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Article – Theme section

The gendered dress of DALL-E 2

Exploring profession-based images in the Indian context

Musthafa Mubashir[1]

1. Department of Media Studies, Bayan College (Affiliated to Purdue University Northwest, USA), Sultanate of Oman
pmmubashir@gmail.com

Abstract

This study delves into the intricate realm of gender and artificial intelligence (AI) through an examination of DALL-E 2-generated images within the Indian context. It takes a methodological approach that focuses on assessing images generated in response to prompts such as 'a farmer cultivating crops in rural Punjab' to reveal the dynamics of gender performativity within professions. The generated images were thematically analysed using dress as a phenomenon to visualise Indian man, Indian woman and ambiguous Indian. The study concludes that DALL-E 2 reinforces the binary gender norms, leaving no space for ambiguous Indian in its responses. Although the generated image is centred on female professions, it is frequently employed in 'male' surroundings. Hindu religious symbols are largely used among male professionals to denote religious and gender predominance. A brown complexion reflects demographics regardless of gender, while female professionals tend to undergo a process of aesthetic enhancement, suggesting societal beauty standards.

Keywords

DALL-E 2, profession, dress, gender, India

Introduction

Artificial intelligence (AI) has already emerged as a significant terrain on which to engage with the cultural and social routines of human life. The dynamic facets of AI reshape human interactions, experiences and imageries. A new era of creative possibilities has been brought about by the recent advances in technology, notably exemplified by breakthroughs in text-to-image generating, where models such as DALL-E, Midjourney and Stable Diffusion are at the forefront, accumulating over 10 million users daily (Anand et al., 2023).

OpenAI launched DALL-E in January 2021. It is a text-to-image platform that generates various forms of images, including photorealistic images, paintings and emojis. (Jeevanandam, 2022). An enhanced version, DALL-E 2, was released in April 2022. DALL-E 2 has over 1.5 million active users generating more than 2 million images daily (OpenAI, 2022). DALL-E 2 is capable of editing certain parts of an image, thus marking the platform as a major advancement in text-to-image generation (Roza, 2023). OpenAI recently announced DALL-E 3, which is expected to completely transform the text-to-image generation process (Acharya, 2023). DALL-E 2 has become one of the most popular text-to-image generating platforms in India (Paul, 2022).

DALL-E 2 is an advancement in the fusion of visual creativity and artificial intelligence. This model goes beyond traditional methods by exhibiting the capacity to produce a wide range of intricate visuals in response to textual cues (Ramesh et al., 2022). Although the models are noted for their ability to generate creative images, scholars have identified potential misrepresentations of socio-cultural elements (Anand et al., 2023; Cho et al., 2023; Gorska & Jemielniak, 2023). DALL-E 2's ability to generate diverse visual content intersects with broader discussions on the influence of gender on professional roles. The images produced can reflect and potentially reinforce existing societal biases, thus impacting perceptions of gender roles in various professions.

People and society experience professions differently based on their gender (Jonnergård et al., 2010; Probert, 2005; Rocha & van Praag, 2020). For instance, leadership roles have stereotypically been associated with men (Clarke, 2020; Fox & Barth, 2017), whereas nursing and education have been connected with women (Drudy, 2011; Wesolowicz et al., 2018). For Judith Butler (1990, 2004), gender is socially constructed and it is performatively constituted by repeated acts. The theory of performativity questions the conventional beliefs on gender identity that are stereotypically affiliated to particular professions. It is imperative to look at gender dynamics through the lens of performativity as AI remarkably engages in the construction of gender imageries that eventually contribute to the affirmation/contestation of stereotypes.

Many scholars have noted AI's massive usage in various fields such as advertising, media and education (Holmes & Tuomi, 2022; Li, 2019; Ouchchy et al., 2020). The use of AI-generated images in such fields makes it necessary to closely examine how they reproduce gender to guarantee inclusive and equitable representation. It is imperative to

enquire how DALL-E 2 performatively imagines the dynamics of gender within profession-based visual content. In this context, I explore the interconnection between gender and profession through the lens of performativity. I conduct a detailed analysis of DALL-E 2 images using dress as a phenomenon by which to imagine gender. The insights gathered from this study can guide the development of future AI systems in terms of promoting accurate, nuanced, and socially conscious gender manifestations.

