

Gendered Professional Identity in AI-Generated Discourse: An Exploratory Corpus-Assisted Analysis of ChatGPT, Gemini, and Grok

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Abstract

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As large language models (LLMs) become increasingly prevalent in professional and organizational communication, concern has shifted from overt stereotypes to subtler patterns through which AI-generated language may reproduce gendered assumptions. This study examines how ChatGPT, Gemini, and Grok construct male- and female-referenced professional identities across ten occupations. The dataset comprises 60 texts, generated in June 2025 through three LLM models (ChatGPT, Gemini, and Grok). Using corpus-assisted critical discourse analysis, the study combines keyword and Key Word in Context (KWIC) analysis in Sketch Engine with Halliday and Matthiessen's systemic functional linguistics, Fairclough's three-dimensional model, and van Leeuwen's social actor representation framework. In the sampled outputs, overt stereotyping was limited; however, recurrent lexical and grammatical differences associated male professionals more often with institutional authority and strategic action, whereas female professionals were more often associated with relational competence and communicative expertise. Because each prompt was generated only once during a single collection session. The results show that explicit stereotyping has been visibly reduced in all three LLMs. Nevertheless, implicit ideologies regarding gender still exist in today's AI-generated professional discourse where male professionals have been predominantly associated with institutional authority and strategic leadership, while female professionals have been characterized through relational competence and communicative expertise.

Keywords: Large Language Models; Corpus-Assisted Critical Discourse Analysis; Gender Representation; Professional Identity; Critical Discourse Analysis; Systemic Functional Linguistics



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1. INTRODUCTION

The emergence of large language models (LLMs) has altered digital communication by enabling the rapid generation of coherent, context-sensitive text across education, healthcare, business, recruitment, and workplace communication. Systems such as ChatGPT, Gemini, and Grok are used to produce professional descriptions, interpret workplace scenarios, support decision-making, and facilitate organizational communication. Their growing use raises questions about whether AI-generated professional discourse is neutral or whether it reproduces patterned assumptions about competence, authority, leadership, and identity.

Research on model alignment and safety shows that LLM outputs may still reproduce socially patterned associations present in training data and reinforced through model design and prompting. Rather than appearing only as overt stereotypes, gendered representation may emerge through lexical choice, discourse organization, agency, evaluation, and the attribution of competence, authority, and leadership (Ding et al., 2025). Gender and occupational bias are therefore important not only as measurable disparities but also as discourse patterns that shape how professional actors and roles are represented.

In this study, professional identity refers to the discursively constructed representation of a person's expertise, legitimacy, agency, and role within an occupational setting. Implicit gender ideology refers to recurrent representational patterns that associate male- and female-referenced professionals with different forms of competence, authority, or social value without stating an overt stereotype. Bias is used here in a qualified sense: not every linguistic difference constitutes harm, but systematic differences may become biased when they reproduce unequal social expectations or normalize asymmetric standards of professional legitimacy (Blodgett et al., 2020; Sheng et al., 2019).

From a discourse perspective, language does not merely reflect social reality; it also participates in constructing professional identities, institutional authority, and legitimate workplace roles. Corpus-assisted critical discourse analysis (CACDA) is therefore appropriate for examining recurrent linguistic patterns in AI-generated professional discourse and interpreting how those patterns may construct gendered representations of competence, leadership, authority, and agency.

The study's theoretical contribution lies in treating LLM output as a site of professional identity construction rather than only as a benchmark response. It links corpus-based evidence to transitivity, social actor representation, and critical discourse interpretation in order to explain how apparently positive professional descriptions may still distribute authority, agency, and legitimacy differently across gendered prompts.

1.1. Objectives of the Research

- To examine how ChatGPT, Gemini, and Grok construct gendered professional identities across ten occupations.
- To identify how professional competence, authority, leadership, and agency are linguistically represented in AI-generated professional discourse.
- To compare ideological similarities and differences in gender representation across the three LLMs using Corpus-Assisted Critical Discourse Analysis (CACDA), Systemic Functional Linguistics and Social Actor Representation.

1.2. Research Questions

- How do ChatGPT, Gemini, and Grok discursively construct male and female professional identities across different occupations?

