

Wh*-Questions in Colloquial Singapore English: Syntactic Evidence for the Malay Substrate Hypothesis

Keywords: *wh*-questions, partial *wh*-movement, *wh*-in-situ; Colloquial Singapore English, Sinitic, Singapore Bazaar Malay; substratist explanation; Malay substrate hypothesis

Abstract: It has been commonly held in recent work on Colloquial Singapore English/CSE (Bao 2001, 2005, Bao and Khin Khin 2010; Lee et al. 2009) that the grammar of this contact variety has received substantial substratal structural and lexical influences from Sinitic languages (Cantonese, Hokkien and Mandarin) with the vernacular varieties of Malay, Bazaar Malay and Baba Malay, only making a negligible contribution. Contrary to this view, this paper presents novel grammatical arguments that *wh*-questions in CSE have arisen as the result of systemic substratal transfer from Baba/Bazaar Malay. The arguments are two-fold. First, CSE and Bazaar/Baba Malay both have partial *wh*-movement (the movement of a *wh*-phrase into an embedded sentence-initial position), unlike the Sinitic languages. Second, both CSE and Bazaar Malay disallow *wh*-in-situ for adverbial *wh*-phrases whereas the Sinitic languages allow such an option. I propose to analyze the observed pattern in terms of the CSE-internal micro-parametric restructuring with regards to the composition of *wh*-phrases in the lexical component under the pressure of Malay à la Cole and Hermon (1998). Specifically, in CSE, a *wh*-phrase can either consist of the interrogative operator and a *wh*-word in a single word, as in English, or simply in a *wh*-word base-generated separately from the interrogative operator, as in the Chinese languages. The proposed analysis also correctly predicts two other parallels between *wh*-questions in CSE and Bazaar Malay with regards to the island-sensitivity of movement and the non-interrogative use of *wh*-variables under quantificational contexts. These parallels confirm that the Malay influences on CSE *wh*-questions are systemic. The results reported in this paper are significant in two respects. First, evidence in favor of the Malay substrate hypothesis has thus far been merely based on the socio-history of the endogenous contact ecology of Singapore (Gupta 1994, 1998; Lim 2007; Low and Brown 2005). The paper presents the first strictly grammatical evidence in favor of this hypothesis. Second, the results of the paper suggest, in view of the overwhelming typological congruence between Malay and Chinese, that 1) the Sinitic influences on the grammar of CSE have been somewhat overstated in the literature, and that 2) only a much finer-grained structural analysis of the differences behind the similarities in these languages can shed light on the identity of primary substratal languages of CSE and the genesis of this contact variety, more generally.

1. Introduction

This paper investigates the syntax of *wh*-questions in Colloquial Singapore English/CSE, an English-lexified variety spoken in Singapore and identifies the language varieties that must

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have played a significant role in the formation of CSE *wh*-questions. The literature on CSE has converged more or less on two views. The first view is that a spectacular range of differences exhibited by CSE from Standard (British) English can be traced back to the grammatical/lexical influences from the Sinitic languages (Cantonese, Hokkien and Mandarin) with which CSE has been in contact. The other view is that the contact/vernacular varieties of Malay, i.e. Baba Malay and Bazaar Malay, are primary substrate languages of CSE (Gupta 1994, 1998; Lim 2007; Low and Brown 2005), but this view has been solely based on the socio-history of the endogenous contact ecology of Singapore. However, the currently prevalent working assumption in the field is that the grammatical influences of the vernacular varieties of Malay are generally much less significant in comparison to the (southern) Chinese varieties and presumably have made only negligible contribution to the formation of CSE grammar (Bao 2001, 2005; Bao and Khin Khin 2010; Lee et al. 2009). Against this dominant view, this paper presents novel evidence from the syntax of CSE *wh*-questions in favor of the Malay substrate hypothesis. As is shown in a growing body of work on this construction (Chow 1995; Kim et al. 2009; Yeo 2010a, b), CSE exhibits three strategies for *wh*-questions: a) full movement of a *wh*-phrase into the sentence-initial position, b) partial movement of a *wh*-phrase into the embedded sentence-initial position, and c) *wh*-in-situ. I argue that the partial *wh*-movement option in CSE is due to the substratal influences of Baba/Bazaar Malay, which possess this option, unlike Hokkien, Cantonese and Mandarin, which are all *wh*-in-situ languages. I further demonstrate that the *wh*-in-situ option in SCE is closer to Bazaar Malay rather than the Sinitic varieties on the ground that both CSE and Bazaar Malay disallow adverbial *wh*-phrases in-situ whereas the Sinitic varieties allow such an option. I propose, extending Cole and Hermon's (1998) minimalist theory of the typology of *wh*-questions, that the emergence of the diversity of *wh*-question-formation strategies in CSE was made possible by a micro-parametric restructuring with regards to the composition of a *wh*-phrase under the substratal pressures of Bazaar Malay. Specifically, in CSE, a *wh*-phrase can either consist of the interrogative operator and a *wh*-word in a single word, as in English, or simply in a *wh*-word base-generated separately from the interrogative operator, as in the Chinese languages. I show that the proposed analysis also correctly predicts other parallels between *wh*-questions in CSE and Bazaar Malay with regards to the island-sensitivity of full and partial *wh*-movement and the non-interrogative use of *wh*-variables under quantificational contexts. These parallels are used to confirm that the Bazaar Malay influences on CSE *wh*-questions are systemic in that the entire subsystem of the Bazaar Malay grammar has been transferred and stabilized in the CSE grammar. The results reported in this paper have important implications for the current debate on the genesis/development of CSE and for the Sinitic substrate hypothesis currently dominant in the literature. Firstly, as stated above, evidence in favor of the Malay substrate hypothesis, if any, has thus far been restricted to the socio-historical considerations on the endogenous contact ecology of Singapore within which CSE has emerged and developed (Gupta 1994, 1998; Lim 2007). The paper presents the first strictly linguistic evidence in favor of this hypothesis. Secondly, the results of the paper suggest that the Sinitic influences on the grammar of CSE have been somewhat overstated in the literature. It is well known that Malay and Sinitic types of languages exhibit a large degree of overwhelming typological congruence (topic-prominence, copula drop, isolating morphology, etc). Thus, it is difficult to tell whether the allegedly Sinitic influences on CSE are really by-products of the Sinitic grammar rather than of the Malay grammar. The analysis reported in this paper is one case study to show that only a much finer-grained structural analysis of the differences behind the similarities in these languages sheds light on primary substratal languages of CSE and the genesis of this contact variety, more generally.

