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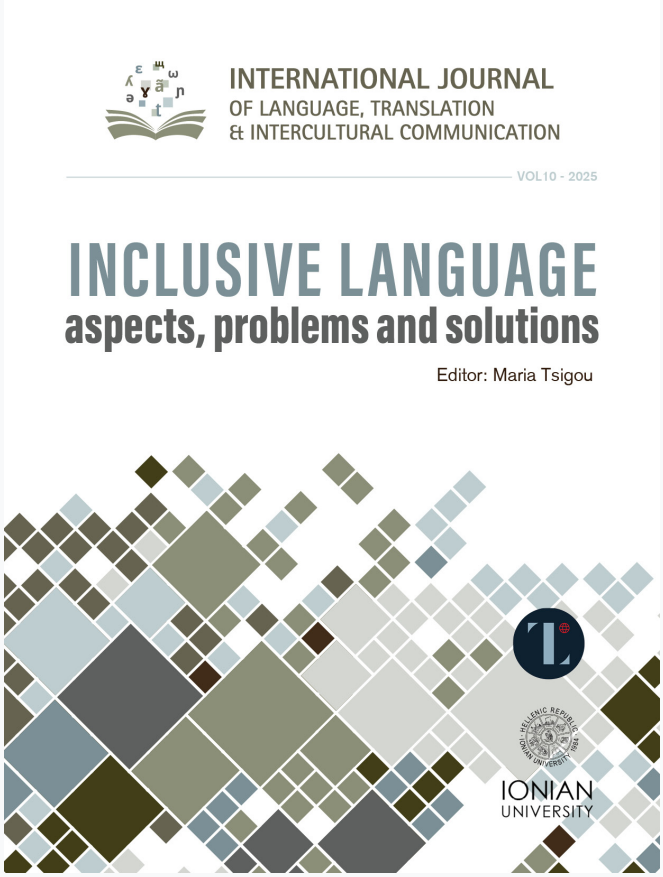

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Inclusive Translation in Political Discourse: Challenges and Opportunities in the Representation of Gender through AI

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Abstract

With an emphasis on gender representation in the German-Greek language pair, this paper uses large language models (LLMs) to analyse the opportunities and difficulties of inclusive translation in political discourse. Significant cross-linguistic and cultural distinctions complicate the transmission of inclusive formulations that are becoming more prevalent in political discourse. Greek remains limited by its strongly gendered grammatical structure, while German has a variety of inclusive methods, including gendered doublets, the gender star, and gender-neutral neologisms. This study investigates how state-of-the-art LLMs handle these structural and cultural differences in translation, evaluating the ability of LLMs to accurately and sensitively represent inclusive discourse using a corpus of current German political texts. The results highlight the need to critically analyse AI-mediated translation in situations where the political and social aspects of language are particularly prominent.

Keywords: *political translation, LLMs, inclusive language*

1 Introduction

Gender representation in political discourse has emerged as a critical issue in the public sphere, especially in times of social transformation and increased demands for equality and inclusion. Social norms and values are shaped and reflected by political discourse, which is a weapon used to exercise power. The goal of using inclusive language in political communication is to promote equality and recognise all genders. The translation of political texts presents unique challenges, especially when working between languages with differing grammatical and social gender systems, such as German and Greek.

At the same time, the development of large language models (LLMs) has significantly changed translation practice, providing high-quality automatic deliverables in a very short time. The ability of AI-based translation tools to rapidly convert huge volumes of texts between different language systems offers enormous potential for promoting global communication and understanding (Vinuesa et al., 2020). Especially in the case of political discourse, where constantly changing developments and conditions result in rapid text production, the application of LLMs to the translation process can greatly contribute to the transmission of messages. However, applying these technologies to sensitive areas such as political discourse requires careful consideration of their ability to convey the message accurately and in a manner respectful of cultural norms and nuances, as these tools present both unprecedented opportunities and critical challenges, especially in capturing gender references (Daugherty et al., 2020).

Language is a key mechanism of social identities, including gender identity. The linguistic construction of gender in political discourse is a crucial field of study, as it reflects and shapes broader social perceptions and power relations. The language used in the political sphere is by no means neutral. On the contrary, it carries an ideological load and can function either as a means

of reproduction or as a means of challenging and therefore confronting gender stereotypes and inequalities. Sociolinguistic approaches to inclusive language highlight the way in which language does not simply reflect existing social structures but actively participates in their formation. Critical discourse analysis, a widely used approach in this field, examines how language is used to construct and maintain social inequalities. It is important to recognize that gender is not a static or monolithic category, but a complex and multifaceted social construction (Buslón et al., 2023). Bigler and Leaper (2015) point out that language that explicitly marks a person's gender contributes to gender bias by emphasizing gender, viewing it as a binary category, and promoting inclusive perspectives.