- How are professional competence, authority, leadership, and agency linguistically represented in AI-generated professional discourse?
- What ideological similarities and differences emerge in the gendered construction of professional identities across ChatGPT, Gemini, and Grok?

1.3. Delimitations of the Study

This research is confined to professional definitions in English language that have been provided by free versions of ChatGPT, Gemini, and Grok. Ten professional occupations are considered and analyzed from the linguistic point of view. This research does not deal with the accuracy and correctness of the information and/or models; rather it analyzes recurring lexical and discursive features via a corpus-assisted critical discourse approach.

1.1. Significance of the Study

This study contributes to research on AI-generated discourse by examining how ChatGPT, Gemini, and Grok construct professional identities in gendered prompts. As LLM-generated language enters recruitment, education, and workplace communication, recurrent lexico-discursive patterns may normalize assumptions about expertise, leadership, authority, and agency. The study therefore treats model outputs not as socially neutral products but as discourse that can be examined for patterned representational differences.

Methodologically, the study integrates corpus-assisted critical discourse analysis with three complementary frameworks. Keyword and KWIC analyses identify recurrent lexical patterns across the gendered sub-corpora. Halliday and Matthiessen's (2014) systemic functional linguistics operationalize agency through process types and participant roles. Fairclough's (1992, 1995) three-dimensional model connects textual patterns with discursive practices and broader social ideologies. Van Leeuwen's (2008) social actor representation framework examines how professional actors are activated, passivated, functionalized, identified, and allocated roles. The integration allows quantitative pattern identification to be followed by explicit, theory-led qualitative interpretation.

The practical implication of the study is that it reveals important gendered representations embedded within AI-generated professional discourse. In this way, the results of the study contribute to the improvement of future generations of transparent, linguistic and socially inclusive AI generators while making advances in the study of the intersection between corpus linguistics, CDA, gender and AI.

2. LITERATURE REVIEW

2.1. Gender Bias in Large Language Models

The rapid deployment of large language models (LLMs) in education, healthcare, recruitment, organizations, and professional communication has intensified research on whether such systems reproduce or mitigate gender bias. Earlier work demonstrated that distributional language representations encode gendered occupational associations and that language-generation systems can produce unequal evaluative patterns across demographic prompts (Bolukbasi et al., 2016; Caliskan et al., 2017; Sheng et al., 2019). More recent research suggests that bias in LLM outputs may appear through subtle lexical, evaluative, and contextual differences rather than only through explicit stereotypes (Zhou & Sanfilippo, 2023; Ding et al., 2025).

Early studies commonly examined gender bias at the level of pronoun prediction, occupational association, and word co-occurrence. These approaches are useful for detecting surface-level disparities, but they do not fully explain how extended discourse constructs professional identities. Ding et al. (2025), for example, identified gendered differences across

multilingual ChatGPT outputs, supporting the need to examine representational patterns beyond isolated pronouns or word associations.

Recent research has shifted toward implicit and evaluative forms of bias. Across eight LLMs, including GPT-4o, Gemini 2.5, and Grok-3, explicit stereotyping was comparatively limited, while more subtle differences remained in evaluations of competence, leadership, dominance, and professional authority. These findings indicate that gender ideology may persist through recurrent linguistic patterns even when overt stereotypes are absent.

Prompt design is also a major source of output variation. Döll et al. (2024) found that occupational prompting produced pronoun distributions resembling labor-market patterns and that the prompting method affected bias estimates more strongly than differences among the tested models. More broadly, small changes in prompt format can produce substantial changes in model performance and output patterns (Sclar et al., 2024). Bias evaluation should therefore document prompts verbatim and use repeated generations rather than treating a single response as stable model behavior.

Additional multilingual research demonstrates that gender biases are not unique to the English language. Ding et al. (2025) discovered that there were consistent differences in the use of descriptive terms and conversations among different languages, and demonstrated that identity biases went further than just gender, encompassing wider social categories. Taken together, these discoveries suggest that the presence of representational biases indicates a general feature of modern-day generative AI rather than a linguistic one. Nevertheless, the existing research continues to be mainly concerned with benchmark tests, fairness measures, and stereotype detection, and does not investigate the process of professional identity construction by LLMs through constant lexical selections, agency, authority, and competence.

