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Gender, Language and Perception: Linguistic Inclusivity in Russian

Supervisor
Ch. Prof. Giuliana Giusti

Assistant supervisor
Ch. Prof. Francesca Santulli

Graduand
Liliana Komova
Matriculation Number 997912

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Introduction

Language plays a crucial role in shaping cultural narratives and societal norms, influencing how individuals perceive and interact with the world around them. In the context of gender, language can either perpetuate traditional gender roles and stereotypes or promote inclusivity and equality. The Russian language, with its complex grammatical gender system, presents unique challenges and opportunities in this regard. Unlike English, which largely utilises gender-neutral terms, Russian inherently embeds gender into its grammatical structure, affecting nouns, adjectives, pronouns, and verbs. This linguistic characteristic has significant implications for how gender is represented and perceived within the Russian-speaking population.

Russian society, historically rooted in patriarchal values, often reflects these gender norms in its language use. The prevalence of masculine forms as the default or neutral option can reinforce male dominance and female subordination, impacting professional and social dynamics. For instance, the use of male-generic terms like "president" and "judge" as standard designations, even for women, suggests that leadership roles are inherently male. Efforts to introduce more gender-inclusive language, such as feminising professional titles, face resistance due to deeply entrenched cultural attitudes and the perceived complexity of changing linguistic habits.

The present research investigates the attitudes towards sexist and nonsexist language among speakers of Russian, focusing on the development and validation of a comprehensive questionnaire tailored to the Russian cultural and linguistic context. The study aims to understand how linguistic structures and cultural narratives influence gender perceptions and to explore the potential for promoting linguistic inclusivity in Russian.

The primary objectives of this research are:

1. To develop a reliable and valid instrument to measure attitudes towards sexist and nonsexist language in Russian.
2. To assess the prevalence of sexist language in various domains, including professional and social contexts.
3. To evaluate the impact of linguistic gender norms on the cognitive representation of gender among native Russian speakers.

4. To explore the potential for implementing gender-inclusive language practices in Russian, considering cultural resistance and acceptance.

This study presents significance for several reasons. Firstly, it addresses a critical gap in the existing literature, as previous research on sexist language has predominantly focused on English and other Western languages, leaving Slavic languages like Russian underexplored. Given the unique grammatical structure of Russian and its cultural context, understanding attitudes towards sexist language in this language can provide valuable insights into the broader dynamics of gender and language.

Secondly, this research has practical implications for promoting gender equality. By developing a comprehensive tool to measure attitudes towards sexist language, this study lays the groundwork for future interventions aimed at fostering linguistic inclusivity. Such efforts can challenge and transform the cultural attitudes that sexist language represents, contributing to greater gender equality in Russian society.

Finally, this study contributes to the global discourse on gender and language by providing empirical data on the interaction between linguistic structures and gender stereotypes. The findings can inform comparative studies across different languages and cultural contexts, enhancing our understanding of how language influences gender perceptions and social norms.

Chapter 1. Gender Inclusivity in Language and Society

1.1. Linguistic Evolution and Gender Inclusivity

Language is not a static construct but an actively evolving system closely interconnected with the social dynamics of human life. This fluidity in language reflects the sociocultural shifts occurring within society. In the current global landscape, one of the key social shifts is the growing emphasis on gender equality. This sociocultural evolution is reflected in the linguistic sphere, necessitating a re-evaluation of language to ensure equitable representation.

The study of gender inclusivity in language is based on several key theoretical concepts. One well-known theory is linguistic relativity, often associated with the Sapir-Whorf hypothesis. This theory states that the structure of a language influences the worldview and cognitive processes of its speakers (Whorf, 1956). In the context of gender inclusiveness, linguistic relativity suggests that languages with gender-specific structures can shape how people perceive gender roles and identities.

Another critical framework is gender performativity, introduced by philosopher Judith Butler. Butler (1990) argues that gender is not an inherent identity but rather an ongoing performance shaped by social norms and discourses. Language plays a crucial role in this performance, as it both reflects and reinforces societal expectations of gender. This perspective highlights the importance of examining how linguistic practices contribute to the construction and perpetuation of gender identities.

Language inclusivity theories, such as those proposed by Deborah Cameron (1998), emphasise the need for linguistic reforms to promote gender equality. Cameron argues that language is a powerful tool for social change and that inclusive language practices can challenge and transform existing gender biases.

In contemporary discussions on gender-fair language, scholars and activists tend to rely more on empirical research than on the Sapir–Whorf hypothesis. For instance, research has demonstrated differences in gender equality across societies that speak gendered, natural gender, and genderless languages, as evidenced by the study of Prewitt-Freilino et al. (2012).

Nonetheless, the progress in developing gender-fair language is primarily driven by activists and non-professional linguists, with a lack of theoretical frameworks in these efforts. Thus, addressing this issue necessitates a more holistic approach. For instance, Spender (1980)

suggests that altering linguistic meanings can lead to social changes and a weakening of sexist semantics. Conversely, as a society and its inherent sexist rules evolve, language meanings will also transform, sometimes even without deliberate efforts. Emphasising either language or social structures exclusively, without considering the other, is likely to result in failure.

One of the most relevant examples of the challenge of androcentric ideologies became the use of masculine terms as they can carry an ambiguity that might denote either a prestigious or a non-prestigious position. While, in contrast, the feminine form is often associated with roles lacking prestige (Gabriel et al. 2016). This linguistic practice contributes to a broader perception where femininity is correlated with inferiority. Such differential treatment in linguistic expressions not only reflects but also reinforces underlying social biases, positioning feminine roles as inherently less prestigious or important compared to their masculine counterparts (Zanoli, 2022).

Over the past fifty years, linguists have been advocating for language-fair practices and the fight against the strengthening of the prestige of masculinity, challenging the normative use of masculine pronouns and job titles, viewed as "both a symptom and a source of fundamental androcentrism," as noted by Braun et al. (2005, p. 3). Research has consistently shown that the use of masculine generics tends to evoke images of men more than women, as seen in studies by Gastil (1990) and Moulton et al. (1978). An example of this can be seen in many languages, including Italian and Russian, where masculine forms linked to professional roles are more commonly associated with males (Stahlberg et al. 2001).

These masculine generic forms also significantly influence attitudes and behaviours, particularly impacting women. Studies by Bem and Bem (1973) revealed a decreased interest among women in job positions advertised with masculine generics. Further, when masculine generics were used in hypothetical job interviews, women reported feeling a lesser sense of identification and motivation compared to scenarios where gender-neutral language was employed (Stout and Dasgupta 2011). The use of masculine language also extends to how women are perceived in professional contexts, often being seen as less suitable for leadership roles, especially high-status ones, when masculine terms are used in job descriptions (Horvath and Sczesny 2015).

Criticisms against gender-fair language initiatives are also prevalent. For example, in Sweden, the introduction of the gender-neutral pronoun "hen" faced significant resistance, with

criticisms falling into several categories. Vergoossen et al. (2020) analyzed 208 arguments from participants with critical attitudes toward "hen" and found that the majority could be categorised into existing taxonomies of criticism against gender-fair language. The criticisms were grouped into four dimensions: defending the linguistic status quo, sexism and cisgenderism, diminishing the issue and its proponents, and distraction in communication. These dimensions highlight the resistance against changes in language, often rooted in a preference for the current linguistic norms, underlying sexist and cisgender beliefs, and concerns about the practicality and implications of such changes.

Understanding and addressing these criticisms is crucial for effectively implementing gender-fair language reforms. It requires not only empirical evidence and theoretical frameworks but also addressing the socio-cultural factors that influence language use and acceptance. As Vergoossen et al. (2020) suggest, the resistance to gender-fair language often reflects broader societal attitudes towards gender and identity, indicating that efforts to promote gender-fair language must also consider these underlying dimensions of criticism to achieve meaningful progress.

1.2. Gender Representation and the Paradox of Cultural Minority

In examining the multifaceted aspects of gender within social constructions, it is important to deepen into the nuanced discourse surrounding women's status, not only as a demographic entity but as a group that has historically overcome the complexities of marginalisation and vulnerability. The idea that women, who constitute approximately half of the global population, can still be considered a "cultural minority" presents a paradox that reflects deeply rooted patriarchal structures and the persistent legacy of gender inequality. This paradox manifests across various domains, including politics, business, media, and academia.

At present, the media plays a crucial role in perpetuating gender stereotypes and biases. Despite advancements in civil rights, gender-based representations in media often reinforce traditional roles and objectify women, which contributes to societal gender inequalities. Research shows that exposure to stereotyped and objectified representations can reinforce gender role norms, sexism, and even violence against women while stifling their career ambitions and negatively impacting their mental health and body image (Santoniccolo et al., 2023).

Gender bias is still pervasive in academia and leadership, often manifesting through both explicit and implicit biases. Women in academia face significant barriers, from biased student evaluations to underrepresentation in top leadership positions. Research shows how cultural biases further complicate these issues, making it difficult for women to progress and succeed in academic and professional environments (Fan Y, Shepherd LJ, Slavich E, Waters D, Stone M, Abel R, et al. (2019). Additionally, leadership studies have traditionally marginalised gender and racial dimensions, often focusing on white male experiences and overlooking the challenges faced by minority women leaders (Showunmi, 2021).

Gender inequality has far-reaching economic and social consequences. For example, the gender pay gap, lack of women in decision-making roles, and the glass ceiling effect hinder economic growth and societal advancement.[1] Scholars emphasise the importance of integrating gender equality efforts with broader socio-economic goals, such as those outlined in the Sustainable Development Goals (SDGs), to create more effective and comprehensive strategies for empowerment and equality (Belingheri et al., 2021).

Today, the goal of many scholars, including linguists, is to explore this paradox of how women, despite their numbers, often face barriers and biases that align their experiences more closely with those typically associated with minority groups. The fundamental theoretical frameworks and scientific works have played an important role in shaping the modern understanding of gender dynamics. The perspectives of French philosopher Simone de Beauvoir, the concept of 'the Other' (1949) and the historical positioning of women as deviations from the male norm continue to resonate in contemporary gender studies. These ideas explain the persistent marginalisation of women despite their numerical parity with men. Additionally, feminist movements have evolved to address not only gender inequality but also intersecting issues of race, disability, and economic justice, highlighting the need for inclusive and diverse approaches to feminist activism (Showunmi, 2021).

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[1] https://builtin.com/diversity-inclusion/glass-ceiling

1.3. Androcentrism in Linguistics and Its Impact on Language Inclusivity

Since the mid-20th century, the feminist movement has been a catalyst for significant transformations across numerous social fields and this period marked a significant shift in awareness and advocacy for gender equality, influencing various aspects of social life, including linguistics. The feminist movement highlighted the importance of developing linguistic equality, recognising that language is a powerful tool that reflects and shapes social norms and attitudes.

The global pattern of male-centred language varies across cultures, but the prevailing androcentrism, where male perspectives and experiences are prioritised, has been a particular focus of this linguistic revolution. In the field of linguistics, androcentrism is evidenced by the default use of male pronouns and terminologies to denote concepts intended to be generic or neutral (Kirsanova, 2013). For example, in many languages, the use of male pronouns as the default when the gender of the subject is unknown or mixed (e.g., "he" to refer to any person) is a common practice (Santoniccolo et al., 2023). The male-centric view in language has historically been manifested in various ways, ranging from the use of gender-specific pronouns to the gendered connotations of certain words and phrases (Kirsanova, 2013). In many European languages, women are often represented as objects rather than subjects, meaning that their representation occurs either through terms denoting a man or through attitudes towards men. Robin Lakoff's seminal work in 1973 discussed how women are often linguistically positioned in relation to men, reflecting broader societal norms that prioritise male experiences (Lakoff, 1975).

This manifestation of linguistic biases transcends grammatical conventions and serves as an indicator of underlying social norms that elevate male experiences to a universal standard. Androcentric language reinforces gender biases, impacting individuals' perceptions and interactions with different genders. Nancy Bodine's research (1975) showed that this phenomenon is not limited to Western languages but is evident in diverse linguistic contexts, affecting women's representation in media, politics, and other social spheres (Bodine, 1975).

The feminist movement has encouraged linguists, scholars, and society to re-evaluate and modify linguistic structures to promote inclusivity. Comparative linguistic studies reveal both universal patterns and unique cultural manifestations of androcentrism. For instance, Deborah Tannen's work (1990) and Hellinger & Bussmann's studies in 2001 highlighted how language

can render non-male genders invisible or marginalised, thereby perpetuating stereotypes and biases (Tannen, 1990; Hellinger & Bussmann, 2001).

Efforts to reform language to be more inclusive often face resistance rooted in existing linguistic traditions and the perceived inconvenience of changing established language norms. However, scholars argue that language reform is essential for social equity. Deborah Cameron's 1998 work emphasised the importance of challenging androcentric language norms to promote gender equality (Cameron, 1992). The challenges are not just social but also structural, involving complexities in language evolution and usage.

Education systems and language policies play a crucial role in perpetuating or challenging androcentric norms. UNESCO suggested curricular reforms to foster awareness of gender-inclusive language practices[2]. The study of Hellinger & Bussmann (2001) discussed the importance of policy interventions in catalysing changes in official and legal language use. These reforms are crucial for effectively addressing language inclusivity on a global scale.

Androcentrism in linguistics is a multifaceted issue requiring concerted efforts across social, educational, and policy levels to foster language inclusivity. As language evolves with society, recognising and rectifying androcentric biases can pave the way for a more inclusive linguistic landscape. The phenomenon of male bias contributes significantly to the development of sexist language.

Linguistic sexism

Linguistic sexism - "asymmetrical treatment of women and men, of male/masculine and female/feminine concepts and principles" (Pauwels, 2003, p. 553), where male/masculine concepts are often constructed as the norm and female/feminine as deviations from that norm (Spender, 1980). This phenomenon reflects and perpetuates gender inequality through language (Gabriel et al., 2016). Pauwels (2003) noted that linguistic sexism involves the unequal representation of genders in language, which can influence perceptions and behaviours related to gender roles. Linguistic sexism often manifests in the use of masculine forms as the default in languages with grammatical gender (Hellinger & Bussmann, 2001). This includes the ubiquitous use of masculine pronouns and terms to represent all individuals, irrespective of their actual gender identity, while feminine forms are typically reserved only for women.

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[2] UNESCO. (n.d.). *Guidelines for promoting gender-inclusive curriculum in higher education.* https://unesdoc.unesco.org/ark:/48223/pf0000211220

The use of masculine forms as generic terms contributes significantly to the invisibility of women in language. Gabriel and Gygax (2016) argue that the dual use of grammatically masculine forms to refer to people in general, as well as to men in particular, is a reflection of intergroup hierarchies and helps to delimit intergroup boundaries in a way that disadvantages women. Their research shows that the grammaticalisation of gender strongly contributes to the salience, or accessibility, of the social category "gender," reinforcing the perception that the male gender is the default (Gabriel & Gygax, 2016). This is further supported by empirical evidence suggesting that even when masculine forms can be interpreted as generic, they are often understood specifically, leading to a higher likelihood of male-specific interpretations (Irmen & Kurovskaja, 2010).

In examining the influence of linguistically masculine-dominated forms on social perceptions and their perpetuation of pervasive linguistic sexism, it could be suggested that using feminatives and other grammatical forms denoting the feminine gender might help to challenge androcentric ideologies. Feminine terms are morphologically derived from masculine ones using suffixes and other methods. However, the implementation of such forms is not straightforward. Studies have shown that the use of feminine forms can increase the visibility of women in language and reduce gender bias. For instance, Gabriel and Gygax (2008) found that Norwegian, which has gradually adopted neutralisation strategies, resulted in the partial loss of the gender-specific meaning of the masculine form, thus promoting more balanced gender representations.

Additionally, linguistic sexism is evident in various aspects like forms of address, idioms, and proverbs (Holmes, 2006; Pershai, 2014), as well as in the broader discrepancies between how women and men use language (Lakoff, 2004). The persistence of linguistic sexism underscores the need for both structural changes in language and shifts in societal attitudes towards gender. As Gabriel and Gygax (2016) suggest, neutralisation and feminisation strategies could offer a way to mitigate the negative impacts of gendered language, although these strategies come with their own sets of challenges and potential side effects. The nuanced approach to language reform, taking into account cultural and linguistic contexts, is essential for effectively addressing and reducing linguistic sexism.

In addressing this issue and moving towards inclusivity, many languages have started implementing diverse strategies, depending on their specific grammatical frameworks and gender constructs to deteriorate the biases, promoting a more inclusive environment.

Further, we will examine the peculiarities of representation of the gender category, as well as the existing strategies for linguistic inclusivity in English, Italian, and Russian languages.

1.4. Gender, Language, and Social Change

Gender studies, the interdisciplinary field, significantly emerging alongside the feminist movement in the 1960s-70s, initially focused on how women's language deviated from the "male" norm, as noted by Robin Lakoff in her seminal work, *Language and Woman's Place* (1975). Disciplines like anthropology, history, sociology, and psychology began to explore gender not just as a biological construct but as a complex social and cultural phenomenon. This period marked the initial recognition of gender as a significant factor in social structures and individual identity.

The primary areas of focus for researching the representation of gender in language include research centred on the linguistic expressions of individuals (either male or female) in various forms of discourse and speech genres. This approach includes analyses that factor in speech act theory. For instance, Robin Lakoff (1975) provides an understanding of how gender influences communication styles. Jennifer Coates (2015) further develops these ideas by exploring how conversational styles differ between men and women, pointing out the social functions of these differences. Galina Baryshnikova (2001) adds a comparative perspective, examining gendered communication in various cultural contexts. Comparative studies explore both common and unique aspects of gender expression across different languages, allowing for a broader understanding of how gender representation in language varies across linguistic and cultural boundaries, providing a global perspective (Vandysheva, 2007). Deborah Cameron's critical analysis in *Feminism and Linguistic Theory* (1992) investigated the grammatical, lexical, and stylistic dimensions of gender representation. The study addresses the interaction between language and gender, focusing on how linguistic practices perpetuate gender imbalances. Janet Holmes' (2008) extensive research on gendered speech patterns provides insights into the social functions of language and how it reflects and reinforces societal norms. A.V. Anisimova's (2013) studies contribute to understanding the cultural conceptions of male and female traits as encoded in language, exploring how these conceptions shape and are shaped by linguistic practices.

Gender is a universal semantic concept present across various languages, though its implementation in grammatical gender displays significant diversity. This diversity includes variations in the number of grammatical genders, their semantic interpretations, and the way gender agreement is executed across different language elements such as nouns, pronouns, modifiers, and predicates. For example, languages like Spanish and German have distinct masculine, feminine, and sometimes neuter genders, while others like Finnish lack grammatical gender altogether (Prewitt-Freilino et al., 2012).

The effectiveness of languages in shaping gender identities, conveying social roles, and challenging or perpetuating gender stereotypes is influenced by the language's specific formal features and usage patterns. Studies have shown that grammatical gender can impact cognitive processes, such as memory and categorisation, by transferring male and female attributes onto inanimate objects (Boroditsky et al., 2003; Vigliocco et al., 2005). This indicates that the language we speak can subtly shape our perceptions and social interactions (Montefinese et al., 2019).

In advocating for inclusive language practices, it is important to consider not only the structural aspects of the language—such as phonology, morphology, syntax, and pragmatics—but also the cultural context of its speakers, their openness to linguistic evolution, and their perspectives on gender-related matters. Languages evolve within their cultural milieus, which influence how gender identities and roles are constructed and understood (Eriksson, 2012).

Each language, through its distinct linguistic features, presents unique mechanisms to address the imbalance in gender representation. This inherent language diversity offers a spectrum of challenges and opportunities in pursuing gender equality in linguistic practices. For instance, English, known for its relatively gender-neutral vocabulary, contrasts with inherently gendered languages like Italian and Russian. This difference plays a crucial role in shaping the linguistic representation of gender (Prewitt-Freilino et al., 2012; Hellinger & Bussmann, 2001).

In gender-neutral languages like English, the challenge lies not in the structure but often in the usage and social perceptions that guide language. Despite its gender-neutral nature, English is not free from gender biases, as seen in the historical predominance of male-centric terms (Cameron, 1992). However, the flexibility of English provides extensive opportunities for inclusive language practices, such as using gender-neutral pronouns and avoiding gender-specific job titles (Pauwels, 2003).

Conversely, languages like Italian and Russian root gender more deeply into their grammatical structure, influencing how gender is represented and perceived. In Italian, nouns and adjectives must agree in gender with the nouns they describe, making gender distinctions more pronounced. Similarly, Russian uses a complex system of gendered endings and agreement rules that are present in everyday language use (Mishlanova, 2023). These grammatical features can perpetuate gender stereotypes but also pose a significant challenge in representing gender neutrality or non-binary genders. However, it also offers unique opportunities for reform. Introducing gender-neutral terms and reforming grammatically gendered structures can be powerful tools in challenging and changing social perceptions of gender (Prunotto, 2023).

