

Phonological Variation and Gender Performance: A Sociolinguistic Study of the “Nǚ Guoyin” Phenomenon in Beijing Youth Speech

Qi'ao Yang, Zhizhong Tian

Beijing No.80 High School, Beijing, 100102, China

Email: qiaoyangmickey@163.com; tianzhizhong7808@gmail.com

Abstract: The phenomenon known as Nǚ Guóyīn (“female national pronunciation”) refers to the fronting of palatal initials /tɕ/, /tɕʰ/, and /ɕ/ to alveolar [ts], [tsʰ], and [s]. Historically documented in Beijing since the 1920s, it was strongly associated with educated young women and explained through aesthetic, dialectal, or intimacy-based accounts. Yet little research has examined its contemporary status under changing gender norms and digital media environments. This study investigates Nǚ Guóyīn among 44 Beijing middle and high school students using speech samples, surveys, and interviews. Results show that 40.9% of participants employed fronted variants, including 26.1% of male speakers, a sharp contrast with earlier findings of exclusively female use. Most users were unaware of their pronunciations, underscoring its unconscious character. While statistical differences were modest, fronting users favored lifestyle-oriented platforms such as Xiaohongshu and Weibo, while standard users clustered around gaming and subcultural spaces like Bilibili and Douyin. Interviews highlighted imitation, parody, and performative identity, indicating that the variant now functions as a mediatized style rather than a residual dialect feature. The findings reveal that Nǚ Guóyīn persists but with shifting indexicalities, serving as a resource for both genders in youth identity performance and raising new questions about an emergent “male national pronunciation.”

Keywords: nǚ guoyin, palatal fronting of /tɕ/ initials, gender performativity, social media, gendered identity construction

1. Introduction

The phenomenon known as Nǚ Guóyīn (“female national pronunciation”), referring to the fronting of palatal initials /tɕ/, /tɕʰ/, and /ɕ/ to alveolar [ts], [tsʰ], and [s], has been documented in Beijing for nearly a century. Its earliest record dates to the 1920s, when Li observed that female students at the Girls’ Middle School in Beijing consistently shifted palatal initials forward. Later accounts, including Zhao Yuanren’s commentary on Karlgren’s *Grammata Serica*, confirmed its prevalence among young women. By the mid-twentieth century, scholars such as Xu Shirong identified it as part of urban vernacular speech. Systematic treatments appeared in the 1980s: Chen[1] described it as characteristic of educated young women, while Cao[2] and Hu[3] conducted empirical studies outlining its phonetic profile, distribution, and motivations. Hu concluded that Nǚ Guóyīn clustered among adolescent females in informal settings and that most speakers were unaware of their non-standard articulation.

Phonetically, the variant involves forward tongue movement, producing weaker aspiration and sharper timbre[4]. Although reminiscent of the historical *jian-tuan* distinction, it collapses contrasts, yielding consistent alveolar realizations. Socially, surveys reported high prevalence among educated young women, near absence among men, and decline with age, suggesting both age-grading and stylistic functions[5].

Interpretations have varied. Hu emphasized an “aesthetic psychology” account, linking the delicate timbre to female preferences for beauty. Cao speculated about residual influence from southern dialects or the “Old National Pronunciation.” Zhu[6] proposed an “intimacy hypothesis,” framing the feature as an extension of infant-directed speech. Despite differences, these views agreed in treating Nǚ Guóyīn as peripheral and gendered.

After the early 2000s, however, research virtually ceased. Chinese sociolinguistics increasingly focused on policy, dialect preservation, and Mandarin promotion, while minor urban variants were sidelined. Internationally, the “third wave” of variationist studies highlighted the role of style, identity, and gender performance[7], but within China the “gender turn” remained underdeveloped. As a result, Nǚ Guóyīn was dismissed as a passing fad, despite its continued use among youth.