Gender, profession and performativity

Gender is performative, multi-layered, fluid and socially constructed. It is a performative act that is constantly formed and reaffirmed through social practices and interactions that adhere to cultural expectations and standards of masculinity and femininity rather than being a mere function of anatomy. These performances are carried out in daily life and are supported by societal discourses, institutions and power structures (Arruzza, 2015). According to Butler (1990, 2004), a person's gender is something they do, or perform, in order to conform to socially established categories of identity rather than something they possess. Gender is therefore neither fixed nor predetermined but is rather fluid and contingent upon the context and social environment in which it is enacted. Mediation of gender through digital means validates the claim that gender can be altered by interactions, contexts and experiences.

In the workplace, people frequently act out their gender in ways that conform to cultural norms around particular occupations. Eccles et al. (1990) state that the segregation of gender into professional domains is consistent in history. Certain professions have traditionally been dominated by either men or women, reinforcing long-standing gender roles. Gender stereotypes and binaries are reinforced by typical associations with certain professions. Professions thus manifest heteronormative biases. People may manage their gender identification and expression in professional contexts in response to cultural norms, workplace dynamics and personal experiences. Conversely, negotiations with the status quo are possible by a woman practising a 'masculinised' profession, similarly, a man practising a'femininised' profession. It may contribute a different discourse to the performativities of gender whereby the institutionalised forms of gender are challenged. In this regard, the performativity of the profession challenges the heteronormative paradigm that shaped existing social norms.

The theory of performativity questions the notion that an individual's gender identity is exclusively based on their biological sex by highlighting the performative aspect of gender. Butler (1990, 2004) creates a solid terrain for resistance to the binary of gender within the professional context. Gender is not about what a person *is* or *being* but rather about what a person does or becomes (Deleuze & Guattari, 2004; Lovaas & Jenkins, 2007). Performativity intersects with the concept of intersectionality, acknowledging that gender is not the sole factor influencing one's experience in the professional realm. Other

aspects, such as race, class, caste and sexuality, interact with gender to shape experiences and opportunities in the professional landscape. This complexity underscores the importance of understanding how AI's automated discourses generate gender perceptions in professional contexts.

Gender situated within text-to-image generation

The emergence of text-to-image generating platforms such as DALL-E has accelerated the discussion on the role of AI in the construction of gender and its imageries. These tools primarily generate images in response to textual prompts, which raises concerns about how gender is materialised in algorithms. García-Ull and Melero-Lázaro (2023) note a recurrence of gender stereotypes within the generated images. AI reinforces and increases the biases in terms of profession. Women professionals are stereotypically shown in 21.6% and males are shown in 37.8% of images. The biases and stereotypes embedded in the language, norms and performances may be amplified and reiterated (Gorska & Jemielniak, 2023). On the other hand, as a constructive result of AI, the algorithms may be capable of producing neutral and less-predefined imageries of gender.

The interplay of AI, gender and image generation is complex and multifaceted. Scholars have identified gendered biases in prompts and training data that are inherent in languages. Large language models absorb hegemonic and stereotypical worldviews from their training data. "People in positions of privilege with respect to a society's racism, misogyny, ableism, etc., tend to be overrepresented in training data for LMs" (Bender et al., 2021, p. 617). For instance, prompting for 'doctor' frequently produces images of men. Conversely, 'nurse' often produces images of women. Zhao et al. (2018) show how subtle modifications in prompts can significantly impact the gender representation in images. A prompt for a 'powerful CEO' is more inclined to generate images of men, in contrast to a prompt for a 'successful CEO'. This is because 'powerful' is stereotypically affiliated with men in social roles.

Mannering (2023) finds that the objects and materials surrounding bodies are different in generated images. Prompts involving 'male' produced items such as ties, knives, trucks, baseball bats and bicycles. Conversely, female cues were more likely to produce items such as bowls, bottles, glasses, handbags and umbrellas. For Miller (2010), things and materials associated with human bodies produce meanings and discourses through their mutual interaction. The generated images cannot be confined to the human body. Rather, multiple dimensions manifested in the images, such as race, complexion, dress, actions and expressions, need to be analysed as they all produce meanings. Similarly, the emphasis on binary gender often eclipses the complexities of gender identity within the generated images. An intersectional approach is essential, taking into account how AI image generation intersects with race, class, caste and other dimensions of social identity (Sambasivan et al., 2021).