2.2. Professional Identity and Gender Representation in Workplace Discourse

Professional identity is a social construct that emerges through language, interaction, and institutional practice rather than a fixed personal attribute. From a discourse perspective, recurrent linguistic choices shape representations of expertise, legitimacy, leadership, and organizational power (Holmes, 2008). Workplace studies show that professional identities may be gendered through communicative practice. Holmes (2006, 2008) observes that organizational discourse often associates masculine identities with authority, strategy, and decision-making, while feminine identities are more often associated with teamwork, interpersonal skill, and relational leadership. Zoon and Ashfaq (2021) similarly identify gendered discursive strategies in workplace meetings, while Yoong (2020) shows how media discourse reproduces expectations concerning career success and leadership.

Professional identity in AI-mediated contexts has also received growing attention. A study shows how institutional discourse frames competence, responsibility, adaptability, and expertise in relation to AI adoption, while another study demonstrates that professional norms can reshape gendered language use. However, limited research has compared how different conversational LLMs construct professional identities in extended occupational descriptions. Comparative corpus-assisted analysis of leadership, competence, authority, agency, and workplace identity across ChatGPT, Gemini, and Grok therefore remains underdeveloped.

2.3. Corpus Linguistics and Corpus-Assisted CDA

Corpus Linguistics is an approach that allows one to identify frequent linguistic patterns through analyzing textual corpora. In this regard, corpus linguistics helps to analyze keywords, collocations, and concordances to conduct a more objective and repeatable research; nonetheless, corpus data alone does not provide enough explanation of the ideological meaning of discourse.

Therefore, corpus linguistics tends to be combined with CDA using the approach of Corpus-Assisted Critical Discourse Analysis (CACDA).

Generative AI has added another dimension to the use of CACDA for analyzing AI-generated texts. According to Curry et al. (2024), although ChatGPT is useful for the initial stage of corpus analysis, it is only through researcher-conducted analysis based on corpus data that meaningful patterns and discourse functions can be accurately interpreted. The research has confirmed the significance of using both corpus computation and critical discourse analysis in examining AI-generated language.

Corpus-assisted discourse studies have traditionally concentrated on political, media, and historical discourse, while AI-generated professional discourse has received less attention. Few studies combine keyword analysis, KWIC concordancing, and critical discourse interpretation to compare ChatGPT, Gemini, and Grok. The present study addresses this specific methodological and empirical gap.

2.4. CDA and SFL in Gender Representation

The notion of Critical Discourse Analysis (CDA) sees language as a social practice where power, ideology, and identity are constructed rather than represented (Fairclough, 1992, 1995). This allows for an appropriate theoretical framework to study discursively constructed professional identities and gender relations by means of linking linguistic choices with sociocultural context. In addition to that, Systemic Functional Linguistics (SFL), seeing language as a social semiotic system, introduces a theoretical construct called Transitivity System which is used to analyze how agency, responsibility, authority, and professional competence are constructed in terms of process types and participant roles (Halliday & Matthiessen, 2014). These theories help researchers reveal ideological meanings encoded in apparently neutral grammatical choices.

Fairclough's (1992, 1995) Three-Dimensional Model builds on the linguistic approach to discourse analysis by interpreting it through three interrelated levels of text, discursive practice, and social practice so that it becomes possible to trace how linguistic patterns perpetuate social ideologies. In addition to Fairclough's model, the framework of Social Actor Representation by van Leeuwen (2008) explores how discourse serves to legitimize identities through certain techniques, such as activation, passivation, functionalization, and role allocation. Combined with the Transitivity System by Halliday & Matthiessen (2014), all the three frameworks offer a thorough explanation of agency, authority, and the construction of identities. All these models are known for being theoretically compatible in terms of ideological discourse analysis (Lukin, 2024). However, the combined application of these models to AI-generated professional discourse, especially that of ChatGPT, Gemini, and Grok, is rather underexplored.

