verb)	1 (0,36%)	0 (0%)	0 (0%)
Total	275 (100%)	357 (100%)	531 (100%)

The frequency of MGNSs in reference-making words, such as pronouns and nouns (e.g. *molt* artist** ‘many.COM.PL artists.COM.PL’), and in modifiers like adjectives (e.g. *gratx* ‘grateful.COM.PL’) and past participle verbs (e.g. *loro sono stat* arrestat** ‘they have been.COM.PL arrested.COM.PL’), remained relatively stable over time. However, with regard to articles and prepositions, Table 13 illustrates how different letters and symbols were employed to neutralise the determiner class.

Table 13: Distribution of different MGNSs on determiners

Type of MGNS	N° of MGNSs occurrences in determiners	% of MGNSs occurrences in determiners
ə	35	50%
*	24	34,29%
X	5	7,14%
@	4	5,71%
U	2	2,86%
Total	70	100%

This examination of the determiner class reveals that articles and prepositions have been altered using only five of the seven MGNSs; most of all, ə accounts for 50% of these modifications.

As previously stated (2.2.2), two schwa proposals differ in how they encode number information, as Gheno (2020a) proposes a single symbol for both singular and plural, while Boschetto (2021) advocates for a distinction between ə (singular) and ɜ (plural). This leads to two distinct approaches to neutralising plural articles and prepositions. The MGNS_NUDM corpus reveals a blend of the two proposals: while most plural determiners follow the method suggested by Boschetto (e.g., *dell* + ɜ) rather than Gheno's (*de* + ə), NUDM users tend to neutralise plural forms using *lə* for articles and *dellə* for prepositions disregarding the singular/plural distinction of symbols ə/ɜ.

Across all parts of speech, the occurrence of ɜ in the corpus to encode plural number information is relatively rare. In fact, out of a total of 300 instances of words modified using the schwa solution in plural contexts, only 30 were modified by employing the symbol ɜ for the plural, while 270 featured

the symbol ə identical to that used in singular forms. Thus, while transfeminist communities may recognise the option to encode number information in gender-sensitive language, their use of the plural symbol 3 remains inconsistent. As already noted by Comandini (2021, p. 58), the rapid adoption of schwa in this corpus has also affected parts of speech. Previously, MGNSs were mainly used with nouns and pronouns; however, with the introduction of schwa, there has been a transition from short, simple, fixed expressions such as greetings (e.g., *Buonasera a tutt**, ‘Good evening to everyone.COM.PL’) and thanks (e.g., *Grazie a tutt**, ‘Thanks to everyone.COM.PL’) to more complex texts, with initial efforts at syntactic agreement in longer and more articulated sentences.

Turning now to the annotation of referential contexts where MGNSs occur (cf. 2.3.1), Table 14 presents the distribution of the various types of references conveyed by these new symbols and letters.

Table 14: Referential contexts of occurrence of MGNSs in the corpus

Referential context	N° of MGNS occurrences
Generic Plural	974 (83,75%)
Generic Singular	114 (9,8%)
Specific Plural	45 (3,87%)
Specific Singular	1 (0,09%)
Not classifiable*	29 (2,49%)
Total	1,163 (100%)

The majority of MGNSs are used in references to mixed-gender groups of people or unknown referents, ostensibly to avoid plural forms of masculine by convention. In the case of *Non Una Di Meno*, however, the use of *generic feminines* forms such as *buongiorno a tutte*, ‘good morning to all.F.PL’ is a common practice (Pusterla, 2019), where *tutte* is formally encoded as feminine plural but intended to include also men and non-binary auditors who usually attend their political events.

Generic plurals (see example 14 below) accounted for the vast majority of MGNs, while references to indefinite people or job positions (15), labelled *generic singular*, covered only 9,8% of the corpus. Moreover, data display only one designation of a known non-binary individual through the MGNS *u* (16), used to neutralise the grammatical gender of *compagno/compagna* ‘comrade(M).SG/(F).SG’), and through the use of the subject pronoun *loro* as a calque from the English *singular they* (Dembroff & Wodak, 2018, 2021). The corpus does not include other neo-pronoun formations that designate non-binary referents, although the pronoun *læi* has been proposed both by the website Italianoinclusivo (Boschetto 2020) and the linguist Vera Gheno (2020a).

(14) Post #413. [...] *lo faremo **tutta** insieme perché vogliamo essere il grido altissimo e feroce di tutte quelle donne che più non hanno voce.*

‘[...] We will **all.com** do it together because we want to be the loud and fierce cry of all those women who no longer have a voice’.³⁴

(15) Post #475. [...] *SE TOCCANO **UN*** TOCCANO **TUTT***.*

‘[...] If they touch **one.com** they touch them **all.com**’.

(16) Post #137. *Stanotte Marti ha intrapreso il suo nuovo viaggio. Lei, lui, **loro**. Ciao amico, sorella, **compagnu**.*

‘Tonight, Marti embarked on their new journey. She, he, **they.NB**. Goodbye, friend.M, sister, **comrade.NB**’.

Despite the limited explicit references to non-binary individuals in the corpus, this type of reference can also be inferred in cases of mixed-gender personal coordinating constructions (Motschenbacher, 2014, see 2.2.1), as in (16):

³⁴ Differently from the linguistic examples presented so far, in the examples taken from the corpus posts, only referential gender will be glossed in the English translation for words where such information is necessary to understand the inconsistencies discussed in the text. Instead, the grammatical gender assigned to inanimates and other linguistic information will be omitted.

- (17) *Buongiorno a tutte, tutti e tuttu*
 Good morning to all.F.PL all..M.PL and all.COM.PL
 ‘Goodmorning to all of you’

Among these constructions, 29 occurrences are realised through syndetic coordination (17), where two constituents are linked by a coordinating conjunction. The remaining occurrences reflect abbreviated splitting achieved through juxtaposition (18), where conjuncts are separated by a slash, and full repetition of the form is avoided.

(17) *Post #255. [...] Ieri eravamo in tantissime e tantissimu, per le strade di Bologna e in tutto il mondo a rivendicare l'aborto libero, sicuro e gratuito.*

‘Yesterday there were so **many.F** and **many.NB?** of us on the streets of Bologna and around the world demanding free, safe, and accessible abortion’.

(18) *Post #201. [...] Siamo Rivolta! Manifestazione nazionale Non Una Di Meno. Prenota il tuo posto autobus e andiamo tutte/u insieme.*

‘We are Riot! Non Una Di Meno national demonstration. Book your bus seat and let’s all.F/[all]NB? go together’.

Motschenbacher (2014) argues that the more strongly the opposition between gendered coordinating constituents is marked, the more it reinforces the gender binary and an essentialist perspective, as non-binary identities are rendered *exotic* compared to binary ones (Dembroff & Wodak, 2018, 2021). Consequently, Motschenbacher (2014) favours gender neutralisation, where appropriate, rather than gender specification (feminisation or specification of non-binary referential gender). Coordinating constructions should also be examined in relation to order of mention, i.e. the sequence in which gendered constituents are mentioned (cf. 2.2.1). In this corpus, feminine gender primacy is evident, as feminine forms typically appear as the first conjunct, and masculine forms occur in only six out of 39 instances.

In examples (17-18), the non-binary referential gender is glossed with a question mark, as such constructions can lead to two possible interpretations. On the one hand, NUDM users may be addressing only women and non-binary individuals in those two posts, since they are the main recipients of their typical political activities. On the other hand, the *u* could once again be glossed as a common gender. From this perspective, the feminine grammatical gender in *tutte* would be understood as inclusive of male referents (e.g., *generic feminine*), and the MGNS as inclusive of all non-binary identities, highlighting the distinction between binary gender identities (e.g., *tutte* = feminine and masculine referents) and non-binary identities (e.g., referents who identify as genderqueer, genderfluid, agender, bigender, etc.).

Furthermore, the neutralisation of coordinated conjuncts predominantly occurs through the use of the letter *u* (78.13%), whereas the schwa, which we have noted as one of the most common MGNS strategies (Table 8), rarely appears in neutralised elements. Certainly, the present corpus is too small to draw any conclusion; however, in light of Thornton's (2022, p. 45) observations that the schwa symbol is mainly used to denote generic or unknown referents instead of non-binary ones, this may suggest an emerging *specialisation* among the various MGNS. In this case, *u* would be more likely to indicate a non-binary referential gender value, while the schwa would represent a common gender. Nonetheless, this consideration must be viewed within the context of the transfeminist collectives' specific needs in online writing, such as issuing calls to action or reporting on activities, which require fast and effective one-to-many and many-to-many communication formats (Comandini, 2021).

2.5.3 Results. Qualitative analysis

During the manual annotation of the corpus, numerous instances of gender-sensitive language were identified that could not be categorised neatly within the tagset labels. It can be argued that these problematic cases offer valuable insights into the interaction of MGNSs with standard Italian grammatical rules. While the quantitative analysis confirmed a rise in the use of MGNSs in online

activist spaces, this practice remains far from stable or standardised, even within transfeminist communities. As Dembroff and Wodak (2021, p. 10) observe:

[we] shouldn't just be concerned with what the most conscientious individuals should do. We should strive to change grammatical norms that shape the behavior of even the relatively unconscientious, the exhausted, the distracted, and the overwhelmed. An infeasible policy is unlikely to become a new norm, since it's likely to be (known to be) habitually violated by so many of us so often.

The corpus thus contained examples of morphosyntactic incoherence (19), such as missing agreements between nouns and adjectives (19a), between pronouns (or nouns) and verbs at past participle forms (19b), or missing agreements within the verb phrase between the auxiliary (*be*) and the past participle (19c).

- (19) a. *Un'* *insegnante* *liber**
 INDF.F.SG teacher(F).SG liberated.COM.SG
 'A liberated teacher'

- (19) b. *Quell** *che* *sono* *affiancati* *da* *specializzandi*
 Those.COM.PL who be.PRS.IND.3PL **support**.PST.PTCP.M.PL by interns.M.PL
 'Those who are supported by medical interns'

- (19) c. *Alcun** *compagn** *sono* *state* *arrestat**
 Some.COM.PL comrade(COM).PL be.PRS.IND.3PL **be**.PST.PTCP.F.PL arrest.PST.PTCP.COM.PL
 'Some comrades have been arrested'

Most instances of missing agreement were identified within noun phrases involving nouns and determiners (such as articles, prepositions, and quantifiers), where an MGNS had neutralised the noun's grammatical gender, but not the determiner's one. Furthermore, the unmodified element in the noun phrase almost always carried a feminine grammatical gender, reinforcing the emphasis on female firstness in *Non Una Di Meno*'s communications. It is noteworthy that these instances of morphosyntactic inconsistency did not necessarily appear in complex sentences but also occurred between adjacent elements within phrases (20), indicating minimal text planning rather than a specific morphosyntactic difficulty.

(20) Post #258. [...] *Quattro giorni fa alla festa del lancio del Pride a Firenze **alcuna** compagna sono state attaccate violentemente in piazza. Ad **una** è stato puntato un coltello alla gola, **una** altra è stata ferita alla testa con una bottiglia.*

'Four days ago at the Pride launch party in Florence, **some.COM comrades.COM** have **been.F** violently **attacked.F** on the square. **One.COM** had a knife held to the throat, **another.COM** has **been.F injured.COM** on the head with a bottle'.

Evidence of limited text planning and a lack of a coherent language policy can be seen in the 41 posts (8.35% of the corpus) where multiple types of MGNS co-occur within the same sentence. Some words are present *, while others use *u*, and in certain cases, up to three different strategies appear in a single post (e.g., */x/u). This data may indicate that different MGNSs are being treated as interchangeable at this stage of their use.

Inconsistency phenomena also pertain the morphological level, thus the application of MGNSs within single words. Indeed, data from the corpus display that MGNSs are applied on target adjectives agreeing with the epicene noun *persone* 'people.(F).PL' (21) which is grammatically feminine but can designate any human referent (Thornton, 2022, p. 20).

(21) Post #263. [...] ***persone Migrantə, Rifugiatə, Richidentə, asilo e Apolidə, TRANS*** [...].*
'**Migrant.COM, Refugees.COM, asylum seekers.COM, and stateless.COM people.F, TRANS*** [...]'.

Additionally, based on the link between grammatical and referential gender (cf. 1.7.2), several instances of MGNSs in so-called common gender nouns or adjectives (e.g., *migranti* ‘migrants(COM).PL’) are present in the corpus, which are not supposed to be neutralised, as explained in 2.2.2. However, both coherent and incoherent realisations of the same noun coexist. Indeed, there are cases where adjectives are unnecessarily neutralised (22) since *felici* ‘happy.COM.PL’ has covert gender (cf. 1.7). However, examples such as (23) show that some users are aware of the distinction between so-called common gender and non-independent nouns in Italian, since they applied the MGNS on the word *emozionata* ‘excited.COM.PL’, meant to neutralise the gendered forms *emozionati/emozionate* ‘excited.M.PL/F.PL’, but not to *felici*.

(22) Post #219. [...] Siamo molto *felici** che questo incontro ci abbia *viste* insieme come NonUnaDiMeno Salerno, Benevento e Napoli nella sua realizzazione.

‘We are very **happy.COM.PL** that this meeting **saw USE.PL** together as NonUnaDiMeno Salerno, Benevento and Naples in its realisation’.

(23) Post #303. [...] Siamo *emozionata e felici* di ritrovarci in presenza dopo il 25 novembre per costruire insieme lo sciopero femminista e transfemminista dell’8 marzo.

‘We are excited (gender-neutral) and happy (common gender) to meet again in person after November 25th to build the feminist and transfeminist strike on March 8th together’.

Within the common gender noun type, many other words exhibit contrasting forms, such as *docenti/docent** and *insegnanti/insegnant**, both ‘teachers.COM.PL’ or *migranti/migrant** ‘migrants.COM.PL’. A particularly interesting case in this context is the oscillation of the forms *studenti/studentə/studentessə*. In Italian, the masculine noun *studente* has a feminine counterpart formed with the suffix *-essa*, resulting in *studentessa*, which, as previously mentioned, has historically been associated with negative connotations and an hypercharacterisation on feminine agent nouns. However, since it is a deverbal noun in *-nte*, *studente* could also be formally interpreted as a common gender noun, making it suitable for gender-sensitive usage without modification. Indeed, the corpus includes instances where *studente* remains unaltered and is explicitly understood as having a generic

meaning, at least in reference to both men and women, as seen in *I/Le studenti dell'Università di Napoli* 'The.M.PL/F.PL students(COM).PL of the University of Naples'.

Otherwise, the corpus shows occurrences of the schwa replacing the final vowel of the feminine suffix *-essa* (e.g., *studentessə*) or modifying the base form, whether it is understood as masculine or common gender (e.g., *studentə*). Neutralisation of feminine or masculine forms is also found in the corpus with agent nouns formed using the respective masculine and feminine suffixes *-tore/trice* (example 13 in 2.2.2). In the corpus, replacing the ending vowel *-e* of the masculine suffix *-tore* with a MGNS (e.g. *lavoratorə*, 'worker(COM).SG/(COM).PL') was the most prevalent strategy; however, we also found some occurrences *lavoratricə*.³⁵

Concerning the application issues of the schwa to non-independent symmetric nouns discussed in section 2.2.2, such as *amica/amico* 'friend(F).SG/(M).SG', where the plural forms differ phonologically for morphological reasons *amiche/amici* [a'mike/a'miʃi] 'friends(F).PL/(M).PL', in MGNS_NUDM corpus, nouns frequently appear closer to the masculine forms rather than the feminine ones (e.g., *medicə* instead of *medichə* doctors(COM).PL', *criticə* instead of *critichə* 'critics(COM).PL'). Some adjectives, however, neutralise the feminine form, as seen in *cronicə* 'chronic.COM.PL', instead of *cronicə*. It seems likely that these plural forms in the corpus are driven by orthographic rather than phonological considerations, owing to both the ambiguous phonological status of schwa and the fact that other MGNS symbols (e.g., *, @, x, &, _) cannot be pronounced as vowels. As Thornton (2022, p. 39) notes:

[...] la varietà di italiano con <ə> in uso nella comunità che ruota attorno alla casa editrice effequ è una varietà prioritariamente scritta, le cui norme obbediscono innanzitutto ai bisogni della scrittura, nonostante la pronunciabilità delle forme con <ə> sia uno dei fattori a favore del loro uso secondo Gheno (2019).

³⁵ According to the discussion in 2.2.2, glossing *lavora-tor-ə* and *lavora-tric-ə* would result respectively in 'work-er(M)-ə(COM).SG?PL?', 'work-er(F)-ə(COM).SG?PL?'.

[...] the variety of Italian with <ə> used in the community surrounding the publishing house effequ is primarily a written variety, whose norms primarily cater to the needs of writing, although the pronounceability of forms with <ə> is one of the factors in favor of their use, according to Gheno (2019).

2.5.3.1 Performative meanings of sub-standard gender neutralisation strategies

The inconsistencies observed thus far are undoubtedly attributed to the challenges of applying MGNSs to the morphosyntax of Italian. However, the corpus also contains annotations of other inconsistencies that may be attributed not to a lack of attention or incomplete understanding of the gender system of Italian by the users, but rather to an intention to enrich their speech acts (Austin, [1962] 1975) with performative meanings (Bianchi 2022; Bianchi, 2024, in press). These meanings reflect an ideological stance regarding gender identity and the marginalisation of identities that differ from binary ones.

For instance, certain MGNSs neutralise independent nouns (cf. 1.7.2) with lexical gender that are inherently feminine, such as *sorelle* in *sorellə* ‘sisters’ (24), *donne* in *donnə* ‘woman’. In these cases, the MGNS convey something other than referential gender value, which would be obviously feminine. From this perspective, MGNSs expand the notion of *sisterhood* to encompass non-binary and trans* identities in the femininity concept, or to emphasise the distinction between gender identity and sexual orientation in neutralisations such as *lesbicx* from *lesbiche* ‘lesbians’, also highlighting the further marginalisation of non-binary or trans* lesbians within LGBTQAI+ political agenda. Along with this hypothesis, when the MGNS appears at the end of the independent noun, as seen in *donne** ‘women(COM).PL’, the asterisk may signal that *women* is being used as an umbrella term, similar to the use of *trans** in English observed in 2.1.3. Indeed, when *donne** is used, the text often addresses violence against women, explicitly including trans women within as victims of systemic violence (25).

(24) Post #442 [...] Noi siamo con le **sorelle** in lotta in Turchia [...] La Turchia è il paese dove è stato sospeso qualsiasi possibile evento che abbia a che vedere con i diritti LGBT*QIA+ Hande Kader attivista trans* è stata rapita [...].

‘[...] We stand with our **sisters** in struggle in Turkey [...] Turkey is the country where any potential event related to LGBT*QIA+ rights has been suspended. Hande Kader, a trans* activist, was kidnapped [...]’.

(25) Post #83. [...] Con le vostre parole, promuovete una narrazione tossica che alimenta il clima di odio verso le **donne*** e d’impunità verso i loro carnefici. [...] **Donne*** comprende tutte le soggettività violate LGBTQIA+ [...].

‘[...] Through your words, you promote a toxic narrative that fuels a climate of hatred towards **women*** and fosters impunity for their perpetrators. [...] **Women*** includes all violated LGBTQIA+ identities [...]’.

Additionally, MGNSs are sometimes employed to neutralise the grammatical gender assigned to a word, even when this gender is arbitrary and unrelated to referential gender, as in the case of *corpx* ‘bodies(PM).PL’ in example (26), where PM means *Performative Meaning*.

(26) Post#128. *Siamo **corpx** in movimento. [...] Abbiamo deciso di pensare insieme a come prendere parola partendo dal corpo, da **tuttx i corpx, nessunx, esclusx, quelli che lottano, resistono e sopravvivono, quelli ingabbiati, repressi, razzializzati, emarginati perché non conformi, trans, queer, non riconosciuti, uccisi, violati e violentati. [...] I NOSTRX CORPX NON SONO MOTIVO DI VERGOGNA I NOSTRX CORPX SONO LA NOSTRA SCELTA I NOSTRX CORPX RESISTONO.***

‘We are **bodies(PM)** in motion. [...] We decided to think together about how to take the floor starting from the body, from **all(PM) the(M) bodies(PM), no one(PM) excluded(PM), those(M)** that struggle, resist and survive, **those(M)** that are **caged(M), repressed(M), racialized(M), marginalized(M)** because they are **nonconforming(M), trans, queer, unrecognized(M) , killed(M), violated(M) and raped(M).** [...] [DEF.M] **OUR(PM) BODIES(PM) ARE NOT CAUSE FOR SHAME, [DEF.M] OUR(PM) BODIES(PM) ARE OUR CHOICE, [DEF.M] OUR(PM) BODIES(PM) RESIST.**

In (26), the use of -x appears to encapsulate various characteristics that signify forms of social marginalisation. It is used to refer to racialised or disabled bodies, or those that deviate from aesthetic norms, such as being excessively fat or thin.³⁶ Moreover, -x highlights the body as a primary space for expressing non-normative relationships, gender identities, and sexual orientations. It also values the body as a means of economic empowerment for sex workers and symbolises the memory of systemic male violence against women who have been abused or murdered.

It is evident that this performative use of MGNSs is far from a gender-sensitive language policy. Instead, it represents a highly politicised use, more similar to some usages of MGNSs within the Argentine *Ni Una Menos* movement, as well as the immigrant community from Central and South America in the United States. According to such communities, the use of the capital *X* in the term *LatinX* (Milian, 2017, p. 123) asserts the traits that define the history and identity of the Latin immigrant group, as well as their strong political stance on the claims of the trans* and non-binary identities, thus the MGNS is aimed to explicitly highlight the further linguistic and cultural marginalisation of indigenous populations along with the sexual ones.

³⁶ The whole post is accessible at the following link:
<https://www.facebook.com/profile/100064317626355/search/?q=I%20nostrx%20corpx%20resistono> (Accessed 22 November 2023).

Given these observations, it is possible that the function of MGNSs is shifting towards a symbolic role, akin to a *flag marker*. Indeed, these more recent uses resemble those seen with emojis (Bai et al., 2019), as they may serve an identity-building purpose within both individual expression and the broader community that adopts a shared set of emojis with stable meanings. In this context, the paralinguistic meanings, along with the grammatical inconsistencies noted in this analysis, suggest that this linguistic practice is more focused on politically signaling the writer's stance or the utterance itself, as an *act of allyship* (Radke et al., 2020, p.292), rather than introducing new grammatical gender values to the system.

Supporting this is the fact that the flag marker *ø* has recently become a target of political opposition to transfeminist causes (see Figure 15). Indeed, the symbol has been used by three student associations affiliated with far-right parties in Italy to incite hatred against queer individuals (Farina, 2022). A poster, which appeared in early October 2022 at the University of Turin, urged the university community to 'keep the campus *clean*', clearly targeting LGBTQAI+ individuals, with the *ø* symbol in rainbow colours barred.



Figure 15. Poster at the University of Turin by FUAN and ALIUD

Concluding, while acknowledging the differences between sociocultural and linguistic contexts, the use of MGNSs in both South American and European Spanish provides an interesting perspective for reinterpreting the debate on sub-standard neutralisation, particularly concerning the necessity for these symbols or letters to remain outside of linguistic norms, at least during the current socio-cultural phase that these countries are experiencing.

Lo que hacemos al hablar en femenino, en neutro, duplicando o utilizando cualquier otra fórmula, no es resolver sino mostrar el desasosiego, desnaturalizar, generar ruido, propiciar un desplazamiento, intervenirlo. Una metáfora que nos vuelve a situar, precisamente, en la dimensión alegórica del lenguaje. Y que nos devuelve la potestad sobre nuestra lengua a través de la tensión de sus usos ilegales.

(Vasallo, 2023, p. 83)

[What we do when we speak using the universal feminine, the neutral form, duplication, or any other formula is not to resolve but to expose discomfort, de-naturalise, make noise, encourage movement, and intervene in it. A metaphor that places us in the allegorical dimension of language, and that returns power to us through the tension of its unlawful uses].

2.5.4 Discussion and final remarks about sub-standard gender neutralisation in Italian

The manual annotation analysis of the MGNS_NUDM corpus revealed trends largely consistent with the questionnaire data (Study 1, cf. 2.4) as well as Comandini's (2021) and Thornton's (2022) ones. When considering these results in light of the debate between opponents and supporters (cf. 2.3), as well as the preferences expressed by speakers in the questionnaire, it becomes clear that framing sub-standard neutralisation as a purely top-down or bottom-up innovation is overly simplistic. Both directions are evident in the debate and usage, while also opening new perspectives.

The bottom-up dynamic is reflected in the absence of a shared norm, both within the Non Una Di Meno community and in their public promotion (evident in the differing approaches of Gheno and Boschetto in applying the schwa). The use of MGNSs is sociolinguistically marked along both diastratic and diaphasic axes, having been employed by specific political groups for over a decade, and gaining popularity especially among younger generations interested in gender-sensitive topics. As Comandini (2021) notes, MGNSs exhibit significant diamesic variation (Berruto, 2012), addressing the needs for immediacy, economy, and efficiency inherent in *Computer-Mediated Communication* (Verschueren & Östman, 2011; Yao & Ling, 2020).

A consensus regarding theoretical aspects of MGNSs, such as their social objectives (whether moderate or radical) and their referential gender value, has yet to be reached (cf. 2.2.2). Current corpus data indicate a fluctuation between the use of MGNSs with a non-binary reference (third gender, both grammatical and referential) and a common gender reference, situated between the two ideological positions outlined by Dembroff & Wodak (2018). Within the transfeminist online community, MGNSs are predominantly used with a common referential gender value, aiming to include any human referent, regardless of gender identity, through a single form. In contrast, respondents in the questionnaire expressed a preference for using MGNSs primarily to refer to known non-binary individuals (cf. 2.4.3).

In relation to the reorganisation of the Italian gender system outlined in Table 6 (2.2.2), the corpus data suggest that MGNSs may lead to a three-gender system (masculine, feminine, and a new value). This new grammatical gender value could be used both for known non-binary individuals (what has been indicated as ‘NB’ along the corpus analysis) and for groups with mixed or unknown gender identities (‘COM’). In this framework, grammatical masculine and feminine gender would be assigned solely to individuals whose gender identity is known, while the new value encoded by MGNSs would function similarly to how masculine currently operates in standard Italian. That is, it would be assigned not only to specific referents but also in all default cases, such as unknown, indefinite, or uninstantiated referents, and for agreement with coordinated conjuncts of mixed gender (cf. 1.7.4).

Table 15. Reorganisation of the Italian gender system according to current usage of MGNSs

Grammatical gender		Type of reference
Masculine	specific person with known gender identity (male)	specific people with known gender identity (male)
	generic person with unknown gender identity; abstract job role (common gender)	generic people with unknown or mixed-gender identities (common gender)
Feminine	specific person with known gender identity (female)	specific people with known gender identity (female)
New Value	specific person with known gender identity (non-binary)	specific people with known gender identity (non-binary)
	generic person with unknown gender identity; abstract job role (common gender)	generic people with unknown or mixed-gender identities (common gender)



This reconfiguration of the grammatical gender system and its associated referential values does not challenge the existing binary structure, as it still retains gender specification but avoids linking generic reference to the masculine grammatical gender. It remains to be tested to what extent MGNSs are perceived as *generic* by speakers, or whether, due to the traditional use of masculine by

convention, MGNSs will be perceived as a *masked masculine* (this issue will be explored further in Studies 3 and 4, Chapter 4).

The bottom-up dynamic is also evident in the fact that this innovation has been adopted by social groups far removed from positions of power, such as transfeminist and LGBTQAI+ communities. Furthermore, no specific social context (e.g., education, healthcare) or text typology (e.g., narrative, directive, or descriptive texts) has been identified from the top of Institutions as a testing ground for MGNSs. Investigating these aspects prior to making the proposal public could have provided valuable insight into the concrete linguistic needs of non-binary individuals.

However, the bottom-up dynamic is less apparent in the involvement of the publishing industry and cultural sector, where, even though the text represents a formal and programmed variety of written Italian, certain inconsistencies can still be observed. For instance, in *Dare la vita* by intellectual and activist Michela Murgia (2024), who overtly supported both feminisation strategies and the use of schwa, several passages can be found where neutralisation occurs with respect to the grammatical gender used to designate a specific referent (a child). However, this neutralisation does not extend to the unknown referent marked by the indefinite adjective *nessuno* ‘nobody/none(M).SG’ nor to the reference of people with mixed gender, such as the pair of adult parents (Murgia, 2024, p. 87). It is certainly unusual to observe a sensitivity towards the use of schwa to avoid specifying the gender of the newborn, juxtaposed with the use of conventional masculine forms in all other referential contexts.

Ma se **chi nasce** non è **desideratø da nessuno degli adulti coinvolti** nella sua generazione,
di chi è la responsabilità?
(Murgia, 2024, p. 87)

‘But if **the child born** is not **wanted(COM).SG** by **any(M).SG** of **the(M).PL adults(M).PL**
involved(M).PL in their conception, who bears the responsibility?’

There have been as well few, largely unsuccessful, attempts to incorporate MGNSs into institutional or administrative communication. Notable examples include the use of *ə* by the municipal administration of Castelfranco Emilia and in six reports from a ministerial commission for the National Scientific Accreditation, published in winter 2022 (Arcangeli, 2022a). Interestingly, the adoption of MGNSs by certain multinational corporations, such as the social network Twitch, or Tinder, the world's most popular dating app, as well as companies such as ABB, a leader in automation technology. Additionally, the schwa symbol has been accepted for an Amazon MGM Studios production, the animated series *The Second Best Hospital in the Galaxy*, which was also distributed by the Amazon Prime Video streaming service. These corporations are ideologically distant from transfeminism, represents perhaps the only promotion of MGNSs by a group in power. This move has notably not been criticised by opponents (cf. 2.3).

To date, MGNSs have extended beyond political communities and social networks, making their way into non-fiction, fiction, print and multimedia advertising, certain magazines, e-commerce websites, dating apps, comics, and video games. Nevertheless, this second, more top-down movement does not yet suggest any attempts at linguistic prescriptivism or an *engineered modification of the official language* (D'Achille 2021, Moro 2022).

It is clear that the morphological pursuit of a gender-sensitive language poses significant challenges in languages with grammatical gender (Motschenbacher 2014). Yet, the use of letters or symbols, which may somewhat naively aim to provide linguistic visibility to a minority group, functioning as *flag markers* to deconstruct gendered language and societal norms, is a phenomenon deserving of further exploration. It has too quickly been dismissed as *lingua scema* 'stupid language' (Arcangeli 2022a).

However, the political awareness and history of the Italian non-binary community remain recent and somewhat undefined. As a result, the use of MGNSs in Italy has not yet developed into what Motschenbacher (2014, p. 268) defines as acts of *self-reference* or *in-group labelling*.

Another influential factor is the function in which the respective linguistic forms are used. Acts of self-reference, in-group labeling or individualised uses are usually less problematic than out-group uses, acts of other-identification and generic usages. The political views of the language user also play an important role. They are not just responsible for the answer to the question whether action needs to be taken, but also which kinds of strategies (non-sexist, LGBT-friendly, non-heteronormative) and, within a non-heteronormative language policy, which substrategies (erasing gender difference or erasing male dominance) are chosen.

Moreover, several aspects of the Italian MGNS proposals constitute a kind of *verbal hygiene* (Cameron, 1995) associated with second wave feminism, which was aimed at *purging the system of problematic elements*, for example avoiding the use of masculines by convention to refer to women (cf. 2.1), rather than promoting a wider reflection on subordination, invisibilisation, and marginalisation processes supported by multiple language practices.

According to Brigitte Vasallo, a Galician journalist, university lecturer, and transfeminist activist, the application of MGNSs requires a process of linguistic and social *emancipation* that cannot be extended to all groups (2023, pp. 89-90). From a Marxist perspective, Vasallo draws a parallel between standard language and the means of production within the capitalist system, viewing MGNSs as *highly specialised technical tools* that serve to dominate these means of production. Given their technical nature, MGNSs are unlikely to be *collectivised*, as they are not easily accessible to the poorest, migrants, the less educated, or the elderly. Instead, their use could lead to what she terms *linguistic inflation*, a proliferation of signs referring to *ever-smaller fragments of reality*.

In this light, the pursuit of MGNSs as a language policy integrated into formal usage no longer aligns with a struggle for existence by a marginalised social group. Rather, it becomes closer to what Vasallo describes as *pride in cultural capital*, symbolising the manifestation of this emancipation process (Vasallo, 2023, p. 68).

[...] Cuando hablamos con la *-e*, somos las obreras del lenguaje asaltando la fábrica del patrón para colectivizarla. Pero, si una de esas opciones está soñando con sustituir al patrón, no tiene sentido ni emprender la lucha. Porque el sistema no es una forma, sino un método. El sistema no es la *-o*, como no es el masculino: el sistema es la universalización. Así, cualquier apuesta por decretar el lenguaje de género perfecto, el que nos incluirá a todo el mundo a través de una letra, redundará en todas las cuestiones de las que trata de huir. Y, por supuesto, cualquier enfrentamiento entre opciones disruptivas para ver cuál tiene razón es un despropósito. Las intervenciones en el lenguaje no son antagónicas. No lo serán, al menos, mientras siga existiendo un masculino universal y todo lo demás se sitúe en la zona del extrañamiento.

(Vasallo, 2023, p. 83)

[[...] when we speak using the *-u*, we are the labourers of language storming the master's factory to collectivise it. However, let it be clear: if any of these options dreams of replacing the master, there's no point in even starting the fight. The system is not a form, but a method. The system is not the *-o*, just as it is not the masculine; the system is universalisation. Thus, any attempt to declare a perfect gendered language, one that will include everyone through a single letter, will inevitably bring back all the issues it tries to escape. And, of course, any comparison between dissident options to see who is right is absurd. Linguistic interventions are not in opposition to one another. At least, they won't be as long as a universal masculine exists and everything else remains in the realm of the alien].

– Chapter 3 –

Cognitive aspects of gender in language

Building upon the understanding of the Italian gender system and the review of both standard and sub-standard gender-sensitive (GS) language proposals, this chapter introduces a psycholinguistic perspective to complement previous discussions. The primary focus lies on investigating the relationship between linguistic input, specifically, how grammatical gender is encoded in written text, and cognitive output, particularly how individuals mentally visualise the referents in a sentence. The chapter compares the use of masculine by convention with GS strategies in written texts, aiming to explore how more balanced mental representations of men and women are formed. Due to the methodology adopted in the experiments that will be presented in Chapter 4, only the presence of men and women in mental representations will be explored, deferring the investigation of non-binary representations to future work.

