A comparison of Heritage vs Homeland
Taiwanese Mandarin speaker attitudes towards *sajiao*

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Abstract. This study investigates the language attitudes and perceptions of Taiwanese Mandarin heritage and homeland listeners towards the use of *sajiao*, a stylized speech type, in two varieties of Mandarin. A matched guise experiment was conducted via Qualtrics with heritage listeners from the United States (n = 6) and homeland listeners from Taiwan (n = 7). Participants listened to a recording and rated their perceived social constructions of the speakers in terms of their cuteness, pleasantness, femininity, masculinity, and professionalism on a scale from one to seven. In total, participants listened to 130 recordings, 64 target and 66 filler, of 4 different sentences with both *sajiao* and non-*sajiao* forms. We find that heritage speakers pattern similarly to homeland speakers, although not to the same extent. This positions heritage speakers in their own category, where they have acquired the social associations with this specialized speech style, but not to the same degree as homeland speakers. This research sheds new light on heritage language socialization and perceptions of language variation, namely regarding two varieties of Mandarin and speech style. Further research is needed to investigate how Beijing Mandarin heritage speakers would perform in this same task.

Keywords. *sajiao*; heritage language; Taiwanese Mandarin; Beijing Mandarin; language socialization; language attitudes

1. Introduction. This study aims to investigate Taiwanese Mandarin heritage and homeland listeners' perceptions of *sajiao*, a type of gendered speech style. Previous literature has focused on the comparison between homeland speakers' and L2 learners' perceptions, leaving those of heritage speakers to be investigated. This research also seeks to document Taiwanese Mandarin perceptions of both Beijing and Taiwanese varieties of Mandarin. Through these two overarching research questions, we seek to supplement the growing body of literature on heritage language users, the interaction between identity and language, and language socialization.

2. Literature review. *Sajiao* is a type of speech act present in Mandarin Chinese, often described as sounding like a spoiled child. Characteristics of *sajiao* include the usage of sentence-final particles, sentence-final vowel lengthening, reduplication, nasality, and heightened pitch (Hardeman Guthrie 2016; Yueh 2013). Although *sajiao* is described as a phenomenon strongly associated with female speech in the majority of literature, studies show that men also use *sajiao* in natural discourse, albeit to a lesser extent (Yueh 2013).

    Sajiao is used in a wide variety of contexts, which range from greeting, negotiating, asking for help, complaining, refusing, giving an order, apologizing, and agreeing (Hardeman Guthrie 2016; Yueh 2013). *Sajiao* is also increasingly used in professional settings as it becomes a form of polite or formal language in Taiwan (Hardeman Guthrie 2016).

Much previous work focuses on how mainland Chinese Mandarin listeners perceive Taiwanese Mandarin, especially to gauge the influence of Taiwanese media on speaker stereotypes (Peng 2020; Peng & Garcia 2020; Juan 2011). Juan (2011) finds that mainland Chinese teenagers recognize Taiwanese Mandarin as a non-standard variety due to primarily phonological variation, while lexical and syntactic variation play a lesser role, and that this variety is associated with pleasantness and with popular media. In contrast, data collected from online discussion forums find Taiwanese Mandarin strongly associated with unpleasantness, pretentiousness, and cuteness (Peng & Garcia 2020). While lexical variation is not the most salient difference between Taiwanese and Beijing Mandarin, it can affect speaker judgments. Dabney (2014) finds that sentence-final particles can have different interpretations in Taiwanese and Beijing Mandarin, where the same particle 嘛 *ma* is associated with coldness in Taiwan but warmth in Beijing. There is clear variation in perceptions of Taiwanese Mandarin by mainland speakers, but there is a paucity of research investigating perceptions of mainland Mandarin varieties by Taiwanese Mandarin speakers.

