

Acceptability judgements in Colloquial Singaporean English

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The authors made the following contributions. Alvin Wei Ming Tan: Conceptualisation, Methodology, Investigation, Formal analysis, Visualisation, Writing – Original draft, Writing – Review & editing; Louise Mycock: Conceptualisation, Writing – Review & editing, Supervision.

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Abstract

Colloquial Singaporean English (CSE) includes several optional features which vary in their usage. Such features include the zero copula in copular constructions (e.g., “Tom \emptyset very tall”), as well as the lack of past tense inflection in past constructions (e.g., “Yesterday, she go to the store”). In this study, we used an acceptability judgement task to estimate the effect of social factors (e.g., mother tongue language) and linguistic factors (e.g., complement type or past inflection form) on CSE speakers’ acceptability of these two classes of constructions. For copular constructions, we found that PP complements were more acceptable than NP or AP complements with a zero copula, and there were no differences in ratings between Malay and Chinese speakers. These results suggest that previously-found differences have been levelled among CSE speakers. For past tense constructions, Malay speakers showed a greater difference in ratings than Chinese speakers for sentences with versus without past tense inflection. There were also no differences among different forms of past tense inflection (suppletion, vowel change, affixation), contrasting with previous studies. These results help to complement and clarify the findings from corpus-based studies of the distribution of these optional features among CSE speakers, demonstrating the utility of using acceptability judgements to study sociolinguistic variation and language change.

Keywords: Colloquial Singaporean English, acceptability judgements, sociolinguistics, variation

Word count: 6630

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Introduction

Singapore English (SgE) is a contact variety spoken in Singapore, with substrate languages and dialects including Chinese¹ and Malay². It is spoken by most Singaporeans, the majority of whom are also bi- or multilingual, in part due to bilingual education. Students are required to learn both English and another language, termed a “mother tongue” (MT), which is typically related to the student’s ethnicity: ethnic Chinese students learn Mandarin, ethnic Malay students learn Malay, and ethnic Indian students learn an Indian language (e.g., Tamil, Hindi, Punjabi; Pakir, 1999). SgE includes a range of subvarieties, with the acrolect termed Standard Singapore English (SSE) and the basilect termed Colloquial Singapore English (CSE; also commonly known as Singlish). The continued coexistence of these subvarieties has led to a number of proposed approaches to the role of CSE in Singapore, including ‘continuum’ (Platt, 1975) and ‘diglossia’ (Gupta, 1998), *inter alia*. Perhaps the most helpful model for understanding CSE and CSE variation is Leimgruber’s indexical approach (Leimgruber, 2013), according to which linguistic variables index social positions (e.g., formality, emotion, socioeconomic aspirations) and speakers select features that appropriately indicate their desired stance rather than necessarily adopting an entire set of features associated with CSE or SSE.

¹ Our use of “Chinese” here is intentionally imprecise. When referring to an ethnic group, it denotes people of Chinese descent, but when referring to language, we use it as a term covering various Sinitic varieties spoken in Singapore, including Mandarin, Hokkien, Cantonese, and Teochew, among others, as they share relevant syntactic characteristics. Our subsequent analyses of Chinese varieties will focus on (Mainland China) Mandarin as a representative example; Singaporean varieties are mostly similar with respect to relevant matters of syntax (see Lin & Khoo, 2018; Zhu, 2016).

² Similarly, our use of “Malay” is also imprecise, referring both to a broad ethnic group, as well as a term for the Malay macrolanguage, which includes varieties spoken in Indonesia and Malaysia as well as Singapore.

Under this model, it is possible to describe CSE features without presuming that they must always co-occur within any particular utterance. Instead, one should expect variation in the usage of CSE features by speakers of SgE, and in particular, sociolinguistic factors are likely to be important predictors of variation. In order to capture the natural variation in SgE, researchers have often turned to recordings of naturalistic speech or corpus analyses as methods to understand the distribution of different features of SgE (e.g., Deterding, 2003; Ho & Platt, 1993; Lai, Tan, Wong, Loke, & Bond, 2013; Leimgruber, 2013). The ecologically valid context of these approaches has been crucial in capturing SgE as it is actually used, and has generated rich data which can be analysed along many different dimensions.

However, as is the case with any investigation using naturalistic data, these approaches have certain limitations. Firstly, because of the difficulty of collecting and processing direct recordings, naturalistic studies often employ relatively small sample sizes, limiting the generalisability of the results. This has been mitigated by the recent development of a large-scale spoken SgE corpus (Koh et al., 2019), which is likely to enable more accurate descriptions of feature distributions across SgE speakers. Nonetheless, there remains variation in the number of times any particular target phenomenon may occur within one participant's speech, and lower frequency phenomena may remain more difficult to study; this is related to the "negative data problem", which is the observation that constructions which do not appear in a corpus may not be ungrammatical, merely unattested (Bennett, 2010). Secondly, in naturalistic settings, there is no way to control for the influence of many other factors, especially pragmatic, discourse, and other contextual information. These affect the kind of language that may be appropriate for speakers to use, and in the particular case of SgE, the indexical approach suggests that speakers flexibly modulate the features they express in their speech depending on many of these background factors (Leimgruber, 2013). As such, it is difficult to characterise CSE features and their distribution while controlling for such

extraneous factors.

A complementary methodology that addresses some of these issues is the use of formal acceptability judgements. This method involves explicit collection of acceptability ratings for various constructions from native speakers, and allows for systematic capture of particular phenomena that may not be possible with naturalistic data. Additionally, formal acceptability judgements collected from a larger number of individuals permit the analysis of variation across individuals, and also decrease the potential magnitude of biases that can occur with informal acceptability judgements that are the result of the researcher's own introspection or that represent the responses of a small number of informants (Juzek, 2015). Currently, formal acceptability judgements as data are gaining traction in linguistics research, but there are still relatively few instances of their application with respect to populations with known sociolinguistic variation, including SgE. A search for the terms "Singapore(an) English" and "acceptability judg(e)ment" in Google Scholar returned only 5 results that were true formal acceptability judgement tasks (Chan, 2023; Horsch, 2022; A. X. W. Leong, 2013; L. Li, 2015; Terassa, 2019).³

Hence, the current study sought to explore the use of formal acceptability judgements as a means of understanding the distribution of CSE features among SgE speakers. In particular, we investigated the relationship between linguistic and demographic variables as a window into sociolinguistic variation in SgE. To do so, we chose two well-attested CSE features, namely the zero copula and uninflected past tense.

³ There were a number of other studies which used participants' *process* of generating acceptability judgements as a way to measure their linguistic attitudes and language ownership, rather than as a way to characterise SgE (Bokhorst-Heng, Alsagoff, McKay, & Rubdy, 2007; Bokhorst-Heng, Rubdy, McKay, & Alsagoff, 2010; Foo & Tan, 2019; Higgins, 2003; Rubdy, McKay, Alsagoff, & Bokhorst-Heng, 2008). There was also an additional study which technically did use an acceptability judgement task, but only with a small number of advanced linguistics students (Sato, 2013), which would again potentially limit the generalisability of the results.

Both of these features have observed optionality, and we examined how their acceptability varied with linguistic (e.g., phonetic, syntactic, or semantic) features of the stimuli, as well as with participants' language backgrounds (languages spoken and language proficiencies). In the remainder of the introduction, we provide a brief overview of the two phenomena of interest.

Copular constructions in Singaporean languages

Copular constructions in SSE. In SSE, as in many other varieties of English, the copula is *be* and is obligatory in copular constructions, as in (1).

- (1) a. Today is [_{NP} Saturday].
 b. Tom is [_{AP} very tall].
 c. Sally is [_{PP} at home].

Copular constructions in Chinese. In Chinese, the ordinary copula is 是 *shì*. Similar to other constructions in this isolating language, this does not inflect for tense, number, or person (unlike *be* in English). 是 *shì* is typically used with NP complements, as in (2); with most NP complements, the copula is obligatory.⁴ In this and following examples, we use *(X) to mean X is obligatory.

- (2) 约翰 *(是) (个) 医生。
 yuēhàn *(shì) (gè) yīshēng.
 John COP CLF doctor
 "John is a doctor."

⁴ Some NP complements seem to license constructions without a copula as informal responses to questions, such as time and price (Chang, 2009), and some varieties may also permit predicative nominals without the copula (Tang, 2001), but these tend to be exceptions and are generally less acceptable than their counterparts with an overt copula. We assume that the general case involves an obligatory copula, and that other pragmatic factors permit copula-less forms.

On the other hand, AP predicatives⁵ disallow the copula in Chinese, as in (3), except with emphatic or focus marking.

- (3) 他 ∅ 很 开心。
 tā ∅ hěn kāixīn.
 3SG.M POS happy
 “He is happy.”

Locative expressions in Chinese require the word 在 *zài*, as in (4). This word does not co-occur with 是 *shì* except when the latter is used as a focus marker (Xu, 2003).

- (4) 我 *(在) 厨房 里。
 wǒ *(zài) chúfáng lǐ.
 1SG LOC kitchen in
 “I am in the kitchen.”

We assume that 在 *zài* can be considered a locative copula, given that it is needed to define the predication structure for PPs (see Arche et al., 2019; Ross, 1991; Sharma & Rickford, 2009).⁶

In summary, Chinese copular constructions with an NP predicative require the copula 是 *shì*, those with an AP predicative do not have a copula, and those with a PP predicative require the locative copula 在 *zài*.

⁵ The ability of adjectives to function as clausal predicates has led to suggestions that they should be considered intransitive stative verbs rather than a separate word class (McCawley, 1992). However, distributional analyses have suggested that the adjective does indeed form a separate word class in Chinese (Arcodia, 2014; Paul, 2010), and we take this view in subsequent analyses.

⁶ There is disagreement about whether the complement of 在 *zài* is an NP or a PP, related to whether locative words such as 里 *lǐ* ‘in’ and 上 *shàng* ‘on’ are nouns (e.g., McCawley, 1992) or postpositions (e.g., Djamouri, Paul, & Whitman, 2013). We follow Y.-H. A. Li (1990) in analysing such locative words as postpositions, although the analysis would not differ significantly were they to be analysed as nouns.

Copular constructions in Malay. In prescribed rules of Standard Malay, NP predicatives can appear either with or without the copula *ialah* (Nik Safiah Karim, Farid M. Onn, Hashim Haji Musa, & Abdul Hamid Mahmood, 1989), as in (5); the examples in this section are adapted from Moeljadi, Bond, and Costa (2016) except where otherwise noted.

- (5) Budi (ialah) guru.
 Budi COP teacher
 “Budi is a teacher.”

