A content analysis of the gendered language used in online recruitment in Egypt.

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Abstract

The aim of this article is to explore the use of grammatically gendered language in Egyptian online recruitment, with a particular focus whether the language used is inclusive of all genders. To do so I present a content analysis of over 13,000 job titles collected through a digital web scrape. Jobs were coded and analyzed based on target audience, grammatical gendering, occupational classification, and main economic activity. Findings show that occupational gender expectations are embedded in grammatical gender choices. Specifically, senior and high-paid positions are more likely to be advertised in the masculine, while other secretarial, administrative, and supporting positions are more likely to be advertised in the feminine. Jobs exclusively targeting women are less likely to include managerial or professional roles compared to jobs targeting men or women, and this relationship is found to be highly statistically significant. In conclusion, linguistic choices, through grammatical gendering of job advertisements, can be used to reinforce and perpetuate existing gender stereotypes, occupational expectations, and divisions (i.e., men as doctors and women as nurses). The results help identify a national and organizational governance gap in the absence of laws and guidance governing discriminatory online recruitment practices.

Keywords gender, recruitment, language, Arabic, bias, inclusion

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1. Introduction

Research exploring the role of language in mediating occupational expectations has significantly grown over the last twenty years, especially in countries with grammatically gendered languages such as Germany, France, and Italy. In these languages it is common for the masculine or unmarked form to be used generically and as the default. For example, the use of *buenos amigos* in Spanish for a mixed gender group, the use of *le maire* for a female mayor in French, or *Lehrer* (teacher) in German to refer to all genders. This use of male pronouns and masculine morphology to refer to all genders (often termed 'masculine generic', 'masculine default', or 'ambiguous masculine') is grammatical and considered normal in many languages including Arabic (Aoun et al., 2009).

Recently, attention to this topic has adopted a feminist approach with studies repeatedly demonstrating that the generic and default use of masculine grammatical gender tends to underrepresent women and create a male bias in perception (Braun et al., 2005; Gygax et al., 2008; Keith et al., 2022; Redl et al., 2021). Not only can language perpetuate a male bias in perception, but women have also been found to be rated less suitable for leadership positions when positions are presented in masculine generics (Horvath & Sczesny, 2016).

This line of research remains understudied in non-Indo-European language families and non-Western countries, such as Egypt. Given the pervasive gender segregation and occupational polarization in the Egyptian labor market (Constant et al., 2020), the language used in recruitment is all the more impactful. Therefore, the social and linguistic contexts in Egypt present an interesting and important site for exploring the ways in which recruiters advertise different jobs, and the implications of this usage on gender inequality in the workplace. This study aims to explore and assess the grammatical gendering in the language used by online recruitment websites. Specifically, the paper investigates whether generically intended masculine grammar is used in a consistent and representative manner. To do so I explore the following research questions:

- 1. What kind of language is used in online recruitment?
 - a. Is the use of the masculine generic form in Egyptian job advertisements consistent and equally representative of all genders?
- 2. How does this language usage vary across different occupations and industries?
 - a. Specifically, what is the distribution of grammatical gender used in online recruitment and is this usage consistent across different types of jobs and industries?
- 3. What kinds of jobs are advertised exclusively to women, in comparison to jobs advertised to both women and men?
- 4. What alternative forms of gender-inclusive language are used by recruitment websites and for which jobs?

2 Background

2.1 Grammatical gender (G-gender) in Arabic

Egyptian Arabic follows a two-gender system with masculine [+masc] and feminine [+fem] distinctions. Unlike other gendered languages, such as German or Dutch, Arabic does not possess a 'neuter' g-gender. Instead, the default, generic, or unmarked form is the masculine form, as seen in French and Spanish, while the feminine form is syntactically marked using a morpheme, predominantly, 'a(t)ⁱⁱ (Aoun et al., 2009). This masculine or feminine gender marking must also be reflected in tense and number (singular, dual, and plural).

For humans (unlike objects), Arabic relies on semantic information to assign Ggender and therefore "the distinction is based on sex or biological gender" of the referent or addressee (Albirini et al., 2013). However, in the absence of this semantic information (i.e., unspecified biological gender of the referent due to ambiguity), the unmarked masculine form may be used instead to refer to all genders; this special usage refers to the masculine generic. Additionally, in the plural it can be used to refer to a mixed-gender group. This default use of masculine generics is common amongst both natural and G-gender languages (Corbett, 1991). Its use is relatively widespread and can be seen across various language families, including Romance languages (Spanish, French, Italian), Germanic languages (Dutch, German, English), Semitic languages (Hebrew and Arabic), and many more.

Examples of this can be seen in Table 1 where *manager* can be presented generically or as part of a word-pair. Importantly, in this case expectations may already be that the *manager* is more likely to be a man and therefore using masculine morphology may reinforce that expectation. On the other hand, using *'manager* [+masc]' or *'manager* [+fem]' can avoid that reinforcement.

	Generic masculine	Feminine	Non-generic masculine/feminine
Singular	مدیر <i>modeer</i> 'manager [+masc]'	مدیر ۃ <i>modeera</i> 'manager [+fem]'	مدیر / مدیر ة <i>Modeer/ modeera</i> 'manager [+masc]/manager[+fem]'
Plural	مدیر ین <i>modeereen</i> 'managers [+masc]'	مدیر ا ت <i>modeerat</i> 'managers [+fem]'	مدیر ین/ مدیر ات Modeer een/ modeer at 'managers [+masc]/managers[+fem]'

Table 1	Crammatical	ander in Arabic	across singular	and plural nouns.
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2.2 Egyptian labor market

Women in Egypt, much like in the majority of countries around the world, face additional barriers to employment and are subject to discriminatory practices. Recently, Egypt ranked low in the Global Gender Gap Report in both economic and political domains (WEF, 2015). This is well documented in the literature where societal pressure and existing gender norms have resulted in additional barriers to women's inclusion in formal employment sectors (Sieverding, 2016). This is culturally reflected in Egyptians aversion to the presence and inclusion of women in the workplace (Mostafa, 2003). Evidently, these attitudes are echoed in the composition of the current labor market that is highly segregated and polarized (El-Hamidi, 2021). Recent reports show that women in Egypt suffer from a participation gap, higher unemployment ratesⁱⁱ, and a substantial pay gapⁱⁱⁱ which varies in extremity depending on industry and occupational classifications (El-Hamidi, 2021). Most recently women's labor force participation rate has dropped from 22.6% in 2011 to 15.4% in 2021(El-Assiouty, 2022).

Barsoum indicates that a major barrier to employment is the limited employment opportunities for women in Egypt (2019). This is seen in the current corpus where the number of opportunities available to women compared to those available to men on online recruitment websites is heavily imbalanced. Specifically, for every job advertised to a woman there are seven other jobs advertised exclusively to men.^{iv}

There are various implications to these attitudes and practices that disadvantage women searching for employment. The limited number of opportunities for women results in their underemployment and overrepresentation in the informal economy instead, where their employment is unprotected and risky (El-Saadany, 2021). This is likely to continue contributing to the wide gender pay gap and reduced participation of women in the labor force, which the Egyptian government has been actively trying to tackle. According to the Ministry of Planning, Egypt is taking measures to increase educational attainment and increase women's participation in the labor force as part of their sustainable development strategy (El-Saadany, 2021; Maged, 2019; Ragui Assaad et al., 2020).