Previous literature focuses on learners' perception on *sajiao*, where homeland Taiwanese Mandarin and American L2 Mandarin listeners have different perceived social constructions of this speech style. In Hardeman Guthrie (2016), homeland Taiwanese Mandarin listeners participated in a matched guise experiment task, where they ranked users of *sajiao* on various characteristics. While both homeland speakers and L2 learners perceived users of *sajiao* to be cuter and more feminine, they differed in rankings of friendliness and pleasantness. Whereas homeland speakers found *sajiao* users to be more friendly and pleasant, L2 learners instead found *sajiao* users to be less pleasant and friendly. Hardeman Guthrie (2016) attributes this to users' different cultural ideals on femininity. While Taiwanese Mandarin learners have incorporated some of their target language's culture's interpretations of *sajiao*, other perceptions of *sajiao* are influenced by their own culture's standards of gender. Language and culture socialization thus influences perceptions of this speech act.

While research has been conducted on homeland and learner perceptions of *sajiao*, there have not yet been any studies investigating how heritage speakers interpret *sajiao*. We refer to Polinsky (2014)'s definition of heritage speakers as "individuals who were raised in homes where a language other than the dominant community language was spoken, resulting in some degree of bilingualism in the heritage language and the dominant language". This definition intention- ally does not define heritage language in terms of proficiency but rather by language exposure in the home environment. However, the amount of language exposure/input that heritage speakers receive and its effects on speakers' grammars are not equally reported across all domains of use. While there is literature on phonology (Chang & Yao 2016), syntax (Benmamoun et al. 2013), and semantics (Scontras et al. 2017) for heritage speakers in Mandarin Chinese, social pragmatics remains an understudied field in general. Polinsky (2018) reports that heritage speakers may lack exposure to appropriate vocabulary used in politeness or request strategies; to accommodate for this, heritage speakers employ novel constructions that draw on both of their language grammars. Taken together, the work suggests that heritage speakers of Mandarin Chinese occupy a unique space differing from both language learners and homeland speakers, and we expect to see Mandarin Chinese heritage speakers' creative solutions to potential gaps reflected in other social pragmatic phenomena.

To date, there is no work that examines how *sajiao* is perceived by heritage speakers of Mandarin. This project answers Polinsky (2018)'s call to fill this gap by looking at the intersection between heritage identities and *sajiao* interpretations, analyzing how language socialization differs

in heritage populations versus homeland speaker populations. This paper investigates perceptions of Beijing Mandarin by both homeland and heritage Taiwanese Mandarin speakers in both *sajiao* and non-*sajiao* contexts to see how language variety may interact with characteristics such as cuteness and friendliness. This aspect will establish associations that both homeland and heritage Taiwanese Mandarin speakers have about Beijing Mandarin, allowing for more pinpointed comparisons. Lastly, this project also contributes the field's larger understanding of heritage language diversity by differentiating heritage speakers from one another and treating the population as a multifaceted group. While many studies tend to focus on Chinese-speaking Asian Americans as a whole, we focus on Taiwanese Mandarin heritage speakers because perceived social characteristics can potentially differ between Beijing and Taiwanese Mandarin populations.

3. Methodology.

3.1. PARTICIPANTS. This project has two target populations, Taiwanese Mandarin homeland and heritage listeners. The minimal requirements for all participants were that they were over the age of 18. For homeland listeners, they should be born and have spent part of their childhood in Taiwan. For heritage listeners, they should have at least one caregiver who is a homeland speaker of Taiwanese Mandarin and should be born and raised in the United States. Participants for this project were recruited from friends, family, and social media advertising on sites such as Facebook and Reddit.

There were fifteen total responses for this experiment, with two responses that were unusable due to demographic reasons. Out of the thirteen responses, seven were from Taiwanese Mandarin heritage listeners and six were from homeland listeners. The average year of birth of heritage listeners was 1997, while the average year of birth of homeland listeners was 1998, with a larger range of ages in the homeland listeners than the heritage listeners, presented in Table 1.

	Male	Female	Avg. Year Born (Age)	Youngest (Age)	Oldest (Age)
Heritage	2	5	1997 (24)	1999 (22)	1992 (29)
Homeland	3	3	1998 (23)	2003 (18)	1989 (32)

Table 1. Participant demographic data

3.2. EXPERIMENT STRUCTURE. The experiment was conducted through Qualtrics in both English and Mandarin Chinese with traditional characters and Hanyu Pinyin. Participants were first shown an online consent form and, if they consented to participate in the project, were shown written approximations of the four sentences they were asked to listen to.