When considering actual use of Malay, however, the copula *adalah* is also observed with NP complements (I Wayan Arka, 2013; Khairul Taufiq Abu Bakar & Nor Hashimah Jalaluddin, 2017). The two copulas do not seem to differ semantically (Moeljadi et al., 2016), although a corpus study revealed that *ialah* appears much more frequently with NP predicatives than other types of predicatives (73.8% of occurrences) as compared to *adalah* (59.3% of occurrences) (Khairul Taufiq Abu Bakar & Nor Hashimah Jalaluddin, 2017). A final note about Malay NP predicatives is that they behave differently to other copular predicatives, as they require an inchoative copula (*menjadi* ‘become’) in the future tense (unlike AP and PP predicatives), as in (6) (I Wayan Arka, 2013).

- (6) Dia akan *(menjadi) dokter.
 3SG FUT become doctor
 “He/she will become a doctor.”

While an analysis of this verb is outside the scope of the present study, it suggests that NPs have a greater tendency to occur with a copula than other types of complements in Malay (at least in some contexts).

On the other hand, prescriptive grammars for Standard Malay suggest that AP predicatives can appear either with or without the copula *adalah* (Nik Safiah Karim et

al., 1989), as in (7), adapted from Mustaffa (2018).

- (7) Ros (adalah) merah.
 rose COP red
 “Roses are red”

Actual use shows again that, like NPs, AP predicatives can appear with *ialah*, although much less frequently (Khairul Taufiq Abu Bakar & Nor Hashimah Jalaluddin, 2017). However, speakers seem to disagree on the acceptability of either *ialah* or *adalah* appearing with AP predicatives (Moeljadi et al., 2016), thus it seems that AP predicatives strongly disfavour the presence of a copula.

Locative expressions in Malay can optionally take an existential copula *ada* or *berada* (Moeljadi et al., 2016), as in (8).

- (8) Budi (ada/berada) di rumah.
 Budi EXIST at home
 “Budi is at home.”

Again, actual use reveals that both *adalah* and *ialah* are used with locative expressions (Khairul Taufiq Abu Bakar & Nor Hashimah Jalaluddin, 2017). This also applies for benefactive constructions, which (while not technically locative) also involve a preposition *untuk* ‘for’, as in (9).

- (9) Ini (adalah/ialah) untuk Budi.
 this COP for Budi
 “This is for Budi.”

In summary, copular constructions in Malay can occur without a copula, with *adalah*, or with *ialah*. Furthermore, PP predicatives can optionally take an existential copula *(ber)ada*.

Copular constructions in CSE. CSE, like SSE, has the copula *be*. Unlike SSE, however, CSE also permits a zero copula (sometimes termed “copula omission” or “copula deletion”), exemplified in (10), adapted from Chang (2009).

- (10) a. Today \emptyset [_{NP} Saturday].
 b. Tom \emptyset [_{AP} very tall].
 c. Sally \emptyset [_{PP} at home].

A number of studies have examined the contexts in which the zero copula is licensed (Chang, 2009; Ho & Platt, 1993; Platt, 1979; Yu, 2015). In particular, empirical data from the 1970s suggests that the distribution of the zero copula was affected by speakers’ L1 (Chinese or Malay)⁷—Platt (1979) found that Malay speakers had the zero copula most consistently with PPs, followed by APs and then NPs, while the rates for Chinese speakers were mostly equal (although slightly higher for APs). In their analysis of Platt’s data, Sharma and Rickford (2009) suggested that the difference in distributions may have been due to the influence of copular constructions in the L1s: “The greater absence of copulas in Malay may explain the higher frequencies of zero copula among Malay-medium students. Similarly, the higher rate of omission with adjectival predicatives among Mandarin and Cantonese speakers learning English may derive from its parallel absence in their first languages.” (p. 72) This suggestion arises from the observation that copulas are obligatory in Chinese for NP and PP complements (but disallowed for AP complements, except with emphatic or focus marking), whereas copulas are always optional in Malay (see Tan, 2020 for a more extensive discussion).

While this study has been seminal in CSE sociolinguistics, certain issues remain

⁷ In Platt’s study, “L1 language” was based on the language medium of the schools attended by the informants (as there were Chinese- and Malay-medium schools prior to 1987). Additionally, complements labelled “PP” only included locatives, and not temporals or other types of PP construction.

regarding zero copula distribution, including the issues mentioned above with using naturalistic data. Specifically, the data were based on a relatively small sample of 3 Malay and 14 Chinese informants, thus the generalisability of the results is uncertain—for instance, the 100% rate of zero copula in PP complements for Malay speakers was based on only 5 tokens. Additionally, there was no way to control for other factors such as adverbials and discourse particles, which contribute pragmatic information and are known to affect the acceptability of the zero copula (Chang, 2009; Yu, 2015). Finally, and most significantly, much has changed in the sociolinguistic landscape of Singapore since 1979, when this study was published. The “Speak Mandarin Campaign” launched in 1979 encouraged Chinese Singaporeans to speak Mandarin instead of other Chinese “dialects” in order to unify the ethnic Chinese population, resulting in greater linguistic homogeneity among the Chinese. Furthermore, the introduction of the “national stream” in 1983 meant that all students were educated in English as the primary language of education by 1987, with their MT taught as their second language. Subsequent improvements in the quality and reach of education have meant that most current Singaporeans are effectively bilingual, and many would consider English to be the primary language of their household (Woon, 2018; Wu, O’Brien, Styles, & Chen, 2020); thus, “L1” is no longer a helpful term to designate the substrate languages of CSE, and “MT” is more relevant as a label for the language(s) other than English in which Singaporeans are educated, whether or not this is actually their “first” or “household” language. These changes in the linguistic landscape suggest that more research is necessary to understand copular constructions in contemporary SgE.

More recent characterisations of CSE copular constructions have taken a more theoretical approach, focusing on possible origins of copula optionality (Ansaldò, 2010; Chang, 2009) and syntactic principles underlying constructional variation (Yu, 2015). While these have provided detailed syntactic and sociolinguistic analyses of CSE copular constructions, they are limited in relying solely on the linguist’s intuitions, or possibly

Table 1

Our summary of relative acceptabilities of zero copular constructions, based on prior grammatical and empirical work. \boxtimes : much more acceptable; $>$: more acceptable; $?>$: possibly more acceptable; \boxapprox : approximately as acceptable; $=$: as acceptable.

Language	Relative acceptability of zero copula
Chinese	AP \gg NP = PP
Malay	AP $>$ PP $>$ NP
CSE-L1 Chinese (1970s)	AP $>$ NP \approx PP
CSE-L1 Malay (1970s)	PP $?>$ AP $>$ NP

those of a handful of informants. Issues with this approach are immediately apparent when examining examples given in descriptions of CSE copular constructions. For example, (11) is given by both Chang (2009, p. 30) and Yu (2015, p. 11); Chang considers it to be perfectly acceptable, while Yu marks it with ‘*/?’, indicating that he considers it at least somewhat unacceptable.

(11) Tom \emptyset clever.

Hence, a more thorough and nuanced description of the graded distribution of zero copula acceptability is needed to understand its standing as a feature of SgE.

Synthesising the descriptions of copular constructions in Chinese, Malay, and CSE, we show the relative acceptability for zero copular constructions by predicative type in Table 1.

Past tense constructions in Singaporean languages

The presence of verbal inflection is another sociolinguistic variable in SgE. For example, past tense inflection is obligatory in SSE, as in (12).

- (12) a. Yesterday, she went to the store.
 b. He took the bus home last week.
 c. They packed up this morning.

In contrast to English, verbs are not marked for tense in Chinese (Liu, 2015) or Malay (Winstedt & Wilkinson, 1913), as in (13) and (14) respectively.

- (13) 他 上 个 星期 搭 巴士 回家。
 tā shàng gè xīngqī dā bāshì huíjiā.
 3SG.M previous CLF week take bus return.home
 “He took the bus home last week.”

- (14) Dia menaiki bas pulang minggu lepas.
 3SG take bus go.home week previous
 “He/she took the bus home last week.”

CSE allows optional past tense marking. Thus, the examples in (15) are permissible; these examples involve the non-finite form of the verb instead of the corresponding verb with past inflection.

- (15) a. Yesterday, she go to the store.
 b. He take the bus home last week.
 c. They pack up this morning.

This optionality is highlighted by variable past tense marking even within a single utterance, as shown in (16).

- (16) a. We went in, take half an hour to come out. (Fong, 2004)
 b. They never say the date, he didn’t state the duration, right. (Leimgruber, 2013)

More generally, CSE speakers exhibit substantial intra- and inter-utterance variability in past tense inflection (Deterding, 2007; Leimgruber, 2013). However, this variability does not appear to be entirely random or arbitrary; instead, there may be patterns in the likelihood of past tense marking (Cruz-Ferreira, 2005; Deterding, 2007; Fong, 2004; Gut, 2009; Ho & Platt, 1993). Empirical data (from Cruz-Ferreira, 2005; Gut, 2009; Ho & Platt, 1993; W. Leong, 2021 i.a.) have suggested that there are patterns in the likelihood of past tense marking, such that verbs whose past form ends in a consonant cluster (e.g., *picked*) are less likely to be inflected, whereas verbs whose past forms involve a vowel change (e.g., *fell*) are more likely to be inflected. This pattern of results may be due to a number of (non-exclusive) factors. First, final consonant clusters tend to be reduced in SgE (Cruz-Ferreira, 2005; Deterding, 2007; Lim, 2004); thus, past forms ending in consonant clusters may simply be reduced to the stem form without the final [t]/[d]. Notably, however, omission of final [t]/[d] appears to be more frequent in other lexical words in comparison to the regular past *-ed* morpheme (Cruz-Ferreira, 2005; Deterding, 2007). Second, irregular past forms (including those involving a vowel change) tend to be more frequent (Gut, 2009; Lieberman, Michel, Jackson, Tang, & Nowak, 2007), which may help to preserve the marked form. Nonetheless, even accounting for morphophonological effects, individual verbs still vary substantially in their likelihoods of being inflected for past tense (Ho & Platt, 1993).

One important gap in the current research relates to the role of MT in past tense inflection. The study by W. Leong (2021) suggested that there was no significant effect of whether participants reported primarily speaking English or a non-English variety at home on production of inflected past forms. However, this approach collapsed speakers of different MTs, and therefore could not determine the effect of MT. In contrast, a study by Wong (2012) on Malaysian learners of L2 English suggested that Malay speakers were more likely to endorse non-standard tense and agreement morphological marking than Chinese speakers, although they did not test for past tense marking. Further research is

needed to determine whether this variation also holds for speakers of SgE with different MTs.