2. The Genesis of CSE and the Endogenous Multilingual Contact Ecology in Singapore

CSE, most intimately known as Singlish, is an English-lexified variety in Singapore spoken by a growing number of young Singaporeans on an everyday basis. According to Lim and Gisborne (2009), CSE has already attained endonormative stabilization in Phase 4 of the Dynamic Model of Postcolonial Englishes (Schneider 2007). CSE thus is often labeled a New English (Kachru 1985; Pakir 1991), a non-native variety that has been indigenized in the community in which it is spoken. Today, CSE is acquired by children as their mother tongue (Kwan-Terry 1986, 1989; Gupta 1991, 1994), despite the continued social stigma associated with it.

The uniqueness of CSE is easily detected even by casual foreign observers in all aspects of its usage, including phonology/phonetics, morphology, and syntax. Since British trade settlement in Singapore, beginning in 1819 with the arrival of Sir Stamford Raffles, British English has been very influential (Bloom 1986; Gupta 1998). CSE is a contact language due to the fact that its grammatical systems have evolved in the endogenous multilingual contact ecologies (Platt 1975; Gupta 1994; Ansaldo 2004, 2009); that is, CSE arose in contact communities where the languages of the indigenous population are used together with CSE (Chaudenson 1977). Ansaldo (2009: 138) observes that Singapore's linguistic ecology has been characterized by this type of communicative system throughout its history. Bazaar Malay, a Malay-lexified contact variety with a Chinese substratum, was widely used in the Malay Peninsula and the Indonesian archipelago. This variety played an important role as the *de facto* lingua franca which allowed for interethnic communication in the marketplace of Singapore and elsewhere in Southeast Asia (Ansaldo 2004, 2009; Lim 2007; Bao and Khin Khin 2010). Around the beginning of the 20th century, an English-based pidgin started to replace Bazaar Malay as the lingua franca in Singapore, and this replacement accelerated after Singapore's independence in 1965. As a result, the then English-lexified lingua franca led to what we now know as CSE. A related variety is Baba Malay, which is the mother tongue of the Peranakan community in the Straits Settlement and the unique blend of Hokkien and (Bazaar) Malay (Ansaldo, Lim and Mufwene 2007; Shellabear 1913; Pakir 1986). Peranakan Chinese were the first group of migrants to Singapore to switch to English as a home and business language (cf. Tan 1988).

In addition to the vernacular varieties of Malay, the native dialects of early Chinese immigrants from the southern Chinese provinces of Fujian and Guangdong to Singapore, i.e., Hokkien, Cantonese and Teochew, have exerted important Sinitic influences on the formation of CSE in the contact ecology of Singapore. The role of Mandarin in the formation and stabilization of CSE also cannot be underestimated due to its use as the medium of instruction in Chinese vernacular schools before the government started nation-wide English-medium education (Bao and Khin Khin 2010).

Due to its presence in the continued endogenous contact ecology in Singapore, CSE naturally exhibits substratal influences at various levels of grammar from more than one local language/variety, including (British) English, (vernacular varieties of) Malay, Tamil, and Sinitic languages (Cantonese, Hokkien and Mandarin), though the language policies in Singapore in the second half of the 20th century have made Sinitic influences on CSE more pronounced, as in the contact ecology of Hong Kong English (Lim 2009). When it comes to the linguistic significance of the primary substrate language(s) of CSE, researchers' positions are split. On one hand, Gupta (1998) and Low and Brown (2005) (see also Deterding 2007) argue that the vernacular varieties of Malay, Baba Malay and Bazaar Malay, are principal substrates, with the assorted southern varieties of Chinese (Cantonese, Hokkien and Teochew)

