

Gender Inversion Phenomenon in the Internet and Social Media

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Abstract: From the past to 2023, an interesting phenomenon has emerged where some users on social media platforms set their gender to the opposite of their actual gender. The development of society, job pressures, gender conflicts, and other factors have contributed to the various reasons behind gender inversion. This paper aims to investigate the reasons behind this phenomenon and explore the reflection of this social issue of gender inversion in social media software, as well as its manifestations in work demands and gender discrimination. This paper conducts a questionnaire survey to investigate the characteristics of individuals who have engaged in gender reversal behavior. The survey included questions about their age, education level, and frequency of internet use, among other factors. In addition, the survey also examined the reasons behind the gender reversal behavior in this group. The results showed that privacy protection, unfair treatment, and work requirements were three significant reasons. Furthermore, this study will provide strategies for internet platforms to improve user privacy issues.

Keywords: gender, privacy, education, work, discrimination

1. Introduction

Gender inversion behavior refers to selecting a gender opposite to one's gender on social media platforms [1,2]. The significance of conducting this research lies in that, with the rise of social media, expressing one's gender identity in virtual communities has become a notable phenomenon. Previous research has focused chiefly on different genders' behavioral and treatment differences in social media. However, the phenomenon of gender inversion has received little attention [3,4]. The reason for focusing on this issue is that gender inversion is often overlooked but can reflect subconscious choices. Relevant literature have also discussed gender issues in social media networks, including comparing the use of reading functions by different genders and gender and racial discrimination in the housing market [5,6]. Issues with previous research and the author's work: Previous research has achieved specific results in revealing gender issues in social media, but there are still limitations.

Few studies have focused on the population that sets their gender in the opposite direction and deeply analyzed their psychological factors and behavioral intentions. This paper involves user surveys and questionnaires, initially selecting 229 individuals who set their gender in the opposite direction in social media communities and understanding the gender ratio of this user group. Subsequently, the author distributed questionnaires to gain a clear understanding of the psychological factors and behavioral intentions of these individuals across different genders. The author's research

aims to gain an in-depth understanding of this social issue by analyzing social and individual factors and proposing corresponding improvement measures.

Compared to previous research, this study analyzes the population that sets their gender in the opposite direction and investigates their psychological activities, social factors, and behavioral characteristics on internet platforms [7,8]. This study aims to explore the personal and social factors behind the behavior of setting gender in the opposite direction and understand this group's psychological activities and behavioral characteristics through surveys and questionnaires. Results of the experiment support the author's research findings, indicating that among the population that sets their gender in the opposite direction on social media communities, there are different psychological activities and behavioral characteristics, and harassment and gender inequality are two important influencing factors. Gender inversion behavior is closely related to personal needs and social environment, and job demands are also one of the main reasons for this group to engage in gender inversion. At the same time, privacy protection is a common motivation for males and females to engage in gender inversion. This finding reveals the complexity and diversity of gender-setting phenomena in social media and provides strong evidence for further research and addressing this issue. This paper also provides beneficial suggestions for managing and developing relevant industries and social media platforms. Through in-depth research on gender setting phenomena in social media, the author has comprehensively understood users' psychology and behavioral motivations. At the same time, this study provides valuable references for social media platforms and related industries to meet user needs better and improve gender issues in social media networks.

2. Methods

2.1. Basic Assumptions

Data on gender preference settings in social media was collected through online questionnaires. The survey was distributed to the sample participants. The questionnaire aims to differentiate the characteristics, reasons, and subsequent behaviors of the group that makes gender selections through the survey. Before distributing the questionnaire, this paper anticipates that a group might select the opposite gender due to job requirements and gender discrimination, with the majority being young.

2.2. Questionnaire Design

The questionnaire includes questions about the basic information, behavioral motivations, and subsequent group behaviors. The focus is analyzing the motivations behind gender selection behavior about work, harassment, privacy, and discrimination. In the survey, participants were asked if they had experienced unfair treatment based on gender. They were also asked to specify the specific situations in which this occurred, such as during the job application process, advocating for their rights, shopping, or seeking assistance.

3. Experimental Results and Analysis

3.1. Data Description

A total of 589 participant data were collected in the survey, out of which 229 participants selected having engaged in the behavior in question in the second question of the questionnaire. Therefore, there are 229 valid questionnaires for analysis. The valid sample includes 87 males (37.99%) and 142 females (62.01%). The age distribution of the participants is as follows:

- 33 participants (14.41%) are between the ages of 10 and 20.
- 130 participants (56.77%) are between the ages of 21 and 30.