Given the current local context and limited research attention to the role of recruitment practices in encouraging or discouraging women from entering the formal labor market, this paper serves as a starting point to understanding women's barriers to entry into employment.

2.3 Legal position and antidiscrimination

Despite the presence of several anti-discrimination clauses in the constitution and labor laws which prohibit discrimination on the bases of "sex" ("Constitution of the Arab Republic of Egypt," 2014, pp. Articles 9-13; "Egyptian Labour Code (No. 12)," 2003), women's political empowerment score in the Global Gender Gap Index remains as low as 0.196 (where a score of 1 indicates parity) (El-Assiouty, 2022). Further, Article 11 of the constitution stipulates that the State "ensures women empowerment to reconcile the duties of a woman toward her family and her work requirements" ("Constitution of the Arab Republic of Egypt," 2014, p. 27). According to the current legal framework, explicitly gendered recruitment practices, such as specifying a target gender for the job or specifying that a woman be unmarried, are illegal. However, the reality of these practices is that they continue to exist without intervention or consequence. It is unclear why this discrepancy between the legal framework and current practices exists when the government is actively trying to increase women's participation in the labor force.

2.4 Significance of language

Gendered language has been proven to have a prominent effect on perception, behavior, and attitudes. Previous research in other grammatically gendered languages, such as Dutch, German, Italian, and French have shown that relying on default masculine grammatical gender perpetuates a male bias in perception (Koeser & Sczesny, 2014; Lindqvist et al., 2019; Sato et al., 2016; Vainapel et al., 2015). This male bias in perception not only underrepresents women, but also affects their perceived suitability for different occupations. Therefore, language carries important socio-economic capital and can be used to empower or disempower women (Eckert & McConnell-Ginet, 2003; Pavlenko, 2001). In the context of the workplace, where women in Egypt are typically underrepresented or marginalized, the consequences of using gender-exclusive language cannot be understated. In this paper, I focus on how linguistic features such as grammatical gender can reinforce and perpetuate some of the existing hegemonic roles.

3 Methodology

Data was identified through the six most frequently used recruitment websites based in Egypt and the Middle East. A systematic digital web scrape was conducted weekly using Python, for a duration of six months. Job titles were collected and coded based on descriptive information found in the title^v. During the web scrape I found three different types of jobs: those exclusively targeting women, exclusively targeting men, and targeting either women or men. For the purpose of this paper, the focus is on jobs available to women and so jobs exclusively targeting men were not coded as they are not part of the analysis.^{vi}

A total of 29,944 titles were initially identified during the web scrape, of which 16,215 were excluded while cleaning the dataset. Jobs were excluded from the quantitative analysis if they advertised in English, transliterated English job titles that are not integrated in Arabic, job seekers erroneously searching for jobs in the job posting section, advertisements with career fields instead of job titles, and advertisements that specify a gender without a job title. Examples of excluded data can be found in the supplementary material. Includes were inductively coded for linguistic factors and descriptive job specifications, and deductively coded for occupation, and main economic activity.

3.1 Descriptive (inductive) codes

Jobs were categorized based on G-gender, number (singular or plural), and target audience. For G-gender, the dataset was coded for strictly masculine gendering, strictly feminine gendering, both masculine and feminine gendering (referred to as word-pairs), and masculine or feminine G-gendering with additional gender specifications (see Table 2). For number, job titles were coded as singular or plural because the singular and plural forms are both subject to gender marking in Arabic. For target audience, the job title was coded based on whether it was exclusively targeting women or targeting either women or men. This was not determined by the choice of G-gender; it was determined based on the website specifications and filters.^{vii}

G-gender	Code	Singular example	Plural example
	Strictly masculine	مدیر 'Manager [+masc] '	مدیر ین 'Managers [+masc]'
Masculine denoted by [+masc]	Masculine + gender specification	(ذکور / اناٹ) مدیر 'Manager [+masc] (males/females)'	(ذکور/ اناٹ) مدیرین 'Managers [+masc] (males/females)'
	Masculine + female specification	اناٹ فقط) مدیر) 'Manage r [+masc] (females only)'	(اناٹ فقط) مدیرین 'Managers [+masc] (females only)'
Feminine denoted by	Strictly feminine	مدیر ة 'Manager [+fem] '	مدیرات 'Managers [+fem] '

Table 2 Linguistic Factors - Coding for grammatical gender and number

[+fem]	Feminine + gender specification	(ذکور/ اناٹ) مدیر ق 'Manager [+fem] (males/females)'	NA
Both		مدیر ۃ /مدیر	مدیر ات/مدیر پن
Masculine &	Word pair	ۃ /مدیر	
Feminine	(masculine/feminine)	'Manager [+masc] /	'Managers [+masc]/
(word pair)		Manager [+fem]'	Managers [+fem]'

3.2 Occupational (deductive) codes

Occupational classifications were coded based on the ILO's most updated International Standard Classification of Occupations (ISCO-08) which separates occupations based on 10 different groups that are linked to a specific skill level (Office, 2012). Similarly, main economic activity was coded based on the ILO's International Standard Industrial Classification of All Economic Activities (ISIC Rev.4) (ILO, 2008). A brief description of these classifications can be found in the supplementary materials.

3.3 Data analysis

This article combines both qualitative and quantitative methods to analyze the corpus. Firstly, through a content analysis the data is systematically categorized and quantified to produce descriptive statistics. Secondly, multinomial logistical models are used, where relevant, to show that gendered variations in the language used in recruitment is not arbitrary.

4 Findings

In this section I first present an analysis of the language used in recruitment, with a particular focus on the choices of G-gendering in job advertisements. This is followed by an analysis of occupation & gender, and industry & gender. Finally, I present the types of jobs exclusively targeting women and the attempts at using gender-inclusive language in the corpus.

4.1 What kind of language is used in recruitment?

Overreliance on the masculine

There is a clear preference for recruitment websites to advertise in the masculine form, where 83.4% of jobs were advertised in masculine g-gender (see Figure 1). This representation gap in the choice of g-gender is largely expected and reflective of the existing male dominance and gender segregation in the Egyptian labor market. This is especially highlighted when we exclude jobs exclusively targeting women (which may be inflating the use of feminine g-gender, n=1,294) from the analysis and focus instead on

jobs simultaneously targeting women and men (n=12,435). Here the use of masculine ggender increases to 89.8% despite these jobs targeting both women and men.