Changing social perceptions, ideological stances, and political practices are reflected in the historical development of inclusive references in political discourse. Political language has evolved significantly in response to broader social shifts towards gender equality, from the use of the masculine gender as "collective" to the adoption of more inclusive language choices like the use of double forms or inclusive phrases. Furthermore, given the idea that language shapes reality, inclusive language use in political discourse can significantly improve political representation and participation as well as the realistic and efficient guarantee of gender equality (Cernadas & Iglesias, 2020).

With an emphasis on structural distinctions and cultural norms between German and Greek, this study attempts to investigate the strengths and weaknesses of LLMs in translating inclusive political discourse. Corpus analysis, inclusive form classification, and a methodical assessment of the three LLMs (GPT-4o, Claude, and Julius) are all parts of the methodology. The results add to the continuing discussion about the effects of AI in politically delicate translation fields, particularly regarding algorithmic fairness and gender equity.

2 Theoretical Framework

2.1 Comparative Analysis of German and Greek Language

Although both languages feature three grammatical genders (masculine, feminine, and neuter), they differ significantly in their syntactic structures and sociolinguistic usage. For instance, the German Federal Government instituted a rule in 1993 that federal ministries must be referred to using neuter grammatical forms (*Einführung der sächlichen Bezeichnungsform für die Bundesministerien*).

Within the German Parliament, inclusive language has been the subject of heated political discussion in recent years. In 2021, the AfD even called for the abolition of gender-specific language, but this proposal was rejected by a majority of the German Parliament (531 in favour, 74 against) (Mills, 2021). A decisive role in the adoption of inclusive language in the political sphere is played by the *Duden* editorial board, as well as other language policy bodies in Germany, which promote the iclusive language, highlighting language as a field of ideological negotiation (Worschech & Müller, 2022). In official German public—and particularly political—discourse, clear conventions for the promotion of inclusive language have been developed, which are ensured through methods such as:

- Double forms, i.e. *Bürgerinnen und Bürger* (male and female citizens),
- The gender gap, which uses the symbol of the lower hyphen as a way of including non-binary gender identities, i.e. *Bürger_innen*,

- The gender star, which works similarly to the gender gap, but uses the asterisk as a more inclusive symbol, i.e. *Bürger*innen*,
- Participles in gender-neutral expressions, i.e. *die Studierenden*.

On the other hand, sexist language reflecting deeply ingrained patriarchal structures has long been a feature of Greek political rhetoric. Despite the ever-increasing presence of women in the Greek Parliament and the European political scene, the adoption of inclusive language in political discourse remains limited and fragmented. The dominant use of masculine gender as an ostensibly generic term reinforces to date the invisibility of women and non-binary identities. (Lampropoulou & Georgalidou, 2017). Although there have been institutional initiatives, such as the Guidelines for the Use of Non-Sexist Language in Public Administration by the General Secretariat for Gender Equality (GSGE, 2017), their implementation in public political discourse remains weak.

Because of these distinctions, translating inclusive forms is particularly difficult, especially when it comes to typographic innovations like the gender star, which are uncommon outside of specialised contexts and lack a direct equivalent in Greek. Therefore, culturally appropriate tactics are needed to maintain the ideological and communicative intent of inclusive references.

2.2 Inclusive Language and LLMs

large language models (LLMs), which have been trained on extensive multilingual corpora, are state-of-the-art instruments in natural language processing and translation. They can generate translations with a high degree of fluency and structural accuracy thanks to their sophisticated architecture and real-time processing capability.

However, societal biases, such as gender biases, are often reflected in their algorithmic design and training data (Nazer et al., 2023). As Ferrara (2023) points out, LLMs tend to associate specific genders with specific roles or attributes, potentially distorting the original message and thereby reinforcing gender biased representations. Such biases are detected either when translating gender-neutral pronouns, or when transferring titles into gendered forms that reflect stereotypical associations—such as the English term *professors* being predominantly translated into Greek masculine plural forms *καθηγητές* in Greek.

These trends bring up the topic of algorithmic intervention, which in this study refers to the systematic and unintended impact of model architecture and training data on the final translation. The ideological positioning and semantic integrity of political texts may be jeopardised by such intervention. The outputs of LLMs represent a type of encoded decision-making influenced by data and design, even though they might not be purposefully manipulating language.

Notwithstanding their advantages, LLMs have trouble with pragmatic and cultural nuances. Their performance is hindered by their limited exposure to corpora that are rich in context, politics, or history in minority or morphologically rich languages, such as Greek. Addressing these limitations, according to Kasneci et al. (2023), calls for a hybrid strategy that combines human expertise with AI output through ongoing monitoring, algorithm auditing, and training corpus curation.