The chapter begins by outlining key linguistic and psycholinguistic theories that inform experimental studies on gender inferences, particularly in reading tasks. It examines how individuals construct mental representations from written linguistic stimuli, focusing on the role of both explicitly coded (e.g., overt) grammatical gender information and implicit world knowledge.

Language-specific factors that influence the construction of mental representations in languages with grammatical gender, as opposed to those with natural gender, are discussed. Additionally, key

psycholinguistic findings on gender inferences in grammatically gendered languages are presented, with particular emphasis on the phenomenon of *male bias*. This bias refers to the male-specific mental imagery triggered by grammatically masculine forms intended to be referentially generic.³⁷ The chapter also explores the impact of GS language, comparing the effects of feminisation and neutralisation strategies in reducing the male bias elicited by such masculine forms.

³⁷ In psycholinguistic studies on gender inferences (Gygax et al., 2021), the word ‘form’ is used to indicate the whole stimulus presented in a specific experimental condition. Therefore, talking about ‘generic masculine forms’ will include nouns, determiners and all other elements with overt grammatical gender presented in an experimental item. The use of ‘form’ may be due to the necessity of opposing explicitly encoded information to implicit one in a synthetic way when describing the experimental design.

3.1 A brief review of experimental methodologies used in psycholinguistic and neurolinguistic studies of gender inferences

Before delving into experimental results about text comprehension processes in reading, particularly inferences about referents' gender, this section aims to briefly overview the primary methods employed in psycho- and neurolinguistics, highlighting their main advantages and limitations. These insights will be essential for contextualising all the research results within the chapter, thus the theoretical framework presented in subsequent sections, as well as the data from the two studies discussed in Chapter 4.

First, it is essential to distinguish between experiments conducted in laboratory settings and those where data is collected via web platforms. Each methodology offers distinct advantages and limitations that can significantly impact the interpretation of results. The characteristics of these two approaches are tendencies rather than universally applicable traits (Kim et al., 2023). Laboratory experiments allow for using advanced equipment and implementing complex or custom-designed paradigms tailored to the specific linguistic-cognitive phenomenon under study. In contrast, web-based tests require more standardised tasks, often less creative, and do not need highly specialised instruments. Additionally, laboratory settings provide greater control over the test environment, reducing external distractions and influences, compared to web-based tests conducted privately on participants' computers, over which researchers have no control. However, this high level of control in laboratory experiments can undermine *ecological validity*. Indeed, the more the experimental setting deviates from real-life conditions, the less likely the results will reflect natural human behaviour (Kim et al., 2023, p. 362). One notable drawback of a controlled environment is the presence of the researcher, which can be mitigated by distancing them from the participant during the actual experiment. The mere presence of the researcher can induce biases such as the *social desirability* one (Lavrakas, 2008), where participants provide responses they perceive as more socially acceptable rather than their true inclinations, or the *observation bias*, where participants alter their behaviour simply because they are being watched (Ekström, 2011). Conversely, while web-based anonymous tests preserve spontaneity, they lack the opportunity for reactive *briefing and*

debriefing between the researcher and participant (Kim, 2024, p. 361). This limitation can prevent the immediate resolution of any confusion regarding test instructions or issues arising during the experiment, which can lead to incomplete data collection. Furthermore, post-test conversations between the researcher and participant can provide valuable feedback and insights for post hoc analyses. Web-based experiments also enable faster and easier data collection using international platforms like *Mechanical Turk* or *Prolific*.³⁸ Particularly, the latter promotes voluntary and ethical participation by ensuring subjects are compensated according to standards, and it reduces the likelihood of coerced participation due to asymmetric relationships between researcher and participant, which may occur in internal university recruitments. Nonetheless, both lab-based and web-based experiments must have their procedures pre-validated by an ethics committee. Despite the potential lack of control and precision in web-based research compared to laboratory settings, researchers can make strategic choices in test design to minimise noise in the results. This includes, for example, establishing uniform break periods for all online participants and incorporating specific attention checks to assess concentration at multiple points during the experiment. Web-based research is particularly effective for quickly obtaining a large and diverse participant sample or when seeking specific participant characteristics (e.g., knowledge of a particular second language; the presence of a language disorder).

Regardless of whether a lab or web setting is chosen, it is also crucial to distinguish between *offline* and *online* measurements. Online measurements capture moment-by-moment processes in real time, allowing researchers to observe the emergence of superficial effects of underlying cognitive processes as they unfold. In contrast, offline measurements pertain to results or representations constructed after processing has occurred, capturing an interpretation of the event (Sato & Vanek, 2023). Both methodologies encompass a wide range of measurements and should be considered complementary rather than contrasting. Just as qualitative and quantitative analyses of linguistic data

³⁸ Amazon Mechanical Turk and Prolific Ltd are respectively available at the following links: <https://www.mturk.com/>, and <https://www.prolific.com/>. (accessed 31/07/2024).

are mutually enriching, combining offline and online measurements can provide a more comprehensive understanding of the cognitive phenomena under investigation.

Historically, offline measurements preceded online ones as they do not require specialised equipment. Among these are *categorisation preferences* and *similarity ratings*, which are behavioural measures that reveal whether and how different entities are perceived as part of the same category. From a linguistic perspective, these techniques are useful for probing the organisation of meanings in the mental lexicon. When applied to prototypical membership (Arduini & Fabbri, 2014, pp. 25–28) they help determine the distance of a particular meaning from the prototype's core, thereby investigating different abstraction processes (Collins & Loftus, 1975). As it will be further described in the following sections, categorisation tasks may successfully help in investigating gender stereotypes' activation triggered by different linguistic stimuli. Another offline method involves *accuracy scores*, such as acceptability (Yes/No) or grammaticality judgments regarding individual words or entire sentences. These scores are used to test not only text comprehension but also memory tasks and linguistic production. Offline methodologies typically involve deductive observation, making it advisable to combine them with online measurements for a more accurate account of the phenomenon under study.

Among online measurements, which will be central for the present work, the most common is *response times* (RTs), defined as the interval from stimulus onset to the initiation of the participant's response (Sato & Vanek, 2023, p. 218). Response times are often interchangeably called *reaction times*, although response time includes both the time to react to the stimulus and the cognitive-motor time required to initiate the response. In contrast, reaction time refers to the response to a simple stimulus, such as the perception of light, irrespective of other influencing factors (Sato & Vanek, 2024, p. 230). RTs are widely used due to their cost-effectiveness and ease of administration compared to other online measurement techniques requiring specialised equipment, such as neuroimaging. However, RTs cannot precisely disentangle which cognitive process causes a response delay or acceleration. For example, a slowdown in RTs might result from the stimuli's effects, such as their

familiarity or frequency of occurrence, the experimental context, or extra-experimental factors like the participant's social background.

Another prominent online measurement technique is *eye-tracking*, which monitors eye movements using specialised equipment while presenting participants with both oral and written linguistic stimuli. This method's advantages include its applicability to testing infants, children, or individuals with linguistic difficulties who might not be suitable for simple RT tests. Indeed, eye-tracking allows for the investigation of cognitive reactions without requiring explicit decisions or judgements and without necessitating the reading and comprehension of a text. Moreover, eye-tracking is based on the premise that eye movements naturally and concurrently follow the same pattern as processed linguistic information, meaning that preferential looks towards specific objects or pictures reflect the activation of corresponding information (Allopenna et al., 1998). Unlike RTs, which provide a single measurement, eye-tracking offers multi-level data (e.g., *fixation location*, *first fixation duration*, *first-pass reading time*, *regression fixation proportion*), resulting in a more detailed dataset for interpreting cognitive processes. The main disadvantage of eye-tracking lies in the higher cost of equipment and sample recruitment, as well as the greater technical expertise required for implementation and data analysis.

Finally, the most advanced and invasive online measurement techniques include *Skin Conductance Responses* (SCR), *Event-Related Potentials* (ERP), and *Functional Magnetic Resonance Imaging* (fMRI). SCR is a psychophysiological measurement indexing the intensity of autonomic arousal in response to a linguistic stimulus, based on the assumption that electrodermal activity increases when a stimulus provokes an emotion during processing. Like eye-tracking, SCR is useful for probing unconscious processes, especially those involving emotionally charged semantic domains. However, like fMRI, it lacks high temporal resolution. fMRI measures neural activity based on changes in blood oxygenation across brain regions, offering excellent spatial but poor temporal resolution. It has been instrumental in demonstrating that brain areas activated by perceptual stimuli (e.g., the image of a leg) also activate when presented with an associated linguistic stimulus (e.g., the verb *kick*) (Sato & Vanek, 2024, p. 223). For maximum temporal accuracy, ERP measures brain

voltage fluctuations in response to sensory stimuli, recorded at various scalp regions. ERP results, based on latency, polarity, amplitude, and scalp distribution, provide a multi-level outcome for a nuanced analysis of cognitive processes. ERP's primary contribution is its ability to isolate brain responses activated at different intervals, from more automatic, exogenous components (100-200 milliseconds) reflecting perceptual responses to the stimulus, to those related to information processing (300 milliseconds and beyond), which will be further detailed in the following sections concerning reading processing.

3.2 Inference models for reading comprehension

The construction of Mental Representations (MRs) during reading tasks, particularly those related to the gender identity of human referents, is a complex and multifaceted process. In the 1960s, MRs were viewed as syntax-based models, wholly dependent on linguistic structure in a way that words, syntactic deep structure, and semantic meaning were completely adjacent to the model represented in mind (Garnham, 1981). However, in the early 1970s, psychologists argued that these representations resembled events with prominent actors and settings, rather than following sentence structure exactly and that mental representation resulted from the *integration* of linguistic elements and general world knowledge. Especially due to Brandsford et al.'s experimental findings (1972), sentences were no longer just linguistic objects to be remembered but were seen as tools for constructing semantic descriptions that include more information than explicitly stated.

Most current cognitive models explaining linguistic processing are derived from the model initially theorised by Kintsch and van Dijk (1983). According to this model, the way texts are stored in long-term memory is structured on two levels: a level concerning the explicitly coded relationships between the words of the text (*text base level*), and the relationships between the text's content and external information, known as world knowledge (*situation model*) (Cook & O'Brien, 2023). This approach, termed *constructionism*, was based on three core assumptions (Garnham & Oakhill, 1996):

firstly, readers remember the overall meaning of a sentence rather than its specific morphosyntactic structure. Secondly, unlike the 1960s models focusing on syntactic structure, constructionism views the mental representation of complex sentences as an *integration* of ideas based on content relationships (e.g., causal, anaphoric relations). Moreover, the process of constructing an MR was described as *incremental*, with each representation forming the basis for the next. Thirdly, MRs draw from both the explicit information in the text and general world knowledge, which plays a crucial role in integrating implicit links.

Later, in the Eighties, the constructionist view was further refined by the Mental Model Theory (Garnham, 1981). The first important refinement concerned the integration of the *probability notion*, aimed at better defining which type of information could effectively be part of mental representations. According to the theory, probability acts as a filter in determining the most plausible elements and characters to be represented in our minds, thereby narrowing the vagueness of the preceding approach (Garnham & Oakhill, 1996). Garnham (1981, p. 561) illustrates the importance of probability by providing the examples in (1a) and (1b):

- (1) a. *The hostess bought a mink coat from the furrier.*
b. *The hostess bought a mink coat in the furrier's.*

Even though the linguistic structures differ, since *from* suggests the hostess directly bought the mink coat from the furrier, whereas *in* allows for the possibility of her buying it from another client in the furrier's, the probability of real-world situations stored in long-term memory leads us to represent only the *from* scenario and not the *in* one.

Moreover, mental models influenced by probability are structurally similar to the real or imaginary worlds described in texts but not necessarily to the linguistic expressions used. Indeed, mental models may diverge from the text in terms of accuracy and representativeness, and the aim of the theory was also to detect which formal or conceptual elements drive the model construction, even far from the information provided in the text:

It is convenient to think of language as being about a mental model rather than about the world. A mental model is a surrogate for the world in a way in which a piece of prose can never be.

(Johnson-Laird & Garnham, 1980, in Garnham, 1981, p.564).

Hence, in addition to being incremental and integrated, the process of constructing MRs was described as *inferential*, where “inferences represent situations in which readers must fill in the gaps in the text-based representation to make coherent connections between prepositions in the text” (Cook & O’Brien, 2023, p. 236). In general, inferences are triggered when they are strongly backed by contextual information. The precision of what is triggered also relies on contextual support: the activated information can vary from a broad concept to a specific lexical item. Specifically, the inferences produced from world knowledge were defined as *automatic*, with their activation becoming particularly evident in cases of internal *clash* within a sentence, where textual and extra-textual information, such as a stereotype, provide conflicting data. This scenario will be particularly useful in understanding mental representations related to the gender of human referents in the following sections.

Before delving into gender inferences, it is important to note that the Mental Models theory has faced significant debate with a competing approach that emerged in the 1990s, the Minimalist Theory (McKoon & Ratcliff, 1992). This debate primarily addressed two points: the number and type of inferences immediately included in mental representations, and the modality of inference-making, respectively dumb and passive for minimalist scholars, while strategic and goal-driven in constructionists’ view.

Firstly, the point of disagreement between constructionists and minimalists was the nature of inference processing as *restricted* or *unrestricted*. Indeed, from the constructionist perspective, numerous inferences derived from both linguistic and extralinguistic information could be immediately encoded to represent a fine-grained mental model. For example, a complete description of the sentence “three turtles rested on a floating log, and a fish swam beneath them” would include

the inference that the fish swam under the log (McKoon & Ratcliff, 1992, p. 441). From the constructionist framework, this inference should be automatically encoded. Conversely, the minimalist position asserted that this inference would not be automatically encoded because it is unnecessary for immediate processing, nor is the information that the fish swam under the log considered general knowledge. Particularly, minimalists argued that the mental representations are not as complex and detailed as constructionists used to depict them. Instead, they view the inference-making process as *dumb*, *passive* and *automatic*, based only on two types of inferences: those that preserve *local coherence* and those that are *quickly and easily available* (McKoon & Radcliff, 1992). Local coherence is established among superficial concepts or linguistic items that are close to each other and are separated by a maximum of two sentences, as this amount of information is the maximum that working memory can hold at once (McKoon & Radcliff, 1992, p. 443).

Singer et al. (1994) highlighted the ambiguity arising from the minimalist definition of this criterion. Specifically, local coherence seems to have three nuances of meaning according to minimalists: one referring to memory studies concerning the restriction to the maximum information storable in working memory; a spatial perspective where local coherence is established among closely positioned sentences; and a third sense dealing with the level of mental representation involved in automatic inferencing, where minimalists envision automatic encoding of inferences related to lower levels of mental representation, such as linguistic relations between items in sentences, rather than higher-level situational models in constructionists' view (Van Dijk & Kinsch, 1983).

Moreover, turning to the second criterion of minimal inferencing, the *easily available information* may come from explicit textual stimuli or general knowledge. For instance, if one reads a sentence with the subject *bird* followed by an anaphoric reference to *parrot*, their world knowledge helps them understand the relationship between the two linguistic items, as [parrot] is a member of the category [birds]³⁹. This second criterion for minimal inference encoding has been criticised also by psychologists (Gerrig & O'Brien, 2005), since automatic inferences have been defined by what they were not, reviewing numerous instances where readers did not encode non-local inferences,

³⁹ From now on, squared brackets are meant to stress the reader's focus on the concept rather than the word.

leading to the definition of ‘easily available information’ (Gerrig & O’Brien, 2005, p. 227). Moreover, Singer and colleagues (1994) argued that, in the minimalist view, *quickly and easily available information* is incorporated into mental representations only if it helps maintain local coherence; thus, not only it was unnecessary to identify two different criteria, but being the two linked to each other, the theory does not provide the possibility of scientific falsification.

Nevertheless, minimalists did not completely dismiss the possibility of complex and detailed MRs, but they argued these cannot be automatic. Talking about *global coherence*, McKoon and Radcliff (1992) proposed the possibility of strategic, goal-driven inferencing, as long as these inferences are activated only when a *local* one is absent, prompting a strategic process to restore coherence. Generally speaking, global coherence involves integrating incoming information with the content that is no longer active in the working memory but stored in the long-term memory (Cook & O’Brien, 2023, p. 237). McKoon and Radcliff (1992, p. 446) explained the global coherence inferences using the following examples:

- (2) a. *A killer wants to kill the president. When the killer’s knife won’t work, he reaches for his hand grenade.*
- b. *A person wants to lose weight. The person decided to buy fruit and yoghurt since their bike was broken.*

In (2a), the second sentence is understood independently of the first one concerning local coherence. Conversely, processing (2b) necessitates global coherence inferences to make sense. Therefore, according to the minimalist’s view, goal-driven inferences such as in (2b), where the goal is to understand the link between [healthy food] and a [broken bike], are made possible only by the lack of local coherence. In all other cases, this type of inference will not be part of the first automatically activated MR. However, several studies demonstrated that readers are sensitive to violations of global coherence even when there is no local coherence break (Cook & O’Brien, 2023, p. 237). On the contrary, the constructionist view believed that all inferential processes were goal-driven, based on three assumptions:

- *The reader's goal assumption*: readers construct MRs to address their comprehension goals.
- *The coherence assumption*: readers seek both local and global coherence.
- *The explanation assumption*: readers attempt to explain actions, events, and states mentioned in the text.

(Graesser et al., 1994, pp. 371–372)

Some authors (Garnham & Oakhill, 1996; Garnham & Yakovlev, 2015; Gerrig & O'Brien, 2005) argued that the debate between constructionists and minimalists was misplaced since the two approaches examined different aspects of MRs. Constructionists or explanation-based view (Cook & O'Brien, 2024) focused on specific linguistic contexts leading to *search after meaning* (e.g., goal-driven) inferences (Singer et al., 1994), without specifying the number or direction of inferences (Garnham & Oakhill, 1996). Conversely, minimalists sought general restrictions on the inferential process, including minor interpretative tasks like anaphoric reference relations, which can be automatically encoded through syntactic priming (Garnham & Yakovlev, 2015).

Considering the contrasting positions of minimalists and constructionists, a third psycholinguistic approach, the *Memory-Based Approach* (MBA) (Gerrig & O'Brien, 2005), emerged in the 2000s to explain reading processing. This approach is currently the most effective for understanding the functioning of the construction of mental representations from the perspective of the gender of the referents (Gygax et al., 2021).

3.3 The Memory-based approach and grammatical gender processing

3.3.1 *The role of working and long-term memory in constructing mental representations*

Starting from the Twenty-first century, the Memory-Based Approach merged minimalist automaticity with the constructionist complexity of representation (Cook et al., 1998; Gerrig & O'Brien, 2005). According to this approach, inferencing is viewed as an automatic process weighted by extralinguistic context and memory, acknowledging the dynamic interplay of active and inactive information in memory; particularly, MBA wanted to shed light on the exact mechanism of reactivation of inactive information.

Gerrig and O'Brien (2005, p. 228) elucidate the role of ordinary memory processes in automatic inference through the *Resonance Model* (Myers & O'Brien, 1998). This model explains how elements in discourse representations are reactivated, with featural overlap playing a crucial role. According to this model, mental representations are produced in three stages:

- In the first stage, concepts presented in the written text are immediately activated in working memory.
- In the second stage, the concepts activated in working memory send signals to long-term memory, where world knowledge is stored. Such signals may retrieve inactive extralinguistic information. The speed and accessibility of this activation depend on the degree of overlapping features between what is read and what the reader already knows.
- In the third stage, the information retrieved from long-term memory is also present in working memory and thus integrated with the information derived from reading, forming (or updating) the mental representation.

Experimental research since the 1970s has identified some factors influencing concept (re-)activation. For instance, concerning anaphorical relations, McKoon and Radcliff (1980) found that exact anaphoric references (e.g., complete repetition of the antecedent) are easier to encode than partial ones (e.g., use of a pronoun instead of repeating the antecedent). Duffy and Rayner (1990) demonstrated that high-typical antecedents, such as *robin* for [bird] drive faster inferences than low-

typical ones (e.g., *goose*). Other factors affecting antecedent accessibility include textual distance, complexity, and associative strength, especially causality links or semantic similarity (Cook & O'Brien, 2023, p. 237; Gerrig & O'Brien, 2005, p. 230). Hence, since the resonance mechanism is viewed as a *gradient of reactivation*, the MBA does not search for specific categories of inferences that establish local or global coherence but aims at understanding the different weights associated to explicit and implicit information.

Moreover, while inference-making is seen as an automatic and passive process, the reader's goal is considered only one of many factors influencing resonance. Indeed, the problem-solving focus of the reader contributes to activating specific information, but it is not the sole driver. Experiments by Cook et al. (1998) and Gerrig & O'Brien (2005, p. 231) showed that reactivation of inactive information is not solely goal-driven, as it can sometimes be automatic and irrelevant, or even hinder text comprehension.

Finally, the most recent research on text comprehension models has revised earlier assumptions by proposing the three-stage *RI-Val model* (Cook & O'Brien, 2023, p. 238), which provides a more precise explanation of meaning reactivation from long-term memory during the resonance process. This model encompasses the stages of *Resonance*, *Integration*, and *Validation*. The initial stage ('R' stage) pertains to the moment when a concept's activation level rises, thereby accumulating potential influence on the following stages. The Integration ('I' stage) phase involves incorporating information from long-term memory that meets the minimal threshold for activation. Meanwhile, the 'Val' stage, or validation phase, evaluates all linkages from the previous stage against the contents of active memory, not requiring perfect matches to advance to further text comprehension (Cook & O'Brien, 2023, p. 238). These stages are characterised as passive and *asynchronous*, indicating that the output from one stage serves as the input for the next. A key innovation of the RI-Val model is the coherence threshold, which denotes the point at which the validation process identifies sufficient matches between stored information and active memory, thus enabling comprehension to progress. Significantly, even though the coherence threshold marks the moment when a text passage has been understood and the reader can proceed, concepts activated during prior resonance mechanisms remain

active and continue to be processed. Consequently, there is potential for further reactivation, integration, and validation of these concepts with new content.

Turning now to *gender inferences*, MBA has been particularly effective in explaining how various explicit and implicit pieces of information regarding referents' gender identity contribute to the formation of our mental representations.⁴⁰ A necessary premise is that there is no universal cognitive process able to summarise the construction of mental representations across different languages. Current psycholinguistic research has identified the key factors that guide gender inferences based on the gender system of a language. For example, in a language with grammatical gender such as Italian, information about referential gender explicitly encoded in the text, such as feminine suffixes on nouns (e.g., *professoressa* 'professor(F)'), is assumed to be immediately activated in working memory. However, the formation of the mental representation of the referents' gender identity also involves implicit information associated with that initial concept activated in working memory. In the case of gender, intended as a social construct and an individual identity trait (cf. 2.2.1 and 2.2.2) information stored in long-term memory that can be resonantly associated with the textual input can be of various types. Psycholinguistic studies (Beller et al., 2015; Bender et al., 2016b, 2016a; Boroditsky et al., 2003; Boroditsky & Ramscar, 2002; Imai et al., 2014; Pavlidou & Alvanoudi, 2014, 2019; Saalbach et al., 2012; Sato et al., 2020; Sato & Athanasopoulos, 2018; Sera et al., 2002) investigate the immediate association of qualities culturally linked to stereotypical gender roles with linguistic stimuli grammatically gendered as masculine or feminine, even when depicting inanimate objects (e.g., *mela* 'apple(F)', *ponte* 'bridge(M)') or pseudonyms (Ervin, 1962). In such cases, qualities stored in long-term memory as stereotypically associated with the essentialist view of masculinity and femininity were immediately linked to the grammatical gender of the inanimate object. This mechanism caused grammatically feminine objects to be perceived, for example, as more delicate, sweet, small, and weak, while those grammatically masculine were perceived as stronger, larger, and more powerful.

⁴⁰ In psycholinguistic literature, 'gender inferences' (Gygax et al., 2021) is often used to refer to the inferential process by which the gender identity of referents is mentally represented, based on how (and whether) grammatical gender is encoded in the text.

Gender stereotypes not only involve the qualitative association of physical or character traits to animate and inanimate referents according to their grammatical gender but can also influence the proportion of men and women included in a plural mental representation (Sczesny et al., 2016). This is particularly evident in mental representations elicited by role nouns, where the depiction of a group may also be based on gender stereotypes associated with each profession in the reader's social context. Additionally, gendered MRs are influenced by more individual factors such as the reader's familial background, social upbringing, political positioning, attitudes towards feminism and GS language, and personal gender identity and biological sex. All this range of implicit information potentially available through resonance processes becomes relevant in inferencing social gender. The following lines will explore the main elements that facilitate the activation or inhibition of gender stereotypes in the resonance process.

3.3.2 *The role of information stored in world-knowledge: stereotypical gender effects on MRs*

The construction of mental representations of human referents, concerning their gender identity, relies on explicitly encoded textual information, thus what has been called in psycholinguistics experiments *definitional gender* (Irmen, 2007; Osterhout et al., 1997; Siyanova-Chanturia et al., 2012) such as the feminine or masculine grammatical gender of nouns (3a), and implicit information rooted in the reader's general knowledge, like gender stereotypes associated with role nouns, also called *social gender* (Doleschal, 2015, p. 340) (3b).⁴¹

(3a) *Estetiste* 'Beauticians(F)'.

(3b) [Beauticians are predominantly women].

⁴¹ In the literature on gender inference, the expression 'explicit gender marking' is frequently used to describe stimuli in which grammatical gender is overt (cf. 1.1), meaning that the gender information is explicitly recognisable in the text. In the present work, for consistency with the previous chapters, 'overt grammatical gender' will be used instead of 'gender marked'.

This process involves a dynamic and incremental interplay between working and long-term memory, aiming to integrate information. Indeed, by looking at examples (3) the most probable MR in readers' minds would be [female beauticians] since both the definitional and the stereotypical gender encodings suggest feminine imagery. Looking at the implicit information, the activation of gender stereotypes in role noun processing having been widely observed across many languages both through offline measurements (see Gabriel et al., 2008, and Misersky et al. 2014, respectively, for French, English, and German, and for Czech, Italian, Norwegian, and Slovak, using rating scales in questionnaires; Gygax & Gabriel, 2008 for French, based on reading comprehension tasks), and online observations based on response times (see Carreiras et al., 1996 for English and Spanish, using self-paced reading task; Gabriel & Gygax, 2008, for Norwegian, based on anaphor resolution; Garnham & Yakovlev, 2015, for Russian, based on timed questionnaires; Irmén & Roßberg, 2004, and Schunack & Binanzer, 2022, for German, based on anaphor resolution; Gygax et al., 2008, and Sato et al., 2013, for English and French, based on anaphor resolution; Kim et al., 2023, for Swiss and Québec French varieties, based on yes-no forced choice task; Xiao et al., 2022, for French, using the gathering paradigm).⁴²

Additionally, important scientific data on the activation of gender stereotypes come from eye-tracking experiments (Esaurova et al., 2014, on German; Ronca & Moscati, 2019, on Italian) and neurolinguistic research, which has significantly advanced our understanding of cognitive processes by offering direct measures of real-time stereotype processing.

A key methodology in this field involves the use of event-related potentials (ERPs) and specific measurements, such as P300, P600, and N400, aimed at detecting form or content anomalies in text processing.⁴³ Siyanova-Chanturia et al. (2012) observed the activation of gender stereotypes within

⁴² The gathering paradigm (Braun et al., 2005; Xiao et al., 2022) methodology asks participants to estimate the proportion of men and women present at an event described in a text, based on how referential gender is represented through grammatical gender cues.

⁴³ In neurolinguistics, P300, P600, and N400 refer to brain wave patterns, known as event-related potentials (ERPs; see 3.1), that are measured with electroencephalography (EEG) and indicate different cognitive processes in response to language and other stimuli. Particularly, the P300 is a positive wave that peaks about 300 milliseconds after a stimulus. It's commonly linked to attention and the detection of relevant or surprising information, particularly during tasks that

the 500-600 millisecond window, the same timeframe in which explicit grammatical gender information in the text is usually processed. Interestingly, the authors highlighted that the activation of stereotypical information, especially when it contrasts with explicit textual information, can generate anomalies in processing similar to those related to syntactic parsing, which can emerge from the P300 and P600. The fact that a P600 is also elicited by syntactic anomalies led the authors to conclude that not only definitional but also stereotypical gender information must be encoded *grammatically*, thus stored in long-term memory as part of the word's meanings (Irmén, 2007; Osterhout et al., 1997).

Moreover, stereotypes seem to function as semantic-pragmatic information, with their violation (*semantic incoherence*) triggering an N400 response akin to those elicited by other pragmatic incongruities. For example, encountering incongruent word pairs, based on highly stereotyped essentialist views of gender roles, such as 'woman/aggressive' or 'man/nurturing' may result in an N400 response, illustrating the automatic process of stereotypical activation (Siyanova-Chanturia et al., 2012, pp. 2–3). Along with this perspective, it is necessary to understand to what extent it is possible to treat stereotypes as extra meanings re-activated from world knowledge instead of inherent features of the noun stored in long-term memory. In fact, during the late 1990s, certain researchers introduced a *lexicalist interpretation* of the Mental Model Hypothesis (Banaji & Hardin, 1996; Osterhout et al., 1997). This perspective suggested that stereotypes were not viewed as automatic inferences but were directly stored and integrated into the lexicon. However, through two eye-tracking experiments, Kreiner et al. (2008) refute the lexicalist hypothesis, arguing that because the activation of the stereotype can be easily inhibited by linguistic factors present in the text, such as overt grammatical gender, which will be discussed shortly, it is not possible to interpret stereotypes as inherent to the lexical entry.

require distinguishing one item from another (Polich, 2007). The P600 is a positive wave peaking around 600 milliseconds after a stimulus, P600 is mainly associated with processing syntactic (sentence structure) errors or complex grammatical constructions, reflecting re-evaluation or repair in language comprehension (Friederici, 2002). Instead, N400 is a negative wave peaking approximately 400 milliseconds after seeing or hearing a word. The N400 is specifically tied to semantic processing, how the meaning of words fits within a context. Larger N400 responses indicate unexpected or incongruent word meanings (Kutas & Federmeier, 2011).

It is also important to note that there is a distinction between P600 and N400 responses about gender stereotypes and language. When stereotypical and grammatical information clash within a complex sentence, a P600 is often elicited, notably signaling parsing anomalies, whereas single role nouns in semantic or associative priming paradigms typically elicit N400 effects, reflecting the integration of conflicting lexical features (Siyanova-Chanturia et al., 2012).

Going back to stereotypical effects, Cacciari and Padovani (2007) highlighted the different cognitive weights of male and female stereotypes. Their study involved two experiments testing the activation of gender stereotypes for Italian role nouns. The experimental paradigm, based on Banaji and Hardin's study (1996), showed participants a prime word followed by a target pronoun (*lui/lei*, 'he/she') and involved a gender (identity) decision task. The prime words were Italian role nouns with female, male, or neutral stereotypes (control condition). Their results indicated that the effect of masculine stereotypical gender priming is significantly stronger than feminine one. This finding is consistent across languages: indeed, it was observed by Siyanova-Chanturia et al. (2012, p.10) for Italian, where stereotypically masculine primes were more effective than feminine ones in triggering brain responses with gender-incongruent stimuli. Lastly, studying stereotype weights in gender inferences in German, English and French, Gabriel et al. (2008) discovered that masculine stereotypes were associated with role nouns with greater frequency and higher inter-participant agreement than feminine ones. In conclusion, interlinguistic experimental findings so far indicate that stereotype weight in MRs' construction must always be considered when exploring gender inferences.

3.3.3 The role of language-specific encoded information: grammatical gender effects on MRs

Psycholinguistic research has extensively debated which information type primarily influences the inferential process in grammatical gender languages and the significance each holds within language processing. Coming back to the situation of a clash between definitional and stereotypical gender, as illustrated in (4a) and (4b), several experimental findings (Cacciari et al., 1997; Carreiras et al., 1996; Garnham & Yakovlev, 2015; Gygax et al., 2021; Ronca & Moscati, 2019) demonstrated that surface

grammatical information tends to override the stereotypical one during language processing, and that masculine grammatical inputs seem to exert greater influence on MRs compared to feminine ones (Irmen & Roßberg, 2004, p. 272).

(4a) *Estetisti* ‘Beauticians(M)’.

(4b) [Beauticians are predominantly women].

Therefore, while exposed to clashing information such as that of (4) people most likely have a mental representation of [male beauticians], despite the automatic activation of the feminine stereotype.

Ronca and Moscati (2019) provided a detailed explanation of the inhibitory effect of overt grammatical gender on stereotypes, supporting the Mental Models theory. They employ an eye-tracking methodology to directly observe stereotype activation and propose an experiment based on the *Visual World Paradigm*. Participants were presented with audio stimuli while viewing a screen displaying images of a man and a woman, alongside filler images. The experiment featured bi-clausal sentences, manipulated in two conditions (5a) and (5b):⁴⁴

(5a) *Essendo ingegnere, si era comprata un nuovo studio in centro città.*

‘Being an **engineer(M)**, [she] had **bought herself** a new studio in the city center’.

(5b) *Diventata ingegnere, si era comprata un nuovo studio in centro città.*

‘Having **become(F)** an **engineer(M)**, [she] had **bought herself** a new studio in the city center’.

The authors observed that in condition (5a), where the masculine noun is used to represent both men and women (e.g., *masculine by convention*, cf. 2.1.1), participants immediately inferred [male

⁴⁴ The conditions proposed by Ronca and Moscati (2019) are more articulated. This section highlights only the most significant difference between conditions (5a) and (5b) in order to highlight the results relevant to the present discussion.

engineer], activating the stereotype [engineers are predominantly men] in working memory, which was then integrated into sentence processing. Participants updated their mental representation to [female engineer] upon reading the feminine past participle *comprata*, ‘bought(F)’. Conversely, in condition (5b), the early disambiguation of feminine grammatical gender of the past participle *diventata*, ‘became(F)’, presented at the sentence’s start, inhibited the stereotype’s activation from the subsequent role noun *ingegnere*, suggesting a female referent directly. Therefore, overt grammatical gender must be considered a strong formal input that can inhibit stereotype activation, or at least reduce its effect, on gender inferences about human referents (Irmén et al., 2007).