Methods

Participants

83 participants aged 18–25 (49 male, 33 female, 1 other) participated in the main study. All participants were native CSE speakers. As their MT, 62 spoke Chinese, 18 spoke Malay, and 3 spoke another language (English or Tamil). Only the Chinese- and Malay-speaking participants were used for the remainder of the analyses. The MT distribution was similar to those of the overall 18–25 population in Singapore (Department of Statistics, Ministry of Trade and Industry, Republic of Singapore, 2021).

Out of the 80 included participants, 73 either attended, were attending, or were about to attend university, of whom 58 were Chinese-speaking and 15 were Malay-speaking. These proportions were not significantly different at $\alpha = .05$ ($\chi^2 = 1.82$, $p = .177$).

40 participants indicated that they could speak at least one variety other than English and their MT. Of these, 23 of the Chinese speakers could speak another Chinese variety (Cantonese, Hokkien, Teochew, or Henghua), and 8 of the Chinese speakers could speak Malay. 3 Malay speakers could also speak Mandarin. These data were not excluded as these multilingual speakers uniformly rated themselves as being more proficient and having more formal training in their MT than their third language.

Task

Participants completed a questionnaire online using Qualtrics, in which they evaluated sentences on a 1–5 scale based on their naturalness (see Appendix). They were told not to consider grammar rules they may have learnt in school, but to focus on their

sense of what would be appropriate in ordinary relaxed conversation. Participants were also reminded that they would not be evaluated on the basis of their responses.

The first block comprised 10 practice sentences, including 5 sentences in SSE and 5 in CSE. This block allowed participants to become familiar with the task, and also primed them to interpret sentences in a CSE context.

Subsequently, participants completed three blocks of 24 questions each. Each block contained 12 copula test sentences, 10 past tense test sentences, and 2 benchmark sentences.⁸ In particular, the 12 copula test sentences included 4 sentences for each complement type (NP, AP, PP); these all involved a 3SG subject to control for the form of the copula (i.e., *is*). The 10 past tense test sentences included 2 sentences of each past tense type (suppletion, vowel change, [t]/[d] affixation, [ɪd] affixation, vowel change + [t]/[d] appending); they also all included a past temporal marker (e.g., *yesterday*), providing a temporal discourse frame that would both signal that the event took place in the past, and license uninflected past forms (Gut, 2009; Ho, 2003). The test sentences had both SSE and CSE versions (i.e., with and without the copula, or with and without past tense marking respectively), such that each participant would be presented with only one version of each test sentence. Participants rated an equal number of SSE and CSE sentences. Which sentences were presented in CSE was counterbalanced across participants. One low and one high benchmark sentence were also included to verify that participants understood the task. All sentences were constructed by the authors, one of whom (AWMT) is a native CSE speaker. The full list of sentences can be found in the Appendix.

After completing the three test blocks, participants responded to a set of demographic questions, including information about age, gender, education, MT

⁸ The copula and past tense test sentences mutually served as fillers, and thus no additional filler sentences were included. No participant reported identifying both classes of test sentences, suggesting that this method of blinding was sufficient.

language proficiency, and duration of living in Singapore. The full list of demographic questions can be found in the Appendix.

All participants gave informed consent before taking part in the study.

Results

Copular constructions

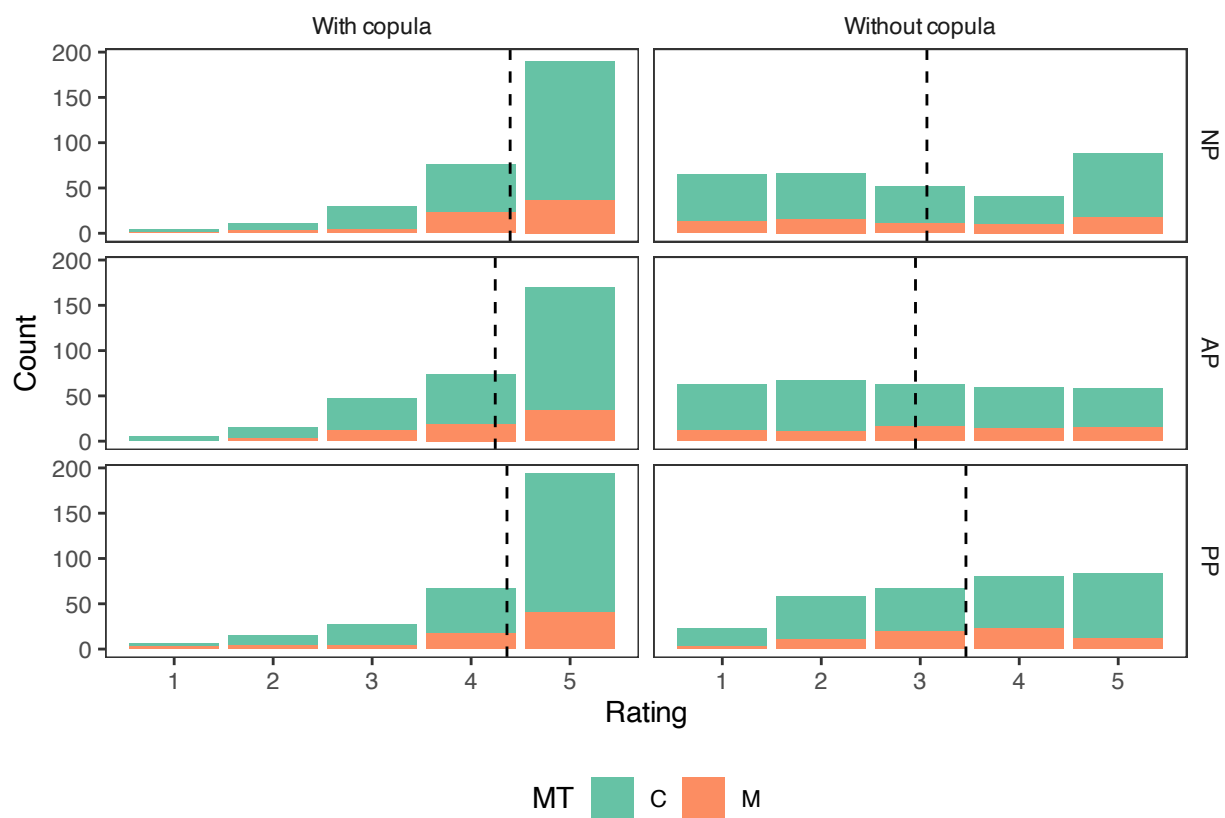


Figure 1. Distributions of ratings for copular constructions by complement type, sentence version, and MT. Black dashed lines indicate means. C: Chinese; M: Malay.

Participants' ratings for items involving copular constructions are shown in Figure 1. We conducted a linear regression with rating as the outcome variable, and complement type, sentence version, and MT as fixed effects with sum contrasts, along with all

interactions. We also included participant and item as random effects. The full model specification is as follows: `rating ~ comp_type * sent_version * mt + (1 | ppt_id) + (1 | item_id)`.⁹

Model results suggested that there was an unsurprising main effect of sentence version ($b = 1.16$, $p < .001$), with sentences including the copula having higher mean ratings (4.33 ± 0.10) than sentences without the copula (3.17 ± 0.10).¹⁰

There was no main effect of MT ($b = 0.05$, $p = .733$), suggesting that mean ratings did not differ between Chinese speakers (3.77 ± 0.09) and Malay speakers (3.72 ± 0.09).

However, there were interaction effects between complement type and question type, as shown in Figure 2. Post-hoc pairwise comparisons using the Tukey method revealed that there were no significant pairwise contrasts for sentences including the copula (all $p > .20$). However, there were significant pairwise contrasts for sentences without the copula. Sentences with a PP complement (3.49 ± 0.15) had higher ratings than sentences with an NP complement (3.05 ± 0.15 , $b = 0.54$, $p = .012$) and also had higher ratings than sentences with an AP complement (2.96 ± 0.15 , $b = 0.44$, $p = .048$). Ratings for sentences with an NP complement were not significantly different from sentences with an AP complement ($b = 0.10$, $p = .851$).

Surprisingly, there were no interaction effects involving MT. There was no interaction between language and complement type ($p > .20$), or language and sentence version ($p = .367$), or language and both complement type and sentence version ($p > .40$).

⁹ A Shapiro–Wilk test revealed that residuals of the linear regression were not normally distributed ($W = 0.99$, $p < .001$). However, visual observation of the Q–Q plot suggested that the deviation was minor and only occurred near the top tail of the distribution, which was expected due to negative skew (-0.72) associated with a ceiling effect. As such, linear regression remained the analysis of choice.

¹⁰ Reported values indicate estimated marginal means and their standard errors.

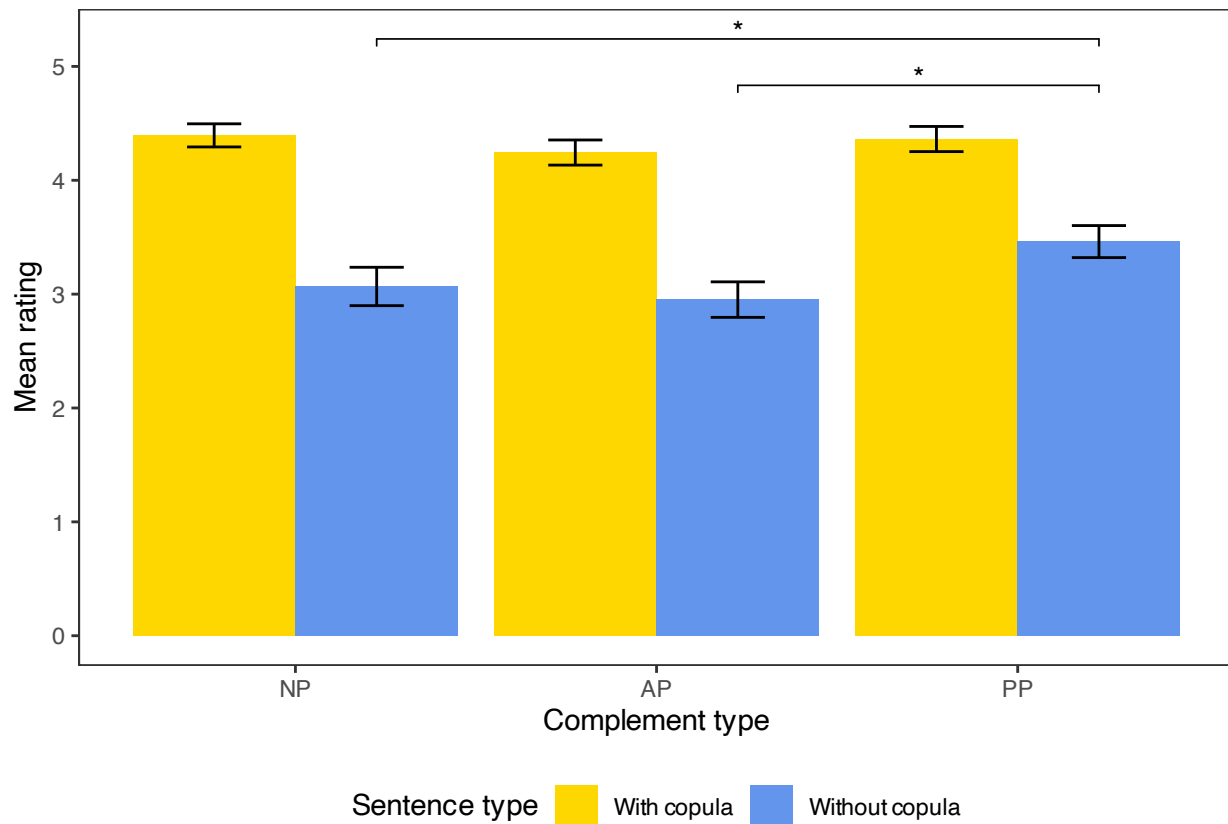


Figure 2. Mean ratings for copular constructions by complement type and sentence version.