Against this backdrop, the present study reactivates attention to Nǚ Guóyīn by situating it at the intersection of sociophonetics, gender linguistics, and media studies. Two central questions guide the analysis. First, does Nǚ Guóyīn still display the strong gender bias documented by Hu and Cao, or has it been adopted, mimicked, or parodied by male speakers in today’s more fluid social environment? Second,

do traditional frameworks, beautification psychology, dialectal residue, intimacy signaling, retain explanatory value, or have new mechanisms, particularly those tied to digital media, become more salient?

The rapid rise of Douyin, Xiaohongshu, and Bilibili has transformed linguistic practice among Chinese youth. Short videos and livestreams amplify stylized features, allowing rapid circulation and imitation. Once localized traits now spread widely, framed as markers of cuteness, humor, or authenticity. Within this ecology, Nǚ Guóyīn may function less as an unconscious variant and more as a deliberate performance of gendered identity. Butler's theory[8] of performativity provides a useful lens: fronted palatal initials can serve as resources for "doing femininity" or destabilizing gender norms.

Accordingly, this study treats Nǚ Guóyīn not merely as a phonetic curiosity but as a nexus of language, gender, and media. Using speech samples, questionnaires, and interviews with Beijing adolescents, it investigates the distribution of the variant, speakers' awareness, and the role of media exposure in its spread. It also considers whether male adoption signals reconfiguration of the phenomenon and whether a complementary "male national pronunciation" characterized by backing may be emerging. By addressing these questions, the study contributes to documenting an evolving urban speech style and to broader debates on how youth, media, and identity intersect in shaping contemporary linguistic practice.

2. Methodology

This study adopts a mixed-methods design that integrates quantitative and qualitative approaches to investigate the Nǚ Guóyīn phenomenon among Beijing adolescents. To ensure both breadth and depth, the research combined speech sample collection, survey questionnaires, and structured interviews. The triangulation of methods not only strengthens the reliability of the findings but also provides a multi-layered understanding of the social and linguistic dynamics underlying this phonetic variation.

2.1 Participants

The participants consisted of 44 students recruited from two schools in Beijing: 17 students from the junior division of Chaoyang Foreign Language School (Grades 7–8) and 27 students from the Wangjing campus of Beijing No. 80 Middle School (Grades 9–12). Recruitment followed a random selection process in multiple campus locations, including school gates, courtyards, and cafeterias, to ensure a diverse and representative sample. All students were informed of the study's aims and voluntarily agreed to participate. The gender distribution was balanced, with 21 female and 23 male students, thereby enabling analysis of possible gender-based variation.

2.2 Data Collection Instruments and Procedures

Three complementary instruments were employed:

(1) *Speech Samples.* Participants read a short story passage and a word list containing a high frequency of /tɕ/, /tɕʰ/, and /ɕ/ initials[9]. The story was adapted from *The North Wind and the Sun*, and the word list followed Hu's design. This combination tested whether speakers showed fronting in continuous discourse, isolated items, or both. All readings were recorded under controlled conditions[10].

(2) *Questionnaire Survey.* A structured questionnaire captured sociolinguistic background, attitudes, and media use. Items covered: (a) dialect background, including birthplace, parental origins, and exposure to "jian-tuan" dialect regions; (b) evaluations of Standard Mandarin and Nǚ Guóyīn on a five-point Likert scale, including judgments of gender appropriateness; and (c) social media practices, such as frequency of platform use (e.g., Douyin, Xiaohongshu, Bilibili, WeChat), preferred content types, and perceived influence of online speech styles[11].

(3) *Structured Interviews.* Ten semi-structured interviews were conducted with nine students and one teacher, balanced by gender and by variant/non-variant use[12]. Without explicitly naming Nǚ Guóyīn, the researcher demonstrated the feature and asked whether participants noticed it, how they evaluated it, and what functions they attributed to it. Questions probed perceptions of "cuteness," authenticity, and male usage, allowing spontaneous responses while minimizing bias[13].

2.3 Data Analysis

The analysis combined perceptual phonetic judgments, descriptive statistics, and thematic content analysis.