As noted by Pauwels (2003), language reforms are essential in addressing these imbalances. In gendered languages, these reforms often involve introducing gender-neutral terms and the equitable treatment of both genders in linguistic expressions. For instance, in Italian, initiatives like using the asterisk (*) or *schwa (ə)* to replace gendered endings are gaining attention, although they face resistance (Prunotto, 2023; Sulis & Gheno, 2022). Linguists are also advocating for the introduction of gender-neutral pronouns to accommodate non-binary identities, proposing new forms like *loro* for singular use or newly coined pronouns like *ləi* (Gheno, 2021; Giusti, 2022). Similarly, Russian, with its grammatically gendered structure, presents challenges too. Recent efforts include using neutral terms for professions and public roles, developing new pronouns and adjusting adjective endings (Novokreshchenykh, 2018). Linguists and activists are experimenting with new gender-neutral pronouns, though these are not yet widely accepted or used.

In contrast, English has made substantial progress in adopting gender-neutral pronouns like *they/them/theirs* for non-binary individuals, which are increasingly reflected in media, literature, and official documents (Hord, 2016). The flexibility of English facilitates these changes, enabling the replacement of gender-specific job titles with neutral alternatives, such as *firefighter* instead of *fireman* and *chairperson* instead of *chairman*. These changes highlight the evolving nature of language in response to social movements advocating for gender equality. The growing acceptance and use of gender-neutral language in English demonstrate how linguistic reforms can effectively reflect and promote social change (McConnell-Ginet, 2011; Cameron, 2020).

Such reforms are not only linguistic alterations but are deeply interconnected with social changes. They reflect and influence social attitudes towards gender, contributing to broader

movements for gender equality (Hellinger & Bussmann, 2001). However, the successful implementation of these reforms often depends on social acceptance and usage. Social attitudes towards gender roles and expectations can either facilitate or obstruct these linguistic changes (Baker, 2014).

1.5. Strategies for Language Inclusivity

The main aim of language inclusivity is to acknowledge and address the diverse needs of different individuals and groups, ensuring that language use does not exclude, marginalise, or offend[3]. This is particularly relevant in environments characterised by cultural, gender and identity pluralism. The strategies for achieving language inclusivity are multifaceted, reflecting the complex interaction of linguistic norms, cultural contexts, and social norms. In the discourse surrounding linguistic strategies to address sexism and mitigate the negative consequences of language inequality, many languages have begun incorporating gender-neutral alternatives to masculine generics. Therefore, two prevalent approaches emerge: gender specification and gender neutralisation (Pauwels, 2003, p. 556).

This linguistic shift aims to integrate already existing masculine forms with newly introduced feminine forms (called feminatives or feminisation when a feminine form is added to the lexicon) or to adopt a gender-neutral approach (referred to as neutralisation, which minimises gender-specific information), as described by Sczesny et al. (2016). These methodologies, while sharing a common aim of promoting equality, differ significantly in their implementation and underlying philosophies.

Gender specification, often referred to as feminisation, advocates for the explicit inclusion of feminine forms in language. This approach challenges the traditional norm where masculine terms are used as the default or generic form to represent all genders. The logic supporting gender specification is based on the understanding that the masculine form should not be universally assumed to embody the entire spectrum of human experience. Anne Pauwels, in her 2003 analysis, highlights this point, emphasising the importance of linguistic visibility for women and other genders beyond the masculine norm. By integrating feminine forms, this

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[3] American Psychological Association (APA)
https://www.apa.org/about/apa/equity-diversity-inclusion/language-guidelines

approach asserts that men are not the sole representatives of humanity and, thus, masculine generics are inadequate and inappropriate for general use.

On the other hand, gender neutralisation strives for the complete elimination of gender-specific references in language. This method aims to remove the binary gender distinctions embedded in many languages, advocating for a linguistic framework that transcends gendered limitations. The proponents of gender neutralisation argue that the very presence of gendered language perpetuates gender stereotypes and inequalities (Gustafsson et al., 2015; Ståhlberg et al., 2007). Hence, by adopting gender-neutral terms, language can become a more inclusive and less biased medium of communication. This perspective is represented in various linguistic studies that highlight the role of language in shaping social perceptions and reinforcing gender norms.

Both strategies, while seemingly opposing, are integral to the broader movement of creating a more inclusive linguistic environment. Gender specification serves to affirm and validate the presence of multiple gender identities in linguistic representation, while gender neutralisation aims to create a universally inclusive language that transcends gender binaries. The debate between these approaches reflects a larger societal discourse on gender, identity, and representation.

1.6. Gender Representation in Languages: English, Italian, Russian

The choice between gender specification and neutralisation depends on the grammatical representation of gender. In languages with strongly gendered systems, such as Romance and Slavic languages, gender specification can be a powerful tool for affirming gender diversity as it becomes a reflection of cultural and societal norms regarding gender. In these languages, the explicit gendering of words serves not only as a grammatical necessity but also as a potential means of embracing and acknowledging gender diversity. This linguistic specificity can empower speakers to express and affirm diverse gender identities more explicitly.

In contrast, in languages like English, which do not have rigid gender markings, the move towards gender-neutral language can be more readily adopted. Gender-neutral linguistic structure facilitates a smoother transition towards inclusive language practices. The adaptability of English in terms of gender representation allows for a more straightforward integration of gender-neutral language, reflecting and supporting shifts in social attitudes towards gender inclusivity.

English

Unlike gendered languages, English operates with a more subtle gender framework in its grammar, where the distinction is more semantically driven than grammatically enforced. Nouns and pronouns pertaining to specific genders (e.g*., father, mother, he, she*) carry explicit gender connotations, while a significant portion of the lexicon remains ostensibly gender-neutral (Novokreschhennykh, 2018). In English, gender can also be represented through the use of formants (e.g., *man/woman, male/female*), the use of gender-marked suffixes such as *-ette, -ess, -ine, -trix*, and the titles like *Mr./Mrs./Miss/Ms*.

Historically, in English, the generic masculine form is a practice evident in the use of *he* to denote an unspecified person (Miller & Swift, 1972a). However, this approach has been increasingly scrutinised, with critics arguing that such usage, while grammatically generic, may skew cognitive representation towards male imagery, thereby rendering female prototypes less accessible (Blaubergs, 1980; Willis & Jozkowski, 2017). For instance, in occupational terms, traditional usage like *chairman* and *fireman* carries implicit gender biases. This criticism is consistent with feminist linguistic perspectives that challenge the neutrality of the generic masculine gender by emphasising the subtle perpetuation of male dominance in language.

The linguistic response in English to these gendered nuances has been multifaceted. Affixation and gender-marking methods, such as the use of *-ess* (e.g., *actress*), *-ette* (e.g., *usherette*), and terms like *spokeswoman* and *chairwoman*, illustrate efforts to articulate female presence explicitly (Ulianitckaia, 2021). However, such feminatives, while signalling gender specificity, have often carried connotations that either diminish the status of the referent or serve to accentuate gender unnecessarily (Fedotova, 2016). This duality underscores the complexity of gender representation in language, where the intent to achieve inclusivity can inadvertently reinforce stereotypes.

It should be noted that feminatives in English carry connotations analogous to those observed in Russian. According to Fedotova (2016), nouns with female gender specification often reveal a non-serious or contemptuous attitude towards women. This suggests that the use of these gender-specific terms in both languages often reflects underlying biases or negative perceptions of women. However, nouns denoting male persons typically reflect a higher status for male referents compared to females (Miller & Swift, 1972a).

A shift towards gender-neutral English has been apparent in recent years. Despite the emergence and development of gender-specific lexemes under the influence of the feminist movement, recent trends clearly demonstrate a movement towards gender neutralisation (Thieme & Saunders, 2018). Given that English is an analytical language characterised by the absence of syntactic and morphological gender links in sentences, methods of linguistic neutralisation primarily involve removing gender markers and generic male pronouns (Ulianitckaia, 2021). The American Psychological Association (APA) guidelines, for example, discourage the generic use of *he* and recommend gender-neutral alternatives (American Psychological Association, 2009). This is part of a broader linguistic neutralisation process, such as replacing gender-specific terms with gender-neutral equivalents (e.g., *firefighter* instead of *fireman*, police officer instead of policeman), as well as the growing use of singular *they* as a gender-neutral pronoun and the adoption of terms like *Mx.* as a gender-neutral title (Saguy & Williams, 2021). These developments reflect a broader societal trend towards recognising and accommodating a spectrum of gender identities beyond the binary male/female distinction.

The path towards a more gender-inclusive English is not without resistance. Critics of gender-neutral language reforms often cite arguments ranging from the impracticality and perceived inelegance of linguistic alterations to concerns about eroding historical and literary authenticity (Pérez & Tavits, 2019; Sarrasin et al., 2012). These objections, while focusing on the challenges associated with changing deep-rooted linguistic structures, also highlight social tensions around changing gender norms and the role of language in reflecting and shaping those norms. Current research emphasises the importance of assessing and measuring public attitudes towards inclusive and sexist language to understand these dynamics better (Gustafsson et al., 2015). These studies suggest that public acceptance plays a crucial role in successfully implementing linguistic reforms to promote gender equality.

While English lacks the overt grammatical gender markers of languages like Italian or Russian, its evolution in terms of gender representation, for instance, in terms of pronouns and occupational titles, speaks to a global reexamination of language as a tool for both reflecting and shaping societal values concerning gender. The ongoing debate and gradual embrace of gender-neutral and Inclusive language practices in English emphasise the adaptability of the language and the growing awareness among its speakers of the need for linguistic expressions that accommodate a wide range of gender identities.

Italian

In Romance languages, including Italian, the grammatical structure retains two distinct genders: masculine and feminine. This dichotomy influences not only noun forms but also adjectives, pronouns, and verb conjugations (Maiden & Robustelli, 2000). The binary system marks a departure from Latin, which included a neuter gender. The absence of neuter gender in Italian signifies a linguistic simplification over time, although it is not directly related to cultural perceptions of gender as predominantly binary (Zanoli, 2022). In Latin and similar languages, the neuter gender did not function to merge or neutralise the masculine and feminine distinctions. Instead, it typically featured a common gender for referencing humans, set in opposition to the neuter gender, which was typically reserved for objects (Sihler, 1995). However, this system does not apply to Italian.

The peculiarity of the Italian language lies in its strong gender specification for both animate and inanimate nouns. This assignment follows etymological patterns rather than logical rules (Zanoli, 2022). For instance, the gender of inanimate objects does not necessarily align with any inherent masculine or feminine characteristics, leading to linguistically constructed gender associations without real-world consequences (Zanoli, 2022).

In Italian, the masculine and feminine genders applied to inanimate objects do not inherently imply any form of prestige or conform to gender stereotypes. This linguistic characteristic is evident in the way certain nouns are formed and used. For instance, while noun pairs such as *porta* (feminine, 'door') and *portone* (masculine, 'large door') or *poltrona* (feminine, 'armchair') and *divano* (masculine, 'sofa') might initially suggest that masculine nouns refer to larger or more significant objects compared to their feminine counterparts, this pattern is not consistently observed across the language (Guisti, 2022).

This assumption is effectively challenged by other noun pairs like *sedia* (feminine, 'chair') and *sgabello* (masculine, 'stool') or *strada* (feminine, 'street') and *vicolo* (masculine, 'alley') (Guisti, 2022). In these examples, the size or importance of the object does not correlate with the grammatical gender of the noun. As such, it is clear that there is no intrinsic superiority, prestige, or greater significance associated with the masculine gender in the grammatical classification of inanimate nouns in Italian. In contrast, no inherent inferiority, triviality, or lesser value is tied to the feminine gender.

For nouns referring to animate beings, particularly humans or animals close to humans, like pets, the grammatical gender usually indicates the sex or gender of the referent. In common person-referencing nouns, obligatory gender endings are semantically interpreted to correspond to the gender of the referents.

The Italian language reflects socio-cultural shifts, especially in the context of professional titles. With the increasing participation of women in various professions, the use of masculine forms for job titles when referring to women has become more common. The studies show resistance to the feminisation of certain prestigious profession names, indicating cultural and societal influences on language. The preference for using masculine forms for prestigious roles may suggest a bias against acknowledging women in these positions (Zanoli, 2022). This practice creates a "prestigious masculine" form, adding a layer of complexity to gender representation in the language (Giusti, 2022). However, the acceptance of feminised forms is higher among younger participants and female participants, reflecting generational and gender-based differences in attitudes towards gender-inclusive language (Zanoli, 2022).

The concept of an "unmarked" masculine gender in Italian, which is used for generic references or mixed-gender groups, has been a topic of discussion. This usage has the potential to be interpreted as referring specifically to males, raising questions about gender bias in language perception.

Pursuing language inclusivity in Italian involves linguistic innovation and social awareness. One approach is the conscious use of gender-neutral or inclusive language in public discourse, education, and media. This includes the use of generic terms or alternating between masculine and feminine forms to ensure balanced representation (Robustelli, 2013). Additionally, the introduction of gender-neutral pronouns and terms, although challenging in a strongly gendered language like Italian, represents a progressive step towards inclusivity (Prunotto, 2023).

In recent years, there has been a growing interest in adopting more gender-inclusive language practices. For instance, the use of the schwa (ə) as a neutral suffix in both written and spoken Italian, for example, *tuttə* instead of *tutti* (masculine) or *tutte* (feminine) represents an effort to include non-binary genders and challenges the traditional gender binary (Gheno, 2021). The schwa is seen as a practical solution because it is part of the International Phonetic Alphabet and is used in several Italian dialects, although it is not currently part of standard Italian. Other suggestions to address gender neutrality in Italian include the use of the letter *u* at the end of words (e.g., *altu*, *bellu*) and the use of the asterisk symbol (*) as a means to denote gender

neutrality (e.g., *alt**, *bell** - these forms are widely used on social media platforms to avoid gender specifications, however, they are not pronounceable, which limits their utility to written communication only (Prunotto, 2023)). Since [u] is not typically used for gender inflection in standard Italian, it provides a potential alternative. However, its similarity to the masculine -o can cause confusion, and its use is influenced by regional dialects where -u is already used as a masculine marker (Prunotto, 2023).

These proposals aim to foster greater inclusivity and move away from the traditionally masculine-dominated language structure, reflecting the ongoing effort to adapt the Italian language to be more inclusive of non-binary individuals. They are part of a broader discourse on gender neutrality in Romance languages. Such linguistic innovations, however, have caused debates among linguists, educators, and the public about the balance between linguistic tradition and social change (Thornton, 2022; Sulis & Gheno, 2023; Zanoli, 2022; Nodari, 2022). Though still under discussion and not universally adopted, these linguistic changes indicate a growing awareness and sensitivity towards gender identity in language usage.

Although Italian has taken steps to adapt to gender-inclusive language practices, especially in professional contexts, the language's internal gender system, especially the use of unmarked masculine forms, continues to perpetuate certain gender stereotypes. This highlights the need for ongoing linguistic and social evolution to address these issues.

Russian

In Russian, similar to Romance languages like Italian, gender plays a significant role in its grammatical structure, influencing noun forms, adjectives, pronouns, and verb conjugations. Unlike Italian, however, Russian retains three genders: masculine, feminine, and neuter. This trichotomy evolved from Proto-Indo-European. The presence of a neuter gender in Russian allows for a certain linguistic flexibility, yet it still aligns with cultural perceptions of gender that are predominantly binary.

In Russian, the gender of nouns can be determined through various methods. Firstly, gender can be based on the inherent meaning semantics of the word, e.g. *papa* 'father' - masculine. Secondly, the formation of gender-specific nouns can be achieved through suffixation; for example, *akter* 'actor' is masculine, while adding a specific suffix changes it to *aktrisa* 'actress' for the feminine form. Thirdly, gender can be identified in syntactic constructs, where

phrases combine to indicate gender, which represents an example of a specification by marking the gender of a noun: *zhenshchina geolog* 'woman geologist', which clarifies that the geologist is female (Grigoryeva, 2023). The concept of grammatical gender extends beyond nouns and is also presented in adjectives, pronouns, and verbs, influencing their forms.

Russian also displays noun declension, which is associated with grammatical gender and is generally divided into three declension classes. Each class predominantly aligns with a gender, reflecting the broader cultural context of gender perceptions:

First Declension: This declension class is primarily associated with feminine nouns, with some exceptions in masculine gender. The nominative singular form of these nouns usually ends in *-a* or *-ya* (e.g. *koshka* 'cat', feminine and *papa* 'dad', masculine) (Yakovlev, 2015).

Second Declension: Comprising mostly neuter nouns, this class occasionally includes masculine nouns as well. These nouns end in a consonant or the suffixes *-e* or *-o* in the nominative singular (e.g. *stol* 'table', masculine and *okno* 'window', neuter) (Yakovlev, 2015).

Third Declension: This category exclusively contains feminine nouns, which end in a soft consonant in the nominative singular form. (e.g. *mysh'* 'mouse' and *lyubov'* 'love') (Yakovlev, 2015).

Additionally, Russian nouns are categorised as animate or inanimate, affecting the assignment of grammatical gender. Thus, gender assignment to nouns, including those representing inanimate objects, often follows historical and etymological patterns, which can be arbitrary and not necessarily based on logical or inherent characteristics of the objects themselves. For example, while the gender of some inanimate objects might have traditional or historical origins, they do not necessarily correlate with any masculine or feminine attributes in a real-world context, leading to linguistically constructed gender associations. Regarding this representation, like in Italian, Russian does not inherently imply specific stereotypes associated with the masculine or feminine genders. The use of gender in nouns like *dom* (masculine, 'house') and *zdanie* (masculine, 'building' compared to *zhil'ye* (neuter, 'accommodation') or *kvartira* (feminine, 'apartment') does not suggest any superiority based on grammatical gender.

For animate beings, particularly in referencing humans or animals, the grammatical gender in Russian typically indicates the biological sex of the referent. However, there are cases when the masculine form is used for both genders, for example, exceptions like *sobesednik* 'interlocutor', (*m*) and *svidetel* 'witness', (*m*). In traditional linguistics, this rule of nomination

is accepted, in which case the masculine form is considered neutral and generalised (Potebnya, 2012). For example, the practice of naming professions in Russian often employs the masculine form. This linguistic convention can be traced back to historical contexts where specific professional roles were predominantly occupied by males, leading to the professional titles inherently adopting a masculine linguistic form. This phenomenon reflects the gendered nature of occupational norms, where the naming convention for a professional designation aligns with the gender traditionally associated with that profession. These masculine-form terms are currently considered gender-neutral (Sheremeta, 2018). In this case, the masculine form is used to denote *a person in general*, expressing *"a general concept of a person – their social, professional, or other qualifications – regardless of gender"* (Vinogradov, 2001).

Specific masculine nouns possess corresponding derivative feminine forms (feminatives) that are often colloquial in nature, such as *vrachikha* 'female doctor', *pedagogichka* 'female teacher', and *ingenerikha* 'female engineer'. These feminine correlates typically bear negative connotations, while compound feminatives like *zhenshchina prezident* 'woman president' are not perceived as negatively. This might be associated with the fact that radical changes in the language are met with sharper resistance by conservative societies than gradual transitions to progressive changes (Ulianitckaia, 2021). Furthermore, numerous loanwords in Russian also exist solely in the masculine form and are considered gender-neutral, meaning they can be used to refer to females too, and their gender form can only be determined through the context in which they are used (e.g. *klerk* 'clerk'; *oligarkh* 'oligarch'; *kutur'ye* 'couturier'; *shef* 'chef'; *geniy* 'genius'; *izgoy* 'outcast' (Sheremeta, 2018)).

The use of the masculine gender when naming women on a professional basis has become a widely discussed issue. This practice is seen as representing a worldview from a male perspective, thus being androcentric (male-oriented) and potentially leading to discrimination. However, among the female population, the naming of professions in the masculine gender is still dominant as it is considered a more prestigious option. The use of the neutral masculine form for naming individuals of both genders is also typical in official and business language, where linguistic innovations are rare (*advoka*t 'advocate'; *sud'ya* 'judge'; *president* 'president'). On the contrary, professions stereotypically considered female and having a reduced status and prestige have a feminine form: *prisluga* 'maid'; *kukharka* 'kitchen maid'.

Although the neuter gender exists in Russian, it is predominantly used for inanimate objects and rarely applies to people, except in derogatory terms or some references to young children.

Due to this limited and often negative use, the strategy of using neutral gender forms for inclusivity is not generally considered effective or preferable in Russian linguistic practice (Kirey-Sitnikova, 2021). Hence, in the Russian language, gender specification emerges as the primary approach to achieving linguistic inclusiveness.

The language is evolving in response to socio-cultural shifts, particularly in the context of gender representation in professional titles. With increased gender awareness and the growing participation of women in various professions, there has been a push towards using more gender-inclusive forms. However, the traditional unmarked masculine forms often continue to be used, raising questions about embedded gender biases in language. For instance, the feminist movement in Russia promotes the creation of feminine forms for most occupations, but this initiative faces challenges and leads to debates among native speakers.