as less significant secondary substrates. On the other hand, a large number of researchers on CSE (Bao 1995, 2005, Bao and Wee 1999, Bao and Khin Khin 2010, Lee et al. 2009 and references cited therein) claim that Chinese languages, Hokkien, Cantonese and Mandarin, are primary substrates. This latter view is no surprise in light of the historical fact that early Chinese settlers to Singapore spoke these Chinese varieties and given the sheer numerical dominance of ethnic Chinese people vis-à-vis Malays and Indians reported in Pan (1998, p. 200). According to Pan, in 1840, 50.0% of the population is of Chinese descent compared to Malay (37.3%) and Indian (9.5%). In 1980, this dominancy had further accelerated with Chinese (76.9%) vis-à-vis Malay (14.6%) and Indian (6.4%), a distribution that still holds in the current Singapore demography. Influences from the Malay languages can be observed at different levels; notable features include lexical items such as *makan* ‘to eat’ and *jalan* ‘to walk’, reduplication and the so-called *kena*-passive (Bao and Wee 1999). However, the current dominant view in the literature on CSE still seems to be that the grammatical influences of the vernacular varieties of Malay are generally much less significant in comparison to the Chinese varieties and perhaps have made only negligible contribution to the formation of CSE grammar (Bao 2001, 2009; Lee et al. 2009); see also Platt and Weber (1980). Bao and Khin Khin (2010) go further and suggest that certain grammatical subsystems, e.g., *one*-construction in CSE (Bao 2009), are directly transferred from Chinese to CSE rather than indirectly through Bazaar Malay and Baba Malay.

The primary purpose of this paper is to suggest one new area in which CSE has inherited and stabilized a syntactic construction from the vernacular varieties of Malay. In the next section, I show that CSE permits three options for *wh*-question formation: full movement, partial movement and *wh*-in-situ. I provide data to show that none of the Chinese varieties (Hokkien, Cantonese and Mandarin) allows the partial movement option. I further demonstrate that Baba Malay and Bazaar Malay have the same set of question-forming strategies as well as more nuanced syntactic and semantic properties that also hold true in CSE *wh*-questions. Based on this syntactic similarity, I argue that the vernacular varieties of Malay have exerted a primary substrate influence in this area of grammar in CSE. I propose to analyze this influence as an exponent of a parametric resetting concerning the formation of *wh*-words in the lexical component of CSE under the substratal pressure of the vernacular varieties of Malay in the dynamic contact ecology in Singapore.

3. *Wh*-Questions in CSE and Substratal Grammatical Influences

This section presents new evidence based on a careful comparison of the range of *wh*-question-forming strategies in Mandarin/Cantonese/Hokkien and Baba/Singapore Bazaar Malay that the grammar of *wh*-questions in CSE must have arisen from language contact between CSE and the vernacular varieties of Malay. This result is significant in two respects. First, it provides first grammatical evidence in favor of the Malay substrate hypothesis (Lim 2007; Gupta 1994), which has thus far only been supported purely on socio-historical considerations of the multilingual contact ecology in CSE. Second, this result provides arguments against the current dominant view in the CSE literature (Bao 2001, 2009; Platt and Weber 1980; Bao and Khin Khin 2010; Lee et al. 2009) that Baba/Singapore Bazaar Malay has made only negligible contributions to the development of CSE.

3.1. *Wh-Questions in CSE: Full, Partial and In-Situ*

Wh-question formation in CSE has been discussed thus far primarily with respect to the acquisition of interrogative by children acquiring English in Singapore (Kwan-Terry 1986, 1991; Harrison and Lim 1988; Gupta 1990), but the syntax of *wh*-questions in CSE has yet received due attention in the literature from a formal perspective (though, see Bao 2001, Gupta 1994 and Yip and Matthews 2007). This section shows that CSE exhibits the full range of *wh*-question forming strategies attested in the syntactic literature.

Optionality of *wh*-movement is a widely accepted feature in CSE. Ho (2000: 2) observes that variable fronting in CSE is typically linked with the nominal *wh*-words *what*, *where* and *who*, while the non-nominal *wh*-words *why* and *how* have a propensity to be moved. The optionality of *wh*-movement and the fronting tendency are exemplified by examples in (1-4). Note that the questions here are not so-called echo-questions, which are used in contexts of faulty hearing or disbelief with special emphasis and intonation.

- (1) a. ? *What* John must buy?
b. John must buy *what*? (Chow 1995: 25)
- (2) a. *Where* John can buy the durians?
b. ? John can buy the durians *where*? (Chow 1995: 25)
- (3) a. *Why* Mary must leave early?
b. * Mary must leave early *why*? (Chow 1995: 38, 39)
- (4) a. *How* we can go there?
b. * We can go there *how*? (Chow 1995: 40)

As shown in (1a, b) and (2a, b), the nominal *wh*-words *what* and *where* exhibits optionality with respect to *wh*-movement. The contrast in acceptability between (3a)/(4a) and (3b)/(4b) shows that the non-nominal *wh*-words *why* and *how* resist the in-situ option and undergo obligatory *wh*-movement.