(1) *Quantitative Analysis.* Speech samples were categorized into three groups: standard pronunciation (unaltered /tɕ/, /tɕʰ/, /ɕ/), partial fronting (slight advancement, transcribed as [tɕ̟], [tɕ̟ʰ], [ɕ̟]), and full fronting ([ts], [tsʰ], [s]). Classification relied on perceptual auditory analysis by trained linguists rather than acoustic measurements. While this approach introduces a degree of subjectivity, inter-listener reliability was high, consistent with established sociophonetic practice. Questionnaire data were analyzed

using descriptive statistics, chi-square tests of independence, and t-tests to compare platform use, content preferences, and perceived stylistic influence between fronting and non-fronting groups. In addition, Mann-Whitney U tests were employed for ordinal Likert-scale data to assess the significance of attitudinal differences.

(2) Qualitative Analysis. Interview transcripts were coded thematically using content analysis. Categories included “sources of imitation,” “motivations for use,” “gender associations,” “media influence,” and “social evaluation.” This method allowed the identification of recurring patterns in how participants interpreted and justified the phenomenon. Special attention was paid to how speakers negotiated between self-expression, peer influence, and wider gender norms. By triangulating survey statistics with qualitative insights, the study aimed to capture both the prevalence and the social meaning of the phenomenon.

2.4 Ethical Considerations

Given that all participants were minors, the study followed strict ethical safeguards. Participation was voluntary and mediated through teachers, who explained the project’s purpose. Students provided verbal assent, with the right to withdraw at any time. No personal identifiers such as names, ages, or parental origins were disclosed in the final dataset. Recordings were anonymized and stored securely, with transcripts used solely for research purposes. Survey items avoided sensitive or potentially stigmatizing language, and interviews employed neutral phrasing to prevent discomfort or suggestive bias. The study adhered to the principle of minimal risk, ensuring that participants’ privacy, dignity, and autonomy were fully respected.

2.5 Summary of Design

In sum, the methodological framework was designed to capture both the structural and the performative dimensions of Nǚ Guóyīn. Speech samples allowed for objective assessment of phonetic realization; surveys quantified background variables and attitudes; interviews illuminated subjective perceptions and social meanings. Together, these methods provided a robust dataset capable of addressing the study’s guiding questions: whether Nǚ Guóyīn continues to exhibit gender asymmetry, and whether traditional explanations remain valid or have been supplanted by media-driven mechanisms.

3. Results

This section presents the empirical findings of the study, combining quantitative survey data, speech sample analysis, and qualitative interview insights. Results are organized into five parts: (1) distribution of Nǚ Guóyīn among participants, (2) speakers’ awareness of their own pronunciations, (3) statistical associations with social media usage, (4) qualitative interpretations within a gender performativity framework, and (5) preliminary observations of a complementary “male national pronunciation.”

3.1 Distribution of Nǚ Guóyīn

Among the 44 participants, 21 were female (Grades 7–12) and 23 were male (Grades 7–11). When reading the story passage, seven female students and one male student displayed partial fronting, accounting for 33.3% and 4.3% of their respective groups. None demonstrated full fronting in the passage task. However, when reading the word list, 11 females (57.1%) and 6 males (26.1%) employed some degree of fronting; three females and one male exhibited full fronting, while the remainder showed partial fronting. These results are summarized in Table 1.

Table 1. Distribution of Nǚ Guóyīn by Grade and Gender

Grade	Male (n)	Female (n)	Passage fronting (M/F)	Word list fronting (M/F)
7	5	4	0 / 1	0 / 3 (1 full)
8	6	4	1 / 3	2 (1 full) / 3 (1 full)
9	2	4	0 / 1	0 / 2
10	6	2	0 / 1	3 / 1
11	4	5	0 / 1	1 / 2 (1 full)
12	0	2	0 / 0	0 / 0

Overall, 18 participants (40.9%) used fronted variants (partial or full). While females remained the majority, the male proportion (26.1%) was striking, especially compared to Hu’s finding of 0% male usage. These results suggest a weakening of strict gender boundaries: Nǚ Guóyīn can no longer be described as exclusively female.