1.7. Gender Roles and Stereotypes in Russian Language and Society

The role of the Russian language in reflecting and influencing gender stereotypes in Russia is significant. Russian society supports gender-based roles and functions due to the solid patriarchal foundation, justifying that both men and women uphold traditional views on femininity and masculinity. For instance, men typically value qualities like being a good homemaker in women, placing less emphasis on intelligence or career success. The man's educational level or marital status does not significantly alter this perspective. Women, particularly as they age, tend to conform to these societal norms, valuing their appearance highly when younger and later prioritising being a good homemaker; the image of the career woman is often portrayed negatively, suggesting that professional success comes at the cost of personal happiness and traditional femininity (Rassadina, 2012).

Hence, in terms of public perception and cultural norms, there is a strong emphasis on women as "the prettier sex," which affects behaviours and expectations daily. Women are expected to maintain a high standard of appearance in public, and this cultural norm significantly influences gender dynamics (Stroikina, 1997).

This can be contrasted with the evolving norms in many Western societies, where such expectations are increasingly viewed as patriarchal or oppressive. However, it is important to acknowledge that gendered expectations about appearance and behaviour persist to varying degrees worldwide. In Western contexts, while there is a growing movement toward gender

equality and less emphasis on traditional gender roles, the pressure on women to conform to beauty standards still exists, albeit in different forms and with varying intensity (Wolf, 1991). Russian men, conversely, are often seen as protectors and providers and are expected to display courtesy and chivalry towards women. These expectations are present in cultural narratives and everyday interactions, shaping the behaviour of both men and women.

This traditional view extends to significant life decisions where love and marriage are often prioritised over career ambitions (Rassadina, 2012). Consequently, the academic and professional landscape remains challenging. While women participate in the workforce and academia, they still face barriers in rising to leadership positions. The share of male managers outweighs that of female managers, and there is a notable reluctance to accept women in top leadership roles, including political offices (Rozhanovskaya, 2020).

Russian feminism faces numerous challenges due to the country's conservative turn. Feminist organisations adapt, using technology and social media to advocate for their interests, but they often face social stigma around feminism. The movement is further complicated by its intersection with LGBTQ+ rights, which remains a controversial area due to strict laws in the country.

In terms of language's role in this dynamic, the way gender is framed and discussed in Russian contributes to these stereotypes. This manifests in the language through androcentric structures, where male terms are often used as default or neutral, reinforcing gender asymmetry (Bozhenko, 2022).

The structure of the Russian language, with its inherent gender markers and default masculine forms, plays a significant role in perpetuating gender stereotypes. This linguistic characteristic provides a clear distinction between masculine and feminine forms, thereby potentially reinforcing traditional gender roles, particularly in professional contexts. Even the use of feminine suffixes sometimes emphasises the gender of the person in a negative way, which can lead to stereotypes suggesting that certain jobs or roles are better suited to one gender than another.

In many cases, the masculine form of a noun is used as the standard or neutral form. This androcentrism implicitly assumes that men are the standard or norm and women are the exception. The lack of gender-neutral terms for many professions can impact perceptions of professionalism and authority. Consequently, women in traditionally male-dominated fields

may be perceived as less authoritative or irrelevant because the language does not represent them equally.

Overall, the interaction of language, culture, and social norms in Russia creates a complex environment in which traditional gender roles are maintained, with language playing a critical role in these dynamics. However, globalisation and the influence of developing trends in equality, especially for the younger generation, have launched the process of changing these stereotypes. This study presents the opportunity to monitor and analyse the potential shifts and evolutions in these gender-related dynamics.

Chapter 2. The Measurement of Gender Perception

2.1. Gender and Cognition

The complex interaction between mental processes, language, and conceptual structures has been a topical subject of research in the field of cognitive psychology, as seen in the studies of scholars such as Stahlberg et al. (2007) and Slobin (1996), where the topic of the mental conceptualisation of gender was dominant. The linguistic representation of the world significantly influences how individuals relate to their surroundings. It establishes behavioural norms and shapes attitudes towards the environment. Each natural language embodies a unique framework for perceiving and organising, or "conceptualising," reality (Maslova, 2001).

This interest stems from findings that demonstrate how gender perceptions are influenced by both linguistic properties, such as the grammatical gender of words, and the stereotypes that people hold (Carreiras et al., 1996; Gygax et al., 2008). Slobin (1996) contributed to this understanding by proposing that habitual language use can influence thought patterns, a notion encapsulated in his concept of "thinking for speaking". Slobin argued that speakers of different languages have to think in ways that align with the linguistic structures of their language whenever they are preparing to speak. This process influences how they perceive and conceptualise the world. For instance, speakers of languages with grammatical gender might pay more attention to the gender of objects than speakers without grammatical gender.

The study conducted by Carreiras et al. (1996) analysed how grammatical gender in languages such as Spanish influences the mental representation of gender, showing that gender-marked nouns can affect cognitive processing speed and accuracy. Gygax et al. (2008) extended this idea by examining the cross-linguistic differences in gender representation, providing evidence that linguistic gender systems can impact gender stereotyping and biases in social cognition. Stahlberg et al. (2007) investigated how gender stereotypes are perpetuated through language use, finding that language not only reflects but also reinforces societal gender norms.

Changes in language, such as the use of inclusive language, can influence cognitive processing and reduce gender bias, demonstrating the potential for language reforms to mitigate the impact of stereotypes. Individuals' implicit attitudes towards gender roles are shaped by the linguistic context, suggesting that changes in language use can lead to broader shifts in social attitudes. Through its influence on perception, cognition, and social norms, language determines how

individuals conceptualise and interact with gender roles and stereotypes, thereby contributing to the persistence of gender biases in society.

2.2. Description of the Misersky et al. (2014) measurement

To effectively address the problem of gender stereotypes, an essential initial step is to develop a reliable methodology for identifying and measuring these stereotypes. This methodology will provide a basis for systematically examining the ways in which gender stereotypes are embedded and reinforced through language. We begin this chapter with a description of the research, the method of which became the basis for the first experiment conducted for this thesis.

The study, led by Misersky et al. (2014), created a tool to facilitate cross-linguistic and cross-cultural comparisons. The tool aims to disentangle language form from stereotypical conceptualisation by determining norms of gender stereotyping for a number of languages.

By establishing a standardised approach to assessing gender stereotypes across multiple languages, this measure provides a unique opportunity to apply it across languages, thereby comparing and contrasting these phenomena across cultural settings. More specifically, the tool's utility extends beyond academic research and offers potential applications in educational, social, and policy arenas. Providing evidence of how gender roles are perceived across cultures, the tool could help educators, social scientists, and policymakers develop more informed strategies to combat gender bias. This approach could not only improve the understanding of the role of language in shaping gender perceptions but also lead to more equitable and inclusive social practices.

Aims and Goals

The primary aim of Misersky et al. 's (2014) study consists of establishing and formalising norms regarding the gender stereotypicality of an extensive assortment of role nouns, covering several languages, including Czech, English, French, German, Italian, Norwegian, and Slovak, involving the identification of how different languages and cultures perceive the gender associations of various occupations and roles.

Moreover, the research aims to develop and implement a web-based tool (questionnaire) - a digital platform - representing a step forward in research methodology, offering a more efficient and accessible means of collecting and analysing data on gender stereotypes. Uniquely designed to accommodate the linguistic nuances present in the grammatical representation of gender in nouns referring to humans, this ensures consistent research methodologies across different languages. The presence or absence of grammatical gender in specific languages influences the design of the questionnaire. Additionally, this tool has the potential for expansion to include more languages. Its significance lies in allowing researchers worldwide to make cross-linguistic and cross-cultural comparisons with greater ease and precision. Such comparisons are critical to understanding the universal and culture-specific aspects of gender stereotypes in language.

"Thus, the aims and goals of the study are twofold: to create a comprehensive database of gender norms in role nouns across a diverse language spectrum as well as to create a digital tool that will revolutionise the way researchers study language, gender, and stereotypes" (Misersky et. al., 2014). These goals are intended to make significant contributions to the field, offering insights that can shape future research and contribute to a deeper understanding of the complex relationships between language and social gender norms.

Methods

The research involved a substantial participant pool, initially comprising 1663 individuals. This diverse group was eventually narrowed down to 1408 participants for the final analysis. The reduction was due to the exclusion of individuals who did not meet specific criteria: those who were not native speakers of the languages under study, those who were not students, and participants who failed to follow the given instructions. The participants represented a broad demographic from various countries and universities, effectively encompassing the linguistic diversity of the seven languages (Czech, English, French, German, Italian, Norwegian, and Slovak).

A key component of the methodological approach was the use of a comprehensive questionnaire. This questionnaire included a list of 422 role nouns in English, along with their equivalent terms in the other six languages. The role nouns were carefully selected to cover a broad spectrum of social and occupational groups. Participants were asked to estimate the

gender ratio associated with these role nouns. They did this using an 11-point rating scale, which quantified gender representation from one extreme (0% women and 100% men) to the other (100% women and 0% men). This scale was designed in two versions to counter any potential bias: one version positioned the higher percentage of women at the scale's left end, while the other placed it on the right. The inclusion of both masculine and feminine forms of the role nouns was a crucial aspect of the methodology, especially for languages with grammatical gender distinctions. This approach ensured that the study's findings would accurately reflect the gender associations in languages where nouns are inherently gendered.

Given the substantial quantity of role nouns requiring evaluation, each participant was tasked with evaluating approximately half of the total role nouns. This selection was randomised for each participant and language to ensure broad and unbiased coverage of the nouns. The randomisation process was integral to the study's design, aiming to eliminate any potential skew in the data due to the overrepresentation or underrepresentation of certain nouns.

This systematic approach ensures that the study captured a wide range of perceptions and attitudes towards gender roles as embedded in language. By combining a large and diverse participant base with a thorough and well-structured questionnaire, the study aimed to provide comprehensive insights into the gender stereotypicality inherent in various languages. This methodology not only supported the primary objective of establishing gender norms across languages but also set a precedent for future research in the field of language and gender stereotypes.

Results

The results showed that high values on the rating scale corresponded to a higher proportion of women. The study found similar rankings of role nouns across languages, with overall proportions of women in the role nouns ranging from 0.42 to 0.45 across languages. This suggested stronger male stereotypes than females globally. The study also found no significant differences in the perceptions of male and female participants. However, the direction of the scale (left or right) showed some influence. The study found that the orientation of the scale should be considered, as displaying 100% feminine on the left side of the screen rather than the right, resulted in a higher proportion of women, especially in English, Italian, and Norwegian.

Nonetheless, this effect is relatively small and does not significantly change the relative stereotypicality rankings of role names.

Moreover, the findings across different languages were consistent. This high degree of reliability indicates strong consensus among participants with different language backgrounds, further supporting the study's methodology and findings. Thus, the results of the study offer a comprehensive overview of gender stereotypes present in the perception of role nouns. These findings provide a basis for further exploration of the complex dynamics of language and gender, providing valuable information to linguists, psychologists, and gender studies researchers.

Further, we will conduct a more detailed analysis of the results obtained for English and Italian, and subsequently compare them with the findings for Russian.

Discussion and Implications

The study's methodology allows cross-experiment and cross-linguistic comparisons, particularly in researching stereotypes and their evolution. It acknowledges certain limitations, such as the uncontrollable nature of online data collection and potential discrepancies between participants' beliefs and actual gender distributions in occupations and roles. The study highlights the value of a web-based questionnaire in evaluating role nouns stereotypically, given the widespread use of the internet and the ability to reach diverse populations. It also allows future studies to explore the relationship between people's beliefs and actual gender distributions in various roles.

The study successfully established gender stereotype norms for a broad range of role nouns across multiple languages, using a standardised methodology, providing a valuable tool for future research on gender stereotypes and offering insights into the perception of roles across different cultures and languages. Thus, using this methodology, we carried out a replication of the study for the Russian language, aiming to evaluate people's perception of gender representation of role names. Further, we will discuss the topicality and relevance of this survey for the Russian language and present the study itself.

2.3. Gender Perception in Russian Role Nouns

Aims, Relevance, Theoretical and Practical Significance

The study conducted by Myserskii et al. (2014) on other European languages has explored the impact of grammatical gender and gender stereotypes on the perception of role nouns — words that denote professional positions or social roles that can carry implicit gender associations — highlighting the importance of understanding this interconnection.

The interaction between Russian's detailed grammatical gender system and the stereotypes associated with various professional and social roles has not been sufficiently explored, particularly in how these elements influence language comprehension and the mental representation of gender.

As was mentioned previously, the Russian language distinguishes three grammatical genders (masculine, feminine, and neuter), which allows for marked variability in how these genders can be represented, especially in plural forms where generic masculines often imply mixed or male-only groups, despite supposedly neutral grammatical constructions.

The primary objective of this study is to establish a set of stereotype norms for role nouns in the Russian language, cataloguing the gender associations of 103 commonly used role nouns. The norms established through this study could serve as an essential tool for researchers in the fields of linguistics, psychology, and social sciences, facilitating more nuanced studies on the impact of gender in language across various contexts. Additionally, these norms have practical implications, potentially influencing language use in educational materials, media, and policy-making to promote gender neutrality. Consequently, this study aims to investigate the gender perception of these role nouns, focusing on how the interaction of morphological gender marking and the effects of gender stereotypes influence native Russian speakers' gender preferences in role nouns.

Understanding the interaction between grammatical gender and gender stereotypes can enhance theoretical models of language processing, particularly in psycholinguistics. Practically, insights from this research could inform approaches to language teaching and text creation in Russian, aiming to reduce gender bias and improve comprehension in mixed-gender communication scenarios. This research can provide empirical evidence on the impact of

gender stereotypes integrated with grammatical gender, offering a comparative perspective with findings from other languages. It aims to contribute a unique set of data to the global discussion on gender in language, highlighting the specific challenges and opportunities presented by the Russian language.

The approach involves a survey where participants rate the gender stereotypicality of role nouns on a ranging from 0% to 100% rating scale. This method allows for precisely measuring societal perceptions and biases towards certain professions and social roles, providing a quantitative basis for further analysis. An online questionnaire was administered to Russian-speaking participants to understand how morphological marking of gender and gender stereotypes affect gender choice among native speakers.

Methodology
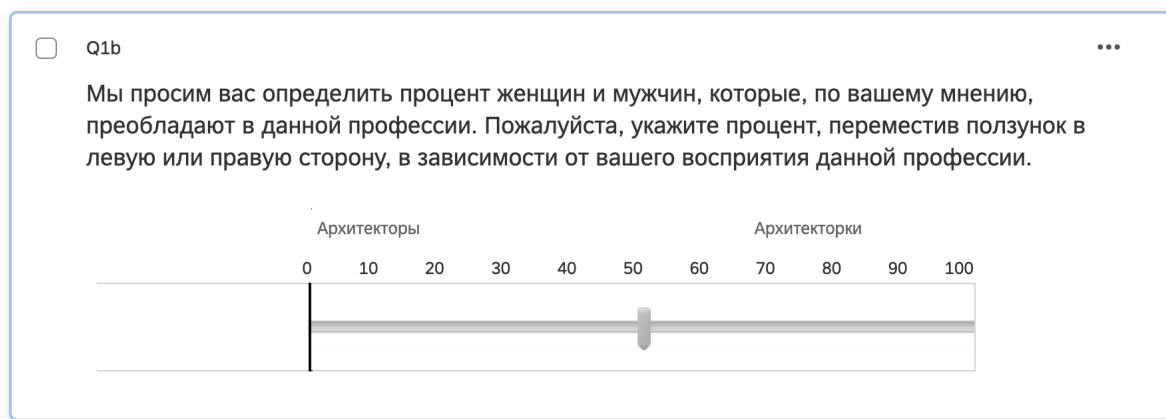
The data was collected from 72 participants, native Russian speakers (24 males, 48 females) aged 18 to 58, to ensure a comprehensive understanding of the nuances in language processing. Participants were recruited through social media platforms to obtain a diverse sample in terms of age, educational background, and social demographics. This diversity helps ensure that the findings are generalisable across different segments of the Russian-speaking population. Respondents participated voluntarily and did not receive any compensation for participating in the survey.

The research employed an online questionnaire constructed on the Qualtrics platform and was designed to accommodate the nuances of Russian grammatical structure and ensure the accuracy of the inputs. Participants were given instructions on how to assess the role nouns, with examples to clarify any potential ambiguities in the rating process. Upon reviewing and consenting to the instructions, participants were asked to assess the male-to-female ratio for each role noun. At the beginning of the questionnaire, participants were required to provide demographic information, including their age, gender, level of education, occupational status and knowledge of languages.

The study evaluated gender perceptions of 103 role nouns in Russian. Compared with the original study by Misersky et al. (2014), our survey incorporated a reduced number of role nouns. This reduction is attributed to the translation and localisation process during which certain nouns were excluded either because they lacked corresponding equivalents in the

Russian language or had become obsolete. Each chosen noun was associated with varying degrees of stereotypical gender perceptions based on preliminary reviews of linguistic databases and prior research. According to Gabriel et al. (2008), who conducted previous research in this field, the use of generic masculine for role nouns of both genders tends to elevate the perception of males rather than the use of explicitly gender-marked nouns. Consequently, our dataset comprised three categories of role nouns: gender-paired nouns, which are applicable to both female and male genders (e.g. *artistki / artisty* 'artists'); masculine nouns that lacked a feminine counterpart (e.g. *himiki* 'chemists'); and masculine nouns that possessed a feminine counterpart but only one that is used colloquially (e.g. *redaktorki, redakto*ry 'editors'). The complete list of role nouns is provided in Appendix A.

The nouns were presented in the plural form, depicting both masculine and feminine genders alongside a rating scale ranging from 0% to 100% (Fig.1).

Figure 1. Question design

Additionally, previous research has shown that the orientation of the scale impacts ratings (Kennison and Trofe, 2003; Gabriel et al., 2008). Specifically, when a scale positions 100% male at the right end, there is a minor yet statistically significant increase in the tendency of role nouns to be perceived as male. Thus, in order to monitor possible patterns in respondents' answers and to eliminate potential bias, two blocks of questions were created and assigned randomly to the respondents. The first one ranged from 0% women (fully male-associated) to 100% women (fully female-associated), while the second block was presented in an inverted direction form with 100% men (fully male-associated) and 0% men (fully female-associated). This scale design allows the capture of nuances in gender perception and provides a

quantitative measure of stereotypicality. Each participant was given all 103 role nouns to assess, the order of which was randomly assigned.

Results

Quantitative Analysis of Role Noun Perceptions

Since our rating scale ranges from 0% to 100%, the percentages in the responses correspond to the proportions of the rating scale, so the results obtained are comprehensible, and there is no need to code the data into any other specific values, however, since we have two scales with different directions, we will align these values to a single direction to enable a consistent analysis of all the data collected (for the overall analysis we took the 100% man-on-the-right sale). Pandas, a tool for data manipulation and analysis in Python, was used to calculate the results. Descriptive statistics (mean, median, and standard deviation) were calculated to quantify the extent of gender association. The distribution of scores was analysed to determine whether it skews towards male or female stereotypes.

The overall pattern revealed that role nouns were perceived more as masculine, indicating a bias against female representation. The results showed a difference in gender perception based on the format of the questionnaire. The data indicated that when the scale was oriented with 100% men on the right, the mean rating of perception of women M = 47.2, showed a leaning more towards males which is coherent with the previous research. Conversely, with the scale oriented to have 100% women on the right, the mean rating M = 48.4 was higher, pointing to a lesser degree of bias. By-gender analysis showed that female respondents generally rated the proportion of women in roles higher than male respondents. The consideration of mean rating is more appropriate here as the data is normally distributed, hence it provides a central tendency that represents the data well.