3 Methodology

3.1 Corpus Selection and LLMs

The criteria for selecting the texts that constitute the corpus include: (a) the presence of gender-related topics, (b) relevance to contemporary debates on gender equality, and (c) the use of different inclusive language strategies (e.g. double formulae, gender star, neutral phrasing). To ensure the representativeness and validity of the data, political texts from the contemporary German political landscape (the past five years) were selected, sourced from representatives of all parties represented in the German Parliament (CDU, CSU, SPD, FDP, Die Grünen, AfD), were selected. The total corpus consists of 28 texts (approximately 87,000 words), distributed in the following categories:

- Political texts of internal communication (10 texts): These are texts from the German Parliament, from the period 2019-2024, concerning debates on social policy, equality and labour rights, as well as debates on the abolition of inclusive language. These texts target politicians.
- Political texts of external communication (10 texts): These include addresses by Merkel and Steinmeier during the COVID-19 pandemic, as well as press conferences on social policy issues. These texts are intended for the public.
- Pre-election texts (8 texts): These comprise programmatic statements, positions on gender equality issues, and campaign materials from electoral campaigns. These texts target the electorate.

Three LLMs were used to generate translations: Julius AI, Claude 3.5 Sonnet, and GPT-4o. Performance, multilingualism, and token length restrictions were taken into consideration during the selection process. Specifically, GPT-4o was chosen primarily due to its broad usage, as it is currently the most widely used model; Claude was selected for its advanced training; and Julius was included due to its integration with Python code, which enables the model to conduct in-depth data analysis (see Table 1).

GPT-4o (OpenAI)	**Claude 3.5 Sonnet (Anthropic)**	**Julius AI**
Version: May 2024	Version: April 2024	Version: October 2023
Support for multilingual translation work	Support for multilingual translation work	Support for multilingual translation, data analysis, and Python coding
Extensive training in European languages	Extensive training in European languages	Extensive training in European languages
128.000 tokens per prompt	100.000 tokens per prompt	4.096 tokens per prompt

Table 1: LLMs' Characteristics

3.2 Register of Inclusive Forms

During the first stages of the research, an analytical register of all types of inclusive language, as they were reflected in source texts, was created. The aim was to identify and classify the most prevalent types chosen by German political rhetoric, depending on the communicative context, the sender and the target of the text. This approach enables the correlation of respective linguistic choices with the ideological context and function of the text, thereby facilitating further

investigation of the translational choices made by large language models (LLMs). In total, 571 inclusive types were documented.

Four linguistic indicators were used to classify inclusive types:

- Morphological markers: grammatical suffixes indicating gender in German, such as the -*in/-innen* suffixes,
- Lexical markers: the selection of terms with gendered meanings, such as *Mann* and *Frau*,
- Syntactic constructions, structures such as nominalised participles, i.e. *die Studierenden*,
- Typographical markers, symbols such as the gender star (*).

Subsequently, the degree of inclusion within each category was evaluated, specifically examining whether all genders were referenced using specialised symbols or neutral terms, or whether the linguistic choice reflected exclusionary language by employing exclusively masculine forms.

The register analysis reveals that exclusionary linguistic choices, specifically the use of masculine forms, constitute only 17.7% of German political discourse, with 75% of these instances attributable to the far-right Alternative for Germany (AfD) party (see Table 2). It is also noteworthy that there is not much discrepancy between external and internal political texts—that is, between texts spoken within the German Parliament and those addressed to citizens (election speeches, public addresses, etc.). This finding suggests that gender-inclusive choices are not merely driven by institutional requirements within the parliamentary context or by strategic attempts to appeal to voters. On the contrary, they appear to be deeply embedded in contemporary German political rhetoric as a consistent and ideologically grounded communicative practice.

Types	Frequency of occurrence	%
Double types	218	38.2%
Symbols	159	27.9%
Exclusive terms	102	17.7%
Inclusive terms	92	16.2%
Total	571	100%

Table 2: Distribution of Inclusive Forms in Source Texts

3.3 Evaluation Framework

To assess how LLMs handle inclusive language in political translation, a two-pronged evaluation framework was applied, integrating both quantitative and qualitative dimensions. This framework was designed to provide a comprehensive understanding of the translation strategies employed by the models, as well as the extent to which they succeed or fail in preserving inclusive intent.

Some of the indicators were developed specifically for the purposes of this study, while others were adapted from established approaches in translation evaluation, notably functionalist theories such as Skopos theory (House, 1997) and interdisciplinary models integrating AI fairness and bias detection (Kasneci et al., 2023).

Quantitative indicators focused on identifying observable trends across the corpus:

- Frequency of Gendered Form Translation (FGFT): Percentage of explicitly gendered expressions retained in the target language.
- Frequency of Translation of Neutral Forms (FTNF): Frequency with which gender-neutral constructions are maintained.
- Inclusiveness Index (II): Ratio of inclusive forms in translation compared to the source text.
- Consistency Index (CI): Degree of regularity in the application of similar strategies across comparable contexts.