A growing body of work in the syntax of CSE (Chow 1995; Kim et al. 2009; Yeo 2010a, b) has collected data to show that CSE exhibits three options for *wh*-questions. Consider (5a-c):

- (5) a. *What* you think she buying ah? (object: full *wh*-movement)
b. You think *what* she buying ah? (object: partial *wh*-movement)
c. You think she buying *what* ah? (object: *wh*-in-situ)

To take (5a-c), (5a) illustrates the full-movement construction as in Standard English, where the *wh*-word *what* is moved to the sentence-initial scopal position. The example in (5b) shows that the movement can be partial, meaning that it targets a non-scopal position in the embedded clause. The example in (5c) illustrates the *wh*-in-situ option. Although the partial movement pattern seems to be infrequent in use and a marked grammatical construction compared to the full movement and *wh*-in-situ constructions, many of my native CSE consultants agree that they have used and heard it. One of the consultants reported that the partial *wh*-movement might be more convenient and hence could be chosen than the full movement variant because CSE speakers tend to stick with a Subject-Verb word order and are known to prefer simple sentences

to complex ones. As for what contexts wherein the partial movement option is employed, it is used in contexts very similar to the full movement and *wh*-in-situ. For example, if I am with a group of friends and one of them needs to go into a store to buy something, all the sentences in (5a-c) give the progressive reading. Chow (1995) replicates the same range of *wh*-questions as shown in (6a-c).

- (6) a. ? *What* you think Mary can win?
 b. ? You think *what* Mary can win?
 c. You think Mary can win *what*? (Chow 1995: 45)

The three options for *wh*-questions is observed not only with direct objects but also with other grammatical functions, i.e., subjects and indirect objects, as shown in (7a-c) and (8a-c), respectively.

- (7) a. *Who* you think buying John's car ah? (subject: full *wh*-movement)
 b. You think *who* buying John's car ah? (subject: partial *wh*-movement)
 c. You think *who* buying John's car ah? (subject: *wh*-in-situ)
- (8) a. *Who* you think Mary give durian to ah? (indirect object: full *wh*-movement)
 b. ?? You think *who* Mary give durian to ah? (indirect object: partial *wh*-movement)
 c. You think Mary give durian to *who* ah? (indirect object: *wh*-in-situ)

Note that between the partial *wh*-movement and *wh*-in-situ configuration yield the same surface order in the case of the subject movement, as in (7b, c), because the base-position of the embedded subject is indistinguishable from the embedded specifier of CP. The speaker from whom I elicited the examples here finds (8b) grammatical but degraded because it seems simply too complicated for partial movement to occur. The same speaker also reports that the question particle *ah* can be dropped for all cases in (7a-c) and (8a-c), though it depends on pragmatic forces of the utterances he would try to convey, an issue we won't go into in this paper.

Yeo (2010b) notes that all the three patterns are also available for the nominal *wh*-phrase *where*, as shown in (9a-c).

- (9) a. *Where* you think I go?
 b. You think *where* I go?
 c. You think I go *where*? (Yeo 2010b: 9)

Bao (2001) observes that the typological status of CSE with respect to *wh*-question formation is accommodated as the result of the resetting of the binary [\pm *wh*-movement parameter]. Chinese is a [$-$ *wh*-movement] language whereas (Standard) English is a [$+$ *wh*-movement] language. Bao argues that CSE can select either value with respect to this parameter. The examples in (5-9) show, however, that this simple-minded binary analysis cannot explain the existence of the partial *wh*-movement option attested in CSE.

The distribution of non-nominal *wh*-phrases such as *why* is more limited. Specifically, *why* cannot be in-situ but must undergo either partial or full movement, as illustrated in (10a-c).

- (10) a. Why he think you don't like him ah?
 b. He think *why* you don't like him ah?
 c. * He think you don't like him *why* ah? (Yeo 2009: 10)

An anonymous reviewer reports disagreements on the grammaticality judgments on some of the sentences above (e.g., (10c) is not impossible for the reviewer) but given the variable and fluid nature of CSE, variation in grammaticality across speakers of this variety are the norm rather than the exception. Of course, it would be desirable if we could find examples from real discourse to show how this construction is used in CSE but my search for the examples in ICE-SIN and The NIE Corpus of Spoken Singapore English (NIECSSE) has not returned any example. Though this point is well taken in view of the fluid nature of the grammar of CSE, I do not think that the lack of the relevant data in the CSE corpora should mean the impossibility of the partial movement configuration in the grammar of CSE. The acceptability judgments reported thus far in this section have been based on my consultation with 17 native speakers of CSE living in Singapore. Of course, I do not intend them to be exemplary of the CSE grammar, if any, nor to hold for all “dialects” of CSE. However, to the extent that there are a group of speakers who do share the judgment pattern noted above, I believe that the pattern calls for an explanation. Furthermore, as is well known in the debate between corpora-based precision-based and judgment-based linguistics, linguistic corpora (e.g., collections of recorded real world speech, telephone recordings, newspapers, books, magazines and folk tales recorded in the field and the web) do not contain all (im)possible grammatical patterns that a speaker would avail herself/himself to. To take one familiar example, the Standard English sentence **Who did you wonder whether John bought* is unacceptable but no corpora contains such negative information. Thus, the precision-based grammar tends to massively undergenerate particularly when faced with novel constructions or lexical items in a language. Since we can test the availability of a grammatical construction and the contexts in which it would be used in actual discourse through the acceptability judgment task anyway, I do not see any reason why the judgments I have elicited have to be backed up by corpora in the case of CSE.