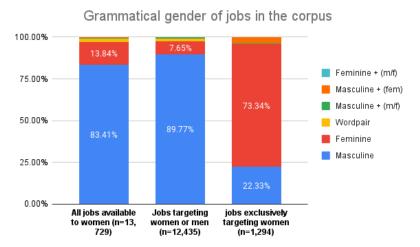


Figure 1 Dominance of masculine grammatical gender in online recruitment

Additionally, looking at the interaction between g-gender and number (singular or plural) we find that most jobs are also advertised in the singular form (82.3%). This is important in contextualizing the results for two main reasons. Firstly, with singular masculine gender marking it is more difficult to determine whether the referent was generically intended or not. This is largely because two factors are likely to affect the applicant's interpretation of the masculine: linguistic factors and occupational expectations (or stereotypical factors). In the case of linguistic factors, the masculine generic is more likely to prime male expectations. This relationship is seen to hold for non-male dominated jobs as well, such as '*teacher*' or '*nurse*' (Gygax et al., 2008). As for stereotypical factors or occupational expectations, a singular masculine generic for maledominated jobs, such as *manager, lawyer*, or *accountant* is more likely to result in a nongeneric interpretation of the masculine as male rather than male or female. Whereas in the plural, it is more plausible to interpret the masculine as referring to more than one gender.

Variation in grammatical gender

The corpus contains different variations and combinations of feminine and masculine ggender. While the presence of strict masculine, strict feminine, or word pairs is largely expected, we see some other gendering that is sometimes contradictory or asymmetrical. For jobs exclusively targeting women, we would expect to find consistent feminine gender marking to reflect the desired referent or target audience. However, as seen in Figure 2 there is more gender variation than is arguably necessary. We still find the masculine form to be used relatively often and more distinctly we find masculine ggendering with additional gender information.

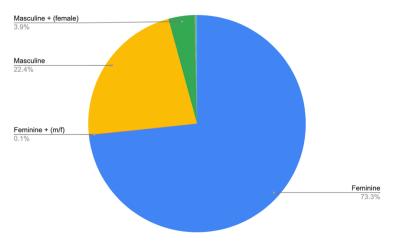


Figure 2 Distribution of g-gendering for jobs exclusively targeting women.

Firstly, it is these jobs that are advertised in the masculine form that are also more likely to be associated with men or male dominated industries. For example, amongst the top jobs advertised in the masculine but targeting women we find *officer* (n=89), *accountant* (n=29), *manager* (n=24), *specialist* (n=16), and *engineer* (n=7). Secondly, jobs advertised in masculine g-gender with additional female specifications (n=53)demonstrate the same relationship (see Table 3). This reluctance and avoidance of feminine g-gender is so deeply rooted that it is even reflected in jobs targeting women exclusively. The cases where the g-gendering of the job is incongruent with the desired or targeted gender for the job, we can see that the choice of g-gender is not linguistically motivated rather it is based on specific occupational expectations. This poses an important question as to why feminine g-gender is not used in these specific cases where the target referents are definitely women?

Translation	Example in corpus
'Lawyer[+masc] wanted (women only)'	مطلوب محامي (نساء فقط)
'sales manager[+masc] (women only)'	مدیر مبیعات (نساء فقط)
'Accountants[+masc] (women only)'	محاسبين (نساء فقط)

Table 3 Examples of the use of masculine generic, with additional social gender specification

Similarly, instances of feminine g-gender with additional male specification (n=21) occur instead for roles typically associated with women. For example, '*secretary* [+*fem*] (*men*/*women*)', '*sales representative* [+*fem*] (*women and men*)', and '*pharmacists* [+*fem*] (*men*/*women*)'. Importantly, this is more purposeful and significant because the feminine form cannot be used generically to refer to both men and women^{viii}. These asymmetries offer (speculative) insight into some of the expectations or attitudes of recruiters and provides compelling evidence that language choices are indeed motivated by social occupational expectations.

Overall, these variations in G-gender choices raise various concerns. Firstly, the avoidance of the feminine form is not consistent across different jobs and is ignored in lower seniority jobs that are dominated by women, such as *secretary*. Secondly, this particular usage of the masculine generic followed by female specification indicates that the masculine generic alone is not sufficiently representative of women, otherwise we

would see it being used consistently throughout all jobs. It appears that recruiters trying to use the masculine form generically find it insufficiently generic without the additional gender specification. This indicates that the masculine form may not be used by some recruiters to refer to both women and men, rather the use of masculine on its own is meant to indicate that the targeted referent is a man. Examples above pose questions as to why the feminine form is not used in the first instance (masculine g-gender coupled with 'women only'), and why word pairs are not used in the second (feminine g-gender coupled with 'men/women')?

4.2 How does language vary across different occupations and industries?

Having established that the language used in recruitment predominantly relies on masculine G-gender, I now explore whether this reliance is consistent across different occupational classifications and economic sectors. In this section I provide an initial contextual overview of which jobs are most represented in the corpus, followed by a deeper exploration of key occupational classifications and industries.

Overall distribution of occupational classifications and main economic activity

The distribution of occupational classifications in the corpus is skewed towards professional, associate professional, clerical support, managerial, sales, and elementary roles. Expectedly, other occupations relating to agriculture and machinery occur considerably less as they are more likely to be recruited through contractors and informal markets. Occupational distribution also varies depending on the target audience. Importantly, this variation is associated with different skill levels and seniority being represented in the corpus. Unsurprisingly, jobs exclusively targeting women have a lower skill level.

Similarly, industry distribution is skewed towards five main industries (professional, scientific, and technical activities, wholesale and retail trade, administrative and support services, manufacturing, and human health and social work) making up over 70% of the corpus. While other industries including agriculture, water supply and waste management, arts, entertainment and recreation, mining, and other service activities make up just 3% of the dataset. This distribution also varies depending on target audience.

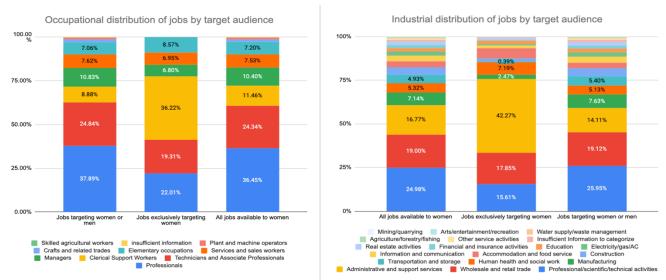
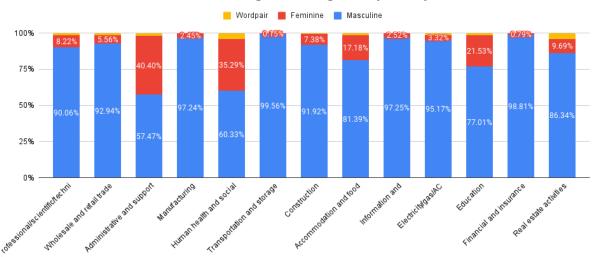


Figure 3 Distribution of jobs according to target audience and main economic activity. Distribution of grammatical gender across different industries and occupations

Most job classifications predominantly use masculine g-gender. However, this relationship is inconsistent and differs in extremity depending on the industry and occupational classification. Variation in G-gender based on industry can be seen in Figure 4. Most notably, *administrative and support services* as well as *human health and social work* show the greatest variation in G-gender. While these differences in sectors are initially statistically significant, most of the variation can be explained by differences in occupational classifications within these sectors.