Ronca and Moscati’s results are significant for the direct study of stereotype inhibition in working memory. They provide experimental confirmation that the construction of MRs involves not only information for establishing local or global coherence, as proposed by the minimalist hypothesis (McKoon & Radcliff, 1992) but also automatic inferences retrieved from long-term memory that may not aid text interpretation. However, considering the literature on languages with grammatical gender (Gygax et al., 2021; Sczesny et al., 2016), a fundamental assumption made by the authors can be contested: treating nouns like *ingegnere* ‘engineer(M)’, as *unmarked* (cf. 1.7.4) even in terms of grammatical gender. The authors claim these nouns are masculine only due to stereotypical information but ‘formally ungendered’ (Ronca & Moscati, 2019, p. 114) since Italian grammar prescribes the generic masculine for professional roles to indicate all possible referents. Looking at the grammatical gender encoding, as discussed in 1.7.2, nouns like *ingegnere* belong to the class of non-independent nouns (Thornton, 2022, p. 20), which have overt grammatical gender for both masculine and feminine forms (e.g., *ingegnere/ingegnera* ‘engineer(M)/(F)’). As extensively discussed in Chapters 1 and 2, as well as in the academic debate from the Eighties onward (cf. 2.2.1), the use of the masculine by convention does not imply that it can be considered unmarked.

Indeed, the inferential process elicited by masculine forms considered unmarked will be addressed shortly. For now, it is crucial to emphasise that, despite the undeniable effect of the strong male stereotype associated with the noun *ingegnere*, the specific male mental representation activated in participants’ minds in Ronca and Moscati’s (2019) experiment could have been guided not only by

implicit information but also by the masculine grammatical gender encoded in the noun, which the authors did not account for in their experimental design.

A key insight to understanding why such grammatical gender encoding cannot be disregarded in studying the inferential process is offered by the *Thinking for Speaking hypothesis* (Slobin, 1996, 2000; 2003; 2006) highlighting that, since language acts as a medium to encode event conceptualisation, processing a language activates linguistically emphasised features that bias our mental representations as ‘attentional clues’. Indeed, certain language-specific patterns may direct and accentuate our attention to specific dispositions such as events or categories.

By going beyond gender inferences and examining how different languages influence the way speakers conceptualise and describe motion, Slobin (2003; 2006) offered a compelling perspective on linguistic *online* relativism. The hypothesis delves into how specific syntactic construction and/or lexicalisation patterns of a language shape the cognitive processes of its speakers when they have to talk about a specific semantic domain. The particular focus is on the manner of motion, starting from Talmy’s descriptions (1991, 2000) of *satellite-framed (S-) languages* and *verb-framed (V-) languages*. The *S-languages*, including English, encode the manner of motion within the verb and use extraverbal satellites to express the path of motion. Conversely, *V-languages*, including French, encode the path of motion within the verb, while the manner is expressed through extraverbal satellites. For instance:

In S-languages: *The dog ran*[MANNER] *into*[PATH] *the house*.

In V-languages: *Le chien est entré*[PATH] *dans la maison en courant*[MANNER].

Due to this manner lexicalization, in S-languages, even belonging to different families such as the Finno-Ugric, Germanic, Slavic, and Sino-Tibetan, manner verbs are easily accessed in listing tasks, frequently used in conversation, and prominently featured in both oral and written narratives. Speakers of these languages readily access various manner verbs, making fine-grained distinctions between similar manners of movement. Moreover, the meanings of these verbs are often extended for

evaluative or metaphorical descriptions of events and processes. As a result, listeners and readers tend to build detailed MRs of the manner of motion in reported events (Slobin, 2003, p. 176).

This extensive use of manner verbs begins in early childhood (Slobin, 1996), requiring young learners to differentiate between different types of manner. English-speaking children, for example, must constantly pay attention to the semantic distinctions among various manner verbs in their input. Consequently, their native language guides them to focus on the manner of motion and develop systematic semantic categories in this domain. As children learn which features are emphasised in their language, this cognitive process becomes automatic in adulthood. Mature speakers thus instinctively know what to encode when preparing a message. Hence, children develop the automatic concept of *listening/watching for understanding* which transforms into *thinking for speaking* in adults (Slobin, 2003, p. 181).

In contrast, V-languages, pertaining as well to different families such as the Romance, Semitic, and Turkic ones, but also some signed languages, focus more on the path of motion rather than the manner. For speakers of these languages, the manner is less salient, and attention is directed toward changes in location and the settings in which motion occurs. The key linguistic difference lies in the availability of a main-verb slot for manner verbs in S-languages, as opposed to a main-verb slot for path verbs in V-languages. This structural distinction influences how speakers of these languages attend to and describe motion events (Slobin, 2006).

Looking at S-languages, the impact of these obligatorily encoded traits extends to different types of memory processes which are implicated not only in current speaking/understanding but also in storing conceptualisations for future reports. For example, Oh (2003) tested English and Korean speakers in a labelling task where participants watched videos of people performing various actions involving different manners of motion. In a surprise memory task, subjects were asked to compare their memory of each clip with a standard clip of the same actor walking at a normal rate. English speakers, but not Korean speakers, accurately identified the length of stride and degree of arm swing in the original clips, although these details of manner did not occur in their labelling of the clips. This demonstrates that even if some traits are part of *thinking* and not *speaking* in the current conversation,

having such a salient category in one's native language influences the attention participants pay to that trait in conceptualising an event and describing it later. As thinking for *present* speaking becomes part of *potential* speaking, it necessitates the development of appropriate mental representations that are then available for non-linguistic purposes (Gumperz & Levinson, 1991). Therefore, the influence of formally encoded traits, such as grammatical gender, seems to persist also in a durable fashion (Gygax et al., 2012; Lévy et al., 2014) beyond the immediate experimental context and is reactivated in subsequent tasks.

According to Pederson et al. (1998, p. 586), the use of a linguistic system forces the speaker to make computations they might not otherwise make. They argue that many experiences must be remembered in a way that facilitates future description, and the formal encoding of specific semantic traits, such as manner of motion in English verbs may function as attentional clues to facilitate such memorisation and retrieving processes.

It is important to note that, as Slobin stated (2003), this hypothesis has only been tested for its cognitive effects in inferential contexts (e.g., tests of recall, recognition, and judgement). Due to the lack of substantial scientific evidence on the anticipatory effects of language on cognition, Slobin emphasises that language influences only certain cognitive processes, not cognition in general. This clearly differentiates the hypothesis from both weak and strong deterministic theories proposed by early linguists like Edward Sapir and Benjamin Lee Whorf (Kay & Kempton, 1984) which have not been widely supported by experimental psycholinguistic tests (Hunt & Agnoli, 1991; Lucy & Shweder, 1979; Pinker, 1994), and where experimental data did show language effects, they were often limited to specific cognitive domains (Everett, 2013).

Turning now to the linguistic and cognitive domain of grammatical gender, Slobin suggests:

If I tell you about my 'friend' in English, you will expect that sooner or later you will discover the sex of the friend, because you know that third-person pronouns in English indicate gender. If I go on and on to refer only to 'my friend' or 'they,' you will begin to suspect that I have reason to conceal the person's gender. However, if we have the same conversation in a language that has no gendered pronouns, such as Turkish, Chinese, or Hungarian, you

probably will not have such suspicions. [...] We are not concerned with real-world cognition here, but with the ongoing construction of mental representations. Our basic cognition of gender does not change when we switch languages, as far as I know, although our social and cultural cognition may well change.

(Slobin, 2003, p. 172)

In more recent psycholinguistic studies, Everett (2013) found no compelling evidence that speakers of different languages conceptualise referents' gender differently in broader non-linguistic contexts. The findings with greater acceptance among the scientific community indicate that, firstly, when speakers are used to overt grammatical gender encoding, they may sometimes attribute gendered characteristics to non-linguistic entities, and that such attribution may be visible even in 0-7-year-old children (Bassetti & Nicoladis, 2016). Additionally, speakers of languages that use gendered pronouns are more likely to perceive non-gendered human depictions in gendered terms (Everett, 2013, p. 245). However, Everett contends that the influence of grammatical gender on cognition is significantly weaker and more limited than other linguistically encoded traits, such as manner of motion, spatial orientation, and colour codings, as explored by Slobin (1996; 2000; 2003; 2006). He suggests that this weaker influence is due to the universal and salient nature of the societal gender binary in world knowledge, which exists independently of linguistic representation. Moreover, as proved by experimental data (Bassetti & Nicoladis, 2016; Bender et al., 2016b) the application of grammatical gender to inanimate or non-human entities appears to further diminish its cognitive impact.

In many cases the information encoded in grammatical gender categories directly conflicts with concrete experience. For example, any Portuguese speaker is well aware that a fork has no actual biological sex. So on some level they must also be aware that the masculine gender of the associated noun *garfo* does not actually imply that forks are males. The same conclusion could of course be made for countless other nouns. In such cases, introspection reveals a disconnect between grammatical gender categories and biological sex categories.

With this “conflict” in mind, it is not particularly surprising that grammatical gender seems to play a limited role in impacting the construal of non-gendered entities.

(Everett, 2013, p. 246)

Thus, in light of the foregoing discussion on the effects of grammatical gender encoding on cognition, it can be observed, on one hand, an inevitable influence; on the other hand, this influence can be considered more restrained compared to that produced by other types of formal encodings, such as manner of motion. Additionally, as stated by Bassetti & Nicoladis (2016, p. 6), the significance of effects produced by grammatical gender varies along with the language system: for example, it seems that gender in Romance languages exerts a greater effect on cognition than gender in Germanic languages.

Therefore, even though such effects can never be considered universally weighted across languages, there is consensus that in constructing the MRs of gendered role nouns, the morphological encoding of grammatical gender may drive speakers to consistently attend to referents’ gender information, even when it is irrelevant or detrimental to text comprehension, as initially proposed in examples (1a) and (1b). Indeed, mandatory grammatical gender encoding makes referential gender a salient feature in the sentence (Gygax et al., 2021) to the extent that facing a clash between grammatical and stereotypical gender in role nouns, it is likely that the first one inhibits the activation of the second one if grammatical gender is formally encoded in the language with high frequency, as it happens in French, Spanish, or Italian.

In addition to the extensive literature on languages with grammatical and natural gender, there are also psycholinguistic experiments related to aspects of linguistic relativity and grammatical gender that have been conducted on genderless languages. An interesting example is the two studies proposed by Chen and Su (2011). The experiments presented by the authors involved exposing participants to stories containing stereotypical references to male or female individuals, or single sentences containing role nouns followed by images depicting men or women. In both experiments, participants were required to answer questions about the referential gender of the target subjects. In

the English stimuli, referential gender was frequently encoded in the personal pronouns *he/she*, whereas in the Chinese stimuli, it was almost always absent. The English-speaking participants were found to be more successful, both in terms of accuracy and faster response times, in processing and thus reusing referential gender information in the text compared to the Chinese-speaking participants. The authors interpret this difference as due to Chinese being less exposed to grammatical gender, making its speakers less *tuned* to retrieve and retain this information in working memory. Similar results have been obtained by Fukumura and colleagues (2013) on Finnish, still within the context of pronouns but studying the phenomenon of Semantic Competition.

Coming back to the effect of overt grammatical gender of role nouns, one study on bilingual speakers (Sato et al., 2013), whose languages differ typologically for grammatical gender encoding, like English and French, reported a switch in gender inference type corresponding to language switching during the experiment, along with participants' proficiency levels in both languages. When bilingual participants were presented with professional nouns in English (e.g., *dancers*) their inference was driven by the immediate activation of the stereotype associated with the profession [a group of women], since English is a natural gender language that does not show grammatical gender encoding through nominal morphology. Otherwise, when the same participants were presented with analogue stimuli translated into French, a grammatical gender language, their inference corresponded to the overt masculine grammatical gender, intended as referentially generic (e.g. *danseurs* 'dancers(M)'), which inhibited the activation of the female stereotype resulting in the inference [a group of men]. Therefore, mental representations seem to alternate as a function of *language in use* (Sato et al., 2013, p. 33).

Looking more broadly at gender effects on cognition in bilinguals (see Bassetti and Nicoladis, 2016 for a review) it is possible to identify two primary findings: firstly, bilingualism appears to attenuate the effects of grammatical gender on cognition found in monolingual speakers of the same languages, and this attenuation is observed in both early bilinguals and later learners. Presumably, the speaker's awareness of two different gender systems mitigates the reliability of each as a unique reference. Secondly, the impact of bilingualism is contingent upon the specific language combination

involved. Positive effects are noted among people who speak two grammatical gender languages, as they exhibit weaker influences of their native language's gender assignments on items that have opposing gender assignments in the two languages (Bassetti & Nicoladis, 2016). Conversely, and contrary to Sato et al.'s results (2013) reported above, no significant effects of bilingualism were found in native speakers of a grammatical gender language (e.g., French) whose second language lacks grammatical gender (e.g., English); these individuals continued to display the effects of their native language's gender assignments. It is important to consider that the differing views of Bassetti and Nicoladis (2016) and Sato et al. (2013) may be attributed in part to the significant variation in the tasks presented to participants. More importantly, these differences likely arise from the focus on grammatical gender respectively in non-human and human referents. Lastly, native speakers of a language without grammatical gender who learn a grammatical gender language may begin to exhibit effects of the grammatical gender of the second language (Bassetti and Nicoladis, 2016, p. 9).

Most of the studies reviewed by Bassetti and Nicoladis (2016) in formulating these generalisations focused on the attribution of qualities and connotations to objects or animals based on grammatical gender. Although the present work does not address the gender of inanimate entities but rather the effects of gendered human referents on mental representations, all experimental results aligned with the hypotheses of online linguistic relativity discussed in this section, along with the postulations about the Memory-based approach, served as the main theoretical foundation for studying gender inferences.

Again, it is evident that such effects must always be contextualised, taking into account the multifaceted nature of multilingualism, depending on factors such as the timing of language acquisition (early versus emergent bilinguals), the duration and intensity of exposure to the languages, the variety of input exposure, the level of proficiency attained, the cultural status of each language in the country of residence, and so on. It was not possible in this context to explore all aspects of multilingualism that may influence the relationship between grammatical gender and cognition. However, highlighting the main findings of formal encodings of gender both in monolingual and bilingual speakers was relevant for the studies proposed in the forthcoming sections of this work,

where the scientific objective is to isolate the effects of form while controlling for the automatic activation of gender stereotypes.

3.4 The cognitive processing of masculine, feminine, and gender-sensitive encodings of grammatical gender

3.4.1 The polysemic meaning of masculine gender in grammar and language processing

The preceding sections have highlighted the theoretical and empirical reasons that make explicit gender encoding cognitively salient in languages with grammatical gender, such as Italian. This section aims to specifically investigate more deeply the cognitive salience of masculine forms intended generically, thereby encompassing both men and women as potential human referents.

As discussed in previous chapters, grammatical gender languages such as Italian prescribe the use of masculine by convention in any referential context intended to be generic, thus gender-indefinite, gender-unknown, or gender-mixed. In contrast, feminine grammatical gender in these languages is configured as structurally and sociolinguistically marked (cf. 1.7.4 and 2.1.1). While it is unquestionable that the masculine grammatical gender is unmarked in Italian, both from a structural and a sociolinguistic point of view (Luraghi & Olita, 2006, pp. 30–32), the cognitive salience of the generic meaning associated with masculine forms has been recently questioned by some psycholinguists (see Gygax et al., 2021 for a review), and much earlier by philosophers (Moulton, 1981). These arguments are primarily based on French and German academic literature; however, since the masculine by convention is a common pattern found in various grammatical gender languages (Bußmann & Hellinger, 2003; Marcato & Thüne, 2002; Schafroth, 2003), this research strand can provide a theoretical basis for Italian as well.⁴⁵

⁴⁵ In psycholinguistic literature (Gygax et al., 2021), what has been defined in previous chapters as ‘masculine by convention’ is almost always referred to as the ‘generic masculine’, for all referential uses indicated in Table 6 (cf.),

Considering grammatically masculine nouns as *polysemic* (Gygax et al., 2021), thus possessing both the specific and the generic meaning, necessarily implies a disambiguation task in language processing, as the specific interpretation [male] must be inhibited to include [women] in the mental representation. However, psychologists have proposed contrasting models regarding the processing of such disambiguation. Consider a sentence like (6):

(6) *Il chirurgo più qualificato nel nostro ospedale non può operare questo mese perché è entrata in maternità.*

‘The(M) most qualified(M) surgeon(M) in our hospital cannot operate this month because [she] started_{F(F)} the maternity leave.

According to the *Parallel Distributed Processing Theory* (Plaut et al., 1996), all meanings associated with words are activated immediately and *in parallel* during reading. However, the meanings to be included in the mental representation are selected only in a subsequent decision stage. In this perspective, the grammatical gender of *chirurgo* ‘surgeon(M)’, since intended as generic (e.g., potentially female and male surgeon), should not be inferred until the grammatically feminine anaphora *entrata* ‘entered(F)’ is encountered. The model suggests that if the activation of the masculine grammatical gender of *chirurgo* is irrelevant to understanding the content of the first part of the sentence (e.g., not goal-driven), it is not immediately included in the mental representation. However, as soon as referential gender becomes relevant for semantic coherence (in this case the saliency of the feminine grammatical gender in *entrata*, is reinforced by the immediate reference to pregnancy), it is included in the MR through anaphor resolution, selecting [woman] from all previously activated meanings. According to this view, such final selection [woman], in contrast to the masculine grammatical gender shown in *chirurgo*, should not involve any cognitive effort.

regardless of whether it refers to an unknown individual, an abstract role, or a group of people of mixed or unspecified gender identities. Therefore, from this point onward, the terminology more consistent with the psycholinguistic literature, ‘generic masculine’, will be adopted.

Instead, the *activation-selection model* of ambiguity resolution (Gorfein, 2001; Gorfein et al., 2007), postulates that every word possesses a set of weighted attributes reflecting its multiple structural and semantic features. The activation of one feature instead of another is context-dependent, but in the absence of a particular context, the activation depends on its current weight, which is based on the frequency of use in real-life conversations and cognitive accessibility. Regarding gender inferences, the use of masculine grammatical gender in singular nouns to designate indefinite people occurs significantly less often than the reference to specific male people (Gygax et al., 2021), and this may become central in providing more cognitive accessibility to the specific meaning, even when employed in the plural form, resulting in an automatic *male bias* and a passive interpretation of [man] or [group of men] instead of [gender-indefinite individual] or [group of men and women].

Thus, regarding the disambiguation task in sentence (6), the Activation-Selection Model posits that a generic masculine stimulus would initially activate the specific masculine form. In a subsequent phase, this information would be compared with other available information in the working memory, such as the feminine anaphoric reference. Finally, the specific masculine information would be discarded in favour of the generic masculine present in the long-term memory, updating the mental representation to modify referential gender. Contrary to the previous model, such an update of the mental representation will invariably result in cognitive effort (Tibblin et al., 2023a).

While this second model proves superior to the previous one in terms of immediate inference of the word's gender, irrespective of the reader's goal, the primary issue seems to be the very consideration of generic masculine inference as a disambiguation task. Indeed, the generic meaning, clear in grammar and some speakers' metalinguistic competence, appears not to be cognitively recognised (Gygax et al., 2021).

Numerous experiments on anaphor resolution of sentences containing role nouns justify doubts about the existence of the generic masculine inference. Various experiments in this field have involved sentence evaluation tasks based on anaphor resolution in two-sentence passages. The sentence evaluation task was initially proposed by Tanenhaus & Carlson (1985, 1990), and has gained particular significance in the line of research on gender inferences following the experiments

conducted by Gygax et al. (2008). The evaluation consisted in judging if the second sentence was a *sensible continuation* (e.g., coherent) of the first one. The first sentence contained an antecedent, a role noun in grammatically masculine plural form, intended as generic (e.g., *les spectateurs* ‘the(M) spectators(M)’), while the second presented an anaphoric element conflicting with the antecedent’s grammatical gender (e.g., *plusieurs femmes* ‘several of the women’). Sometimes, a third median sentence was included to provide more context (Sato et al., 2016). Participants’ positive judgments significantly decreased with incongruent continuations (e.g., *plusieurs hommes*, ‘several of the men’), with slower response times, indicating cognitive effort in resolving the feminine anaphoric element and immediate activation of a male-specific mental representation upon reading the role noun.

Reboul and Moeschler’s (1998) terminology and Tibblin et al.’s (2023a) visual schemes further elucidate the functioning of anaphoric relationships within mental models. Their tools allow precise predictions regarding the inclusion of smaller entities, such as objects and individuals, in readers’ mental representations (MRs). Two operations are particularly pertinent: *grouping* and *extraction*. Grouping occurs when a noun phrase antecedent like *the actors and the actresses* is followed by a generic comprehensive anaphoric element *they*. Here, the reader constructs two MRs according to the coordinated conjuncts [the women] and [the men] as separate entities, merging these into the new MR [a mixed-gender group]. Extraction, instead, occurs when a generic antecedent, (e.g., *It. i vicini* ‘the(M) neighbours(M)’), is followed by a gender-specific anaphoric element (e.g., *alcune donne*, ‘some(F) women’). Initially, the reader forms a mixed-gender MR, which is then updated to include the gender-specific components.

The extraction operation has been instrumental in investigating the male bias due to generic masculine forms interlinguistically through Sentence evaluation. As illustrated in Figure 16, two inferential outcomes arise from generic masculine forms in anaphor resolution tasks. If a generic masculine stimulus (e.g., *i vicini* ‘the(M) neighbours(M)’), is interpreted as ungendered, the extraction of the feminine anaphoric element (e.g., *alcune donne* ‘some(F) women’) is successful, leading to positive judgments regarding coherence without cognitive effort, as the initial MR already included both men and women. However, as demonstrated in various anaphor resolution experiments across

gendered languages (see Carreiras et al., 1996 for Spanish; Irmen & Roßberg, 2004; Körner et al., 2022; Sato et al., 2016 for German; Gygax & Gabriel, 2008; Tibblin et al., 2023a, (2023b) for French), the extraction process often fails, resulting in negative judgments. Even when successful, extraction leads to longer response times, indicating that the initial MR comprised only men, which was later updated to include women.

In natural gender languages such as English, the inference of a role noun intended generically but without grammatical gender encoding is guided by stereotypical information (Gygax et al., 2008, for English; Gabriel & Gygax, 2008, for Norwegian). Thus, the extraction of the feminine anaphoric element is successful when the role noun carries a high female stereotype (e.g., *the caregivers*).

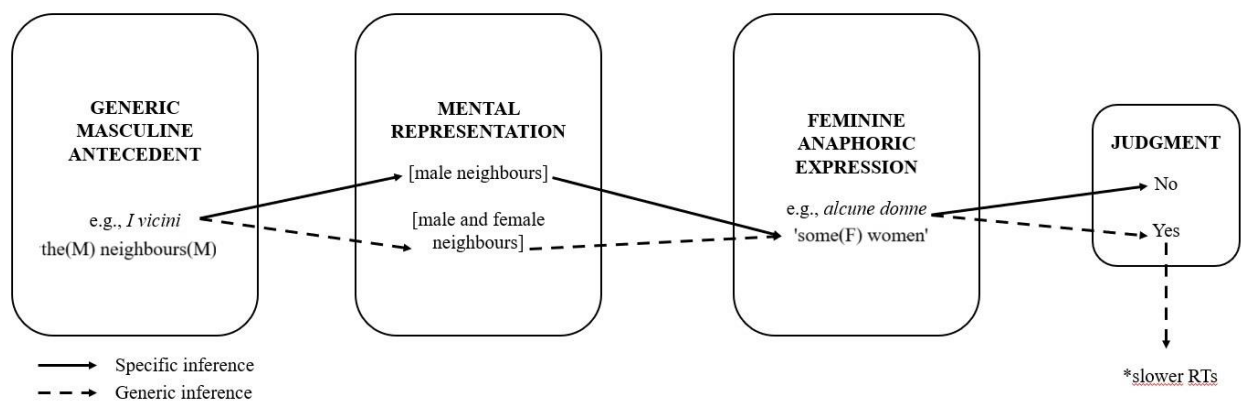


Figure 16. Extraction operation of feminine anaphoric expression from a generic masculine antecedent, based on Tibblin et al.'s (2023a, p. 8)

Beyond the Sentence evaluation methodology, empirical research in German (Esaulova et al., 2014; Irmen & Kurovskaja, 2010), Spanish (Carreiras et al., 1996; Nissen, 2002), Greek (Makri-Tsilipakou, 1989), Russian (Doleschal & Schmid, 2001), and French (Garnham et al., 2012; Gygax et al., 2012; Gygax & Gabriel, 2008; Lévy et al., 2014) has shown that the specific meaning of masculine forms often overrides the generic one by employing several different tasks (see Sczesny et al., 2016, p. 2 for further review).

Interestingly, offline tasks (Braun et al., 1998; Stahlberg et al., 2001; Vervecken et al., 2015) indicate that the specific masculine mental representation tends to persist beyond immediate automatic activation, even when participants are explicitly instructed about the potential generic interpretation of masculine forms (Gygax et al., 2012). Offline methodologies typically adopt questionnaires probing participants' MRs by asking them to name exemplars, such as 'who is your favourite actor,' or 'name five historical heroes' (Braun et al., 2005; Hansen et al., 2016; Stahlberg et al., 2001). This approach reveals the impact of grammatical gender on MRs during recall. Another offline method involves rating tasks using Likert scales or polar sliders. The *gathering paradigm* (Braun et al., 2005; Xiao et al., 2022), for example, asks participants to rate the percentage of men and women at an event described in a text according to how referential gender is grammatically encoded. This methodology also identifies male bias (e.g., a higher estimated percentage of men) in texts containing only generic masculine role nouns. Likert scales, instead, are useful in assessing male bias beyond extraction operations, such as in the generic interpretation of singular role nouns (e.g., *an artist*). Richy and Burnett's (2021) experiment asked participants to rate the gender of a role noun within a sentence, finding significant male bias when masculine grammatical gender was intended as generic (Richy & Burnett, 2021, Exp. 2).

Summarising all the aforementioned findings, experimental literature in psycho- and neurolinguistics confirms the existence of male bias due to grammatically masculine nouns, even when intended as generic, in gendered languages or in natural gender languages with gendered pronouns. This bias is present regardless of linguistic family and persists in offline tasks, suggesting it endures in metalinguistic reflection contexts. Additionally, male bias is observed in both monolingual and multilingual speakers and seems to emerge in children aged three to five (Gygax et al., 2019). Moreover, the bias arises from both plural and singular masculine forms intended as generic, indicating the specific masculine meaning is more salient than the generic one, regardless of whether the generic is understood as an undefined individual, an unknown person, or a mixed or unknown gender group.

Returning to the initial question of whether the masculine gender can be considered polysemic, it seems difficult to imagine the generic meaning existing in the speaker's spontaneous resonance process, rather than remaining just a grammatical prescription across linguistic systems. The more intriguing question, at this point, is which factors contribute to such significant cognitive salience of the specific masculine meaning.

Beyond the greater frequency and domains of occurrence of generic masculines, factors contributing to male bias include early primary education's formal instruction of gender values available in grammatical gender languages, emphasising the masculine-feminine dichotomy, with the generic connotation acquired later (Gygax et al., 2009). Additionally, in occupational roles, particularly high-prestige professions, the predominance of men across sectors enhances the cognitive accessibility of male referents when stimuli are presented in a generic masculine plural form (cf. subordination processes analysed in 2.1.1).

More generally, some experimental works on male bias refer to the *androcentric ideology* (Brauer & Landry, 2008; Hamilton, 1988; Siyanova-Chanturia et al., 2012), thus the fact that [male] often overlaps with [human being], configuring itself as the prototypical member of the [human] semantic concept. According to the thorough review of Bailey et colleagues (2019), androcentrism must be understood as a societal framework not about male superiority but about positioning men as the *normative social group* and women as exceptions, reinforcing men's societal power and dominant status (Hegarty & Pratto, 2001; see also Miller et al., 1991). Indeed, according to the authors, the male bias must be understood as a structurally cultural bias rather than merely a cognitive bias. Indeed, the androcentric perspective extends far beyond and predates language, being deeply entrenched in the social reality. Interesting manifestations reported by the authors, in addition to the commonly cited gender gap in the workforce across most occupational sectors, highlight that men are seen as the prototypical individuals even concerning science and research. For instance, men are frequently chosen as participants in numerous sample or experimental studies. Additionally, men are often considered the standard patients for many medical conditions, making these conditions more challenging to diagnose and treat in women and even more so in non-binary individuals (Menz, 2006).

According to Bailey et colleagues (2019), three factors influence category members' perceived typicality: frequency of instantiation, category ideals, and central tendency. Men are more frequently instantiated than women in media and high-power roles, contributing to their perceived typicality. Masculinity is often regarded as a more *ideal* attribute of humanity due to social and cultural norms, prioritising traits like agency and power over communal and moral traits still dramatically associated with femininity, such as weakness or moody temperament. These factors are reinforced by societal power asymmetries, where men generally hold more power and visibility, affecting how categories are constructed and maintained.

Everyday examples that equate being male with being human, through repetition and historicisation, may cause a bias in categorisation processes that transcend language. These processes, as previously emphasised, enable the male individual to appear first in various types of listing or recall tasks. Moreover, this bias extends beyond human tests to artificial dialogue systems and *Large Language Models*, which, relying on predominantly androcentric online data, inevitably replicate the same human bias (Lima et al., 2023; Sheng et al., 2021; Sun et al., 2019).

According to the review proposed by the authors (Bailey et al., 2019), the androcentric perspective appears to be universally shared, regardless of a specific ethnicity or cultural community, and this ideology transcends even the sex and gender identity of individuals. Despite its pervasive nature, it is possible to identify tools and contexts that can moderate androcentrism. For example, increasing the visibility of women as human exemplars, fostering desirability towards gender egalitarianism, and exposure to images, terms, or actual men and women can influence androcentric responses.

With respect to the scientific objective of this chapter, using strategies of grammatical gender encoding other than generic masculine may elicit a different cognitive response than the male bias. The following section will be dedicated to a concise review of the literature on experiments investigating the effect of GS language in reducing male bias during reading tasks.

3.4.2 The Effect of Gender-sensitive Forms on Mental Representations

Various approaches have explored the effects of gender-sensitive strategies on reducing male bias, testing both direct methods (e.g., eye-tracking) and indirect observations (e.g., self-paced reading, sentence evaluation tasks, questionnaires). Commonly tested strategies include feminisation through coordinated masculine and feminine conjuncts (e.g., *attori e attrici*, ‘actors and actresses’) and (standard) gender-neutralisation via syntactic rewordings that avoid specifying the gender of referents (cf. example 8 in 2.2 for different strategies).

Experimental findings indicate that feminisation in German (Braun et al., 2005; Hansen et al., 2016; Irmen & Roßberg, 2004; Körner et al., 2022; Schunack & Binanzer, 2022) and French (Brauer & Landry, 2008; Tibblin et al., 2023a, 2023b; Xiao et al., 2022) enhances the representation of women in mental imagery compared to generic masculine forms. The impact of this strategy is notably higher under controlled stereotype conditions (Kim et al., 2023; Richy & Burnett, 2021; Tibblin et al., 2023a, 2023b). However, this consistency is not observed for gender neutralisation. Some studies show (grammatically) *gender-neutral* stimuli mitigate male bias (Sato et al., 2016; Stahlberg et al., 2001), while others suggest they perpetuate it (Braun et al., 2005; Irmen, 2007; Irmen & Roßberg, 2004).⁴⁶

Moreover, research comparing feminisation and neutralisation strategies yields mixed results. In some cases, feminisation proves significantly more effective (Irmen & Roßberg, 2004; Tibblin et al., 2023b), while others find both strategies equally effective (Stahlberg et al., 2001, Exp. 1; Tibblin et al., 2023a). Discrepancies in results can be attributed to methodological differences, statistical power variances, and factors such as participants’ positive or negative attitudes towards gender-sensitive language. Attitudes are typically measured through questionnaires that assess agreement with statements about GS language use (Tibblin et al., 2023a, p. 4). Such measurements often rely on scales or questionnaires already validated in social psychology on the topic of linguistic sexism or

⁴⁶ In psycholinguistic literature, the expression ‘gender-neutral’ (Tibblin et al., 2023a; 2023b) is used to refer to a linguistic stimulus where the referential gender of the individuals depicted in the sentence is ambiguous, regardless of whether grammatical gender is covert in nouns and adjectives, or if the sentence present epicene nouns, or syntactic rephrasing involving collective nouns. Additionally, the expression ‘gender-neutral’ is often employed in reference to the absence of a gender stereotype associated with the role noun presented as a stimulus. Accordingly, this terminology will also be adopted moving forward.

positioning regarding feminist ideology. These assessments must be always administered at the end of the experiment to avoid influencing its progression. Previous research has produced mixed results regarding how these attitudes influence referents' gender representation. (Tibblin et al., 2023a, p. 4).⁴⁷

For instance, in German, Braun et al. (2005) found that participants with positive attitudes towards GS language exhibited a stronger male bias when masculine forms were used, as they were more likely to interpret these forms as specifically referring to men. Conversely, in French, Tibblin et al. (2023b) observed that participants with negative attitudes perceived higher proportions of women in occupations, suggesting they might believe women are sufficiently represented and thus view gender-sensitive language as unnecessary. However, in another study (Tibblin et al., 2023a), the authors found that positive attitudes were correlated with more balanced mental representations, regardless of the item form. Finally, in Spanish, Anaya-Ramírez et colleagues (2022) discovered that positive attitudes among Spanish speakers facilitated the use of feminine anaphors with stereotypically masculine role nouns, indicating a nuanced interaction between attitudes and language use. As can be seen, the national context also modulates the effect of attitudes: the extent to which the media or linguistic authorities in a country oppose gender-sensitive language in general, or a specific strategy, can exert additional influence on inference processes, compounding the individual participant's attitude.