3.2. *Partial Wh-Movement in CSE and Substratal Influences from Malay Vernaculars*

It is widely known in the literature that CSE exhibits a wide range of syntactic differences from Standard English that can be traced back to the substrate influences of the Chinese languages (Hokkien, Cantonese and Mandarin): see Bao (2001, 2005), Bao and Lye (2005), Bao and Khin Khin (2010), Deterding et al. (2003), Ho and Platt (1993), Pakir (1991), Platt and Ho (1983, 1989), Platt and Weber (1980), Ritchie (1986), Lee et al. (2009) and references cited therein. An important question here, then, is whether these Chinese languages served as the primary substrate language for CSE with respect to *wh*-questions. Importantly, these languages only allow *wh*-in-situ and exclude partial and full *wh*-movement options, as shown in (11a-c) from Mandarin, (12a-c) from Cantonese and (13a-c) from Hokkien. See Chow (1995) for comparable examples in Mandarin and Cantonese that make the same point.

- (11) Mandarin
 a. * *Shenme* Lisi shuo Meili chi?
 what Lisi say Meili eat
 ‘What did Lisi say Meili eat?’

- b. * Lisi shuo *shenme* Meili chi?
 Lisi say what Meili eat
 ‘What did Lisi say Meili eat?’
- c. Lisi shuo Meili chi *shenme*?
 Lisi say Meili eat what
 ‘What did Lisi say Meili eat?’

(12) Cantonese

- a. * *Matye* Lisi waa Meili sik zo?
 what Lisi say Meili eat ASP
 ‘What did Lisi say Meili ate?’
- b. * Lisi waa *matye* Meili sik zo?
 Lisi say what Meili eat ASP
 ‘What did Lisi say Meili ate?’
- c. Lisi waa Meili sik *matye*?
 Lisi say Meili eat what
 ‘What did Lisi say Meili ate?’

(13) Hokkien

- a. * *Simi* Lisi gong Meili jia?
 what Lisi say Meili eat
 ‘What did Lisi say Meili eat?’
- b. * Lisi gong *simi* Meili jia?
 Lisi say what Meili eat
 ‘What did Lisi say Meili eat?’
- c. Lisi gong Meili jia *simi*?
 Lisi say Meili eat what
 ‘What did Lisi say Meili eat?’

It is premature, however, to jump to the conclusion that the Chinese languages have not exerted a substratal influence on the formation of partial movement in CSE. It is not the case that Chinese languages block *wh*-fronting entirely. A reviewer observes that in Chinese, *wh*-phrases can appear in the sentence-initial topic position via “*wh*-topicalization” (Wu 1999; see also Tang 1988). Thus, the reviewer notes that the examples in (14a, b) are equally grammatical as long as emphasis is put on the topicalized *wh*-phrase *shenme-shihou* ‘what time’. Thus, a *wh*-word in the specifier of CP is indistinguishable from a *wh*-word in the specifier of a Topic/Tense on mere surface word order (cf. Xu and Langendoen 1978; Bao 2001). A similar *wh*-topicalization pattern holds in Cantonese and Hokkien, as shown in (15a, b) and (16a, b), respectively.

(14) Mandarin

- a. Tamen *shenme-shihou* qu Beijing?
 they what-time go Beijing
 ‘When do they go to Beijing?’
- b. *Shenme-shihou* tamen qu Beijing?
 what-time they go Beijing
 ‘(Lit.) When, they go to Beijing?’

- (15) Cantonese
- a. Koei dei *geisi* noei bakking?
 they what-time go Beijing
 ‘When do they go to Beijing?’
- b. *Geisi* koei dei noei bakking ah?
 What-time they go Beijing Q
 ‘When do they go to Beijing?’
- (16) Hokkien
- a. Yinang *dixi* ke Pakia?
 they what-time go Beijing
 ‘When do they go to Beijing?’
- b. *Di xi* yinang ke Pakia?
 what-time they go Beijing
 ‘(Lit.) When, they go to Beijing?’

Thus, the Chinese languages allow the *wh*-movement-like construction at least on surface word order. It is important to note that *wh*-topicalization and *wh*-in-situ, do not have the same semantic interpretation. Thus, it is well known in the literature (see Tang 1988, Wu 1999 and references cited therein) that *shenme* ‘what’ in (14b) has an obligatory strong discourse-linked reading, whereby the speaker who asks this question presupposes that Zhangsan certainly bought something yesterday, and he wants to know what it is that Zhangsan bought. This presupposition, however, does not obtain in the in-situ *wh*-question in (14a). Crucially for our purposes, this discourse-linked reading obligatory in Chinese *wh*-topicalization is not necessarily entailed in the CSE examples of full or partial movement constructions as illustrated in (5-10). This consideration, thus, shows that the movement option in CSE is not due to the substratal influences of the Chinese language under investigation.