Participants heard a short audio file of a sentence and were asked to rate their perception of the speaker based on five characteristics chosen from Hardeman Guthrie (2016): cuteness, femininity, masculinity, professionalism and friendliness. These characteristics were rated on a scale of one to seven to match Hardeman Guthrie (2016)'s methodology, where one is ranked the lowest and seven is ranked the highest. Participants were given short definitions of professionalism and friendliness based on feedback from a pilot study. For professionalism, participants were asked to think about whether the way the speaker was talking sounded like they were at work, and for friendliness, participants were asked to judge how approachable they found the speaker. Figure 1 shows an example of what participants were shown.

		NOT CUTE 不可愛 bù kě ài	2	3	4	5	6	VERY CUTE 很可愛 hěn kě ài
1. How cute does this person sound? 這個人的聲音聽起來有多可愛? zhè ge rén de shēng yīn tīng qǐ lái yǒu duō kě ài?		○	○	○	○	○	○	○
2. How friendly does this person sound? 這個人的聲音聽起來有多友善? zhè ge rén de shēng yīn tīng qǐ lái yǒu duō yǒu shàn?		NOT FRIENDLY 不友善 bù yǒu shàn ○	2 ○	3 ○	4 ○	5 ○	6 ○	VERY FRIENDLY 很友善 hěn yǒu shàn ○
3. How feminine does this person sound? 這個人的聲音聽起來有多女性化? zhè ge rén de shēng yīn tīng qǐ lái yǒu duō nǚ xìng huà?		NOT FEMININE 不陰柔 bù yīn róu ○	2 ○	3 ○	4 ○	5 ○	6 ○	VERY FEMININE 很陰柔 hěn yīn róu ○
4. How masculine does this person sound? 這個人的聲音聽起來有多男子氣概? zhè ge rén de shēng yīn tīng qǐ lái yǒu duō nán zǐ qì gài?		NOT MASCULINE 不很男子氣概 bù hěn nán zǐ qì gài ○	2 ○	3 ○	4 ○	5 ○	6 ○	VERY MASCULINE 很男子氣概 hěn nán zǐ qì gài ○
5. How professional does this person sound? 這個人的聲音聽起來有多專業? zhè ge rén de shēng yīn tīng qǐ lái yǒu duō zhuān yè?		NOT PROFESSIONAL 不專業 bù zhuān yè ○	2 ○	3 ○	4 ○	5 ○	6 ○	VERY PROFESSIONAL 很專業 hěn zhuān yè ○

Figure 1. Participants' view of sample questions and Likert scale

Participants were also able to replay the recording once as needed while looking at the characteristics. Afterwards, participants were asked to fill out a demographic survey asking about their age, profession, and language history. Participants were only asked to self-identify which language(s) they spoke and to what level. No task to test proficiency was administered. This experiment was a listening task where participants were explicitly asked not to focus on the content of the recording, so listening comprehension was not a critical component, and not requiring a proficiency test encouraged more heritage participants who otherwise would have felt insecure about their language ability.

Participants were also asked to volunteer the list of places where they had lived before in order to determine potential sources of language socialization, as Hardeman Guthrie (2016) found that L2 speakers who lived in Taiwan for an extended period of time acquired similar perceptions of *sajiao* to homeland speakers. The survey also asked if the participants had ever studied Mandarin Chinese before, and if so, where and for how long. Oftentimes heritage speakers reported attending Saturday or Sunday school classes to practice heritage language maintenance. These weekend schools generally center around diaspora communities as a form of social environment, thus serving as an important source of language socialization.