Qualitative indicators examined the sociolinguistic and ideological appropriateness of the translation output:

- Pragmatic Accuracy (PA): Alignment with the communicative intent and political positioning of the source.
- Linguistic Accuracy (LA): Grammatical correctness and fluency within Greek language norms.
- Semantic Content Preservation (SCP): Degree to which the inclusive meaning of the original is preserved.
- Cultural Adaptation (CA): Sensitivity to Greek socio-political and discursive conventions.
- Translational Creativity (TC): Use of innovative or hybrid linguistic strategies to overcome structural mismatches.

This dual set of metrics enabled a structured and replicable analysis of inclusivity in AI-driven political translation.

3.4 Data Collection and Prompting Protocol

The collection of translations followed a strictly standardised procedure to ensure reliable comparison and analysis of the translated outputs, as proposed in recent LLM evaluation methodologies (Piazzolla et al., 2024; Shetty et al., 2024).

i. Each source text was segmented into chunks of up to 4000 tokens, in order to provide equally sized sections across all outputs and avoid any influence on the translation quality due to input length.

ii. Prompts were developed, identical for each model, with the aim of optimal performance. After several tests, the following prompt was chosen:

   Translate the following German political text into Greek. Maintain the formal tone, stylistic features, sentiment, and terminology. Pay particular attention to the accurate rendering of references to individuals and inclusive expressions in the text.

iii. All translations were carried out within a four-week period (1-30 September 2024) to minimise potential changes to the models.

iv. Translations were then matched to the 571 registered inclusive types. Each of the 28 texts was translated three times (GPT-4o, Claude, Julius), producing 84 target texts and 1,051

translations of inclusive forms. The final dataset allowed for both per-model comparison and intra-textual variation analysis.

4 Results and Discussion

4.1 Morphosyntactic, Pragmatic, and Stylistic Challenges

4.1.1 Morphosyntactic Asymmetries

At the level of morphosyntactic challenges, there is a differentiation in the functioning of the tripartite grammatical gender systems (masculine, feminine, neutral) that both languages have. Despite the superficial similarity of the systems, the distribution of the genders in occupational and social roles shows significant divergences. A typical example is the use in German of the feminine noun suffix *-in* (singular) or *-innen* (plural), which is almost always indicated by German politicians in combination with masculine nouns. In contrast, in Greek there are a variety of restrictions and exceptions, thus making the process of maintaining gender language less feasible. For instance, the expression *Bürger und Bürgerinnen* is often translated simply as *πολίτες* (citizens), using the masculine plural. This morphological heterogeneity has a decisive influence on the translation rendering of inclusive forms.

A similar methodological challenge arises in the cross-linguistic transfer of German pluralized nominalized participles, which function as grammatical mechanisms for gender inclusivity in public discourse. This specific morphosyntactic choice constitutes an established strategy of inclusive reference in the political rhetoric of the German-speaking context, as it ensures the comprehensive inclusion of all genders and the equal linguistic representation of diverse gender identities, transcending traditional binary categorizations.

The corresponding transfer of these morphosyntactic structures to the Greek language system presents significant difficulties, which are related to the differentiated grammatical structure of the two languages. Unlike in German, in which plural participles encompass all three genders, in Greek the corresponding forms are morphologically distinguished into three grammatical genders with distinct morphological markers. As evidenced by the translation outputs, LLMs tend to reduce the inclusive reference of the source text to the masculine form in Greek. A typical example is the case of translating the German term *die Arbeitenden*—which includes all working people regardless of gender—into the Greek term *οι εργαζόμενοι*—which grammatically denotes exclusively male workers.

4.1.2 Pragmatic Asymmetries

At the level of pragmatic dimensions, the heterogeneity observed between the two languages regarding institutionalized conventions of inclusive language creates challenges in the translation of political discourse using LLMs. This asymmetry is manifested primarily at the level of typographical mechanisms of inclusion, which have become standard practice in the German communicative context but remain marginal in the Greek linguistic background.

In particular, the systematic use of typographic symbols such as the gender star (*), the semicolon (:) or the underscore (_) has acquired normative practice characteristics with high penetration in both official institutional discourse and in the wider public discourse. This practice now constitutes a recognizable semiotic code that functions as a mechanism of inclusion within

the specific sociolinguistic context. In contrast, in the Greek linguistic environment there is a clear lack of corresponding institutionalised conventions with an equivalent degree of social and pragmatic legitimisation. Although campaigns calling for the use of inclusive symbols have surfaced in specialised registers, such as feminist publications, activist media, and academic writing in gender studies, their application is still dispersed and marginalised.