Distribution of grammatical gender by industry

Figure 4 Distribution of grammatical gender across the top 13 industries (97% of the data, with at least 200 occurrences per industry)

The distribution of grammatical gender across different occupational classifications is presented in Figure 5. Unsurprisingly, masculine G-gender dominates the majority of occupational classifications. While it may be difficult to compare the use of the masculine and the feminine because the masculine can be used generically (as opposed to the feminine), the reduced use of the feminine form is also reflected in jobs exclusively targeting women. Further, its asymmetric use in the clerical support workers classifications (which includes secretarial roles, administrative roles, and reception duties) may shed some light on the embedding of social expectations in g-gender. This asymmetry reinforces the speculative evidence that perhaps masculines are not used by recruiters as a generic term and are potentially not interpreted as such either. If masculines were the default and generic method of recruitment, we would not see the exclusive use of the feminine form for certain jobs. Additionally, we would not find significant variation in the use of masculines across industry and occupation. It is also worth noting that the distribution bias does not seem to be an issue of skill either, as elementary occupations or lower skilled roles (including couriers, kitchen workers, waiting *staff*) are also dominated by men. This relationship is found to be highly statistically significant as seen in Figure 6.

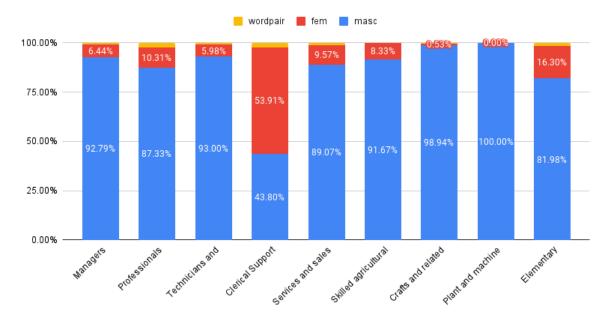


Figure 5 Distribution of grammatical gender across occupational classifications

The figure reflects the existing occupational polarization in the Egyptian labor market in various ways. Firstly, managerial and professional roles have a high probability of being advertised in the masculine regardless of whether the job targets women or women and men. Additionally, the gap between them in the diagram is reflective of the lack of senior positions and opportunities advertised to women. Secondly, craft and related trade work typically targets men, and this is seen both in the language and advertising attitudes. On the other hand, clerical roles targeting women or men and women have a substantially higher probability to advertise in the feminine, and by extension have a higher probability of targeting women.

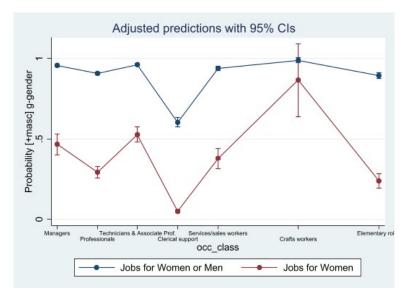


Figure 6 predicted probabilities of the use of masculine grammatical gender by occupation, sub-grouped by target audience at 95% confidence intervals.

In the following sections, I unpack this relationship across three key occupational classifications (managerial positions, professional roles, and clerical support roles) and

three key industries (human health and social work, professional services, and administrative services).

Managerial positions

There were only 92 managerial roles advertised in the feminine form in comparison to 1,325 advertised in the masculine form in the corpus. What do these managerial roles entail and how do they differ?

There is a substantial amount of diversity in the nature of managerial roles advertised in the masculine compared to the feminine. Of course, this could be explained by their more frequent occurrence. However, it is immediately evident that once again the feminine form is only likely to be used in cases administrative contexts or in supporting rather than leading roles. While masculine managers are more likely to be general managers, executive managers, audit managers, cyber security managers, production managers, project managers, and financial managers, feminine managerial positions are less likely to branch out of administrative positions. Examples of feminine managers in Figure 7 include office manager (n=55), reception manager (n=1), assistant manager (n=3), and house *manager* (n=12). Surprisingly, the role *office manager* is more likely to be advertised in the feminine form than the masculine, even though masculines are more likely to be used for managerial titles (ratio of 1:15), we still see the feminine outnumber the masculine in this specific role. Further, all instances of assistant-manager in the corpus used the feminine form for 'assistant' and the masculine form for manager. This choice of g-gender undoubtedly plays a role in reinforcing a clear seniority divide/gap, especially since the masculine generic is not consistently used throughout the same job title. Finally, although linguistically translated as a *manager*, the role 'house manager' in Arabic semantically translates to housekeeper, which is an elementary occupation and not regarded as a senior position.



Figure 7 Different types of feminine managers in the corpus

Therefore, it is evident that not only is a *manager* more likely to be advertised in the masculine, but also the masculine *manager* is quite distinct from the feminine *manager*. This language divide indicates a much deeper issue of gender segregation in managerial roles as well as a layered embedding of occupational expectations that cannot be solved simply by increasing the frequency of the feminine form of *manager*. Rather it requires an exploration into the reasons behind this gender segregation.

Professional positions

The professional classification (n=5004, 36.45% of corpus) houses all high-skilled labor such as *lanyers, accountants, analysts*, and *engineers*. In this section, I explore the question: are

all professional roles equally masculine, given that previous results have shown that the majority of professional roles are advertised in masculine generics?

Firstly, Figure 8 presents the predicted probability (sub-grouped by target audience) of the use of masculine g-gender for different types of professional roles, including those that are male-dominated (e.g., *engineer*), neutral (e.g., *organizer*), and female-dominated (e.g., *nurse*). If the masculine is truly considered generic, we would see no significant variation across different professional roles. However, the present inconsistency in the use of masculines challenges this view that they refer to men and women equally. The figure shows an incremental step change in the use of masculine g-gender based on role stereotypicality, where female-dominated roles (even those targeting both women and men) will be less likely to use masculine g-gender. Further, the figure shows that even when a role exclusively targets women, if it is typically male-dominated, it will still use masculine g-gender. Additionally, differences (although less extreme) between neutral and male-dominated roles are also found to be statistically significant. Importantly, however, the step between neutrality and female-dominated roles is much more pronounced, which may indicate that 'neutral roles' are more male-leaning than they are female-leaning.

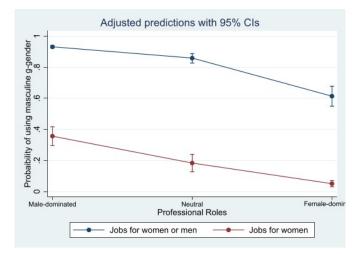


Figure 8 Predicted probabilities of the grammatical gender used to advertise for professional roles

Exploring this further by looking at the 15 most frequently occurring professional jobs (90% of professional roles fall in this category), we also find that the use of masculine g-gender is not consistent across different jobs. In Figure 9, professional roles are categorized based on their level of masculine dominance. This distribution of g-gender across these roles is hierarchal and once again gendered preferences are reflected in the linguistic choices of recruiters. Jobs in the fields of law, engineering, medicine, and accounting veer much more heavily towards the use of the masculine form. On the other hand, supporting and communal roles are more likely to be associated with women and use the feminine form instead.