Dress as a phenomenon by which to imagine gender

Gender performativity holds to the idea that gender is a performance that is enacted through social norms and conventions rather than an innate quality. In performance, dress plays a vital role as an outward manifestation of the preferred or supposed gender identity of individuals. Dress is defined as an assemblage of modifications of the body and/or supplements to the body (Roach-Higgins & Eicher, 1992) and dress stands for both the process and material (Kaiser, 2012). It includes "direct modifications of the body such as coiffed hair, coloured skin, pierced ears, and scented breath, as well as an equally long list of garments, jewellery, accessories, and other categories of items added to the body as supplements" (Roach-Higgins & Eicher, 1992, p. 1). Dress and its performativity, agency and materiality can be utilised as an adequate phenomenon by which to visualise gender affiliations in generated images within the context of professions. Dress, known as second skin, exerts belonginess, ethnic and religious identity, a sense of self and subjective positions (Mirza, 2013). The silhouette and embellishments may conjure up notions of femininity, power, or subversiveness based on the context.

Discussion on dress and gender intersects with religion. Religion and dress are significant contributors to the construction of gender identities (Bradley & Homberger, 2015; Upson-Saia, 2011). Dress frequently functions as an outward manifestation of commitment to religious doctrine and cultural norms within various religious traditions, shaping perceptions of gender roles and identities. In the Indian context, dress with religious connotations can hold deep symbolic significance, such as modesty, piety, or spiritual commitment, impacting how individuals perceive gender and profession within a particular social setting (Miller-Spillman & Reilly, 2019; Shukla, 2015a, 2015b). For these reasons, it is imperative to understand how DALL-E 2 manifests religious dress in order to shape gender and its portrayal within professions. It is insightful to engage with how AI perpetuates or disrupts existing gender norms within the algorithm.

Methodology

In the initial stage, I generated a list of professions from Chat GPT using the prompt "What are the common professions prevalent in India based on population numbers?" A total of ten professions were generated. In the next step, I asked it to generate examples for each profession in the Indian context. Additionally, different Indian city names were added to each profession to confirm the Indian association. Signifiers of gender, such as pronouns, were avoided in the examples. The generated examples were used as prompts to generate images on DALL-E 2. The professions and their associated examples are set out in Table 1. DALL-E 2 generated four images for each prompt, resulting in a total of 40 images. The generated images were thematically analysed using 'dress' as a phenomenon by which to visualise gender affiliations. While gender is expressed and maintained in variations based on socio-cultural affiliations (Butler, 1990), it can be materialised in

diverse ways, including dress (Koene, 2017). Similarly, Adomaitis et al. (2024) identify the prominence of dress in signalling gender identities as historically tied to women and men. Hence, this study uses dress in generated images as a phenomenon to identify the gender dynamics. For instance, the person in the shirt in the image can be concluded to be a man, and the person in the *sari* can be concluded to be a woman. The images are systematically categorised into three primary classifications: Indian male, Indian female and ambiguous Indian, drawing from the categorisation framework proposed by Gorska and Jemielniak (2023). The ambiguous Indian encompasses images lacking clear adherence to traditional gender distinctions. Building upon Gorska and Jemielniak's (2023) approach, which utilised the categorisation of AI-generated depictions of professionals to elucidate gender biases, ambiguous Indian images are construed as those that introduce uncertainty in discerning binary gender (i.e., male and female) solely from visual cues. The study acknowledges the possibility for ambiguity within generated images owing to diverse factors. For example, this classification encompasses instances such as a transgender individual adorned in a traditional Indian *sari* yet exhibiting physical characteristics typically associated with the male gender. In order to mitigate the inherent subjectivity of the author's determinations regarding the categorisation of images into distinct representations of Indian males, Indian females and ambiguous Indian, a peer review of generated images was conducted.

Profession	Example (Indian Context)
Agricultural Workers	A farmer cultivating crops in rural Punjab
Service Industry Workers	A clerk assisting customers in a bank in Mumbai
Healthcare Professionals	A nurse providing care in a hospital in Delhi
Teachers and Educators	A high school teacher conducting a classroom lecture in Kolkata
Information Technology Professionals	A software developer coding a new application in Bangalore
Manufacturing and Industrial Workers	A factory worker assembling electronic components in Chennai
Administrative and Office Workers	A police officer in Hyderabad
Sales and Marketing Professionals	A sales representative promoting and selling products in Jaipur
Transportation Workers	A truck driver transporting goods across Pune
Construction Workers	A construction labourer working on a building site in Calicut

Table 1: The professions and their associated examples.