Even official guidelines, like those issued by the General Secretariat for Gender Equality (GSGE, 2017), favour morphological inclusivity over symbolic inclusivity by favouring double forms (e.g., *οι εργαζόμενοι και οι εργαζόμενες*) over typographical innovations. The fact that prominent official political websites still almost entirely use masculine generics shows how little inclusive typographic techniques have permeated common communication practices.

This asymmetry does not simply constitute a question of different conventions but raises significant dilemmas in the translation process. The transfer of German typographic conventions into the Greek linguistic environment may run into phenomena of communicative mismatch, since the target audience of the Greek translation does not necessarily possess the necessary interpretive schemes for decoding the specific semiotic practices.

4.1.3 Stylistic Asymmetries

At the level of stylistic parameters, the translation of certain inclusive terms proves equally problematic, as their translation may significantly alter the stylistic profile of the source text and activate ideological connotations. This phenomenon is particularly pronounced in cases where lexical units are used as neutral collective designations in the source language but carry strong ideological connotations in the target language.

An indicative example is the translation of the German term *Arbeiterschaft*, which functions primarily as a collective designation of the workforce without strong ideological connotations in the contemporary German linguistic environment. The systematic rendering of this term by LLMs with the Greek term *εργατιά* constitutes a typical case of a stylistic shift with important discursive implications. The Greek term does not function as a neutral descriptive designation but carries strong connotations of ideological positioning, referring specifically to the vocabulary of leftist political rhetoric. This stylistic shift results in a de facto alteration of the communicative profile of the text, giving it an ideological stigma that is absent from the original and possibly incompatible with the communicative intention of the original transmitter.

4.2 Translation Strategies Observed

The study of LLMs' translation choices in terms of rendering inclusive language types highlights a wide range of applied strategies, which are categorized into four categories:

i. Equivalence Strategies: This approach seeks equivalence not only on the semantic and morphosyntactic level, but also on the pragmatic level, reproducing the same inclusive intent in the target language. This strategy was mainly chosen in the translation of double forms—especially in cases where feminine types are also entrenched in Greek, such as *Mitbürger und Mitbürgerinnen* which was almost overwhelmingly rendered as *συμπολίτες και συμπολίτισσες* (men and women fellow citizens). This strategy seems to have been mostly chosen by the Julius model which applied such strategies in 57.3% of cases, followed by Claude with 45.7% and finally GPT-4o with 42.3%.

ii. Shift Strategies:

- Lexical Shifts: LLMs resorted to lexical shifts in cases where no established feminine equivalent exists, as for example in the case of *die deutschen Bürger und Bürgerinnen*, which was rendered in most texts as *οι Γερμανοί και οι Γερμανίδες* (German men and women). Similar shifts were also observed in gendered forms that were eventually translated with inclusive, gender-neutral terms, such as *Fachmänner und -frauen*, which was translated as *εξειδικευμένο προσωπικό* (specialized staff) or *ειδικό προσωπικό* (expert staff) involved replacing doublets with neutral terms.
- Morphosyntactic Shifts: Analysis of the translations revealed that the LLMs implemented morphosyntactic shifts mainly when the German source text employed nominalised participles. For example *die Studierenden* was translated by Julius and Claude as *η φοιτητική κοινότητα* (the student community) or *die Asylbewerbenden* which was rendered by Claude and GPT-4o as *τα άτομα που αιτούνται άσυλο* (individuals applying for asylum).
- Stylistic Shifts: as documented by the translation results, LLMs quite often made a neutralization of gendered types, which changed the gender load to an inclusive one. Phrases such as *die Ärzte und Ärztinnen*, *die Minister und Ministerinnen* were translated as *ιατρικό προσωπικό* (medical staff) and *τα μέλη του υπουργικού συμβουλίου* (members of the cabinet), respectively.

v. Elimination Strategies: In several cases of gender-neutral language, the LLMs, especially GPT-4o, chose to eliminate inclusivity by using the masculine form of the Greek language. Choices such as translating the neutral term *die Abgeordneten* as the masculine Greek term *οι βουλευτές* (male MPs) or the term *die Teilnehmenden* with the term *οι συμμετέχοντες* (the male participants), especially from the GPT-4o model, distort the degree of inclusiveness and affect the ideological stance of the source text.

vi. Innovative Strategies: the strategy of typographic neologisms, i.e. the use of symbols, seems to have been chosen to a limited extent by LLMs. Mostly GPT-4o opted to use the underscore instead of the gender star commonly used in German. For example, the term *Asylbewerber*innen* was translated by GPT-4o as *οι αιτούντες_ούσες ασύλου*, while Julius and Claude chose a cultural adaptation using both the gendered forms *οι αιτούντες και οι αιτούσες ασύλου* (men and women applying for asylum).