Figure 9 Masculine dominance in professional roles: percentage of masculine grammatical gender in the most common professional roles.

Clerical roles

Clerical roles accounted for 11.5% of the corpus (n=1,573) and as seen in Figure 4 are not dominated by masculine G-gender. This is the only category in which we start to see a shift from the previous findings that showed a heavy reliance on masculines for managerial and professional roles to roles that are exclusively targeting women. At first glance, the data seems to suggest that clerical roles are dominated by feminine g-gender, and by extension women. However, breaking this down further, we see that this result is driven and skewed by the overwhelming majority and feminine dominance over one specific role: *secretary*.

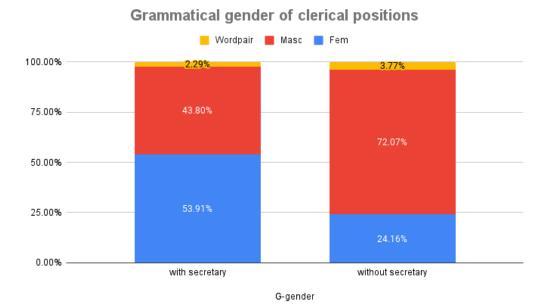


Figure 10 feminine grammatical gender dominance with and without the role secretary.

The data shows a very strong relationship between secretarial roles and feminine g-gender to the extent that its removal results in a completely different distribution (see Figure 10). Without the feminine *secretary*, clerical roles follow the same trend seen in other occupational classifications with a heavy reliance on the masculine form. Extending this approach and analysis on to the rest of the corpus, we see that the removal of one job title substantially reduces share of jobs advertised in feminine g-gender. In other words, secretarial roles have inflated the representation of women in the corpus and in online recruitment.

To explore this relationship further, I present the top 10 jobs that account for 95% of the clerical roles in the corpus in Figure 11. Of these jobs, only *secretary* and *administrative officer* showcase a majority in the feminine. All other jobs follow the same patterns presented in other occupational classifications, with masculine G-gender being the dominant form of advertisement. Jobs for clerical support workers in the professional, scientific, and technical industries are more likely to be advertised in masculine G-gender. Here we see a deviation from the typical association between clerical support workers and women, such that supporting roles in high-skilled industries would still target men over women.

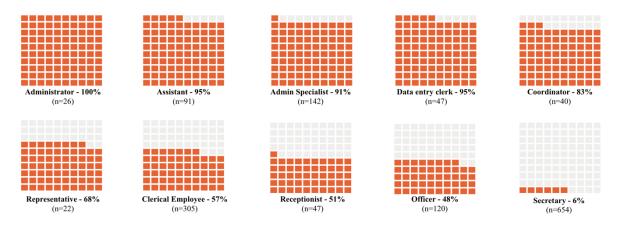


Figure 11 Masculine dominance in clerical roles: percentage of masculine grammatical gender in the most common clerical roles.

Additionally, clerical roles advertised in the masculine form (27 unique job titles) have a much wider variety and range, in comparison to clerical roles advertised in the feminine form (10 unique job titles). While this may not seem like an issue, it shows just how restricted women's opportunities are even within this occupation that favors them. This echoes the occupational polarization present in the Egyptian labor market and the limited number of opportunities available for women. It is worth noting that if recruiters are using feminine G-gender as a linguistic feature to signal the job's intended referent or target audience as female, then it is also plausible that they are also using masculine G-gender to indicate that the intended referent is male and not male or female.

Finally, the role of *secretary* can also be explored from the masculine perspective. We see such strong dominance and preference for *secretary* to be feminine and female, but what does a masculine *secretary* look like in the corpus? In the corpus there are some (albeit few) instances of secretarial roles advertised in the masculine rather than the feminine (n=29), of those instances, the majority are for *executive secretaries* (n=10). Further, there are 7 occurrences of specialized secretarial roles, such as those in architecture firms, trade offices, and tourism agencies. The remaining titles include *secretary* (n=8) and *administrative secretary* (n=4). Due to the limited sample size, one cannot

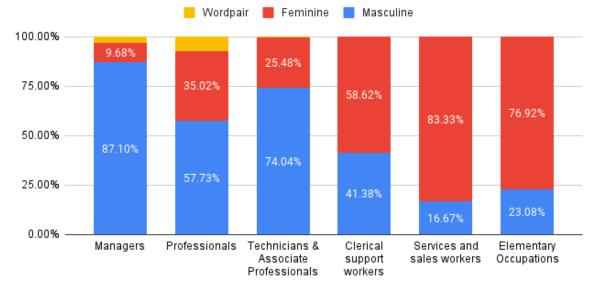
test if this is distinctly and significantly different from secretarial roles targeting women. However, it is not coincidental that the most frequent title for secretarial positions advertised in the masculine is for *executive secretary*.

Human health and social work.

The health sector provides a good example of gendered approaches in the language used in recruitment that vary based on seniority and skill level. As seen in Figure 12, managerial, professional, and technical roles in this sector are dominated by masculine ggender. However, supporting roles, service roles, and elementary positions are instead dominated by the feminine g-gender. So, while the industry as a whole is more likely to advertise in the masculine form, this preference is not equally distributed across different positions. This asymmetry is found to be statistically significant.

Unpacking this even further we find that amongst professional roles in the industry the most common job advertised in the masculine is *doctor* and the most common job advertised in the feminine is *nurse*. This seniority divide is also reflected within the same professional classification. Evidently, women are more likely to be explicitly targeted for nursing roles than they are for other medical professional roles. Similarly, amongst clerical support workers in the industry, the top job advertised in feminine g-gender is (expectedly) *secretary* while the top job advertised in masculine g-gender is a *pharmaceutical assistant*. This relationship holds for service occupations as well where women are more likely to be targeted for caregiving roles, personal care work, and domestic work.

This raises several concerns as the feminine form cannot be used generically and could hinder male professionals' ability to apply for 'stereotypically female roles' and may even add to the stigma surrounding these positions (Kearns & Mahon, 2021). Additionally, the current language used signals a clear message to applicants that *doctors* are supposed to be men, and *nursing* is for women.

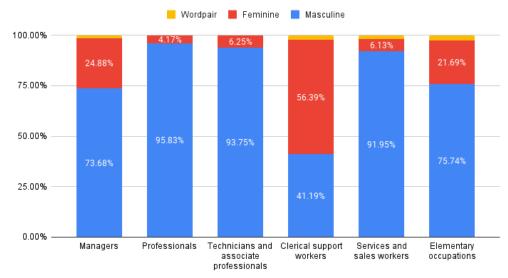


Distribution of grammatical gender by occupation in the health sector

Figure 12 Distribution of grammatical gender by occupation in the health sector

Administrative and Support Services

Looking at the industry that is most likely to feature feminine g-gender, the same distribution seen above holds. Managerial, professional, and technical roles are still more likely to use masculine g-gender and in turn clerical roles are more likely to target women (see Figure 13). There seems to be a seniority ceiling for women within the industry in which they are most often targeted. This relationship is found to be statistically significant and is reflected both in language choice and target audience. Specifically, within this sector women are more likely to be explicitly targeted for clerical roles than they are for professional or managerial roles and the g-gender reflects this.



