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Sociolinguistic Factors Affecting Tense Variation in Singapore English

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Despite English being the primary official language of Singapore, many of its citizens show deviations from the standard variety, Standard Singapore English (SSE), in speech or writing. In particular, it has been noted that Singapore English speakers may produce non-standard tense morphology, often omitting verbal past-tense markers in past-tense contexts. However, a couple of open questions remain: are there any social or external factors driving this variation, and is this variation morphological or phonological? To address these questions, I asked participants to complete a verbal interview and written questionnaire designed to probe how they inflect verbs and examined if conformity to SSE is predicted by age, sex, or mother tongue. The results suggest that non-standard tense use does not differ along these lines. They also support earlier claims that tense marker omission in SSE is phonological, rather than morphological, for a majority of speakers, but that there is a small group for whom the variation may be morphological.

1 Introduction

English in Singapore is said to exist as a diglossic relationship between Colloquial Singapore English (CSE), the “low” variety, and Standard Singapore English (SSE), the “high” variety (Gupta 1989). Speakers of Singapore English have some range of command over the dialect spectrum and are able to use either variety depending on social context (Gupta 1989). Like other diglossic societies, the “low” variety, CSE, is largely used in informal situations, while the “high” variety, SSE, is used in formal contexts (Leimgruber 2011). Proficiency in and use of SSE is associated with prestige; conversely, deviation from SSE is stigmatized (Bao 2003). Singapore English speakers generally have a good grasp of SSE, although according to Gupta (1989:33) “some students still have problems producing Standard English (especially in the area of tenses)”. In particular, speakers of SSE may show a tendency to omit verbal past-tense markers in past-tense contexts — a known feature of CSE (Alsagoff 2001, Wee 2004, Fong 2004) that may also be a feature of SSE (Deterding 2003, Gut 2009):

- (1a) My mum she come from China many years ago!
(1b) Oh, I see him last week.
(Platt and Weber 1980:61)

Given the institutional advantage that proficiency in SSE confers, coupled with the stigma surrounding non-standard English use, understanding why some speakers tend to show non-standard tense morphology while others do not could aid in formulating educational policies and hopefully lead to de-stigmatization of non-standard tense usage. Yet, there remain unsolved questions regarding variation in the use of tense markers in Singapore English. Who is most likely to show this variation, and is past-tense marker omission in SSE driven phonologically or morphologically? In individuals who show tense variation, is non-standard morphology specific to certain syntactic structures?

The results presented in this paper support prior findings that past-tense marker omission in SSE is driven phonologically. They also suggest that there is a small group of people for whom it is driven morphologically, although this group does not seem to be clearly defined along the axes of age, sex, and first language. For speakers in this group, past-tense morphology appears to be optional in past-tense contexts, but is fully absent in non-past-tense environments.

2 Literature Review

2.1 Overview of Singapore Englishes

Most of the work done on Singapore English has focused on CSE, whose grammar differs dramatically from SSE. Features of CSE grammar include topic prominence (Alsagoff and Ho 1998), copula deletion (Ho and Platt 1993, Leimgruber 2009), and tense agreement (Ho and Platt 1993). In contrast, the grammar of SSE has been described as largely identical to the Standard Englishes of other countries (Leimgruber 2011). In practice, however, the idealized features of either variety often show up in the other (Gupta 1994), prompting some researchers to describe English in Singapore as a continuum rather than diglossia. Early work characterized it as an educationally motivated dialect continuum (Platt 1975), but that has since been criticized (Gupta 1994, Alsagoff 2007) and a few other models put forward (Gupta 2006, Alsagoff 2007, Leimgruber 2011). For the scope of this paper, I assume the “leaky” diglossia model (Fasold 1984, Gupta 2006), which posits that although some features stereotypical of CSE or SSE can “leak” into the other variety, they “tend to constellate”, making it possible to

distinguish which variety is in use (Gupta 1994:8). Notably, for native speakers of Singapore English, there is almost no ambiguity as to whether CSE or SSE is being used in a particular situation (Leimgruber 2011).

2.2 Linguistic Characteristics of Tense Variation

Previous work on tense variation in Singapore English has largely focused on past-tense marker omission. This phenomenon has been well-documented as a feature of CSE (Tay 1979, Platt and Weber 1980, Alsagoff and Ho 1998, Alsagoff 2001, Wee 2004, Fong 2004); however, its role in SSE is still up for debate (Gut 2009). Gupta (1989) originally considered past-tense marking to be a feature distinguishing SSE from CSE. Others have challenged this view: Deterding (2003) found the past-tense /ɪd/ marker to also be frequently omitted in SSE speech, and Ho (2003) found that some students omitted past-tense marking in their written assignments, considered to elicit SSE (Gupta 1989). Later research has either considered past-tense marking to be optional (Fong 2004, Gut 2009) or highly variable and difficult to characterize (Deterding 2007, Leimgruber 2011).

The uncertainty largely stems from the fact that word-final /-t, d/ deletion is a feature of both CSE and SSE (Bao 1998, Cruz-Ferreira 2005), which makes it particularly difficult to distinguish if people are not vocalizing past-tense morphology because of a phonological rule or they simply have no representation of the concept. Cruz-Ferreira (2005) analyzed interviews in the NIECSSE (Deterding and Low 2001:33) and found an “overall tendency for -t/-d omission” beyond verbs. As they and others have noted, surface forms in Singapore English cannot therefore be taken at face value, and many researchers have treated past-tense marker omission in Singapore English as the result of a more general word-final /-t, d/ deletion (Bao 1998, Lim 2004, Cruz-Ferreira 2005, Gut 2005). Gut’s (2009) analysis in particular supports the idea that this phenomenon is more phonological than morphological: they found in a corpus of SSE that words requiring affixation were marked for past tense less than those requiring suppletion or vowel change. Gut’s (2009) finding, however, could be strengthened by showing a dissociation between phonology and orthography at the within-individual level, whereby people can produce past-tense markers in writing despite omitting them in speech. This would further support the idea that the lack of past-tense markers in SSE is fundamentally a phonological process.