3.3. STIMULI. This experiment used four stimulus sentences. The first two sentences came from Hardeman Guthrie (2016)'s paper on *sajiao*. These two sentences are provided below, with an optional sentence-final particle. These two sentences in Example (1) and (2) use contexts where the speaker has a different opinion from the listener, thus positioning the speaker in opposition to the interlocutor.[1]

(1)　　我們　　　　　一定　　　　要　　看　　那個　　　　電影　　　　嗎?　我
　　　　Wǒ-men　　yīdìng　　　yào　kàn　nà-gè　　　diànyǐng　　ma?　Wǒ
　　　　1-PL　　　　definitely　want　see　DEM-CLF　movie　　　QP?　1SG
　　　　比較　想　　看　　別　　的(欸).

　　　　bǐjiào　xiǎng　kàn　bié　de (ei).
　　　　more　want　see　other　DE (SFP)

'Do we have to see this movie? I'd rather see the other one.'

(2) 你   不   應該   對   我   說   這樣   的   話   (呀).
     Nǐ   bù   yìnggāi duì   wǒ   shuō zhèyàng de   huà   (ya).
     2SG NEG should   to   1SG say   this.way DE   speech (SFP).
     'You shouldn't talk that way to me.'

Both of the contexts in Hardeman Guthrie (2016)'s study use *sajiao* as a way to soften re- quests or orders towards the recipient, with the above two examples highlighting blunt language that could be face-threatening without the use of *sajiao*. The use of *sajiao* to soften blunt language serves to help the interlocutor gain face (Yueh 2013). Two additional contexts were used in order to represent this politeness strategy, namely a request for help, as in (3), and a suggestion, as in (4). These stimuli position the speaker and the addressee as more on the same side, particularly suggesting that the addressee is in a position of power or influence. These sentences also have optional sentence-final particles, and (4) has optional verb reduplication, another characteristic of *sajiao*.

(3) 請   幫   我   寫   作業   (啦).
     Qǐng   bāng   wǒ   xiě   zuòyè   (la).
     Please help   1SG   write homework (SFP).
     'Please help me with my homework.'

(4) 我們   去   看(看)   一下   (啊)/(啦).
     Wǒ-men qù   kàn-(kàn)   yīxià   (a)/(la).
     1-PL   go   look-(REDUP) for.a.moment (SFP).
     'Let's go take a look.'

In total, participants listened to 130 recordings. 64 of these recordings were target stimuli, which were produced by four homeland Beijing Mandarin speakers (2 male, 2 female) and four homeland Taiwanese Mandarin speakers (2 male, 2 female) under two different guises (*sajiao* versus non-*sajiao*). Participants were led to believe that each recording was from a different speaker rather than from one speaker reading the same sentence with different styles through 66 filler stimuli.

Due to the COVID-19 pandemic, all volunteers who recorded stimuli were asked to do so using their phone or available recording software at home rather than coming into a lab to record. While the amplitude of all recordings normalized in Praat, there is still some variation in the quality of the recordings which could have influenced participants' perceptions.

4. Results. In total, 4160 tokens were analyzed in R Version 4.1.1 (R Core Team 2021). Heritage listeners rated 2240 total tokens (*sajiao* = 1120) and homeland listeners rated a total of 1920 tokens (*sajiao* = 960) for each of the five characteristics (cuteness, friendliness, femininity, masculinity, and professionalism). The mean ratings of each perceived social characteristic by the type of speaker (Taiwanese Mandarin or Beijing Mandarin), speaker's gender, type of listener, and type of speech style are presented in Table 2.