- 66 participants (28.82%) are between the ages of 31 and 40.

In terms of education level, 27 participants (11.79%) have a high school diploma or below, 107 participants (46.72%) have an associate degree, 92 participants (40.17%) have a bachelor's degree, and 3 participants (1.31%) have a graduate degree or above.

3.2. Results Presentation and Description

Based on all the valid questionnaires, the author conducted various analyses on this group, as follows:

Based on the above data analysis results, the author further discusses and analyzes the characteristics of this group. Firstly, females occupy a higher proportion in this group, which may be related to the characteristics of social media in attracting female users. Females are more inclined to share their lives and emotions on social media, and social media platforms also provide more opportunities for social interaction, which may make females more active on these platforms.

The age distribution shows that the 21-30 age group accounts for nearly half of the sample, which may reflect the popularity of social media among young people. Young people are more receptive to new technology and things, making them more likely to be social media users. In terms of education level, those with an associate degree are the most common, which may be related to their familiarity with the internet and the use of social media.

In terms of corresponding identities, there is a higher proportion of high school and college students, which may be related to the popularity of social media among teenagers. Teenagers prefer social media to showcase themselves, communicate emotions, and connect with peers. In addition, the frequency of internet usage is mainly concentrated at 3 to 5 hours per day, indicating a solid attraction of social media to this group.

In terms of gender preference settings, it is common for this group to have curiosity about the opposite gender. This may be related to the gender selection feature provided by social media platforms, which attracts users to try and explore.

3.2.1. Harassment

Among this group, only 27% have experienced harassment, so the reasons for gender switching in this group are not strongly related to harassment. However, females in this group receive more harassment on social media than males, which may be one of the reasons why females have a higher number of gender switches than males. as shown in Figure 1.

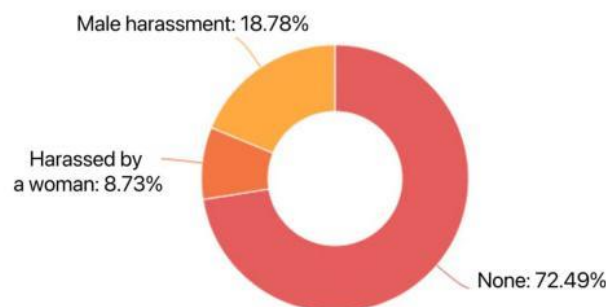


Figure 1: Rate of gender-based harassment by gender.

3.2.2. Gender Discrimination

The proportion of people who have experienced gender discrimination reaches 75%, indicating a strong correlation between gender discrimination and the act of gender switching in this group.

- In the job application process, the ratio of males and females is similar, indicating that gender discrimination is no longer as prevalent in the job application process as it used to be.

- Males are more likely to experience unfair treatment than females in protecting their rights. This may be due to the influence of societal gender roles and gender power structures. Males may face higher expectations and challenges when protecting their rights, leading to more males experiencing unfair treatment.

- A higher proportion of females report experiencing unfair treatment in shopping. This may be due to gender stereotypes and biases, making females more susceptible to unfair treatment in shopping experiences.

- In the process of seeking help, the ratio of males and females is similar. This may indicate that gender influences unfair treatment when seeking help and depends more on specific situations and backgrounds.

- In the “other” category, fewer males report experiencing unfair treatment. This may be due to societal expectations of males, leading to fewer reports of unfair treatment by males, as males may be less willing to see themselves as victims of unfair treatment.

In conclusion, although there are some differences in specific categories, overall, males and females have similar experiences of gender discrimination. This suggests that gender discrimination may have been reduced in modern society. However, there are still differences and challenges due to societal culture, gender roles, and gender power structures, as shown in Figure 2.

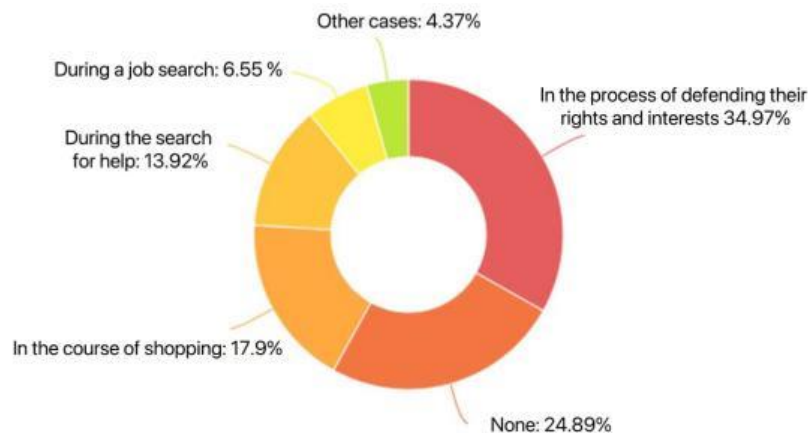


Figure 2: Reasons for choosing different options.