Furthermore, both the biological sex and, more importantly, the gender identity of participants can influence their cognitive processes related to the decoding and mental representation of referential gender. Typically, individuals who identify as women tend to report a stronger male bias with generic masculine forms compared to male participants (Tibblin et al., 2023a). In general, and regardless of the proposed form (Stahlberg et al., 2001), several studies, including older ones, have reported that men's inference processes are often more male-biased than women's ones (Hamilton, 1988; Martyna, 1978, p. 4). However, the *own-sex effect* is not always observed (Richy & Burnett, 2021), and it remains unclear if there is a minimum age threshold at which the effects of this variable begin to

⁴⁷ The EMERGE platform provides a wide range of measurement scales for Attitude and sexism for use in scientific research. <https://emerge.ucsd.edu/> Accessed 25.07.2024

manifest. For instance, in Gygax et al. (2019), no own-sex effect was found when analysing the mental representations of children. Nonetheless, balancing the sample in terms of gender or including the participant's gender as a predictor in inferential models is crucial to exclude this effect from data analysis.

Additionally, there may be purely language-specific reasons explaining why neutralisation strategies fail to reduce the male bias in grammatical gender languages, such as morphological default gender settings (cf. 1.7.4). All these aspects will be considered in the experimental studies and analyses proposed in Chapter 4.

Concluding the illustration of the main research topics related to the gender inferences framework, the following lines provide some insights about the link between role noun inferences and social perception of gender. Indeed, role nouns have been largely explored as experimental stimuli not only because they facilitate the analysis of interactions between linguistic and extralinguistic information, but also because significant findings in social psychology demonstrate that the use of generic masculine forms in professional settings, such as job advertisements or interviews, can elicit negative feelings and attitudes towards the job, especially among women (Bailey et al., 2019; Sczesny et al., 2016).

Exposure to solely generic masculine forms in job-related materials seem to correlate with traits of *social ostracism*, broadly understood as a threat to core social needs like community belonging, control over one's life, self-esteem, and a sense of meaningful existence (Williams, 2007). For instance, Stout and Dasgupta's (2011) study on English showed that women exposed to texts using *he* as a generic pronoun felt more excluded from potential candidates, perceived a higher likelihood of male hires, were less motivated to apply, and identified less with the job's potential satisfaction. However, when texts employed feminised or neutralised alternatives, such as *he and she* or *they*, these negative feelings were significantly mitigated. Similar results, concerning the employer's perspective, were found by Horvath and Sczesny (2015) in Austrian German, where masculine job titles led to male candidates being perceived as more suitable for high-status positions. Conversely, when feminised titles were used, both genders were seen as equally qualified. This bias did not appear in

lower-status roles, suggesting that feminisation issues are linked to prestige rather than linguistic difficulty, as discussed in 2.1.1.

The lower prestige or competence of feminine job titles stems from the stigma associated with the sociolinguistic markedness of such forms, particularly with suffixes historically connotated as negative, such as *-essa* in Italian (e.g., *avvocatessa*, ‘lawyer(F)’) or the German (originally French) suffix *-euse* or *-öse* (e.g., *masseuse*, ‘masseur(F)’, and *frisöse*, ‘hairdresser(F)’), which *evoke frivolous or sexual connotations* (Sczesny et al., 2016, p. 4) (cf. 1.7.3.2). In contrast, newer feminine derivations, such as *avvocata* in Italian or the productive suffix *-in* in German (e.g., *ingenieurin*, ‘engineer(F)’), tend to elicit more positive perceptions regarding competence and job prestige (Merkel et al., 2012).

It is also important to contextualise these findings in light of speakers’ attitudes, particularly their sociopolitical positioning or general attitudes towards cultural phenomena, such as the proposal of GS language. Regarding the prestige associated with feminine forms of professional titles, Marcato and Thüne (2002) observed a decreasing prestige associated with feminised role nouns significantly correlated with the political orientation of participants, with conservatives perceiving less prestige compared to liberals. More broadly, as Bailey et al. (2019, p. 15) report, individuals with sexist ideologies are more inclined to use masculine generics, indicating a correlation between sexist beliefs and androcentric language usage. Consequently, for participants with such ideologies, the use of feminine forms, already marked within the linguistic community, might be even more pronounced due to their ideological stance.

Focusing on the social repercussions of this sociolinguistic markedness, particularly among young people, Vervecken et al. (2015) used the *Stereotype Content Model* to measure warmth and competence ratings of role nouns expressed in French generic masculine versus feminised forms among 12 to 17-year-old adolescents. Warmth refers to beneficial intentions towards oneself and one’s group concerning the job, while competence involves the ability to execute these intentions. The study found that women were perceived as more professional in terms of warmth (but not competence) in typically feminine professions when generic masculine forms were used. However,

when exposed to feminised forms, participants relied less on stereotypes in evaluating warmth and competence. Similarly, Vervecken and Hannover (2015) found that Dutch- and German-speaking 10-year-olds, both male and female children, perceived lower competence in jobs presented with generic masculine forms and showed a greater inclination to apply when jobs were presented in feminised forms, but found no effects in French.

Experimental results in this area remain somewhat heterogeneous, yet they provide a foundation for understanding the significance of linguistic form on stereotyping processes and stress why the way people use to encode grammatical gender should be considered, indeed, a *sensitive* topic, especially in job environments. During the pivotal stage of career development in childhood and adolescence, gender stereotypes in occupations may critically impact future educational and occupational status (Vervecken et al., 2015, p. 7).

Turning to the primary findings of cognitive research on GS language, Gabriel et al. (2018) have offered a comprehensive review, highlighting the most relevant themes concerning the use of feminisation and neutralisation strategies. Among these themes is the difficulty of linguistic production and reception of GS language, which translates into a cognitive effort for speakers. This issue is often used against the promotion of GS language (cf. 2.3). Previous research has shown, particularly in languages with grammatical gender such as French and German, that feminisation generally requires less cognitive effort than neutralisation in linguistic reception (Gabriel et al., 2018, p. 853). This finding can be attributed to the processes of grouping and extraction described by Reboul and Moeschler (1998) (cf. 3.4.1). The mental representation elicited by feminised forms, where the image of the male referent is compositionally added to that of the female referent, is less cognitively demanding compared to the same operation elicited by neutralised forms, where gender information remains ambiguous.

Furthermore, in terms of linguistic production, regardless of how neutralisation is realised depending on the language, whether through the choice of collective, epicene or common gender forms, the gender-indefinite syntactic reformulation is always a less typical alternative than gender

specification in languages with grammatical gender. Therefore, it requires more monitoring of linguistic production by the speaker and, in general, greater metalinguistic competence.

Experimental evidence both for (Nadal & Bove, 2024) and against (Gabriel et al., 2018; P. Gygax & Gesto, 2007; Sczesny et al., 2016) the argument that GS strategies are more cognitively demanding compared to the use of the generic masculine mainly concerns linguistic reception, especially in written texts. Tests on cognitive costs related to linguistic production remain relatively scarce. These measurements essentially concern the impact that the strategies have on sentence reading times or RTs in text comprehension tests. Nadal & Bove (2024), studying Spanish, used eye-tracking to understand how feminised forms impact sentence reading times and the process of information retrieval. They found an increase in reading times with feminised forms compared to generic masculine forms, referred to by the authors as the *neutral condition*, despite the scientific consensus on the non-neutrality of the generic masculine discussed in the previous paragraph. The authors interpreted the results as follows:

In the noun phrase ‘los vecinos’ or ‘los/as vecinos/as,’ the reader detects the gender ending for the first time in the sentence. Observing a shift from the neutral condition (the unmarked masculine), the native reader wonders why there is a need to make the two genders explicit if a masculine plural ending would make it possible to achieve the same mental representation (mixed group of male and female neighbours).

(Nadal & Bove, 2024, p. 49)

This assertion is problematic for several reasons. Firstly, the authors did not control the stereotype associated with the stimuli through a pre-test, nor did they refer to any previous norming studies (Misersky et al., 2014). Additionally, they reported rather limited effects in the presence of feminised forms, which seem to slow down reading, as is normal with a greater number of characters, but without impairing text comprehension. Indeed, the difficulty in reading feminised forms pertained to the first pass reading phase, “when graphemic decoding, meaning assignment, syntactic parsing,

and pragmatic enrichment take place to achieve the ostensive-communicated stimulus. The reading check is not carried out when a grammatical gender other than the masculine plural is used in other reading phases” (Nadal & Bove, 2024, p. 53).

Moreover, the feminised forms were presented *contracted* (e.g., *los/as vecinos/as* ‘the(M)/(F) neighbours(M)/(F)’), which is graphically more complex compared to other possible coordinating conjuncts alternatives (see 2.2.1), since the two forms are separated by a slash but without a full repetition of the determiner and noun, making the reading of the feminine forms less intuitive. On the topic of the graphical representation of GS language, an interesting study by Friedrich et al. (2021) on German shows that forms modified by an asterisk (e.g., *Spieler*innen* ‘players(M)*(F)'), representing a neutralisation strategy aimed at including all gender identities, cause variable negative effects on reading and aesthetic evaluation of the text depending on the number information of the modified role noun: plural nouns with an asterisk are processed like generic masculine nouns, while singular nouns show significant impairments in comprehensibility, aesthetic evaluation, and interest in the game due to the gender asterisk.

In French, Gygax and Gesto’s (2007) study highlights a noteworthy factor in investigations of text comprehension difficulties due to GS forms, namely the factor of repetition. Comparing the reading difficulties in texts with generic masculine or feminised forms realised either through full or contracted coordination, using a hyphen (e.g., *mécanicien-ne-s* ‘mechanics(M)-(F)’), slower RTs were visible in feminised forms, especially in contracted ones. However, from the second visualisation of split masculine/feminine items onwards, the effect of the slowdown begins to disappear. Readers quickly adapt to the strategy, which does not cause greater cognitive effort over time but is processed with nearly the same effort as the generic masculine.

Thus, even concerning the difficulty of processing GS language, experimental results are not homogeneous. As seen from the previous considerations, this heterogeneity largely depends on the exact phenomenon observed by cognitive psychological measurements, the proposed GS forms, the language in question, and the textual context in which they appear. There seems to be consensus only that the cognitive processing of feminised forms is easier than neutralised forms (Gabriel et al., 2018)

and that regardless of the strategy used, beyond the observation of a slowdown in milliseconds, there is no significant impairment of text comprehension (Braun et al., 2007; Sczesny et al., 2016). Even considering the applicability of such forms to more complex texts like journalistic ones, studies like that of Blake & Klimmt (2010) suggest that the use of GS forms, compared to the use of generic masculine, contributes to appropriate mental recognition of women without compromising readability and linguistic aesthetics.

Moreover, as reported by Pozniak et al. (2023), regardless of the effect one aims to measure triggered by gender-sensitive GS language, it is important to begin rethinking experimental research considering greater sociolinguistic complexity of the stimuli. Indeed, in discussing *context dilution*, they describe how the cognitive effects elicited by different strategies of gender encoding in French, specifically GS forms versus the generic masculine, were significantly weakened or disappeared when the experimental material provided to participants was no longer composed of short sentences but rather of more elaborate texts set in a plausible communicative context, such as university activity brochures (Pozniak et al., 2023, p. 17). Therefore, when participants are exposed to a greater number and variety of information, the single effect of the form is diluted because it encounters other sociolinguistic variables or conflicting repeated information. This can include a gender stereotype that permeates an entire text or one that is culturally ingrained, such as the association of scientific subjects with male students and literary subjects with female students.

In conclusion, as stated by Sczesny et al. (2016, p.7) empirical evidence does not confirm the alleged disadvantage of GS language. However, these findings and the scientific evidence for serious disadvantages of masculine generics have largely been ignored in political controversies and public discussions about such proposals. There is a lack of transfer of scientific knowledge, which prevents understanding linguistic asymmetries as part of a broader gender imbalance and hinders social change knowledge (Sczesny et al., 2016, pp. 7-8). Education and policy-making, therefore, need to increase efforts to circulate new scientific insights about GS language to break the vicious circle of ill-informed and polarised public debate (cf. 2.3).

As it emerges from reported findings, there are very few studies on male bias in gender inferences of human referents in Italian, and none, to the author's knowledge, about the effects of GS strategies on such inferences. As part of the strand of research presented throughout Chapter 3, the studies presented in the following sections aim primarily at bridging the scientific gap in Italian data on male bias in reading tasks. Moreover, these works will directly compare the effects of two and three different GS forms on MRs of human groups, controlling for the stereotype variable to focus solely on the explicit information effect. Lastly, the two studies will address the aforementioned linguistic and extralinguistic factors that contribute to the interpretation of GS strategies in Italian.

– Chapter 4 –

Experimental results on gender inferences in Italian

Considering the advances in psycholinguistics research described in the previous chapter concerning the topic of mental representations of human referents during reading tasks, the present chapter aims at showing the results of two experimental studies on gender inferences in Italian, both based on stimuli containing role nouns. The choice of testing role nouns stems from the intention to investigate the effects of gender-sensitive language proposals in a semantic domain where such proposals could have significant psychosocial impacts, such as the workplace.

An original methodology for a textual comprehension task will be introduced in the first study, examining the effect of three different grammatical gender encodings on the mental representations of groups of people. The second study will replicate an experiment on the French language conducted by Tibblin et al. (2023a) and test four different types of gender encoding on an anaphor resolution task. The first experiment will compare strategies belonging solely to standard Italian, whereas the second experiment will also test the sub-standard gender-sensitive strategy of the schwa, already discussed in Chapter 2. On the basis of the obtained results, an analysis of the effectiveness of the different gender-sensitive language strategies of both standard and substandard Italian in eliciting truly generic mental representations of mixed-gender groups of people will be offered.

Considering Chapter 3 as the theoretical framework for both experimental studies, these will be exposed by directly presenting the stimuli and conditions, research hypotheses, methodology related to data collection, and experimental procedure. Then, visual descriptive and inferential statistical analysis will be provided. This chapter includes an initial general commentary related to each of the two studies, and a concluding discussion comparing the two.

4.1 Study 3. Effects of grammatical gender on gender inferences: experimental evidence from Italian common gender nouns⁴⁸

The study involved a reading comprehension task using 18 brief texts, each describing a group of individuals engaged in an activity and followed by a related question. It aimed to explore the gendered mental representation evoked during reading through the manipulation of form. Participants were shown various pictures of human groups and asked to verbally choose the one that best depicted the group described in the text.

4.1.1 Experimental design

4.1.1.1 Stimuli and Conditions

Concerning the type of stimuli, the study tested plural forms of Italian so-called common gender nouns (Thornton, 2022, p. 20) (e.g., *cantanti*, singers(COM)) and English unintegrated borrowings that exhibit the same morphosyntactic behaviour, such as *designer*, since they easily allow for gender neutralisation, and because a few studies investigated this type of nouns (Irmen, 2007; Richy & Burnett, 2021; Sato et al. 2016). Indeed, contrarily to Italian *non-independent symmetric nouns* (Thornton, 2022), also called *phonologically transparent* in psycholinguistics by Bates et al. (1996), which display two different forms denoting opposite genders (e.g., *Alcuni maestri/Alcune maestre*, ‘some(M) teachers(M)/some(F) teachers(F)’), common gender nouns can be considered *phonologically opaque* since the controller has not overt grammatical gender and allows the selection of both feminine and masculine targets of agreement (*alcuni/alcune docenti*, ‘some(M)/(F) teachers(M)+(F)’).

Therefore, the experiment presented plural forms of common gender nouns in three different conditions according to the form manipulation of target nouns: generic masculine, contracted split (masculine/feminine) forms divided by a slash, and gender-neutral forms. In the first two conditions,

⁴⁸ Results from Study 3 have been published in the *International Journal of Linguistics* and are available at the following link: <https://www.macrothink.org/journal/index.php/ijl/article/view/21824>

grammatical gender was overt in determiners (articles, prepositions, and quantifiers) and/or post-nominal modifiers (adjectives, verbs at past-participle form) in agreement with the controller, so that at least two elements in the sentence possessed overt grammatical gender. Otherwise, the neutralised condition has been mostly obtained by replacing overtly gendered determiners or quantifiers (*alcuni/alcune* ‘some(M)/(F)’) with the expression *un gruppo di* ‘a group of’, and replacing modifiers with adjectives with covert gender (two-ending adjectives in *-e/-i*, II Class, Iacobini & Thornton, 2016, p. 204) or syntactic rewordings able to avoid gender specification. The three experimental conditions can be summarised as follows:

- Gen_masc (generic masculine): *Tutti i contabili dell’azienda*. ‘**All(M) the(M) company’s accountants(M)**’.
- Split_mf (split masculine/feminine, feminisation): *Tutti i/Tutte le contabili dell’azienda*. **All(M) the(M)/ All(F) the(F) company’s accountants(M)+(F)**.
- G_neutral (standard neutralisation): *L’intero gruppo di contabili dell’azienda*. The company’s entire team of **accountants(COM)**.

To avoid stereotype interaction, the nine experimental stimuli were selected from the Italian section of Misersky and colleagues’ norming study (2014) about gender stereotypes associated with roles and professions, by choosing only those nouns rated as gender-neutral (.45 - .55, where 0 is male and 1 is female stereotype), such as *clienti* customers(COM) or *adolescenti* teenagers(COM).

Turning to the nine filler items, referential gender ambiguity of common gender nouns was disambiguated using proper personal names, or by presenting independent nouns with lexical gender (e.g., *damigelle* ‘bridesmaids’) which present a direct relation between lexical and referential gender (cf. 1.7.2)

4.1.1.2. Participants and procedure

The data collection phase took place between June and July 2023. The sample includes 44 native speakers of Italian, balanced for gender identity, and aged 18 to 40. According to the results of a sociodemographic questionnaire, the sample was strongly targeted toward young people who completed university studies and were highly interested in the topic of gender-sensitive language, mostly showing positive attitudes towards it.

Before starting the test, participants signed a consent form authorising the researcher to use the data for scientific purposes and ensuring voluntary participation in the test. The entire experimental procedure was previously validated by the Ethics Committee for Research with Human Subjects in the Non-biomedical field of the University of Naples Federico II, on May 31st, 2023. The experiment was hosted by the Urban/Eco Research Centre in Naples, and participants took the test one at a time in a private and quiet room. Participants were introduced to the test with written instructions and one familiarisation trial. The task was briefly presented as a reading comprehension without explaining or disclosing the specific research goal to avoid possible bias in participants' responses, but further scientific clarification was provided by the researcher at the end of the test. Full experimental design and protocol can be found in Appendix B.

The experiment was implemented using a PowerPoint presentation to present the stimuli. The PC audio and video channels were recorded using the OBS-Studio software. The reading comprehension task consisted of 18 passages, each one composed of a first slide with a brief text, a second one containing a comprehension question about the text, and a third slide with multiple-choice answers. Participants were allowed to move on from one slide to the next autonomously, but it was forbidden to go backwards. This condition was verified by checking the recorded videos. Each text was articulated into three sentences, two sentences were meant to construct the scenario, and one target sentence described a group of people doing an action (1a). The comprehension question asked who was doing the action in the target sentence (1b).

- (1) a. *The concert will last from afternoon to evening. The newly arrived singers will perform at 3 p.m. Rehearsals will be held in the morning.*
- b. *Who will start singing at 3 p.m.?*

The multiple-choice answers were provided as pictures portraying a male-only group, a female-only group, a mixed-gender group, and a filler picture with a group of people doing an action semantically incongruent concerning the scenario (Figure 17). Each picture showed an associated alphanumeric code (e.g., T1), so participants had to reply to the question by saying the code of the selected image after a beep sound.



Figure 17. Slide with multiple-choice answers. Test set 1, Item 5

After completing the reading comprehension of 18 passages, participants were asked to fill out an anonymous sociodemographic questionnaire aimed at collecting data about their age, gender identity, education level, and interest in GS language. Concerning GS language, two questions measured the score of interest for each participant: the first one explored participants' knowledge about the topic by providing a three-level answer (e.g., 1= *I do not know it at all*; 2= *I have heard about it*; 3= *I am familiar with the debate*). The second question presented a five-point Likert scale to investigate how close the subject was to the debate on gender-sensitive language, considering 1 as the lowest and 5 as the maximum engagement with the topic. The duration of the full experiment, considering instructions and the final questionnaire ranged from seven to eleven minutes.

The experiment adopted a between-subjects design, so the participants saw each target noun only once but were exposed to each experimental condition three times. For each name to be evaluated in all experimental conditions, three different test sets were created, and each participant was randomly assigned to one out of three test sets before starting the experiment. The presentation order of experimental and filler items was randomised.

4.1.1.3 Dependent variables and measurements

The manipulated variable that served as a predictor was the form of the role noun. The three levels of this categorical variable were: generic masculine, split masculine/feminine, and gender-neutral. Another predictor for the analysis was the score of participants' interest in gender-sensitive language obtained through the sociodemographic questionnaire. The outcome variables measured for the analyses will be the following:

- **Participants' answers** (e.g., the picture selection among multiple-choice answers). This categorical variable had three levels: Male-Only Group (MOG), Female-Only Group (FOG), and Mixed-Gender Group (MGG).
- **Response times** of the picture selection in milliseconds.

RTs were measured by recording the audio during the experiment and using Praat (Boersma & Weenink, 2021), a phonetic analysis software. Looking at the sonogram, the interval between the onset of the beep sound and the onset of the occlusive [t] pronounced by participants (Figure 18) was considered. Namely, the explosive phase in [t] pronunciation easily allowed for onset detection on the sonogram; that is the reason why the alphanumeric code in multiple-choice answers always started with *T* (e.g. T1; T2). Consequently, using a Praat script, Response Times for the 18 items within each audio file were automatically marked.

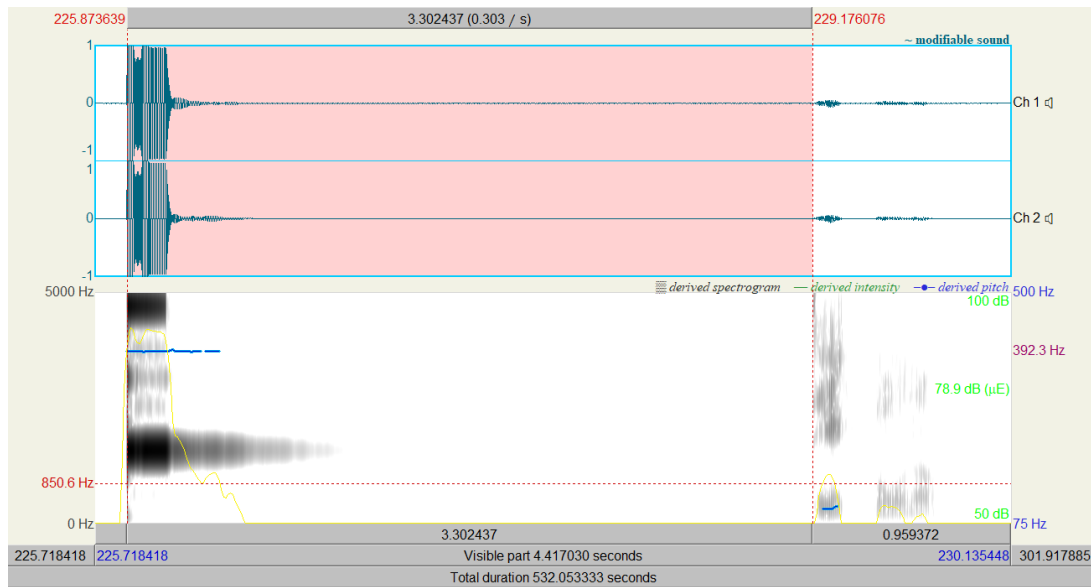


Figure 18. Time range between the beep and the T sound in RT calculation on Praat

4.1.2 Hypotheses

Taking the score of selected Mixed-Gender Group pictures as the reference measurement to investigate the mental representations of multiple referents, the analysis of participants' answers and RTs aims to verify whether the following hypotheses hold true:

H1: the probability of selecting MGG pictures will be lower in the generic masculine condition than in the two gender-sensitive conditions. Conversely, the highest scores for Male-Only Group selections are expected to be elicited by generic masculine forms.

H2: The comparison between the two gender-sensitive conditions is expected to unveil significant differences. Primarily, corroborating the findings of Irmen and Roßberg (2004) and Tibblin et al. (2023b), which discuss the varying effectiveness of feminisation and neutralisation strategies in reducing the male bias, it is hypothesised that the MGG selections will be higher in the split form relative to the gender-neutral condition. Moreover, it is anticipated that split forms will elicit the highest Female-Only Group selection scores.

H3: According to participants' engagement in gender-sensitive language, it is expected that high levels of interest will lead to higher selections of MGG pictures. Furthermore, given the ideological nature of the debate on gender-sensitive language (cf. 2.3), slower RTs are expected at high levels of interest, indicating greater reflexivity of the participants before the response.

H4: Concerning response time, slower RTs are expected at gender-sensitive conditions compared to the generic masculine one, as in Nadal and Bove (2024). This is attributed to feminisation and neutralisation being comparatively sociolinguistically marked strategies if gender encoding in Italian (cf. 2.1.1). Specifically, given the ambiguity of the gender-neutral condition, where the role noun lacks both overt grammatical gender and stereotypical gender clues, it is foreseen that participants will exhibit slower RTs in retrieving the gender information than in the other two conditions.

In summary, a male bias induced by generic masculine forms is expected to be mitigated through gender-sensitive strategies. Additionally, it is postulated that the use of sociolinguistically marked strategies, such as feminisation and neutralisation, will necessitate increased cognitive effort in building gendered mental representations of human referents' groups. Lastly, it is anticipated that the closeness to the debate on gender-sensitive language will prompt participants to show less spontaneity in their responses, both in answers and RTs.

4.1.3 Data preparation

Prior to the statistical analysis, the data were preprocessed using the following procedure: concerning interest in gender-sensitive language, a singular score was generated, derived from two specific questionnaire items, namely, the three-tier question concerning familiarity with the subject matter, and the five-point Likert scale question regarding closeness to the topic. The formula adopted to obtain the Interest score was the following:

$$\text{KNOWLEDGE (available values: 1-3)} \times \text{CLOSENESS (available values: 1-5)}$$

For example, if a participant selected value 2 of 'knowledge' and value 5 of 'closeness', their final interest score would have been 10. Furthermore, responses to filler items were analysed, and all participants who committed more than two errors out of nine filler items were excluded from the sample ($n = 6$). The data were then analysed with R (R Core team, 2021) by using separate models for answers and RTs.

4.1.4 Results

4.1.4.1 Answers data

Before presenting the results of the inferential analyses, the following lines provide descriptive data about selected pictures grouped by the form of the role noun (Figure 19).

The selection of Mixed-Gender Group pictures was largely preferred by participants regardless of the experimental conditions. Particularly, the barplot shows that participants expressed a general tendency to select respectively Mixed-Gender Group (56% - 68%), Female-Only Group (23% - 24%), and more rarely Male-Only Pictures (8% - 21%).

Contrarily to Hypothesis 1, not only was the proportion of MGG answers not significantly lower when participants were presented with the generic masculine form, but also the two gender-sensitive forms did not increase the probability of selecting MGG pictures. Indeed, looking at the leftmost bars in Figure 18 (e.g. generic masculine form), participants largely preferred MGG pictures (65%), while only 12% of answers related to MOG selections. Interestingly, the gender-neutral form, which was supposed to trigger generic interpretations, shows instead the lowest proportion of MGG answers (56%) and the highest proportion of MOG ones (21%).

Along with Hypothesis 2, data reported in the central and rightmost bars in Figure 18 seem to confirm a difference in the effectiveness of the two gender-sensitive strategies in triggering inclusive mental representations. Indeed, split forms elicited a higher proportion of MGG answers (68%) than gender-neutral forms (56%). However, the proportion of FOG answers remained almost identical regardless of the experimental condition, around 20%. Despite female visibility was not related to the feminisation strategy, the proportion of answers in split form highlighted not only that the participants largely preferred MGG answers, but that split forms seem to obscure the presence of men in participants' mental representations since the feminisation elicited the lowest proportion of MOG selections (8%).

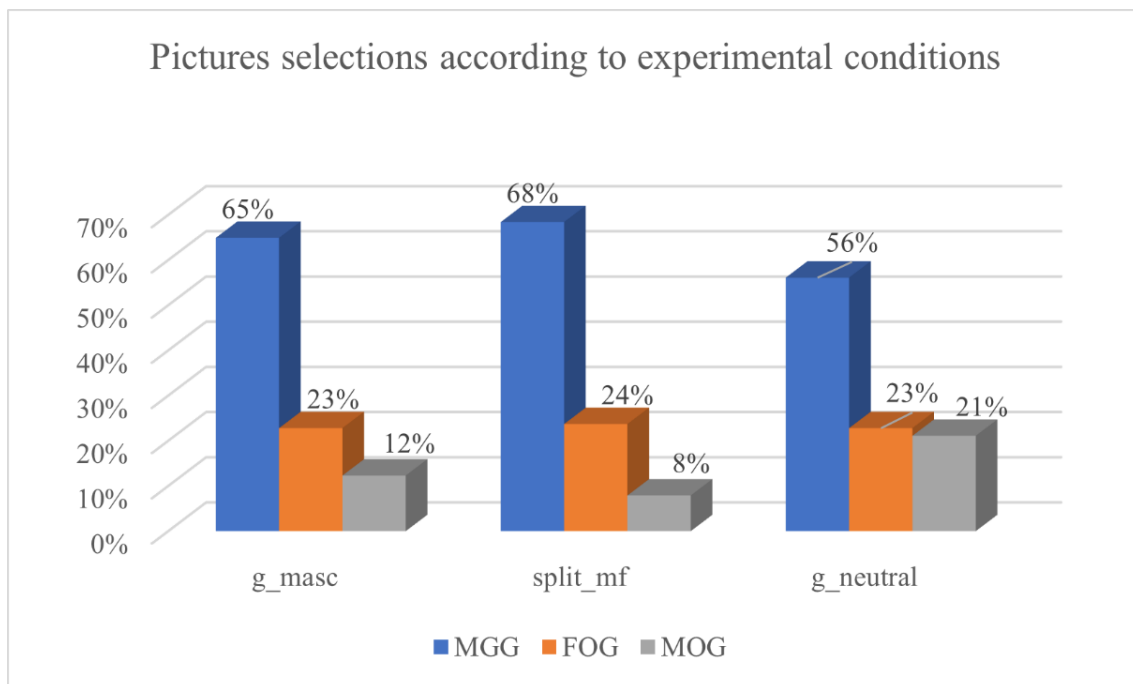


Figure 19. Percentage of picture selections grouped by form ('MGG' mixed-gender group, 'FOG' female-only group, 'MOG' male-only group)

Turning to the inferential analysis, since participants were exposed to all experimental conditions, the present analysis adopts a multinomial modelling, using the *multinom* function of the *VGAM* package (Yee, 2015). The model has been built using participants' answers as the dependent variable, while Form and Interest were used as predictors (see Table 16). The specific masculine representation (MOG pictures) was set as the corner point of the model, to observe the effects of those predictors on the selection of MGG and FOG pictures. Based on the sample, the model showed significant effects produced by both predictors.

Concerning Form, the probability of selecting an MGG picture was weakly significantly reduced ($p < 0.05$) in the gender-neutral form compared to the other two experimental conditions. Considering the Interest, instead, the model confirmed Hypothesis 3 by reporting a positive effect of

the scores 11 to 15 on participants' responses, such that high scores of interest in the topic corresponded to a higher probability of giving MGG ($p < 0.01$) or FOG ($p < 0.05$) answers.

Table 16. Summary of the multinomial model parameter estimates on the dependent variable Answers

Predictors	Estimate	Std. Error	z value	p-value
Intercept: MGG	0.8072	0.6086	1.326	0.1847
Intercept: FOG	-0.4326	0.7857	-0.551	0.5819
Form_{split_mf}:MGG	0.5039	0.4613	1.092	0.2746
Form_{split_mf}:FOG	0.4883	0.5113	0.955	0.3396
Form_{g_neutral}:MGG	-0.7029	0.3823	-1.838	0.0660
Form_{g_neutral}:FOG	-0.5561	0.4398	-1.264	0.2061
Interest_{moderate}:MGG	0.5208	0.6085	0.856	0.3921
Interest_{moderate}:FOG	0.8180	0.7863	1.040	0.2982
Interest_{high}:MGG	1.3038	0.6160	2.117	0.0343

4.1.4.2 Response Times data

Regarding RTs, the descriptive analysis does not reveal statistically significant differences in the RT mean across the three experimental conditions ($p > 0.1$). Nonetheless, the boxplot presented in Figure 20 reveals that both gender-sensitive strategies were associated with marginally slower RTs compared to the generic masculine forms (5326 ms): specifically, 5469 ms for split forms and 5790 ms for gender-neutral forms, the latter of which exhibited the most prolonged average reaction time.

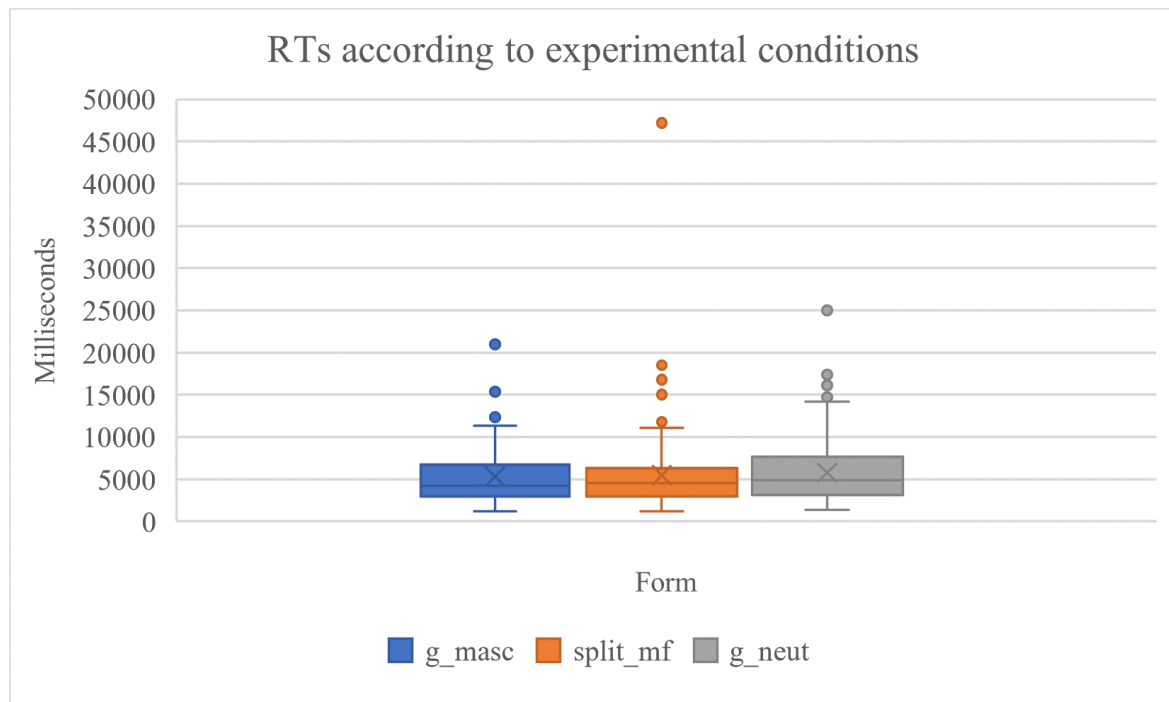


Figure 20. Mean Response Times (in ms) of picture selections grouped by form

Descriptive data about RTs were then tested by adopting linear modelling, using the *lm* function integrated with R. As for participants' answers, Form and Interest were set as the independent variables, $R^2 = 0.02354$. Based on the sample, the only independent variable that significantly influenced RTs is the interest in GS language (Table 17). This is supported by a statistically significant decrease in RTs at both moderate ($p < 0.01$) and high ($p < 0.001$) levels of interest, aligning with the

predictions outlined in Hypothesis 3. In contrast, manipulation of the form did not produce any notable impact on RTs, thus not confirming Hypothesis 4.