3.2 Awareness of Fronting Variants

Previous studies suggested that variant speakers were often unaware of their own usage. Our findings support this. In the questionnaire, participants were asked whether they perceived themselves as using standard [tɛ], [tɛ^h], [ɛ] pronunciations or fronted [ts], [ts^h], [s] variants. Results are shown in Table 2.

Table 2. Self-Perception of Pronunciation

Group	“No difference”	“Standard more frequent”	“Fronting more frequent”
Fronting users (n=17)	9 (53%)	6 (35%)	2 (12%)
Standard users (n=27)*	9 (33%)	12 (44%)	5 (19%)

Over half (53%) of fronting users perceived no difference between standard and fronted variants. Another 35% incorrectly believed they used standard pronunciation more often, despite evidence of fronting in their speech samples. In total, 88% of fronting speakers misjudged their own pronunciation. Even 33% of standard speakers failed to distinguish the two, and 19% mistakenly believed they used fronting. This pervasive lack of self-awareness indicates that Nǚ Guóyīn functions largely as an unconscious style, shaped by social interaction rather than deliberate choice.

3.3 Social Media Usage and Statistical Associations

Survey data revealed that participants’ media practices differed modestly between fronting and non-fronting groups. Table 3 compares platform usage across groups.

Table 3. Platform Usage by Group

Platform	Fronting group (%)	Standard group (%)	z-stat	p-value	Sig.
WeChat	94.1	96.3	-0.34	0.74	No
Douyin	41.2	44.4	-0.21	0.83	No
Xiaohongshu	47.1	37.0	0.66	0.51	No
Bilibili	35.3	51.9	-1.07	0.28	No
QQ	11.8	25.9	-1.13	0.26	No
Weibo	23.5	22.2	0.10	0.92	No