Now, given the endogenous multilingual contact ecology in which CSE has arisen and developed, another possibility for the emergence of the partial movement in this variety is that it occurs as the result of intense language contact between CSE and the contact varieties of Malay. Recall that it is the vernacular varieties of Malay, Baba Malay and Bazaar Malay, not the standard/formal Malay, which have been hypothesized to play a role in the formation of CSE (Gupta 1994, 1998; Lim 2007). As noted in Gupta (1998), Malays were encouraged to be educated in Malay and discouraged from receiving education in English in the early years of English-medium education in Singapore. Accordingly, it is not unreasonable to speculate that the indigenous Malay varieties of the ethnic Malay did not contribute much to the CSE grammar.

With this background in mind, the Malay substrate hypothesis predicts that the partial movement option in CSE must have arisen from these varieties. The examples in (17a, b) from Baba Malay show that this prediction is indeed borne out.¹

¹ In this paper, I am going to focus on substantiating the Malay substrate hypothesis using data from Singapore Bazaar Malay because I have been unsuccessful in finding a native speaker consultant of Modern Baba Malay. I believe, however, that evidence from Bazaar Malay is sufficient to demonstrate the hypothesis in question because, as an anonymous reviewer points out, the variety that was influential in the contact ecology where CSE developed was most likely Singapore Bazaar Malay, not Baba Malay, though the former might have been influenced by the latter.

- (17) Baba Malay
- a. John chakap *apa* Bill beli?
 John said what Bill buy
 ‘What did John say Bill bought?’
 - b. John chakap *siapa* James chakap Mary bunuh?
 John said who James said Mary killed
 ‘Who did John say that James said that Mary killed?’ (Yap 1997: 2, 5)

The partial *wh*-movement also is a grammatical option in Singapore Bazaar Malay. There has been virtually no work done on this vernacular variety, with the valuable exception of Khin Khin (2005). The reason is that, as widely known in previous socio-historical work on the contact ecology in Singapore, Bazaar Malay was a Malay-based pidgin used for interethnic communication among native speakers of Chinese, Malay and Tamil (Abdullah 1969) and as such exhibits considerable linguistic variation among speakers. In her first comprehensive description of Bazaar Malay, Khin Khin (p. 140) observes that *wh*-words in Singapore Bazaar Malay either remain in their base positions (18a-c) or move to the front of the sentence without changing the position of other constituents (19a-c), but does not investigate whether partial movement is possible or not in Singapore Bazaar Malay.

- (18) Singapore Bazaar Malay
- a. Ah itu panggil apa?
 ah DEM call what
 ‘Ah what is thaty called? (Lit. that calls what?)’
 - b. Satu kilo itu kacang berapa?
 one kilo DEM beans how.much
 ‘How much is a kilo of those beans?’
 - c. Itu lu negeri mana?
 DEM 2SG country which
 ‘Which country are you (from)?’ (Khin Khin 2005: 141, 142)

- (19) Singapore Bazaar Malay
- a. Saya cakap *apa* baker ah?
 1sg speak what burn
 ‘I asked, “what’s got burnt?”’
 - b. *Berapa* lu mahu?
 how.much 2SG want
 ‘How much do you want?’
 - c. *Apa* pasal lu mahu tau?
 what matter 2SG want know
 ‘What matter would you like to know?’ (Khin Khin 2005: 142)

All of my three native consultants of Singapore Bazaar Malay report, however, that the partial *wh*-movement is indeed a grammatical option in this variety, as shown in examples (20a-c).

(20) Singapore Bazaar Malay

- a. *Siapa* John bilang Mary nampak hari tu?
 who John say Mary saw day DEM
 ‘Who did John say Mary saw the other day?’
- b. John bilang *siapa* Mary nampak hari tu?
 John say who Mary saw day DEM
 ‘Who did John say Mary saw the other day?’
- c. John bilang hari tu Mary nampak *siapa?*
 John say day DEM Mary saw who
 ‘Who did John say Mary saw the other day?’

The examples in (17a, b) and (20a-c), therefore, suggest that the partial movement option in CSE arises via the substrate influence from the vernacular varieties of Malay. As pointed out by a reviewer, the facts that CSE allow *wh*-in-situ and full movement options cannot be taken as strong evidence for the Malay substrate hypothesis. After all, the in-situ strategy could be a substrate from the Chinese varieties (see section 3.3, though, for new evidence against the Chinese substrate analysis on adverbial *wh*-in-situ) whereas the full movement strategy is simply appropriated from (British) English syntax, as argued by those scholars mentioned in section 2, who believe that Hokkien, Cantonese and other Chinese dialects contributed to the substrate of CSE. Thus, the crucial case for the Malay substrate hypothesis rests on the observation in this section that CSE and the vernacular varieties of Malay both exhibit partial *wh*-movement, unlike Mandarin, Cantonese and Hokkien. This section thus has shown that (at least) the partial *wh*-movement option must have arisen due to the language contact between CSE and Baba/Bazaar Malay. As such, the existence of this movement option provides important linguistic evidence against the current dominant view (Bao 2001, 2009; Platt and Weber 1980; Bao and Khin Khin 2010; Lee et al. 2009) that the grammar of the vernacular varieties of Malay has contributed only negligible contribution to the formation of CSE.