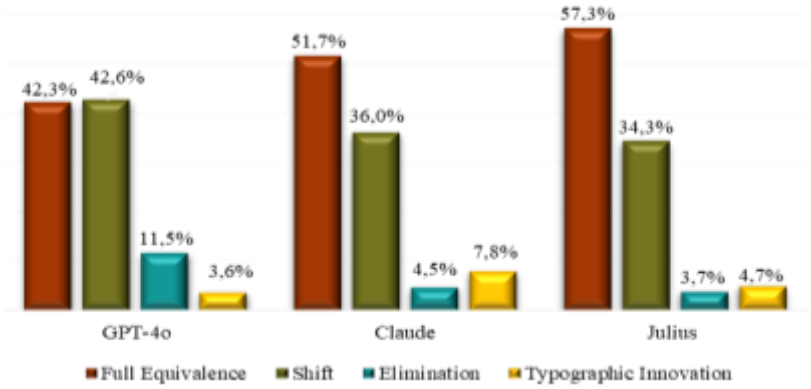

Figure 1: Distribution of translation strategies applied by LLMs across inclusive language forms

This chart illustrates the frequency with which each model employed equivalence, shift, elimination, and typographic innovation strategies. As a result of the models' differing degrees of inclusivity and cultural adaptation, Julius exhibits the highest rate of equivalence strategies, while GPT-4o uses elimination and masculine defaults more frequently.

4.3 Example Translation Variations

To shed light on the distinct translational patterns adopted by the three LLMs under study, the following table presents a selection of representative examples. These source expressions were chosen for their high frequency and semantic centrality within the corpus, as well as their varying levels of structural and ideological complexity.

The table below presents source expressions alongside real or typical examples from German political discourse, followed by their translations by GPT-4o, Claude, and Julius. The aim is to demonstrate how each model adapts to the target language's pragmatic demands as well as morphosyntactic challenges.

Source Expression	**GPT-4o**	**Claude**	**Julius**
die Bürgerinnen und Bürger	οι πολίτες	οι πολίτες και οι πολίτισσες	οι συμπολίτες και συμπολίτισσες
die Studierenden	οι φοιτητές	η φοιτητική κοινότητα	τα άτομα που σπουδάζουν
Asylbewerberinnen*	οι αιτούντες_ούσες άσυλο	οι αιτούντες και οι αιτούσες άσυλο	άτομα που αιτούνται άσυλο
die Arbeitenden	οι εργαζόμενοι	εργαζόμενα άτομα	εργαζόμενοι και εργαζόμενες
die Abgeordneten	οι βουλευτές	τα μέλη του κοινοβουλίου	οι βουλευτές και οι βουλεύτριες
Fachmänner und -frauen	οι ειδικοί	ειδικό προσωπικό	ειδικοί και ειδικές
die Teilnehmenden	οι συμμετέχοντες	οι συμμετέχοντες και οι συμμετέχουσες	τα άτομα που συμμετείχαν

Table 3: Representative examples of translational strategies across LLMs

The models' internalised preferences for gender inclusivity, cultural adaptation, and stylistic fidelity are highlighted by these translation decisions. Importantly, the table exhibits that identical source expressions can be translated in a variety of ideologically conflicting ways, potentially influencing how political texts are interpreted. This underscores the importance of context-sensitive evaluation when deploying LLMs in politically and ideologically sensitive fields.

4.4 Quantitative and Qualitative Metrics Comparison

The empirical data, as collected from the translation results and recorded in the inclusive language register, reveal significant differences between the models (GPT-4o, Claude, Julius), which reflect their different approaches to issues of gender representation and inclusivity.

Julius demonstrates the highest performance in the Frequency of Gendered Form Translation (FGFT: 96.3%). In contrast, GPT-4o shows the lowest value (78.5%), indicating a reduced ability to recognize and retain the gender references of the original text. A similar trend is observed in the index of inclusivity, GPT-4o significantly underperforms (II: 65.9%), while Claude holds the leading position with 78.5%. Claude model opts for the shift from gendered doublet forms to

neutralized alternatives, aligning more closely with the ideological and cultural norms of the textual purpose.

Of particular interest is the dimension of consistency in the application of translation strategies for similar inclusive references. Julius stands out in this area (85.3%), demonstrating a remarkable consistency in its approach, with Claude following at 79.3%. Furthermore, a notable variation in strategies for elimination strategies is highlighted. GPT-4o eliminates 11.5% of cases and chooses to use masculine as a "generic" term in 17.5% of cases. In contrast, Julius and Claude apply elimination strategies at just 3.7% and 4.5% respectively.

The qualitative analysis of the results reveals additional distinguishing features of the three models. Julius demonstrates a remarkable ability to handle complex morphological structures and its choices reflect a high level of linguistic accuracy. A key factor here is the model's implementation in Python, which supports the decoding of such structures. On the other hand, Claude is distinguished for its systematic application of inclusive practices and its awareness of political and ideological dimensions, which proves that the model is more trained in cultural references and nuances. In contrast, GPT-4o tends to reproduce sexist choices using the masculine, thus disrupting the purpose and ideological connotation of source texts. These choices, however, also reflect and reinforce the position of the inclusive language within Greek society through the linguistic tendencies of the model's user base (see Figure 2).