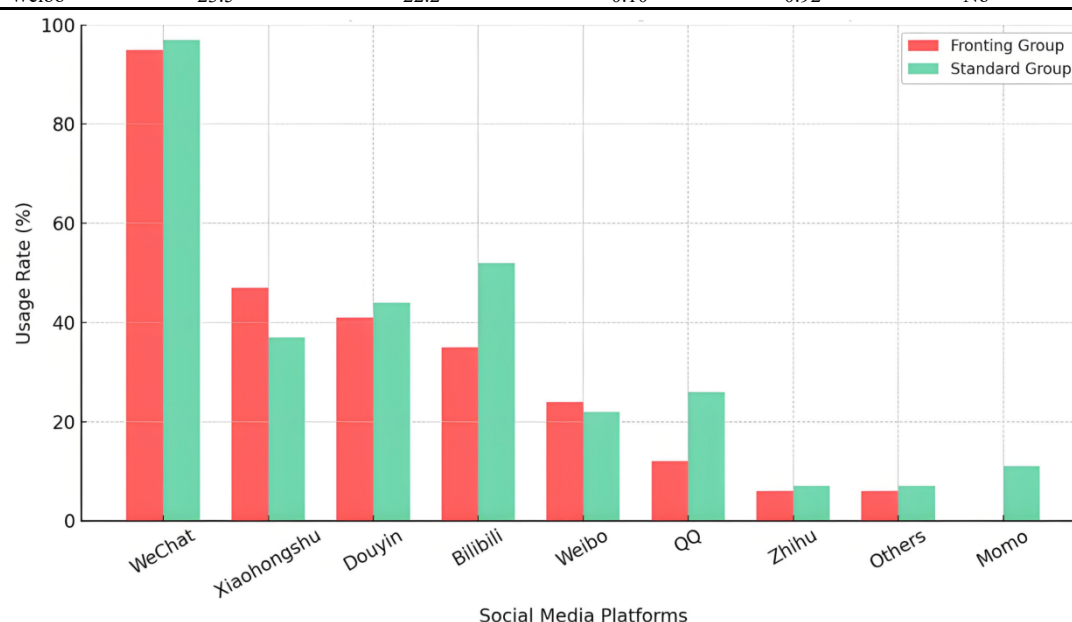


Figure 1. Comparison of Platform Usage

As illustrated in Figure 1, WeChat was almost universally used by both groups, while more distinct differences appeared in secondary platforms. The fronting group reported higher usage of Xiaohongshu and Weibo, platforms typically associated with lifestyle sharing and self-presentation. By contrast, the standard group demonstrated greater engagement with Bilibili, Douyin, and QQ, which are more strongly linked to gaming, anime, and youth subcultural communities. These tendencies, though not statistically significant, suggest subtle alignment between phonetic style and preferred digital environments: fronting users gravitated toward socially expressive and aesthetic platforms, whereas standard users clustered around entertainment- and gaming-oriented spaces.

Content preferences reinforced this tendency. Table 4 shows reported consumption by content type.

Table 4. Content Preferences by Group

Content type	Fronting group (%)	Standard group (%)	z-stat	p-value	Sig.
Gaming	41.2	70.4	-1.92	0.055	Marg.
Beauty/fashion	47.1	29.6	1.17	0.24	No
Daily Vlog/emotion	64.7	48.1	1.07	0.28	No
Music/dance	47.1	33.3	0.91	0.36	No
Hot news/social	35.3	22.2	0.95	0.34	No

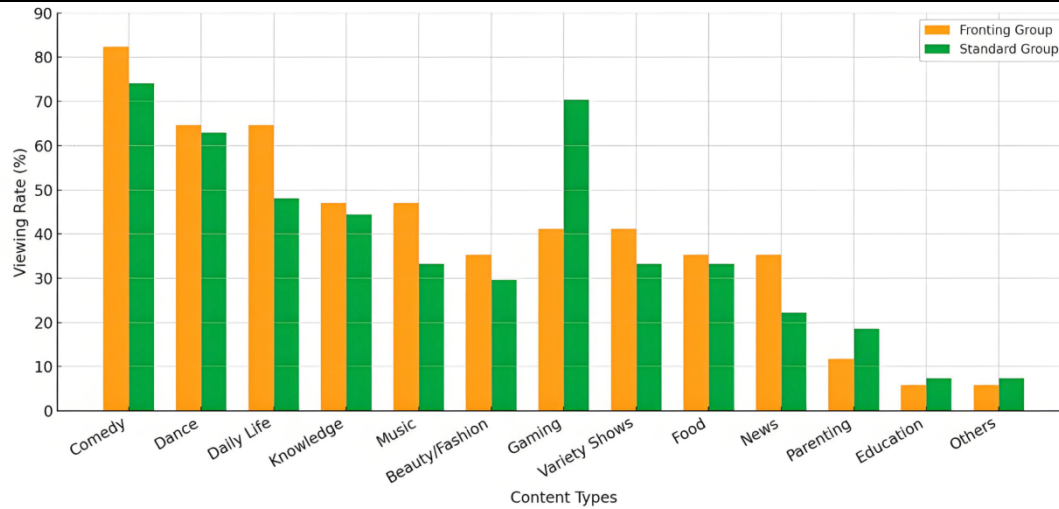


Figure 2. Comparison of Content Preferences

As shown in Figure 2, gaming content, typically associated with male-dominated, competitive, and aggressive interactional styles, was substantially more common among standard users, approaching statistical significance ($p \approx 0.055$). In contrast, fronting users reported higher engagement with beauty, lifestyle, and emotional content, domains symbolically linked to affective display and self-presentation. Although most differences did not reach the threshold of significance, the directional trends are meaningful: they parallel the symbolic associations of Nǚ Guóyīn as a “cute” or “softened” speech style, suggesting that digital media environments may reinforce and normalize the social meanings of phonetic variation.

3.4 Qualitative Insights: Gender Performativity

Interviews revealed recurring themes consistent with Judith Butler’s theory of gender performativity.