Yet, past-tense marking need not be exclusively either phonological or morphological: Bao (1998) predicted that the lack of realized past-tense markers in speech could lead to a change at the morphological level. There could very well be a subset of SSE speakers for whom the process is phonological, in that they omit the use of past-tense markers in speech through a general /-t, d/ deletion process but retain an understanding of SSE morphological rules, and others for whom it is morphological. For the latter group, one could expect these speakers to also show non-standard tense morphology in writing, possibly in a larger set of environments than just past-tense verbs ending with phonetic /-t, d/. There is some preliminary evidence from written comments on Facebook suggesting this may be the case, and there may be an even wider range of non-standard tense usage than previously noted. Figure 1 shows a range of statements in which the verb is inflected with non-standard morphology, while examples 2a, 2b, and 2c (for which screenshots are not available) show instances in which there appears to be an antithesis to the aforementioned rule: past-tense markers are sometimes used in contexts which do not license past-tense morphology.

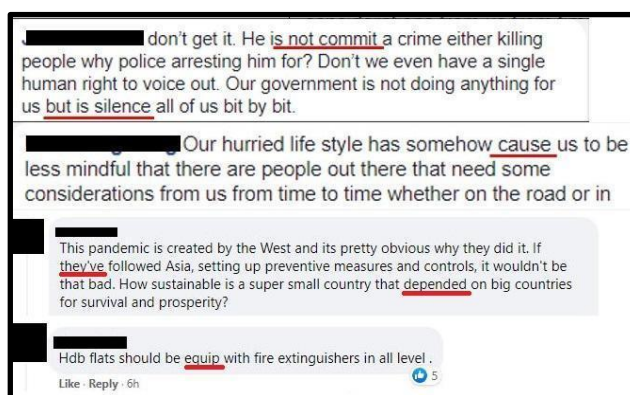


Figure 1: Anonymized screenshots of comments from Facebook showing non-standard tense usage.

- (2a) “[P]eople stared at me as their face turned pale seeing a monster followed me everywhere”
 (2b) “But u just made my mom cried for breaking the news of increasing the price of water”
 (2c) “Who would placed a toddler with a habit of removing his diaper after he finished crapping alone and in a cot?”

The examples above are unlikely to be typos, as (i) the autocorrect feature on most smartphones should change them to SSE, and (ii) many of them require the addition of letters rather than omission, suggesting intent rather

than accident. Though preliminary, the presence of these overt non-standard tense markers suggests that hypotheses of verbal tense in Singapore English may need to be expanded to cover a wider range of contexts. For speakers who use this wider range of non-standard tense morphology, the process may be driven morphologically rather than phonologically. More work needs to be done to examine factors that could drive the optionality of past-tense markers at the inter-individual level.

2.3 Social Factors Driving Tense Variation

Are there specific social factors that determine who shows this variation and who does not? In many situations, language variation is driven by geographical location (Heeringa and Nerbonne 2001, Huisman et al. 2019): contact drives the spread of language change, and isolated communities are more likely to form dialect bubbles. However, there are reasons to believe the situation in Singapore is not simply the product of regional dialectal variation. Firstly, Singapore is a small country (278 square miles) with an extremely high population density (21,476 people per square mile). People in Singapore also regularly come into contact with others living around the country through various institutions such as work and school. As of 2010, 92.5% of resident working persons in Singapore required some mode of transport to get to work, with the median travelling time ranging from 20–45 minutes for most areas of the country (Singapore Census of Population 2010). The percentage of primary school students who walked to school was 46%, but that decreased exponentially with higher levels of education (Singapore Census of Population 2010). Taken together, these factors minimize the opportunity for regional dialect bubbles to form. Secondly, the Singaporean education system provides standardized instruction in English. A national curriculum is implemented across all public schools, which form the overwhelming majority of schools in general. In light of this evidence, it is reasonable to assume any variation in dialect is drawn by social or linguistic factors unrelated to geography.

What sociolinguistic factors could be driving the use of non-standard tense markers? Gupta (1989:37) notes that the deviations from SSE she observes are mostly “in areas [...] that are easily taught”, which stands in contrast to her characterization of students’ general command of English as “very good” and their vocabulary as “outstanding”. This suggests there is more to non-standard tense variation than simple unfamiliarity with the language. Rather, there may be overt interference effects hindering the learning of these rules. One such interference could be the influence of a mother tongue, which is well-documented to interfere with the learning of a second language (Beardsmore 1982, Bhela 1999, Ellis 2006).

A census from 2015 shows this claim is plausible: although English is the common medium of instruction in schools, only 36.9% of Singapore residents speak English as the main language at home (Lee 2016). The other three official languages of Singapore, Mandarin, Malay, and Tamil account for 34.9, 10.7, and 3.3 percent, respectively (Lee 2016). It has been noted that L1 speakers of Mandarin and other Chinese dialects have trouble with tense morphology when picking up English as an L2 (Yang and Huang 2004), as do L1 Malay speakers (Wong 2012, Manokaran et al. 2013) and L1 Tamil speakers (Tiittanen 2015). Verbs in Mandarin (Yang and Huang 2004) and Malay (Wong 2012) are not inflected for tense. Yang and Huang (2004) argued that the use of lexical or pragmatic devices rather than overt morphology in Mandarin causes speakers to rely on them more for temporal cues. In addition, Brebner et al. (2016) did a study on English-Mandarin bilingual preschool children in Singapore and found those with Mandarin L1 did not morphologically mark verbs for tense even by the end of kindergarten. They reasoned that these children were conceptualizing verbs first in Mandarin, which does not mark tense morphologically or phonologically. Furthermore, although Tamil has both regular and irregular tense morphology, it does not license word-final consonant clusters (Annamalai and Steever 1998), which could affect the perception and use of past-tense affixation in L2 English. It is thus plausible that a significant portion of Singapore’s residents experience interference effects on their English language learning from a different L1 language.