Gendered AI: the dress and its dynamics of performance

The gender binary is remarkably saturated in the responses of DALL-E 2. Dress is appropriated into what is socially constructed as binary in professional contexts. The results were

equally divided into two images of female professionals and two of male professionals in most of the responses if the profession was not traditionally associated with any of the genders. For instance, as a response to the prompt, 'a clerk assisting customers in a bank in Mumbai', DALL-E 2 generated two images each centred on male and female clerks. In such cases, the gender identity of the individuals in the images left no room to imagine the ambiguous Indian. Further, male members in other roles such as visitors to the bank were extensively represented in all four responses as illustrated in Figure 1. Similarly, if the worker was in a public place such as in the case of 'a sales representative promoting and selling products in Jaipur' and 'a high school teacher conducting a classroom lecture in Kolkata', the bystanders/students seem to be male by their dress. Although the generated

Figure 1: An image generated by DALL-E 2 in response to 'a clerk assisting customers in a bank in Mumbai' depicts a substantial presence of males, who assume various roles as staff members and visitors, creating a densely populated scene.

image was centred on a female profession, it was largely represented in 'male' surroundings. In this sense, male individuals outnumbered the female members in most of the responses. The algorithm of DALL-E 2 exemplifies a space of masculinity through the prominent (re)presentation of dress traditionally associated with men.

DALL-E 2 incorporates culturally significant Indian dress that is typically associated with each gender as an immediate way of manifesting the gender binary. Notably, attire such as the *sari* (a dress consisting of a very long piece of cloth wrapped around the body) and *churidar* (a traditional garment characterised by trousers and a long tunic), as seen in Figure 2, are ascribed to female professionals, while male counterparts are depicted in shirts, pants and *kurta* (long, loose shirt commonly worn in South Asia). Additionally, there is a significant absence of dress items such as suits, which are commonly associated with executive roles. This contextualisation of dress aligns with prevailing Indian cultural norms, as illustrated in Figure 2. The response generated by DALL-E 2 in Figure 2, in response to 'a farmer cultivating crops in rural Punjab', featuring a female farmer engaged in crop cultivation in rural Punjab, showcases her attire as resembling a *churidar*. However, it is relevant to note that uniforms are utilised when appropriate, particularly for professionals such as police officers and nurses (see Figure 5 and Figure 7).

The assertion of male or female identity extends beyond apparel, as colours and body adornments also play a pivotal role in marking gender. The bodies of female clerks can be specifically identified by the gaudy colours used in the dress items. Further, female clerks are adorned with lipstick, bangles and chains as illustrated in Figure 6. DALL-E 2's algorithm is developed such that Indian female bodies are excessively decorated using gaudy colours and attachments in public spaces such as banks. Following Butler (1990), this can be envisaged as an institutionalised performance of dress that reiterates social constructions and stereotypes. Conversely, if the worker is not in a public space, such as in the prompt of 'a factory worker assembling electronic components in Chennai', the DALL-E 2 avoids body accessories, as seen in Figure 3. Accessories are largely used for professionals who work in public spaces.

The images of nurses and police officers were not equally divided. As a response to 'a nurse providing care in a hospital in Delhi', DALL-E 2 generated three images of female nurses and one of a male nurse. On the other hand, the prompt, 'a police officer in Hyderabad' resulted in all four images being of male police officers. It thus employs a stereotypical preference that nurses are generally women and police officers generally men. The predominance of a particular gender in terms of the number of images produced attempts to reproduce the status quo. The performativity of the algorithm tends to be affirmative to the existing norms. It is also evident from the results that dress has been conferred either on men or women, producing no ambiguity in identifying the gender. Thus, DALL-E 2 divides Indian men and Indian women from each other, leaving no space for the ambiguous Indian.

The religiosity of AI-generated genders

In the Indian context, gender has a nuanced relationship with religiosity that is often intertwined with cultural norms and practices. Many researchers have noted that gender expression and religious identity are deeply interconnected (Chakravarti, 1993; Jeffery & Jeffery, 1996). DALL-E 2 has demonstrated a performative process of gender by reflecting these nuanced associations between gender and religiosity in its generated images. The algorithm tends to establish 'dominant' genders with the help of a 'religious' body in Indian professional contexts. Dress has been overwhelming in establishing a body as religious and dominant.