2.5. Comparative Studies on LLM and Research Gap

The fast development of LLMs has led researchers to move their focus away from model evaluation and towards comparison of differences in ways that different models construct and structure language. While advanced models like ChatGPT, Gemini, and Grok show better alignment and lower explicit biases, they still show disparities in terms of lexicon choice, reasoning style, and social representation due to the differences in training data, architecture, and alignment methods used by them (Bommasani et al., 2021; Chang et al., 2024). The comparative studies have also found that while explicit gender biases have been minimized, there is still an existence of implicit biases when it comes to representations of competence, leadership, and authority (Ding et al., 2025). The current literature is based on benchmark evaluations and fairness metrics but fails to address the issue of discourse-based formation of professional identities.

Even though there is increasing research on the topic of LLM bias, there are very few examples of studies using Corpus-Assisted Critical Discourse Analysis (CACDA) to examine AI-generated discourse. There are even fewer comparative analyses of ChatGPT, Gemini, and Grok, and there is no such example that uses an approach combining keyword analysis, Key Word in Context (KWIC) concordance, Systemic Functional Linguistics (Halliday and Matthiessen, 2014), Critical Discourse Analysis (Fairclough, 1992, 1995), and Social Actor Representation (van Leeuwen, 2008). This research aims at filling the existing gap through the analysis of linguistic constructions of professional identity.

3. METHODOLOGY

3.1 Research Design

This study employed corpus-assisted critical discourse analysis (CACDA) to examine how male- and female-referenced professional identities were constructed in outputs from ChatGPT, Gemini, and Grok. Corpus methods were used to identify recurrent lexical patterns through keyword and concordance analysis. These patterns were then interpreted through Halliday and Matthiessen's (2014) transitivity system, Fairclough's (1992, 1995) three-dimensional model, and van Leeuwen's (2008) social actor representation framework. The design therefore combined quantitative corpus evidence with qualitative, theory-led interpretation.

3.2. Data Collection and Corpus Compilation

This corpus consisted of professionally written descriptions that were generated using three conversational AI models, ChatGPT, Gemini, and Grok, chosen specifically because of their wide availability and popularity among conversational LLMs, allowing the analysis of gendered representations of professionals across top AI systems. In order to limit variations caused by ongoing improvements of the models, all descriptions were collected in one session in June 2025.

Ten occupations from various sectors, including business, engineering, science, education, healthcare, law, information technology, politics, and academia, were chosen: CEO, Engineer, Scientist, School Principal, Entrepreneur, Doctor, Lawyer, Software Developer, Politician, and University Professor. Two prompts (for male and female) were crafted for each occupation and then submitted identically to the three models, resulting in 60 texts (20 × 3). Each prompt called for an elaboration of 180 to 200 words about one's professional skills, leadership, ability to communicate, make decisions, interact at work, accomplishments, and solve problems, without including any non-professional traits.

3.3. Prompt Design and Corpus Preparation

A standardized approach to prompt formulation was applied to maintain methodological consistency between ChatGPT, Gemini, and Grok. The same prompt formula, construction, and writing limitations were used with the variation in profession and gender. Thus, the differences in language identified are attributable to the models' discourse production and not to the variation in prompts. After the generation process, all texts were manually checked to make sure they meet the instructions and restrictions on words. Lexical, grammatical, and stylistic manipulations were not performed; only insignificant formatting discrepancies were fixed to provide an authentic corpus. The corpus was transformed into the plain-text (.txt) form and analyzed in Sketch Engine – a popular tool for corpus compilation, extraction of keywords, concordance analysis, and comparative corpus research (Kilgarriff et al., 2014). All documents were tagged by metadata, including AI model, gender, profession, generation date, and inclusion in the corpus.

3.4. Keyword Extraction and Corpus Analysis

The corpora were then analyzed using Sketch Engine, a software suite for corpus linguistic analysis that allows for frequency analysis, keyword identification, and Key Word in Context (KWIC)

concordancing analysis, thus making it suitable for discourse analysis assisted by corpus research (Kilgariff et al., 2014). The process of keyword identification was the first stage of analysis and involved the use of the Simple Maths keyness measure provided by Sketch Engine (Kilgariff, 2009). This measure relies on comparing the frequency of occurrences of certain words in a focus corpus against a reference corpus. In order to control for the writing style of individual models, we used the male and female sub-corpora as reference corpora alternately. The cutoff point for keyness was fixed at 2.5 to select lexically unique terms and minimize the selection of marginal keywords. After that, the resulting keyword lists underwent further manual filtering involving the removal of function words and non-semantic terms. Then, ten content words that reappeared frequently within the gender-specific sub-corpora and could be considered related to professional identity were chosen. The resulting keywords were subject to KWIC concordance analysis that revealed the context of use, preferred meaning, collocations, and functions in discourse. The observed patterns in language were abstracted into more general themes, forming the empirical basis for the next step of the research – the Critical Discourse Analysis.