Table 17. Summary of the linear model parameter estimates on the dependent variable RTs

Predictors	Estimate	Std. Error	z value	p-value
Intercept	2.9562	1.0314	2.866	0.00441
Interest_moderate	2.1994	1.0444	2.106	0.03595
Interest_high	2.7175	1.0267	2.647	0.00851
Form_{split_mf}	0.1425	0.5513	0.258	0.79626
Form_{g_neutral}	0.4642	0.5513	0.842	0.40041

4.1.4.3 Further analysis

Further analysis aimed at examining a potential effect, both on participants' answers and RTs, of some sociodemographic variables, such as age, education level, and gender identity. Following the statistical models previously employed, sociodemographic variables did not exhibit any significant effect on the dependent variables. However, given that gender identity was the sole sociodemographic variable balanced within the sample, some observations arising from the descriptive analysis will be raised herein.

Concerning participants' answers (Figure 21), no statistically significant differences emerge between men and women with respect to the general tendency across the three conditions, as well as for the stimuli presented in the generic masculine form. In contrast, data concerning the two gender-

sensitive conditions highlight different trends due to the gender of the participants. When presented with split forms, women showed the highest percentage of Mixed-Gender Group responses overall (77%). Moreover, when encountering split form stimuli, male participants were observed to select pictures representative of Female-Only Groups with a frequency double that of their female counterparts (32% versus 16%, respectively). Contrarily, within the gender-neutral condition, female participants demonstrated a preference in choosing FOG pictures with a frequency double that of male participants (32% compared to 14%). Furthermore, comprehensive statistical analysis conducted on the entire sample revealed a significantly reduced probability of selecting inclusive pictures under the gender-neutral condition (cf. Figure 19). This trend is accentuated when examining the responses of female participants exclusively, who exhibit the lowest percentage of MGG responses (46%).

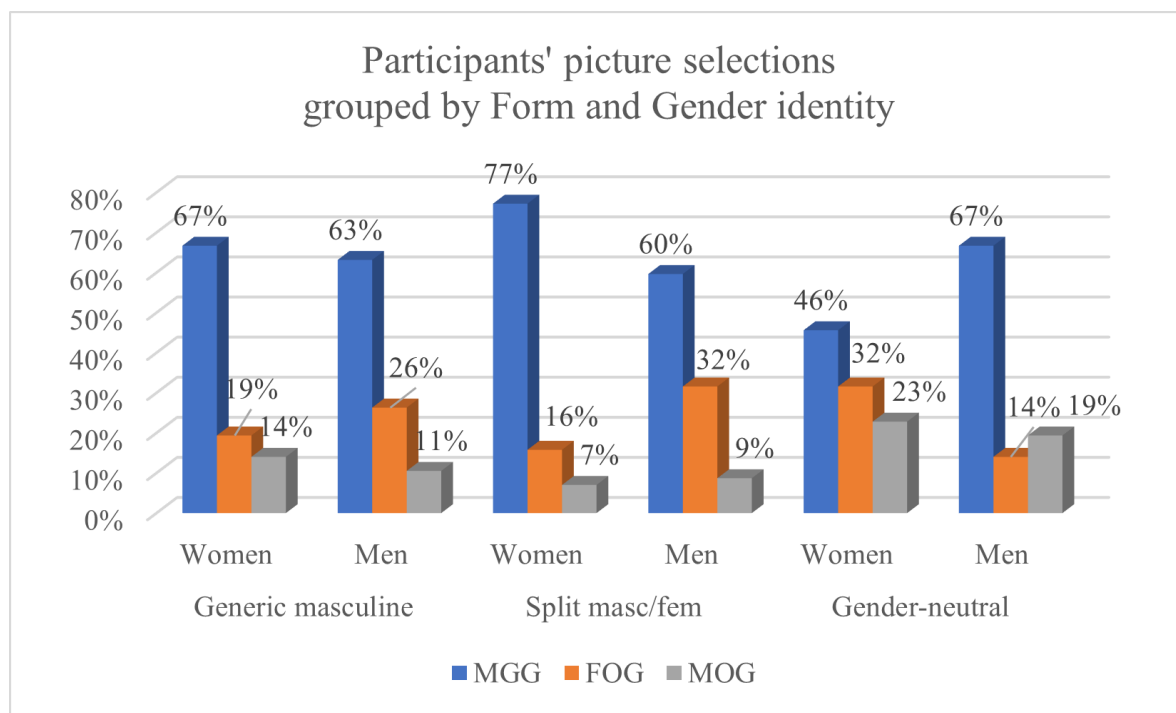


Figure 21. Percentage of picture selections grouped by form ('MGG' mixed-gender group, 'FOG' female-only group, 'MOG' male-only group) and participants' gender identity

Turning to the influence of participants' gender identity on RTs on average, female participants exhibited marginally shorter RTs across all experimental conditions (5,357 ms versus 5,699 ms for male participants) with no significant difference ($p > 0.1$). This discrepancy was particularly pronounced within the context of the split forms, where the average RTs for women was 4,952 ms in contrast to 5,985 ms for men.

Although the descriptive analysis showed the above-mentioned interesting differences, after integrating gender identity as a predictor in the two separate models, no significant effect was observed on Answers and RTs.

4.1.5 Discussion

The objective of this study was to mirror the findings for different languages with grammatical gender concerning the specific masculine interpretation (male bias) of generic masculine forms. It further aimed to assess whether this bias could be mitigated or eradicated through the employment of standard gender-sensitive strategies the Italian.

However, the findings from the current experiment showed a great countertrend to the reference psycholinguistic literature. Indeed, the generic interpretation was largely preferred regardless of experimental conditions, and the employment of the generic masculine form (*Alcuni cantanti*, 'Some(M) singers(M)') did not elicit a specific masculine representation. More surprisingly, a significant probability of inferencing specific masculine representations emerged in the gender-neutral condition (*Un gruppo di cantanti* 'a group of singers(COM)').

Looking instead at the elements of continuity with related studies, it is evident that this experiment underscores a notable disparity in the cognitive processing between standard feminisation and neutralisation strategies (Irmén and Roßberg, 2004; Tibblin et al., 2023a, 2023b). Indeed, the overt encoding of both masculine and feminine grammatical gender in coordinated forms (*Alcuni/Alcune contabili*, 'Some(M)/(F) accountants(M)+(F)') enhanced the generic interpretation of role

nouns over those formulations where the encoding of the referents' gender remained ambiguous (*un gruppo di contabili*, 'a group of accountants(COM)').

Given this countertrend, it becomes crucial to explore the underlying factors that possibly led participants to report a low sensitivity to the manipulation of linguistic forms and a significantly higher probability of interpreting gender-neutral forms as specific masculine.

First of all, it is necessary to interpret these findings in light of the composition of the sample: the cohort under investigation predominantly comprised younger individuals ($M = 29$ years old), with a considerable proportion having attained higher education (74% had pursued University education, amongst whom 40% were holders of a Master's degree). Additionally, a notable affinity for the subject of gender-sensitive language was evident, with 55% of participants identifying as significantly aligned with the topic; a mere 5% expressed disinterest or lack of awareness. Moreover, the recruitment process was partially informed by enlisting individuals who had engaged in a preceding study concerning gender-sensitive strategies the previous year. Given these conditions, despite instructions for participants to provide instinctive responses, it cannot be discounted that they may have adopted a response strategy, leading them to opt for generic interpretations independently of the experimental conditions. This inclination may have stemmed from an *observation bias* (Ekström, 2011), whereby participants assumed that because the researcher was the same, the study objectives would be similar. Consequently, they may have inferred that the topic under investigation was related to gender-sensitive language or such behaviour in subjects might be also due to a *social desirability bias*, wherein the participants' profound engagement with the topic might have compelled them towards more inclusive responses, diverging from their natural inclinations (Lavrakas, 2008).

Gabriel et al. (2018, p. 853) articulate that "gender-sensitive language might require actively inhibiting the use of the masculine form only, requiring speakers to reflect upon or monitor their language use, thus detecting when a linguistic device (e.g., the masculine form) may be inappropriate in the semantic context". The act of monitoring for the most appropriate answer was also mirrored in the significantly protracted RTs observed amongst participants deeply invested in gender-sensitive language. Furthermore, the absence of a temporal constraint on responses enabled some participants

to deliberate for extended RTs, up to 20 or even 50 seconds, before submitting their answers, indicating a considerable level of reflection.

Turning to the employed methodology, the experiment faced some limitations, including the use of mixed semiotic elements (textual, auditory, visual) in the comprehension task, which may have compromised result accuracy. Moreover, the stimuli lacked prior validation for equal accessibility and familiarity (Tibblin et al., 2023a, p. 27), and perceptions of gender neutrality might have evolved since Misersky et colleagues' norming study (2014).

Critically, the between-subjects design proved challenging, limiting each condition to a few items and potentially affecting mental representations due to the exposure to varied gender encoding types. According to the *competition-based hypothesis* proposed by Gygax and Gabriel (2008, p. 144), readers were more inclined towards a male-biased interpretation of masculine generics when the text also included forms with overt feminine grammatical gender (e.g. split forms), as opposed to when the text exclusively contained masculine generics. In this instance, the hypothesis might apply to gender-neutral condition; namely, since participants were also exposed to the double-gendered split forms, they may have encountered greater difficulty in interpreting as generic those formally and stereotypically ambiguous stimuli.

The linguistic interest lies in understanding why such difficulties with ambiguous stimuli often lead to masculine interpretations. One reason could be that masculine functions as the default gender in Italian morphology (Thornton, 2006) (cf. 1.7.4), so it is likely that readers recall masculine (grammatical and referential) gender when facing ambiguous linguistic cues. Furthermore, despite the grammatical gender ambiguity of target nouns, they were always introduced by the quantifier expression *un gruppo di*, 'a(M) group(M) of', which is arbitrarily assigned masculine in Italian. This raises the critical questions (cf. 1.7.2) regarding the ease with which nouns of common gender may be interpreted as generic in the presence of determiners that are explicitly gendered.

In the Italian language, a significant majority of phonologically transparent nouns, and most agreeing adjectives, assume a masculine form ending in *-o* in the singular and *-i* in the plural (e.g., inflectional class I; *maestro/maestri*, 'teacher(M)/-s(M)') (Bates et al., 1996, p. 993; Thornton, 2022,

p. 19). Consequently, even when the plural ending *-i* applies to phonologically opaque nouns, which fit in inflectional class II (cf. 1.7.1) (e.g., *docente/docenti*, ‘teacher(COM)/teachers(COM)’) the covert grammatical gender may prompt participants to lean towards masculine interpretations, influenced by these phonological patterns (e.g., the *-o* in *gruppo*, and the *-i* in target nouns). Finally, among the stimuli presented were several English loanwords, such as *designer* and *speaker*. These nouns were selected with a gender-neutral stereotype, lack prototypical semantic features associated with female referents, and do not display the typical inflectional endings of the feminine grammatical gender, such as the *-a* (singular) and *-e* (plural). As a result, it is likely that such borrowings have been automatically classified as masculine by default.

On the basis of these considerations and the *Thinking for speaking hypothesis* (Slobin, 2003) (cfr. Chapter 3), it remains to be clarified, through methodological refinement, whether in a language like Italian, where grammatical gender is overt in the vast majority of nouns and targets of agreement, the use of *functionally ambiguous words* (Cacciari et al., 1997) constitutes an effective gender-sensitive strategy from a cognitive perspective. Additionally, it is worth investigating whether the mandatory and highly frequent exposure to grammatical gender in the language inevitably prompts participants to attend gender specification, therefore activating one of the two binary grammatical gender values, even when faced with an ambiguous stimulus.

4.2 Study 4. Effectiveness of different Italian gender-sensitive strategies in reducing male bias in anaphor resolution: experimental replication of French results by Tibblin et al. (2023a)

Considering the methodological limitations identified in Study 3, particularly the inter-participant experimental design and the excessive targeting of the sample towards young individuals who are highly favourable to gender-sensitive language, the study presented in the next section will adopt a different methodology and stimuli while investigating analogue research goals. Specifically, the improvements include automated data collection in absence of the researcher during the experiment, compensating participants, obtaining a larger and less targeted sample, introducing a third GS strategy in the test, using inferential models capable of providing a more complex statistical analysis of the available data, and remodelling the experimental task to reduce noise due to the various forms of semiosis employed in Study 3.

Indeed, Study 4 tested non-independent nouns instead of common gender nouns (cf. 1.7.2, Thornton, 2022, p. 20); additionally, it introduced substandard neutralisation using schwa alongside the standard neutralisation condition. To evaluate these new conditions, Study 4 replicates Tibblin et al.'s (2023a) study on gender-sensitive language in French, with explicitly noted modifications.

The study employs a sentence evaluation methodology based on an anaphor resolution task, as designed by Gygas et al. (2008). This involves presenting an antecedent in the first sentence and an anaphoric element in the second, examining how anaphoric expressions are processed in terms of gendered mental representations when antecedents are in a GS form compared to the generic masculine form.

A 4×2 mixed design was used, with the form of the antecedent and anaphor gender as the main predictor variables. The study also measured their interaction and the effects of attitudes towards gender-sensitive language on successful anaphora resolution.⁴⁹

⁴⁹ This study was pre-registered on the Open Science Framework in February 2024 and is accessible at the following link: <https://osf.io/knr4x>.

4.2.1 Experimental design

4.2.1.1 Stimuli and conditions

The study investigated plural forms of Italian non-independent symmetric nouns (Thornton, 2022, p. 20), with overt grammatical gender (e.g., *camerieri/camriere*, ‘waiters(M)/(F)’). Shifting from common gender nouns to non-independent ones enabled the inclusion of innovative GS forms, such as schwa, which were inapplicable to common gender nouns which are already suitable for representing all gender identities without any morphological neutralisation (cf. 2.2.2). Thus, the experiment presented these role nouns in four conditions: generic masculine, split masculine/feminine, schwa, and gender-neutral.

In Study 4, grammatical gender was overt only on the role noun and its preceding determiner. Feminisation was achieved through full split forms with complete repetition of the determiners (e.g., *i camerieri e le camriere*, ‘the(M) waiters(M) and the(F) waiters(F)’), whereas in Study 3, masculine and feminine forms were juxtaposed using a slash.⁵⁰ While Tibblin et al. (2023a) presented French split forms with female-firstness order, when role nouns were presented in the split form in the present study, the masculine form always preceded the feminine form, as this order is typical in Italian coordination, except in specific phrases like *signore e signori*, ‘ladies and gentlemen’, (Formato, 2019, p. 63). This choice aimed at testing participants with the most common structure in split forms.

Study 4 also introduced a sub-standard neutralisation form using the schwa MGNSs on the target noun and on the preceding determiner. Additionally, standard neutralisation was achieved by replacing overtly gendered determiners and nouns with gender-neutral reformulations, mainly through collective and epicene nouns (e.g., *il personale della trattoria*, ‘the(M) restaurant staff(M)’, instead of *i camerieri*, ‘the(M) waiters(M)’). These nouns had grammatical gender not semantically motivated, thus independent from referential gender; however, based on the possible male bias triggered by the expression *un gruppo di*, ‘a(M) group(M) of’, in Study 3, the grammatical gender of

⁵⁰ Tibblin et al (2023a) adopt a different terminology by calling split forms realized through syndetic coordination as *complete double*, to oppose them to the *contracted double* forms, realised using a *mid-dot* between masculine and feminine grammatical gender (e.g., *les voisin-es*, ‘the neighbours(M).(F)’).

these reformulations was balanced with 11 feminine and 11 masculine rewordings. The four experimental conditions can be summarised as follows:

- Generic masculine: *I nuotatori aspettavano davanti alla piscina*. ‘**The(M) swimmers(M)** were waiting in front of the pool’.
- Split masculine/feminine (feminisation): *I nuotatori e le nuotatrici aspettavano davanti alla piscina*. ‘**the(M) swimmers(M) and the(F) swimmers(F)** were waiting in front of the pool’.
- Schwa (Substandard neutralisation): *a nuotatorə aspettavano davanti alla piscina*.⁵¹ ‘**The(COM) swimmers(COM)** were waiting in front of the pool’.
- Gender-neutral (Standard neutralisation): *La(F) squadra(F) di nuoto aspettava davanti alla piscina*. ‘**The(F) swim team(F)** was waiting in front of the pool’.

It is important to highlight that while the French study proposed two strategies of feminisation and one of neutralisation, the Italian replication proposes two neutralisation strategies and only one feminisation strategy. This difference in design will be important in interpreting the results (cf. 4.2.5).

Regarding the 22 target items, the modifications from the original study mainly concern the selection of role nouns. While the original study used a list of nouns validated for gender-stereotype associations by Tibblin (2023b), the current study controls these effects by selecting role nouns from the same pool with gender-neutral stereotypes used in Study 3 (Misersky et al., 2014). Only non-independent symmetric nouns with a stereotype score between .45 and .55 were included, treating masculine stereotypes as 0 and feminine as 1. The scenarios from the original study have been faithfully translated for almost all sentence pairs.

Turning to the 44 filler items, the generic mental representation elicited by the target items was disambiguated using independent nouns with lexical gender (e.g., *madre/padre*, ‘mother/father’) that

⁵¹ Based on the findings of the corpus study on MGNSs discussed in Chapter 2, it appears that the distinction between lowercase and uppercase is not consistently observed among users, neither in their controlled nor uncontrolled writing. Consequently, it has been decided not to capitalise the schwa that modifies the determiner at the beginning of the sentence.

refer exclusively to men or women. According to Gygax et al. (2008), the fillers primarily elicited negative responses (33 out of 44) by presenting logically incongruent content, while the target items were designed to elicit positive judgements. A small group of 11 fillers presented congruent content to elicit positive responses as attentional checks.

However, following Tibblin et al.'s design (2023a), it was not possible to fully translate the filler items from the original study, as some French nouns with lexical gender (e.g., *oncle/tante*, 'uncle/aunt'; *beau-frère/belle-sœur*, 'brother-in-law/sister-in-law') correspond to non-independent symmetric nouns in Italian (e.g., *zio/zia*, 'uncle(M)/(F)', *cognato/cognata*, 'brother-in-law(M)/(F)'), which were already under investigation as target items. To address this, these nouns were replaced with analytical constructions explicitly referring to either men or women (e.g., *pregnant women*; *sperm donors*). Functionally, the distribution of fillers with expected positive and negative responses remained unchanged.

4.2.1.2 Participants and procedure

The data collection phase took place in April 2024. A total of 130 right-handed native Italian speakers participated in the experiment. They were recruited through Prolific, an online participant pool known for providing high-quality data (Peer et al., 2022), ensuring fair compensation for participants, and allowing researchers to conduct detailed pre-screening. The pre-screening questions, whose precise wording can be found in the Appendix C, addressed participants' handedness, minimum age, presence of mild cognitive impairment and/or vision problems, presence of ADHD and/or language disorders, and linguistic background. All participants were remunerated at a rate of £9.51 per hour, with the average time completing the test being 14 minutes.

Before analysis, six participants were excluded from the sample as they exceeded the time limits specified in the instructions (35 minutes). Additionally, nine participants were removed due to high error rates on the filler items (cf. 4.2.3). Consequently, the final sample comprised 115 participants

(mean age = 33 years, SD = 10 years). Regarding participants' occupational status, 69% were employed, predominantly in Trade and Industry (51% of total workers), while 31% were students, mainly in Arts and Humanities (45% of total students). The sample was automatically balanced for biological sex through Prolific's pre-screening, and a sociodemographic questionnaire was used to determine participants' gender identity. The sample consisted of 50% men, 48% women, and 2% trans* and non-binary individuals. Most of the sample (44%) resided in Northern Italy, with 19% from the South, including Sardinia and Sicily; 26% were from Central Italy, and the remaining 11% lived abroad. In summarising attitudes towards gender-sensitive language, the sample was relatively evenly distributed across negative (37%), neutral (34%), and positive (29%) scores.

Before starting the test, participants signed a consent form authorising the researcher to use the data for scientific purposes and ensuring voluntary participation in the test. The entire experimental procedure was previously validated by the Ethics Committee for Research with Human Subjects in the Non-biomedical field of the University of Naples Federico II, on February 29th, 2024.

The procedure consisted of reading 22 experimental sentence pairs and 44 filler sentence pairs, derived from those used by Gygax et al. (2008), structured as in (2):

- (2) a. *I camerieri della trattoria attraversavano la strada.* (Antecedent sentence)

‘**The(M) waiters(M)** of the restaurant were crossing the road’.

- b. *Poiché era previsto brutto tempo, diverse donne/diversi uomini avevano l'ombrello.* (Anaphor Sentence)

‘Because bad weather was forecast, **several women/several men** had umbrellas’.

The participants' task involved reading and understanding the first sentence, then pressing the space bar to hide it and reveal the second sentence. After reading the second sentence, they had to decide as quickly and accurately as possible whether it was a plausible continuation of the first

sentence. It was clearly indicated that the group mentioned in the second sentence was a subset of the one in the first sentence. Participants were instructed to keep their thumbs on the space bar and their index fingers on the ‘yes’ and ‘no’ keys throughout the experiment. To reduce the likelihood of trials where participants were inattentive, the experiment automatically advanced if no key was pressed within 10 seconds. Before each sentence pair, a screen appeared asking if participants were ready to proceed, remaining until the space bar was pressed, allowing for breaks if needed. The experiment began with six familiarisation trials involving scenarios about animals instead of personal role nouns, unlike those used by Tibblin et al. (2023a), to avoid any bias from role nouns prior to the main experiment.

All sentence pairs were presented in a random order, and two lists were created for each form variable level. In each list, half of the target sentences referred to women and the other half to men. If a role noun was followed by a women-continuation in the first list, it was followed by the men-continuation in the second list, and vice versa. The context-setting content of the sentences remained consistent between the two lists, and all lists included the 44 filler items. Each participant was randomly assigned to one of the four forms and one experimental list within each form. The experiment used a by-participant design, so participants were exposed to only one condition regarding the form shown in the antecedent sentence but saw both feminine and masculine continuations in the anaphor sentence.

Upon completing the experiment, participants answered questions regarding GS forms, an eight-item scale measuring attitudes towards gender-sensitive language (Tibblin, 2020; Tibblin et al., 2023a; 2023b), and provided socio-biographical information, including age, gender identity, education level, occupation, region of residence, and language background. Complete lists of both filler and experimental items, the attitudes scale, and all questions presented to the participants can be found in the Appendix C.

4.2.1.3 *Dependent variables and measurements*

The manipulated variables serving as predictors were the form of the role noun and the referential gender of the anaphoric element (e.g., ‘some men’ vs. ‘some women’). The Form variable had four categorical levels: generic masculine, split masculine/feminine, schwa, and gender-neutral. The Anaphor variable had masculine or feminine available values. Another predictor in the analysis was participants’ interest in gender-sensitive language, assessed through the sociodemographic questionnaire. The outcome variables measured for the analyses were:

- **Participants’ Judgments** (e.g., the proportion of ‘Yes’ responses to sentence pairs).
- **Response times** for Judgment selection in milliseconds.

The test was implemented on the Qualtrics platform, with response times automatically measured by calculating the interval between the first appearance of the anaphor sentence and the participant’s tap on the ‘Yes’ or ‘No’ key.

4.2.2 *Hypotheses*

To replicate the findings of Julia Tibblin et al. (2023a), the following directional hypotheses have been formulated. These hypotheses are specified individually for each dependent variable, beginning with those related to the judgments of the target sentences. For each dependent variable, the expected main effects are initially described, followed by the expected interactions, and concluding with the anticipated results from the contrast analyses.

A) Dependent Variable: Judgments of Target Sentences (yes/no)

The intercept will refer to the dependent variable, with the independent variables set to the following values: continuation: men, form: masculine, and the attitudes score centred to its mean.

a.1) Expected Main Effects

H1: A significant main effect of the variable continuation is anticipated, such that women-continuation (i.e., a group of women) will result in fewer positive judgments overall.

H2: Significant main effects are expected for the following levels of the variable form: feminisation (split form), sub-standard neutralisation (schwa form), and standard neutralisation (gender-neutral form). Specifically, using a gender-sensitive form is predicted to yield more positive judgments overall.

a.2) Expected Interactions

H3: A significant two-way interaction between the variable form and continuation is anticipated. Gender-sensitive forms are expected to lead to more positive judgments for women-continuations than the masculine form.

H4: A significant three-way interaction between the variable attitudes, continuation, and form is expected. In the masculine condition, positive attitudes are predicted to lead to fewer positive judgments when the anaphor ‘some women’ was used (as in Braun et al., 2005). Consequently, the interaction among positive attitudes, women-continuation, and the schwa form is expected to trigger more positive judgments compared to the interaction with positive attitudes, women-continuation, and the other gender-sensitive alternatives.

a.3) Contrast Analyses

Based on the results of Tibblin et al. (2023a), the contrast analysis is expected to reveal significant differences across the three gender-sensitive conditions. Firstly, the standard neutralisation condition is anticipated to be less effective in reducing male bias (i.e., a lower percentage of positive judgments), consistent with the French study and the Italian results presented in Study 3 (Safina, 2024). Concerning sub-standard neutralisation, given its very recent introduction, its strong ideological connotation, and its association with the language of transfeminist communities (cf. 2.4 and 2.5), a female bias is expected to be induced by the forms modified with schwa. This phenomenon was also reported in the original study for the contracted double condition, which is similarly recent

and has been the subject of public debate. Finally, the feminisation strategy is expected to be the most effective condition in reducing male bias, as it explicitly presents both gender specifications.

B) Dependent Variable: Response Times (RTs) of Positive Judgments

The intercept will denote the RTs, with the independent variables set as follows: continuation - men, form - masculine, and attitudes score centred to its mean.

b1) Expected Main Effects

H1: A significant main effect of the variable continuation is expected, indicating that women-continuations will result in slower overall RTs.

H2: Significant main effects are anticipated for the split form, schwa form, and gender-neutral form levels of the variable form. Specifically, the use of gender-sensitive forms is predicted to expedite overall RTs.

b2) Expected Interactions

H3: A significant two-way interaction between the variable form and continuation is expected. Gender-sensitive forms (split form, schwa form, gender-neutral form) are predicted to lead to faster RTs for women-continuations compared to the masculine form.

H4: A significant three-way interaction between the variables attitudes, continuation, and form is anticipated. In the masculine condition, positive attitudes are predicted to result in slower RTs for women-continuations. Consequently, the interaction among positive attitudes, women-continuation, and the schwa form is expected to lead to faster RTs compared to the interaction with positive attitudes, women-continuation, and the other gender-sensitive alternatives.

b3) Contrast Analyses

It is expected that split forms will yield significantly faster RTs for women-continuation sentences compared to schwa and gender-neutral forms. Additionally, since the schwa strategy is a

recent proposal for language policy in Italian, it is anticipated that schwa forms will require more time to be processed overall.

In summary, a male bias is expected when participants are exposed to the generic masculine condition, both in terms of success (proportion of positive judgments) and cognitive effort (RTs) in resolving the feminine anaphor. Therefore, it is predicted that GS forms will mitigate such bias. Moreover, positive attitudes towards gender-sensitive language are expected to intensify the male bias interpretation of the masculine form. Split forms are expected to offer the most effective gender-sensitive alternative, explicitly encoding feminine grammatical gender in the target nouns. Conversely, gender-neutral forms are expected to be the least effective in reducing male bias, since participants were exposed to the grammatical gender of gender-sensitive rewordings, which was completely unrelated to any referential gender.

Lastly, regarding the innovative schwa solution, it is expected a female bias and processing difficulties due to the ideological connotation and the recent introduction into Italian.

4.2.3 Data preparation

The data were analysed with Google Colaboratory Research, setting the runtime as R coding language (R Core Team, 2021). The judgments and the RTs were analysed separately, and the preparations are presented accordingly in this section. First, the percentage of correct responses for the two types of filler items (congruent and incongruent) was calculated for each participant. Before doing so, filler responses were coded as incorrect if the RT of the first or second sentence was below the set minimum threshold (300 ms) or hit the maximum time limit (10,000 ms). After this procedure, all trials of the participants ($n = 9$) who responded incorrectly to more than 50% of the congruent or incongruent fillers were removed. Following this first data screening, all trials in which the RT of the first or second sentence was above or below the set threshold (i.e., all analysed trials had an RT of the first

and second sentence between 300–10,000 ms) were removed. This second data screening led to a removal of 2.02% of the data.

Before analysing each outcome variable, a mean score reflecting each participant's attitudes towards gender-sensitive language was calculated. Contrary to the original study by Tibblin et al. (2023a) missing values (i.e., *No option suits me*) were directly excluded from the questionnaire. Moreover, the scores of items 1–3 and 6–7 were reversed before the calculation. This mean score served as a predictor in the upcoming analyses. The Attitude variable and the Sentence length in characters variable were centred to their mean ($M = 3.2$ and $M = 71.1$, respectively).

Turning to the adopted inferential measurements, the following lines faithfully reproduce the explanation provided by Tibblin et al. (2023a) regarding the procedure and analysis models to be used. This section has not been modified in the Italian study, except for the choice of the optimiser for the response time model, as noted in the text. All changes from the original study will be highlighted in bold and footnotes.

Analyses of the Judgment Data

The participants' judgments of the second sentences were analysed through generalized linear mixed-effects modelling with binomial distribution using the *glmer* function of the *lme4* package (Bates et al., 2021).⁵² To minimise convergence errors, we used a bound optimization by quadratic approximation (BOBYQA) with a set maximum of 200,000 iterations. The best model of fit was selected using the *fitLMER.fnc* function of the *LMERConvenienceFunctions* package (Tremblay & Ransijn, 2020). This function takes a maximal model as an input, then finds an optimal fixed-effects structure through backwards elimination of the fixed effects, before finding an optimal random-effects structure through forward selection, and finally refits the fixed-effects structure through further backward elimination. The maximal model contained a three-way interaction between the variables Form, Anaphor gender, and Attitudes towards gender-fair language and their main effects as

⁵² The problem of selecting one of a number of models of different dimensions is treated by finding its Bayes solution and evaluating the leading terms of its asymptotic expansion. These terms are a valid large-sample criterion beyond the Bayesian context, since they do not depend on the a priori distribution (Schwarz, 1978).

fixed effects, and random intercepts of Participant and Role noun. The back- and forward fitting threshold was set to a z statistic of 2. Our model selection based on stepwise regression can be criticised for producing alpha inflation. We therefore investigated the maximal models of both outcome variables to see whether the main and interaction effects of interest remained significant in the maximal model. Since this was the case, we only present the final models and refer to the OSF repository of the project for summaries of the maximal models⁵³.

Analyses of the response time data

The RTs reflect the time taken from the onset of the second sentence to the moment any of the two response keys was pressed. Only the RTs of the positive judgments were analysed, which led to a removal of [18%] of the data. The remaining data were analysed with linear mixed-effects modelling using the *lmer* function of the lme4 package (Bates et al., 2021). All RTs were log- transformed prior to the analyses to reduce the skewness of the data. The maximal structure was identical to that of the generalized linear mixed-effects model, but also included main effects of the variables Trial number and Sentence length in characters, and a random slope of Trial number by Participant. The final model was selected through the same procedure as the judgment data, with the exception that the threshold was set to a p -value of .05.⁵⁴

Further details on the data analyses

In this section, we present details of the analyses that were not specified in the pre-registration. For both models, we used the R^2 measures suggested by Nakagawa and Schielzeth (2013) to quantify the variance explained by each model. These measures were calculated with the *r2* function of the performance package (Lüdtke et al., 2021) and include both the marginal R^2 , taking only the fixed effects into account, and the conditional R^2 , accounting for both fixed and random effects. In both models, all variables were dummy coded with Form: masculine and Anaphor gender: men as reference categories. Furthermore, we used the *ggpredict* function from the *ggeffects* package (Lüdtke, 2018a) to predict the values visualised in Figures 21 and 22.

⁵³ The pre-registration of the original study containing further information about the models is available at the following link: <https://osf.io/5gc8f/>.

⁵⁴ Compared to the model used by Tibblin et al. (2023a), the present experiment modifies the optimiser of the *lmer* model because the default optimiser in the current version of the library (2023) caused the model to fail to converge. The *Nelder-Mead optimiser* was chosen as it was the default optimiser in the 2022 version of the library.

We report effect sizes in forms of partial η^2 for the main and interaction effects of the generalized linear mixed-effects model (thresholds: small = .01 and medium = .06). These values were calculated with the *anova_stats* function from the *sjstats* package (Lüdtke, 2018b). Cohen's *d* is used to report the effect sizes of the linear mixed-effects model (thresholds: small = 0.2, medium = 0.5, and large = 0.8). These values were calculated by dividing the difference in predicted values by the square root of the sum of the variance components, as suggested by Brysbaert and Stevens (2018).

Within each anaphoric expression, all levels of Form were compared against each other, and within each form, the two levels of Anaphor gender were compared against each other. These comparisons were conducted using the *emmeans* and *pairs* functions from the *emmeans* package (Lenth, 2022). Within each anaphoric expression, p-values were adjusted with the Tukey method for multiple comparisons. These analyses were validated with the *glht* function of the *multcomp* package (Hothorn et al., 2008), using a single-step method for p-value adjustment.