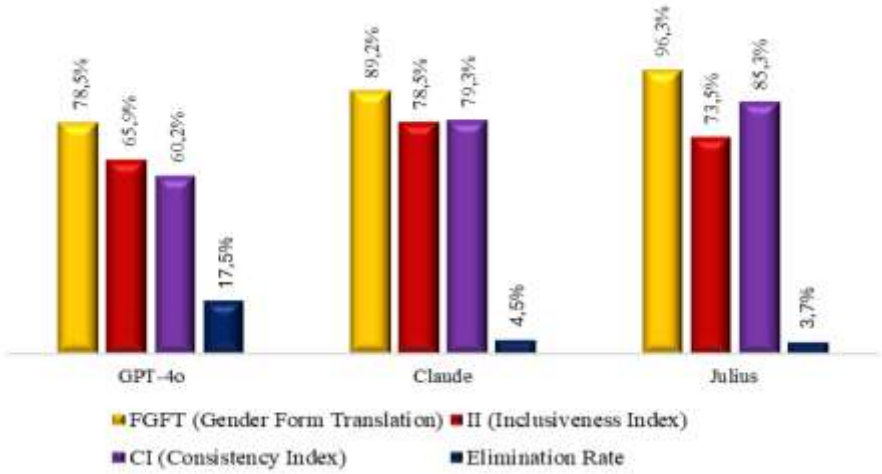

Figure 2: Comparative performance of LLMs based on quantitative and qualitative evaluation metrics

The figure presents four key indicators: Frequency of Gendered Form Translation (FGFT), Inclusiveness Index (II), Consistency Index (CI), and Elimination Rate. While GPT-4o reveals lower inclusivity and higher elimination rates, suggesting possible algorithmic bias in handling gender references, Julius scores highest across the majority of metrics, exhibiting strong consistency and inclusive fidelity.

4.5 Broader Implications for Political Discourse

The findings of this study point that algorithmic choices about inclusive language translation are a complex field with important implications, particularly within the realm of political communication. Of particular importance is the emerging technological dimension of the issue,

as the rapidly expanding use of LLMs in the translation of political texts introduces an added layer of complexity in political communication.

The research reveals that LLMs' algorithmic decisions about inclusive language are not entirely technically neutral; rather, they embody and reproduce specific political stances and bias. When an LLM chooses specific translation strategies for inclusive language, these choices reflect their training data and design specifications, which in turn embody specific socio-political understandings of gender equality, inclusion and gender representation in political discourse.

Given the different approaches to inclusive language between German and Greek—where German has already adopted more systematic and institutionalized inclusive practices—LLMs are required to mediate between distinct linguistic and ideological systems. The translation choices of LLMs can, however, substantially influence political participation, as the use or elimination of inclusive language can affect the sense of inclusion of different social groups in the political process. The sexist use of masculine gender as a generic form leads to a reduced mental representation of women and non-binary people. Indeed, when these choices are made by algorithmic systems that are widely used, the consequences are amplified due to the scale and speed of their deployment.

Moreover, in the field of international relations and intercultural understanding and communication, LLMs function as technological mediators between different political approaches to inclusive language. The choice of an LLM to translate, for example, a German text that systematically uses inclusive language into a Greek text that uses only the masculine gender constitutes a political intervention that can influence the perception of the political positions of the parties involved. Similarly, an LLM's decision to retain inclusive language and, when necessary, introduce neologisms or typographical innovations may contribute not only to better understanding between peoples, but also to the introduction and normalization of new linguistic practices in Greek.

Serious concerns, however, arise from the opacity and ethical implications of the algorithmic processes that lead to specific translation choices of LLMs. Unlike human translators, who can articulate and defend their choices, the decisions of LLMs are the result of complex statistical processes that are often not easily interpretable. This lack of transparency raises significant questions of political accountability and, above all, political censorship. In addition, the training of LLMs on specific corpora influences their translation tendencies regarding inclusive language. If the training data mostly reflects traditional, non-inclusive uses of language, LLMs tend to reproduce these patterns, thus perpetuating traditional understandings of gendered issues in political discourse, as was evident in the case of GPT-4o.

Conclusion

This study emphasises the complex difficulties in employing LLMs to translate inclusive language in political discourse. Although models such as Claude and Julius exhibit promising approaches, such as typographic innovations and gender-neutral approximations, GPT-4o exhibits a greater propensity for masculine defaults. Critical questions concerning ideological alignment, consistency, and transparency are brought up by the differences in tactics between and within models.