Imitation and Citationality. Several students attributed fronting to imitation of influencers or Taiwanese celebrities. For example, one remarked: “Some internet personalities speak that way, so others copy them.” Another explicitly linked fronting to “sounding cute,” reinforcing the idea of citationality, performing gender through repetition of recognizable cultural styles.

From Online to Offline. Respondents noted that speech patterns spread from digital contexts into face-to-face interactions, serving as tools for social bonding. One participant explained: “We imitate it to get closer to friends.” This illustrates how online media normalize stylistic practices that later become embodied routines.

Male Appropriation. Notably, some male students reported using fronting, often humorously or in parody. Their practices destabilize the assumption that phonetic style maps neatly onto gender identity. Butler’s framework highlights the subversive potential of such “misaligned” performances: when men adopt a feminized variant, they expose the contingency of the gender-speech link.

Alternative Functional Pathways. A female teacher, herself a consistent user of full fronting, argued that [s] was acoustically clearer and less prone to distortion in noisy environments compared to [ʃ]. Her functional explanation illustrates that not all usage is gender-driven; pragmatic communicative needs may also motivate variant adoption[14].

Together, these accounts confirm that Nǚ Guóyīn is not a uniform or exclusively gendered phenomenon. It operates simultaneously as a stylistic performance, a mediatized cultural trend, and, in some cases, a practical acoustic strategy.

3.5 Preliminary Observation of “Male National Pronunciation”

During data collection, researchers observed a contrasting variant: the backing of palatal initials toward the palatal-velar region, approximating [cç], [cʰç], or [ç]. This emergent feature, tentatively labeled “male national pronunciation,” appeared only among male speakers. Though not systematically studied in this project, its existence suggests the possibility of complementary gendered sound shifts. Further research is required to determine its prevalence, social meanings, and interaction with Nǚ Guóyīn.

3.6 Summary

The results demonstrate three key findings. First, Nǚ Guóyīn is no longer exclusively female; while still more common among women, a significant proportion of men also employ it. Second, users are often unaware of their own pronunciations, underscoring its unconscious, socially conditioned character. Third, social media platforms and content preferences correlate with usage patterns, reinforcing the idea that digital environments facilitate the diffusion of stylistic phonetic variants. Finally, qualitative interviews suggest that Nǚ Guóyīn functions simultaneously as a gender performance, a medium-driven style, and, in some cases, a pragmatic speech strategy.

4. Discussion and Conclusion

The findings of this study shed new light on the sociolinguistic dynamics of Nǚ Guóyīn in contemporary Beijing. Building upon earlier descriptive research, the present analysis revisits this longstanding phenomenon through updated empirical data, demonstrating that its social meanings, distributional patterns, and explanatory frameworks are undergoing significant transformation.

4.1 Gender Boundaries and Shifting Distributions

Perhaps the most striking result concerns the weakening of the sharp gender asymmetry emphasized in earlier studies. In the 1980s, Nǚ Guóyīn was described as a near-exclusive marker of educated young women, with male adoption virtually absent. By contrast, this study found that more than one quarter of male participants employed fronted variants, particularly in the word-list task. The phenomenon, once tightly bound to femininity, now appears more fluid, accessible to both genders as a resource for social performance.

This development reflects broader changes in Chinese society. Over the past three decades, shifting gender ideologies have reconfigured expectations of masculinity and femininity. Whereas earlier norms tightly policed gendered behavior, contemporary youth culture tolerates and even embraces boundary-crossing practices. The appropriation of Nǚ Guóyīn by male speakers, sometimes serious, sometimes parodic, illustrates how linguistic variants become sites where social categories are contested and redefined[15]. Rather than serving as a fixed emblem of femininity, Nǚ Guóyīn has become a flexible stylistic option available to speakers across the gender spectrum.

4.2 Beyond Traditional Explanations

Previous scholarship offered three major explanations for the persistence of Nǚ Guóyīn: beautification psychology, dialectal residue, and intimacy signaling. While each captures certain aspects of the phenomenon, our findings suggest that these accounts are insufficient to explain its contemporary trajectory.