Figure 2: An image generated by DALL-E 2 in response to 'a farmer cultivating crops in rural Punjab', featuring a female farmer engaged in crop cultivation in rural Punjab.

The imageries of gender produced by DALL-E 2 reflect a rich tapestry of religious expression within the professional context. The religiosity of professionals is (re)produced by manifesting religious attire and iconic symbols associated with faiths and traditions. Figure 4 is an image in response to the prompt, 'a sales representative promoting and selling products in Jaipur'. The individual portrayed in the image is observed to embody the role of a vendor selling steel vessels. Notable features include the presence of a thread adorning the wrist, a thread neck chain, a turban adorned with saffron hues and the discernible presence of a cloth or handkerchief in his pocket, also adorned with saffron tones. These visual cues collectively suggest an association with Hindu religious symbol-

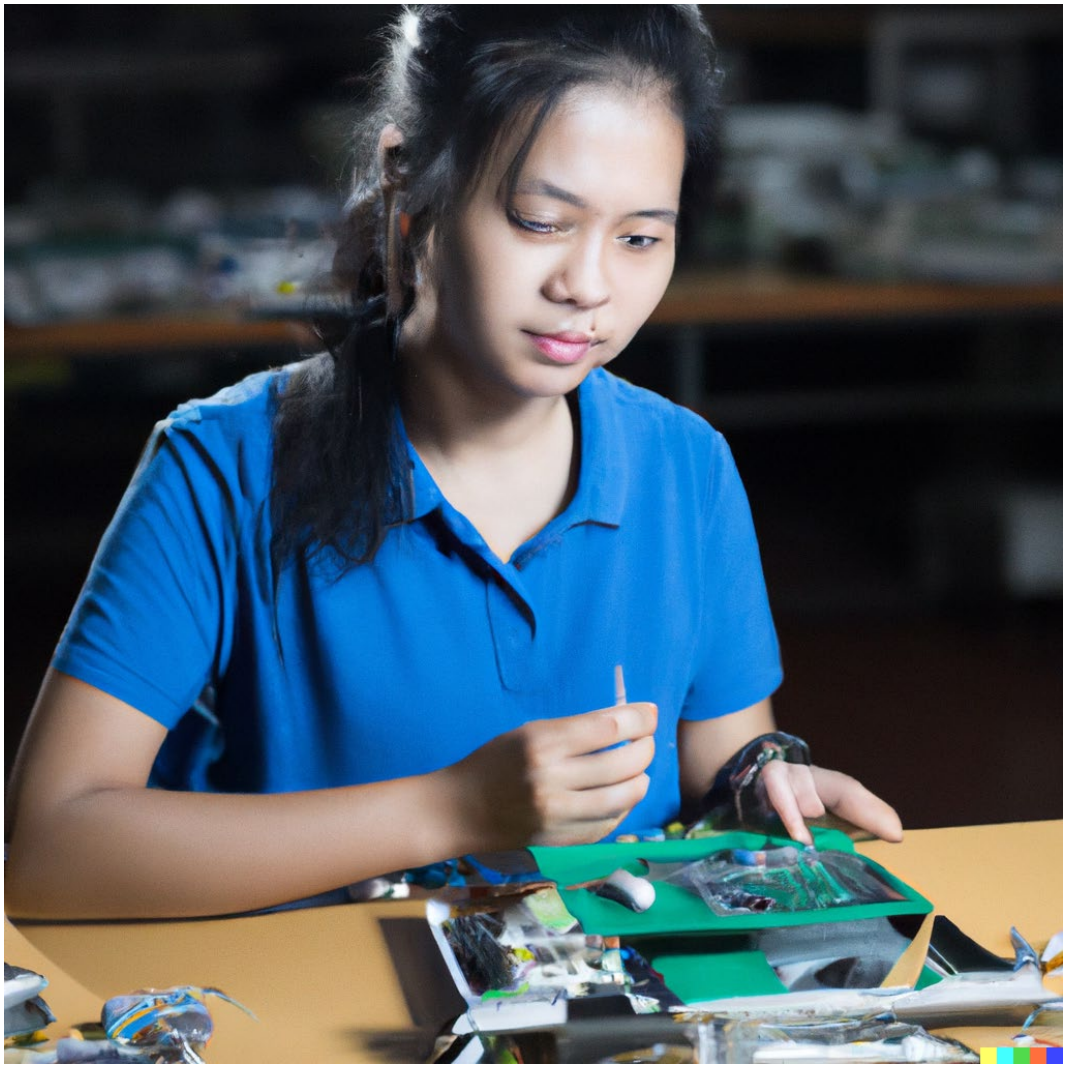

Figure 3: An image generated by DALL-E 2 in response to 'a factory worker assembling electronic components in Chennai'. The woman is devoid of accessories, such as bangles or chains.

ism. It can thus be inferred that the depicted sales representative's religious affiliation may be conceived specifically as Hindu. Although the prompt was confined to professional attributes, DALL-E 2 generated a male sales representative whose body is shown as a religious terrain.