This result is significant from another perspective. The claim made in the literature that Baba/Bazaar Malay played a role in the formation of CSE makes sense in terms of the detailed socio-history of the contact ecology in Singapore (Gupta 1994; Lim 2007; see also Ansaldi 2009 for a detailed exposition of the multilingual contact ecology) but their claim has not been supported by strictly linguistic facts; to the best of my knowledge, no grammatical phenomenon seems to have been presented thus far that can only be accounted for by invoking Malay, but not the Sinitic languages. The results in this section, thus, constitute the first piece of grammatical evidence from Bazaar/Baba Malay in favor of the Gupta’s/Lim’s claim, which has been backed up so far only on the basis of the socio-history.²

Now, even though this conclusion is established, it is a separate question whether there are *no* substratal influences from the Chinese languages in the *wh*-in-situ strategy. A reviewer suggests that CSE speakers could have created the partial *wh*-movement construction based on

² Ng (in press) investigates the origins of the word-final high tone in the CSE variety spoken by Chinese Singaporeans. This tone is not attracted to stress, but to the word-final position. Based on the observation that this pattern has no match in the Chinese varieties in Singapore, she proposes that it has arisen from the phrase-final intonational rise in the indigenous Malay speakers. Further, Ng provides new evidence from recording that this transfer from the indigenous Malay to CSE occurred via Bazaar Malay, as reinforced by Baba Malay and Indian English. This result presents another argument, based on prosody, for the Malay substrate hypothesis. I thank Hiroki Nomoto (personal communication, March 2011) for drawing my attention to Ng’s research.

the vernacular varieties of Malay but could have adopted the in-situ strategy based on the Chinese languages or based on the fact that both Chinese and Malay languages permit in-situ *wh*-questions. In the next section, I address the question whether it is Chinese or/and Malay that have influenced *wh*-in-situ in CSE by giving a careful comparison on the grammatical constraints on *wh*-in-situ.

3.3. *Wh-in-Situ in CSE, Chinese and Singapore Bazaar Malay*

As stated above, the fact that partial *wh*-movement exists in CSE does show influences from Malay, but that leaves open the question whether the Chinese languages still played a major role as a substrate language of CSE. On the surface, it looks extremely difficult to prove whether the *wh*-in-situ in CSE arises from the Sinitic influences or Malay influences because both languages behave quite similarly in respects pertinent to the syntax of *wh*-questions (Cole and Hermon 1998). Based on careful comparison of the different constraints on *wh*-in-situ in Mandarin/Cantonese/Hokkien and Singapore Bazaar Malay, however, we can show that that the *wh*-in-situ option in CSE is also closer to Bazaar Malay than the Chinese languages.

There are two syntactic differences between Chinese and Bazaar Malay with respect to *wh*-questions. One difference, already illustrated in the previous subsection, is that argument *wh*-questions in Chinese do not display the full range of options (full, partial and in-situ) attested in Malay; they always appear in situ. The other difference, crucial for our present purposes, is that in the Chinese languages, adverbial *wh*-phrases, i.e. *wh*-phrases such as *weishenme* ‘why’ that do not contain a nominal interrogative word, can also appear in situ, unlike those in Malay. This contrast is illustrated by the examples in (21-23) from Mandarin/Cantonese/Hokkien and the example in (24a, b) from Singapore Baba Malay.

- (21) Mandarin
 Ni renwei Lisi *weishenme* cizhi?
 you think Lisi why resign
 ‘Why do you think Lisi resigned?’
- (22) Cantonese
 Nei gokdak Lisi *dimgai* cizik ah?
 you think Lisi why resign Q
 ‘Why do you think Lisi resigned?’
- (23) Hokkien
 Le linoui Lisi *weisimi* xijit?
 You think Lisi why resign
 ‘Why do you think Lisi resigned?’
- (24) Singapore Bazaar Malay
 a. ??/* Lu nangis *kenapa?*
 2SG cry why
 ‘Why did you cry?’
 b. *Kenapa* lu nangis?
 why 2sg cry
 ‘Why did you cry?’

The examples in (21-23) show that the adverbial *wh*-phrase ‘why’ remain in situ in the Sinitic languages. The examples in (24a, b) show, on the other hand, that the adverbial *wh*-phrase predominantly occurs in the sentence-initial position; one consultant rejected the in-situ option as unacceptable whereas the other found it quite marginal. The apparent in-situ example in (24a) is judged acceptable in this variety only when it is construed as two independent clauses: “*Lu nangis* (with falling intonation). *Kenapa?*”³ Importantly, CSE patterns with Singapore Bazaar Malay, not with the Sinitic languages, in that the adverbial *wh*-phrase *why* cannot remain in situ but instead must undergo overt syntactic movement into the sentence-initial position, as shown in (3a, b), repeated here as (25a, b).

- (25) a. *Why* Mary must leave early?
 b. * Mary must leave early *why*? (Chow 1995: 38, 39)

If the *wh*-in-situ strategy in CSE were to be appropriated from that of the Sinitic languages, we would expect that the example in (25b) should be grammatical on a par with that the examples in (21-23). On the other hand, the inability of the adverbial *wh*-phrase in situ in CSE naturally falls out from the Malay substrate hypothesis because the *wh*-in-situ option is ungrammatical for the adverbial *wh*-phrase in Singapore Bazaar Malay, as shown in the contrast between (24a) and (24b). Accordingly, this result shows that even the *wh*-in-situ option in CSE is closer to Singapore Bazaar Malay than it is to the Sinitic languages, contrary to Bao’s (2001) that the in-situ strategy in CSE is a substratal feature of Chinese.