3.5. Analytical Framework

An integrative approach to Corpus-Assisted Critical Discourse Analysis (CACDA) was employed, which involved combining quantitative methods of corpus analysis with qualitative discourse analysis to study the construction of gendered professional identities by contemporary LLMs. Lexical patterns that stood out as statistically significant were determined through corpus analysis, and then interpreted from three perspectives. In this study, the main linguistic framework is Halliday and Matthiessen's (2014) Systemic Functional Linguistics (SFL), specifically, the Transitivity System, which is used for investigating process types and participants along with distribution of linguistic agency regarding professional identity presentation by both male and female professionals. The results obtained were interpreted by means of the Three-Dimensional Model of Critical Discourse Analysis proposed by Fairclough (1992, 1995), making connections between textual patterns and discursive practices as well as social ideologies related to gender, leadership, authority, and professional competence. In order to enhance representation analysis, the Social Actor Representation framework offered by van Leeuwen (2008) was utilized, including such concepts as activation, passivation, functionalization and role allocation for investigating socially constructed professional identities.

3.6. Trustworthiness and Ethical Considerations

The reliability of the present research was verified with Lincoln and Guba's (1985) standards of credibility, dependability, confirmability, and transferability. First, credibility was achieved by applying similar prompts to ChatGPT, Gemini, and Grok, and then conducting systematic corpus creation and keyword analysis on Sketch Engine. Second, the reliability of the data collection and analysis process was guaranteed by documenting every stage of it to make the process transparent and repeatable. Third, confirmability was achieved by relying on the evidence provided by the concordance and on the existing theoretical framework rather than on the subjective assumptions of the researcher. Fourth, transferability was achieved by describing the methodological details of the data collection and analysis procedure. In terms of ethics, there were no human participants or personal information used in the study, as all the texts were created using the publicly available versions of the AI models.

4. ANALYSIS AND DISCUSSION

4.1. Introduction to the Analysis

This section provides the corpus-assisted critical discourse analysis of the gender representation in AI-generated professional discourse in relation to four big language models

(ChatGPT, Gemini and Grok). The ten representative keywords in each language model selected following the methodology presented in methodology section are determined according to their frequency, semantics, and discourse functions. Instead of analyzing all keywords extracted from the data, the research is based on the keywords that better demonstrate the patterns of professional identity, agency, leadership, communication, and interaction at the workplace. Each of the keywords was analyzed by means of concordance analysis (KWIC), followed by interpretation according to Halliday's Transitivity System, Fairclough's three-dimensional model, and van Leeuwen's social actor representation model. Keywords selected and themes of their analysis are given in Table 4.1.

4.2. Concordance Analysis of ChatGPT

Table 1

Keyness Analysis of Professional Identity Themes in ChatGPT (Male vs. Female Corpus)

ChatGPT Male (Focus Corpus)	Freq.	Keyness	ChatGPT Female (Focus Corpus)	Freq.	Keyness	Theme
Leader	5	1855.6	approach	12	4471.94	Leadership Style
respected	9	3339.28	earn	9	3354.2	Professional Authority
dependable	9	3339.28	productivity	3	1118.74	Professional Competence
initiative	4	1484.68	active	8	2981.63	Agency
collaborate	3	1113.76	communicate	10	3726.78	Communication
consider	7	2597.44	evaluation	2	746.16	Decision-making
negotiate	2	742.84	negotiation	2	746.16	Workplace Practice
cooperative	2	742.84	transparent	2	746.16	Professional Behaviour
demanding	3	1113.76	systematically	5	1863.89	Work Management
inspire	2	742.84	guiding	2	746.16	Professional Development

Theme 1: Professional Leadership and Authority

The results from the concordance analysis indicate that ChatGPT portrays professional leadership in different ways for men and women. While both genders are portrayed as capable leaders, the lexical environment of the chosen keywords indicates that different discourses exist regarding the way leadership should be viewed. For male professionals, the chosen keyword, leader, is recurrently occurred in the sampled concordance lines in institutional environments, where leadership is seen as an inherent quality of a professional. Some of the concordance lines that are evident in this case include "As a leader, he creates a positive and collaborative school culture," "As a leader, he inspires employees with his vision," and "As a leader, he manages the legal teams well." In all these cases, the word leader is always accompanied by processes such as creates, inspires, manages, and builds.