The prevalence of religious symbolism within the performative (re)presentations generated by DALL-E 2 is evident, particularly within the depictions of male professionals, as opposed to their female counterparts. In Figure 5, which responds to the prompt 'a nurse providing care in a hospital in Delhi', a male nurse is depicted with Bhasma applied on his forehead, positioned between his eyebrows. Bhasma, a sacred ash symbolising Lord Shiva in Hinduism, is traditionally applied by Hindus with a clean hand following a bath. How-

Figure 4: An image generated by DALL-E 2 in response to the prompt 'a sales representative promoting and selling products in Jaipur'. The male representative seems to be a Hindu.

ever, no female nurses are depicted with religious symbols. DALL-E 2 prefers to generate male professionals with religious adornments in its responses.

Religious minorities are constantly excluded from the generated images. The majority of the professional figures are imbued with the religiosity associated with Hinduism. Hindu symbols such as sacred threads worn on the wrist, typically saffron in hue, and the application of Bhasma, are prominently featured in the images. The algorithm tends to overlook performativities of religious practices outside of Hinduism, contributing to a skewed portrayal of religious diversity. Moreover, there is a discernible gender bias in the depictions, whereby male professionals are consistently depicted with religious attributes, establishing a dominant association between masculinity and the Hindu religious iden-

Figure 5: An image generated by DALL-E 2 in response to the prompt 'a nurse providing care in a hospital in Delhi'. A male nurse is depicted with Bhasma applied on his forehead.

tity within professional contexts. Conversely, female professionals are often portrayed as devoid of explicit religious symbolism. However, in responses where religious markers are present among female professionals, they predominantly align with Hindu symbols (see Figure 6). Figure 6 features a female clerk whose sacred threads worn on the wrist and thread neck chain are visible. There is an absolute absence of Christian/Muslim or any other minority religious identities as shown by dress in the responses. This pattern performatively establishes that Hindu religiosity is normative and dominant. Further, Hindu religiosity is intensely manifested in the dress choices of 'dominant' masculine bodies within the professional milieu. In doing so, the algorithm restricts itself to the gender dichotomy, providing zero terrain for the ambiguous Indian.