By-participant analysis

Seventy-two participants ranged from 18 to 58 years old, with a median age of 25 years. The overall median rating across participants was 45.75 (fig.2), with the mean rating across the role nouns for each participant of 47.85. These values indicate that, on average, role nouns tended to be perceived as more biased towards the male gender, defining women as a minority in these

occupational groups. However, the overall distribution of scores was nonnormal, Kolmogorov–Smirnov's $D(72) = 0.21$, $p = 0.002$. The standard deviation of the mean ratings across participants was about 8.38, showing moderate variability in how participants perceive the gender association of role nouns.
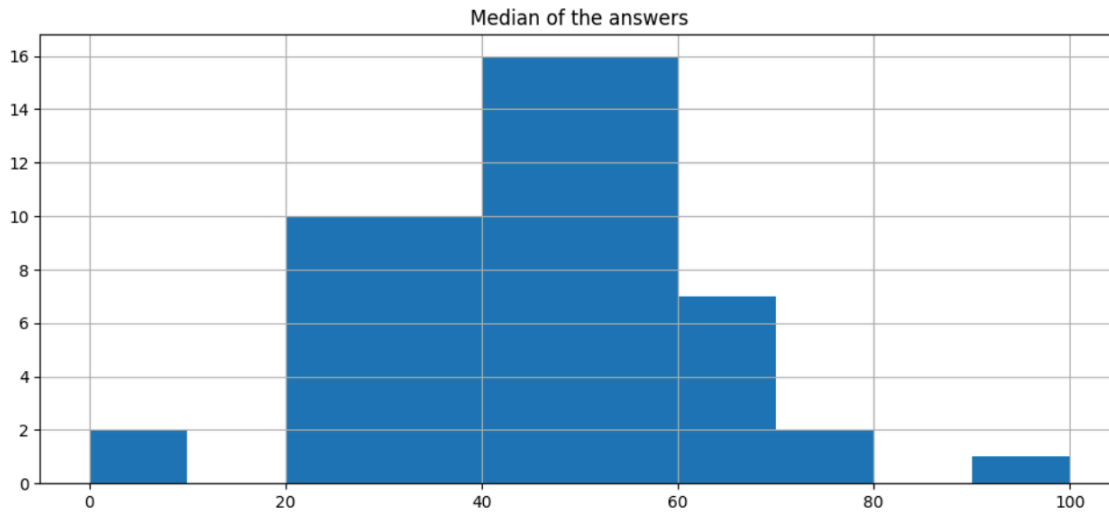

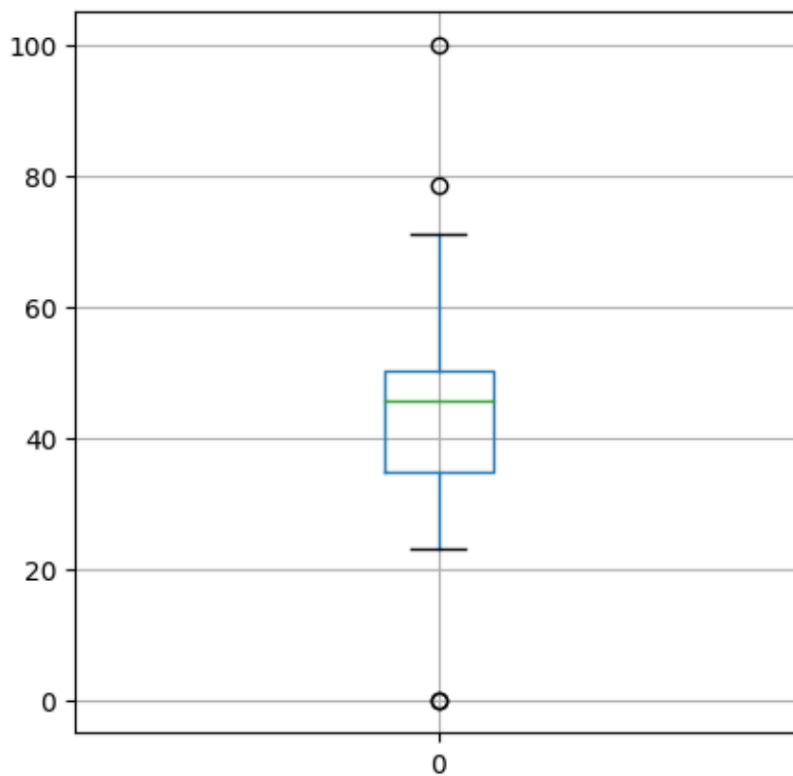Figure 2. Median distribution of answers

Figure 3. Distribution of answers

The box plot of the median ratings in Figure 3 provides a visual representation of the central tendency and dispersion of the answers given by respondents, highlighting the overall skew towards gender stereotyping. The central tendency (median) is shown around the 45 mark (45.75), and the interquartile range (IQR) suggests that the middle 50% of the answers are grouped towards the lower half of the range, indicating a skew towards lower values. The median provides a representation of the central tendency of the data, reflecting the typical perception of gender stereotypicality for each role noun without the influence of extreme ratings. The presence of outliers above the upper whisker suggests that some respondents' answers are significantly higher than the rest of the data provided and may present inconsistency in the final results.

Insights by Gender (Figures 4,5)

Female Participants (48):

Mean Rating: 49.03,

Standard Deviation: 8.94

These results suggest that female participants perceive less gender stereotyping in role nouns compared to the overall sample, with lower variability in their perceptions.

Male Participants (24):

Mean Rating: 45.44;

Standard Deviation: 6.65

Male participants rated the role nouns as more male-oriented compared to females, with greater variability in their perceptions.
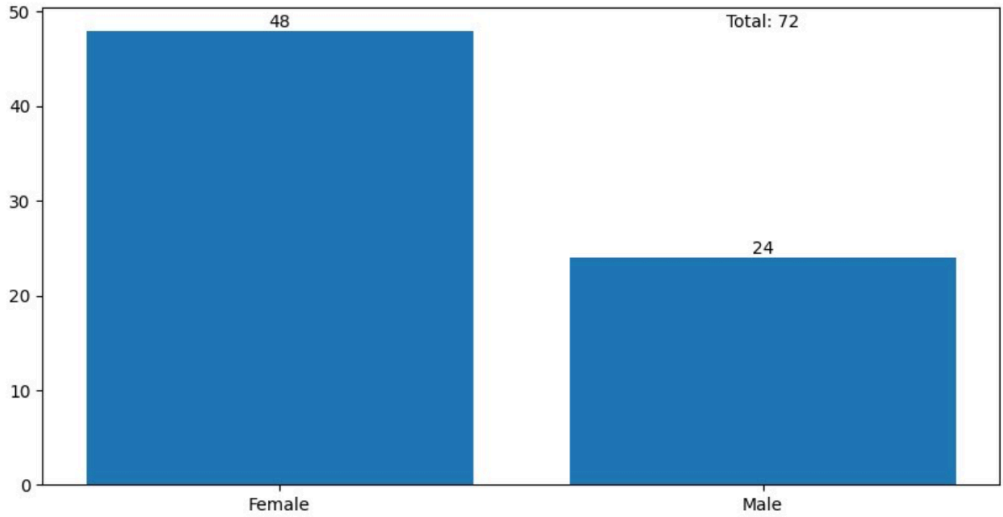
Figure 4. Gender distribution
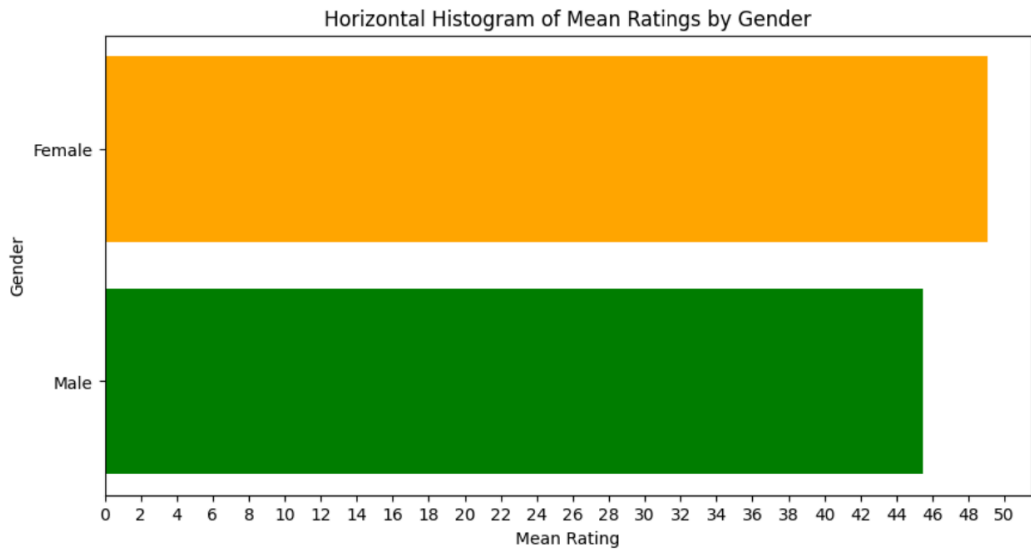
Figure 5. Mean Ratings by Gender

By-item analysis

For each role noun, we calculated the mean rating and standard deviations (Appendix A). A scatter plot (Fig. 6) of the mean rating for each noun against standard deviations identifies the role nouns that have more consensus among participants (lower standard deviations) and which are more contentious (higher standard deviations). This pattern is consistent with the results of previous studies conducted in English, German and French, where more nouns were observed towards the male end of the scale (Gabriel et al., 2008).
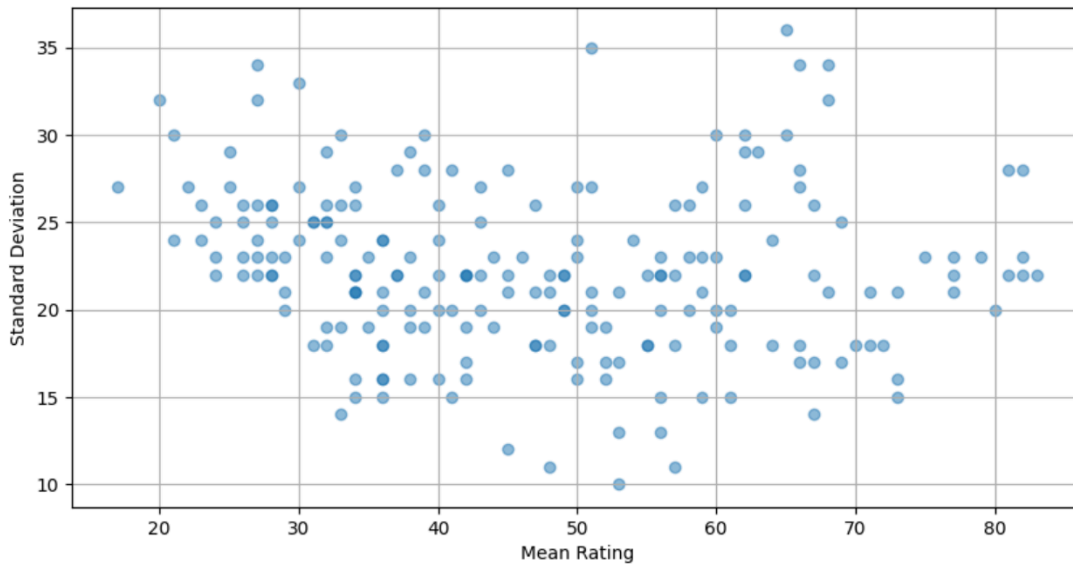
Figure 6. Mean Rating Distribution of Role Nouns

The results showed some professions to be predominantly associated with one gender. For example, *Babysitters* M(mean) = 73, *Beauticians* M = 72, *Caregivers* M = 75, *Chamber-maids* M = 74.29, and *Housekeepers* M = 75.58 were strongly female-biased, while *Astronauts* M = 27.86, *Deputies* M = 27.21, *Diplomats* M = 28.3, *Orchestra conductors* M = 21.45, *Mayors* M = 27.2 were predominantly associated with males. The results also highlighted a set of roles that are perceived as gender-neutral (mean rating around 50), such as *Doctors*, *Biologists*, *Restorers*, *Photographers* and *Managers*. Overall, the data obtained showed the expected bias and confirmed all existing stereotypes in the perception of gender-oriented professions. Noticeable outliers were not presented in the data.

2.4. Comparative Analysis of Gender Role Noun Perception Across English, Italian, and Russian

The study of gender representation within language has attracted extensive research interest due to its implications for societal gender biases. This comparative analysis combines findings from surveys conducted among English, Italian (by Misersky et al. 2024), and Russian speakers to assess the perception of gender roles as denoted by various role nouns.

In the English-speaking sample, the age of participants spanned from 18 to 51 years, with an average age of 20.37 years and a standard deviation reflecting a relatively narrow age range (SD = 4.39). The Italian-speaking sample comprised an age distribution ranging from 18 to 64 years and a mean age of 22.86 years (SD = 4.15). The age range of Russian respondents ranged from 18 to 58 years, with a median age of 25 (SD = 6.8). This demographic diversity could potentially influence the perception of gender roles within each language group.

The mean ratings for English and Italian participants are quite similar, both slightly below the midpoint of an 11-point scale, with a mean of .44 (SD = .04) for English and .43 (SD = .04) for Italian participants. These findings show a tendency towards perceiving role nouns as masculine across both languages. However, the data for Russian presents a higher mean rating of 47.85 on a 0-100 scale and an SD = 8.38, pointing to a broader distribution in perceptions and a more pronounced male bias.

All language groups demonstrated nonnormal distributions, with significant deviations detected in the first version of the presented scale. Notably, English and Italian participants showed minor yet statistically substantial increases towards male gender ratings when the scale's male end was positioned on the right. Interestingly, this tendency was also supported by the results of the Russian study.

Female Russian participants (N=48) evidenced a median rating of 47.5 and a mean of 49.03, with a standard deviation of 8.94, suggesting a nuanced perception with less pronounced gender stereotyping. Conversely, the male participants (N=24) reported a lower median rating of 38.0 and a mean of 45.44 but a reduced standard deviation of 6.65, indicating a stronger inclination towards gender-stereotyped perceptions. However, English participants, both female (M = .44, SD = .04) and male (M = .44, SD = .04), rated the proportions of women as being equally high. In the Italian study, the same pattern was explored: the female participants (M =

.43, SD = .04) and male participants (M = .43, SD = .04) rated the proportions of women quite similarly (Misersky et al.2014).

Combining these results, it becomes evident that English and Italian participants share a similar pattern in their perception of role nouns, marked by subtle biases towards male representation. The Russian data shows a stronger male bias, which is consistent with the observed trend in gender-role perceptions but with increased variability.

Discussion

The primary objective of the study consisted of establishing standardised norms for a wide range of role nouns for the Russian language in order to provide an opportunity to assess and analyse the perception of gender stereotypes among a Russian-speaking sample. The creation of this database for the Russian language will simplify further cross-linguistic research, including comparison with other Slavic languages. Therefore, the aim of this research was to examine how the grammatical gender system in Russian interacts with the stereotypes linked to different professional and social roles, focusing on how these factors affect stereotype perception and the cognitive representation of gender.

The results contribute to understanding the interaction between grammatical gender and gender stereotypes in Russian. The use of generic masculine forms in Russian tends to be associated with male groups, highlighting the influence of linguistic structure on gender perception. Additionally, the study detects the impact of scale direction on gender perception rating, a phenomenon requiring further exploration.

These cross-linguistic findings have profound implications for understanding how gender stereotypes are perceived in society. The non-normal distribution and the differences based on the direction of the scale highlight the influence of methodological factors in shaping gender perceptions. Meanwhile, differences in gender responses suggest the need for nuanced approaches to studying gender stereotypes that take cultural, linguistic, and social variables into account.

The data we obtained on Russian was compared through a cross-linguistic analysis with data from English and Italian (Misersky et al. 2014). The proportion of female representation in role nouns for Russian showed a similar trend but with higher values, indicating a stronger

stereotype of males over females, aligning with earlier studies (Gabriel et al., 2008). These results also demonstrate that Russian showed a stronger correlation between the grammatical gender of nouns and the societal expectations of the roles those nouns describe. This correlation is less pronounced in languages without grammatical gender, suggesting that linguistic frameworks do play a crucial role in the cognitive processing of gender information.

The study acknowledges its limitations, such as the relatively small and demographically limited sample size. Future research could expand on these findings by including a more diverse participant pool and exploring additional linguistic factors that may influence gender perception in role nouns. The expansion of the range of role nouns and the exploration of additional contexts, such as age stereotypes associated with certain professions, should be taken into consideration to provide a more comprehensive picture of stereotype perception.

It should also be noted that the advantages of using a web-based questionnaire to reach diverse demographic groups are significant as it significantly enhances the research reach and inclusivity. It allows for gathering data from a broad spectrum of participants across various geographical locations and demographic groups, which is crucial for studies requiring diverse input.

The implications of this study are manifold for future research, particularly in linguistics and gender studies. Understanding the nuances of gender perception in Russian can inform broader investigations into gender representation in language and contribute to more inclusive linguistic practices.

In conclusion, this study not only fills a significant gap in our understanding of Russian linguistics but also contributes to broader discussions about the role of gender in language. It highlights the potential for linguistic research to inform more equitable and effective communication practices, contributing to a deeper understanding of the cognitive processes that underlie language comprehension.

Given that our findings reveal the stigmatisation of the female gender within professional contexts, and as we noted the levels observed surpass those documented in both English and Italian contexts. Consequently, it is both logical and important to extend our research with a focus on examining whether these perceptions of gender align with the actual gender distribution across professions in Russia. This approach will enable a more comprehensive understanding of the underlying dynamics of the stigmatised perceptions identified.

2.5. Gender Distribution across Professions in Russia

The distribution of men and women across various sectors and employment levels is one of the manifestations of social inequality in society, shaped by the societal division of labour (Brushkova, 2021). A situation where women and men are unevenly distributed across different types of activities is termed labour market gender segregation. As a result of segregation, predominantly masculine or feminine sectors, professions, or enterprises emerge, the primary negative outcome of which is a gender wage gap favouring men (Brushkova, 2021).

Segregation and uneven distribution of genders in professions are common across many countries. To analyse and assess existing trends in changes in the gender structure of employment, it is important first to identify factors that contribute to the strengthening or reduction of gender asymmetry, including determining the impact of stereotypes and perceptions of gender in professions among the population on economic and social consequences.

The formation of gender inequality in professional environments is shaped by many factors, including significant historical, cultural, and economic events that have occurred within a country. In the context of Russia, the influence of Soviet-era norms offers a clear example of how the established division of industries and professions into male and female roles continues to shape contemporary gender perceptions within the workforce. This historical segregation has led to persistent barriers where certain professions remain predominantly male-dominated or pay less for women, perpetuating gender disparities in the labour market. This ongoing division not only reflects deeply held attitudes in society but also impacts current economic opportunities and outcomes differently for men and women.

Currently, in Russia, the participation rate of women in professions is relatively high by global standards, yet there has been a gradual decline over recent years. According to Rosstat, the employment rate for women was 60.1% in 2017 compared to men's 71.5%. By 2019, the employment rate for women had decreased to 52.9%, while for men, it was 67.3% (Brushkova, 2021). This decline reflects broader socio-economic shifts and potential gender biases that could be influencing both access to employment and the types of employment available to women.

As of 2019, professions predominantly occupied by women in Russia include education (82%), healthcare and social services (80%), hospitality services (74%), finance and insurance (69%), and culture, sports, and leisure (66%). Predominantly male sectors include construction (87%), mining (82%), transportation (78%), information and communication (65%), as well as sectors that do not require higher qualifications like agriculture, forestry, and fishery (67%) (Fig.7. https://rosstat.gov.ru).

Figure7. Gender Distribution by Occupation in Russia in 2019

In examining the comparison of the results of the survey on gender perceptions and the real picture of gender distribution in Russia, in most cases, the perceptions of the respondents corresponded to the situation in the labour market. Let us consider specific examples. According to our survey data, the accounting profession is perceived as overwhelmingly female (94.7%), aligning closely with statistics that show only 5% of accountants in this sector are male. In the clerical sector, secretaries and assistants are predominantly women (66.8%), although this figure is lower than the actual statistic, which indicates that 90% of secretaries and assistants in Russia are female. Respondents consider pharmacy a female-dominated field (63.5%); indeed, women constitute about 81% of all professionals in this area in Russia. Psychology and pedagogy are segments of the labour market where the workers in most cases are women (89% and 85%, respectively), however, these occupations were perceived as less

female (52% and 62% respectively). The data on photographers also showed similar trends—60% of perceptions favouring women align with the current dominance of women (53%) in this field. Among male occupations, the computer scientist profession is predominantly male (71%), which corresponds to reality: 83% of programmers and developers are men. As well as engineers (70%) that aligns with the actual situation—among engineers, 60% are men. The same trend is maintained in relation to political professions where men dominate among deputies, mayors and diplomats.[4]

However, we observed a significant number of professions in which stereotypical perceptions we collected in the questionnaire do not match the actual situation in the country (examples with the rates from our experiment presented further). Typically, this discrepancy tends to underestimate the presence of women in various professions, with many instances where respondents greatly miscalculated the gender distribution within occupational fields.