*: $p < .05$, **: $p < .01$.

Past tense marking—past marking type

Participants' ratings for items involving past tense constructions are shown in Figure 3. We conducted a linear regression with rating as the outcome variable, and past marking type, sentence version, and MT as fixed effects with sum contrasts, along with all interactions. We also included participant and item as random effects. The full model specification is as follows: `rating ~ past_type * sent_version * mt + (1 | ppt_id) + (1 | item_id)`.¹¹

¹¹ Similar to the ratings for copular constructions, a Shapiro–Wilk test revealed that residuals of the linear regression were not normally distributed ($W = 0.99$, $p < .001$). Again, visual observation of the Q–Q plot suggested that the deviation was minor and only occurred near the top tail of the distribution, which was

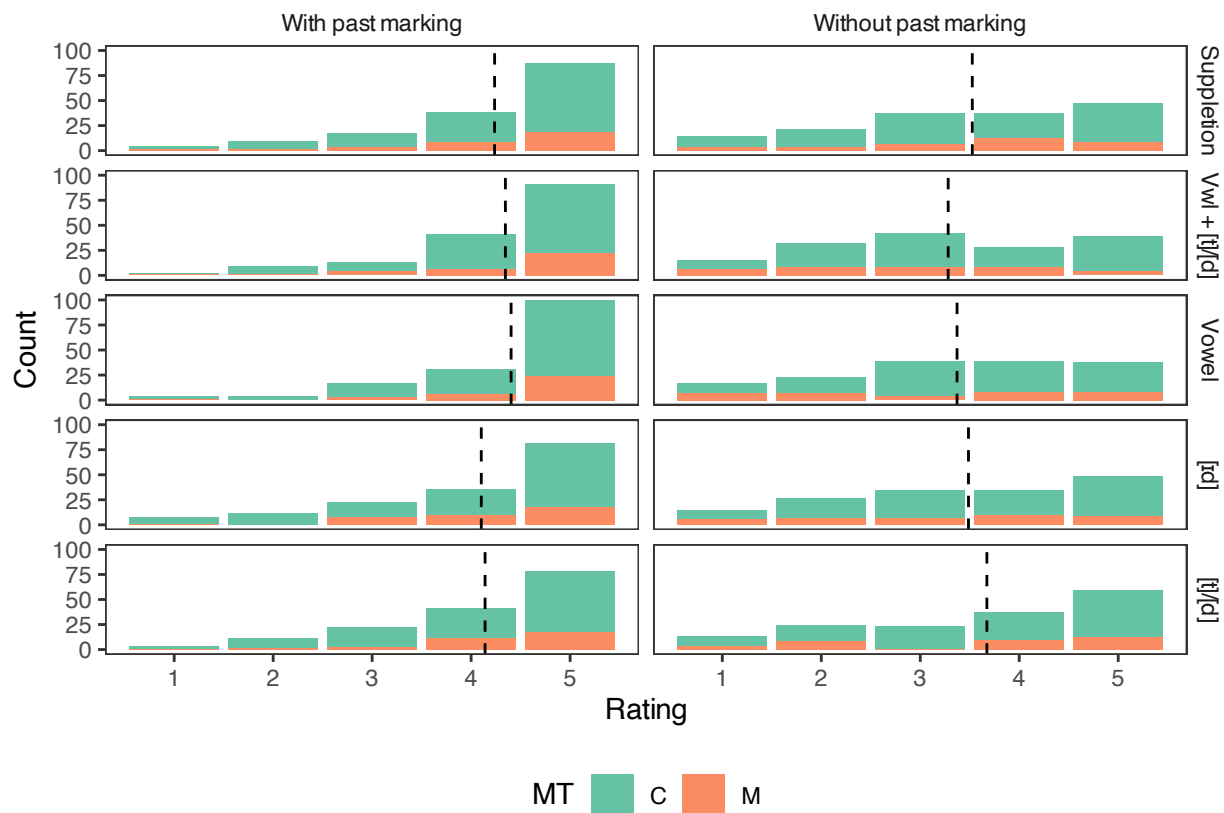


Figure 3. Distributions of ratings for past tense constructions by past tense marker, sentence version, and MT. Black dashed lines indicate means. C: Chinese; M: Malay.

Model results suggested that there was again a main effect of sentence version ($b = 0.84$, $p < .001$), with sentences including the copula having higher mean ratings (4.24 ± 0.11) than sentences without the copula (3.40 ± 0.11).

There was again no main effect of MT ($b = 0.15$, $p = .380$), suggesting that mean ratings did not differ between Chinese speakers (3.89 ± 0.10) and Malay speakers (3.74 ± 0.10).

In contrast with the pattern of results for copular constructions, there were no significant interaction effects between past marking type and sentence version (all $p >$

expected due to negative skew (-0.81) associated with a ceiling effect. As such, linear regression remained the analysis of choice.

.08). There were also no significant interaction effects between past marking type and both question type and MT (all $p > .40$).

Conversely, there was a significant interaction effect between sentence version and MT ($b = -0.34$, $p = .005$), as shown in Figure 4. Post-hoc pairwise comparisons using the Tukey method did not reveal any simple effects of MT (all $p > .07$), suggesting that Chinese and Malay speakers did not differ in their ratings for either sentence version, although they differed in the *difference* in ratings between sentences with and without past tense marking.

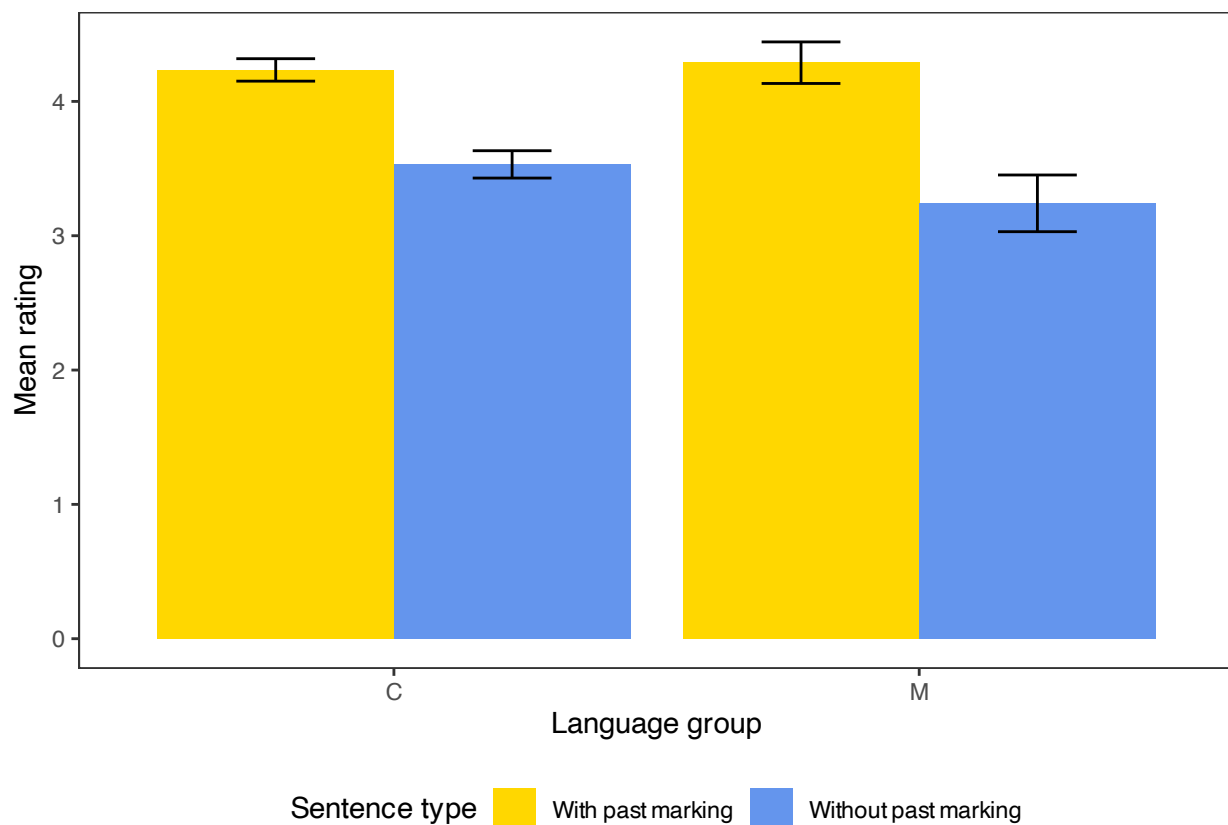


Figure 4. Mean ratings for past tense constructions by MT and sentence version. C: Chinese; M: Malay.