On the other hand, the selected female-subcorpus lines more often foregrounded communication. Instead of focusing on authority, ChatGPT always puts an emphasis on communication skills. Concordances usually look like "She communicates clearly with employees and stakeholders," "She communicates complex findings clearly," "She communicates clearly with patients and healthcare professionals," and "She communicates clearly with students and colleagues." Such recurring concordance lines show how dialogue, transparency, cooperation, and listening define female professional success. Thus, communication becomes the main instrument used by women to prove their workplace effectiveness.

In such a way, the sampled contrast suggests how ChatGPT sees male professionals as authorities who control organizations, while female professionals use interpersonal communication and cooperation to be influential. While both depictions are positive, they reflect the differences in linguistic ways of gaining professional legitimacy.

Theme 2: Professional Recognition and Legitimacy

A second ideological a second contrast emerges in the difference between the male term respected and the female term earn. The analysis of the concordances shows that male professionals tend to be depicted as having professional status and legitimacy already, while female professionals achieve their professional legitimacy through performance. In the male text, the term respected is used as something that is already there, for example: "a respected and dependable school leader" and "professional recognition" is described as an existing feature of being a leader. On the other hand, the female corpus uses the verb earn in constructions such as "earns the trust of colleagues and stakeholders," "earns the respect of patients," "earns the confidence of stakeholders," "earns the trust of clients," and "earns the respect of colleagues and students." For any profession from engineering to medicine, politics, entrepreneurship, or even academia, the notion of recognition is invariably presented in terms of achieving recognition based on ethics, resilience, communication skills, and competence.

Through the collocation of the verb earn with nouns like trust, respect, and confidence, the notion of professional authority is shown to be dependent upon performance. Considering Critical Discourse Analysis, one can say that there are two different models of professional legitimacy here. While male professionals were more often presented as already possessing status in these sampled lines., female professionals need to keep proving their competence before they receive recognition.

4.3. Concordance Analysis of Gemini

Table 4.2

Keyness Analysis of Professional Identity Themes in Gemini (Male vs. Female Corpus)

Gemini Male (Focus Corpus)	Freq.	Keyness	Gemini Female (Focus Corpus)	Freq.	Keyness	Theme
confidently	7	3207.6	sophisticated	6	2708.58	Professional Competence
direct	6	2749.51	recognize	5	2257.32	Professional Authority
mentor	6	2749.51	champion	5	2257.32	Leadership & Mentorship
coordinate	6	2749.51	targeted	4	1806.05	Strategic Management
distinguish	5	2291.43	resolute	4	1806.05	Decision-making
success	5	2291.43	distinguished	4	1806.05	Professional Achievement
sustain	5	2291.43	review	4	1806.05	Organizational Development
clearly	4	1833.34	interpersonal	6	2708.58	Communication & Action
rigor	3	1375.26	incisive	3	1354.79	Analytical Competence
enable	8	3665.68	act	6	2708.58	Professional Agency

Theme 1: Institutional Agency vs. Relational Professionalism

The results of the concordance analysis show that Gemini uses two separate institutional agentive constructions for the construction of male and female professional leadership. Specifically, male professionals are consistently conceptualized using the keyword pairs of enable and mentor, which stress organizational power, facilitation, and knowledge transfer. Examples of concordance lines such as "enabling him to articulate project requirements and strategic visions clearly" and "enabling him to articulate business strategies to investors and stakeholders" indicate

that men are seen as building up organizational capabilities through communication, delegation, and decision making. Using Halliday's transitivity analysis, male professionals are constructed as Actors in material processes (empowers, coordinates, fosters, mentors, delegates), thus stressing their agency as initiators of institutional action.