3.2.3. Work-related Needs

75% of people have gender-switched due to work-related needs, indicating a strong correlation between work-related needs and gender switching. Based on the provided data, the author analyzed why people switch their gender on social media for work-related needs. Among them, a portion of people (26.2%) choose gender switching not for work-related needs but rather to display their true gender identity on social media. Additionally, some people choose gender switching because it is convenient for their work to have male or female characteristics, such as speaking style (13.1% and 6.11%). Furthermore, a portion of people (14.85%) choose gender switching because their work is related to males, while 10.92% choose gender switching because their work is related to females.

Regarding the target audience, 16.16% of people choose gender switching because their work serves males, while 12.66% choose gender switching because their work serves females. These results indicate that gender-switching behavior is widespread among people, and there are different reasons based on work-related needs. Work environments and job characteristics may lead people to want to display gender characteristics related to their work on social media to better adapt and integrate into the work environment and meet the needs for different gender traits in their work. Gender-switching behavior may be aimed at better showcasing a gender image suitable for specific work needs or to better align with the nature of the work and the target audience, as shown in Figure 3.

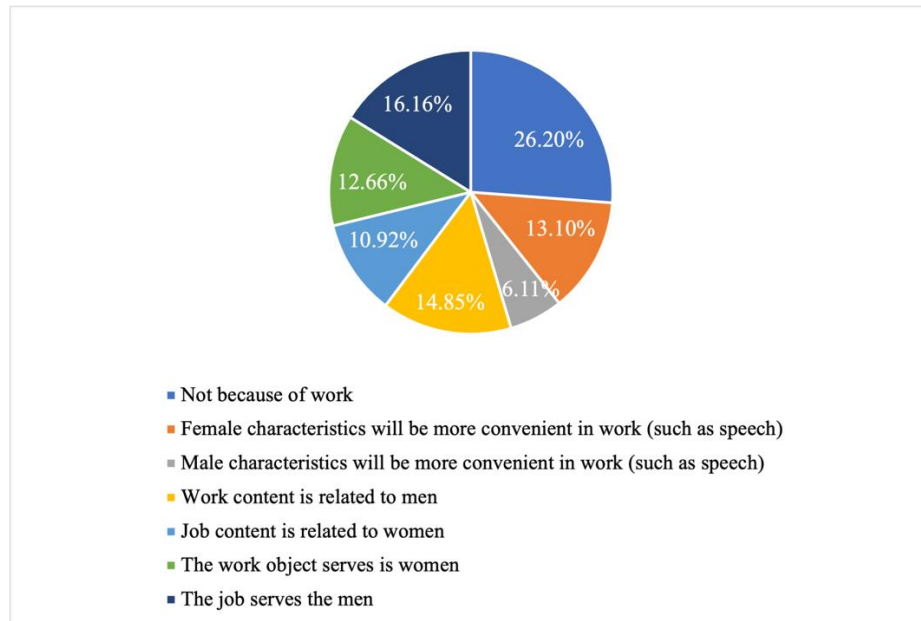


Figure 3: The relationship between behavior and work.

3.2.4. Privacy Protection

62% of males and 64% of females consider privacy protection as one of the reasons for their gender switching. Several specific factors may influence privacy protection:

- Avoiding personal information disclosure: Privacy protection has become increasingly important in the internet age. People are concerned that revealing their gender on social platforms may expose more personal information, such as age, occupation, and location. This information could be used for targeted advertising and data mining., affecting personal privacy and security.
- Avoiding harassment and unnecessary attention: On social media, some users may experience harassment, unnecessary attention, or targeted comments based on their gender. By setting a different gender, people may hope to reduce these unpleasant experiences, maintain anonymity, and avoid targeted attacks.
- Identity expression and concealment: Users on social media sometimes wish to express themselves with different identities. For example, some females may prefer to participate in specific discussions or social circles as males, making it easier for them to be accepted or integrated into specific topics. Similarly, some males may use gender switching to conceal their true identity and protect their virtual image.
- Humor and entertainment: Some people may set a different gender for humor or entertainment, which may not directly relate to real privacy protection needs. People sometimes use gender-switching on social media as a joke, to create a sense of mystery, or to add fun, as shown in Figure 4.

