

Gendered and Genderless: The mental organization of Chinese personal pronouns

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INTRODUCTION The present study focuses on gender specification in third-person singular pronouns in Chinese, including “他 ta”(he) and “她 ta” (she) in Mandarin and the genderless “佢 keoi” (he/she) in Cantonese. Native Chinese speakers frequently make gender pronoun mistakes in spoken English, i.e., using “he” for females and “she” for males. The phenomenon has motivated the current study on gender processing in their native language. A self-paced English reading experiment by Dong et al. (2014) has found longer reading times in sentences containing pronouns that mismatch their antecedents’ gender than the matching ones in native English speakers, i.e. “gender mismatch effect”. However, it was absent in native Chinese speakers. The authors concluded that there is a biological gender processing deficiency in the conceptualizer of Chinese speakers. Contrarily, Chinese ERP studies showed both N400 and P600 effects in gender mismatch sentences, meaning that native Chinese speakers can detect semantic and syntactic violations (Qiu et al., 2012; Xu et al., 2013). Based on this result, we hypothesize that gender information is processed semantically and syntactically in Chinese, leading to the likely presence of gender mismatch effect. Our experimental subjects will be senior high school students and undergraduates, who receive intensive Standard Chinese writing training and use written Cantonese on social media regularly. Participants are selected through self-report, translation and comprehension tasks to ensure balanced proficiency in both written Cantonese and Standard Chinese, minimizing the possible confounding variable of imbalanced competency.

EXPERIMENT The present study comprises an online self-paced reading task and offline questions. We manipulated the presence and appropriateness of gender information. Participants read sentences from 3 conditions (matched, mismatched, and genderless) chunk-by-chunk by pressing a button at their own pace. Reading times were recorded to identify if there is any gender mismatch effect in Chinese. The chunk right after the pronoun is our interest window. It is the place that would show discrepancy between the pronoun and its antecedent (mismatched), confirm previous information (matched), or provide crucial semantic information for pronoun resolution (genderless). Follow-up questions on referent identification were presented after each sentence, in order to ensure that participants were paying attention instead of randomly guessing.

PREDICTIONS We expect the reading times for the interest windows to be in ascending order from the matched condition, to genderless, then to mismatched. Matching gender information facilitates processing, as the new information from the pronoun confirms the information gathered previously. The genderless condition would be processed a bit slower. Since no gender information was provided, anaphoric reference has to be established purely on the semantic cue at the window. The mismatched condition should be read the slowest, as the discrepancy between the semantic cue in the window and previous gender information should cause longer processing time in pronoun resolution. The expected mismatch result (matched faster than mismatched) will support that gender is processed semantically and syntactically, which is in line with previous ERP results (Qiu et al., 2012; Xu et al., 2013). Consequently, gender information could have either a facilitatory or an inhibitory effect in processing, depending on whether it is used appropriately. It follows that 他 (he) and 她 (she) have different lemma entries based on gender specification.

Appendix I: Examples of each condition

Masculine (M): 小明, 大文

Feminine (F): 芬芬, 麗麗

Interest windows are in red.

Target pronouns and their referents are highlighted in yellow.

Condition 1: Standard Chinese, matched gender

1. 芬芬 問 小明 功課, 因為 她 經常 偷懶。
Fan Fan (F) ask Siu Ming (M) homework because 3.F.SG always slack off
“Fan Fan asks Siu Ming for help with her homework because she always slacks off.”
2. 麗麗 讚 大文 乖巧, 因為 他 幫忙 造飯。
Lai Lai (F) praise Dai Man (M) well-behaved because 3.M.SG help cook
“Lai Lai praises Dai Man for being well-behaved because he helps with cooking.”
3. 大文 很 怕 麗麗, 因為 她 脾氣 很 壞。
Dai Man (M) very afraid Lai Lai (F) because 3.F.SG temper very bad
“Dai Man is very afraid of Lai Lai because she has a very bad temper.”
4. 小明 跑 贏 了 芬芬, 因為 他 跑步 很 快。
Siu Ming (M) run win PAST Fan Fan (F) because 3.M.SG run very fast
“Siu Ming beat Fan Fan in running because he runs very fast.”

Condition 2: Standard Chinese, mismatched gender

1. 芬芬 問 小明 功課, 因為 他 經常 偷懶。
Fan Fan (F) ask Siu Ming (M) homework because 3.M.SG always slack off
“Fan Fan asks Siu Ming for help with her homework because he always slacks off.”
2. 麗麗 讚 大文 乖巧, 因為 她 幫忙 造飯。
Lai Lai (F) praise Dai Man (M) well-behaved because 3.F.SG help cook
“Lai Lai praises Dai Man for being well-behaved because she helps with cooking.”
3. 大文 很 怕 麗麗, 因為 他 脾氣 很 壞。
Dai Man (M) very afraid Lai Lai (F) because 3.M.SG temper very bad
“Dai Man is very afraid of Lai Lai because he has a very bad temper.”
4. 小明 跑 贏 了 芬芬, 因為 她 跑步 很 快。
Siu Ming (M) run win PAST Fan Fan (F) because 3.F.SG run very fast
“Siu Ming beat Fan Fan in running because she runs very fast.”

Condition 3: Cantonese, genderless

1. 芬芬 問 小明 功課, 因為 佢 成日 偷懶。
Fan Fan (F) ask Siu Ming (M) homework because 3.SG always slack off
“Fan Fan asks Siu Ming for help with her homework because he/she always slacks off.”
2. 麗麗 讚 大文 乖, 因為 佢 幫手 煮飯。
Lai Lai (F) praise Dai Man (M) well-behaved because 3.SG help cook
“Lai Lai praises Dai Man for being well-behaved because he/she helps with cooking.”
3. 大文 好 驚 麗麗, 因為 佢 脾氣 好 差。
Dai Man (M) very afraid Lai Lai (F) because 3.SG temper very bad
“Dai Man is very afraid of Lai Lai because he/she has a very bad temper.”
4. 小明 跑 贏 左 芬芬, 因為 佢 跑步 好 快。
Siu Ming (M) run win PAST Fan Fan (F) because 3.SG run very fast
“Siu Ming beat Fan Fan in running because he/she runs very fast.”

Appendix II: Bibliography

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