Distribution of grammatical gender by occupation in the administrative sector

Figure 13 Distribution of grammatical gender by occupation in the administrative sector

4.3 What kind of jobs are advertised to women only?

As seen in section 4.2, women are most likely to be targeted for clerical and supporting roles followed by professional and associate professional roles. They are also less likely to be targeted for managerial roles relative to jobs targeting both women and men. This variation in distribution is found to be statistically significant as seen in Figure 14. Specifically, professional roles, technical roles, and managerial roles are less likely to target women. In contrast to clerical roles which are far more likely to target women. Based on this distribution in the corpus, it is evident women have lower access to higher paid and senior positions.

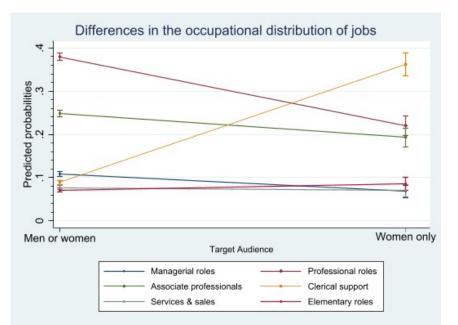


Figure 14 predicted probabilities (at 95% confidence intervals) of whether a job exclusively targets women or targets men or women depending on occupational classification.

This is further reinforced by the top 10 most frequently occurring jobs that are advertised exclusively to women compared to those advertised for men or women. In jobs available to men and women, which are mostly advertised in the masculine, we find higher skilled and seniority positions taking the top spots (e.g., *officers, accountants, managers,* and *engineers*). On the other hand, within jobs advertised to women only we find an opposite effect where low seniority positions are dominating the list (e.g., *secretary, representative,* and *cleaner*). Even senior positions exclusively targeting women are still more likely to be advertised in the masculine.

Additionally, I present some of the cases of explicit gendered recruitment in Table 4 where the recruiter has made their gender preference explicitly clear using both g-gender and social gender (i.e., semantically). There are several points to be made about the examples collected.

Ways to refer to women in	Freq.	
Girl	بنت أو فتاة	27
Unmarried woman	آنسة	29
Married woman	سيدة	11
Ways to refer to men		
Young man	55	

Table 4 Examples of explicitly gendered job advertisements

Firstly, women are defined and sub-grouped or targeted based on their marital status instead of their individual characteristics or skills. Jobs may specify that they are searching for married or unmarried women, and as seen in Table 4 they are more likely to target unmarried women. Where women are targeted based on their marital status,

men are evaluated instead on merit (e.g., '*serious and committed young man wanted*'). This has larger implications on gender roles, expectations, and the aversion to, and stigmatization of, married women in the workplace.

Secondly, the use of *girl* rather than *woman* or *young woman* across different job types including sales, accounting, nursing, call centers, and domestic work sheds light on how women are perceived and regarded in the workplace. This is not to be equated with the use of *young man*, as this can be feminized to refer to young women as well. It is interesting that the corpus does not contain many instances that explicitly specify *'man wanted'* like the aforementioned examples. This suggests that recruiters consider women (whether young, married, or unmarried) and young men as mere deviations from the 'man' as default.

Hierarchal and gendered occupational expectations

Thus far the asymmetric use of g-gender has only offered speculative evidence that the masculine may not be generically intended in recruitment. Even with the overreliance on masculine g-gender varying between occupational classifications, without further metalinguistic evidence, one can still argue that the masculine is still referring to women and men. In this section, I use examples from the corpus to challenge this view and present further evidence that the masculine is not being used generically.

Table 5 presents a few examples found in the corpus with multiple jobs listed in the same advertisement. In all examples listed below, the senior and more professional role is always advertised in the masculine while the supporting role is always advertised in feminine g-gender, instead of consistently using the masculine generic. The first example reflects the existing occupational distribution in the corpus; women are more likely to be targeted for secretarial roles and men are more likely to be targeted for professional roles. The difference in this example is that this is seen within the same advertisement. The recruiter explicitly genders their selection of different positions based on seniority and occupational expectations. This actively signals to women qualified for the accounting role, that this position is not targeting them, rather they are more likely to be accepted when applying to the less senior role.

Role with Feminine g- gender	Role with Masculine g- gender	Example in corpus	No.
secretary	Accountants	مطلوب محاسبين وسكرتيرة	1
Cleaning supervisor	Administrative security guard	امن اداري ومشرفه نظافة	2
dermatologist	Heart surgeon	مطلوب استشاري جراحة قلب-استشارية جلدية	3
nurses	dentists	مطلوب اطباء اخصائيين اسنان وممرضات أخصائيات	4
nurses	doctors	اطباء وممرضات	5
tele sales	engineer	مطلوب بنات تلي سيلز ومهندس	6
assistant	dentist	مساعدة طبيب اسنان	7
assistant	manager	مساعدة مدير	8
assistant	doctor	مساعدة طبيب نساء	9

Table 5 Examples of asymmetric or hierarchal gendering within the same advertisement

assistant	doctor	مساعدة طبيب لمركز تخسيس وعلاج طبيعي	10
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This same relationship is reflected in examples 3-5 where the feminine is used for the *dermatologist* and not the *heart surgeon*, the *nurse* and not the *doctor* or *dentist*. In all roles presented, there is no particular reason why the *surgeon* cannot be a woman and no reason that mandates the *nurse* has to be a woman. However, this seems to be a relationship that holds throughout the entire corpus.

Another interesting case can be seen in example (2), where unlike the other examples there is no gap in seniority. Here we see different expectations within the same level of seniority and across horizontal organizational structures, where women are more likely to occupy roles related to cleaning services and men are more likely to occupy roles related to security and general administration. There are also specific cases where a supporting position, such as *assistant manager*, is advertised with incongruent G-gender. Examples (7) and (8) showcase this incongruency. We see that the choice of G-gender for the managerial role is in the masculine form and the assistant role itself in the feminine form (i.e., 'assistant [+fem] manager[+masc]'). Similarly, the assistant to the doctor is feminine and the doctor is presented in the masculine. This explicit change and asymmetry in the choice of gender reinforces this seniority divide. Perhaps the most explicit form of gendering can be seen in example (6) where the direct translation of the job advertisement is 'sales-girls and engineer [+masc]'.

4.4 Gender-inclusive language alternatives

In this section, I explore the relatively infrequent use of 'gender-fair' or 'gender inclusive' language. The corpus contained two variations of jobs referring to women and men: binomial word-pairs (e.g., *actor/actress*), and masculine generics followed by additional gender specifications (e.g., *actor m/f*).