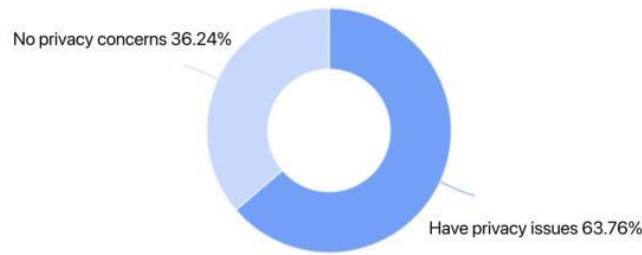


Figure 4: The relationship between behavior and privacy issues.

3.2.5. Reaching out to Others

Regarding connecting with women, approximately 28.82% of people choose to deselect their gender for that purpose. On the other hand, about 22.27% of people deselect their gender to connect with men. There may be various motivations for this:

Social needs: Connecting with the opposite sex is a common demand on social media platforms. Selecting one's gender may be done to attract male or female users better or to seek specific social interactions.

Identity expression: Some users may wish to present themselves with a gender different from their gender on social media. This could be due to specific interests or a preference for connecting with men or women on specific topics.

Based on the analysis, the reasons for selecting a different gender on social media are diverse for this group. They range from personal reasons, such as privacy protection and avoidance of harassment, to social reasons, such as social needs and identity expression. Individuals may choose to deselect their gender based on personal preferences, interests, and social needs. At the same time, social media platforms provide the option to set one's gender, offering users a way to express themselves and explore different identities. Further research and investigation are needed to gain a deeper understanding of different users' motivations and psychological needs to comprehend better and fulfill their social experiences.

The future trends of the population after engaging in gender reselection behavior are as follows:

- The reasons for gender reselection on social media have individual and social components. Individual factors may include personal traits, psychological needs, and personal interests, while social or environmental factors may involve influences from social culture and social circles.

- After engaging in gender reselection, most individuals may experience disappointment or dissatisfaction that does not align with their initial psychological expectations. This may be related to personal expectations and the reality presented on social media, as well as the cognitive differences between virtual and real identities regarding gender.

- A significant portion of individuals express a continued willingness to engage in gender reselection, possibly because they believe that doing so can fulfill specific needs or interests. On the other hand, those unwilling to try again may have already experienced dissatisfaction from gender reselection or do not identify with the significance of this behavior.

- Most individuals do not tend to recommend gender selection behavior to those around them. This may involve considerations of personal privacy protection and a reluctance to promote this behavior among peers. Additionally, it may be related to personal attitudes and perceptions towards gender selection, as many individuals may not view it as a necessary or commendable behavior.

4. Discussion

Gender reselection behavior on social media can focus on the following aspects: First, conducting long-term tracking studies to observe the persistence and changing trends of gender reselection behavior and to understand whether the motivations for individuals' gender-setting behavior on social media change over time and in different environments. They, secondly explore the psychological mechanisms and actual experiences behind gender reselection behavior to understand the cognitive differences between virtual and real identities, as well as the connection between expectations and actual experiences of gender reselection behavior. Further research can examine the differences and influencing factors of gender reselection behavior in different cultural and social backgrounds, comparing gender reselection behavior among different regions, age groups, and genders to explore the role of culture, society, and education [9, 10]. Additionally, attention should be given to the protection of user privacy and safety, studying how better to protect minors' privacy and personal information and effectively address the potential risks and challenges associated with gender reselection behavior. The impact of social media platform policies and norms on gender selection behavior should be explored, including whether more options regarding gender settings should be provided while balancing the need for personal privacy and self-expression. Finally, conducting gender reselection behavior education and psychological counseling activities for high school and college students to help them better understand their gender identity and expression and enhance their awareness of the potential impacts of gender reselection behavior. These future studies will provide valuable references and guidance for developing social media platforms and user experiences.