Thus, in the medical sector, the presence of women was estimated at 45.5%, whereas the statistics show that women make up 71% of qualified doctors in the country. This tendency is also observed with veterinarians, where the actual presence of women in the profession (67%) does not align with the perceptions of the respondents (51%). Similarly, the architecture profession was perceived to have only 33.5% female participation, yet in reality, this field in Russia has been actively embraced by women, with female architects now comprising about 60% of the profession. Survey participants identified men as the majority in the field of law and economy: lawyers - 60%, economists 70%; however, women's predominance is observed in these professions, making up 61% and 69%, respectively. [5]

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[4] Rosstat https://rosstat.gov.ru

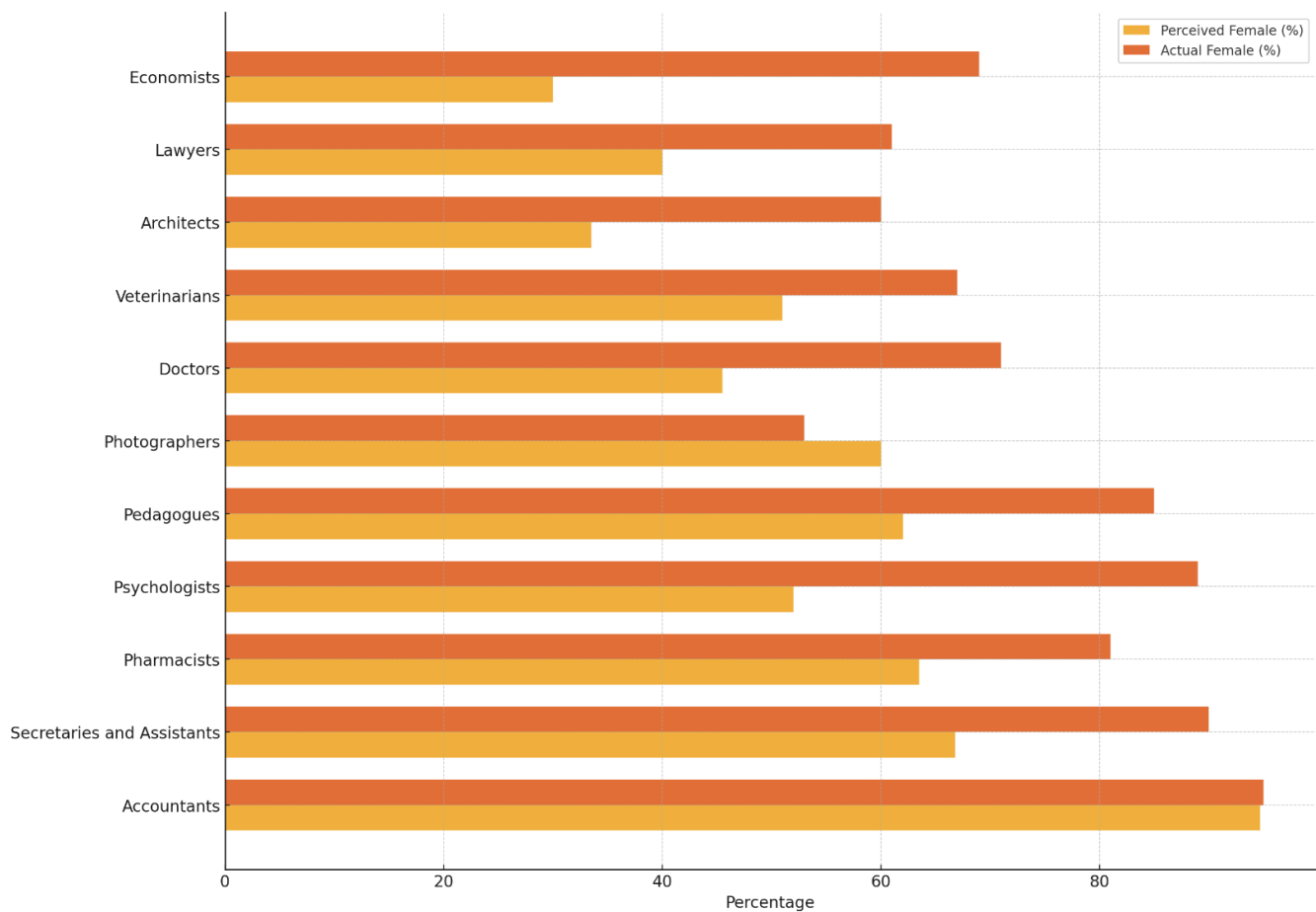[5] Rosstat https://rosstat.gov.ru

Figure 8. Perceived (Results of the Experiment) VS
Actual Female Participation in Professions in Russia

Gender distribution of the employed population by educational level reveals that women predominate among those with higher education (55% women versus 45% men), and among those with secondary professional education aimed at training mid-level specialists (56% women versus 44% men). Conversely, men are more prevalent among those with secondary professional education intended for skilled workers (64% men and 36% women), general secondary education (59% men and 41% women), and basic general education (64% men and 36% women). Among those lacking basic general education, men also dominate, constituting 61% (with women making up 39%)[6].

Thus, the results of this comparison show that only a part of the professions is perceived by the population in accordance with the actual statistics, and the bias towards the male gender is not relevant for some occupations. This highlights the need to study and understand the emergence of stereotypes. However, despite a greater presence of women in some professions than

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[6] Rosstat https://rosstat.gov.ru

expected, statistics indicate that there are almost no women in the most "prestigious" managerial positions. It is important to note that in recent years, the number of women and men in "managerial" roles has been converging: 45% women versus 55% men as of 2019. Although research indicates that this achievement has been primarily due to an increase in the number of women in lower and middle management positions, in any case, this is a positive trend, indicating a reduction in the gender gap within this employment category The representation of Russian women in top executive roles within companies and organisations is comparatively low when measured against European standards. Currently, only 3–5% of companies and firms are led by women. Regarding another "prestigious" field - politics - the representation of women in politics has not seen any substantial increase. In 2018, women constituted only 17.8% of the Russian Federation Council (with men making up 82.2%) [7].

Thus, observing the existing tendency of sexism and discrimination against women in professions and beyond, it is crucial to understand and explore the potential impact of linguistic sexism and the presence of male-oriented language norms in the development of this issue. Despite the documented negative consequences of sexist language, there remains significant resistance to the adoption of inclusive language. These perspectives require further investigation; however, current tools for measuring such attitudes are either not comprehensive or lack empirical validity. In the following chapter, we will present the development and implementation of a survey designed to assess attitudes towards sexist and nonsexist language in Russian.

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[7] Rosstat https://rosstat.gov.ru

Chapter 3. Measuring Attitudes Towards Language Inclusivity in Russian

3.1. Impact of Sexist Language

The relationship between culture and language has been a subject of discussion among scholars for many years. The concept that culture and language are interconnected is foundational to understanding how linguistic practices can influence societal norms and individual behaviour (Wolfram & Schilling-Estes, 2006). This idea states that the meanings that people assign to language influence their reality, their self-esteem, and their worldview (Parks & Roberton, 2000). This theoretical perspective is grounded in the moderate version of the Sapir-Whorf hypothesis of linguistic relativity. Unlike the strong version, which suggests that language determines thought and behaviour directly, the moderate version proposes that language and culture are mutually influential (Parks & Roberton, 2000). In this view, language reflects and shapes cultural practices and individual identities in a reciprocal relationship. When people use language, they do so within a cultural context that imbues words and expressions with specific connotations and implications, which also refers to the use of sexist language (Hegarty, Watson, Fletcher, & McQueen, 2011).

Sexist language refers to words, phrases, and expressions that unnecessarily differentiate between the genders or perpetuate gender stereotypes, ranging from seemingly benign terms that reinforce gender roles to derogatory expressions that demean people based on their gender (Parks & Roberton, 1998a). The widespread use of sexist language not only reflects social gender inequality but actively contributes to its perpetuation (Stahlberg, Braun, Irmen, & Sczesny, 2007). In principle, sexist language has the potential to harm both women and men by perpetuating harmful stereotypes and reinforcing societal inequalities (Wolfram & Schilling-Estes, 2006). However, empirical research indicates that the majority of these negative impacts disproportionately affect women (Parks & Roberton, 2000). The European Institute for Gender Equality (EIGE)[8] accounts that sexist behaviours and language negatively affect women's sense of belonging, mental health, and job satisfaction, as sexist language can have a psychological impact, undermining women's self-esteem and self-concept by consistently positioning them as inferior or subordinate to men (Morando, 2023). Terms that trivialise women's achievements or reduce them to their marital status (e.g., "girl" for an adult woman or "Mrs John Smith") contribute to a diminished sense of self-worth, supported by

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[8] EIGE https://eige.europa.eu/

studies showing that women exposed to such language may internalise these demeaning messages, affecting their confidence and self-perception (Bing, 1992).

In professional settings, sexist language can interfere with women's career advancement and professional recognition. Titles and descriptors that emphasise gender over competence (e.g., "lady doctor" or "female CEO") subtly suggest that women's presence in specific roles is an exception rather than the norm, which can even influence hiring and promotion decisions, often to the detriment of women.

The use of male-generic terms (e.g., "mankind" or "he" as a default pronoun) can create cognitive biases that lead to the exclusion of women from mental representations of these roles (Gygax, Gabriel, Lévy, Pool, Grivel, & Pedrazzini, 2012). For instance, when textbooks and teaching materials predominantly use masculine terms, students may unconsciously associate leadership, scientific, or heroic roles primarily with men, thereby limiting young girls' aspirations and belief in their potential (Lakoff, 1973).

Language shapes cultural narratives and societal norms. Words themselves do not possess inherent ideological meanings, but it is the manner that renders language sexist, in which it is employed and the messages that are conveyed, generated, and interpreted within specific social contexts, marked by intersecting power dynamics (Cameron, 1992). The pervasive use of sexist language reinforces traditional gender roles and expectations. By normalising male dominance and female subordination through everyday language, society continues to perpetuate gender inequality (Kleinman, 2002). For example, the consistent use of terms like "chairman" or "fireman" implies that leadership and bravery are inherently male traits, thus discouraging women from pursuing such roles (Garnham, Gabriel, Sarrasin, Gygax, & Oakhill, 2012).

Despite these documented effects, there remains significant resistance to adopting inclusive language (Hellinger & Bußmann, 2001). This resistance is often rooted in tradition and the perceived complexity of changing long-established linguistic habits. However, as language evolves, so too can societal attitudes. Efforts to promote nonsexist language are not just about modifying words but about challenging and transforming the cultural attitudes that these words represent. These negative consequences highlight the importance of adopting inclusive language practices, while this resistance shows the need for comprehensive and validated measures of attitudes towards sexist language, providing the basis for the development of the new questionnaire presented in this chapter.

3.2. Gender Studies in Russian

Understanding attitudes towards sexist/nonsexist language is particularly relevant in the context of the Russian language, given its significant usage and cultural influence. Russian is one of the most widely spoken languages in Europe[9]. Estimated to be around 221 million, approximately 138 million in Russia and millions more using it as a second language across the continent (Ethnologue, 2021). The relevance of studying sexist language among Russian-speaking populations is highlighted by deeply rooted gender norms and cultural narratives presented in language that can perpetuate gender inequality.

Previous studies on sexist language have predominantly focused on English and other Western languages, leaving a gap in the research concerning Slavic languages like Russian. This gap is crucial to address, as linguistic structures and cultural contexts vary significantly, influencing how sexist language is perceived and internalised. For instance, as we already discussed, Russian's grammatical gender system, which assigns gender to nouns, adjectives, and verbs, inherently influences gender perceptions (Comrie, 1986). Such linguistic features require an individual approach to measuring attitudes towards sexist language in Russian.

There are no previous studies for Russian concerning the measure of attitudes towards sexist / nonsexist language. Studies on sexist language in Russian usually focus on gender equality and neutrality and the role of word formation in gender representation. For instance, Aksyuchenko and Vlasova (2015) provided a comprehensive analysis of how gender is linguistically constructed in Russian, showing the impact of morphological processes on gender perception. Recent research by Zinovyeva (2017) explored the role of gender-marked lexical units in constructing masculinity and femininity in different discourses and demonstrated how the language of the media shapes and perpetuates gender roles and stereotypes. The trend toward gender-neutral language is reflected in the works of Pershai (2017) and Nikitina (2015), which analysed changes in the use of gender-marked nouns and pronouns. Overall, these studies emphasised the importance of linguistic reforms to reflect modern gender values and neutrality in language.

The development of a questionnaire to assess attitudes towards sexist / nonsexist language in the Russian context aims to fill the existing research gap. Given the cultural and linguistic nuances, it is essential to adapt the instrument to reflect specific issues relevant to native

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[9] (2022) https://doi.org/10.5281/zenodo.6825313

Russian speakers, including addressing terms and expressions unique to Russian that perpetuate gender stereotypes and examining how these linguistic habits impact gender perceptions and roles.

3.3. A Tool to Measure Attitudes Toward Sexist / Nonsexist Language In Russian

The basis for our study is the Inventory of Attitudes Toward Sexist/Nonsexist Language (IASNL), a comprehensive tool to measure attitudes towards sexist and nonsexist language, constructed by Janet B. Parks and Mary Ann Roberton (2000).

As described by Parks and Roberton (1998a, 1998b), many existing tools rely on self-report questionnaires that may be subject to social desirability bias, where respondents provide answers they believe are socially acceptable rather than their true feelings, leading to skewed data that does not accurately reflect actual attitudes. Additionally, these measures frequently focus on a limited set of language issues and fail to account for the broader cultural and contextual factors that influence attitudes towards sexist language. Another significant limitation is the insufficient validation of these instruments. Although some studies, such as Rubin et al.'s (1994), have made progress in this area, many instruments still do not undergo accurate reliability and validity testing. The lack of testing for reliability (the consistency of the measure) and validity (the accuracy of the measure) can lead to inaccurate or incomplete assessments of attitudes, which impedes the understanding of the true impact of sexist speech and the effectiveness of language reforms.

In order to address the issues, there is a clear need for a new, more comprehensive measure. The methodology should incorporate a broader range of language issues, including but not limited to generic pronouns, job titles, and terms that trivialise individuals based on gender. Such an approach can help in providing an understanding of how sexist language is perceived across different contexts. Moreover, the new measure should minimise potential biases by including indirect assessment methods, such as implicit attitude tests, which can reveal underlying biases that respondents might not openly acknowledge. This approach will help to mitigate the influence of social desirability bias and provide a more authentic assessment of attitudes. Accurate validation processes are essential for the new measure, including extensive testing for both reliability and validity across diverse populations and contexts. By ensuring

that the measure is both reliable and valid, we can be more confident in the accuracy and generalisability of their findings.

Conceptual Framework

The original study by Parks & Roberton (2000) established a framework that consisted of beliefs about sexist language, the ability to recognise sexist language, and willingness to use inclusive language, this methodology was based on three instruments that have been used in studies of attitudes toward sexist language. The first instrument was a questionnaire developed by Henley and Dragoon (1983), followed by a modified version by Rubin and Green (1991), and the final instrument was created by McMinn et al. (1994).

Henley and Dragun (1983) developed the first self-report questionnaire to survey attitudes and behaviours related to sex-biased language. Based partially on Bate's (1978) work, their instrument collected information across eight categories:

1. Interest in sexism in language;

2. Methods to avoid sexist language;

3. The impetus for adopting inclusive language;

4. Need and attitudes towards a single sex-neutral pronoun;

5. Usage of "*they*" as a singular pronoun;

6. Frequency of hearing alternatives to male generics;

7. Preferences for sex-neutral pronouns (e.g., "*per, pers, perself*"; "*s/he*");

8. Influences on adopting sex-neutral pronouns (Parks & Roberton, 2000).

Rubin and Greene (1991) adapted the Henley and Dragun instrument into The Language Questionnaire, which included the following sections:

1. Beliefs about sexist language;

2. Level of concern about sexist language;

3. Ranking influences for adopting nonsexist language;

As well as three composite scales that examined how participants rated the sexism in certain phrases, the strategies they employed to avoid sexist language, and their openness to using alternatives to "he" as a generic pronoun (Parks & Roberton, 2000).

The Gender-Specific Language Scale (GSLS) was developed by McMinn et al. in 1994 to assess individuals' ability to recognise sexist language. This scale comprised 12 statements, with half containing gender-specific errors, such as the exclusive use of masculine pronouns. These errors were defined as "designation errors" in the sexist language section of the *Publication Manual* of the American Psychological Association (1983) (Parks & Roberton, 2000). Participants were tasked with identifying all errors within the statements, unaware that their GSLS scores were determined by their accuracy in recognising sexist language. While the GSLS indicated a moderate inverse correlation between recognising sexist language and its usage in essays, the scale's comprehensive psychometric properties, including construct and discriminant validity, were not fully established, which highlighted the necessity for a new instrument able to capture attitudes toward sexist and nonsexist language in a more comprehensive way.

The Henley and Dragun (1983) questionnaire, the Rubin and Greene (1991) instrument, and the GSLS by McMinn et al. (1994) have played an important role in studying sexist language. However, these instruments were not useful for identifying and measuring attitudes toward sexist language. They either focused just on the recognition of this phenomenon or lacked a well-defined conceptual framework. The validity details for the Henley and Dragun instrument and The Language Questionnaire remained unpublished, highlighting the need for a reliable measure that integrates earlier findings. The content validity of an instrument is determined by how well the items represent the entire area of study (Nunnally & Bernstein, 1994).

In designing the Inventory of Attitudes Toward Sexist/Nonsexist Language (IASNL) (2000), the existing literature on attitudes towards sexist language was reviewed to develop a framework. Three main perspectives in the research on attitudes were revealed:

1. Beliefs about sexist language;

2. Recognition of sexist language;

3. Willingness to use inclusive language (Parks & Roberton, 2000).

To understand individuals' beliefs about language, one effective approach to be employed is to analyse the arguments they make for or against the use of inclusive language. In 1980, Blaubergs identified eight common arguments against inclusive language used by scholars in the 1970s. Parks and Roberton (1998a) later confirmed that these same arguments were still being used by contemporary college students to justify sexist language. Consequently, these arguments were used as a conceptual framework for developing the first section of the IASNL, which assesses respondents' beliefs about sexist language.

Previous research has demonstrated that attitudes toward sexist and nonsexist language are also reflected in one's ability to recognise sexist language. The conceptual framework for this section was based on three categories of sexist language identified by Miller and Swift (1988) and illustrated in an educational video about sexist language (Parks, Harper, & Lopez, 1994). These categories include:

1. False generics (*he*, *mankind*);

2. Hierarchical terms (*man and wife*), gender-specific job titles (*waiter/waitress*);

3. Language that diminishes women's self-esteem and personal identity.

The willingness to use inclusive language is arguably the most telling indicator of a person's attitude towards sexist language. The willingness section of the IASNL was developed based on the same conceptual framework as the recognition section, focusing on false generics, hierarchical or separatist terms, and language that undermines women's self-esteem or identity (Miller & Swift, 1988; Parks et al., 1994; Rubin & Greene, 1991). This section aimed to measure respondents' readiness to adopt inclusive language practices, providing insight into their overall view of sexist language.

An instrument addressing all these categories would achieve content validity and effectively measure attitudes towards sexist and nonsexist language. These areas formed the basis for the IASNL framework and its adaptation for the Russian language.

Methodology

To develop the questionnaire for the Russian language, we used the IASNL general model. Based on the categories described above—beliefs, recognition, and willingness—our

questionnaire was structured into three sections, with a total of 21 statements (Appendix C). The questionnaire aims to assess whether respondents have a positive, negative, or neutral stance on the use of inclusive, non-sexist language. Participants were recruited via social media platforms to achieve a diverse sample concerning age, educational background, and social demographics. Participation was voluntary, and respondents did not receive any compensation for completing the survey. Participants were asked to provide demographic information such as their age, gender, education level, employment status, and language proficiency in the block of questions at the beginning of the questionnaire.

The questionnaire was administered on the Google Forms platform. Its cross-platform compatibility ensured that respondents could access the form from any device with internet access. Responses were automatically collected and stored in Google Sheets, simplifying data management and analysis. Integration with other Google Workspace tools improved workflow automation and detailed reporting. Google's security measures ensure that data is stored securely, with privacy controls available to manage access and anonymity.

The primary task of developing a questionnaire was the careful processing of the questions, their translation, and adaptation for Russian-speaking respondents. Some questions were modified to ensure the relevance and appropriateness of certain terms, expressions, and/or idioms that contain sexist meanings.

The first section of the instrument aims to assess respondents' attitudes towards statements related to linguistic sexism in Russian, as well as to measure the strength of respondents' agreement or disagreement with these statements regarding traditional and modern views on language and sexism, which shows the degree of resistance or support for change in language aimed at eliminating gender bias. Examples of statements:

> *"Women who think that being called 'activist' instead of 'activistka' (feminine form) is linguistic sexism are mistaken."*

> *"We should not change the traditional ways of writing and speaking in the Russian language."*

The second section of the questionnaire aims to identify discriminatory language by assessing respondents' perceptions of the highlighted words and phrases in given sentences, measuring the extent to which participants perceive these phrases to be discriminatory by identifying the potential sexism inherent in the highlighted expressions. Examples of sentences:

"<u>Young people</u> are the driving force of society."

"Believing that frogs cause warts is just <u>old wives' tales.</u>"

The third section of the questionnaire examines respondents' willingness to adopt inclusive language practices relevant to the Russian language. The aim is to measure the practical aspects of language change by determining how willing people are to change their communication habits to avoid potential sexism. For example:

"When addressing a woman/man, how willing are you to use impersonal greetings like 'Good day'; 'Excuse me', etc., instead of gendered 'Girl'; 'Young man', etc.?"