The term mentor serves to reinforce the structural aspect of authority that characterizes men, who are portrayed as "mentoring junior researchers," "mentoring residents," and "mentoring emerging scholars." On the other hand, women are mostly characterized using the term act, as evident from phrases such as "acts decisively," "acts with analytical precision," and "acts swiftly." Women, although actors in material processes, usually act out of necessity due to an organization crisis, financial problems, or difficulties in the workplace. It is clear, therefore, that while Gemini establishes male authority as structural and institution-building, female authority is justified by performance under difficult circumstances.

Theme 2. Relational Communication and Professional Interaction

The second thematic pattern concerns gender differences in workplace communication and professional interactions. While Gemini illustrates people equally as communicators, there is a difference in the organizational purpose of their communication. While the function of communication for the male category is mainly to support organizational efficiency and institutional authority, for the female corpus, the function of communication is to support the maintenance of networks and relationships between people. Concordance samples "articulate complex policy directives," "translate dense empirical data," "articulate intricate technical specifications," and "communicate strategic visions clearly" portray communication as an instrument of strategic use in the organization. The keyword enable adds another dimension to this pattern, illustrating males as enabling organizational performance through technical competence, delegation, and strategic coordination.

However, women in professional contexts are portrayed using the keyword interpersonal as seen in the concordance "a sophisticated approach to interpersonal dynamics" and "interpersonal dynamics ensure organizational alignment." In this case, the communication skills are gauged in terms of relational efficiency rather than institutional efficiency. Women are depicted in all cases as keeping teams united, promoting collaboration, aligning different parties, and establishing an open professional environment. According to Van Leeuwen, this is what he refers to as relational functionalization, where the professional efficiency is dependent on managing relations at work. Fairclough's analysis of texts brings out the recurrent lexemes cohesive, collaborative, aligned, transparent, and motivated. Therefore, Gemini depicts the male communication skills as being institutionalized and authority-based while female communication skills are presented in terms of relational competency.

4.4 Concordance Analysis of Grok

Table 4.3

Keyness Analysis of Professional Identity Themes in Grok (Male vs. Female Corpus)

Grok Male (Focus Corpus)	Freq.	Keyness	Grok Female (Focus Corpus)	Freq.	Keyness	Theme
steer	4	1577.04	professionalism	8	3056.77	Leadership Style
employ	4	1577.04	respected	4	1528.88	Professional Authority
dynamic	3	1183.03	successfully	5	1910.85	Professional Competence
balance	4	1577.04	active	3	1146.91	Agency

Grok Male (Focus Corpus)	Freq.	Keyness	Grok Female (Focus Corpus)	Freq.	Keyness	Theme
exchange	2	789.02	communicate	3	1146.91	Communication
evidence	2	789.02	reflect	5	1910.85	Decision-making
transfer	2	789.02	alignment	3	1146.91	Organizational Practice
intellectual	2	789.02	advancement	3	1146.91	Professional Development
shine	2	789.02	accomplish	3	1146.91	Achievement
actively	2	789.02	promotion	3	1146.91	Strategic Management

Theme 1: Functional Leadership and Strategic Decision-Making

The results of the concordance analysis show that Grok constructs male professionals mainly through functional leadership and decision making, whereas female professionals are represented through achieved success and competence. Male professionals consistently co-occur with the keywords *steer* and *balance*, showing leadership as a dynamic activity of leading organizations to success. Examples of concordance lines like "steering the company through market expansions," "steered complex initiatives to on-time completion," and "steered projects through uncertainties to successful outcomes" highlight the image of men as individuals steering institutions through tough conditions. Similarly, the keyword *balance* can be seen in phrases like "balancing risk and opportunity," "balancing immediate needs and educational considerations," and "balances technical feasibility and project timelines," which denote rationality, planning, and management. Halliday's transitivity analysis presents men as the Actors of material processes, in which men control and optimize the performance of institutions. The functionalization theory of Van Leeuwen supports the representation of male professionals through occupation and managerial responsibility.