Another possibility is that tense usage varies with age. Standardized instruction in English is a relatively new phenomenon — since gaining independence in 1965, the Singaporean Government has slowly shifted emphasis toward English as the primary language of the education system and tightened the scope of its curriculum (Cai 2009). People who attended school before many of these changes were implemented may have had less rigorous instruction in English and therefore greater variability in learned rules, especially if they did not speak the language at home. Even those who spoke English at home may have spoken a more colloquial variety, considering that their parents were even less likely to have gone through structured formal education in English. Further, Wee (2011) notes that English usage at home has risen over time. Earlier generations would have had fewer classmates from English-speaking homes, and would thus have less robust contact with the language. All these factors could lead to older Singapore residents showing more variation in English. Of note is that at least one form of linguistic variation has been shown to be driven by age and L1 in Singapore: Starr and Balasubramaniam (2019) found both these variables were significantly correlated with the presence of prevocalic /r/ in Singapore English.

It is also possible that the use of tense markers varies by the speaker’s sex. Although there is less linguistic motivation for this specifically in the context of Singapore English, sex is known to be a correlate of linguistic

variation more generally (Eckert 1989, Labov 1990). As such, sex, age, and first language were all examined in this study.

2.4 Research Questions

This study mainly aims to address the following questions:

- (i) Is there within-subject level evidence that past-tense marker omission is phonological or morphological?
- (ii) Does the use of non-standard tense morphology, more generally, vary with age, sex, or first language?

As an additional, exploratory question, the study also asks:

- (iii) For speakers who show tense variation, is there a particular range of syntactic contexts in which they tend to use non-standard morphology?

3 Methods and Participants

The participants for this study represented 30 speakers of Singapore English (17 female and 13 male), with ages ranging 18–71 years old (mean = 32, std = 14.1) (Table 1), who were recruited in Singapore through my social network. They encompassed strangers, acquaintances, and friends. None had spent more than 5 years living outside the country, and 16 considered English to be the main language spoken at home while they were growing up. Participants were asked to complete both a verbal interview and written questionnaire and were instructed to use SSE for the entirety of the testing session. All participants were literate and all but 1 had finished high school. Due to technical issues with the recording device, 1 participant’s interview was excluded from analysis. Another participant scored more than 2 standard deviations away (50% conformity to SSE) from the sample mean (in both the written and spoken datasets) and was excluded as an outlier.

Table 1: Breakdown of participant demographic information

L1	Not English														English															
Sex	F							M							F						M									
Age	21	22	22	41	43	46	52	63	24	30	36	46	52	71	18	18	20	23	23	24	25	37	42	20	23	23	23	23	23	26

Both the interview and questionnaire were designed to assess participants’ conformity to SSE verbal tense morphology. The interview portion of the study was conducted verbally and consisted of two broad series of questions designed to get participants to use past-tense morphology as much as possible. Participants were given as much time to answer these questions as they wanted, and the interviewer asked follow-up questions depending on how the conversation went. On average, each conversation lasted about 8 minutes.

- (3a) Could you talk about your work? How long have you been working there? What kinds of projects have you done?
- (3b) What’s the funniest story you remember from your childhood? Please narrate in as much detail as you can remember, including your thought processes at various points of the story.

The written questionnaire that followed the interview was designed with a few constraints in mind. Many questions were phrased to elicit punctual events, as Gut (2009) observed that past-tense markers were less likely to be realized when describing habitual actions. Expanding on Gut’s (2009) methodology, I also aimed to elicit primarily irregular verbs (for which word-final /-t, d/ deletion would not apply), albeit in written form. This was done to provide the clearest distinction between different verb forms, which are most different phonologically and orthographically for irregular verbs. However, I did not separate these into verbs for which the past tense is formed through suppletion or vowel change, as both have been shown to have similarly high inflection rates (Gut 2009). Many questions included auxiliary HAVE and DO, in part to elicit the past participle verb forms of irregular verbs, and in part because HAVE and DO are associated only with SSE and not CSE (Gupta 1989), so their inclusion would maintain the formal context necessary to elicit SSE. I also looked at the ways in which people use tense in an embedded clause, as in Examples 2a–2c. These were all choices made to reflect the initial data from Facebook comments, as it seemed like these syntactic contexts tended to elicit the most non-standard variation. Anecdotally, I had observed that non-standard variants could occur in, for example, the infinitival clause complements of past-tense matrix clauses (e.g., “I didn’t want him to go to the market.”). The questionnaire was designed with a mix of these kinds of sentences, of which the probed word was the predicate. There were six such syntactic contexts:

- (4a) Questions with do-support, e.g., “Did you _____ to the market?”
- (4b) Infinitival clauses where the matrix clause is in past tense, e.g., “I didn’t want him to _____ to the market.”
- (4c) “Small clauses” where the matrix clause is in past tense, e.g., “I didn’t let him _____ to the market.”
- (4d) Passives in infinitival clauses where the matrix clause is in past tense, e.g., “He didn’t want to be _____ of that situation.”
- (4e) Coordination, e.g., “I have never seen nor _____ a trumpet.”
- (4f) Auxiliary HAVE, e.g., “He had _____ his homework.”

The questionnaire consisted of some single-word cloze-style questions, such as:

- (5a) Had Mary _____ to the store yesterday, we might have milk.
- (5b) Did Ms Tan _____ her glasses in the morning?
- (5c) The police officer made me _____ the confirmation.
- (5d) Harry decided he would not be _____ by Tracy anymore.

As well as some open-ended questions, such as:

- (6a) You want to ask your colleague out to eat lunch. However, you don’t know if they have already done so. How do you pose your question?
- (6b) How would you ask someone if they went grocery shopping today?
- (6c) Susan was supposed to plant and water some sunflower seeds yesterday. Mary does not believe she did and asked her. However, Susan said that she did in fact _____.

The interview and questionnaire were analyzed separately because of the aforementioned difficulties in differentiating morphological and phonological processes in speech, and also because speaking time (and consequently the number of verbs used) varied substantially between participants. Further, the formality of a written questionnaire ensured I elicited the participants’ use of SSE. The interviews were conducted by a native Singapore English speaker (me) in decently informal contexts (e.g., at a cafe), which may have caused participants to use CSE while speaking. I assumed that under untimed, controlled conditions, speakers’ written answers reflect their mental representations of verb morphology in SSE. Similarly styled questionnaires have been used in the past to gauge English past-tense generation in people with semantic dementia as well as neurotypicals (Patterson et al. 2001).