"How willing are you to use feminatives (sotrudnitsa 'employee' (fem.), direktrisa 'headmistress' (fem.), programmistka 'programmer' (fem.), etc.)?"

This section is critical to predicting the feasibility and potential success of language reforms aimed at promoting gender inclusivity and identifying areas where additional support or education may be needed to promote greater acceptance and use of inclusive language.

Each section was designed using a 5-point Likert-type scale (Fig.9.) to quantify respondents' attitudes and perceptions towards linguistic sexism and inclusive language. The methodology allows us to standardise the assessment of the opinions and behaviour of different respondents, which facilitates a comprehensive analysis of attitudes towards linguistic sexism in the Russian language. High scores (4–5) reflect a positive attitude towards inclusive language, while low scores (1–2) signify a negative attitude. A score of 3 suggests neutrality or uncertainty. Each respondent's overall score is the sum of all individual item scores (21 total). Participants were given instructions on how to assess the statements. Each statement is related to various aspects of inclusive language. Respondents were asked to indicate their level of agreement with each statement, where:
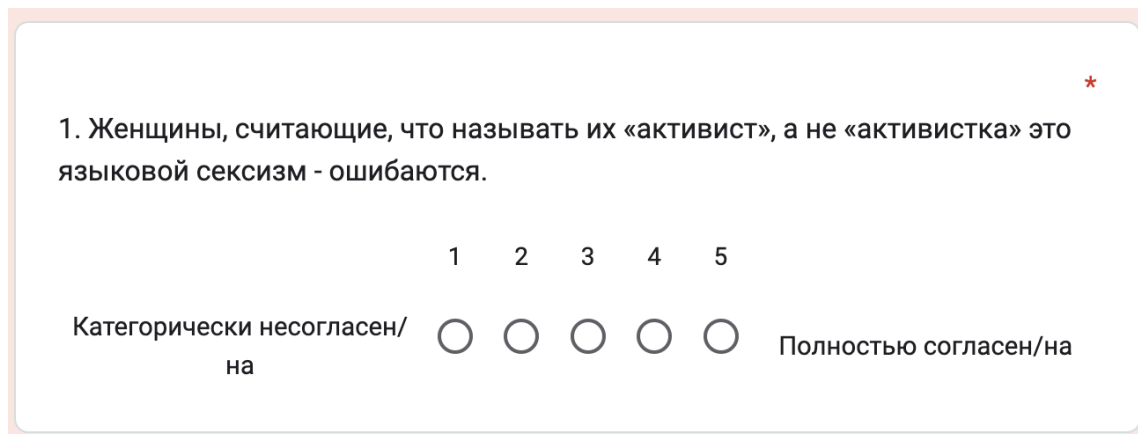
- 1 - Strongly Disagree

- 2 - Disagree

- 3 - Neutral

- 4 - Agree

- 5 - Strongly Agree

To avoid response bias and ensure consistency in the interpretation of scores, some items were negatively worded and required reverse scoring. The negatively worded questions were 1, 2, 3, 4, 5, 8, and 20. Before each section, we put the definition of sexist language:

"*Sexist language includes words, phrases, and expressions that unnecessarily differentiate between females and males or exclude, trivialize, or diminish either gender*" (Parks & Roberton, 2004, p. 415).

The inclusion of the definition in the instrument ensured that all respondents based their answers on a consistent definition. The total scores can range from 21 to 105 (including the reverse-scored items): scores between 73.6 and 105 indicate a supportive attitude toward nonsexist language, while scores between 21 and 52.5 indicate a negative attitude; scores ranging from 52.6 to 73.5 indicate a neutral attitude.

1. Женщины, считающие, что называть их «активист», а не «активистка» это языковой сексизм - ошибаются.

| | 1 | 2 | 3 | 4 | 5 | |
| Категорически несогласен/на | ○ | ○ | ○ | ○ | ○ | Полностью согласен/на |

Figure 10. Question Design

Results

The data was gathered from 88 native Russian-speaking participants (42 males and 46 females), with the two most prevalent age groups of 18-24 and 25-35 respectively (Fig.10).
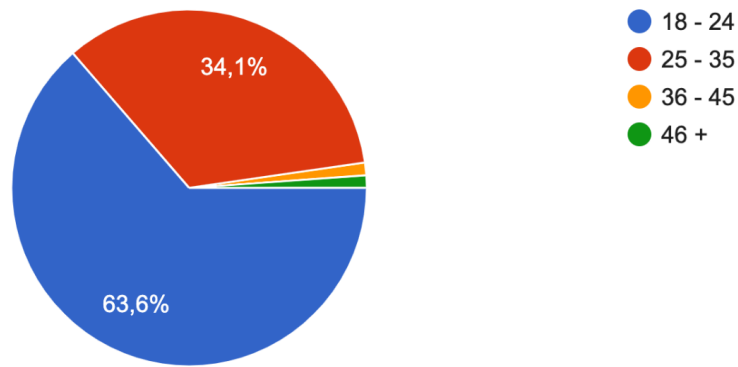
Figure 10. Participants Age

Each respondent's overall score was calculated by summing the scores of the 21 items, with specific items (1, 2, 3, 4, 5, 8, and 20) being reverse-scored to ensure consistency in interpretation. The total scores range from 21 to 105, with higher scores indicating a more positive attitude towards inclusive language (from 21 to 52.5 - negative attitude; from 52.6 to 73.5 - neutral attitude; from 73.6 to 105 - supportive attitude (Parks & Roberton, 2000)). All calculations were made using Pandas (a tool for data manipulation and analysis in Python) and are shown in Appendix D.

By-participant analysis

Total responses mean score: 60.67

Standard Deviation: 10.52

Range: 50 (minimum score of 36 and maximum score of 86)

The mean score of 60.67 indicates a generally neutral to slightly positive attitude towards inclusive language among respondents, with moderate variability in responses. The distribution of attitudes towards inclusive language among respondents is shown in Figure 11:
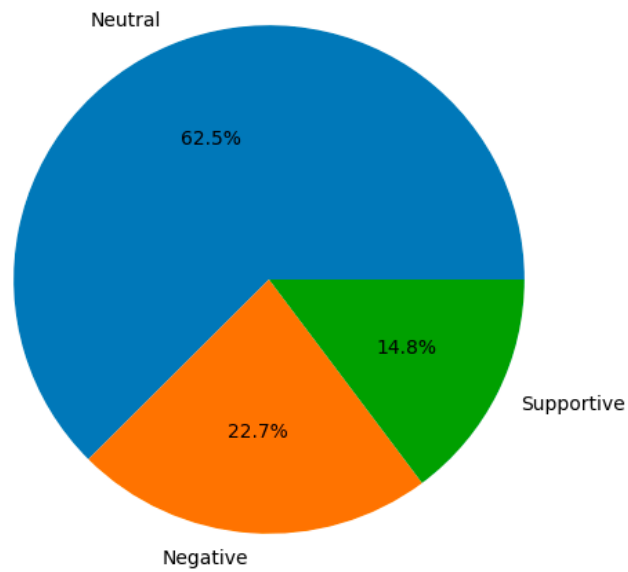
Figure 11. Distribution of Attitudes Towards Inclusive Language

These percentages reflect respondents' overall tendency towards inclusive language based on their overall scores and the classification criteria provided, suggesting that a large majority of respondents have a neutral attitude, with a significant proportion exhibiting negative attitudes and a smaller group showing supportive attitudes.

Total mean scores by gender:

Males: 57.7

Females: 63.4

Females exhibited a more positive attitude towards inclusive language than males. This difference, quite significant, suggests that gender may influence perceptions of inclusive language. The box plot in Fig.12 compares the spread and central tendency of total scores between genders, highlighting differences in distribution.
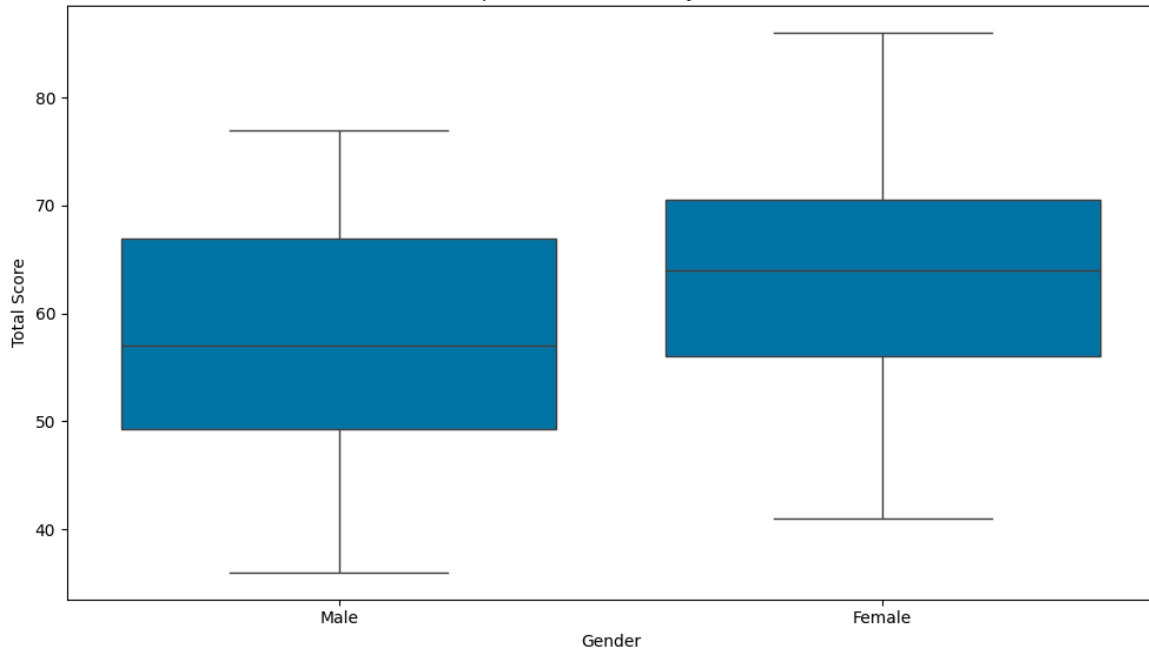
Figure 12. Boxplot of Total Scores by Gender
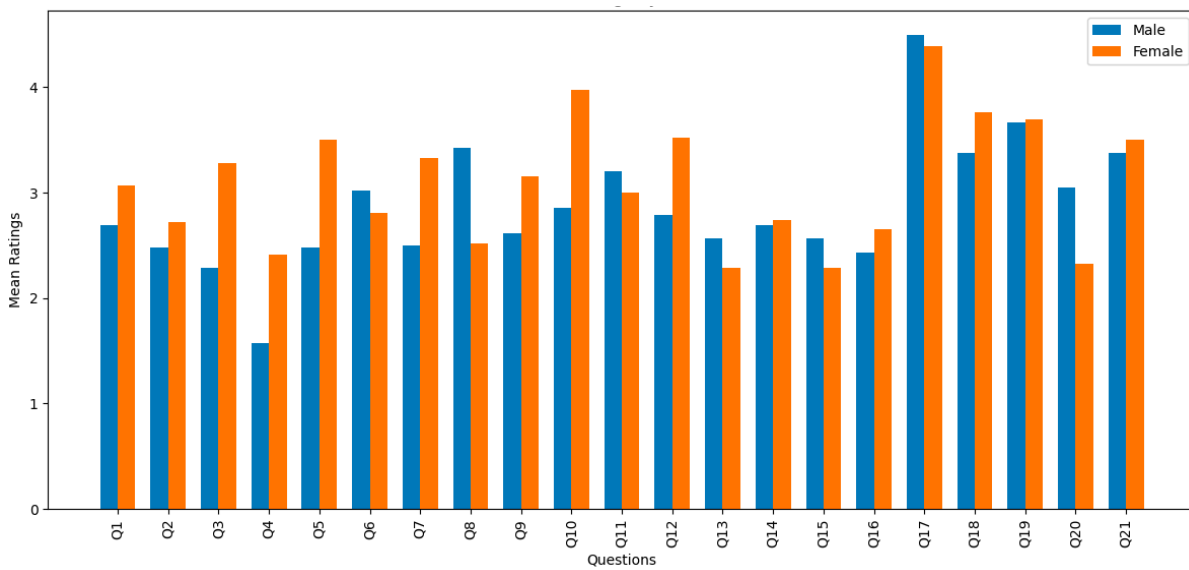
Fig.13 Mean Rating by Gender

In Figure 13, each bar in the bar chart represents the average score given by male and female respondents for each question related to attitudes toward inclusive language.

The analysis of attitudes towards inclusive language among respondents revealed differences based on age, education, and living location. When examining age groups, it was found that older respondents, aged 36–45 (M = 77.00) years and 46 (M = 67.00) years and older, tended to have higher average overall scores, indicating more positive attitudes towards inclusive

language compared to their younger counterparts in the 18-24 (M = 59.68) and 25-35 (M = 61.77) age brackets. According to an analysis by educational level, individuals possessing higher education degrees, particularly those with specialist or master's qualifications (M = 65.44), exhibited the most supportive attitudes. In contrast, respondents with secondary education (M = 56.43) have the lowest mean scores, indicating less favourable views towards inclusive language. Furthermore, the living location of respondents also influenced their attitudes. Those respondents who are currently living in a country where Russian is widely spoken displayed lower mean scores (M = 59.32). Conversely, individuals who spent most of their lives in a Russian-speaking environment but are no longer living in it showed significantly higher mean scores (M = 65.00), reflecting a more positive stance on inclusive language. This may indicate the potential influence of the use of two or more languages in the linguistic repertoire of the respondents, as well as the impact of multicultural and multilingual environments, which represents an interesting aspect for further research.

By-item analysis

As the questionnaire was divided into three sections, first, we needed to see what part had more positive attitudes among the respondents (Fig.14)
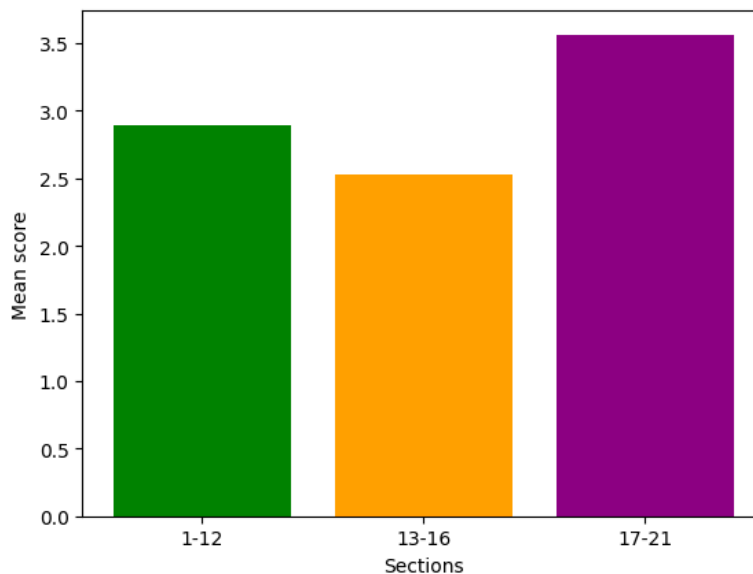
Figure 14. Mean Distributions Across Sections

The first section assessed respondents' beliefs about sexist language and the extent of their agreement with statements regarding traditional and modern views on language and sexism.

The mean score for this section is M = 2.9, which states the neutral attitude of the respondents. Statement 10 ("*When teaching history, more attention should be paid to outstanding women who have influenced the course of history.*") had the highest mean score with a mean score of 3.44, showing a tendency towards the respect of women in society. Statement 4 ("*Nouns in the masculine form (designating both man and women) used as neutral do not carry discrimination.*") showed the lowest mean score with a mean score of 2.01, indicating that the majority of respondents do not consider it discriminatory to refer to both sexes using a masculine term.

The second section was aimed to evaluate the respondents' ability to recognise discriminatory language in given sentences. The mean score for this section is M = 2.53, the lowest among all three sections, showing that the respondents either cannot recognise why the highlighted words should be perceived as sexist or do not agree that they actually have discriminatory properties. Statement 14 ("*Believing that frogs cause warts is just old wives' tales.*") with the highest mean score of 2.71, suggesting the most awareness of the potentially sexist nature of the expression "old wives' tales."

The third section measured respondents' willingness to adopt inclusive language practices relevant to the Russian language. The mean score for this section is M = 3.56, which is the highest score among all the sections, showing the readiness to employ strategies of language inclusivity in everyday speech. Statement 17 ("*When addressing a woman/man, how willing are you to use impersonal greetings like 'Good day'; 'Excuse me', etc., instead of gendered 'Girl'; 'Young man', etc.?*") with a mean score of 4.44, showed a very high willingness to use impersonal expressions to address people in a neutral, more inclusive way. Statement 20 (*"How willing are you to use means of gender neutralisation in writing, for example, endings "activists/-ki"; "activists (-ki); "activist_ ki?"*) with a mean score of 2.67, indicates the lowest willingness to use inclusive strategies in writing.

The scatter plot in Figure 15 shows the dispersion of mean scores across all 21 statements of the questionnaire.
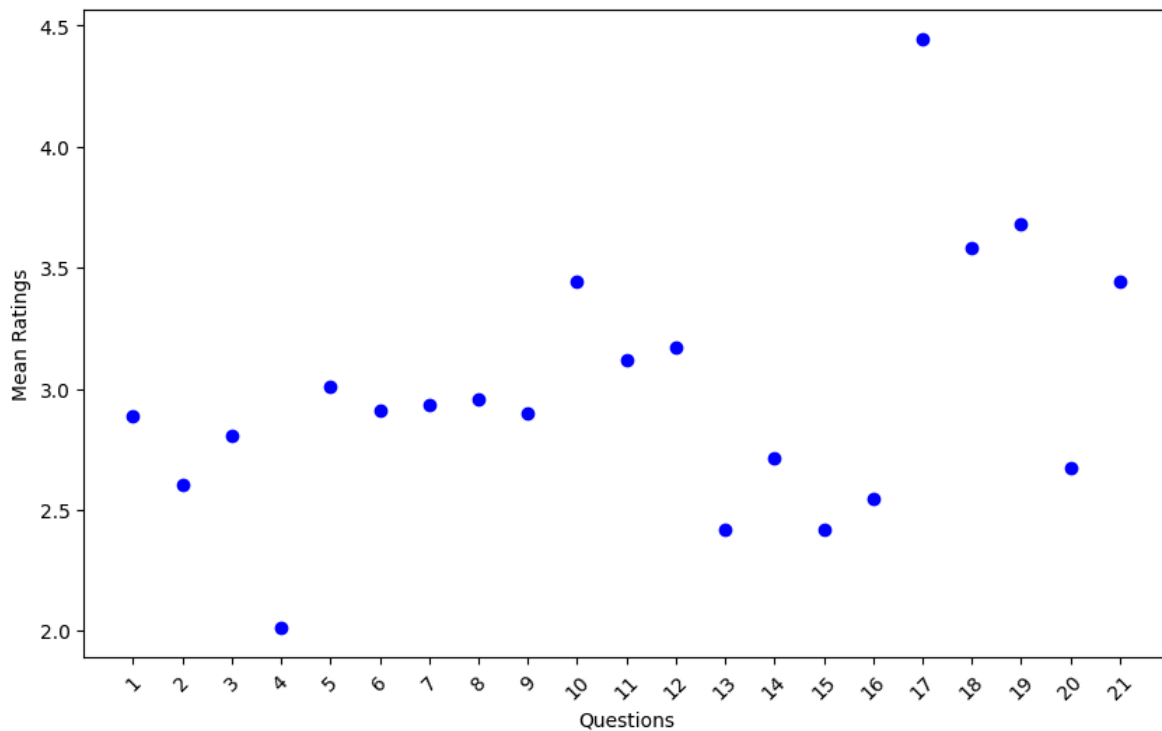
Figure 15. The Dispersion of the Mean Ratings

Discussion

The results from this study showed the attitudes towards sexist and nonsexist language among Russian speakers, reflecting broader cultural and linguistic trends. The overall mean score of 60.67 suggests a generally neutral to slightly positive attitude towards inclusive language, with considerable variability among individual responses. This finding indicates that while some respondents are supportive of nonsexist language, a significant portion remains neutral and few participants are against it.

The gender-based analysis revealed that females generally exhibited a more positive attitude towards inclusive language than males, with mean scores of 63.4 and 57.7, respectively. This difference aligns with previous research indicating that women are more likely to recognise and oppose sexist language due to their direct experiences with gender discrimination (Parks & Roberton, 2000). The box plot comparing total scores by gender further highlights the wider spread and lower median scores among males, suggesting more significant variability in attitudes within this group.