There are 303 (2.2% of the corpus) instances of advertisements explicitly indicating that the job is meant for both women and men in the corpus. Two key questions arise: firstly, which jobs are more likely to use inclusive language, and secondly, when inclusive language is used; what does it look like?

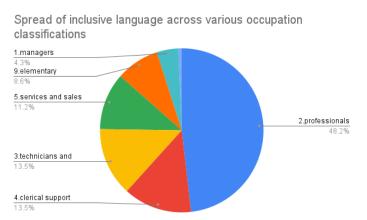


Figure 15 spread of inclusive language across occupational classifications

Professional roles are substantially more likely to use inclusive language (48% of inclusive language fell in this occupational category) compared to all other categories. However, managerial positions (and craft or trade workers) are the least likely to use any form of inclusive language. At first glance, this may be attributed to higher frequency of professional roles compared to managerial roles. However, further exploration through a

multinomial logit model and calculation of predicted probabilities indicates that managerial roles have the lowest probability for using inclusive language and are statistically different to professional roles. Therefore, gaps in the use of inclusive language are seemingly hierarchal in the corpus and inconsistent across different occupational classifications.

Another interesting way to explore binomial word pairs is by looking at the choice of word order. Previous research on order preferences has shown that they carry "beliefs about agency, animacy, power, [and] prototypicality" (Hegarty, 2013, p. 73). Typically, in Arabic, word pairs lead with the masculine (unmarked form) and are followed by the marked form which denotes feminine g-gender. An example of this can be seen in Table 2, where conventionally (and perhaps intuitively) the unmarked masculine supersedes the feminine in Arabic. This relationship is also found to be consistent across various languages that have feminine and masculine versions of different jobs. For example, *actors/actresses or host/hostess* in English, or *Koch/Kochin* in German – the order follows a consistent pattern. Additionally, this order can be shortened through word-ending repetitions (e.g., *Koch/in* in German and *actual of g-gender to what is conventionally used and seen in this corpus.* Instances of word pairs where the feminine supersedes the masculine are of particular importance because they clearly and purposefully go against the norm.

Examples of this can be seen in Table 6 where feminine/masculine pairs are presented. Immediately, we see that these choices are not random but are instead motivated by occupational preference and expectations. In the first example, the use of *secretary* [+fem] before *secretary* [+masc] is purposeful in that it signals that this job is primarily advertised for women as this is the expected gender for the role. In the second example, we see a preference for a female gynecologist over a male gynecologist, this is not surprising given the culture and taboo surrounding women's sexual health in Egypt (Ayman, 2022). In the final example, we also see this preference for a woman to manage a beauty center that is reflected in the g-gender.

Table 6

Translation	Example in corpus
'Secretary[+fem] - secretary[+masc]'	سکرتیرۃ ـ سکرتیر
'Fine arts/applied arts engineers[+fem]/engineers[+masc]'	مهندسات/مهندسين فنون تطبيقية/جميلة
'Gynecology specialist[+fem]/specialist[+masc] wanted'	مطلوب اخصائية / اخصائي نسا وتوليد
'Manager[+fem]/Manager[+masc] for a women's beauty center'	مدیر ه/مدیر لمرکز تجمیل سیدات

Overall, these examples help show that g-gender can and is often used to signal occupational preferences. While it is difficult to extend this argument to jobs that follow the typical ordinal pattern of *masculine/feminine*, it is not entirely out of the question to imagine that *masculine/feminine* combinations may still have a male preference for the role.

5 Discussion

In this discussion I focus on the governance gaps in recruitment practices and their implications, the need for promoting and adopting gender-inclusive practices, and finally

some of the challenges and barriers to implementing gender-inclusive practices in recruitment.

Gendered and biased recruitment practices in Egypt are layered (see Figure 16). These practices are manifestations of different socio-cultural and economic factors. At the sociocultural and socioeconomic level, gender roles have created rigid gendered occupational expectations and preferences at the sectoral and occupational levels. This has contributed to the creation of a highly segregated and polarized labor market. Additionally, these expectations have created an obvious opportunity gap which can be observed in this study. These levels and layers are embedded and reflected in the linguistic choices of recruiters. Importantly, these linguistic practices, which are largely observable relative to the other socio-cultural levels, are reflective of a much larger problem that has been left unaddressed at the national and institutional level.

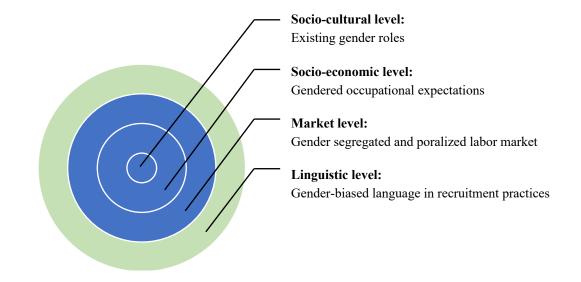


Figure 16 The unobservable layers and factors underlying gendered recruitment practices.

5.1 Governance gaps in recruitment practices

A governance gap exists on two different scales in the field of online recruitment. At the national level, the governance gap allows illegal gendered discriminatory practices to go unchecked where jobs are advertised according to gender rather than qualification. This is reflected at the organizational level where recruiters and companies are unaware of the implications of gendered recruitment practices in the absence of regulation. Attention to this issue is weak, consequently individual recruitment websites and recruiters themselves are allowed to operate under no restrictions and considerations for gender inclusion. Given the Egyptian government's targets to increase women's labor force participation in the formal sector, allowing these practices runs contrary to their goals and strategy.

5.2 Implications

There are various implications at the national, organizational, social, and perceptual levels for allowing the existing practices to persist without awareness and intervention. Firstly, unchecked recruitment practices may be contributing to the low labor force participation of women in the Egyptian workplace. The absence of linguistic representation, whether intentional or unintentional, arguably reinforces the gender segregation found in different industries and the occupational polarization found across different job types with varying skill levels (Hodel et al., 2017). Not only are women less likely to be targeted for the

majority of jobs by recruiters, but even when they are targeted alongside their male counterparts, the language does not seem to reflect this. This may create a 'gatekeeping effect' where the language purposefully signals to applicants that the workplace is predominantly targeting men. While this 'crowding out effect' cannot be fully attributed to linguistic recruitment practices, it is a consequence of a combination of gender-biased practices.

Similarly, at the social and organizational level, these discriminatory and gendered recruitment practices could be (unknowingly) creating barriers to achieving a gender-fair workplace, excluding skilled labor, and under employing women. Language is not a neutral code, but an active influencer of social organization that can "transmit and reproduce power"(Eckert & McConnell-Ginet, 2003; Foucault & Hurley, 1978; cited byMills, 2004). Consequently, gendered discursive practices are likely to continue reinforcing existing hegemonic roles and gender segregation in the labor market (Jakiela & Ozier, 2018). The benefactors from this are male applicants, who are more likely to be implicitly and explicitly targeted for high skilled, high-paying, and senior positions.