The interview was analyzed in the following manner. Following Gut’s (2009) methodology, I identified lexical verbs that were in simple past or past perfect conversational contexts. Only verbs in syntactic environments which also licensed a past-tense marker (according to SSE) were included. The “go” in a sentence like “I didn’t go to the store yesterday” would not be included in such an analysis. A past-tense context was established when two of these three heuristics were fulfilled:

- The verb was used in a direct response to a question about a past event.
- The speaker had provided a temporal reference in the same sentence, such as “when I was 6”.
- The speaker was describing something that had previously been established as being in the past.

Unlike Gut (2009), however, I did not analyze the lexical verb BE, as she had found it to be the most frequent verb by far, substantially influencing the overall rate of past-tense marking. Verbs whose present and past forms are not phonetically distinguishable (e.g., “cut”) were also excluded.

This initial search yielded 886 instances across 29 subjects. Similar to Gut (2009), I then removed verbs in phonetic contexts that made a judgment of the verb form ambiguous — for example, /ɪg’zæmɪndə/ could be the realization of either “examined the” or “examine the” in SSE. In this way, 60 instances were removed. The remaining verbs were split into “regular” and “irregular” verbs for more detailed analysis. Verbs whose past tense required only /t/, /d/, or /ɪd/-affixation were considered “regular” verbs, as Gut (2009) had found similar rates of past-tense marking between them. Likewise, verbs requiring suppletion or vowel change (including verbs like “keep”, for which the past tense requires both vowel change and affixation) were considered irregular verbs.

Each verb was scored impressionistically for the presence or absence of a past-tense marker according to the following rules. For verbs in the regular category, I considered them to be marked for past tense only if they included a word-final /t/, /d/, or /ɪd/. In keeping with Gut’s (2009) methods, I also considered regular verbs ending in a glottal stop /ʔ/ to have unrealized past tense. For the irregular verbs, I considered them to be marked for past tense if the corresponding suppletion or vowel change had occurred. For example, the base verb “keep” would be marked for past tense even if the realized form was /kɛp/ instead of /kɛpt/.

For the written questionnaire, there were two levels of analysis. The first analysis aimed to address the question of whether previous findings of past-tense marker omission may have had a phonological or morphological origin. For this, I only analyzed responses in the questionnaires which licensed simple past or past perfect tense markers. I then compared the rate of tense marker realization in speech vs writing. A higher rate of marker omission in speech would indicate that the process is more phonological, whereas similar rates between modalities would suggest a morphological origin.

The second level of analysis covered all questions on the questionnaire. To see if SSE tense usage varies by age, sex, or language, I marked individual responses to questions for either standard or non-standard tense morphology on the main verb, and aggregated them as a percentage score for each participant. This portion of the analysis was agnostic to the exact type of deviation (e.g., a lack of past-tense marker) observed and was only concerned with non-standard tense morphology on the main verb in general. Verbs which do not have orthographically distinguishable present and past-tense forms (e.g., “cut”, “put”) were excluded from analysis, as were responses in which the participant did not provide a main verb (e.g., using a preposition instead). For the open-ended questions, most of the participants’ responses included an auxiliary verb, as intended. In these cases, only the tense morphology of the main verb was scored. The aspect of an auxiliary, if one was provided, was not marked for standardness (e.g., “As of yesterday, John has not bought the milk / did not buy the milk” would have been marked as standard-conforming).

Statistics were calculated using the *scipy* and *statsmodels* (Seabold and Skipper 2010) packages in Python. For the first analysis comparing within-subject past-tense marker omission, I calculated the percentage of verbs marked for past tense in speech and writing separately for each participant. I then ran a paired-sample t-test to determine if there was a significant difference in past-tense marker absence between the two modalities.

For the second analysis, I used a multiple regression model with the rate of SSE tense morphology usage as the dependent variable. An Ordinary Least Squares regression model was used so as to capture any interaction between independent variables. In this model, first language and sex were categorically operationalized as English and non-English and male and female, respectively. As there was no pre-hoc reason to partition participants by age group (which would have involved setting a “cutoff”), age was operationalized as a continuous variable in the model. As such, the full model for SSE conformity rate (SR) was:

$$SR = a_0 + a_1 \cdot x_1 + a_2 \cdot x_2 + a_3 \cdot x_3$$

where x_1 = age (in years); x_2 = sex (male or female); and x_3 = first language (English or not English).

4 Results

Overall, past-tense marker omission rates in speech (Table 2) were similar to those found by Gut (2009) in a corpus of Spoken Singaporean English. Of the lexical verbs in past-tense contexts, and excluding BE, 73.4% were marked for the past tense (Gut’s analysis, which included BE, yielded 78.4%). Regular and irregular verbs were used at roughly the same frequency, but regular verbs (those whose past-tense modifiers included only /t/, /d/, or /ɪd/-affixation) were inflected less often (60.3%) than their irregular counterparts (85.8%). These rates support the idea that tense variation in SSE is generally phonological.

Table 2: Rate of past-tense marker usage from verbal data

Verb Type	Total	Marked for Past Tense	
	Count	Count	%
Regular	403	243	60.3
Irregular	423	363	85.8
Overall	826	606	73.4

However, this study was also concerned with dissociating phonological and morphological processes at the within-individual level by comparing past-tense marker realization rates between participants’ spoken and written data. A paired t-test revealed a significant difference in past-tense marker omission between both modalities (Figure 2; $t(27) = -7.91, p < 0.001$). Verbs were less likely to be marked for past-tense in past-tense contexts in the interviews ($M = 0.705, SD = 0.158$) than in the written questionnaire ($M = 0.945, SD = 0.048$). This further supports the idea that participants have an understanding of SSE past-tense morphology, and that past-tense marker omission in SSE is a phonological process.