Interestingly, the analysis by age groups showed that older respondents (36–45 years and 46 years and older) had higher mean scores, indicating more positive attitudes towards inclusive language compared to younger respondents (18-24 and 25-35 years). This trend could be attributed to generational differences in social and cultural experiences, with older individuals possibly being more exposed to discussions on gender equality over time or having more empathy, as also suggested by Parks & Roberton (2000).

Educational background also played quite a significant role in shaping attitudes. Respondents with higher education degrees, particularly those with specialist or master's qualifications, exhibited the most supportive attitudes towards inclusive language. In contrast, those with secondary education displayed less favourable views. This disparity suggests that higher education levels may be associated with greater awareness and acceptance of gender-inclusive practices. Additionally, the place of residence of respondents influenced their attitudes. Participants living in Russian-speaking countries had lower mean scores, while those who are living elsewhere had significantly higher scores. This finding may reflect the influence of multicultural and multilingual environments, where exposure to diverse perspectives promotes more inclusive attitudes.

The mean scores for each section of the questionnaire revealed varying levels of awareness and willingness to adopt inclusive language practices. In Section 1, Beliefs about Sexist Language, the mean score of 2.9 indicated a neutral attitude among respondents. Notably, the statement advocating for more attention to outstanding women in history received the highest mean score (3.44), reflecting respect for women's contributions. Conversely, the statement about using masculine nouns as neutral showed the lowest mean score (2.01), suggesting that many respondents do not view this practice as discriminatory. Section 2, Recognition of Discriminatory Language, had the lowest mean score (2.53), suggesting that respondents either struggle to recognise sexist language or do not perceive certain expressions as discriminatory. Section 3, Willingness to Adopt Inclusive Language, had the highest mean score (3.56), indicating a general readiness among respondents to employ inclusive language practices. The highest willingness was shown for impersonal greetings (4.44), whereas the lowest was for gender-neutral writing strategies (2.67).

Our results aligned closely with the original study by Parks & Roberton (2000) for English. The study found that women were significantly more supportive of nonsexist language than men. Among age groups, individuals 23 years and older were significantly more supportive

than those aged 21-22, who were more supportive than those aged 18-20. However, overall attitudes were more positive with the mean response of 66.59, with scores ranging from 43 to 75.

Further validation of the questionnaire with more extensive and more diverse samples is needed to ensure the reliability of the instrument. Understanding the nuanced attitudes towards inclusive language can help in designing more effective interventions and policies aimed at reducing linguistic sexism.

Further research

Further research on attitudes toward sexist and nonsexist language should continue to explore both individual and contextual factors that influence these attitudes. As Parks and Roberton (1998b) have noted, variables affecting these attitudes can be categorised into personal characteristics (such as age and gender) and contextual characteristics (such as occupation, work environment, and social institutions).

In the area of personal characteristics, the age-related differences in attitudes observed in various studies should be further investigated. Parks and Roberton (1998b) have hypothesised that the empathy developed through life experiences might account for age differences in attitudes. Conversely, Rubin and Greene (1991) have suggested that the political climate during one's formative years could lead to generational differences in activism or complacency towards sexist language. Exploring the underlying reasons for these age-related differences remains a valuable prospect for research.

Contextual factors also play a significant role in shaping attitudes toward sexist language. Future studies could use the instrument to examine attitudes across different occupations, academic disciplines, and socioeconomic statuses.

Experimental studies using the Instrument could focus on the effectiveness of various instructional methods aimed at changing attitudes toward sexist language. Such studies could adopt a longitudinal design to assess the long-term impacts of the use of gender-inclusive language.

Additionally, the study conducted by Rubin et al. (1994) found no significant relationship between attitudes toward sexist language and actual language use, and further research is

needed to explore this potential link. Future studies could adopt a predictive approach to determine whether attitudes measured by the Instrument can predict language behaviours.

Conclusion

The study developed a comprehensive tool that fills a significant gap in assessing attitudes toward sexist and nonsexist language. This tool is not only crucial for research in language and gender studies but also has practical implications in education and policy-making aimed at promoting inclusive language.

While the study shows a promising trend towards acceptance of inclusive language, it also highlights the complexities and challenges in shifting deeply rooted linguistic norms. Gender differences emphasise the need for targeted educational initiatives that address both men's and women's perspectives, potentially promoting greater understanding and support for inclusive language practices. The influence of age and education highlights the importance of lifelong learning and exposure to diverse points of view in promoting gender equality.

The influence of living location on attitudes suggests that broader cultural exposure can positively affect views on inclusive language. This finding advocates for the benefits of international exchange and multicultural engagement in shaping progressive language norms.

The section analysis indicates that while there is an openness to adopt inclusive language, especially in everyday speech, more work is needed to promote the recognition of sexist language and inclusive writing practices. Educational campaigns and reforms should focus on increasing awareness of what constitutes sexist language and the benefits of inclusive language.

Future research should continue exploring these dynamics, focusing on developing targeted interventions that effectively promote gender-inclusive language practices across different demographics and cultural contexts.

Conclusion

This study provided a preliminary examination of the interaction between language and gender perceptions within Russian society, focusing on how the Russian grammatical gender system influences these perceptions.

First, the research aimed to establish standardised norms for gender role nouns within the Russian language, facilitating the understanding and analysis of gender stereotypes. The findings confirmed the expected biases, with strong male and female associations for certain professions and gender-neutral roles. Comparative analysis with English and Italian results indicated that Russian respondents exhibited a more pronounced male bias, with significant variability in perceptions. Female Russian participants showed less gender stereotyping than males, suggesting nuanced gender perceptions. Secondly, the research introduced an instrument - a Tool for Measuring Attitudes towards Sexist / Nonsexist Language for Russian and the readiness for the adoption of inclusive language practices, addressing a significant gap in this field. The study encompassed Russian-speaking individuals residing both within and outside Russian-speaking countries. The findings revealed intriguing patterns, particularly that individuals living in multilingual environments were more inclined to embrace more inclusive language practices. This tendency could potentially be linked to the opportunities presented by other languages they use to employ inclusive linguistic tools and the influence of different linguistic systems on making more inclusive language choices. The tool could play a significant role in further research in the field of gender studies, as it also holds practical value for educational initiatives and policy development aimed at fostering inclusive language practices.

The findings have profound implications for linguistic practices and policies in Russia. The significant male bias in role noun perceptions suggests a need for linguistic reforms to promote gender inclusivity. Implementing gender-neutral terms and encouraging the feminisation of professional titles could help mitigate these biases. Educational materials, media representation, and public discourse should be targeted to challenge and transform the existing stereotypes. By promoting gender-inclusive language, there is potential to influence social attitudes and contribute to greater gender equality in professional and social contexts.

However, the study acknowledges several limitations. The relatively small and demographically limited sample size may not fully represent the broader Russian-speaking population. Additionally, the study's reliance on self-reported data collected via an online

questionnaire may introduce biases, such as social desirability bias. The inclusion of more role nouns in the questionnaire can also contribute to broader findings.

Hence, the future research should aim to expand the participant pool to include a more diverse demographic range, ensuring broader representativeness. Additionally, exploring other linguistic factors, such as the influence of age stereotypes and the impact of bilingual or multilingual environments on gender perceptions, would provide a more comprehensive understanding.

This study achieved its primary objectives, providing a reliable instrument to measure attitudes towards sexist and nonsexist language in Russian, assessing the prevalence of sexist language in various domains, evaluating the impact of linguistic gender norms on cognitive gender representation, and exploring the potential for implementing gender-inclusive language practices. The findings highlight the pervasive nature of gender bias in language as well as the need for ongoing efforts to promote linguistic inclusivity.

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Appendix A

Table contains 103 role noun used for the replication of Misersky et. al (2014) questionnaire for Russian.

№	Role noun	Translation	Mean
1	Архитекторки, архитекторы	Architects	1,33.638297872340424
2	Архивистки, архивисты	Archivists	2,67.83333333333333
3	Артистки, артисты	Artists	3,64.09756097560975
4	Ассистентки, ассистенты	Assistants	4,66.88235294117646
5	Астронавтки, астронавты	Astronauts	5,32.910714285714285
6	Атлетки, атлеты	Athletes	6,36.47826086956522
7	Няни	Babysitters	7,75.32727272727273
8	Косметологи	Beauticians	8,75.24074074074075
9	Биологи	Biologists	9,44.68181818181818
10	Руководительницы, руководители	Bosses	10,38.34782608695652
11	Сиделки	Caregivers	11,76.46296296296296
12	Кассирши, кассиры	Cashiers	12,71.16666666666667
13	Уборщицы, уборщики	Cleaners	13,73.72549019607843
14	Горничные	Chamber-maids	14,75.52941176470588
15	Химики	Chemists	15,35.787234042553195
16	Дети	Children	16,52.023809523809526
17	Хореографы	Choreographers	17,56.56521739130435
18	Клерки	Clerks	18,36.073170731707314
19	Клинические психологи	Clinical psychologists	19,64.02631578947368
20	Собеседницы, собеседники	Conservationists	20,47.09756097560975
21	Ремесленницы, ремесленники	Craft workers	21,33.28888888888889
22	Велосипедистки, велосипедисты	Cyclists	22,37.529411764705884
23	Танцовщицы, танцоры	Dancers	23,64.12
24	Стоматологи-гигиенисты	Dental hygienists	24,48.8
25	Стоматологи	Dentists	25,45.765957446808514

26	Депутатки, депутаты	Deputies	26,27.48076923076923
27	Дизайнеры	Designers	27,54.07142857142857
28	Диетологи	Dieticians	28,65.62264150943396
29	Дипломатка, Дипломаты	Diplomats	29,31.203703703703702
30	Портнихи, портные	Dressmarkers	30,66.04
31	Экономистки, экономисты	Economists	31,33.72727272727273
32	Редакторки, редакторы	Editors	32,50.15555555555556
33	Инженеры	Engineers	33,30.818181818181817
34	Фермерши, фермеры	Farmers	34,31.88235294117647
35	Пожарные	Firefighters	35,23.963636363636365
36	Флористки, флористы	Florists	36,69.58823529411765
37	Гендиректора	General managers	37,32.14
38	Геологи	Geologists	38,36.916666666666664
39	Златокузнецы	Goldsmiths	39,24.96153846153846
40	Охранницы, охранники	Guards	40,26.576923076923077
41	Гинекологини, гинекологи	Gynaecologists	41,54.4375
42	Директрисы, директора	Head teachers	42,41.354166666666664
43	Историки	Historians	43,31.0
44	Домработницы, домработники	Housekeepers	44,76.9622641509434
45	Переводчицы, переводчики	Interpreters	45,53.36734693877551
46	Изобретательница, изобретатель	Inventors	46,29.7
47	Журналистки, журналисты	Journalists	47,62.22727272727273
48	Судьи	Judges	48,43.92156862745098
49	Юристки, юристы	Lawyers	49,40.76
50	Лидеры	Leaders	50,28.807692307692307
51	Библиотекарши, библиотекари	Librarians	51,74.0377358490566
52	Парикмахерши, парикмахеры	Hairdressers	52,66.06382978723404
53	Менеджеры	Managers	53,52.170731707317074
54	Мэры	Mayors	54,28.314814814814813
55	Метеорологи	Meteorologists	55,33.8780487804878

56	Неврологи	Neurologists	56,42.02127659574468
57	Медсестры, медбратья	Nurses	57,73.92307692307692
58	Нутрициологи	Nutritionists	58,66.74509803921569
59	Дирижёрки, дирижёры	Orchestra conductors	59,25.185185185185187
60	Кондитерки, Кондитеры	Pastry chefs	60,59.529411764705884
61	Педиатры	Pediatricians	61,63.90384615384615
62	Персоны	Persons	62,48.970588235294116
63	Фармацевты	Pharmacists	63,55.183673469387756
64	Фотографы	Photographers	64,60.72093023255814
65	Сантехники	Plumbers	65,23.72222222222222
66	Поэтессы, поэты	Poets	66,37.225
67	Политики	Politicians	67,31.425925925925927
68	Почтальоны	Postmen	68,37.6
69	Президенты	Presidents	69,23.236363636363638
70	Профессорши, профессоры	Professors	70,38.83673469387755
71	Психиатры	Psychiatrists	71,51.24
72	Публицистки, Публицисты	Publishers	72,36.25
73	Бегуны	Runners	73,34.97560975609756
74	Хирурги	Surgeons	74,31.76923076923077
75	Переводчицы⌷, переводчики	Translators	75,67.51020408163265
76	Ветеринары	Vets	76,51.458333333333336
77	Зоологи	Zoologists	77,50.81395348837209
78	Ректорши, ректоры	Rectors	78,33.75471698113208
79	Магистры	Magistrates	79,47.36363636363637
80	Префекты	Prefects	80,36.80555555555556
81	Жертвы	Victims	81,69.9
82	Гении	Genius	82,28.372093023255815
83	Люди	People	83,41.794871794871796
84	Личности	Individuals	84,46.806451612903224
85	Гражданки, граждане	Citizens	85,52.45594945945946

86	Гиды	Tour guides	86,53.333333333333336
87	Юристки, юристы	Lawyers	87,28.72222222222222
88	Министры	Ministers	88,29.867924528301888
89	Лингвисты	Linguists	89,67.27659574468085
90	Нотариусы	Notaries	90,47.84
91	Реставраторы	Restorers	91,41.674418604651166
92	Терапевты	Physicians	92,64.0
93	Доктора	Doctors	93,45.52173913043478
94	Бухгалтерши, бухгалтеры	Accountants	94,70.71698113207547
95	Глоттологи	Glottologists	95,63.44444444444444
96	Археологи	Archaelogists	96,31.458333333333332
97	Стажерки, стажеры	Trainees	97,61.583333333333336
98	Математики	Mathematicians	98,31.106382978723403
99	Философы	Philosophers	99,30.49056603773585
100	Аспирантки, аспиранты	Doctoral students	100,42.76086956521739
101	Студентки, студенты	University students	101,53.34285714285714
102	Советники	Councilors	102,33.52
103	Программистки, программисты	Computer scientists	103,29.754716981132077

Appendix B

Calculations of the results in Pandas (Python) of the Misersky et. al (2014) questionnaire replication for Russian.

```python
import pandas as pd
import matplotlib.pyplot as plt
from scipy.stats import kstest

arr  = pd.read_csv('gender_perception_of_role.csv')

### Gender distribution
df_gender = arr['S2'] # Selecting the column that contains gender
values = df_gender.value_counts()

plt.figure(figsize =(10, 5))
plt.bar(values.keys(), values.values)

# Add count numbers to each category
for i, v in enumerate(values.values):
    plt.text(i, v, str(v), ha='center', va='bottom')

plt.text(len(values) / 2, max(values.values), f'Total: {len(arr)}',
ha='center', va='bottom')

plt.show()
```
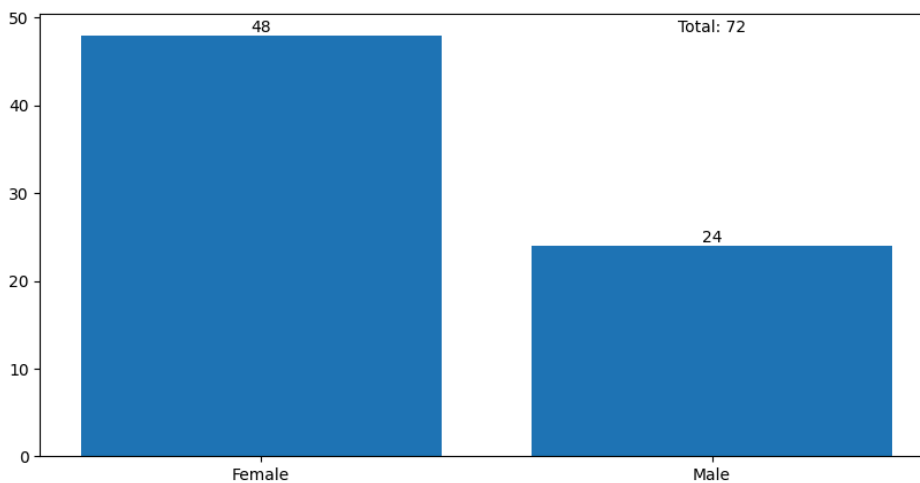


```python
### Age distribution
df_age = arr['S1'] # Selecting the column that contains age

print('The youngest participant is', df_age.min(), 'years old')
print('The oldest participant is', df_age.max(), 'years old')
print('The median age of the participants is', df_age.median(), 'years old')
print('Staadard deviation of the age of the participants is', df_age.std(),
'years old')
```

The youngest participant is 18 years old
The oldest participant is 58 years old
The median age of the participants is 25.0 years old
Staadard deviation of the age of the participants is 6.825442025388578 years old

By participant analysis
```
df_qb = arr.filter(regex=("Q.*b_1"))
print('Questions B')
print('Median: ', df_qb.median(axis=1).median())
print('Mean: ', df_qb.mean(axis=1).mean())
print('SD: ', df_qb.mean(axis=1).std())
```

Questions B
Median: 42.0
Mean: 48.41569401526743
SD: 10.791084075347923


```
df_qa = arr.filter(regex=("Q.*a_1"))
df_qa = abs(df_qa - 100)
df_q = pd.concat([df_qa, df_qb], axis=1)
print('Questions A')
print('Median: ', df_qa.median(axis=1).median())
print('Mean: ', df_qa.mean(axis=1).mean())
print('SD: ', df_qa.mean(axis=1).std())
```

Questions A
Median: 47.0
Mean: 47.177191768880235
SD: 3.9656538413875895


```
print('Median: ', df_q.median(axis=1).median())
print('Mean: ', df_q.mean(axis=1).mean())
print('SD: ', df_q.mean(axis=1).std())
```

Median: 45.75
Mean: 47.85449768487323
SD: 8.379757204393355


```
df_qa_formatted = df_qa.copy()
df_qb_formatted = df_qb.copy()
df_qa_formatted.columns = df_qa.columns.str.replace('Q(.*)a_1', lambda m:
m.group(1))
df_qb_formatted.columns = df_qb.columns.str.replace('Q(.*)b_1', lambda m:
m.group(1))
df_q_formatted = df_qa_formatted.fillna(df_qb_formatted)
df_q_formatted

df_q_formatted.mean(axis=0).to_csv('mean-by-question.csv')
```

By item analysis
```
df_table_questions = pd.DataFrame()
df_table_questions['Mean'] = df_q.mean(axis=0)
df_table_questions['Std'] = df_q.std(axis=0)

df_table_questions.to_csv('table_questions.csv')
```

Kolmogorov-Smirnov
```
from scipy.stats import kstest, norm

# Calculate the mean and standard deviation of your data
mean = df_q.mean(axis=1).mean()
```

```
std = df_q.mean(axis=1).std()

# Perform the KS test
ks_stat, p_value = kstest(df_q.mean(axis=1).to_numpy().astype(int), 'norm',
args=(mean, std))

print(f"KS Statistic: {ks_stat}")
print(f"P-value: {p_value}")
```
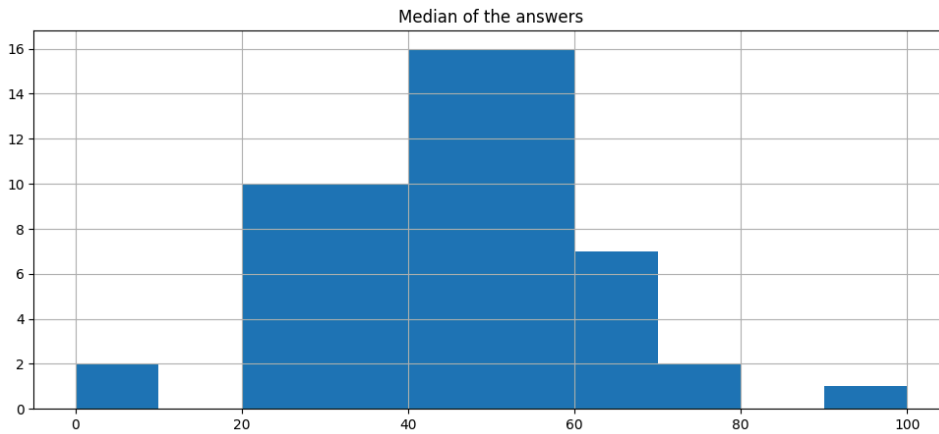
KS Statistic: 0.21480408469451762