Past tense marking—event aspect

As past marking type was not a significant predictor of ratings for sentences involving the past tense construction, we conducted an exploratory analysis to determine whether there were other possible predictors that would explain the variation observed in participants' responses to different past tense items. One candidate was the aspect of the event semantics, which was noted by Ho and Platt (1993) also to influence the proportion of past marking. Specifically, they found that verbs which were telic (e.g., *went*) showed the highest proportion of past marking, followed by stative verbs (e.g., *hated*), followed by atelic verbs (e.g., *walked*).¹² To explore the role of event semantics in past tense marking, we evaluated each sentence in terms of the aspectual features of the event described: dynamic or stative, durative or punctual, and telic or atelic (Dowty, 1979; Olsen, 1994; Vendler, 1957). Using these features, we classified each sentence into aspectual classes: accomplishment ([+dynamic, +durative, +telic], e.g., *Yesterday I went there*), achievement ([+dynamic, –durative, +telic], e.g., *My sister found a job two days ago*), activity ([+dynamic, +durative, –telic], e.g., *My brother walked the dog yesterday*), or state ([–dynamic, +durative, –telic], e.g., *In the sixties he was a policeman*).¹³ It is important to emphasise that this set of analyses is exploratory and post-hoc; as such, the number and order of presentation of sentences of different aspectual classes was not balanced within participants. A histogram of the number of sentences of each aspectual class is shown in Figure 5.

Participants' ratings for past tense constructions by aspectual class are shown in Figure 6. We conducted a linear regression with rating as the outcome variable, and

¹² Note that in Ho and Platt (1993), they used the terms “punctual” and “non-punctual”, but in fact the criterion used to distinguish between these two categories is explicitly characterised as the former category having the feature [+telic] or [+completive].

¹³ Other classes such as semelfactives ([+dynamic, –durative, –telic]) were not present among the sentences in our questionnaire.

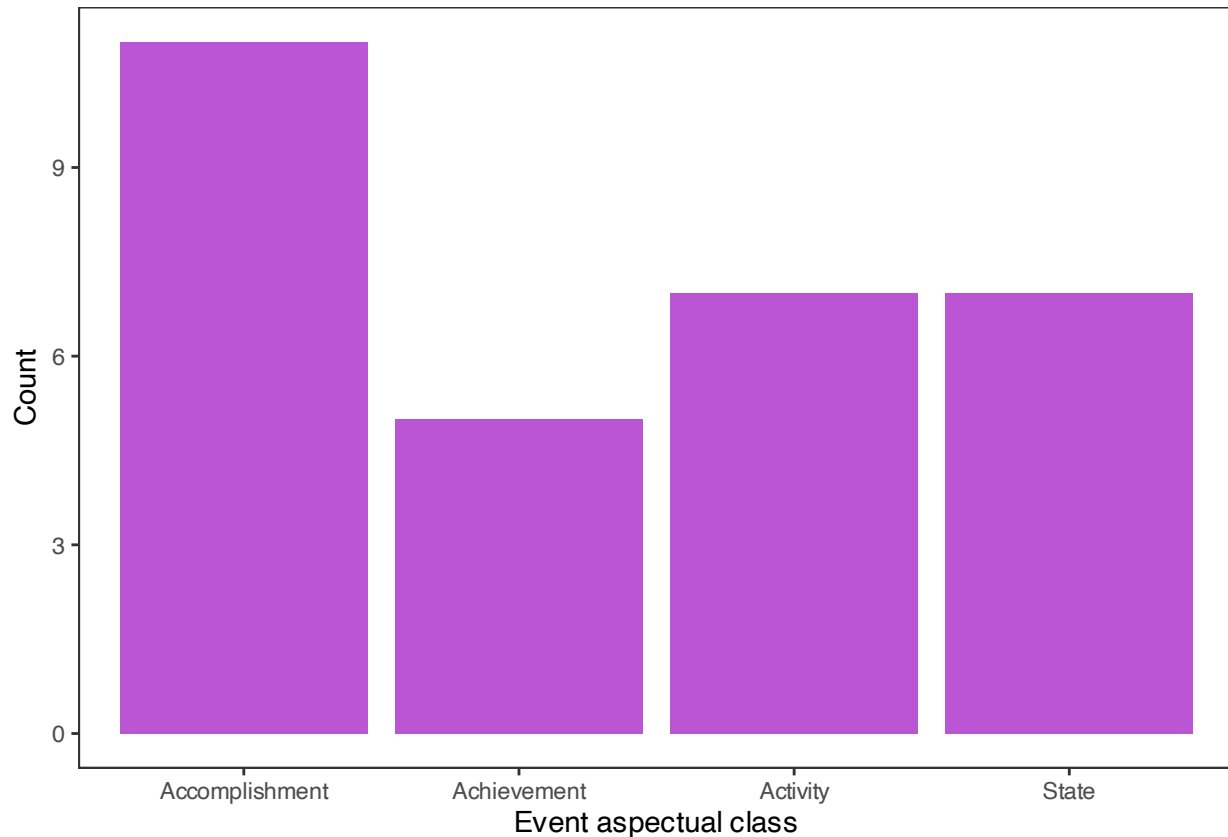


Figure 5. Histogram of aspectual classes of past tense constructions.

aspectual class, sentence version, and MT as fixed effects with sum contrasts, along with all interactions. We also included participant and item as random effects. The full model specification is as follows: `rating ~ aspectual_class * sent_version * mt + (1 | ppt_id) + (1 | item_id)`.

Model results suggested that there was again a main effect of sentence version ($b = 0.89$, $p < .001$), and an interaction effect between sentence version and MT ($b = -0.38$, $p = .004$). Additionally, there was an interaction effect among sentence version, MT, and event aspectual class, as shown in Figure 7. Post-hoc pairwise comparisons using the Tukey method revealed that there were no significant pairwise contrasts for sentences with past tense marking (all $p > .40$). For sentences without past tense marking, there were no significant pairwise contrasts for Malay MT speakers (all $p > .70$). However, for

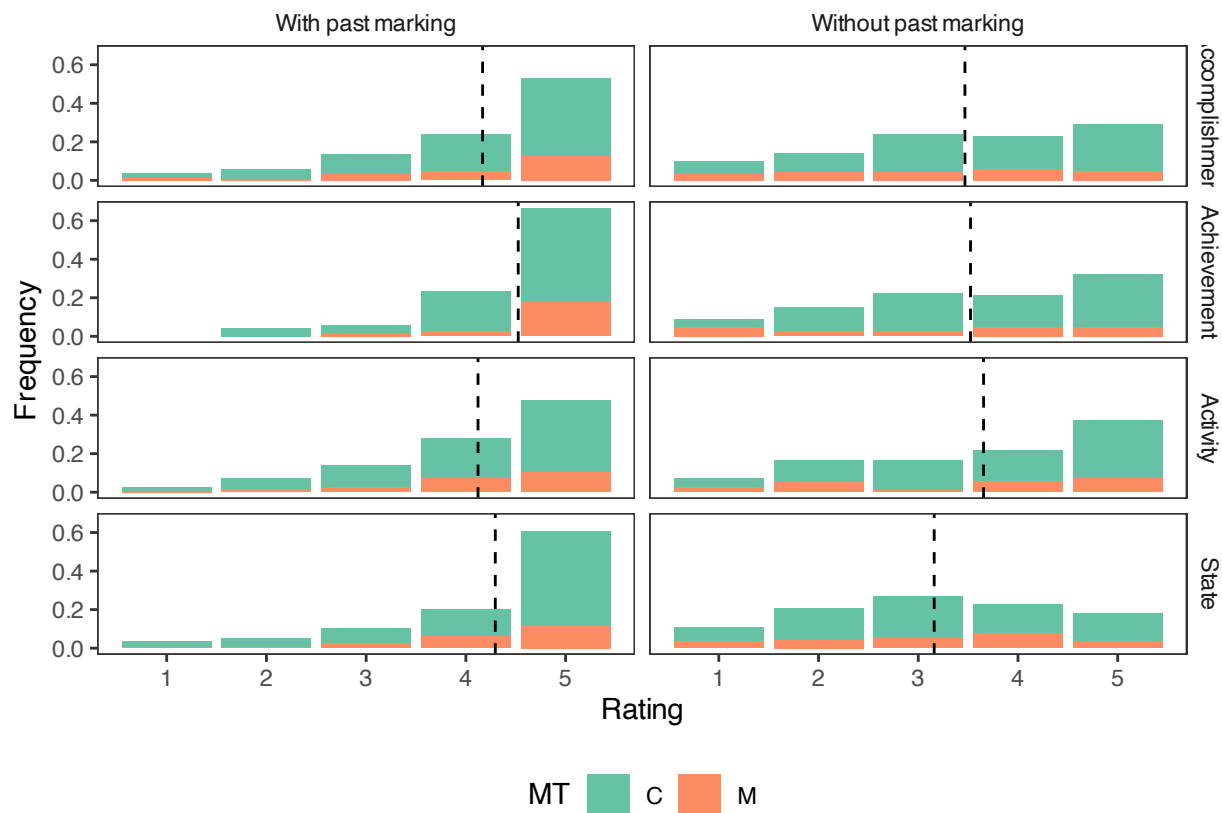


Figure 6. Distributions of ratings for past tense constructions by event aspect, sentence version, and MT. Black dashed lines indicate means. C: Chinese; M: Malay.

Chinese MT speakers, sentences that expressed unmarked past activities (3.74 ± 0.16) had higher ratings than sentences that expressed unmarked past states (3.13 ± 0.17 , $b = 0.61$, $p = .031$).