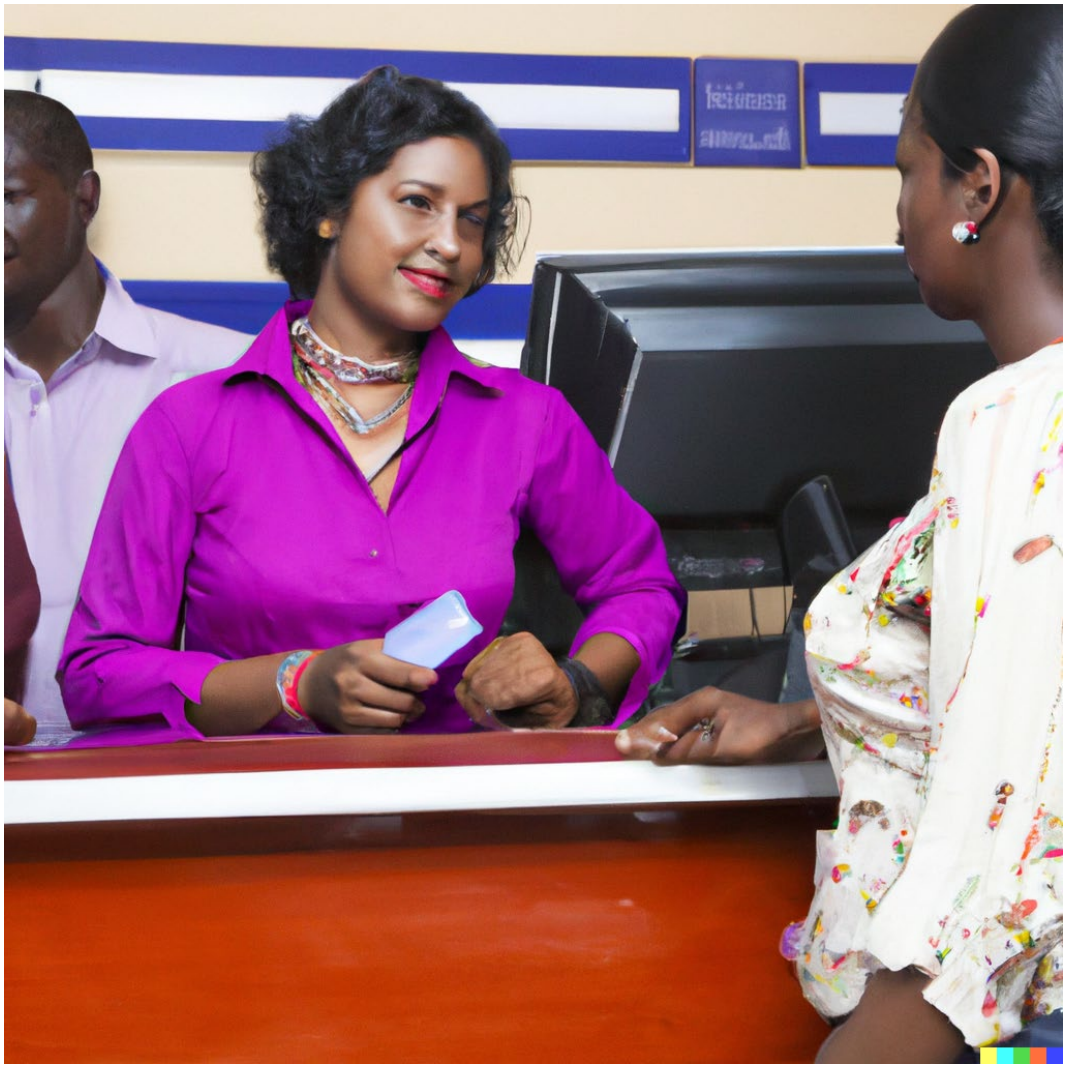

Figure 6: An image generated by DALL-E 2 in response to the prompt 'a clerk assisting customers in a bank in Mumbai', features a female clerk.

Aesthetics of Indian professional bodies

The imageries generated by DALL-E 2 consistently reflect the aesthetics of Indian cultural norms. The individuals portrayed predominantly exhibit a brown complexion irrespective of gender, echoing the demographic landscape. However, an observable trend emerges wherein female professionals appear to undergo a process of aesthetic enhancement, often employing cosmetic products to lighten their facial complexion (see Figure 6). Figure 6, in response to the prompt 'a clerk assisting customers in a bank in Mumbai', features a female clerk whose facial complexion appears noticeably brighter than her hands, possibly indicating the use of cosmetics. Conversely, other female individuals depicted in visitor roles within the bank exhibit a natural complexion devoid of cosmetic alteration.

Figure 7: An image generated by DALL-E 2 in response to the prompt 'a police officer in Hyderabad' features a male police officer.

Male counterparts, such as the individual assumed to be a worker positioned behind the female clerk in Figure 6, are portrayed without evident cosmetic enhancements. DALL-E 2 endeavours to render the central figure – a female clerk in this instance – in an aesthetic performance aligned with prevailing so-called standards of beauty.

In its aesthetics, DALL-E 2 manifests both gender and professional dominance. Masculine attributes are notably emphasised if the profession is traditionally associated with men. This trend is observable in responses to prompts such as 'a police officer in Hyderabad' and 'a construction labourer working on a building site in Calicut', where all four images featured males as central figures. Additionally, all four responses featured a 'single' male professional, even when situated in a public space, as depicted in Figure 7. Female representation was absent from such professions as these are stereotypically associated with masculinity. In Figure 7, a police officer is shown standing by the roadside, where the presence of bystanders or commuters is possible. However, the algorithm confines its focus to a single male professional, amplifying his dominance and authority within the depicted scenario. Conversely, in images where a female is the central figure, such as that of a bank clerk as illustrated in Figure 6, the resulting images depict a more balanced representation, with multiple individuals present, thereby diluting the sense of dominance.