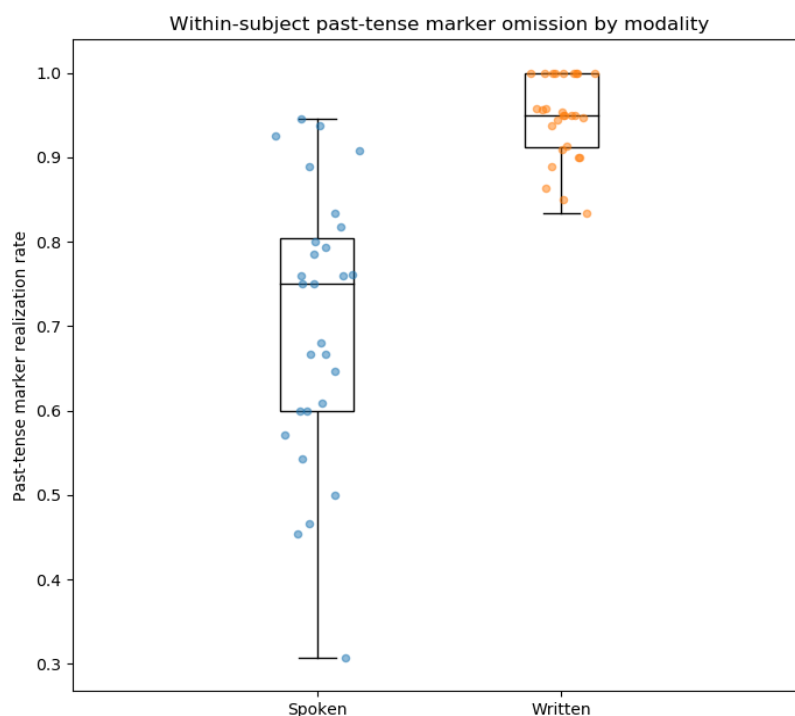


Figure 2: Comparing past-tense marker omission in speech vs writing.

The second question this study set out to ask was if SSE tense morphology covaried with a speaker's age, sex, or first language. My hypothesis was that any combination of these factors might be predictive of non-standard tense morphology use. Because the three variables might interact (e.g., differences due to L1 could be equalized with more standardized education), I ran a multiple regression for both modalities separately to predict the rate of standard tense morphology by speakers' first language, sex, and age. For the verbal data, this was restricted to past-tense marker omission in past-tense contexts, whereas for the written data this encompassed the full range of contexts which participants were given. Contrary to expectations, the regression results were not significant for either the spoken data (Fig 3; $F(3, 24) = 1.20$, $p > 0.05$, $R^2 = 0.13$) or the written data (Fig 4; $F(3, 25) = 0.295$, $p > 0.05$, $R^2 = 0.03$).

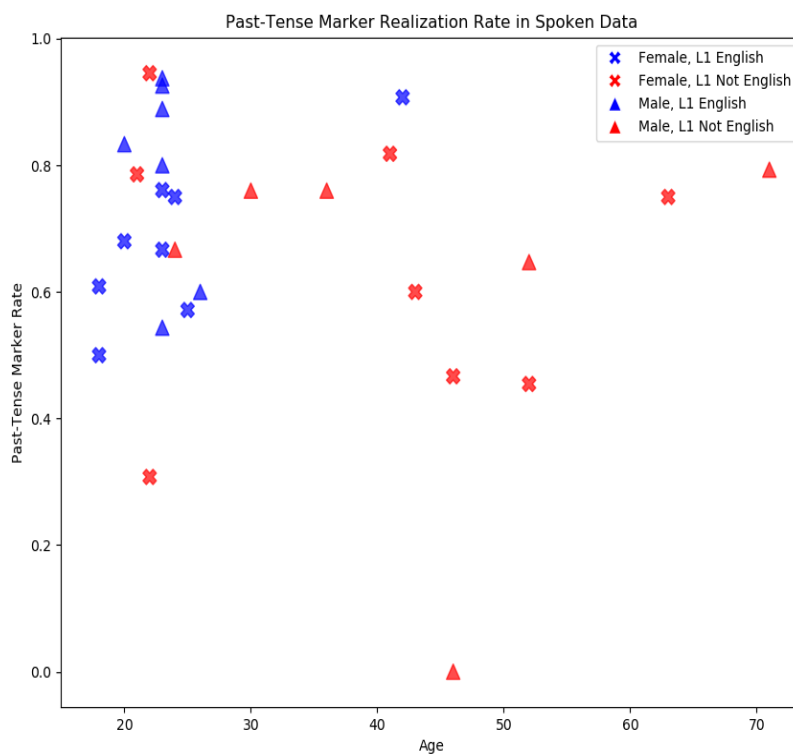


Figure 3: No correlation between examined variables and past-tense marker realization rate in speech.

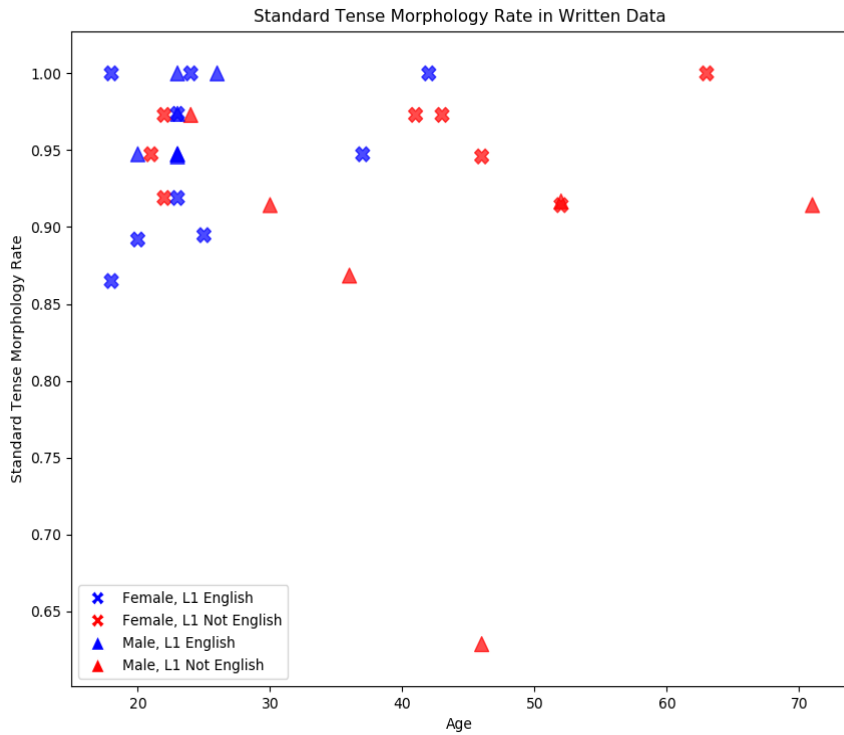


Figure 4: No correlation between examined variables and standard tense morphology rate in writing.