5. Conclusion

In conclusion, this study provides an in-depth analysis of the reasons behind gender reselection behavior on social media, revealing that harassment and gender-based unfair treatment are two important influencing factors. Gender reselection behavior is closely related to individual needs and social environment, with work requirements being one of the main reasons for this group to engage in gender reselection. Additionally, privacy protection becomes a shared motivation for males and females to engage in gender reselection. However, the actual experiences of most individuals do not align with their expectations, which may be attributed to cognitive differences between virtual and real identities. Nevertheless, many individuals continue to try gender reselection. However, few are willing to promote this behavior among their peers, which may be related to considerations of personal privacy protection and attitudes.

This paper comprehensively analyzes gender selection behavior on social media, highlighting the influences of harassment and gender-based unfair treatment. The importance of this research lies in enhancing our understanding of the motivations behind gender reselection behavior and providing targeted policies and norms for social media platforms to protect user privacy and safety. Furthermore, gaining a deeper understanding of the future trends of gender reselection behavior can contribute to guiding educational and psychological counseling activities, improving individuals' awareness of gender identity, and promoting social diversity and inclusivity.

References

- [1] Samory, M., Sen, I., Kohne, J., Flöck, F., & Wagner, C. (2021). "Call me sexist, but.": Revisiting Sexism Detection Using Psychological Scales and Adversarial Samples. *Proceedings of the International AAAI Conference on Web and Social Media*, 15(1), 573-584. <https://doi.org/10.1609/icwsm.v15i1.18085>
- [2] Wang, A., Pappu, A., & Cramer, H. (2021). Representation of Music Creators on Wikipedia, Differences in Gender and Genre. *Proceedings of the International AAAI Conference on Web and Social Media*, 15(1), 764-775. <https://doi.org/10.1609/icwsm.v15i1.18101>

- [3] Oden Choi, J., Herbsleb, J., Hammer, J., & Forlizzi, J. (2020). *Identity-Based Roles in Rhizomatic Social Justice Movements on Twitter*. *Proceedings of the International AAAI Conference on Web and Social Media*, 14(1), 488-498. <https://doi.org/10.1609/icwsm.v14i1.7317>
- [4] Fabbri, F., Croci, M. L., Bonchi, F., & Castillo, C. (2022). *Exposure Inequality in People Recommender Systems: The Long-Term Effects*. *Proceedings of the International AAAI Conference on Web and Social Media*, 16(1), 194-204. <https://doi.org/10.1609/icwsm.v16i1.19284>
- [5] Johnson, I., Lemmerich, F., Sáez-Trumper, D., West, R., Strohmaier, M., & Zia, L. (2021). *Global Gender Differences in Wikipedia Readership*. *Proceedings of the International AAAI Conference on Web and Social Media*, 15(1), 254-265. <https://doi.org/10.1609/icwsm.v15i1.18058>
- [6] Asplund, J., Eslami, M., Sundaram, H., Sandvig, C., & Karahalios, K. (2020). *Auditing Race and Gender Discrimination in Online Housing Markets*. *Proceedings of the International AAAI Conference on Web and Social Media*, 14(1), 24-35. <https://doi.org/10.1609/icwsm.v14i1.7276>
- [7] Dogan, D., Altun, B., Zengin, M. S., Kutlu, M., & Elsayed, T. (2023). *Catch Me If You Can: Deceiving Stance Detection and Geotagging Models to Protect Privacy of Individuals on Twitter*. *Proceedings of the International AAAI Conference on Web and Social Media*, 17(1), 173-184. <https://doi.org/10.1609/icwsm.v17i1.22136>
- [8] Sawhney, R., Neerkaje, A., Habernal, I., & Flek, L. (2023). *How Much User Context Do We Need? Privacy by Design in Mental Health NLP Applications*. *Proceedings of the International AAAI Conference on Web and Social Media*, 17(1), 766-776. <https://doi.org/10.1609/icwsm.v17i1.22186>
- [9] Kulshrestha, J., Oliveira, M., Karaçalık, O., Bonnay, D., & Wagner, C. (2021). *Web Routineness and Limits of Predictability: Investigating Demographic and Behavioral Differences Using Web Tracking Data*. *Proceedings of the International AAAI Conference on Web and Social Media*, 15(1), 327-338. <https://doi.org/10.1609/icwsm.v15i1.18064>
- [10] Zhang, J. S., Keegan, B., Lv, Q., & Tan, C. (2021). *Understanding the Diverging User Trajectories in Highly-related Online Communities during the COVID-19 Pandemic*. *Proceedings of the International AAAI Conference on Web and Social Media*, 15(1), 888-899. <https://doi.org/10.1609/icwsm.v15i1.18112>