The portrayal of subaltern professional bodies, including truck drivers, construction labourers and farmers, exhibits a distinct aesthetic indicative of their subordinate status. Across various responses for prompts such as 'a farmer cultivating crops in rural Punjab' (see Figure 2), 'a construction labourer working on a building site in Calicut' (see Figure 8), and 'a truck driver transporting goods across Pune', the omission of facial features was consistent. The absence of facial identity within the depictions serves as a performative marker of the marginalised body, employing a lack of societal recognition and agency. It also underscores a vulnerability inherent within subaltern professions. On the other hand, individuals engaged in 'dominant' occupations, such as police officers and high school teachers, were consistently portrayed with clearly defined facial features (see Figure 7), thus affirming their prominence and distinct identity. This differential treatment in DALL-E 2's visual (re)presentation underscores a contestation of identity between dominant and subaltern professions, as evidenced by the stark contrast in the presence or absence of facial depiction. Similarly, DALL-E 2 not only genders the bodies but also marginalises them within the context of the professions.

Conclusion

This study explored the dynamics of gender performativity and profession in DALL-E 2 generated images within the Indian context. The study primarily examined three dimensions of the generated images using dress as a phenomenon to imagine gender: (a) the role of dress in gender performances, (b) the manifestation of religiosity in AI-generated genders and (c) the body aesthetics of Indian professionals. The gender binary is remark-

Figure 8: An image corresponding to the prompt 'a construction labourer working on a building site in Calicut' depicts the labourer without showing his face.

ably saturated in the responses of DALL-E 2. The algorithm has appropriated dress into what is socially constructed as binary providing no agency for ambiguous Indians in professional contexts. Following Butler (1990), the dress is performative in institutionalising the dominant routines of gender. Within the dichotomy of male and female, the images reiterate the stereotypical dominance of masculinity. For instance, although the generated image may be centred on female professions, it largely employs 'male' surroundings. As argued by Weidinger et al. (2021), the presence of bias can be detrimental, as it can exacerbate the societal impact of Large Language Models (LLMs), amplifying the legal and ethical implications.

The imageries of gender produced by DALL-E 2 reflect a rich tapestry of religious expression. Hindu symbols such as sacred threads worn on the wrist, typically saffron in hue, and the application of Bhasma, are prominently featured in the images, to the exclusion of symbols from marginal religions. The absence of religious phrases in the prompts does not preclude their reflection in the results. Male professionals are extensively depicted with religious attributes, establishing a performative association between masculinity and Hindu religious identity. In this sense, DALL-E 2 attempts to establish the dominance of Hindu religious identity by imposing religious dress and symbols on 'dominant' male professional bodies. The enactment of male gender dominance is facilitated by prevailing religious structures (Jeffreys, 2011). Further, DALL-E 2 reflects the aesthetics of Indian cultural norms. The individuals portrayed predominantly exhibited a brown complexion, echoing the demographic landscape irrespective of gender. However, female professionals appeared to undergo a process of aesthetic enhancement, often employing cosmetic products to lighten their facial complexion. In conclusion, DALL-E 2 tends to uphold dominant binary gender structures without challenging the status quo through dress.

This study has identified a recurring trend of a binary gender system within DALL-E 2 responses, not just in the quantity of responses as earlier studies observed (Naik & Nushi, 2023). DALL-E 2 tends to produce 'male' surroundings in female-centred images. The study also contributes by incorporating religion as an additional layer to understanding gender in the professions within AI's responses. In the Indian context, dominant religions are often reflected in order to materialise 'dominant' genders. Earlier researchers suggested a revised prompting style to reduce stereotypical inferences. Naik and Nushi (2023) identified the presence of severe occupational biases in neutral prompts within DALL-E 2 and Stable Diffusion. They proposed that biases could be partially mitigated by specifying the gender in the prompt itself. Zhao et al. (2018) proposed an algorithm designed to train gender-neutral word embeddings, claiming that such embeddings are generalisable and applicable in any language. In addition to the suggestions from earlier studies, this study encourages advancing the exploration of methods in order to mitigate potential biases in text-to-image tools, after identifying binary gender as a recurring trend. It also recommends that dress be heavily integrated into algorithms in order to mitigate gender stereotypes in the generated results. Notably, this study is limited to identifying the gender performance of generated images through an analysis of their dress manifestations. Future research could be expanded by employing alternative tools to determine the gender of the generated professionals.

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