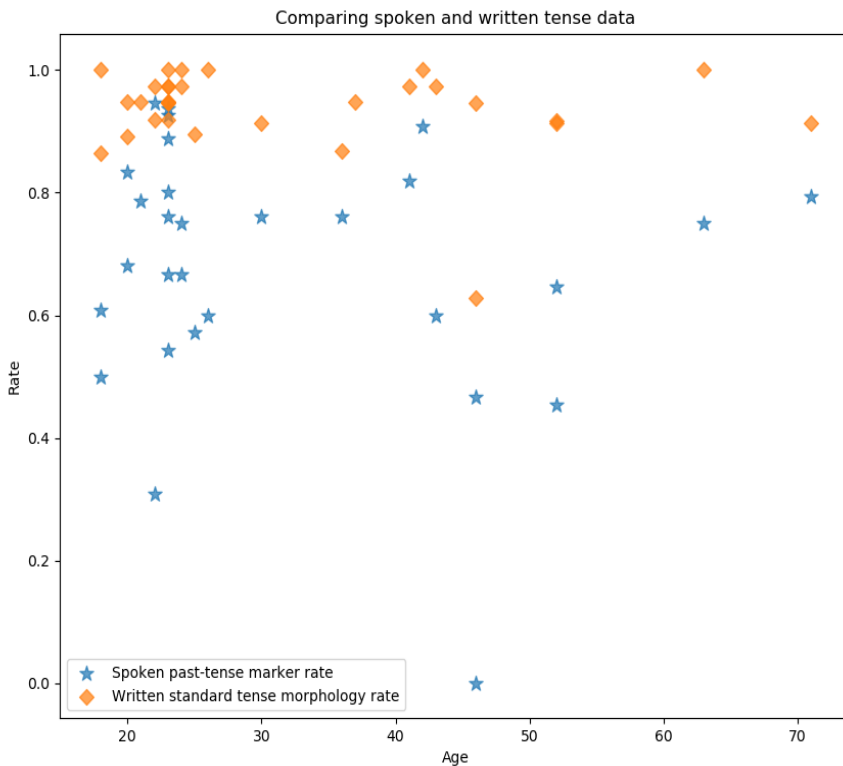


Figure 5: Rate of past-tense markers in speech is lower than rate of standard tense morphology in writing.

5 Discussion

The results of this study provide further evidence that past-tense marker omission is a phonological rather than morphological process, at least for a majority of SSE speakers. Although speakers showed a wide range of past-

tense marker realization rates during their interviews, these rates converged tightly into a high degree of conformity to SSE in their written answers, suggesting they have a strong concept of its tense morphology. While these results do not negate earlier conclusions that past-tense marking in Singapore English is optional, they thus support Gut (2009) and others' conclusions that the phenomenon may be more phonological than morphological.

Besides past-tense marker omission, this study also sought to explore a wider range of deviations from SSE tense morphology, and whether or not age, sex, and first language can influence a speaker's use of non-standard variants. It did not find significant relationships along these axes, suggesting that these are not general trends present in the SSE-speaking public. One caveat with this study was that the English L1 group consisted mostly of younger participants; conversely, most older participants did not grow up speaking English at home. This tracks with Wee's (2011) remark that English usage at home has risen over time. In order to make a definitive conclusion that age and L1 do not interact, one would need more younger participants with a non-English L1 as well as more older participants with an English L1.

Yet, these results do not rule out the possibility that there exists a small subset of SSE speakers for whom variation in tense usage is a morphological rather than phonological process. Rather, the data shows this may be the case: one participant scored more than 2 standard deviations away from the mean SSE tense morphology rate on both the written and spoken datasets. This participant was male, aged 46, and employed as an engineer. He self-reported being able to speak four languages: Teochew, Hokkien, Mandarin, and English. Contrary to common perceptions of speakers of non-standard English, he was also well-educated, having received a Bachelor's degree from an English-speaking country.

For the verbal interview portion of the study, this participant gave comparatively shorter replies than others, producing just four instances of verbs in past-tense contexts (none of which were marked for past tense). Interestingly, in his responses on the written questionnaire, all of the non-standard variants were also cases of past-tense marker omission. He was aware of simple past and past perfect tense morphology, having used the verb forms "was" and "played" in two separate answers as well as the phrase "have you done" on three others. However, he also used "has you do" and "have you do" in some responses. Given that these non-standard forms only occurred in syntactic contexts which do not license the infinitive form (via SSE grammatical rules), there seems to be an asymmetry in the optionality of tense morphology for this speaker: present (or infinitive) tense markers are mandatory in contexts which license them, but the past (or past perfect) marker is optional in past-tense environments.

This is coherent in a linguistic system which has other ways of establishing a past-tense discourse frame, since speakers do not need to do so by inflecting the verb. Indeed, Ho (2003) observed that Singapore English speakers have a tendency to do this using time adverbials (e.g., "yesterday") and other related constructs, which Gut (2009) found to account for 20% of verbs unmarked for past tense. Unfortunately, there were not enough time adverbials in my questionnaire to test this further. However, given that this participant used tense morphology a lot more optionally (63% conformity to SSE) than the others, it is possible that non-standardness is happening at the morphological rather than phonological level for him. Perhaps past-tense marker omission is simply a convenience for the majority of SSE speakers (e.g., not having to fully articulate the /t/ in a consonant cluster when a past-tense discourse frame has been established), which has led to a change at the morphological level (Hare and Elman 1995, Bao 1998) in a minority of SSE speakers.