The female professionals, on the other hand, are represented mostly in terms of the keyword *accomplished*. Concordance hits like "highly accomplished civil engineer," "accomplished physician," and "highly accomplished software developer" emphasize accomplishments over organizational action and power. The expertise of women professionals gets repeatedly validated in terms of results, accolades, inventions, and performance. This means that while Grok creates male authority through perpetual action, it is accomplished authority that forms the basis of female authority.

Theme 2: Professional Validation and Workplace Identity

Secondly, this theme is characterized by the formation of a workplace identity and professional legitimacy. Although both men and women demonstrate high competence as professionals, Grok assigns different linguistic functions to the professional identities constructed for male- and female-referenced professionals. In the corpus of males, workplace communication is linked with organizational leadership where concordance lines include phrases such as "articulates strategies with clarity," "promotes open dialogue," "builds collaborative relationships," and "fosters knowledge transfer and mentorship." Thus, all these communicative processes reinforce the leadership role in terms of *steer* and *balance* within organizations and are therefore used as managerial tools.

On the other hand, women professionals are continuously described through the keyword *professionalism*. Concordance lines reveal workplace interactions with "collaborative professionalism", "professionalism, active listening," "professionalism, openness to feedback" and "professionalism, mentorship and collaborative problem-solving." As opposed to organizational power, Grok consistently highlights behavioral attributes that affirm female

professionalism in the workplace. The repetitive use of evaluative keywords such as professionalism, respect, collaboration, inclusivity, and constructive interactions implies that women professionals are described in relation to workplace behavior norms. The theory of Van Leeuwen suggests that women professionals are more appraised in terms of positive assessments of their behavior as opposed to organizational power. A textual analysis by Fairclough reveals the repetitive lexical pattern of collaboration, professionalism, respect, and support.

Generally, the portrayal of professional women by Grok is seemingly egalitarian since it focuses on their remarkable success and proper professional behavior. However, there is an ideological difference between male and female professionals shown in language use: male professionals are represented through sustained institutional action, whereas women's legitimacy is more often validated through professionalism and accomplishment in the sampled lines. Thus, the language use shows that Grok is preoccupied with the idea of proving the professionalism of women through evaluation.

5. DISCUSSION

The findings address the three research questions within the limits of the sampled corpus. First, ChatGPT, Gemini, and Grok generally constructed both male- and female-referenced professionals in positive terms, but the selected concordance patterns differed in how professional legitimacy was linguistically organized. Male-referenced professionals were more often associated with institutional action, strategic leadership, decision-making, and knowledge transfer, whereas female-referenced professionals were more often associated with relational competence, interpersonal communication, professionalism, and demonstrated achievement. Second, these contrasts were realized through lexical selection, transitivity patterns, and role allocation; however, their strength varied by model, keyword, and occupation. Third, the models showed a shared tendency to differentiate structural authority from relational or evaluative competence, while each model displayed distinct lexical patterns. These results suggest implicit representational asymmetry in this dataset, but they do not establish that the patterns are stable across model versions, prompts, languages, or repeated generations. The interpretation is also constrained by the small subcorpora, low frequencies of several keywords, and the selective thematic analysis. Fuller occupation-level and negative-case evidence should be used to determine where the proposed pattern does not hold.

6. CONCLUSION

This study examined how ChatGPT, Gemini, and Grok constructed gendered professional identities across ten occupations in a corpus collected in June 2025. Within this dataset, all three models generally represented male- and female-referenced professionals as competent, while differing in the lexical and grammatical resources used to construct authority, agency, and legitimacy. Male-referenced professionals were more often associated with institutional action and strategic leadership, whereas female-referenced professionals were more often associated with relational competence, communication, professionalism, and demonstrated achievement. These patterns answer the research questions by showing how professional identity was constructed, which linguistic resources carried the contrasts, and where the three models converged or differed. The conclusions must remain limited to the recorded prompts, occupations, model/build identifiers, language, and collection period. Additional limitations include the small size of each subcorpus, low frequencies for several selected keywords, possible prompt sensitivity, and incomplete generalizability to other professional genres or model versions. Future research should use repeated generations, larger multilingual corpora, preregistered keyword-selection criteria, occupation-level statistical comparison, negative-case analysis, and independently replicated

coding. The study therefore provides exploratory evidence of implicit representational differences rather than proof of fixed gender bias in the models.

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