(Tibblin et al. 2023a, pp. 13-14)

4.2.4 Results

4.2.4.1 Judgment data

Before presenting the results of the inferential analyses, descriptive data grouped by the form of the role noun and the anaphoric expressions used will be provided. Consistent with Tibblin et al. (2023a, pp. 14-15), as illustrated by the leftmost bars in Figure 22, the proportion of positive judgments in the generic masculine condition (*i camerieri*, 'the(M) waiters(M)') is lower when *women* was used as an anaphor compared to *men*. However, when split forms (*i camerieri e le cameriere*, 'the(M) waiters(M) and the(F) waiters(F)') were used, the difference between the anaphoric expressions was minimal.

In contrast to the French study, where the least typical GS form (the contracted double strategy, *les voisin-es*, 'the neighbours(M).(F)') led to a significantly higher percentage of positive judgments with women-continuation compared to the generic masculine condition, indicating a potential female bias, the corresponding least typical GS form in Italian (the schwa strategy, *a vicina*, 'the(COM)

neighbours(COM)’) did not produce such a pronounced difference between positive and negative judgments. Notably, the schwa form resulted in a lower percentage of positive judgments overall, while in Tibblin et al. (2023a), this outcome was associated with the gender-neutral form.

Additionally, the gender-neutral condition, along with the generic masculine form, elicited more positive judgments with men-continuations than women-continuations. This pattern was also observed in the French study, but according to Tibblin et al. (2023a), the difference between the percentage of positive judgments elicited with men- and women-continuation in the gender-neutral condition compared to other GS forms was more pronounced than in the Italian replication.

Overall, the descriptive results suggest that GS forms reduce the male bias induced by the masculine form, especially the split masculine and feminine forms. However, the effectiveness of GS forms varies, and it seems that the differences among French GS forms, according to positive judgments given in men- and women-continuations, are clearer than the Italian one.

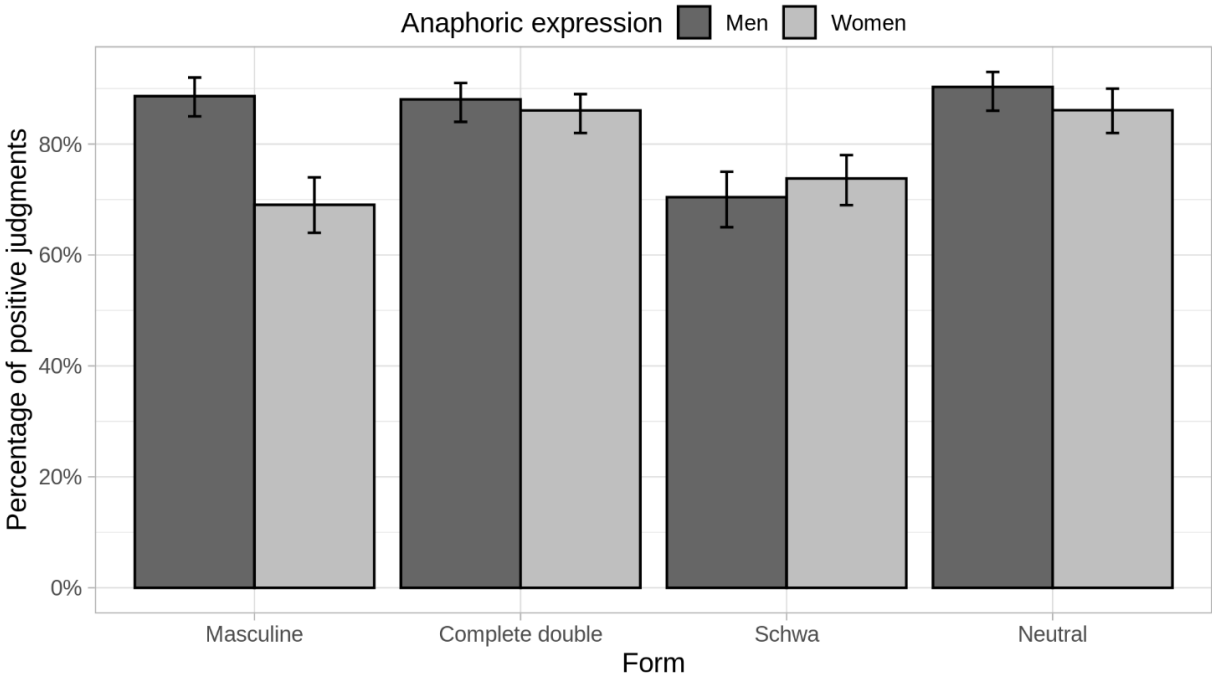


Figure 22. Percentage of positive judgments grouped by form and anaphoric expression. The error bars indicate 95% confidence intervals

More broadly, the results of the inferential model confirmed descriptive data, except for some differences between the original study and the current work that were not significant; all the results are summarised in Table 18.

The intercept in this table refers to the odds ratio, i.e., the exponent of the model's coefficients, of the following values: *men* as Anaphor gender, *masculine* as Form, and the Attitudes variable centred to its mean. An odds ratio of 1 indicates that the odds of a positive response are the same as the odds of a negative response, while a value greater than 1 indicates higher odds of a positive response. Inversely, an odds ratio less than 1 indicates lower odds of a positive response. The model of best fit included a significant interaction between the variables Form and Anaphor gender, as well as a significant main effect of the variable Attitudes towards gender-fair language.

Regarding the final random-effects structure, following the original study, two models have been constructed: the first considering only Role Nouns as random effects, and the second including both Role Nouns and Participants. Whereas Tibblin et al. (2023a, p. 16) relied on the lowest AIC value for selecting the best-fitting model, this study prefers the model with the lowest BIC ($BIC = 2033$, compared to 2047), since the BIC value turns out to be more stringent, favouring models with fewer parameters (Schwarz, 1978).⁵⁵

⁵⁵ BIC (Bayesian Information Criterion) and AIC (Akaike Information Criterion) are measures used in statistics to compare different models and select the best one (Burnham & Anderson, 2004). They both assess the goodness of fit for a model while penalizing for complexity (e.g., number of parameters) to avoid overfitting phenomenon. Particularly, AIC estimates how well a model will predict future data, balancing fit with simplicity by applying a moderate penalty for additional parameters. Otherwise, BIC also balances fit and simplicity but applies a stronger penalty for complexity, favouring simpler models even more when sample sizes are large.

Table 18. Summary of the best generalized linear mixed-effects model of fit

Judgements				
Predictors	Odds Ratios	CI	z value	p-value
(Intercept)	13.56	6.92 – 26.57	7.59	<0.001
FormSplit_form	1.06	0.44 – 2.54	0.13	0.896
FormSchwa	0.28	0.12 – 0.66	-2.92	0.003
Formg_neutral	1.52	0.59 – 3.88	0.87	0.382
AnaphorWomen	0.21	0.13 – 0.33	-6.55	<0.001
AttitudesCentered	1.31	1.02 – 1.67	2.14	0.032
FormSplit_form * AnaphorWomen	3.77	1.92 – 7.37	3.87	<0.001
FormSchwa * AnaphorWomen	6.24	3.30 – 11.80	5.64	<0.001
Formg_neutral * AnaphorWomen	2.83	1.37 – 5.84	2.81	0.005
Random Effects				
Residual variance (σ^2)	3.29			
Random intercept variance role noun	0.31			
Random intercept variance participant	1.77			

Icc	0.39
N° Role_Noun	22
N° participants	115
Observations	2470
Marginal R²	0.089
Conditional R²	0.442

The variable Anaphor showed a nearly small main effect (partial $\eta^2 = .009$), with the simple effect of Anaphor: women (line 5) indicating that when the antecedent is in the masculine form (intercept), the odds of a positive judgment after the anaphor *women* are significantly lower than after the anaphor *men*, and that women-continuations lead to more positive judgments overall ($p < 0.001$), confirming Hypothesis 1.

The variable Form displayed a nearly small main effect (partial $\eta^2 = 0.009$). Specifically, the simple effect of Form: Schwa (line 3) indicates that the likelihood of a positive judgment following the anaphor *men* (the reference value) is significantly lower when the antecedent is in a schwa form (*a nuotatorə* ‘the(COM) swimmers(COM)’) ($p = 0.003$) compared to the generic masculine form (*I nuotatori* ‘the(M) swimmers(M)’), but not for split or gender-neutral forms (lines 2 and 4), partially confirming Hypothesis 2. This data about the schwa form also suggests a female bias, as previously observed in French with the contracted double strategy.

The very small main effect (partial $\eta^2 = 0.003$) of Attitudes towards gender-sensitive language (line 6) suggests that positive attitudes increased the likelihood of a positive judgment, regardless of the anaphor or form used. Contrarily to Tibblin et al.’s results (2023a, p. 17), the model with only Role nouns as random effects showed a slightly significant interaction between Attitudes and Form,

indicating a marginally higher probability of positive judgments ($p = 0.03$) when participants with positive attitudes towards gender-sensitive language were presented with both standard and substandard neutralisation strategies, confirming Hypothesis 4, only for neutralisation strategies. This interaction provides insights into the aforementioned low percentage of positive judgments in the schwa condition overall that will be deepened in the discussion.

Finally, the interaction effect size between Form and Anaphor gender was small (partial $\eta^2 = 0.02$). All GS forms in combination with women-continuations resulted in significant interaction effects (lines 7–9). Thus, using a GS forms significantly reduces the male bias observed in the masculine form, confirming Hypothesis 3. Figure 23 visualises the model's predictions, showing that the fixed effects account for 9% of the variance, while the fixed and random effects together explain 44% of the variance.

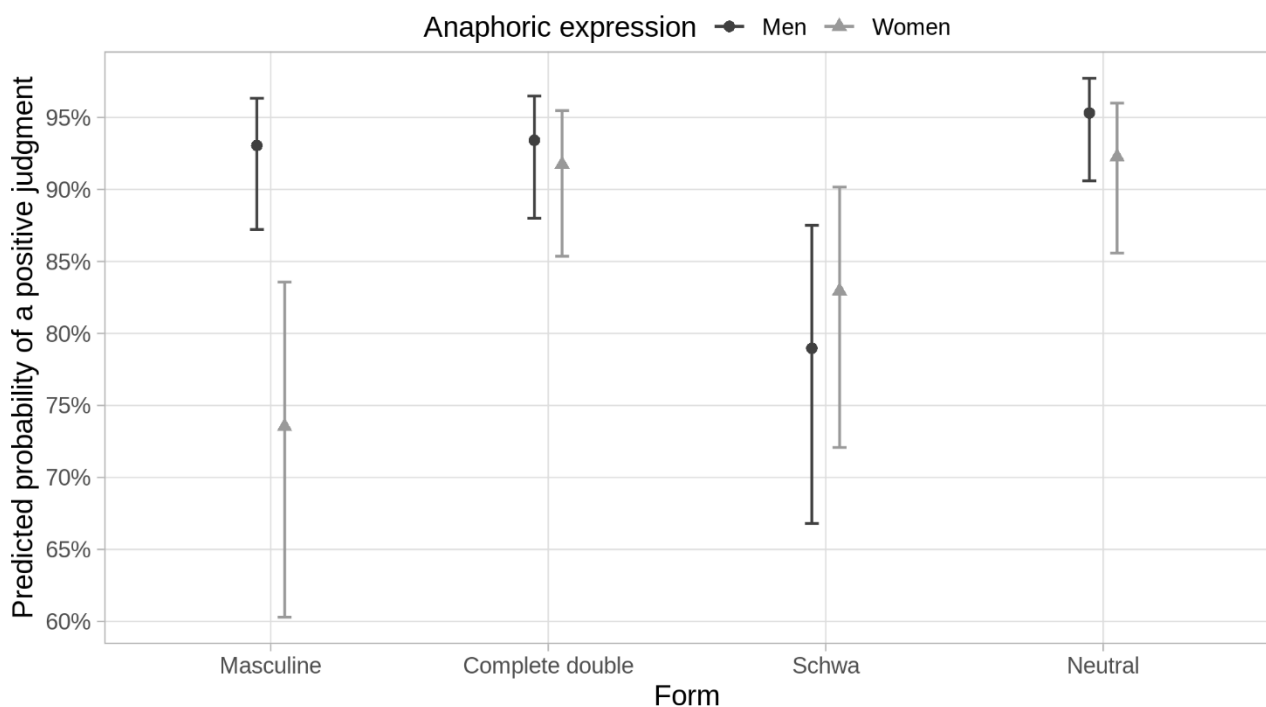


Figure 23. Probability of positive judgments as predicted by the final model grouped by form and anaphoric expression. The error bars indicate 95% confidence intervals

Turning to the contrast analysis and comparing the four forms for each of the two anaphora, the results reveal that the schwa form has the lowest probability of eliciting a positive judgment with the *men* anaphor ($p = 0.03$), which aligns closely with the French contracted double strategy (Tibblin et al., 2023a, p. 18).

In contrast, while the French data showed a significant difference in positive judgments between the masculine generic and all three GS forms in the presence of women-continuations, in Italian, this difference is significant only between generic masculine and standard GS forms ($p < 0.01$). However, this finding should be contextualised considering that the schwa condition received fewer positive ratings overall.

Comparing the anaphoric expressions within each form, the French study showed significant differences in the contracted double and gender-neutral forms. Instead, the present study revealed significant differences only in the generic masculine form, as previously discussed in describing Figure 21. Turning to the generic masculine form, the probability of a positive judgment was significantly lower when *women* was used compared to men ($p < 0.001$).

4.2.4.2 Response times of the positive judgments

The mean RTs of the positive judgments, grouped by form and anaphor gender, are presented in Figure 24. The mean RTs indicate that participants experience the greatest cognitive effort when encountering a feminine anaphor preceded by a generic masculine antecedent, with this effort decreasing when using GS forms. This observation supports the findings for judgments and aligns with Tibblin et al. (2023a). However, the difference in RTs for men- and women-continuations in masculine condition is much more pronounced in French than in Italian.

Additionally, among the French GS forms, the contracted double strategy elicited the shortest RTs for women-continuations, confirming the slight female bias also evident in the judgment analysis.

In contrast, in this study, the split form results in the shortest RTs overall. For the gender-neutral condition, the RTs are similar to those in the generic masculine condition, showing longer RTs compared to the split and schwa forms.

In general, the original study (Tibblin et al., 2023a, p.18) observed variability in RTs with the feminine anaphor, while RTs for men-continuations were consistent across the four conditions, all under 2250ms. In the current study, the overall mean RTs exceed 2250ms. This discrepancy can be explained by the difference in the number of data points (2013 observations in this study versus 2966 in the original) and because in this study both sentences of each pair averaged 70 characters, whereas the antecedent sentences in the French study averaged 49 characters, likely making them quicker to process in anaphor resolution.

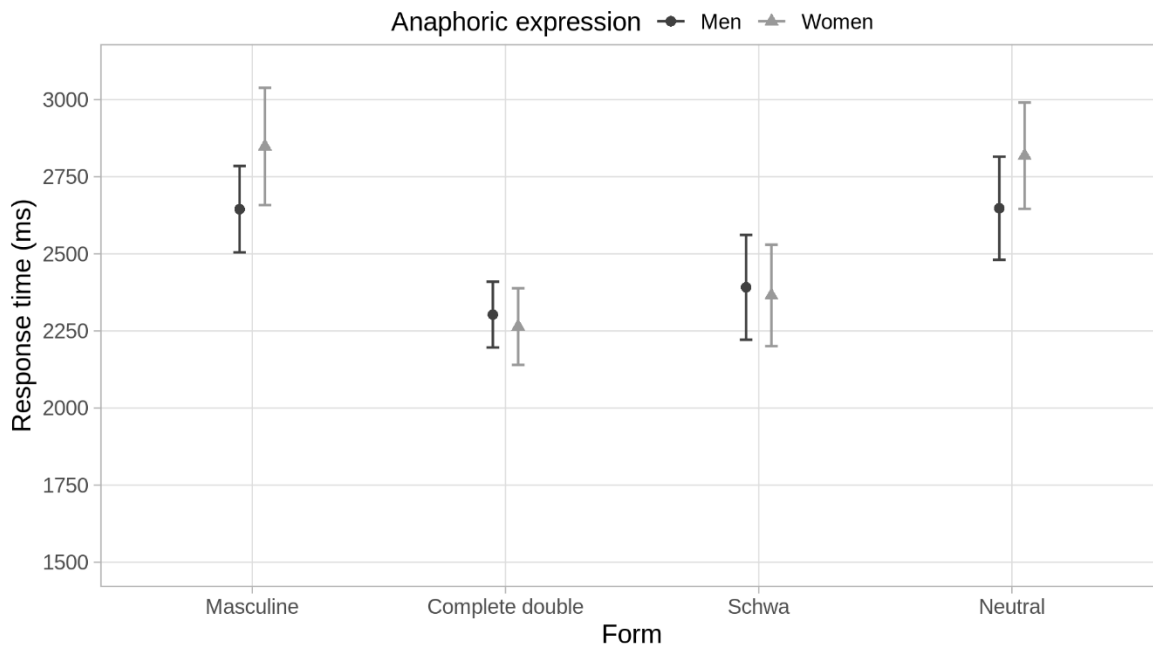


Figure 24. Mean response times (in ms) of the positive judgments grouped by form and anaphoric expression. The error bars indicate 95% confidence intervals

Descriptive data were analysed using linear mixed-effects modelling via the lmer function, as detailed in 4.1.3. The intercept referred to the log-transformed response times with the following values: men as the Anaphoric expression, masculine as the Form, and the Attitudes and Sentence Length variables centred around their means. The trial number was set at 1 (i.e., the first trial of the experiment). The fixed-effects structure included an interaction between Form and Anaphor Gender, and the main effects of Attitude, Sentence Length, and Trial Number. Participant and Role Noun were included as random intercepts.

No significant effects of the interactions between predictors on response times were found during the fitting phase. Consequently, the descriptive statistics were not supported by the inferential statistics. The only statistically significant effects were for Trial Number and Character Number, which were predictable due to familiarisation with the task and actual reading time, respectively.

As the model did not converge, R^2 and effect size were not measured. This lack of convergence can be partly attributed to the difference in observations between the French study (2966 data points) and the Italian study (2013 data points). Moreover, the effects and significant interactions reported by Tibblin et al. (2023, p. 20) had a small average effect size (maximum $d = -0.44$), despite a highly significant effect. Therefore, the difference in sample size likely hindered the convergence of the inferential model, despite similar trends in the descriptive data.

4.2.5 Discussion

4.2.5.1 The male bias elicited by generic masculine forms

This experiment aimed to replicate a French-language study investigating the impact of gender-sensitive strategies on reducing male bias triggered by generic masculine forms. Additionally, it analysed the effectiveness of different gender-sensitive strategies in constructing mental representations of mixed-gender groups of people. The replication study employed a feminisation strategy and two gender-neutralisation strategies, standard and sub-standard, as GS forms. It assessed

each form's effect in an anaphor resolution task by measuring success in antecedent retrieval (i.e., positive judgements) and cognitive effort (i.e., Response Times).

The data generally indicated that the masculine form, though intended to be generic, triggers a male bias during mental representation construction. Participants tended to imagine a group of men as referents rather than a mixed-gender group. Consequently, they found it more challenging to link an anaphoric element referring to women with a masculine antecedent. This finding aligns with extensive literature on male bias at interlinguistic (see Gygax et al., 2021 for a review) and Italian level (Ronca & Moscati, 2019). However, in this study, the predicted male bias was confirmed by the statistical model concerning the percentage of positive judgements, but not by the model concerning RTs, which showed a noticeable but not statistically significant slowdown with *women*-continuations.

Considering the extraction operation in sentence processing (Reboul and Moeschler, 1998) (cfr. Chapter 3), the negative judgments for women-continuations with a masculine generic antecedent (73% of total negative judgements) suggest that participants initially constructed the specific masculine mental representation [group of men]. This representation mostly remained specific, leading to the rejection of female anaphoric continuations. When the anaphor *women* with a masculine antecedent was successfully resolved, it was suggested that the initial specific masculine representation was updated in [group of men and women], which was expected to result in greater cognitive effort (longer RTs) (Tibblin et al., 2023a, p.22). The replication study did not find such an increase in cognitive effort: differences between mean RTs were never significant, and descriptive analysis showed that mean RTs in successful resolution cases with masculine forms followed by women-continuations ($n = 216$ observations, $M = 2848$ ms, $SD = 1401$ ms) were lower than in unsuccessful cases ($n = 96$ observations, $M = 3042$ ms, $SD = 1290$ ms). Notably, when participants expressed a negative judgement, their RTs were generally longer, regardless of the form and anaphor gender. In Tibblin et al. (2023a), this trend was consistent across all GS conditions but not in the generic masculine condition.

Regarding GS forms effects, the general trend is to attenuate or eliminate male bias: more conservative GS forms (feminisation and standard neutralisation) reduced it, while the most

innovative GS form (schwa) eliminated it. The following sections will explore the differences in GS form effects in greater detail, referencing the original French study.

4.2.5.2 Reduction of male bias with gender-sensitive forms

Study 4 demonstrated that gender-sensitive strategies reduce the male bias elicited by generic masculine forms. However, the impact of different GS forms varied: forms neutralised with schwa completely eliminated the male bias, while gender-neutral and split forms significantly reduced it.

The original study (Tibblin et al., 2023a) found that the feminisation strategy, which was morphosyntactically comparable to the one proposed in Italian, also eliminated male bias. This effect was not observed in Italian, possibly because the split forms presented the masculine form before the feminine one (*camerieri e cameriere* ‘waiters(M) and waiters(F)’), unlike the French experiment’s female-first choice (*voisines et voisins*, ‘neighbours(M) and neighbours(F)’). This experiment confirmed the significance of presentation order in processing mixed-gender coordinating conjuncts (Hegarty et al., 2016; Kesebir, 2017), suggesting that the first gender in a pair is more salient and dominant during mental representation formation. Similar effects were noted when using masculine and feminine values as opposite poles in rating scales for estimating the percentage of men and women associated with role nouns (Gabriel et al., 2008; Misersky et al., 2014). The left pole, read first, significantly influenced the perceived gender of the referents. Therefore, future studies should balance the order of presentation of both grammatical gender in split forms. Nevertheless, this minor difference did not affect the overall efficacy of split forms in reducing male bias, as they encouraged neutral mental representations, balancing positive judgments between male and female continuations. Additionally, a similar study on GS forms effectiveness in French (Xiao et al., 2022), which balanced the order of presentation in split forms, found no significant effect of presentation order.

Turning to the standard neutralisation strategy, outcomes align with studies on French (Kim et al., 2022; Richy & Burnett, 2021; Tibblin et al., 2023a; 2023b), which found a slight male bias but

significantly smaller than the one produced by generic masculine forms. Tibblin et al. (2023a) contextualised this by noting that most collective nouns used as gender-neutral reformulations presented overt masculine grammatical gender, regardless of the referents' gender in depicted groups. This issue was addressed in the Italian study by balancing grammatical gender of collective nouns rewordings in gender-neutral condition (e.g., *personale*, 'staff(M)'; *squadra*, 'team(F)'), but this balancing did not eliminate the slight male bias.

Finally, forms neutralised by schwa triggered average balanced mental representations, with a slight female bias. As previously discussed (cf. 2.3 and 2.5.3), a major issue with schwa neutralisation was modifying agent nouns of the *-tore/-trice* type (e.g., *nuotatore/nuotatrice/nuotatorə*, 'swimmer(M)/(F)/(COM)'), where the neutralised form *-torə* might be more intuitively linked to the masculine form, representing a 'masked masculine' (Giusti, 2022, p. 15; Thornton, 2022, p. 40). Despite 9 out of 22 target nouns being of this type, no significant effect of the role noun was found on judgments or response times.

Nevertheless, this outcome is insufficient to discard the 'masked masculine' hypothesis. The results on judgments in the schwa condition must also consider the significant, although weak, interaction between Form, Continuation, and Attitude variables: inferential analysis showed that a positive attitude towards gender-sensitive language increases the likelihood of positive judgments for schwa forms as antecedents of women-continuations. Therefore, even if the suffix *-torə* suggested male-biased mental representations, if schwa is an innovative and ideologically loaded strategy (e.g., a flag marker, cf. 2.5.3.1), such bias would be hard to detect in participants with strong positive attitudes towards gender-sensitive language. Hence, it would be beneficial to investigate gender inferences produced by schwa-neutralised nouns, keeping a control group with a neutral attitude and manipulating the type of role noun as an experimental condition to compare *-tore* nouns with other schwa-neutralised role nouns.

Additionally, as shown in Figure 22, participants assigned to schwa lists reported the lowest percentage of positive judgments (around 70%) regardless of the referential gender in women- or men-continuations, while other experimental lists showed about 85% positive judgments. Observing

only Figure 22, the reduced percentage of positive judgments could suggest that participants were unaware of the schwa symbol as a GS form, perceiving a technical or typographical error in the experiment. However, questionnaire data on gender-sensitive language showed that the sample had a medium to advanced knowledge of schwa as a GS form, easily dismissing this interpretation.

Comparing the percentage of positive judgments with the significant interaction between Attitude and (schwa) Form, it is likely that the 30% of sentence pairs deemed unacceptable stem from two motivations. The first possible reason behind this result is that participants interpreted the gender-value of noun modified by schwa as non-binary, thus excluding the possibility of men's and women's presence in the group. However, in the light of Study 2 results (Table 14, 2.5.2; see also Thornton, 2022), the schwa gender-sensitive solutions is more broadly used with generic plural references rather than non-binary ones; still, the non-binary inference is not able to be excluded a priori.

A second interpretation of this result is linked to participants' ideological positioning, thus, an aversion to schwa. Indeed, positive attitudes affected all experimental conditions, regardless of Form and Continuation, but in the other two GS forms, the percentage of positive judgments never fell below 80%. This suggests that participants supporting gender-sensitive language seem to support standard strategies (feminisation and neutralisation through syntactic reformulation) more than the sub-standard (schwa), which, as outlined in 2.5.4, has acquired strong iconic value, being central to ideological polarisation and public censure by some Italian academics and the Accademia della Crusca (cf. 2.3).

This aversion also pertained to the mid-dot in the contracted double strategy in Tibblin et al.'s (2023a) study, being the most innovative of the three GS forms and the most controversial in French public opinion, even leading President Macron to oppose *écriture inclusive*, with the Senate proposing a ban in official communications in autumn 2023 (Gingins, 2023).

However, contracted double forms did not produce the same experimental outcomes as schwa in Italian: there was also a female bias, but contracted double forms did not elicit a lower percentage of overall positive judgments. The two strategies are not comparable because contracted double forms were designed in French to economically represent men and women, akin to feminisation, without

aiming to question the gender binary or represent non-binary individuals, as schwa does. Additionally, contracted double forms do not introduce phonological innovation but offer a graphical solution to already accepted coordinated constructions in French. Despite debate, contracted double forms were adopted even in the 2022 recommendations of the *Haut Conseil à l'Égalité entre les Femmes et les Hommes* (Tibblin et al., 2023a, p. 25). Therefore, although not standard French, mid-dot forms enjoy greater acceptance among French speakers compared to schwa among Italian speakers, beyond the opposition of French political and linguistic institutions. Indeed, the authors did not find a significant correlation between participant Attitude and contracted double forms; instead, they attributed the female bias to the mid-dot's separation of masculine and feminine grammatical gender, graphically highlighting the feminine grammatical gender at the word's end, thus possibly influencing mental representation.

In conclusion, the general trend regarding the effects of GS forms on reducing male bias is largely confirmed between the original French study and this Italian replication. Differences in the comparison of more recent and innovative strategies in both languages, schwa in Italian and mid-dot in French, are likely due to differing social objectives and linguistic adaptability to the gender system. A feminisation strategy is likely easier to adopt in a language with grammatical gender than a strategy aiming to obscure grammatical gender and challenge the gender binary in language and society.

4.2.5.3 On the effectiveness of different GS forms in Italian

Conducting two studies with distinct methodologies both in terms of tasks and tools employed for data collection and analysis have yielded a more comprehensive understanding of gender inferences in Italian. Initially, the studies diverged in their data collection approaches, with one being lab-based and the other web-based (Kim, 2024) (cf. 3.1). This divergence allowed the researcher in Study 3 to control the experimental setting, which subsequently informed the design adjustments in Study 4 particularly according to stimuli selection and randomisation processes. Moreover, in Study 3, the laboratory setting provided the advantage of controlling the test environment, ensuring optimal

conditions such as adequate lighting and minimal noise. This contrasts with Study 4, where such conditions could only be suggested in the instructions but not enforced. Additionally, Study 3 aimed to test an innovative methodology that combined visual and textual stimuli, utilising response times measured through vocal recordings. This method enabled the detection of hesitations, reconsiderations, or incomplete responses; data that were not obtainable in Study 4. Conversely, the web-based methodology of Study 4 facilitated a larger sample size and mitigated the biases associated with the researcher's direct observation, as noted in Study 3. This allowed for a clearer analysis of the impact of extralinguistic variables, such as attitudes, on the responses, independent of perceived alignment with the researcher's opinions or the study's presumed objectives. The more controlled sample in Study 3 permitted an in-depth exploration of subjects' opinions and impressions post-participation, especially since the specific research objective was disclosed to participants at the end, encouraging feedback and potential follow-ups. However, conducting a web-based experiment with compensated participants likely resulted in more motivated, ethically controlled, and spontaneous participation, thereby enhancing *ecological validity* (Kim, 2024).

Turning to a detailed comparison of the results obtained through the two studies, employing a widely validated methodology in Study 4 (Gygax et al., 2008), and particularly a *by-participant design*, was firstly useful in detecting the male bias produced by generic masculine forms, aligning Italian results with those in other languages with grammatical gender. This initial finding supports the conclusions of Study 3 (cf. 4.1.5), which suggested that the absence of male bias in the generic masculine condition was due to participants being exposed to all three experimental conditions with insufficient repetitions ($n = 3$ items per condition). Conversely, participants in Study 4 were exposed to the same condition for 22 repetitions, yielding more reliable data.

Regarding the effects of feminisation strategies, the results from both studies demonstrate their effectiveness in giving more visibility to women in mental representations. This was observed with both contracted split forms (asyndetic coordination (M)/(F); Study 3) and full splitting ((M) and (F); Study 4), both set with male-first order. Moreover, although the difference between the mean response

times was not significant in either study, feminisation strategies were processed with less cognitive effort.

The effects of the gender-neutral strategy yielded similar results in both studies, showing reduced effectiveness in including women in mental representations and causing an average increase in RTs. This increase is explained by the strategy of rewording being less frequent in Italian than generic masculine, and more formally ambiguous than feminisation. Despite the gender-neutral condition being achieved differently in the two studies, both observed a male bias, more pronounced in the first study than the second. In Study 3, as so-called common gender nouns were tested (i.e., *cantanti* ‘singers(COM)’), neutralisation only concerned the determiner and was achieved by using the quantifier expression *un gruppo di* ‘a(M) group(M) of’, which is assigned masculine but not semantically motivated. In Study 4, gender-neutral rewording was directly applied to the target noun, selecting epicene or collective nouns assigned both masculine (i.e., *i membri* ‘the(M) members(M)’, *il pubblico* ‘the(M) audience(M)’) and feminine grammatical gender (i.e., *le persone* ‘the(F) people(F)’, *l’orchestra* ‘the(F) orchestra(F)’). This modification balanced the effect of the masculine grammatical gender assigned to the noun *gruppo* ‘group’ in gender-neutral stimuli in the previous study and allowed to test a potential female bias with epicene or collective feminine nouns. However, controlling epicene nouns’ gender in Study 4 did not provide different outcomes.

It is plausible that, when encountering an epicene or collective noun, participants still more readily establish an anaphoric link with a masculine element (i.e., ‘a group of men’), even when the antecedent has feminine grammatical gender (i.e., *persone* ‘people(F)’, *squadra* ‘team(F)’). This phenomenon was also observed in French studies on gender inferences produced by epicene nouns (Brauer & Landry, 2008, p. 261; Storme & Delaloye Saillen, 2024, p. 8) which found a male bias for masculine epicenes but no female bias for feminine epicenes. Moreover, Irmen e Roßberg (2004, p. 272) found that the inhibitory action of female grammatical gender on role nouns in German was weaker than that of male grammatical gender.

The male bias observed in the gender-neutral condition in both studies provides fundamental insights into the effects of gender-sensitive language on languages with grammatical gender. It

highlights the different cognitive weight that masculine and feminine grammatical gender encodings in the text have on the mental representation process. Firstly, comparing the effectiveness of split and gender-neutral forms regarding the presence of women in groups, feminine grammatical gender has more impact when it is semantically motivated (*le nuotatrici* ‘the^(F) swimmers^(F)’) than when it is arbitrarily assigned to a noun (*la squadra* ‘the^(F) team^(F)’), as reported by Everett (2013) (cf. 3.3.3).

Moreover, the social and linguistic goal of feminisation strategies has always been to highlight the presence of women, especially in professional titles. As soon as participants read the overt feminine grammatical gender on non-independent nouns, which is structurally and sociolinguistically marked in Italian (cf. 2.1.1), they immediately include women in their mental representation. In contrast, neutralisation proposal aimed to avoid suggesting any clues about the group’s gender composition, and to obscure the referents’ gender each time it is irrelevant or detrimental to message comprehension (Dembroff & Wodak, 2018, 2020).

However, both the presence of male bias in the gender-neutral condition in Studies 3 and 4 and the absence of female bias in studies on feminine epicene nouns suggest that gender-neutral forms effectively obscure the grammatical gender of referents.

Therefore, the problem seems to be the achievement of complete linguistic ambiguity that may itself cause the male bias. In a system that frequently encodes grammatical gender on controllers and all agreement targets, even when exposed to an ambiguous stimulus that does not explicitly link grammatical gender to human referents’ gender identity, the mental representation process will still tend to categorise those referents in the societal gender binary.

However, as exposed in 3.3.2, in the absence of formal clues in the text, such an association relies on another kind of information, for example, the stereotypical one, as it happens in languages with natural gender. Indeed, although the stereotype variable was kept under control, it is also possible that stereotype ratings of some stimuli have changed along the years since the reference norming study was carried out ten years ago (Misersky et al., 2014).