There remain some open questions, however. Of note is that I found just one example of the kind of variation presented in the Facebook comments at the beginning of this paper, in which past-tense morphology is being used in present contexts. These variants are peppered all over social media, leading me to believe that these are not one-off typing errors. Yet, almost none of my participants showed an example of this. One explanation is that this type of variation is not a feature of SSE but of CSE. However, this is unlikely because CSE is characterized by segmental reduction (Ng 2010), which would favor the dropping of affixes over addition. Furthermore, at least in the instances I have observed, the use of these past-tense markers does not meaningfully add to the sentences they are in. Another possibility is that these speakers do not have an adequate grasp of SSE tense morphology and are hypercorrecting. This is the more likely scenario, yet it stands in juxtaposition with the results I obtained. If I am correct in assuming that my outlier participant also does not have a strong grasp of SSE tense morphology, why did he not produce similar deviations? Why would some speakers show selectively optional tense markers while others hypercorrect?

6 Conclusion

The results from this study further support the claims by other researchers (Bao 1998, Lim 2004, Cruz-Ferreira 2005, Gut 2005, Gut 2009) that past-tense marker omission is a phonological phenomenon for a large majority of SSE speakers. They also suggest that there is a minority for whom this phenomenon is morphological. In a sample of 30, age, sex, and first language were not significantly predictive of this latter group. However, depending on the proportion of the population that does show non-standard tense usage at the morphological level, one might

observe a larger effect with greater sample size. Understanding who and what drives the transition from phonology to morphology is a question for future research.

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References

- Alsagoff, Lubna. 2001. Tense and aspect in Singapore English. In *Evolving Identities: The English Language in Singapore and Malaysia*, ed. V. Ooi, 79–88. Singapore: Times Academic Press.
- Alsagoff, Lubna. 2007. Singlish: Negotiating culture capital and identity. In *Language, Capital, Culture*, ed. V. Vinita, G. Saravanan, and Y. Liu, 25–46. Rotterdam: Sense Publishers.
- Alsagoff, Lubna, and Chee Lick Ho. 1998. The grammar of Singapore English. In *English in New Cultural Contexts: Reflections from Singapore*, ed. J. A. Foley, T. Kandiah, Z. Bao, A. F. Gupta, L. Alsagoff, C. L. Ho, L. Wee, I. L. Tabil, and W. B. Heng, 127–51. Singapore: Oxford University Press.
- Annamalai, E., and Sanford B. Seever. 1998. Modern Tamil. In *The Dravidian Languages*, ed. S. B. Steever, 100–128. London and New York: Routledge.
- Bao, Zhiming. 1998. The sounds of Singapore English. In *English in New Cultural Contexts: Reflections from Singapore*, ed. J. A. Foley, T. Kandiah, Z. Bao, A. F. Gupta, L. Alsagoff, C. L. Ho, L. Wee, I. L. Tabil, and W. B. Heng, 152–174. Singapore: Oxford University Press.
- Bao, Zhiming. 2003. Social stigma and grammatical autonomy in nonnative varieties of English. *Language in Society* 32(1):23–46. <https://doi.org/10.1017/s0047404503321025>
- Beardmore, Hugo B. 1982. *Bilingualism: Basic Principles (Vol. 1)*. Avon, England: Multilingual Matters.
- Bhela, Baljit. 1999. Native language interference in learning a second language: Exploratory case studies of native language interference with target language usage. *International Education Journal* 1(1):22–31.
- Brebner, Chris, Paul McCormack, and Susan Rickard Liow. 2016. Marking of verb tense in the English of preschool English–Mandarin bilingual children: Evidence from language development profiles within subgroups on the Singapore English Action Picture Test. *International Journal of Language & Communication Disorders* 51(1):31–43. <https://doi.org/10.1111/1460-6984.12181>
- Cai, Haoxiang. 2009. Going back to the basics of effective English-language teaching [Article in *The Straits Times*]. Accessed 11 November 2020. <https://www.asiaone.com/News/Education/Story/A1Story20091109-178771.html>
- Cruz-Ferreira, Madalena. 2005. Past tense suffixes and other final plosives in Singapore English. In *English in Singapore: Phonetic Research on a Corpus*, ed. D. Deterding, A. Brown, and E. L. Low, 26–36. Singapore: McGraw Hill.
- Deterding, David. 2003. Tenses and will/would in a corpus of Singapore English. In *English in Singapore: Research on Grammar*, ed. D. Deterding, A. Brown, and E. L. Low, 31–38. Singapore: McGraw Hill.
- Deterding, David. 2007. *Singapore English*. Edinburgh: Edinburgh University Press. <https://doi.org/10.3366/edinburgh/9780748625444.001.0001>
- Deterding, David, and Ee Ling Low. 2001. The NIE corpus of spoken Singapore English (NIECSSE). *SAAL Quarterly* 56(1), 2–5.
- Eckert, Penelope. 1989. The whole woman: Sex and gender differences in variation. *Language Variation and Change* 1(3):245–67. <https://doi.org/10.1017/S095439450000017X>
- Ellis, Nick C. 2006. Selective attention and transfer phenomena in L2 acquisition: Contingency, cue competition, salience, interference, overshadowing, blocking, and perceptual learning. *Applied Linguistics* 27(2):164–194. <https://doi.org/10.1093/applin/aml015>
- Fasold, Ralph W. 1984. *The Sociolinguistics of Society*. Oxford: Blackwell.
- Fong, Vivienne. 2004. The verbal cluster. In *Singapore English: A Grammatical Description*, ed. L. Lim, 75–104. Amsterdam, Netherlands: John Benjamins.
- Gupta, Anthea F. 1989. Singapore Colloquial English and Standard English. *Singapore Journal of Education* 10(2):33–39. <https://doi.org/10.1080/02188798908547659>
- Gupta, Anthea F. 1994. *The step-tongue: Children's English in Singapore*. Avon, England: Multilingual Matters.
- Gupta, Anthea F. 2006. Singlish on the web. In *Varieties of English in SouthEast Asia and Beyond*, ed. A. Hashim and N. Hassan, 19–37. Kuala Lumpur: University of Malaya Press.
- Gut, Ulrike. 2005. The realisation of final plosives in Singapore English: Phonological rules and ethnic differences. In *English in Singapore: Phonetic Research on a Corpus*, ed. D. Deterding, A. Brown, and E. L. Low, 14–25. McGraw Hill. <https://doi.org/10.1111/j.1467-971x.2011.01714.x>
- Gut, Ulrike. 2009. Past tense marking in Singapore English verbs. *English World-Wide* 30(3):262–277. <https://doi.org/10.1075/eww.30.3.02gut>
- Hare, Mary, and Jeffrey L. Elman. 1995. Learning and morphological change. *Cognition* 56(1):61–98.