P-value: 0.0021442040694833464

```
plt.figure(figsize =(12, 5))
plt.hist(df_q.median(axis=1))
plt.grid(visible=True)
plt.title(label='Median of the answers')
plt.show()
```
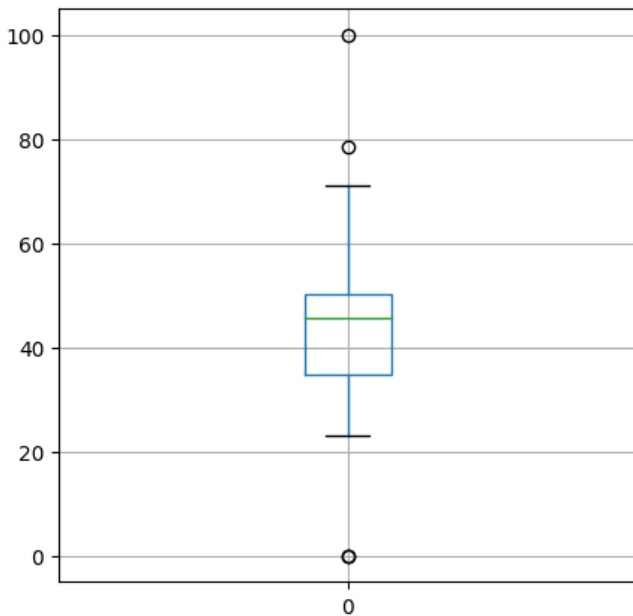


```
df_boxplot = pd.DataFrame(df_q.median(axis=1))
boxplot = df_boxplot.boxplot(figsize=(5, 5))
```
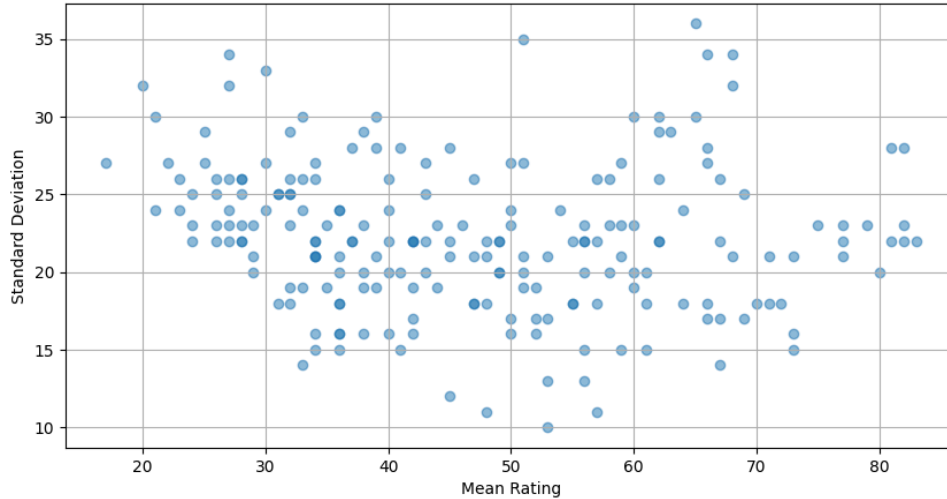


```
x = df_q.mean(axis=0).astype('int')
```

```python
y = df_q.std(axis=0).astype('int')

plt.figure(figsize =(10, 5))
plt.scatter(x, y, alpha=0.5, marker='o')
plt.grid(visible=True)
plt.xlabel('Mean Rating')
plt.ylabel('Standard Deviation')
```


By gender
```python
# Calculate specificly for Male participants
df_qb_male = arr[arr['S2'] == 'Male'].filter(regex=("Q.*b_1"))
df_qa_male = arr[arr['S2'] == 'Male'].filter(regex=("Q.*a_1"))
df_qa_male = abs(df_qa_male - 100)
df_q_male = pd.concat([df_qa_male, df_qb_male], axis=1)
print('Male participants: ', len(df_q_male))
```

Male participants: 24

```python
print('Median: ', df_q_male.median(axis=1).median())
print('Mean: ', df_q_male.mean(axis=1).mean())
print('SD: ', df_q_male.mean(axis=1).std())
```

Median: 38.0
Mean: 45.44002241976764
SD: 6.654193969807899

```python
# Calculate specificly for Female participants
df_qb_female = arr[arr['S2'] == 'Female'].filter(regex=("Q.*b_1"))
df_qa_female = arr[arr['S2'] == 'Female'].filter(regex=("Q.*a_1"))
df_qa_female = abs(df_qa_female - 100)
df_q_female = pd.concat([df_qa_female, df_qb_female], axis=1)
print('Female participants: ', len(df_q_female))
```

Female participants: 48

```python
print('Median: ', df_q_female.median(axis=1).median())
print('Mean: ', df_q_female.mean(axis=1).mean())
print('SD: ', df_q_female.mean(axis=1).std())
```

Median: 47.5

Mean: 49.03366002364572
SD: 8.93908374139664

```python
import matplotlib.pyplot as plt

plt.figure(figsize=(10, 5))
plt.barh(
    ["Male", "Female"],
    [df_q_male.mean(axis=1).mean(), df_q_female.mean(axis=1).mean()],
    color=["green", "orange"],
)
plt.xlabel("Mean Rating")
plt.ylabel("Gender")
plt.title("Horizontal Histogram of Mean Ratings by Gender")

# Set x-axis ticks divided by 2
plt.xticks(range(0, 51, 2))

plt.show()
```
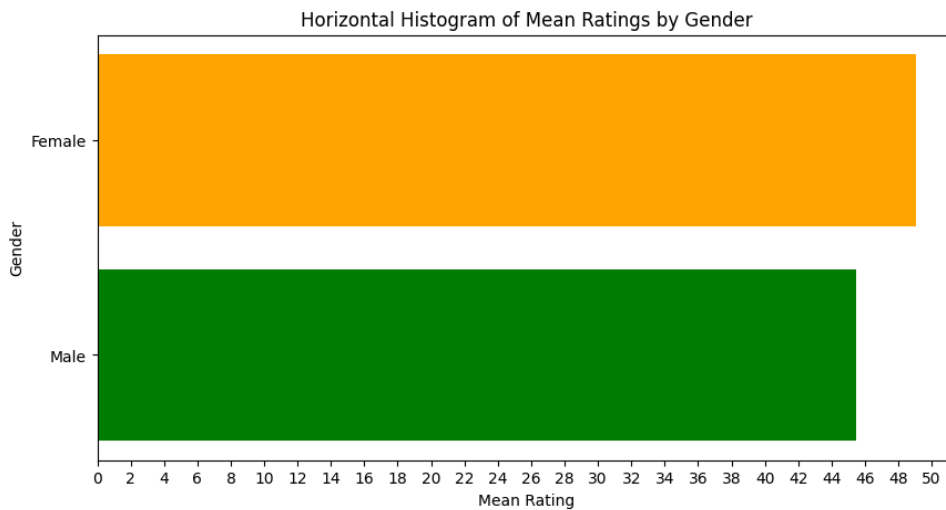
Appendix C

A Tool for Measurement Attitudes towards Sexist / Nonsexist Language In Russian

Сексистский язык включает в себя слова, фразы и выражения, которые необоснованно различают между женщинами и мужчинами или исключают, банализируют или уменьшают значение любого из полов.

Раздел I: Для каждого из следующих выражений выберите вариант ответа, который наиболее точно соответствует вашим взглядам.

1 - категорически несогласен/на; **2** - скорее не согласен/на; **3** - не знаю; **4** - скорее согласен/на; **5** - полностью согласен/на

1. Женщины, считающие, что называть их «активист», а не «активистка» это языковой сексизм - ошибаются.
2. Не следует менять традиционные варианты письма и речи в русском языке.
3. Нет никакого смысла беспокоиться о сексизме в языке.
4. Существительные в мужском роде употребляемые как нейтральные, не несут в себе дискриминации.
5. Выражение "мужик и баба" не считается сексистским, если люди не вкладывают в него такой смысл.
6. Русский язык не должен меняться, потому что он глубоко отражает саму русскую культуру.
7. Устранение сексизма в языке на самом деле важная цель.
8. Многие издательства требуют от авторов прессы избегать расизм. Эти руководства также должны требовать от писателей избегать языковой сексизм.
9. Сексизм в языке напрямую связан с сексизмом по отношению к людям в обществе.
10. При преподавании истории, следует уделять больше внимания выдающимся женщинам, повлиявших на ход истории.
11. Люди, которые используют неформальные феминитивы, навязывают свои взгляды остальным.
12. Несмотря на сложность внедрения и принятия реформ, мы все же должны попытаться устранить языковой сексизм.

Раздел II: Являются ли выделенные слова и фразы в следующих предложениях дискриминирующими?

1 - совсем нет; **2** - скорее нет; **3** - не знаю; **4** - скорее да; **5** - определенно да.

13. <u>Молодые люди</u> — это ведущая сила общества.

14. Верить, что от лягушек появляются бородавки — это всего лишь <u>бабьи сказки</u>.

15. Если ребенок хочет хорошо играть на пианино, <u>он</u> должен много упражняться.

16. Мария должна быть <u>председателем</u> нашего комитета

Раздел III: Выберите описание, которое наиболее точно описывает вашу позицию в следующих ситуациях.

1 - совсем не готов(а); **2** - скорее не готов(а); **3** - не знаю; **4** - скорее готов(а); **5** - полностью готов(а)

17. Когда вы обращаетесь к женщине/мужчине, насколько вы готовы использовать безличное обращение *"Добрый день"*; *"Извините"* и тд., вместо гендерного *"Девушка"*; *"Молодой человек"* и тд.?

18. Насколько вы готовы использовать феминитивы (*"сотрудница"; "директриса"; "программистка"* и тд.)?

19. Насколько вы готовы обращаться к группе лиц не определяя пол, например *"Приветсвую всех пришедших"* вместо *"Дамы и Господа"*?

20. Насколько вы готовы использовать средства гендерной нейтрализации в письменной речи, например, окончания *"активисты/-ки"*; *"активисты (-ки); "активист_ки"*?

21. Насколько вы готовы использовать пассивный залог или безличные конструкции, чтобы избежать указания конкретного пола, например, *"было решено"* вместо *"он/она решил(а)"*.

Appendix D

Calculations of the results in Pandas (Python) from A Tool for Measurement Attitudes towards Sexist / Nonsexist Language In Russian

```python
import pandas as pd
import matplotlib.pyplot as plt

# Load the CSV file
file_path = "IASNL.csv"
data = pd.read_csv(file_path)

# Extracting only the relevant columns (questions 1 to 21)
questions = data.iloc[:, 8:29]

# Reverse scoring for specific items
reverse_score_items = [1, 2, 3, 4, 5, 8, 20]
for item in reverse_score_items:
    questions.iloc[:, item - 1] = 6 - questions.iloc[:, item - 1]

# Extracting gender information and adding it to the questions dataframe
demographic_data = data.iloc[:, :8]
demographic_data.columns = [
    "Timestamp",
    "Age",
    "Gender",
    "Education",
    "Occupation",
    "Native_Russian",
    "Living_Russian_Country",
    "Other_Languages",
]
demographic_data["Gender"] = demographic_data["Gender"].map(
    {"Мужской": 0, "Женский": 1}
)
questions["Gender"] = demographic_data["Gender"]

# Calculate mean scores by gender
mean_scores_by_gender = questions.groupby("Gender").mean()

# Plotting the response distributions by gender
fig, ax = plt.subplots(figsize=(12, 6))

labels = [f"Q{i+1}" for i in range(21)]
x = range(len(labels))

bar_width = 0.35

rects1 = ax.bar(x, mean_scores_by_gender.iloc[0, :21], bar_width,
label="Male")
rects2 = ax.bar(
    [p + bar_width for p in x],
```
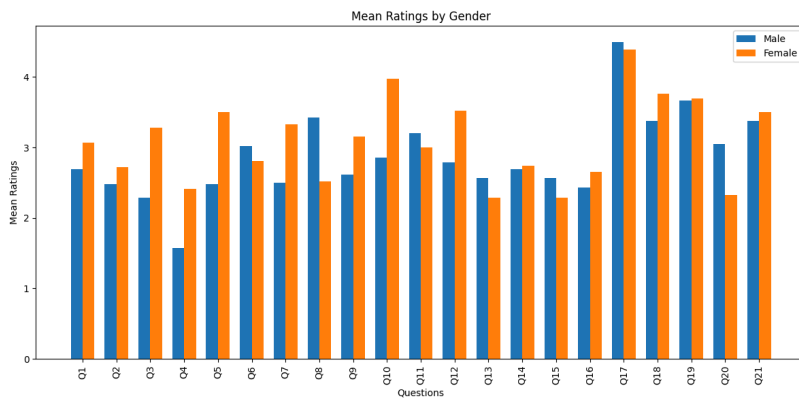
89

```
    mean_scores_by_gender.iloc[1, :21],
    bar_width,
    label="Female",
)

ax.set_xlabel("Questions")
ax.set_ylabel("Mean Ratings")
ax.set_title("Mean Ratings by Gender")
ax.set_xticks([p + bar_width / 2 for p in x])
ax.set_xticklabels(labels)
ax.legend()

plt.xticks(rotation=90)
plt.tight_layout()
plt.show()
```



```
import seaborn as sns

# Calculate the total score for each respondent
questions["Total_Score"] = questions.sum(axis=1)

# Plotting the distribution of total scores by gender
plt.figure(figsize=(12, 6))
sns.histplot(data=questions, x="Total_Score", hue="Gender", multiple="stack",
bins=15)
plt.title("Distribution of Total Scores by Gender")
plt.xlabel("Total Score")
plt.ylabel("Frequency")
plt.legend(title="Gender", labels=["Male", "Female"])
plt.tight_layout()
plt.show()
```

Distribution of Total Scores by Gender
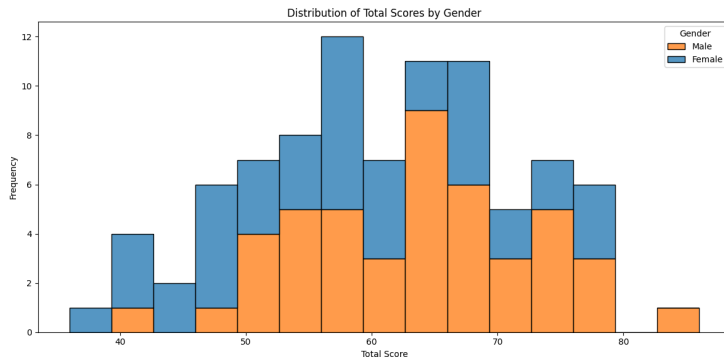
```
plt.figure(figsize=(10, 6))
sns.boxplot(data=questions, x="Gender", y="Total_Score")
plt.title("Boxplot of Total Scores by Gender")
plt.xlabel("Gender")
plt.ylabel("Total Score")
plt.xticks(ticks=[0, 1], labels=["Male", "Female"])
plt.tight_layout()
plt.show()
```


Boxplot of Total Scores by Gender
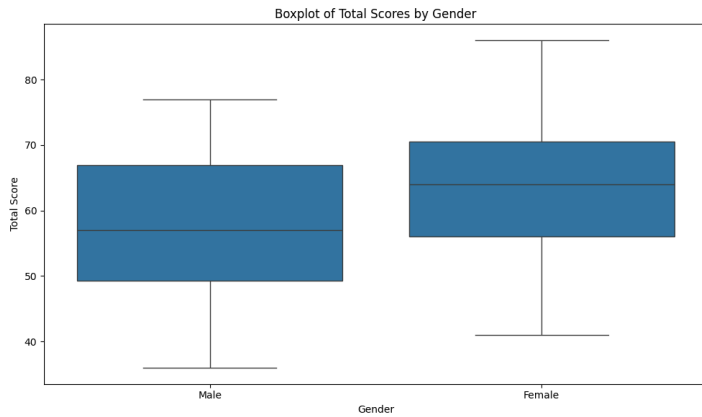
```
plt.figure(figsize=(10, 6))
sns.boxplot(data=questions, y="Total_Score")
plt.title("Boxplot of Total Scores")
plt.ylabel("Total Score")
plt.tight_layout()
plt.savefig("boxplot_total_scores.png")
plt.show()
```


Boxplot of Total Scores
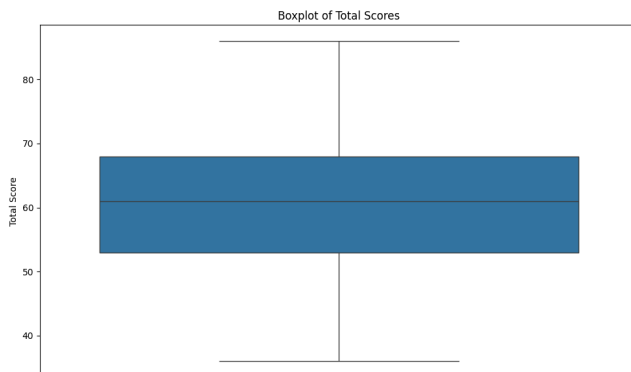
```python
print("Mean: ", questions["Total_Score"].mean())
print("Std: ", questions["Total_Score"].std())
print("Max: ", questions["Total_Score"].max())
print("Min: ", questions["Total_Score"].min())
print("Range: ", questions["Total_Score"].max() -
questions["Total_Score"].min())
```

Mean: 60.67045454545455
Std: 10.520610959608161
Max: 86.0
Min: 36.0
Range: 50.0


```python
questions.groupby("Gender")["Total_Score"].mean()
```

Gender
0   57.714286
1   63.369565

```python
questions["Age"] = demographic_data["Age"]
questions.groupby("Age")["Total_Score"].mean()
```

Age
18 – 24   59.678571
25 – 35   61.766667
36 – 45   77.000000
46 +   67.000000

```python
questions["Education"] = demographic_data["Education"]
questions.groupby("Education")["Total_Score"].mean()
```

Education
Высшее образование (бакалавриат)   59.586207
Высшее образование (высшая квалификация)   62.000000
Высшее образование (магистратура/специалитет)   65.440000
Основное общее образование   58.240000
Среднее профессиональное образование   56.428571


```python
questions["Living_Russian_Country"] =
demographic_data["Living_Russian_Country"]
questions.groupby("Living_Russian_Country")["Total_Score"].mean()
```

Living_Russian_Country
Да   59.318841
Да, большую часть жизни   76.000000
Нет, но провёл(а) в этой стране большую часть жизни   65.000000


```python
first = questions.iloc[:, 0:12].mean().mean()
second = questions.iloc[:, 12:16].mean().mean()
third = questions.iloc[:, 16:21].mean().mean()
```

```python
import matplotlib.pyplot as plt

# Data for the bar chart
x = ["1-12", "13-16", "17-21"]
y = [first, second, third]
colors = ["green", "orange", "purple"]

# Create a bar chart
plt.bar(x, y, color=colors)

# Add labels and title
plt.xlabel("Sections")
plt.ylabel("Mean score")

# Display the chart
plt.show()

# Displaying the plot
plt.show()
```
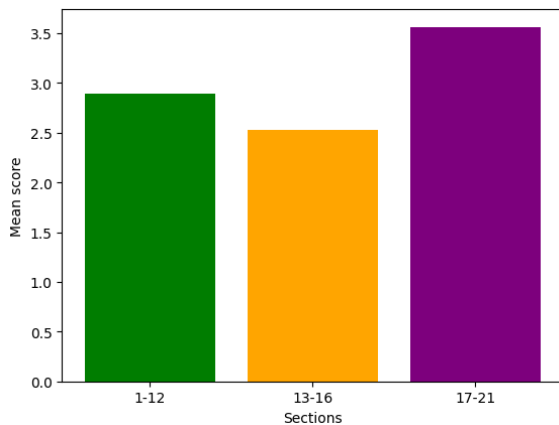


```python
def categorize_attitude(score):
    if score <= 52.5:
        return "Negative"
    elif 52.6 <= score <= 73.5:
        return "Neutral"
    else:
        return "Supportive"


questions["Attitude"] = questions["Total_Score"].apply(categorize_attitude)

import matplotlib.pyplot as plt

data = questions["Attitude"].value_counts()

plt.figure(figsize=(10, 6))
plt.pie(data, labels=data.index, autopct="%1.1f%%")
plt.show()
```
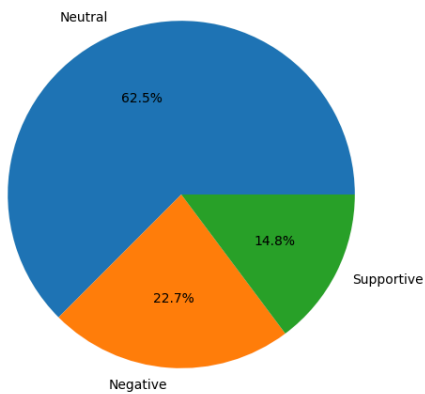
```
import matplotlib.pyplot as plt

# Calculate the mean ratings of the questions
mean_ratings = questions.iloc[:, 0:21].mean()
mean_ratings.index = [f"{i+1}" for i in range(21)]

# Create the skateplot
fig, ax = plt.subplots(figsize=(10, 6))
ax.plot(mean_ratings.index, mean_ratings.values, marker="o", linestyle="",
color="blue")

# Set the labels and title
ax.set_xlabel("Questions")
ax.set_ylabel("Mean Ratings")

plt.xticks(rotation=45)

# Show the plot
plt.show()
```