Characteristic	MSV	S. Gender	Heritage Listener				Homeland Listener			
			female		male		female		male	
			ns	s	ns	s	ns	s	ns	s
Cuteness	Beijing	female	3.60	5.05	3.94	4.50	3.25	4.33	3.58	4.63
		male	2.73	2.65	1.75	1.69	2.41	2.79	3.08	3.13
	Taiwanese	female	4.15	4.53	3.38	3.88	3.08	4.08	4.33	4.58
		male	3.23	4.15	2.80	2.00	2.46	3.13	3.13	4.25
Friendliness	Beijing	female	4.20	5.28	4.13	4.25	3.88	4.92	3.83	4.25
		male	3.75	3.70	2.88	2.75	3.38	3.04	3.88	3.58
	Taiwanese	female	4.58	4.83	3.19	3.50	4.50	4.92	4.38	4.88
		male	3.98	4.50	2.81	2.81	3.58	3.75	3.67	4.50
Professionalism	Beijing	female	4.68	3.48	3.69	3.31	4.21	2.63	3.92	3.01
		male	4.90	4.23	3.19	3.31	3.67	2.75	4.00	3.54
	Taiwanese	female	4.88	2.68	3.88	2.88	3.38	1.96	3.63	2.79
		male	4.63	2.43	3.56	2.44	3.46	1.71	3.50	3.04
Masculinity	Beijing	female	2.68	2.25	1.75	1.44	2.75	1.42	2.96	1.75
		male	5.65	5.55	4.00	3.94	4.50	4.25	4.71	3.92
	Taiwanese	female	2.70	2.80	2.43	1.75	2.58	1.58	2.46	1.75
		male	5.63	4.95	3.94	3.63	4.25	3.29	4.21	2.88
Femininity	Beijing	female	5.33	6.38	6.56	5.19	5.08	6.29	4.42	5.75
		male	1.88	1.95	1.75	1.44	2.83	3.33	2.75	3.21
	Taiwanese	female	5.45	5.75	3.48	4.19	5.17	6.13	4.29	5.38
		male	2.20	2.78	1.63	1.56	3.21	4.21	2.92	3.67

Table 2. Average ratings for each characteristic separated by Mandarin speaker variety (MSV), speaker and listener gender, heritage vs. homeland status of the listener, and sentence type (*sajiao* (s) versus non-*sajiao* (ns))

Overall, heritage and homeland participants patterned similarly. For homeland listeners, *sajiao* is strongly associated with increased cuteness, friendliness, and femininity, and with decreased professionalism and masculinity. Heritage listeners share some of these same associations, such as positive correlations with friendliness and femininity alongside a negative association with masculinity, but not all. There are several key differences between heritage and home- land judgments, underscoring the complex interactions between gender, region, and language socialization.

Firstly, male heritage participants did not share the same associations of *sajiao* with their homeland counterparts. Male heritage listeners found men of both varieties less cute, either less friendly or at equal levels of friendliness, and less feminine when using *sajiao*. Female heritage participants' ratings aligned more closely with female homeland participants, although these heritage listeners found Beijing men less cute and friendly when using *sajiao*. In addition, female heritage listeners rated Taiwanese women as more masculine when using *sajiao*.

In addition, the baseline ratings for non-*sajiao* forms also highlight some differences between the two participant groups. Male heritage listeners tended to pattern differently from male homeland participants, as they rated Taiwanese speakers as generally less cute, friendly, and feminine, as well as more masculine. Beijing women also received higher friendliness and feminine rankings by male heritage participants, and Beijing speakers regardless of gender were

ranked as much less masculine and less professional. Female heritage listeners also show some differing baseline rankings compared to homeland listeners. All speakers were ranked as cuter, friendlier, and more professional by female heritage participants. In addition, male speakers were ranked as more masculine and less feminine by heritage participants.

Homeland listeners also showed variation in judgments, although overall patterns were consistent across gender. Overall, female homeland participants ranked Taiwanese speakers as more feminine and less cute than their male counterparts did. Male homeland listeners also rated Beijing speakers as slightly cuter and masculine in non-*sajiao* forms. The degree of change also differed across gender, with female homeland participants finding male Taiwanese speakers much less professional when using *sajiao*. These results suggest that these characteristics' rankings are dependent on multiple factors, namely gender, speech style, and region.

5. Discussion. Heritage and homeland listeners generally exhibited similar patterns when ranking *sajiao* versus non-*sajiao* sentences. This patterning shows that heritage listeners have similar intuitions about which social meanings are indexed with *sajiao* usage and gender to their homeland counterparts, although the extent of their alignment with homeland participants appears to vary depending on the listener's gender. The difference in mean ranking could be explained by heritage listeners having less strong associations with *sajiao* compared to homeland listeners, but it is also likely that the structure of the experiment affected the results. Potentially unclear instructions, such as where a 'neutral' ranking would be, could have also skewed heritage and homeland results.