Moreover, the results of Study 4 allow to discard the hypothesis that the male bias in response to gender-neutral forms in Study 3 was due to the grammatical masculine gender in *un gruppo di*, ‘a(M) group(M) of’, since gender-neutral rewordings in Study 4 presenting masculine grammatical gender did not have a significant effect on participants’ judgments.

It is likely that in gender-neutral condition in both studies, the inference process might have been guided by retrieving a *default* gender, the masculine, as an automatic slot-filling process for missing linguistic information, or by retrieving information from long-term memory, where the male individual represents the prototypical individual (e.g., [human being]) (Bailey et al., 2019) and is more represented in most professional settings.

Simplifying, the data on Italian GS strategies suggests that ‘all referents are men until specified otherwise’ aligning with the androcentric perspective exposed in paragraph 3.4.1. Therefore, while feminisation specifies the *other-than-man* entity, eliminating male bias, “neutralisation helps in reducing the visibility of gender biases but not in correcting or mitigating them” (Gabriel et al., 2018, p. 851).

In conclusion, Studies 3 and 4 aimed to provide the reader with some cognitive insights to make more aware of political choices in using gender-sensitive language, as already stated by Merkel et al. (2017). Indeed, from a language policy perspective, the reasoning above suggests that, at least cognitively, the strategy of gender specification proposed by the *Moderate claim* (cf. 2.2.2) is the most effective for increasing the visibility of women and, potentially, non-binary referents designed by specific letters or symbols (cf. 2.5.2), which representation was not tested in the present studies. On the other hand, discussions on neutralising grammatical gender and deconstructing gender binarism in society have only recently started in Italy. It cannot be excluded that neutralisation strategies, understood as a *Radical claim*, thus strategies to obscure gender, may over time change the current salience of gender information in reading processing, especially the masculine one which, so far, resulted to be essential in constructing any MR about human referents.

– Conclusions –

Since the conclusions regarding the specific research objectives have already been provided at the end of Chapter 2 and Chapter 4, this final section should be understood as the author's commentary on the insights gained during the research period.

This study aimed to achieve several scientific objectives, the first of which was to determine whether morphological strategies for grammatical gender neutralisation (e.g., MGNSs; *, *a*, *x*) exhibit recognisable and consistent morphosyntactic patterns, and to what extent these patterns can be integrated into standard Italian.

This overarching objective was investigated through two complementary data collections. The findings from the questionnaire (Study 1; cf. 2.4.5) not only provided insight into the linguistic usage across different registers, but also highlighted some characteristics of the spread of MGNSs across various social contexts and participants' motivations behind their use. Meanwhile, the corpus annotation (Study 2; cf. 2.5.4) allowed for the examination of uncontrolled linguistic usage, shedding light on the practical challenges and limitations faced by speakers in using MGNSs, as well as their political and creative applications. The second overarching objective was to investigate the differing

impacts of standard grammatical gender neutralisation strategies (Study 3; cf. 4.1.5) compared with non-standard ones, particularly the use of schwa (Study 4; cf. 4.2.5), on gender inferences during reading. This aimed to assess whether these strategies could be effective in reducing the male bias elicited by the generic masculine or conventional masculine forms.

The combined findings from these four studies, alongside the literature reviewed, suggest that the proposed non-standard strategies for neutralising grammatical gender (e.g., *, ə, x), based on the usage observed in the first two studies, do not yet offer a linguistically coherent or systematic solution that could be implemented as part of a language policy. So far, the numerous morphosyntactic inconsistencies in their application, and particularly the inability to assign a consistent grammatical and referential gender value to these symbols, make it difficult to imagine them being formally adopted, for instance, in educational or administrative contexts.

Conversely, there is little ambiguity regarding the perception of these strategies as *ideologically loaded*, meaning they function performatively rather than purely grammatically. The political use of schwa and other MGNSs in the Non Una Di Meno communications demonstrated the speakers' intent to *territorialise*, thus *squat*, grammatical space (Cordoba, 2020; 2023), creating a form of discomfort, be it graphic or communicative, that mirrors the social discomfort experienced by marginalised groups, such as the trans* and non-binary communities. Additionally, the ideological loading of symbols like schwa is evident from the inferences drawn in Study 4 (cf. 4.2.5.3), where schwa's effectiveness in increasing female visibility was linked to highly positive attitudes towards gender-sensitive language. However, schwa also elicited more negative judgments, regardless of the referential gender of the anaphor, suggesting a perception of agrammaticality issues and rejection of sentences containing schwa, patterns not observed with other standard gender-sensitive strategies.

This is an important point in relation to the proposal of the schwa, as it is true that a symbol capable of drawing such significant attention can certainly act as a 'stumbling block' in linguistics, as Gheno suggests (2022, p. 401), bringing focus to issues that previously lacked it (e.g., non-binary identity, the rejection of biological essentialism). However, it is equally true that it may also provoke

distrust and hostility if the introduction of the symbol is not effectively accompanied by a widespread increase in social and cultural awareness regarding the new conceptualisation of gender identity.

A parallel can be drawn with the hostile reception received by Sabatini's proposals for feminisation in the late 1980s, which in some respects mirrors the reaction to schwa today (Sulis & Gheno, 2023, p. 159). However, the linguistic and social objectives underpinning those recommendations were clearer, and the social group being addressed was more easily identifiable, both for those who supported and opposed the proposals. By contrast, the social groups implicated in the neutralisation proposals involving schwa are harder to pinpoint, as the non-binary community has only recently entered the Italian political landscape and remains a minority group compared to women. Moreover, as discussed in Chapter 2, not all feminist communities support trans* and non-binary inclusion, making it even more difficult to garner support for this social cause, let alone the linguistic one.

Furthermore, given that the debate surrounding the use of MGNSs, particularly schwa, is highly polarised in Italy, as it is across Europe regarding other strategies (Pfalzgraf, 2024), one might question whether the political movements' enthusiastic adoption of such symbols in their communications (see Tables 7 and 12, tracking the rise of MGNS use from 2019 to 2021) is genuinely aimed at altering power dynamics between language and gender within their internal discourse, or whether it is a (legitimate) choice to manifest opposition to more reactionary political stances on gender identity issues, irrespective of language.

In future research, it will be important to explore the spoken dimension of schwa usage, particularly in the (self-)designation of non-binary individuals in spontaneous conversation. From a cognitive perspective, further investigation is needed into the gender inferences triggered by nouns neutralised with schwa when used in contexts of singular generic reference, as opposed to mixed-gender groups, as proposed in the study. For instance, it remains to be seen whether the use of schwa in job advertisements could foster a sense of social inclusion among trans* and non-binary individuals, as has been tested for splitting strategies in relation to women (Gabriel et al., 2018; Stout & Dasgupta, 2011).

Regarding the question of whether the salience of referential gender information (Gygax et al., 2021) in languages with sex-based grammatical gender can be reduced through neutralisation strategies, the two studies demonstrated the difficulty of eradicating gendered mental imagery from the minds of speakers accustomed to receiving and producing binary gender information with great frequency (Slobin, 2003). Where no specific referential gender information was provided, the likelihood of inferring a male group increased, suggesting the persistence of cognitive androcentrism, whereby [male] is equated with [human being] (Brauer & Landry, 2008; Hamilton, 1988; Siyanova-Chanturia et al., 2012). Regardless of whether the ambiguity around the gender of the group was created through strategies internal to the Italian system (Study 3; Figure 18) or external (Study 4; Figure 22), the visibility of women in mixed groups was consistently lower under gender-neutral conditions compared to those with gender specification (split form).

In conclusion, bearing in mind that envisioning morphological solutions that obscure grammatical gender in Italian may be particularly challenging, and that such obscuration may require complex metalinguistic reflection to be standardised, and that both standard and non-standard gender-neutral strategies lack in effectiveness in eliciting generic mental representations, these considerations do not imply that the linguistic practices of invisibilisation, subordination, and marginalisation associated with the grammatical masculine by convention should no longer be questioned.

This work has employed the terminology *gender-sensitive* language to encompass all feminisation and neutralisation solutions, emphasising the need to continue developing a profound, creative sensitivity, instead of a mechanical language modification (Thornton, 2023) towards the issue. This fosters both metalinguistic reflection and social critique of the current gender binary in society. In particular, fostering awareness of gender-sensitive language requires first identifying the linguistic tools that can empower a social group or enhance the psychophysical well-being of an individual. To achieve this, it may be helpful to eliminate the strict division between feminisation and neutralisation strategies, and instead consider when the specification of referential gender is necessary for these objectives.

In this perspective, specifying referential gender may be essential for the recognition and well-being of trans men and women. Likewise, specifying female referential gender can be significant when highlighting the entry of a woman into a prestigious position previously occupied solely by men, as in the case of *una rettrice* ‘a(F) Vice Chancellor(F)’, *un’astronauta* ‘an(F) astronaut(F)’, or *una Presidente del Consiglio* ‘a(F) Prime Minister(F)’.

At the same time, developing gender-sensitive language also means understanding when neutralisation makes more sense, not because obscuring grammatical gender solves the problem, but because it raises the question, in the mind of the recipient, as to whether information about the referent’s gender identity, or even sex, is relevant to the text in question. Similarly, greater awareness and use of gender-neutral strategies, particularly standard ones, can prompt those producing messages to consider more carefully whether the referent’s gender identity constitutes an unnecessary or even negative form of hypercharacterisation, akin to the way ethnicity or migrant status is often over-specified in media reports of criminal acts (Orrù, 2017).

In this sense, developing a gender-sensitive language also means recognising that the specification of referential gender, understood as the *disclosure* (Dembroff & Wodack, 2018) of someone’s gender identity in public, does not hold the same weight for everyone in society, particularly when comparing marginalised groups to majority ones. This makes the pursuit of a unified solution of gender-sensitive language potentially counterproductive.

Indeed, gender identity, binary or especially non-binary, can be expressed with pride and ease when lived in harmony, in social conditions that allow individuals to present their gender expression without repercussions. Conversely, it is worth asking when a special sensitivity, in terms of privacy, is required in disclosing someone’s gender identity into discourse, as the gender specification strategies could cause stress or lead to stigmatisation in non-welcoming social or work environments.

Therefore, gender-neutralisation strategies in Italian, whether they operate within the language system or involve symbols used outside the system to represent a new grammatical and referential gender, currently emerge as valuable tools for metalinguistic reflection and social development

concerning the topic of gender identity. However, their application requires a profound sensitivity to ensure that such strategies are considering the referential context of use (e.g., specific reference or generic reference), as well as the linguistic register in which the conversation takes place. Above all, the use of gender neutralisation strategies must consider the extralinguistic context, particularly the power relations between interlocutors, without which any proposal to discuss gender-sensitive language may result ineffective and meaningless.

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Appendix A. Sociolinguistic questionnaire about gender-sensitive language in sub-standard Italian (Study 1)

Grazie per il tuo interesse verso questo studio sul linguaggio inclusivo per le identità di genere. Il questionario è anonimo e i dati forniti saranno utilizzati esclusivamente per scopi di ricerca. Lo studio è condotto da Elena Sofia Safina, dottoranda al 37° ciclo in Mind, Gender and Languages, presso la Facoltà di Studi Umanistici dell'Università Federico II di Napoli.

L'obiettivo del questionario è quello di descrivere le conoscenze che le persone hanno del linguaggio inclusivo per le identità di genere, e di capire se e come lo utilizzano.

Ci sono molti modi per realizzare l'inclusione di tutte le identità di genere nella lingua italiana, alcuni fanno parte della grammatica (es. dire 'a tutto il personale' anziché 'a tutti i colleghi'), altri invece non fanno parte della grammatica (es. 'a tutt* l* collegh*').

Il questionario che stai per iniziare riguarda i modi di realizzare il linguaggio inclusivo attraverso l'uso di simboli o lettere che esprimono un valore di genere diverso da quello maschile e femminile, come negli esempi qui sotto:

Schwa 'ə' (es. *maestro/maestra* -> *maestrə*)

Asterisco '*' (es. *maestro/maestra* -> *maestr**)

Chiocciola informatica '@' (es. *maestro/maestra* -> *maestr@*)

Lettera 'X' (es. *maestro/maestra* -> *maestrx*)

Lettera 'U' (es. *maestro/maestra* -> *maestru*)

NB: Se prima, durante o dopo aver compilato il questionario avessi bisogno di un chiarimento o volessi fornire una tua opinione, non esitare a contattarmi all'indirizzo elenasofia106@gmail.com.

PARTE 1

1. E-mail:

2. Città di nascita:

3. Città dove vivi adesso:

4. Da quanto tempo vivi in Italia?

- a) da sempre
- b) 0-5 anni
- c) 5-10 anni
- d) Più di 10 anni
- e) Non vivo in Italia

5. La tua lingua madre:

6. Altre lingue che conosci (tieni conto anche dei dialetti):

7. Ultimo titolo di studio conseguito:

- a) Licenza media
- b) Diploma di maturità
- c) Laurea Triennale
- d) Laurea Magistrale (o Laurea a ciclo unico)
- e) Dottorato di ricerca

8. Settore lavorativo o ambito di studi (es. linguistica, ingegneria, medicina, sport)

9. Sei una persona non binaria? (sì/no)

10. Qual è la tua identità di genere? (es. donna, uomo, non-binary, agender, genderqueer, transmasculine, transfeminine, etc.) [risposta aperta]

11. Autorizzo al trattamento dei dati consapevole che i risultati del sondaggio verranno utilizzati solo a fini di ricerca e in maniera del tutto anonima. (sì/no)

12. Sei a conoscenza del linguaggio inclusivo (schwa, asterisco, etc.)?

- a) Sì, ho approfondito la mia conoscenza sull'argomento in diversi modi
- b) Ne ho sentito parlare, ma non so tanto.
- c) No, non ne ho idea [termina questionario]

PARTE 2

Cerca di rispondere nel modo più sincero possibile, e tieni conto che non ci sono risposte giuste o sbagliate.

1. Dove hai sentito parlare di linguaggio inclusivo (schwa, asterisco, etc.) la prima volta? (Si intende anche quando lo hai visto scritto o sentito pronunciare per la prima volta).

Puoi selezionare più di un'opzione.

- collettivi transfemministi e/o associazioni LGBTQAI+
- rete di amicizie
- partner
- rete familiare
- seminari, festival culturali, eventi pubblici
- social network
- libri, riviste e giornali cartacei o digitali
- attraverso contenuti di persone esperte nel campo della linguistica o intellettuali
- altro:

2. Quando hai sentito parlare di linguaggio inclusivo (schwa, asterisco, etc.) per la prima volta? (Si intende anche quando lo hai visto scritto o sentito pronunciare per la prima volta)

- Prima del 2020
- A partire dal 2020

3. Ricordi precisamente l'anno in cui hai sentito parlare di linguaggio inclusivo (schwa, asterisco, etc.) per la prima volta? (Si intende anche quando lo hai visto scritto o sentito pronunciare per la prima volta)

- Nel 2022
- Nel 2021
- Nel 2020
- Nel 2019
- Nel 2018
- Nel 2017
- Non me lo ricordo
- Altro:

PARTE 3

Cerca di rispondere nel modo più sincero possibile, e tieni conto che non ci sono risposte giuste o sbagliate.

- 1. Utilizzi il linguaggio inclusivo (schwa, asterisco, etc.)? ***
 - Sì, spesso
 - Sì, solo qualche volta
 - No, mai [termina questionario]
- 2. In quali ambienti utilizzi il linguaggio inclusivo (schwa, asterisco, etc.)? (puoi selezionare più di un'opzione)**
 - In famiglia
 - Partner
 - Nelle amicizie
 - Negli ambienti dedicati all'attivismo e associazionismo sensibili al tema
 - Negli ambienti lavorativi e di studio
 - Sui social network
 - Altro:
- 3. (Domanda facoltativa) Perché proprio in questi ambienti? [risposta aperta]**
- 4. Ti piacerebbe che il linguaggio inclusivo (schwa, asterisco, etc.) venisse usato anche in altri ambienti?**
 - Sì, spero che accada e mi impegnerò per farlo conoscere alle persone
 - Non saprei, vediamo come si evolve spontaneamente
 - No, preferirei che rimanesse negli ambienti dove è usato adesso
- 5. (Domanda facoltativa) In quale ambiente vorresti che si utilizzasse di più o si iniziasse ad usare il linguaggio inclusivo (schwa, asterisco, etc.)? (es. contesto lavorativo\di studio; prodotti artistici; media; settore culturale; settore giuridico\amministrativo; settore sanitario; settore educativo; etc.)**
- 6. In quale tipo di comunicazioni usi il linguaggio inclusivo (schwa, asterisco, etc.)? (puoi selezionare più di un'opzione)**
 - chat private whatsapp, chat private dei social, diario personale
 - e-mail di lavoro
 - commenti e post pubblici sui social, blog personale, GRUPPI Whatsapp pubblicazioni, comunicazioni ufficiali, inviti formali, moduli, bandi

- audio privati su Whatsapp; al bar con una persona amica
- colloqui di lavoro; visita medica; esami universitari
- davanti alla famiglia o a un gruppo di persone a cui vuoi bene
- convegni, riunioni di lavoro, assemblee scolastiche

7. (Domanda facoltativa) In quale tipo di comunicazione vorresti che si usasse di più o si iniziasse ad usare linguaggio inclusivo (schwa, asterisco, etc.)?

PARTE 4

In questa sezione troverai sia domande a risposta multipla che domande aperte in cui ti chiedo di riscrivere alcune frasi. Anche in questo caso, rispondi nella maniera più sincera possibile, e tieni conto del fatto che non ci sono risposte giuste o sbagliate.

1. Quali sono i simboli o le lettere che usi di più per realizzare il linguaggio inclusivo per le identità di genere? Per ognuna delle opzioni seleziona la frequenza di utilizzo. Contrassegna solo un'opzione per riga.

	Spesso	Qualche volta	Mai
ə (es. amicaə)	☐	☐	☐
* (es. amic*)	☐	☐	☐
X (es. amicx)	☐	☐	☐
Y (es. amicy)	☐	☐	☐
U (es. amicu)	☐	☐	☐
@ (es. amic@)	☐	☐	☐
_ (es. amic_)	☐	☐	☐
' (es. amic')	☐	☐	☐
Nessun simbolo	☐	☐	☐

2. Ti stai rivolgendo a un gruppo di persone di cui non conosci l'identità di genere. Quale frase preferiresti usare?

- Buongiorno a tutte, tutti e tuttu Buongiorno a tutte, tutti e tuttə
- Buongiorno a tuttu
- Buongiorno a tuttə
- E' indifferente
- Altro:

3. (Domanda facoltativa) Riscrivi questa frase con lo schwa per renderla più inclusiva.

"Ieri, ho finalmente parlato con Roberta e Marco, due dei miei più importanti amici di Bologna".

4. (Domanda facoltativa) Riscrivi questa frase con lo schwa per renderla più inclusiva.

"E se uno non è pronto per avere un figlio? Essere genitori significa anche dare se stessi per educarlo al meglio, per dargli tutte le cure di cui ha bisogno".

5. (Domanda facoltativa) Riscrivi questa frase con lo schwa per renderla più inclusiva.

"Incamminarsi ora in montagna sarebbe da incoscienti!".

6. Utilizzando lo schwa, come modifichereesti queste frasi per renderle più inclusive?

"Mostriamo tutto il nostro appoggio ai lavoratori dello spettacolo."

- Mostriamo tutto il nostro appoggio all3 lavorator3 dello spettacolo
- Mostriamo tutto il nostro appoggio all3 lavoratric3 dello spettacolo
- Mostriamo tutto il nostro appoggio aə lavoratorə dello spettacolo
- Mostriamo tutto il nostro appoggio aə lavoratricə dello spettacolo
- Altro:

7. Utilizzando lo schwa, come modifichereesti queste frasi per renderle più inclusive?

"Amici, mi raccomando, domani tutti puntuali alla laurea!"

- Amicə, mi raccomando, domani tuttə puntualə alla laurea!
- Amichə, mi raccomando, domani tuttə puntuali alla laurea!
- Amichə, mi raccomando, domani tuttə puntualə alla laurea!
- Amicə, mi raccomando, domani tuttə puntuali alla laurea!
- Altro:

8. Utilizzando lo schwa, come modifichereesti queste frasi per renderle più inclusive?

"Hai per caso un collega che potrebbe farti da sostituto per due giorni?"

- Hai per caso unə collega che potrebbe farti da sostitutə per due giorni?
- Hai per caso unə collegə che potrebbe farti da sostitutə per due giorni?
- Hai per caso unə collegə che potrebbe farti da sostituto per due giorni?
- Hai per caso unə collega che potrebbe farti da sostituto per due giorni?
- Altro:

9. Utilizzando lo schwa, come modifichereesti queste frasi per renderle più inclusive?

"Fede, Vale e Simo si sono candidati per il ruolo di tesoriere del collettivo"

- Fede, Vale e Simo si sono candidatə per il ruolo di tesoriere del collettivo
- Fede, Vale e Simo si sono candidat3 per il ruolo di tesorierə del collettivo
- Fede, Vale e Simo si sono candidatə per il ruolo di tesorierə del collettivo
- Fede, Vale e Simo si sono candidat3 per il ruolo di tesoriere del collettivo

PARTE 5

Adesso ti chiederò di leggere alcune frasi. Per ogni frase dovrai esprimere un giudizio su quanto sei d'accordo.

1. Il dibattito sul linguaggio inclusivo per le identità di genere è molto importante per me.

- Per niente d'accordo
- Poco d'accordo
- Né in disaccordo né d'accordo
- Abbastanza d'accordo
- Completamente d'accordo

2. Per me il linguaggio inclusivo dovrebbe avere come PRIMO obiettivo quello di eliminare il binarismo di genere in modo da creare una società non più basata sulla distinzione uomo\donna.

- Per niente d'accordo
- Poco d'accordo
- Né in disaccordo né d'accordo
- Abbastanza d'accordo
- Completamente d'accordo

3. **Per me il linguaggio inclusivo dovrebbe avere come PRIMO obiettivo quello di ampliare il binario di genere aggiungendo l'identità non binaria a quella maschile e femminile, dando a chiunque la stessa possibilità di rappresentazione nella società.**
- Per niente d'accordo
 - Poco d'accordo
 - Né in disaccordo né d'accordo
 - Abbastanza d'accordo
 - Completamente d'accordo
4. **Uso il linguaggio inclusivo SOPRATTUTTO per evitare il maschile quando mi riferisco a gruppi di persone con identità di genere diverse o che non conosco (es. *Car* amic** vs. *Cari amici*).**
- Per niente d'accordo
 - Poco d'accordo
 - Né in disaccordo né d'accordo
 - Abbastanza d'accordo
 - Completamente d'accordo
5. **Uso il linguaggio inclusivo SOPRATTUTTO per rappresentarmi o per riferirmi ad un'altra persona non binaria, in modo da evitare il misgendering (es. Alex è una persona non binaria; rivolgendomi ad Alex potrei dire: “Ciao Alex, come sei bellə oggi! Vs. Ciao Alex, come sei bello\bella oggi!”)**
- Per niente d'accordo
 - Poco d'accordo
 - Né in disaccordo né d'accordo
 - Abbastanza d'accordo
 - Completamente d'accordo
6. **Uso il linguaggio inclusivo SOPRATTUTTO per evitare ogni specificazione di genere, anche quando devo indicare persone indefinite o ruoli professionali.**
- es.a) *Tu e Matteo avete mai il desiderio di avere un bambino?* (-> *un* bambin**)
- es.b) *A breve si eleggerà il sindaco* (-> *lə sindacə*)
- es.c) *C'è nessuno in casa? Qualcuno mi aiuti!* (-> *nessunx; qualcunx*)

- Per niente d'accordo
- Poco d'accordo
- Né in disaccordo né d'accordo
- Abbastanza d'accordo
- Completamente d'accordo

Grazie per il tuo prezioso contributo!

Ti piacerebbe partecipare ad un esperimento di psicolinguistica?

Scrivi il tuo indirizzo e-mail qui sotto e ti contatterò non appena l'esperimento sarà pronto.

7. Indirizzo e-mail

Appendix B. Full Experimental design and materials from Study 3.

Study 3. Effects of grammatical gender on gender inferences: experimental evidence from Italian common gender nouns

General information

- **PI of the project:** Professor Michela Cennamo (L-LIN/01)
- **Other project members:** Elena Sofia Safina (second-year PhD candidate, 37th cycle in Mind, Gender, and Language)
- **Affiliated institution:** Department of Humanities, University of Naples Federico II, Via Porta di Massa, 1, Naples
- **Location of the experiment:** Urban/Eco Interdepartmental Research Centre, Via Tarsia, 31, Naples
- **Equipment used:** Hardware/Software, Vivobook ASUS Laptop X510QA_F510QA; Microsoft PowerPoint; OBS Studio (for recording audio and video exclusively of the PowerPoint window); Google Forms
- **Measurements:** Reaction times; Discrete judgments (selected image, multiple-choice responses)
- **Data analysis model:** multimodal logistic regression for nominal variables
- **Participant details/sample size:** Minimum 30 – maximum 120 participants. A group of 10 participants per test set (three sets in total) is estimated to investigate the phenomenon.
- **Inclusion criteria:** Age within the specified range (18–40 years); Native-level Italian proficiency or at least intermediate proficiency if Italian is a second language
- **Recruitment method:** Snowball sampling and advertisement of the experiment through personal networks of the PI and the PhD candidate
- **Physical/psycho-social risks:** The audiovisual content in the test is non-discriminatory, non-offensive, and not potentially harmful. The experiment duration is approximately five minutes and is conducted in a comfortable, private setting without physical exertion. No personal identification data (e.g., name, surname) is collected. The experimental task avoids any expression of personal opinions or experiences.
- **Procedure:** Information & Consent section, instructions, experiment (sentence, question, answer to 18 items), sociodemographic questionnaire, submission. Experimental task: reading short texts; reading questions related to the texts; selecting an image vocally as a response (four choices provided)

Stimuli construction and classification

(For the graphical representation of individual test sets, refer to the attached PowerPoint presentation at the following link:

https://docs.google.com/presentation/d/1xl3XCKZahL5_ShninIgcMBhWebkamEj4/edit?usp=sharing&ouid=113254114842345156935&rtpof=true&sd=true)

- **Varieties of Italian analysed:** standard Italian
- **General linguistic phenomenon investigated:** referential gender inference
- **Specific linguistic phenomenon investigated:** effects of different grammatical gender encodings on reading processing
- **Linguistic elements with explicit grammatical gender encoding:** determiners, verb at past participle form
- **Stereotype range associated with the noun (Misersky et al., 2014):** 0.45–0.55 (e.g., gender-neutral stereotype)
- **Classification of target nouns (Thornton 2022):** common gender nouns (experimental items); proper personal nouns (filler items)
- **Number of experimental conditions:** 3 (masculine form, masculine/feminine coordinating split forms, gender-neutral form)
- **Total number of items:** 9
- **Total number of fillers:** 9
- **Total number of experiment scenarios:** 18
- **Number of conditions viewed per participant:** 3
- **Number of times each participant views each condition:** 3
- **Order of presentation of items:** randomised

Complete texts of the experimental items in Italian.

Each item is transcribed in the three possible formulations corresponding to the experimental conditions.

TestSet1) La gara di design sta per cominciare. I designer più bravi vinceranno il premio ColorTech. Si tratta di un premio molto prestigioso.

TestSet2) La gara di design sta per cominciare. I/Le designer più bravi/brave vinceranno il premio ColorTech. Si tratta di un premio molto prestigioso

TestSet3) La gara di design sta per cominciare. Un gruppo di designer eccellenti vincerà il premio ColorTech. Si tratta di un premio molto prestigioso

TestSet1) Il concerto durerà dalla mattina alla sera. I\Le cantanti appena arrivati\arrivate si esibiranno alle 15. Le prove si terranno il giorno prima.

TestSet 2) Il concerto durerà dalla mattina alla sera. Il gruppo di cantanti appena arrivato si esibirà alle 15. Le prove si terranno il giorno prima

TestSet3) Il concerto durerà dalla mattina alla sera. I cantanti appena arrivati si esibiranno alle 15. Le prove si terranno il giorno prima

TestSet1) La pubblicità ormai deve essere indirizzata a un pubblico preciso. La nostra pubblicità si rivolge ad una clientela di età avanzata. Speriamo possa migliorare le vendite.

TestSet2) La pubblicità ormai deve essere indirizzata a un pubblico preciso. La nostra pubblicità si rivolge ai clienti anziani. Speriamo possa migliorare le vendite

TestSet3) La pubblicità ormai deve essere indirizzata a un pubblico preciso. La nostra pubblicità si rivolge ai/alle clienti anziani/anziane. Speriamo possa migliorare le vendite

TestSet1) Sempre più giovani aderiscono al Friday For Future. Alcuni dimostranti del corteo ecologista si sono radunati in piazza. Il corteo partirà a breve.

TestSet2) Sempre più persone aderiscono ai Fridays For Future. Alcuni/Alcune dimostranti del corteo ecologista si sono radunati/radunate in piazza. Il corteo partirà a breve

TestSet3) Sempre più persone aderiscono ai Fridays For Future. Un gruppo di dimostranti del corteo ecologista si è radunato in piazza. Il corteo partirà a breve

TestSet1) Le aziende stanno optando per lo smartworking. Tutti i \tutte le contabili dell'azienda lavorano quaranta ore a settimana. Il lavoro da casa copre metà delle ore.

TestSet2) Le aziende stanno optando per lo smartworking. L'intero gruppo di contabili dell'azienda lavora quaranta ore a settimana. Il lavoro da casa copre metà delle ore

TestSet3) Le aziende stanno optando per lo smartworking. Tutti i contabili dell'azienda lavorano quaranta ore a settimana. Il lavoro da casa copre metà delle ore

TestSet1) Il regista voleva raccontare una storia autobiografica. Il documentario parla di un gruppo di adolescenti milanesi. Il pubblico ha apprezzato molto il film.

TestSet2) Il regista voleva raccontare una storia autobiografica. Il documentario parla degli adolescenti nati a Milano. Il pubblico ha apprezzato molto il film

TestSet3) Il regista voleva raccontare una storia autobiografica. Il documentario parla degli/delle adolescenti nati/nate a Milano. Il pubblico ha apprezzato molto il film

TestSet1) La nostra radio trasmette sempre in diretta. Alcuni speaker radiofonici vanno in diretta alle 5 del mattino. Le puntate sono registrate e disponibili sul sito della radio.

TestSet2) La nostra radio trasmette sempre in diretta. Alcuni/Alcune speaker radiofonici/radiofoniche vanno in diretta alle 5 del mattino. Le puntate sono registrate e disponibili sul sito della radio

TestSet3) La nostra radio trasmette sempre in diretta. Un gruppo di speaker della radio va in diretta alle 5 del mattino. Le puntate sono registrate e disponibili sul sito della radio

TestSet1) Il governo ha stanziato dei fondi per la cultura. I/Le giovani vincitori/vincitrici del bonus riceveranno una notifica personale. Le domande si possono presentare sino a fine marzo.

TestSet2) Il governo ha stanziato dei fondi bonus per la cultura. Il gruppo di giovani che otterrà il bonus riceverà una notifica personale. Le domande si possono presentare sino a fine marzo.

TestSet3) Il governo ha stanziato dei fondi bonus per la cultura. I giovani vincitori del bonus riceveranno una notifica personale. Le domande si possono presentare sino a fine marzo.

TestSet1) Il tema del convegno è la transizione digitale. Il seminario è tenuto da consulenti con esperienza nel settore. Sarà possibile prenotare un posto in sala.

TestSet2) Il tema del convegno è la transizione digitale. Il seminario è tenuto dai consulenti esperti nel settore.

Sarà possibile prenotare un posto in sala

TestSet3) Il tema del convegno è la transizione digitale. Il seminario è tenuto dai/dalle consulenti esperti/esperte nel settore. Sarà possibile prenotare un posto in sala

Complete texts of filler items in Italian.

1. L'estate è la stagione delle vacanze per molte persone. Roberta e Anna campeggiano ogni anno durante le vacanze estive, e non rinuncerebbero mai a questa tradizione.
2. Oggi fa abbastanza caldo e non c'è più il vento. Luca pesca tutto il giorno su una barchetta a motore. Di solito, torna a casa in tempo per l'ora di cena.
3. Avere un animale domestico è una grande responsabilità. Ogni giorno, alle 18, Mario e Carlotta portano i loro cani a passeggiare, nonostante la stanchezza dopo il lavoro.

4. Il matrimonio era elegante, ma senza essere troppo formale. Le damigelle hanno tenuto il velo della sposa come una volta. E' stata una bella festa.
5. I corsi formativi aiutano a conoscere nuove persone, Guenda e Luciano hanno fatto amicizia al corso di ceramica. Il corso è stato una bellissima esperienza.
6. Stiamo costruendo la casa dove andremo ad abitare. Adesso Nicola si sta occupando del lavandino del bagno, mentre io mi dedico tutto il giorno a pulire il giardino.
7. Il lavoro d'ufficio provoca spesso dolori articolari. Annalisa fa yoga ogni mattina per ridurre il mal di schiena. L'esercizio aiuta a sciogliere la tensione.
8. La pandemia ci ha ricordato quanto le nostre passioni siano importanti. Federico dedica il suo tempo libero agli scacchi. E' un gioco intelligente e rilassante.
9. Ci sono molti prodotti esportati dall'Italia. Ilenia e Carlo producono vino da esportare in Norvegia. L'attività è molto redditizia e potrebbe estendersi in altri Paesi.

Information sheet and consent form (original Italian version)

The information and consent form have been presented before the experiment.

La presente ricerca è condotta dalla Professoressa Michela Cennamo e dalla Dottoranda in Mind, Gender and Language Elena Sofia Safina, entrambe afferenti al Dipartimento di Studi Umanistici dell'Università di Napoli "Federico II". L'esperimento a cui ha scelto di sottoporsi è uno studio di psicolinguistica, richiede un tempo di completamento di circa cinque minuti, e prevede la lettura di alcune frasi e la risposta vocale ad alcune domande relative a ciascuna frase. Non esistono risposte corrette alle domande, pertanto, si consiglia di rispondere alle domande nel modo più spontaneo possibile.