Individual differences

To better understand the observed variation in responses, we conducted two further exploratory analyses. The first analysis involved understanding the relationship in participants' responses to the two types of constructions studied: Were participants who rated CSE copular constructions more highly also more likely to rate CSE past tense constructions more highly? We calculated the mean and 95% confidence intervals for

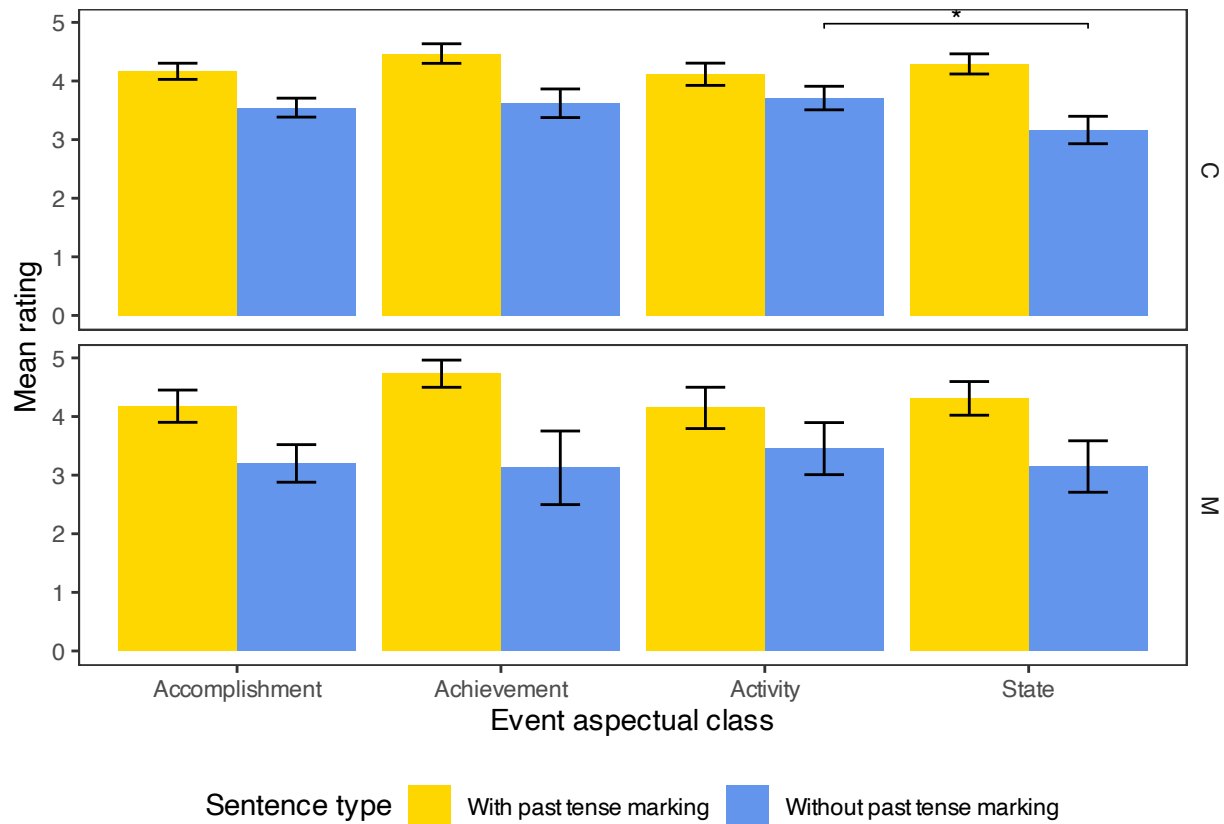


Figure 7. Mean ratings for past tense marking by event aspectual class and sentence version. *: $p < .05$.

both types of CSE constructions for each participant, shown in Figure 8.

The correlation in means between the two types of CSE constructions was moderate, $r = .65$, suggesting that participants sometimes (but not always) endorsed both types of CSE constructions with similar ratings. Additionally, many of the points lay above the $y = x$ line, suggesting that participants generally rated the CSE past tense constructions higher than the CSE copular constructions; this aligns with findings from Leimgruber (2013), who identified lack of verbal inflection as being more common than zero copula.

The second analysis studied the relationship between participants' ratings and their self-assessed MT language proficiency. A histogram of participants' MT proficiencies is shown in Figure 9.

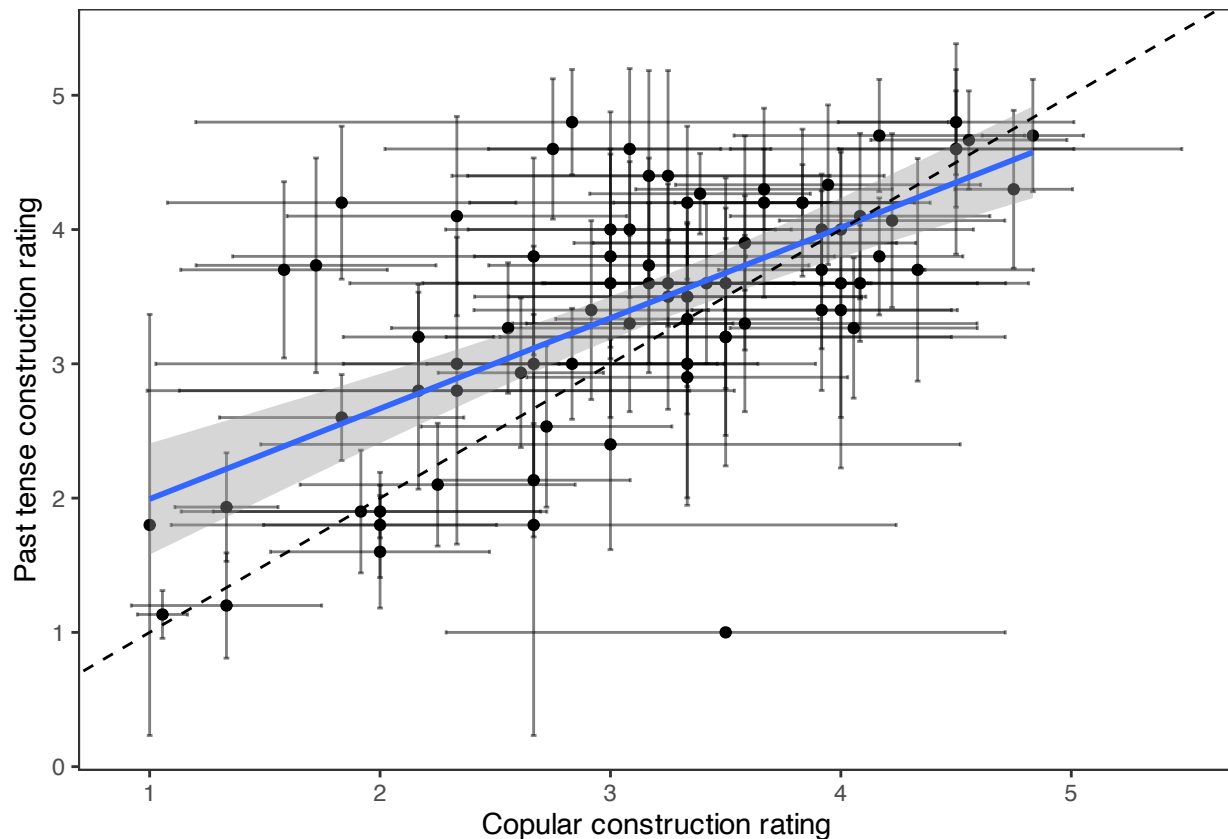


Figure 8. Ratings for copula and past tense CSE constructions by participant. Error bars indicate 95% confidence intervals. Blue line and shaded area indicate the line of best fit and 95% confidence intervals. Black dashed line indicates the diagonal $y = x$, i.e., if participants always rated copula and past tense CSE constructions equally.

As the sample size did not support running a full statistical model with all levels of interaction, we omitted copula or past tense type as predictors, and instead ran a single joint model on both constructions. We conducted a linear regression with rating as the outcome variable, and construction, sentence version, MT, and MT proficiency as fixed effects, along with all interactions. Construction, sentence version, and MT were coded with sum contrasts, and MT proficiency was standardised. We also included participant and item as random effects. The full model specification is as follows: `rating ~ construction * sent_version * mt * proficiency + (1 | ppt_id) + (1 |`

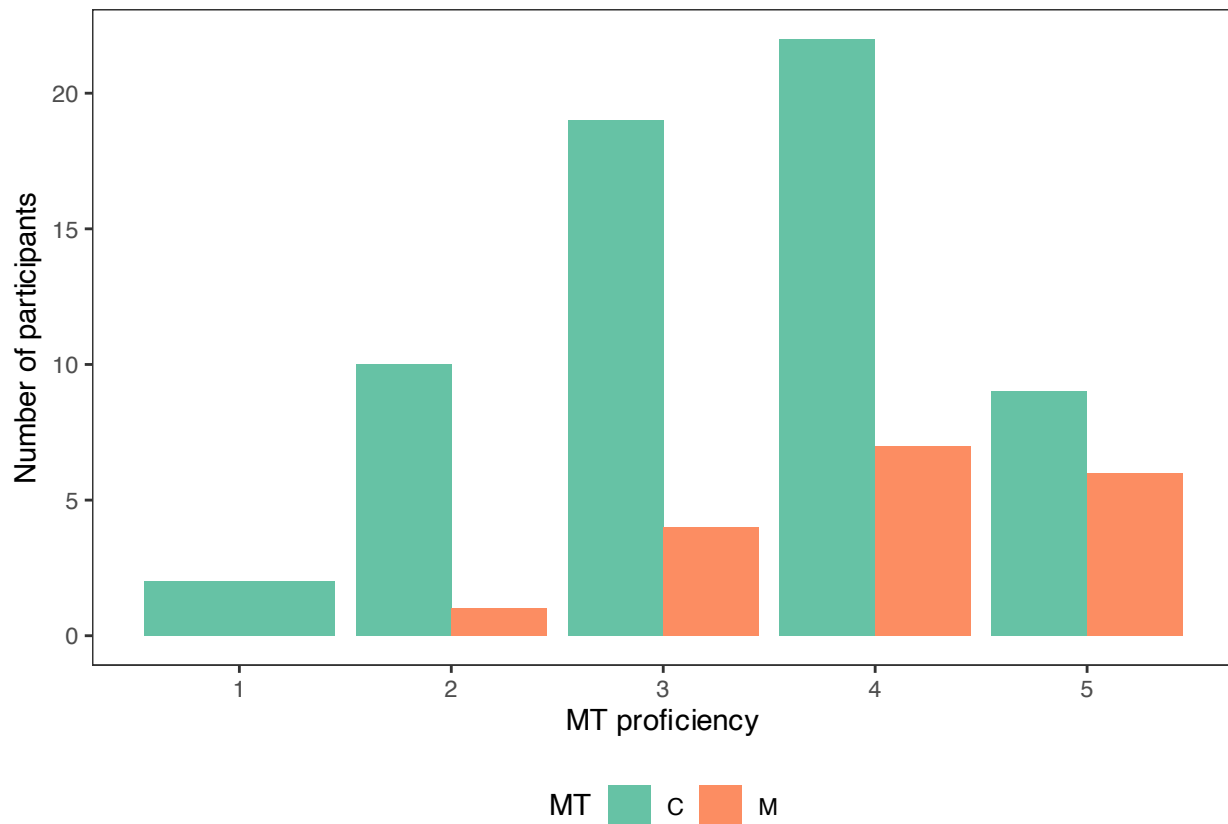


Figure 9. Histogram of participants' self-assessed MT language proficiency by MT. C: Chinese; M: Malay.

item_id).

Participants' ratings by their self-assessed MT proficiency are shown in Figure 10. We focus on model results specifically related to MT proficiency, as other results were similar to results reported in the previous sections. There was an interaction effect between sentence version and MT proficiency ($b = -0.20$, $p < .001$), with the estimated marginal trend of MT proficiency being negative for SSE sentences ($b = -0.10$) and positive for CSE sentences ($b = 0.10$), although neither reached significance (all $p > .20$).