The “beautification” hypothesis assumes that female speakers adopt delicate phonetic forms to align with aesthetic ideals. Yet in our dataset, many users, especially male speakers, were not motivated by aesthetic concerns. Similarly, the “dialectal residue” explanation is less compelling in an era of unprecedented linguistic homogenization, where Beijing adolescents have limited contact with Jiangnan dialects that once preserved the *jian-tuan* distinction. Finally, while “intimacy signaling” may capture the affective quality of fronting in private contexts, it cannot account for the phenomenon’s uptake on public digital platforms.

Instead, the evidence points to new explanatory frameworks. Interviews highlighted the role of imitation, parody, and stylization, particularly in relation to online influencers. Digital media amplify and normalize distinctive features, turning local variants into recognizable emblems of identity. Thus, the persistence of Nǚ Guóyīn today is less about residual dialectal influence or subconscious affect, and more about stylistic practice within mediatized interaction.

4.3 The Role of Digital Media

One of the most original contributions of this study is the demonstration of how digital media reshape the conditions of phonetic variation. Platforms such as Douyin, Xiaohongshu, and Bilibili function as “accelerators of style,” enabling linguistic traits to spread rapidly and acquire new symbolic value.

Our statistical analysis showed that fronting users disproportionately favored platforms oriented toward lifestyle and self-presentation, while standard users clustered in gaming- and subculture-oriented environments. Although differences were not statistically significant, the directional patterns reinforce the idea that platform ecologies cultivate distinct linguistic orientations. Moreover, interview data confirmed that adolescents often noticed, imitated, and circulated Nǚ Guóyīn through digital interactions.

These findings resonate with Butler's theory of gender performativity, which emphasizes how identities are enacted through repeated practices. In this case, fronted palatal initials function as performative resources: speakers reproduce them to "do" femininity, to parody gender norms, or simply to align with a mediatized style. The performative dimension explains not only female adoption but also male appropriation, demonstrating that linguistic variants do not merely reflect gender but actively participate in its construction.

4.4 Functional Motivations and Alternative Pathways

While much of the analysis emphasizes symbolic and stylistic functions, interviews also revealed pragmatic motivations. A female teacher argued that [s] realizations were acoustically clearer and less prone to distortion than [ɕ], especially in noisy environments. Such functional explanations suggest that Nǚ Guóyīn may persist not only as a style marker but also as a communicative strategy, enhancing intelligibility in certain contexts.

This observation complicates the assumption that all instances of Nǚ Guóyīn are purely socially motivated. Instead, the phenomenon may operate on multiple levels simultaneously: as an unconscious articulatory preference, as a stylistic performance, and as a functional adaptation. Future research should examine the acoustic dimensions of clarity and intelligibility to assess whether these practical factors play a significant role in the variant's survival.

4.5 Emergence of "Male National Pronunciation"

An unexpected observation was the emergence of what we tentatively label "male national pronunciation," characterized by backing palatal initials toward the velar region. Although not systematically measured, this variant was noticed exclusively among male speakers. Its existence raises intriguing possibilities: just as Nǚ Guóyīn once indexed femininity, a complementary "male" style may be developing in parallel. Whether this pattern is widespread, stable, or socially meaningful requires further empirical investigation.

If confirmed, the coexistence of fronting and backing variants would provide a compelling example of how sound changes may operate along gendered lines within a single speech community. Such complementary shifts would challenge traditional models of variation that assume a single trajectory, highlighting instead the potential for multiple, intersecting pathways driven by identity performance.

4.6 Theoretical and Practical Implications

The study contributes to sociolinguistic theory by demonstrating how phonetic variants evolve in response to changing gender ideologies and media environments. It underscores the importance of analyzing youth speech not merely as ephemeral fashion but as a crucial site of identity work. By integrating sociophonetic analysis with theories of performativity and media circulation, this research highlights the multi-layered dynamics of variation in contemporary urban contexts.