The evidence suggests that inclusive translation is a politically charged act rather than merely a technical one. Language and cultural perceptions of gender, identity, and representation are influenced by the decisions made by LLMs, who increasingly mediate international political communication. Multidisciplinary oversight is necessary to guarantee accuracy, equity, and fairness in such translations.

Training domain-specific LLMs with balanced corpora that represent inclusive language practices in conjunction with human-in-the-loop systems to guarantee contextual fidelity could be a future direction for this research. Above all, policymakers, developers, and translators need to work together to support linguistically and ideologically responsible AI systems and stop algorithmic reproduction of bias.

References

Bigler, R.S. and Leaper, C. (2015) 'Gendered language: Psychological principles, evolving practices, and inclusive policies', *Policy Insights from the Behavioral and Brain Sciences*, 2(1), pp. 187–194. https://doi.org/10.1177/2372732215600452

Buslón, N., Cortés, A., Catuara-Solarz, S., Cirillo, D. and Rementeria, M.J. (2023) 'Raising awareness of sex and gender bias in artificial intelligence and health', *Frontiers in Global Women's Health*, 4, Article 970312. https://doi.org/10.3389/fgwh.2023.970312

Cernadas, E. and Calvo-Iglesias, E. (2020) 'Gender perspective in Artificial Intelligence (AI)', in Zaphiris, P. and Ioannou, A. (eds.) *Proceedings of the 8th International Conference on Technological Ecosystems for Enhancing Multiculturality (TEEM '20)*. New York: ACM, pp. 173–176. https://doi.org/10.1145/3434780.3436584

Daugherty, P., Wilson, H.J. and Chowdhury, R. (2020) 'Using Artificial Intelligence to promote diversity', in Daugherty, P. and Wilson, H.J. (eds.) *Human + Machine: Reimagining Work in the Age of AI*. Cambridge, MA: MIT Press. https://doi.org/10.7551/mitpress/12588.003.0006

Ferrara, E. (2023) 'Measuring bias in generative AI: Challenges and future directions', *Nature Machine Intelligence*, 5(12), pp. 1122–1131. https://doi.org/10.1038/s42256-023-00767-7

General Secretariat for Gender Equality – GSGE (2017) *Guidelines for the Use of Non-Sexist Language in Public Administration*. Athens: Ministry of Interior. Available at: https://isotita.gr/wp-content/uploads/2018/02/ODIGIES-Mi-SEXISTIKIS-GLOSSAS-GIA-TO-DIMOSIO.pdf

Harry, A. and Sayudin, S. (2023) 'Role of AI in education', *Interdisciplinary Journal and Humanity (INJURITY)*, 2(3), pp. 260–268.

Hajian, S., Bonchi, F. and Castillo, C. (2016) 'Algorithmic bias: From discrimination discovery to fairness-aware data mining', in *Proceedings of the 22nd ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*. New York: ACM, pp. 2125–2126. https://doi.org/10.1145/2939672.2945386

Kasneci, E. et al. (2023) 'ChatGPT for good? On opportunities and challenges of large language models for education', *Computers & Education*, 203, Article 104160. https://doi.org/10.1016/j.compedu.2023.104160

Lampropoulou, S and Georgalidou, M (2017) *Sexist language in Greek public discourse: When gender exclusive forms become a matter of grammatical correctness.* Women's Studies International Forum, 60. pp. 49-57. https://doi.org/10.1016/j.wsif.2016.12.002

Mills, S. (2021) *Language, Gender and Feminism: Theory, Methodology and Practice*. London: Routledge.

Nazer, T. et al. (2023) 'Bias in artificial intelligence algorithms and recommendations for mitigation', *Journal of the American Medical Informatics Association*, 30(8), pp. 1234–1242. https://doi.org/10.1093/jamia/ocad105

Piazzolla, S.A., Savoldi, B. and Bentivogli, L. (2024) 'Good, but not always fair: An evaluation of gender bias for three commercial machine translation systems', *arXiv preprint*. arXiv:2306.05882. https://doi.org/10.48550/arXiv.2306.05882

Shetty, P., Rao, S.S. and Muralikrishna, S.N. (2024) 'Assessing bias in large language models: A comparative study of ChatGPT, Gemini, and Claude', in *2024 International Conference on Modeling, Simulation & Intelligent Computing (MoSICom)*, Dubai, United Arab Emirates. New York: IEEE, pp. 133–137. https://doi.org/10.1109/MoSICom63082.2024.10881888

Vinuesa, R. et al. (2020) 'The role of artificial intelligence in achieving the Sustainable Development Goals', *Nature Communications*, 11, Article 233. https://doi.org/10.1038/s41467-019-14108-y

Worschech, S. and Müller, L. (2022) 'Gendergerechte Sprache als Streitfall politischer Kommunikation in Deutschland', *Zeitschrift für Diskursforschung*, 3(2), pp. 143–162.