There was also an interaction effect among sentence version, MT, and MT proficiency ($b = 0.36$, $p < .001$). For Chinese MT speakers, the estimated marginal trend of MT proficiency was positive for both SSE ($b = 0.11$) and CSE ($b = 0.13$) sentences,

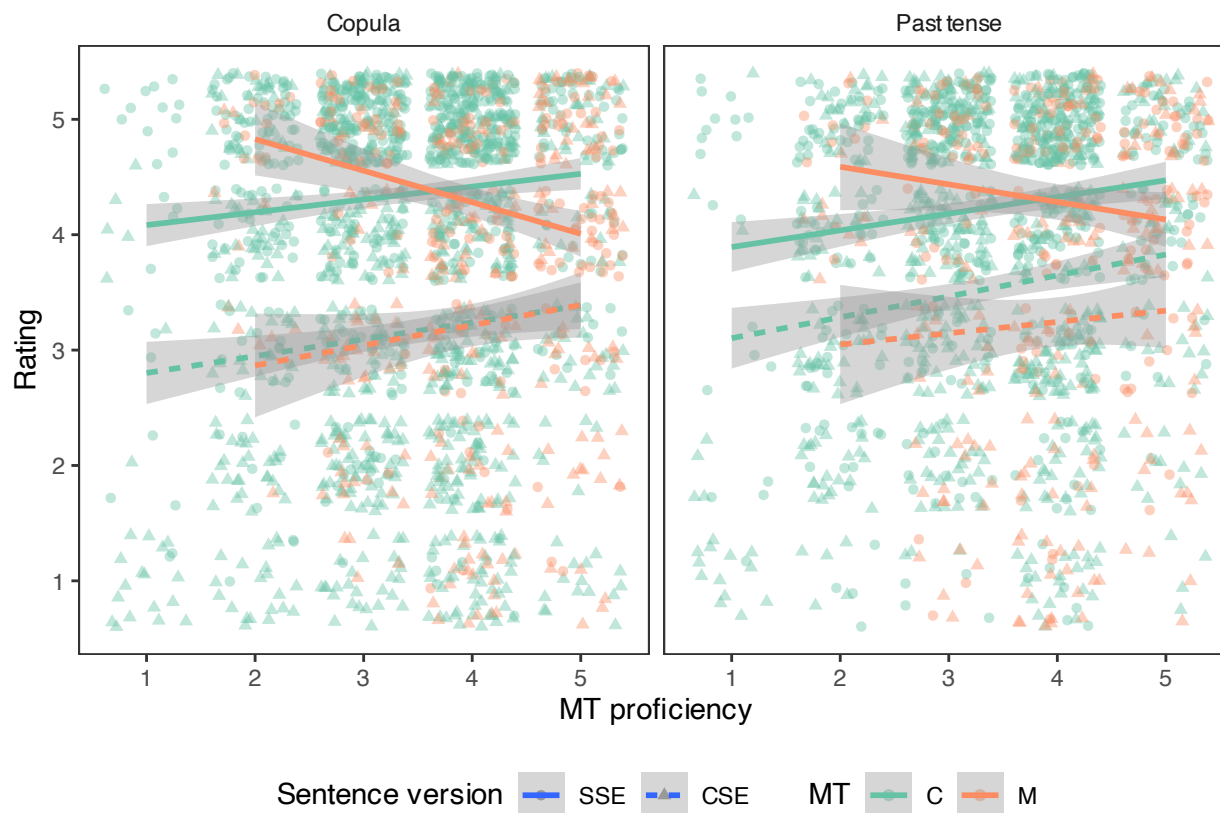


Figure 10. Ratings for copula and past tense constructions by participants' self-assessed MT language proficiency, sentence version, and MT. C: Chinese; M: Malay.

whereas for Malay MT speakers, the estimated marginal trend of MT proficiency was negative for SSE sentences ($b = -0.31$) but positive for CSE sentences ($b = 0.07$). Only the negative SSE trend for Malay MT speakers reached significance ($p = .043$).

In summary, as MT proficiency increased, ratings for CSE sentences also increased for both Chinese and Malay speakers. However, ratings for SSE sentences increased for Chinese speakers but *decreased* for Malay speakers as MT proficiency increased.

Discussion

Using acceptability judgements from Chinese and Malay MT speakers, we found that ratings for different sentences varied across constructions, complement or past tense

type, and individual speakers. Specifically, for copular constructions, our results suggest that MT has no effect on acceptability ratings of copular constructions by CSE speakers. This contrasts with earlier work from Platt (1979), which suggests that there were greater differences in the copula use of Chinese- and Malay-speaking Singaporeans in the 1970s. In comparison, the data in the present study suggest that much of the difference has been eliminated in contemporary CSE, indicating levelling of variability (see also Kalaivanan, Sumartono, & Tan, 2020). Thus, it is likely that continued interactions between Chinese and Malay speakers, as well as increased standardisation and amount of education, have resulted in the levelling of syntactic variation between the two groups. It is notable that such levelling does not appear to be uniform across all syntactic phenomena, as we observed an interaction of MT with sentence type for past tense constructions (discussed below); this disparity may be due in part to the observation that past tense marking is also linked with phonetic variation, which may have experienced less levelling than syntactic variation. Focusing on the pattern of acceptability ratings across different complement types, it seems that PP complements are most acceptable without a copula, followed by NP and then AP (which may not differ significantly from each other). One possible (but highly speculative) explanation for this pattern is that the preposition in the PP is gaining some ‘copular’ function—i.e., linking the subject with a (spatiotemporal) position—perhaps due to the influence of the Chinese locative copula 在 *zài*.

In contrast, there were no differences across past tense types in CSE speakers. This again differs from earlier work from Ho and Platt (1993), who found that past tense forms involving a vowel change were more likely to be produced than past tense forms involving [rd] affixation or vowel change and [t]/[d] appending, and past tense forms involving only [t]/[d] affixation were almost never produced. One explanation for this finding is that the variation in past tense marking is strongly phonetic in nature, and therefore the translation into the visual presentation modality was sufficient to level any differences in endorsement of unmarked past tense forms (but see Ho, 2003; W. Leong, 2021 for

uninflected past tense forms in written SgE). A natural extension for further research would thus be to collect acceptability judgements using stimuli presented aurally, which may reveal more nuanced variation that was not captured by the present questionnaire.

Interestingly, for past tense constructions, we observed an interaction between sentence version and MT, such that Malay speakers had larger differences in ratings between SSE and CSE sentences than Chinese speakers. This effect was not observed by Ho and Platt (1993), who did not analyse past tense marking as a function of MT. As we did not find any simple main effects related to this interaction effect, it is difficult to pinpoint the source of this disparity. However, exploratory analyses suggested that Chinese speakers rated unmarked activities higher than unmarked states, which was in the same direction as the pattern of production found by Ho and Platt (1993). The present study did not have a full combinatorial set of sentences covering different past marking types and event aspectual classes, and a more comprehensive survey may be required to better characterise the acceptability of unmarked past tense constructions in CSE.

Our questionnaire also demonstrated variation across individual respondents. Participants' responses to copular constructions were moderately correlated with their responses to past tense constructions, suggesting that CSE features are often bundled together, but not tightly—speakers may sometimes accept or even adopt different features to differing extents. Speakers' responses were also related to their self-assessed MT proficiency in an interesting pattern of responses. As may be expected, speakers with greater MT proficiency tended to rate CSE sentences more highly, as their MT language may exert a larger influence on their CSE. However, Chinese and Malay speakers showed opposite patterns of responses for SSE sentences, as Malay speakers with greater MT proficiency rated SSE sentences more poorly, whereas Chinese speakers tended to rate them more highly. These results are perhaps due to speakers' differing SSE proficiencies, which may have complex interactions with speakers' MT proficiencies; a general survey of

Singaporeans' self-rated proficiencies across all of the languages that they speak may be insightful in this regard. More generally, the pattern of results also supports the indexical approach to CSE variation (Leimgruber, 2013), such that speakers' usage of various linguistic features may reflect multiple dimensions of social identity, whereby some dimensions (e.g., socioeconomic status) may affect features more uniformly, while others (e.g., affinity with ethnic group) may affect some features more than others.

Language change in CSE

In the absence of longitudinal studies of these constructions in the CSE of speakers with different MTs, comparison of our results with data from research in the 20th century can provide fresh insights into the grammar of CSE and how it has changed. As noted earlier, the data in Platt (1979) provide important information about the CSE of over 40 years ago. Despite the previously noted shortcomings of Platt's study and the different methodology employed in his work and ours, it is nonetheless illuminating to compare the two and consider how and why CSE has changed since the 1970s.

Beginning with past tense marking, our findings indicate no difference relating to MT with respect to the form of past tense marking or its absence. This is evidence of convergence by all speakers on a consistent set of forms, even if Malay MT speakers' ratings differed more than those of Chinese MT speakers. Similar to findings from Deterding (2005) and Kalaivanan et al. (2020) on phonology, our results provide support from morphosyntax for the claim that CSE is close to or has already entered the fourth stage (of five) in Schneider's (2007) Dynamic Model of the evolution of postcolonial Englishes. Schneider identifies this stage as endonormative stabilization, which is characterised linguistically by homogeneity of features and stabilization.

As with past tense marking, copular constructions displayed convergence on a single pattern of relative acceptability for zero copular constructions that showed no effect of

MT. This finding is further evidence of endonormative stabilization in the morphosyntax of CSE. Interestingly, the levelling that has occurred has resulted in a pattern of relative acceptability for zero copular constructions that is not consistent with that of either of the MT languages or the pattern attested in the CSE of L1 Malay or L1 Chinese speakers in the 1970s (Platt, 1979); see Table 1. The high ranking of PP with zero copula is possibly consistent between CSE-L1 Malay in the 1970s (PP? > AP > NP) and CSE in the 2020s (PP > NP > AP), but beyond that there are no shared patterns in the ordering. Convergence is not towards any existing pattern. It is not clear what might have driven the change to the resulting hierarchy of relative acceptability; no obvious explanation based on functional and/or categorial differences is available. This result is a matter that would benefit from further investigation. Comparison indicates that endonormative stabilization involving morphosyntactic features such as past tense marking and copular constructions may progress at different rates. Which features are distinct in this respect and how/why the rates may differ are similarly interesting questions for future research to address.