Language plays a powerful role in mediating applicants' and recruiters' expectations as well as behaviors. It has previously been established in the literature that gendered language severely underrepresents women in perception and negatively affects their perceived suitability for a role (Horvath & Sczesny, 2016). Additionally, from the perspective of gender-minority applicants, roles advertised in generic masculines may result in a lower sense of belonging and perceived chance of success amongst applicants. This is especially important as women in Egypt have previously reported that barriers to their employment include fear of rejection (Constant et al., 2020; El-Saadany, 2021).

5.3 Promoting gender-inclusive practices

There is a need for an increase in gender-inclusive practices in Egyptian recruitment because current practices are underrepresenting women in the labor market. This echoes the recent interest in gender-fair recruitment in other countries with grammatically gendered languages such as Germany, Switzerland, and France. This topic can be tackled on various levels, and while underlying deep-rooted gender roles are harder to change, linguistic practices are not. Consequently, this paper calls for attention to top-bottom interventions and changes in the linguistic practices alongside the existing bottom-up approaches taken by the Egyptian government that aim to increase women's labor force participation, such as increasing educational attainment amongst young women. However, there are various intertwined barriers to the adoption of inclusive language in online recruitment, including awareness, efficiency, and demand for change.

Firstly, there is limited awareness and attention placed on the importance of Egyptian recruitment practices. Without further metalinguistic data, one can only speculate that this kind of gendering is, at the very least, habitual. Additionally, studies on the impact of gendered languages have often focused on European settings and have not been extended to Egypt, yet. In the absence of a systematic exploration of the language used in recruitment (prior to this paper), it was not clear that occupational polarization and gender segregation are as pervasive as the findings have demonstrated. Due to this lack of awareness, the second issue arises because of a general acceptance that the masculine is representative of all genders, which makes inclusive language feel redundant or 'inefficient'. Often the issue of gender-fair language is explored from the 'efficiency lens'; whereby compelling arguments made in favor of the masculine default will claim that the repetition is linguistically inefficient. However, in the context of online recruitment where occupational expectations are much more gendered, the generic masculine can no longer be assumed as such. Further, the corpus is full of linguistically

inefficient examples in cases where recruiters have avoided using the appropriate inclusive language to present asymmetrical g-gender and social gender information (see Table 3). These examples undermine the legitimacy of the 'efficiency' argument as it would have been much more linguistically and spatially efficient to use inclusive language.

Finally, is there even a demand for change amongst Egyptians and Arabic speakers given this aversion to gender-inclusive language? In a study published almost 30 years ago, Pavlou and Potter argued that amongst Arab societies there was no desire to change gender-biased language (1994). However, recent movements amongst Arab youth have called for the increased use of feminine pronouns as opposed to a reliance on the masculine default. Some evidence of this can be seen on Twitter where Arab women have explicitly called out for the use of the feminine form for the sake of inclusion, with Twitter responding by launching a feminine language setting, allowing users to be addressed in feminine pronouns instead.

Issues with gender-inclusive language in Arabic

Developing inclusive language in grammatically gendered languages is not a straightforward process. Due to the Arabic grammatical system, gender inclusive language can create an entrenchment in a binary view of gender. Having the masculine/feminine word-pair as the default solution for job recruitment would also end up excluding nonbinary gender identities. While this is not currently seen as in issue in Egypt due to their limited recognition of nonbinary gender identities, it is likely that the current alternative for 'inclusive' form will become outdated in the future. This can also be seen in German job advertisements, where initial movements to create gender fair language (e.g., Koch/in or Koch/Kochin) would now be deemed exclusive. This has led to another change where the masculine default is used and is followed by male, female, diverse or 'm/f/d' distinctions (e.g., Koch m/f/d). However, studies have found that this particular form is still less effective and less representative of women, due to its reliance on the masculine generic (Horvath & Sczesny, 2016). The extent of this issue can be seen to vary across different languages where some languages, such as Spanish, have morphological and orthographic systems that are able to facilitate and easily absorb these changes (e.g., the use of Latinx instead of Latino or Latina).

These movements show that inclusive practices cannot follow a 'one-size-fits-all' strategy. Current linguistic practices worldwide (even in non-gendered languages where neutrality is readily interpreted as male) fall short from achieving an environment where gender minorities feel included in the workplace. Although, attention to the language used in recruitment may help foster an inclusive environment in online recruitment, 'check box' attempts that solely focus on moving away from the use of masculine generics are likely to be reductive without other socioeconomic interventions.

6 Conclusion

In the absence of regulation of online recruitment, gendered and exclusionary practices have been left unchecked. Consequently, there are various systemic, social, and linguistic barriers to entry for women into the labor market that need to be addressed to increase women's participation in the workforce in a meaningful way. Systemic barriers are evident in the differences between the number of opportunities accessible to men compared to women. This is reflected linguistically as women are more likely to be targeted for care roles, secretarial, and administrative roles as opposed to other professional or managerial roles. This suggests that the language used in recruitment is not just grammatically motivated, but rather it indicates a deeper encoding and embedding of social expectations. Consequently, the overreliance on the masculine form, especially where women are typically marginalized, needs to be reassessed from a feminist and gender-inclusive perspective. This would present a unique opportunity to implement effective interventions that aim to reduce the labor force participation gap through gender-fair language.

6.1 Limitations of the research

There are sectors that are not represented or reflected in this corpus and analysis. This includes the informal sectors, multinational sectors (which typically recruit in English), and industries that typically recruit through contractors rather than individual employees. Furthermore, C-level positions and executive roles where the gap between women and men is most likely to be pronounced are not likely to be hired through online recruitment. Finally, any overlap between recruitment websites (i.e., same company using multiple platforms) could not be measured or filtered out.

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ⁱ There are other variations of 'a(t)' including a(h), 'aa', and occasionally 't' Aoun, J. E., Benmamoun, E., & Choueiri, L. (2009). *The Syntax of Arabic*. Cambridge University Press. https://doi.org/DOI: 10.1017/CBO9780511691775

ⁱⁱ Female unemployment rates at 19% compared to male unemployment at 6% as of 2019.

ⁱⁱⁱ Estimated raw gender wage gap ranges from 25% to 40% depending on sector Biltagy, M. (2014). Estimation of gender wage differentials in Egypt using Oaxaca decomposition technique. *Topucs in Middle Eastern and African Economies*, *16*(1), 18-42.

^{iv} On average, 94.3% (n=21,528) of jobs in online recruitment are accessible to men, while only 60.28% (n=13,758) of jobs are accessible to women.

^v For example, in the title '*hotel manager*', '*manager*' is coded for gender and occupational classification and the descriptive information is used to determine the main economic activity of the job.

^{vi} Jobs exclusively targeting men will only use masculine grammatical gender and so adding this to the analysis would skew results.

^{vii} Majority of recruiting websites had a women only, men only, unspecified gender filter.

^{viii} The use of feminine g-gender to refer to men can be considered offensive and culturally unacceptable. This can be traced back to an aversion to femininity and homophobia.