- [https://doi.org/10.1016/0010-0277\(94\)00655-5](https://doi.org/10.1016/0010-0277(94)00655-5)
- Heeringa, Wilbert, and John Nerbonne. 2001. Dialect areas and dialect continua. *Language Variation and Change* 13(3):375–400. <https://doi.org/10.1017/s0954394501133041>
- Ho, Mian Lian. 2003. Past tense marking in Singapore English. In *English in Singapore: Research on Grammar*, ed. D. Deterding, A. Brown, and E. L. Low, 39–47. Singapore: McGraw-Hill Education.
- Ho, Mian-Lian and John T. Platt. 1993. *Dynamics of a Contact Continuum: Singaporean English*. Oxford: Clarendon Press.
- Huisman, John L. A., Asifa Majid, and Roeland Van Hout. 2019. The geographical configuration of a language area influences linguistic diversity. *PLoS ONE* 14(6): e0217363. <https://doi.org/10.1371/journal.pone.0217363>
- Labov, William. 1990. The intersection of sex and social class in the course of linguistic change. *Language Variation and Change* 2(2), 205–254. <https://doi.org/10.1017/s0954394500000338>
- Lee, Pearl. 2016. English most common home language in Singapore, bilingualism also up: Government survey [Article in *The Straits Times*]. Accessed 11 November 2020, <https://www.straitstimes.com/singapore/english-most-common-home-language-in-singapore-bilingualism-also-up-government-survey>
- Leimgruber, Jakob R. 2009. Modelling variation in Singapore English. Doctoral dissertation, Oxford University.
- Leimgruber, Jakob R. 2011. Singapore English. *Language and Linguistics Compass* 5(1):47–62. <https://doi.org/10.1111/j.1749-818x.2010.00262.x>
- Lim, Lisa, ed. 2004. *Singapore English: A Grammatical Description*. Amsterdam, Philadelphia: Benjamins.
- Manokaran, Janaki, Chithra Ramalingam, and Karen Adriana. 2013. A corpus-based study on the use of past tense auxiliary ‘be’ in argumentative essays of Malaysian ESL learners. *English Language Teaching* 6(10):111–119. <https://doi.org/10.5539/elt.v6n10p111>
- Ng, E-Ching. 2010. Reduction, frequency and morphology in Singaporean English prosody. Unpublished manuscript, Yale University.
- Patterson, Karalyn, M. A. Lambon Ralph, John R. Hodges, and James L. McClelland. 2001. Deficits in irregular past-tense verb morphology associated with degraded semantic knowledge. *Neuropsychologia* 39(7):709–724. [https://doi.org/10.1016/s0028-3932\(01\)00008-2](https://doi.org/10.1016/s0028-3932(01)00008-2)
- Platt, John T. 1975. The Singapore English speech continuum and its basilect ‘Singlish’ as a ‘creoloid’. *Anthropological Linguistics* 17:363–74.
- Platt, John T. and Heidi Weber. 1980. *English in Singapore and Malaysia: Status, Features, Functions*. Kuala Lumpur: Oxford University Press.
- Seabold, Skipper, and Josef Perktold. 2010. Statsmodels: Econometric and statistical modeling with python. In *Proceedings of the 9th Python in Science Conference*, 92–96. <https://doi.org/10.25080/majora-92bf1922-011>
- Singapore Census of Population. 2010. *Statistical Release 3: Geographic, Distribution and Transport*. https://www.singstat.gov.sg/publications/cop2010/census10_stat_release3
- Starr, Rebecca Lurie, and Brinda Balasubramaniam. 2019. Variation and change in English /r/ among Tamil Indian Singaporeans. *World Englishes* 38(4):630–643. <https://doi.org/10.1111/weng.12357>
- Tay, Mary W. J. 1979. The uses, users and features of English in Singapore. In *New Varieties of English: Issues and Approaches*, ed. J. C. Richards, 91–111. Singapore: RELC Occasional Papers No. 8.
- Tiittanen, Mike. 2015. The interaction of verb regularity, L1 and task in the language of Mandarin and Tamil-speaking ESL learners. *The Asian Journal of Applied Linguistics* 2(1):43–54.
- Wee, Lionel, 2004. Singapore English: Morphology and syntax. In: *A Handbook of Varieties of English, Vol. 2*, ed. B. Kortmann, E. Schneider, K. Burridge, R. Mesthrie, and C. Upton, 1058–1072. Berlin/New York: Mouton de Gruyter.
- Wee, Lionel. 2011. Language policy mistakes in Singapore: Governance, expertise and the deliberation of language ideologies. *International Journal of Applied Linguistics* 21(2):202–221. <https://doi.org/10.1111/j.1473-4192.2010.00275.x>
- Wong, Bee Eng. 2012. Acquisition of English tense and agreement morphology by L1 Malay and L1 Chinese speakers. *3L: Language, Linguistics, Literature* 18(3):5–14.
- Yang, Suying, and Yue Yuan Huang. 2004. The impact of the absence of grammatical tense in L1 on the acquisition of the tense-aspect system in L2. *International Review of Applied Linguistics* 42:49–70. <https://doi.org/10.1515/iral.2004.002>