Durante l'esperimento verranno registrati audio e video del computer relativi alla finestra in esecuzione dell'esperimento (Power Point). Non sarà in alcun modo visibile il suo volto. Per evitare un condizionamento nelle risposte, non è possibile spiegare in questo modulo gli obiettivi scientifici del test. Tuttavia, la referente per la raccolta dati, Elena Sofia Safina, si dichiara disponibile a descrivere gli obiettivi scientifici dello studio non appena concluso il test, e a rispondere a qualsiasi domanda a riguardo. Ulteriori richieste di chiarimenti o commenti potranno essere espressi in qualsiasi momento al team di ricerca ai seguenti indirizzi di posta elettronica: michela.cennamo@unina.it; elenasofia.safina@unina.it.

Immediatamente dopo l'esperimento le verrà chiesto tramite un questionario di fornire alcuni dati anagrafici, quali età, conoscenza dell'italiano, identità di genere e ultimo titolo di studio conseguito. IL QUESTIONARIO È ASSOLUTAMENTE ANONIMO.

Ai sensi del D.Lgs. del 30 giugno 2003 n. 196, "Codice in materia di protezione dei dati personali", del Regolamento UE 679/2016 e degli adempimenti di cui al D.Lgs. 101/2018, la informiamo che:

- (a) le risposte che ci fornirà al questionario, nonché i dati audio-video dell'esperimento, saranno utilizzate solo nell'ambito del progetto di ricerca.

- (b) i dati saranno trattati a soli scopi scientifici.

- (c) tutti i dati forniti e raccolti saranno archiviati in modalità anonima e accessibili solo alla Responsabile del progetto di ricerca e alla referente della raccolta dati, la dott.ssa Safina.

- (d) i risultati dell'indagine saranno pubblicati solo in forma aggregata.

- (e) in nessun modo sarà possibile ricondurre i dati del questionario e/o dell'esperimento a un soggetto specifico.

Spuntando la casella “Sì” relativa alla domanda n° 1 del Form dichiara di aver letto e compreso l'informativa sul presente studio, di aver ricevuto sufficienti informazioni circa lo svolgimento del test, e di sottoporsi volontariamente all'esperimento.

Spuntando la casella "Sì" relativa alla domanda n°2 del Form presta il suo consenso al trattamento dei dati personali che le verranno chiesti subito dopo l'esperimento (Età, Conoscenza dell'italiano Genere, Livello di Istruzione).

Sociodemographic questionnaire (original Italian version)

The sociodemographic questionnaire has been presented after the experiment.

L'esperimento appena concluso mira a comprendere in che modo la modalità linguistica di espressione del genere grammaticale (es. maschile, femminile, non specificata) influisce sulla nostra rappresentazione mentale del genere delle persone descritte dal testo.

In particolare, attraverso il test appena terminato si vuole capire se il genere grammaticale maschile, usato con valore "inclusivo" o "non marcato" per indicare gruppi misti di persone (es. "i lavoratori") influisce sulla rappresentazione mentale di un gruppo composto solo da uomini e non di un gruppo misto. Al contempo, l'obiettivo dell'esperimento è capire se le forme promosse come più inclusive (es. "i lavoratori/le lavoratrici", oppure, "chi lavora") siano in grado di ridurre questa influenza del genere grammaticale maschile.

Per qualsiasi commento, dubbio o chiarimento sugli obiettivi scientifici del progetto, la dott.ssa Safina, responsabile della raccolta dati, è a disposizione al termine della compilazione del presente questionario. Inoltre, la dottoressa e la Responsabile del progetto di ricerca (Prof.ssa Michela Cennamo), sono disponibili in qualsiasi momento da remoto agli seguenti indirizzi: elenasofia.safina@unina.it, michela.cennamo@unina.it

Le ricordiamo che ha prestato il suo consenso al trattamento dei dati personali circa età, genere, conoscenza dell'italiano e livello di istruzione, e che tali dati saranno utilizzati unicamente per scopi di ricerca e in modalità completamente anonima.

elenasofia106@gmail.com

* Indica una domanda obbligatoria

1. Età*

2. Quanto conosci la lingua italiana?*

- E' la mia lingua madre
- Conosco l'italiano come se fossi madrelingua
- Conosco l'italiano ad un livello intermedio (riesco ad interagire senza problemi)
- Sto ancora imparando l'italiano (per me non è facile interagire in italiano)

3. In quale categoria di genere posso inserire la tua risposta all'esperimento?

***Perché questa domanda?*

Ti chiedo alcune informazioni demografiche, tra cui l'identità di genere, perché ritengo che possano influire sui risultati dell'esperimento. Mi interessa capire se e in che modo l'identità di genere di una persona interagisce sulla

percezione/interpretazione di un testo scritto. La domanda si riferisce all'identità di genere attuale, NON al sesso biologico assegnato alla nascita.

****Perché solo un'opzione non binaria?**

La scelta di presentare solo una terza opzione distinta da uomo e donna deriva unicamente dalla necessità di inserire i dati del sondaggio in un determinato modello statistico. Sono consapevole dell'ampio spettro di identità di genere rappresentate dal termine ombrello non binario. Tuttavia, ai fini di questo studio, mi interessa soltanto capire se il non riconoscersi nel binarismo di genere influisce o meno sulla rappresentazione mentale del genere grammaticale.

- Sono una donna
- Sono un uomo
- Sono una persona non binaria

4. Ultimo titolo di studio conseguito:*

- Licenza media
- Diploma di Maturità
- Laurea triennale
- Laurea Magistrale o a ciclo unico; Master di Secondo Livello
- Dottorato di Ricerca

5. Sei a conoscenza del dibattito sul linguaggio inclusivo?*

- Lo conosco bene
- Ne ho sentito parlare
- Non lo conosco

6. Quanto ti sta a cuore il dibattito sul linguaggio inclusivo?*

1= Per niente 5 = Molto

- 1
- 2
- 3
- 4
- 5

7. Autorizzo al trattamento dei dati consapevole che i risultati dello studio verranno utilizzati solo a fini di ricerca e in maniera del tutto ANONIMA.*

- Sì
- No

Appendix C. Full experimental design and materials from Study 4.

Study 4: Grammatical gender effects on anaphor resolution: experimental evidence on Italian role nouns comparing generic masculines and gender-sensitive alternatives.

General information

- **Project PI:** Professor Michela Cennamo (L-LIN/01)
- **Other Project Members:** Elena Sofia Safina (third-year PhD candidate, 37th cycle in Mind, Gender, and Language)
- **Affiliated Institution:** Department of Humanities, University of Naples Federico II, Via Porta di Massa, 1, Naples
- **Experiment Location:** Online – Prolific Academic Ltd. Platform (Registered Office: 483 Green Lanes, London, N13 4BS; Company Number: 08991598 VAT Number: GB 233607523)
- **Protocol Number (Ethical Committee):** PG/2024/0026606, dated 04/03/2024
- **Pre-registration:** Open Science Framework (reference link: <https://osf.io/knr4x>; not published yet)
- **Equipment used:** Vivobook ASUS Laptop X510QA_F510QA; Qualtrics.XM; Prolific Ltd; R Core Statistics; Google Colab
- **Measurements:** Reaction Times; Discrete judgments (% of “Yes” responses)
- **Data analysis model:** Generalized linear mixed-effects modelling with binomial distribution
- **Participants and sampling/Estimated Sample Size:** 120 participants. A group of 30 participants per condition (four conditions in total) is sufficient to evaluate the statistical significance of variance in relation to experimental conditions and relevant sociodemographic variables
- **Inclusion Criteria:** adult (18 years or older); native Italian speaker; right-handed; no specific learning disorders (e.g., dyslexia); no speech or language impairments; no visual disabilities
- **Recruitment Method:** data collection via Prolific Academic Ltd platform; participation is voluntary and remunerated in accordance with the hosting platform's policies
- **Physical/psycho-social risks:** the textual content of the test is non-discriminatory, non-offensive, and not potentially harmful. The experiment lasts approximately 15 minutes and is conducted online in the participant’s chosen private environment, with no physical exertion involved. No personal identification data (e.g., name, surname) is collected, and any data related to personal opinions will not be traceable to individual participants.

- **Procedure:** Information & Consent section, instructions, familiarisation trials, experiment (sentence pairs, answer to 66 items), questionnaire about gender-sensitive language, sociodemographic questionnaire, submission. Experimental task: sentence evaluation (reading comprehension).

Construction and classification of stimuli

- **Varieties of Italian analysed:** standard and sub-standard Italian
- **General linguistic phenomenon investigated:** anaphor resolution
- **Specific linguistic phenomenon investigated:** effects of different grammatical gender encodings of the antecedent on the process of anaphor resolution
- **Linguistic elements with explicit grammatical gender encoding:** determiner, noun, verb at past participle form
- **Stereotype range associated with target nouns:** (Misersky et al., 2014) .45–.55 (e.g., gender neutral stereotype)
- **Classification of target nouns (Thornton 2022):** non-independent symmetric and non-symmetric nouns (experimental items); epicene nouns, independent nouns with lexical gender (filler items).
- **Number of experimental conditions:** 4 (generic masculine form; split form; sub-standard neutralisation with schwa; standard neutralisation) $\times$ 2 (continuation with ‘men’ or ‘women’)
- **Total number of experimental items:** 22
- **Total number of filler items:** 44
- **Number of conditions displayed per participant:** 1
- **Number of participant lists (randomised order):** 8 (4 lists for condition of sentence 1) $\times$ (2 conditions for sentence 2). that is, each participant sees only one condition related to the grammatical gender marking and is presented with half of the items continuing with ‘men’ and half with ‘women’
- **Order of presentation of items:** randomised

FULL MATERIALS ACCESSIBLE HERE

Filler items:

<https://docs.google.com/spreadsheets/d/1E79hrGoGc7apyUCHRVhNY9TKpOgfJV0a/edit?usp=sharing&ouid=113254114842345156935&rtpof=true&sd=true>

Experimental items:

https://docs.google.com/spreadsheets/d/1eUulPVCY9ZPP_0QsaWNyvMFzWRGYnaKN/edit?usp=sharing&ouid=113254114842345156935&rtpof=true&sd=true

Information sheet and consent form (original Italian version)

The information and consent form have been presented before the experiment.

Ciao!

Grazie per aver preso parte al mio studio.

Questo studio psicolinguistico fa parte del mio progetto di dottorato in Mind, Gender, and Language presso l'Università Federico II di Napoli (Italia), e ha come referente la Professoressa Michela Cennamo. Lo studio si rivolge a tutte le persone maggiorenni e destresse che abbiano l'italiano come lingua madre. Lo studio richiede circa 15 minuti del tuo tempo, e ti chiedo di partecipare utilizzando esclusivamente un computer (non è accettata una risposta al test da smartphone o tablet).

Ti ringrazio fin da subito per la tua preziosa partecipazione!

Obiettivi scientifici dello studio:

Si tratta di uno studio di natura linguistica mirato ad analizzare alcuni processi cognitivi coinvolti nella comprensione testuale in italiano. Maggiori dettagli sugli obiettivi scientifici ti verranno forniti alla fine del test, in modo da non influenzare le tue risposte durante l'esperimento.

Contatti di riferimento per dubbi e chiarimenti:

Puoi in qualsiasi momento contattare il team di ricerca in privato su Prolific, oppure scrivere agli indirizzi elenasofia.safina@unina.it e michela.cennamo@unina.it.

Che cosa ti chiedo di fare?

Se decidi di partecipare allo studio, dovrai completare un esperimento e due brevi questionari. Durante l'esperimento dovrai leggere delle coppie di frasi e giudicare se, secondo te, la seconda frase di ogni coppia è una continuazione possibile (coerente) o meno rispetto alla prima frase. L'esperimento durerà circa 15 minuti.

Quali sono i benefici collegati alla partecipazione?

Non ci sono benefici diretti connessi alla partecipazione a questo studio. Tuttavia, la tua partecipazione contribuisce alla mia ricerca sulla comprensione testuale in italiano.

Quali sono i rischi collegati alla partecipazione?

Non ci sono rischi diretti connessi alla partecipazione a questo studio. L'esperimento richiede soltanto un investimento del tuo tempo.

I tuoi diritti se partecipi all'esperimento:

Hai piena libertà di accettare o rifiutare di partecipare allo studio. Se decidi di non partecipare, non c'è nessun problema. Se anche decidi di partecipare, ma cambi idea durante l'esperimento, puoi abbandonare lo studio in qualsiasi momento. Tuttavia, se non porti a termine l'esperimento, non riceverai nessun pagamento dalla piattaforma Prolific. Se invece desideri eliminare i tuoi dati raccolti da questo esperimento una volta che l'hai concluso, puoi contattarmi in privato su Prolific indicando il tuo ID Prolific e la tua richiesta, oppure utilizzare uno dei contatti di riferimento.

Che cosa succederà ai dati forniti durante e dopo l'esperimento:

Poiché hai avuto accesso all'esperimento tramite la piattaforma Prolific, ti chiederò tra poco di prestare il tuo consenso affinché io possa raccogliere tramite la piattaforma i seguenti dati:

età / identità di genere / lingua madre / altre lingue parlate fluentemente.

inoltre, immediatamente dopo l'esperimento, ti verrà chiesta la tua opinione (accordo o disaccordo) rispetto ad alcune frasi.

Infine, nel breve questionario ti verranno chiesti dati sul livello di istruzione, sulla tua occupazione principale e sull'area geografica di residenza.

ATTENZIONE: Tutti i dati ottenuti da Prolific o durante lo studio saranno anonimi e accessibili solo alle responsabili della ricerca. Il tuo nome, o qualsiasi altra informazione che possa identificarti, non verrà mai chiesto. Inoltre, nessun dato identificativo verrà mai utilizzato nelle pubblicazioni scientifiche relative allo studio, né verrà mostrato in occasione di pubbliche conferenze, e nemmeno sulla piattaforma OSF (Open Science Framework) dove verrà registrato il materiale di questo studio. In alcun modo sarà possibile collegare i tuoi dati personali alla tua risposta a questo studio.

Pertanto:

Ai sensi del D.Lgs. del 30 giugno 2003 n. 196, "Codice in materia di protezione dei dati personali", del Regolamento UE 679/2016 e degli adempimenti di cui al D.Lgs. 101/2018, ti informo che:

(a) le risposte che ci fornirai al questionario, nonché i dell'esperimento, saranno utilizzate solo nell'ambito del progetto di ricerca.

(b) i dati saranno trattati a soli scopi scientifici.

(c) tutti i dati forniti e raccolti saranno archiviati in modalità anonima e accessibili solo alla Responsabile del progetto di ricerca e alla referente della raccolta dati, la dott.ssa Safina.

(d) i risultati dell'indagine saranno pubblicati solo in forma aggregata.

(e) in nessun modo sarà possibile ricondurre i dati del questionario e/o dell'esperimento a un soggetto specifico.

DICHIARAZIONE: Premendo il tasto « Avanti » in basso a destra, io dichiaro di aver compreso l'informativa riportata qui sopra rispetto agli obiettivi, allo svolgimento dello studio, così come i possibili benefici e rischi. Decido volontariamente di prendere parte a questo studio, e ho avuto tempo sufficiente per prendere la mia decisione.

Instructions (original version in Italian)

GENERALE

Questo esperimento si concentra sulla comprensione del testo. Sullo schermo verranno presentate 66 coppie di frasi, una dopo l'altra. Il tuo compito è semplicemente quello di leggere (a velocità normale, come se stessi leggendo una rivista) e comprendere le due frasi di ogni coppia, e decidere, nel modo più rapido e accurato possibile, se la seconda frase è una possibile continuazione della prima; quindi, se la seconda frase ti sembra coerente con la prima. La prima frase di ogni coppia descriverà un gruppo di persone o animali che fa qualcosa, mentre la seconda frase dirà qualcosa su alcuni elementi compresi nel primo gruppo. Quindi, il gruppo di cui si parla nelle due frasi è sempre lo stesso.

PROCEDURA DETTAGLIATA

1. Prima di iniziare, metti l'indice della tua mano sinistra sul tasto R della tastiera, che corrisponde alla risposta "No", e l'indice della tua mano destra sul tasto I, che corrisponde alla risposta "Sì".
2. Prima di ogni coppia, apparirà una schermata con la scritta "Premi il tasto SPAZIO per far apparire la prossima coppia di frasi. Dopo che hai letto la prima frase, premi di nuovo il tasto SPAZIO per far apparire la seconda frase". Segui questa indicazione per passare da una frase all'altra e da una coppia a quella successiva.

3. Una volta che hai letto la seconda frase, ti chiederò di decidere se questa seconda frase è una possibile continuazione della prima. Rispondi a questa domanda con "Sì" (I) o "No" (R), a seconda dei casi, premendo il tasto corrispondente. Ricordati che la decisione va presa sulla base della prima impressione e non dopo averci pensato a lungo.

AMBIENTE

Ti consiglio di iniziare e concludere il test in un ambiente tranquillo, privato, e silenzioso. Puoi scegliere tu da dove partecipare purché la partecipazione avvenga da un PC e non da smartphone o Tablet.

PAUSA

Se desideri fare una breve pausa, è possibile farlo quando la schermata dice "Premi il tasto SPAZIO per far apparire la prossima coppia di frasi [...]". Quindi, basta non premere subito il tasto spazio. Ma non fare una pausa tra una frase e l'altra di una stessa coppia!

TELEFONO

Ti chiedo gentilmente di spegnere il cellulare e chiudere tutte le altre schede del browser Internet per tutta la durata dell'esperimento. Mi piacerebbe che l'esperimento ricevesse la tua completa attenzione.

DOMANDE

Puoi interrompere l'esperimento in qualsiasi momento. Ti ricordo, però, che Prolific non ti pagherà se non completi l'esperimento.

PROVA

L'esperimento inizia con una breve sessione di prova che consiste in 6 coppie di frasi per familiarizzare con il funzionamento dell'esperimento.

Grazie mille per la tua partecipazione.

Final outline about study goals (original version in Italian)

The explication of the scientific objectives of Study 4 was presented after the experiment.

Hai terminato l'esperimento! Grazie!

Lo studio appena concluso riguardava il modo in cui immaginiamo i gruppi di persone nella nostra mente dal punto di vista del genere sociale (in questo caso, uomini e/o donne) a partire da uno stimolo testuale in cui il genere grammaticale viene espresso in modalità differenti (es. i dottori / i dottori e le dottoresse / l'équipe medica). In particolare, mi interessava capire il ruolo del linguaggio inclusivo su questo processo di rappresentazione mentale. Se hai dubbi o curiosità in merito all'esperimento, non esitare a contattarmi su Prolific o all'indirizzo seguente: elenasofia.safina@unina.it.

Sociodemographic questionnaire (original version in Italian)

Participants were provided with the present questionnaire after the experiment.

1. In quale categoria di genere posso inserire la tua risposta all'esperimento?

*** La domanda si riferisce all'identità di genere attuale, NON al sesso biologico assegnato alla nascita.*

***Perché solo un'opzione non binaria? La scelta di presentare solo una terza opzione distinta da uomo e donna deriva unicamente dalla necessità di inserire i dati del sondaggio in un determinato modello statistico. Sono consapevole dell'ampio spettro di identità trans* e gender non-conforming rappresentate dal termine ombrello 'non binario'. Tuttavia, ai fini di questo studio, mi interessa soltanto capire se il non riconoscersi nel binarismo di genere influisce o meno sulla rappresentazione mentale del genere grammaticale.*

- Donna
- Uomo
- Identità di genere non binaria

2. Qual è il tuo ultimo titolo di studio conseguito?

- Licenza media
- Diploma di maturità
- Laurea triennale
- Laurea Magistrale o a ciclo unico, Master di II livello
- Dottorato di Ricerca, Scuola di Specializzazione medica

3. Qual è la tua occupazione principale?

- Studio [inserisci ambito di studi]
- Lavoro [inserisci settore lavorativo]

4. Dove vivi? (indica la regione italiana dove vivi o il Paese estero sotto la casella "altro")

- Nord Italia
- Centro Italia
- Sud Italia
- Isole di Sardegna e Sicilia
- Estero [inserisci Paese]

Pre-screening questions (operated by Prolific Ltd)

Study 4 was presented to a pool of participants who previously answered the following questions on Prolific Ltd.

- **What is your date of birth?** Min: 18, max: 100
- **Are you left or right-handed?** Right-handed
- **Do you have normal or corrected-to-normal vision?** Yes
- **Have you been diagnosed with Dyslexia, Dyspraxia or ADHD, or aware of having any related literacy difficulties?** No
- **Have you ever been diagnosed with mild cognitive impairment or dementia?** No
- **What is your sex, as recorded on legal/official documents?** Male/Female (balanced proportion)
- **Which of the following is your primary spoken language?** Italian
- **What language(s) did you speak earliest in life?** Italian
- **What is your first language?** Italian
- **Do you have any language related disorders?** None
- **What gender are you currently? We will ask about your sex later.** Man (including trans male/trans man)/Woman (including trans female/trans woman)/Non-binary (would like to give more detail)

Questionnaire about gender-sensitive language (original version in Italian)

Participants were provided with the present questionnaire after the experiment.

Adesso ti porrò qualche domanda a proposito del linguaggio inclusivo, anche detto linguaggio ampio, gender-fair o linguaggio non sessista. Una parte del linguaggio inclusivo ha come obiettivo quello di migliorare la visibilità e rappresentazione delle donne nella lingua, aggiungendo le forme di genere grammaticale femminile accanto a quelle di genere maschile inteso come generico (es. *i maestri e le maestre* vs. *i maestri*). Un altro utilizzo del linguaggio inclusivo è finalizzato a rappresentare tutte le identità di genere (binarie e non binarie), e si può manifestare attraverso l'uso di riformulazioni che evitano il genere grammaticale (es. *il pubblico* vs. *gli spettatori*), oppure attraverso l'uso di simboli che neutralizzano il genere grammaticale (es. *maestrə* vs. *maestri/maestre*).

1. Prima di questo questionario conoscevi il linguaggio inclusivo?

- No, per niente
- No, ne avevo a mala pena sentito parlare
- Sì, lo conoscevo già un po'
- Sì, lo conoscevo abbastanza bene
- Sì, lo conoscevo benissimo.

2. Utilizzi il linguaggio inclusivo?

- No, mai
- Sì, ma molto raramente
- Sì, qualche volta
- Sì, spesso
- Sì, sempre

3. Nella tua vita quotidiana ti capita di incontrare il linguaggio inclusivo?

- No, mai
- Sì, ma molto raramente
- Sì, qualche volta
- Sì, spesso
- Sì, tutti i giorni

4. Indica in quale misura sei d'accordo o in disaccordo con le seguenti frasi

[Risposta a matrice: in ascissa Scala Likert a 5 valori (Per niente d'accordo – Molto d'accordo); in ordinata le seguenti frasi]:

- a) Non dovremmo cambiare il modo in cui la lingua italiana è stata scritta e parlata tradizionalmente.
- b) Preoccuparsi del linguaggio inclusivo è inutile.
- c) La lingua italiana non verrà mai modificata in quanto è radicata troppo profondamente nella nostra cultura.
- d) Nonostante il cambiamento sia complicato, dovremmo comunque provare ad applicare il linguaggio inclusivo.
- e) Personalmente, ritengo molto utile usare il linguaggio inclusivo.
- f) Il linguaggio inclusivo non porta alcun beneficio rispetto all'uso del maschile inteso come generico.
- g) L'uso del maschile inteso come generico appartiene alla grammatica italiana, e non ha niente a che vedere con le disuguaglianze di genere nella società.
- h) Non supereremo mai i pregiudizi di genere fin quando questi saranno presenti nella nostra lingua.

Acknowledgements

This individual project would not have been possible without the support and collaboration of numerous people, both near and far. First, I would like to thank Professor Cennamo, my doctoral tutor, for believing in my project by selecting it during the application phase and for the trust she placed in my abilities throughout the programme and beyond. Professor Sorace equally deserves my sincere thanks for her support, hospitality, and the valuable opportunities for integration and networking she facilitated at the University of Edinburgh, a prestigious and resourceful institution that significantly enriched my knowledge and inspired many of the scientific reflections presented in this work.

I extend my gratitude to each member of the Urban/Eco Research Centre (UCO) at the University of Naples Federico II, under the direction of Professor Cutugno, to whom I am most grateful, for providing the technical resources and scientific support that formed the basis of my two psycholinguistic experiments. Thanks to UCO, I was able to conduct my experiments, present and discuss findings in seminars, obtain IT and statistical support from Dr. Antonio Origlia, Dr. Loredana Schettino, and Luigi Orsini, and participate in numerous academic training opportunities, all of which were indispensable for my independent research journey. Moreover, I extend my gratitude to Dr Julia Tibblin for sharing with me essential tools and data, which consistently helped me to replicate the fourth experimental study.

I am grateful to the reading and working group on the topic of gender inferences, organised by the philosophers of language Dr. Martina Rosola and Dr. Mara Floris. The monthly meetings and the consistent exchange of materials and ideas have been among the most significant sources for enriching and consolidating my theoretical framework. Furthermore, the group has made me feel truly integrated into a well-defined and robust line of study, and has validated, perhaps undeservedly, all my considerations on the subject.

I wish to thank Professor Anna Maria Thornton and Professor Pascal Gygax whose publications have been the primary scientific inspirations for my work. Professor Thornton's writings, with their analytical clarity and precision, resolved many of my uncertainties while simultaneously raising new ones, even more intriguing, for the years to come. Professor Gygax's methodological rigour and focus on the societal applicability of gender-sensitive language studies, as well as the work of his extended research team, allowed me to discover the joy of analysing linguistic data, observing its broader patterns when it finally *speaks*, and fostering the belief that aspects of the human mind and language can indeed be measured, with all the curiosity and satisfaction such an endeavour brings.

I also wish to thank Brigitte Vasallo, for whom I have the utmost admiration, for her activism and her works. It has not been easy to pursue research on such a controversial issue in Italy, even for a single day. Moments of doubt and a sense of disorientation were not uncommon, particularly given how the subject was portrayed in Italian media and publications during my doctoral years. Amidst numerous unsolicited voices, some authoritative, others less so, insisting that my work was neither linguistics nor science but rather a ‘trendy affectation without societal relevance’, Vasallo’s perspective, which I discovered in May 2023, became my guiding light, concerning ideological positioning. Her concrete, ambitious, and incisive words answered the daily question of why I was conducting this research, what contribution I could offer to those who might read it, and what I genuinely hoped for as the future of this debate.

Today, as I hope my thesis reflects, I firmly believe that *gender sensitivity* in language cannot exist unless it is rooted in the fight against class inequality. On a broader scale, I believe that meaningful changes require collective care. In my early-career opinion, *care*, from an academic perspective, resides in the time we dedicate to all facets of the issue of gender-sensitive language, not merely one, and in the intellectual and moral honesty with which we interrogate the platform from which we preach, should we feel the need to preach at all. For this reason, I cannot in good conscience thank many of the contributions published on this topic in Italy over the past four years; to put it euphemistically, *they consistently lacked the care required*, often to a dispiriting degree.

Amidst this landscape, which I describe with rightful frustration, there were, however, virtuous academic examples that restored my faith and motivation to work hard. I wish to thank Luisa Corona, Rosalba Nodari, and Gloria Comandini, for they are the women of science I aspire to become. I have grown with every exchange we have had on language and gender, and I am certain that their knowledge has enriched not only this thesis. I also express my gratitude to several individuals within the academic sphere who, even in brief moments, generously dedicated their time to help me better understand the workings of academia, a world that was entirely unfamiliar to me. I wish to thank Prof Paolo Orrù for assisting me in managing my energy more effectively at work and in demonstrating intelligence, shrewdness, and determination at critical moments. I am also grateful to Prof Margherita di Salvo for her valuable advice and readings, as well as for having considered me on numerous occasions for educational initiatives that greatly enriched my PhD. Finally, I extend my thanks to Professor Ur Shlonsky for recommending the very first article I ever read on the topic of gender inferences in psycholinguistics. I can confidently say it was the right advice at the right time.

As the acknowledgements that follow come directly from my heart, I feel the need to switch to my native language, and foremost, I need to change my tone, as I want to speak directly to each of them.

Evidentemente, devo aver fatto qualcosa di buono per meritarmi questa rete. Le mie persone vicine sono tante, splendide e tutte incredibilmente diverse, il che mi ha permesso di non annoiarmi mai e di credere di potermi meritare un dottorato di ricerca. Ne sono tanto felice.

Grazie a Fabio Ruggiero per essere la mia finestra sicura sul futuro. La tua particolare scelta di fare ricerca e fare linguistica è stata illuminante per me, come lo è ogni giorno ascoltare i faticosi labirinti del tuo pensiero, mai una volta banale. Amico cieco e linguista accorato, benedetto sia il CIDSIM 2022!

Grazie a chi ha dato una mano alla mia mente ad andare d'accordo col mio corpo; è stato senza dubbio il task più complesso degli anni del dottorato. Quindi grazie alla dott.ssa Silvia Pusceddu e al mio gruppo acrobata tutto, in particolare a Luisa, Silvio, Emmina, Pietro e Lolla. Osservare la tesi a testa in giù o da un *reverse throne* è stato decisamente liberatorio.

Ringrazio chi ha avuto il coraggio di iniziare a frequentarmi mentre preparavo, scrivevo, o addirittura consegnavo la tesi. Il vostro è eroismo masochista. Grazie a Luca Mr. Peanutbutter perché ogni persona desidera conoscere prima o poi un amico così. 'O cumpagn mi ten pur o mezz' (standard ortografico rigorosamente allineato con Geolier, 2024). Grazie a Flavio Verdino, 'il mio amico comico', perché ogni chiacchiera dadaista ha dato un po' più di colore al grigiore neorealista delle mie interminabili giornate al computer in Forcellistan. Grazie ad Alessandra, elegante raro esemplare di millennial in grado di parlare delle proprie emozioni e comprendere immediatamente quelle altrui. Grazie ad Anca, Roberta e Maede per il supporto e la pazienza casalinga mostrata davanti all'inquinamento sonoro dei miei disagi. Grazie a Camilla e Jessica, indelebili compagne di cubicolo scozzese: lì funzionava tutto, eppure stavamo tt'nguait, ma ce l'abbiamo fatta raga.

Ringrazio l'assidua frequentazione del Blind Pig e la compagine napoletana che, insieme a me, ha deliberatamente deciso di pagare l'università alla progenie del proprietario buttando almeno metà stipendio al mese in IPA troppo care e lupini troppo secchi. Grazie a Carrozzo, che due anni fa si è appiccicato malamente con me perché mi scaldavo troppo spiegando i bias di genere, e che ora anticipa le richieste di parere con 'tu che sei una grande femminista, che ne pensi di...'. Sei decisamente l'uomo del Novecento che preferisco. Grazie a Norman e Pia, alle vostre risate mal soffocate davanti ai miei impropri in Via Sapienza, la notte del mio 'battesimo del furto'. Grazie a Marco Polo per non aver mai dimenticato a casa il sorriso e la calma, e per aver mostrato sempre e solo gentilezza davanti alla mia più completa inettitudine all'informatica.

Grazie a Enrico, coinquilino d'eccellenza, chef solerte e vivido conoscitore di subcultura neomelodica, e a Biscotto, Alessia, Scialò, Michele, Bosco e Marek. Osservarvi è stato concedersi una commedia in diretta, privata e interattiva, potente al punto da disintegrare ogni singola volta il fardello del dottorato, dei calcoli che non capivo, dei tempi che non riuscivo a rispettare, delle

preoccupazioni che mi soffocavano. Mi avete trasmesso il napoletano, come lingua e come culto scostumato del ridere addosso alle tarantelle, di cui siete illustri insegnanti.

Grazie a Matilde per avermi fatto completamente dimenticare che dovevo consegnare una tesi.

Grazie a mia sorella Titina Di Bratto, eccellente linguista *de' robbottini*, per aver fissato i *check-point* nei miei tre anni di percorso. Strega nera brillante, dai dignità alle orme già percorse, e non hai noia a spiegare e rispiegare la leggerezza. A te il grazie più grande. Il resto già sai, qui non c'è spazio.

Grazie all' On. Marco Picardi, il più grande esempio di dedizione politica che abbia mai incontrato. Camminare accanto a te significa crescere bene e sognarci grandi, guardando un percorso lento ma inesorabile, come la Rivoluzione.

Grazie alle donne della mia famiglia isolana che sono riuscite a trasformare i pochi istanti liberi di ferie di quest'estate di scrittura tesi in smorfiosi capolavori notturni; in particolare, grazie al gineceo medico-sanitario composto da Bande, Ilaria, Nora, Francesca, Giulia, Silvia e Federica. Grazie a Ila per la saggezza, la poesia e il Teatro d'appartamento. Grazie anche agli uomini sardi che sono lì da sempre e per sempre li saranno nonostante i venti, come la Sella del Diavolo: ai miei fratelli Dan e Sambi, e al piccolo Dario, arrivato al mondo nel giorno in cui ho consegnato il progetto di dottorato, regalandomi un amore tutto nuovo. Grazie a Simo, per il quantitativo indifendibile di meme gatteeneey, e per lo svezzamento dell'Alterburg. Grazie a Marco 'il semantico' per la scuola di *dissing*, e al Signor Andrea l'assenza di giudizio, quella vera. Grazie a Sarri per avermi trascinato in quella gioiosa anarchia di cui avevo disperato bisogno; grazie Rosa per tutti i giochi di gattina monella. Un grazie speciale al Dr Efisio Manunta e a Offman per essere stati i miei principali riferimenti su come imparare a sopravvivere, rispettivamente, all'ambizione accademica e al *Quinto passo, l'Addio*. Grazie al Maestro Emanuele, il cui unico difetto è la città di residenza. Ringrazio anche chi, nonostante il mio disfattismo, non ha mai avuto dubbi sul fatto che riuscissi a vincere, proseguire e terminare un dottorato di ricerca. Grazie a Roberta, che al Lazzaretto, due anni prima che vincessi il concorso mi disse: "Sofia è ovvio che tu farai un dottorato, ti pregoh!". E grazie a Matteo, che per sei anni, fortunatamente da molto vicino, mi ha ripetuto: "Non solo vincerai, ma dovrai anche scegliere tra più di uno". Avevate ragione voi, Acquario.

Grazie ad Anna Maria Carmela per la più sana e felice relazione che scegliamo di coltivare ogni giorno.

Grazie al sangue mio, Tonino e Maria Grazia, e alla Fortuna che mi ha permesso di farvi vedere anche questo traguardo. Nella lentezza circolare delle vostre vite anziane trovo sempre la pace. Siete il mio silenzio preferito.

Annalisa e Sergio, Madre e Padre, tutto questo è sempre stato per voi. Grazie.