The variation in characteristic ranking, particularly between male heritage and homeland listeners, could be attributed to a variety of factors. Firstly, this could be due to differing degrees of language socialization that are *sajiao*-specific. While participants provided information about language schools and other sources of language usage where *sajiao* could be encountered, they do not address explicitly how *sajiao* was acquired or identified. Heritage participants with fewer Mandarin-speaking friends or friends of primarily one gender may have very different *sajiao* encounters that were then reflected in participants' perceptions. In addition, the language varieties that heritage listeners were exposed to also informs language ideologies. Differing levels of exposure to Beijing and Taiwanese Mandarin could influence which characteristics heritage participants index with each variety. One salient example here is the different baseline readings for masculinity and femininity for heritage versus homeland participants. The results suggest that heritage listeners may not associate Taiwanese Mandarin with increased femininity, decreased masculinity, and heightened cuteness. However, exposure to different varieties may not be the only factor at play. The wording of the experiment itself, such as the connotations of the provided translations of femininity and masculinity, could have caused participants to rank stimuli differently. In addition, it was ambiguous to participants how to rank speakers they found neither particularly masculine or feminine. Future iterations of this experiment should clearly address this in the instructions to prevent confusion.

Lastly, the cues present in the stimuli could also explain variation between heritage and homeland rankings. Speakers who recorded stimuli were encouraged to record sentences they found the most natural and therefore had more free rein over which cues they chose to represent *sajiao*. While this led to maximally naturalistic sentences, this also meant that cues such as us- age of sentence-final particles, raised pitch, or slowed speech rate were not controlled. All target stimuli were produced with raised pitch with the exception of those from one of the male Beijing Mandarin speakers, who used the same pitch for both the non-*sajiao* and *sajiao* forms and instead

used presence of sentence-final particles as the primary *sajiao* cue. This cue may not have been as perceptually salient as a *sajiao* marker for heritage listeners as it was for homeland listeners.

This lack of raised pitch could explain the variation between rankings for Beijing male and Taiwanese male speakers. Further research could delve into this relationship between *sajiao* markers and language socialization to see if there is a generational effect on cues.

6. Conclusion. This study reports on heritage and homeland Taiwanese Mandarin listener perceptions of *sajiao* in both Taiwanese and Beijing varieties of Mandarin. Overall, this study investigates whether the intersection between this speech style and perceptions of different varieties of Mandarin in homeland speakers were reflected in heritage speakers. This study also serves as an extension of Hardeman Guthrie (2016) by adding a third population, heritage speakers/listeners, to the existing literature on homeland listeners and L2 learners.

Overall, heritage listeners share similar judgments to homeland listeners, both in perceptions of *sajiao* and in perceptions of Taiwanese and Beijing Mandarin. While there are differences between the two populations' responses, heritage listeners associate *sajiao* with cuteness and friendliness, as opposed to L2 learners who lack the same association. Although it may be tempting to equate heritage perceptions with homeland perceptions, the differences identified throughout this research show that heritage listeners have salient differences from both homeland listener and L2 learner perceptions of *sajiao*. Results also suggest that heritage listeners are more likely to use prosodic cues to mark *sajiao* rather than sentence final particles like homeland listeners do. Thus, heritage listeners occupy their own unique space from both L2 listeners and homeland listeners. Further research is needed to identify potential causes of these differences, from sources of language socialization to the content of the stimuli itself.

While the type of listener was analyzed in this study, further research is needed to see whether the self-identified ethnic orientation (e.g., Taiwanese American versus Asian American) of the listener also interacts with the data. Additional methodologies could be used to pinpoint sources of language socialization and exposure to *sajiao*, such as in the form of semi-structured interviews.

Conducting interviews would allow heritage listeners to explain their own feelings or associations with *sajiao*, providing a point of comparison to their rankings in a matched guise experiment.

Lastly, a perception test to focus on heritage Beijing Mandarin listeners should also be conducted to compare how these heritage listeners perceive differences in Taiwanese Mandarin versus Beijing Mandarin. This research would add to the body of literature showing the diversity of heritage identities and see if there are any connections established through shared language socialization realms, such as language schools.

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