Directions for future work

One inadvertent limitation of the main study is participant distribution. The participant pool was imbalanced with regard to MT, and there was also a high proportion of university students. The latter observation is particularly important as individuals of lower socioeconomic status tend to exhibit more basilectal features in their language use (Platt, 1979), which may have been relevant in this study. Nonetheless, the relative proportions of Malay-speaking and Chinese-speaking respondents are comparable to those of ethnic Malay and Chinese Singaporeans aged 18–25, and a vast majority of this age range has attended, is attending, or is about to attend university. Furthermore, the participants were recruited by word of mouth, without specific soliciting of participants from a particular MT or socioeconomic background (to avoid demand

characteristics). Future studies using a different recruitment method and a stratified sampling approach would help to alleviate this issue, and would also open the possibility of studying the judgements of speakers of other MTs (e.g., Indian languages).

Another issue that arose in the course of data analysis is that SSE sentences may have exhibited a ceiling effect. All three complement types had a mean rating of > 4 and a skew of < -1 , suggesting that acceptability for these sentences may be almost at maximum, resulting in difficult result interpretation due to limited variation. However, this result is unsurprising given that SSE is the primary medium of education in schools, and is often considered the prestigious or ‘correct’ variety, thus there is little reason for participants to score SSE sentences poorly (other than possible ‘stiltedness’ if they felt they were unlikely to use such sentences in ordinary CSE speech). Nonetheless, future research in this area may employ alternative study designs focusing exclusively on CSE sentences, which may eliminate this problem.

Additionally, only 3SG subjects were used for copular constructions as the focus was on the effect of complement types, thus the results may not be generalisable to other types of subjects. Research by Ho and Platt (1993) suggests that the preceding environment does have an effect on copula use, with 1SG and 3SG pronouns promoting copula use, and other pronouns and NPs promoting a zero copula. The use of both 3SG pronominal and NP subjects in this study seems to cover both directions of influence of the preceding environment, although a broader study investigating the effects of other subjects may provide a more comprehensive description of copula optionality in CSE.

Finally, as mentioned above, the presentation of the stimuli via the visual modality may have limited their naturalness, given that CSE is much more often encountered aurally, and does not have a codified written form. This may have been particularly important for past tense marking, which is related to the phonetics of the past tense forms; indeed, it is plausible that CSE speakers have slightly different written and

phonetic representations of past tense forms, leading to differential performance in the two modalities. While using auditory stimuli is inherently much more complicated, due to having to control for aspects of the speaker's voice (e.g., perceived gender, accent), it may elicit more accurate responses from respondents, and therefore permit finer-grained descriptions of CSE.

Nonetheless, the results as a whole demonstrate substantial nuance in participants' endorsement of SSE and CSE sentences. They also highlight the importance of acceptability judgements as a tool to understand the syntax of a particular variety, especially for cases with known variation across speakers, whether sociolinguistic or otherwise. In conjunction with other approaches such as corpus and theoretical analyses, such an empirical approach will allow for more accurate and detailed descriptions of language as it is used by speakers, as well as a more systematic method of measuring language change.

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Appendix: Questionnaire

This appendix contains the full list of sentences used in the acceptability judgement task, the rating scale, as well as the demographic questions presented to participants.

Acceptability judgement items

The items used in the acceptability judgement task are shown in Table 2. Words in braces indicate alternations between SSE versions (before the slash) and CSE versions (after the slash) of the sentence.

Table 2

Items for acceptability judgement task.

No.	Type	Sentence
A.	Practice – CSE	He cannot anyhow say people.
B.	Practice – CSE	She go home already.
C.	Practice – CSE	I don't have ticket.
D.	Practice – CSE	They got time to finish one.
E.	Practice – CSE	We sit here talk.
F.	Practice – SSE	Her daughter is very friendly.
G.	Practice – SSE	They will wipe the table.
H.	Practice – SSE	My uncle has finished eating.
I.	Practice – SSE	The fuel in the tank is enough.
J.	Practice – SSE	The rabbit has too much food.
1.	Copula – NP	John {is / \emptyset } a doctor.
2.	Copula – NP	Lucy {is / \emptyset } the English teacher.
3.	Copula – NP	My friend {is / \emptyset } a chef.
4.	Copula – NP	His cousin {is / \emptyset } the older one.

5. Copula – NP The apple {is / \emptyset } one dollar.
6. Copula – NP Now {is / \emptyset } two o'clock.
7. Copula – NP Sally {is / \emptyset } a baker.
8. Copula – NP James {is / \emptyset } the car mechanic.
9. Copula – NP His wife {is / \emptyset } an actress.
10. Copula – NP Her boss {is / \emptyset } the taller one.
11. Copula – NP That one {is / \emptyset } eighty cents.
12. Copula – NP Tomorrow {is / \emptyset } Saturday.
13. Copula – AP Marcus {is / \emptyset } good.
14. Copula – AP Ann {is / \emptyset } clever.
15. Copula – AP The kid {is / \emptyset } careless.
16. Copula – AP The camp {is / \emptyset } tiring.
17. Copula – AP Their shop {is / \emptyset } far.
18. Copula – AP Your dog {is / \emptyset } big.
19. Copula – AP Samuel {is / \emptyset } happy.
20. Copula – AP Kate {is / \emptyset } pretty.
21. Copula – AP Their uncle {is / \emptyset } old.
22. Copula – AP The bus {is / \emptyset } fast.
23. Copula – AP The supermarket {is / \emptyset } open.
24. Copula – AP Your flat {is / \emptyset } nice.
25. Copula – PP Tom {is / \emptyset } at home.
26. Copula – PP The meeting {is / \emptyset } at noon.
27. Copula – PP Her toy {is / \emptyset } in the box.
28. Copula – PP Breakfast {is / \emptyset } in the morning.
29. Copula – PP Your book {is / \emptyset } on the table.
30. Copula – PP Our trip {is / \emptyset } on Tuesday.
31. Copula – PP Mary {is / \emptyset } at work.

32. Copula – PP Our flight {is / \emptyset } at seven.
33. Copula – PP Food {is / \emptyset } in the kitchen.
34. Copula – PP The show {is / \emptyset } in twenty minutes.
35. Copula – PP My robot {is / \emptyset } on the floor.
36. Copula – PP Their wedding {is / \emptyset } on a weekend.
37. Past – Suppletion Yesterday I {went / go} there.
38. Past – Suppletion In the sixties he {was / is} a policeman.
39. Past – Suppletion Ten years ago, the houses {were / are} very big.
40. Past – Suppletion The exam last Tuesday {was / is} very hard.
41. Past – Suppletion Just now they {went / go} to the shop.
42. Past – Suppletion You thought your bags {were / are} lost.
43. Past – Vowel She said that you {took / take} her book.
44. Past – Vowel My sister {found / find} a job two days ago.
45. Past – Vowel Last Monday they {came / come} twice.
46. Past – Vowel She {ate / eat} the cake last night.
47. Past – Vowel I {met / meet} your sister at the wedding last year.
48. Past – Vowel Mark {dug / dig} a hole so he can plant vegetables now.
49. Past – [t]/[d] Before this he {stayed / stay} at his friend's place.
50. Past – [t]/[d] I {tried / try} to do it myself last week.
51. Past – [t]/[d] Henry {packed / pack} for his trip this morning.
52. Past – [t]/[d] He {brushed / brush} his hair when he woke up.
53. Past – [t]/[d] My brother {walked / walk} the dog yesterday.
54. Past – [t]/[d] Jane {pushed / push} me first.
55. Past – [ɪd] When I was young, I {wanted / want} to be a doctor.
56. Past – [ɪd] Last time Sarah {hated / hate} carrots.
57. Past – [ɪd] This blue shirt {faded / fade} in the wash.
58. Past – [ɪd] His mother {painted / paint} the wall white the first time.

59. Past – [ɪd] They {ended / end school} last week.
60. Past – [ɪd] I {folded / fold} the clothes just now.
61. Past – Vwɪ + [t]/[d] His wife {brought / bring} cake for the last party.
62. Past – Vwɪ + [t]/[d] Your friend {told / tell} me what happened.
63. Past – Vwɪ + [t]/[d] They {sold / sell} their house last month.
64. Past – Vwɪ + [t]/[d] Their father {bought / buy} the house three years ago.
65. Past – Vwɪ + [t]/[d] Her cousin {taught / teach} primary school in the past.
66. Past – Vwɪ + [t]/[d] The food {felt / feel} very cold before I put it in the oven.
67. Benchmark – Low You become in the house.
68. Benchmark – Low She become at the office.
69. Benchmark – Low The box become on the floor.
70. Benchmark – High He became a teacher.
71. Benchmark – High Their cousin became skinnier.
72. Benchmark – High The sky became dark.
-

Rating scale

The scale that participants were asked to use for ratings is shown in Table 3.

Table 3

Rating scale for acceptability judgement task.

Rating	Description
1	This isn't a good sentence. It's impossible to understand. I would not use this sentence. No speaker from Singapore would use this sentence.
2	This sentence is better than one I'd rate as 1, but it's still very bad. It's very difficult to understand. Most people from Singapore would definitely not say this.
3	This sentence is not good enough to be rated 4, but it's better than a 2. It's difficult to understand. Somebody from Singapore might use it, but I'd be unlikely to use it myself.
4	This sentence is less than perfect. It sounds a bit strange to me. Other people from Singapore might use it, but I'm not totally comfortable with it.
5	This sentence sounds fine. I'd use it without hesitation, and so would other people from Singapore.

Demographic questions

The demographic questions presented to participants are shown in Table 4. Some of the questions required participants to select an option; in these cases, the possible options are listed in brackets.

Table 4

Demographic questions.

No.	Question
1.	Age [18, 19, 20, 21, 22, 23, 24, 25]
2.	Gender [Male, Female, Other, Prefer not to say]
3.	Which university are you attending / have you attended / are you about to attend? (Type “NA” if you are not intending to attend university)
4.	Which junior college / polytechnic / centralised institute did you attend?
5.	What is your mother tongue?
6.	How would you rate your ability in your mother tongue? (1: limited comprehension, 5: fluent and can communicate easily) [1, 2, 3, 4, 5]
7.	How many years of formal learning have you had in your mother tongue?
8.	Do you speak any other languages / dialects? If so, which ones?
9.	How would you rate your ability in these other languages / dialects? (1: limited comprehension, 5: fluent and can communicate easily) [1, 2, 3, 4, 5]
10.	How many years of formal learning have you had in these other languages / dialects?
11.	Were you born in Singapore? [Yes, No]
12.	How long have you lived / did you live in Singapore?
13.	Have you lived in any other countries? If so, when and for how long?