Practically, the findings may inform language education and pedagogy. Teachers and institutions often frame non-standard variants as "errors" or "deficiencies." Yet understanding Nǚ Guóyīn as a socially meaningful practice challenges such deficit views. Instead of stigmatization, educators might approach the variant as an index of evolving cultural practices, while still ensuring that students are aware of the expectations of standard Mandarin in formal settings.

4.7 Limitations and Future Directions

Several limitations must be acknowledged. First, the sample size of 44 students, while sufficient for exploratory analysis, limits the generalizability of findings. Future studies should include larger and more diverse samples, incorporating multiple schools and socioeconomic backgrounds. Second, the reliance on perceptual coding rather than acoustic measurement introduces potential subjectivity. Integrating acoustic analysis would provide more precise evidence of phonetic shifts. Third, while this study highlighted the role of digital media, it did not analyze online discourse directly. Ethnographic research on digital communities could yield richer insights into how Nǚ Guóyīn circulates and acquires meaning online.

Despite these limitations, the study offers a timely re-examination of a historically important yet understudied phenomenon.

References

- [1] Chen, S. (1985). *An introduction to sociolinguistics*. Beijing: Peking University Press.
- [2] Cao, Y. (1986). Gender differences in the phonology of Beijing Mandarin. *Chinese Language Learning*, (6), 31.
- [3] Hu, M. (1987). A survey of the "nǚ guoyin" phenomenon in Beijing Mandarin. *Language Planning*, (1).

- <https://doi.org/10.16412/j.cnki.1001-8476.1988.01.014>
- [4] Liu, Y., Wang, Y., & Yu, J. (2024). Acoustic features and perceptual confusions of Mandarin consonant initials. *Acta Acustica*, 49(6), 1–13. <https://doi.org/10.12395/0371-0025.2024128>
 - [5] Coupland, N. (2001). *Language, situation, and the relational self: Theorizing dialect-style in sociolinguistics*. Cambridge University Press.
 - [6] Zhu, X. (2004). Intimacy and prominence: A biological explanation of diminutives, *nü guoyin*, and terms like *meimei*. *Contemporary Linguistics*, 3, 193–222.
 - [7] Podesva, R. J. (2011). The California Vowel Shift and gay identity. *American Speech*, 86(1), 32–51. <https://doi.org/10.1215/00031283-1503741>
 - [8] Butler, J. (1999). *Gender Trouble: Feminism and the Subversion of Identity* (10th Anniversary Edition, 2nd). Routledge. <https://doi.org/10.4324/9780203902752>
 - [9] Labov, W. (1972). *Sociolinguistic Patterns* (6th printing). University of Pennsylvania Press. <https://archive.org/details/sociolinguisticp00will>
 - [10] Institute of Linguistics, Chinese Academy of Social Sciences, Institute of Ethnology and Anthropology, Chinese Academy of Social Sciences, & Research Centre for Linguistics and Language Information Sciences, City University of Hong Kong (Eds.). (2012). *Language atlas of China* (2nd ed.). Beijing: The Commercial Press.
 - [11] Eckert, P., & McConnell-Ginet, S. (2013). *Language and Gender*. Cambridge University Press. Krippendorff, K. (2019). *Content Analysis*. SAGE Publications, Inc. <https://doi.org/10.4135/9781071878781>
 - [12] Androutsopoulos, J. (2014). *Mediatization and Sociolinguistic Change*.
 - [13] Lee, C. (2016). *Multilingualism online* (1st ed.). Routledge. <https://doi.org/10.4324/9781315707211>
 - [14] Liu, Y., Wang, Y., & Yu, J. (2024). Acoustic features and perceptual confusions of Mandarin consonant initials. *Acta Acustica*, 49(6), 1–13. <https://doi.org/10.12395/0371-0025.2024128>
 - [15] Yu, H. (2013). Should local operas adhere to dialects? *Zhongzhou Journal*, 196(4), 161–166.