4. Parametric Restructuring under Malay Influences and the Lexical Choice Parameter

In this section, I present a formal syntactic analysis of the substratal influences from Baba/Bazaar Malay on the formation of *wh*-questions in CSE demonstrated in the previous section within Generative Syntactic Theory. In section 4.1, I first outline how the formation of *wh*-questions has been analyzed within a recent installment of Generative Syntax known as the *Minimalist Program* (Chomsky 1995) and introduce a few guiding principles of the program. Readers who are familiar with the Minimalist Program may want to skip this subsection. Especially important in this regard is Cole and Hermon’s (1998, 2000) deterministic theory of the typology of *wh*-questions, which we review in section 4.2 and utilize as the basis for my analysis to be developed in section 4.3. I propose to analyze the substratal influences on *wh*-questions in CSE from the vernacular varieties of Malay as the consequence of the micro-parametric restructuring with regard to the composition of *wh*-words in the lexical component of CSE. Specifically, in English, the superstrate of CSE, the interrogative operator and *wh*-word are conjoined to constitute a single phonological word in the syntax whereas in the Sinitic languages, the hypothesized superstrate of CSE, the interrogative operator and *wh*-words are always separated as two lexical items in the syntax. The apparent optionality of *wh*-questions in Baba/Bazaar Malay arises because a *wh*-phrase can either consist of the interrogative operator and a *wh*-word in a single word, as in English, or simply in a *wh*-word base-generated separately from the interrogative operator, as in the Chinese languages. I call this freedom in the composition of *wh*-phrases the lexical choice parameter. I hypothesize that the emergence of the diversity of *wh*-question-formation strategies in CSE was made possible by this choice parameter. I show in section 4.3 how the proposed analysis works to yield the range of *wh*-questions attested both in CSE and Singapore Bazaar Malay. I further demonstrate that this analysis correctly


³ I am very grateful to Khin Khin Aye (personal communication, March 2011) for contributing this observation.

predicts a wide range of syntactic and semantic parallels between *wh*-questions in the two contact varieties such as island sensitivity, asymmetries between nominal vs. non-nominal *wh*-phrases in terms of movement, and the non-interrogative use of *wh*-words under existential/quantificational contexts. These similarities, in turn, provide further empirical evidence for the Malay substrate hypothesis on the genesis/development of the grammar of CSE.

4.1. *Wh*-Questions in Generative Syntactic Theory

There are a number of guiding principles within the framework of the Minimalist Program (Chomsky 1995) that are of central important to the present study. One principle states that optionality in language is reduced to differences in the composition of lexical items across languages. The other principle, known as the Principle of Full Interpretation (Chomsky 1986, 1995), states that all elements present at the semantic interface must participate in a semantic interpretation. This latter principle has a particular repercussion in the case of *wh*-questions. It is generally assumed that a *wh*-question is semantically interpreted as an operator-variable structure of the form shown in (26). Thus, the sentence in (27a) is interpreted as in (27b) as the result of the *wh*-movement.

- (26) Operator-Variable Structure

$$\text{OP}_{x_i} \quad [\dots x_i \dots] \quad (\text{OP} = \text{interrogative operator}; x = \text{a variable})$$


- (27) a. What did Anna buy?
 b. [What is x] [such that Anna bought x]?

The obvious benefit of the movement analysis here is that it has a clear semantic motivation. Since the semantics of *wh*-questions require an interrogative operator taking scope over the propositional nucleus and the *wh*-word plays the role as the interrogative operator, it follows that a *wh*-phrase must move for the sake of Full Interpretation to fix its scope over the proposition.

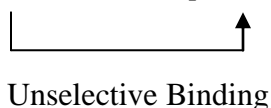
Work within the Principles-&-Parameters Theory/Minimalist Program (see Huang 1982, Tsai 1994 and Reinhart 1998, 2006, among others) has convincingly shown that the operator-variable configuration as in (26) can also be formed by two other strategies: covert *wh*-movement and unselective binding. It is well known since the seminal work by Ross (1967) that the movement of a *wh*-phrase cannot occur across a clause headed by either another *wh*-phrase (the *Wh*-Island Constraint) or a head noun (the Complex-NP Island). These constraints are illustrated in (28a, b), respectively.

- (28) a. ?* [_{DP} Which car]_i were you wondering how_j you should fix t_i t_j ?
 b. * [_{DP} Which writer]_i did you write [_{DP} a play which was about t_i]?

The example in (28a) is ungrammatical because the movement of the *wh*-phrase *which car* crosses the embedded clause that contains another *wh*-word *how* in its initial position. The example in (28b) is ungrammatical because the movement of *which writer* involves extraction from within the clause headed by the noun *play*. Huang (1982) is the first to observe that in Mandarin, the matrix scope interpretation of *wh*-phrase is impervious to neither the *wh*-Island Constraint nor the Complex-NP Constraint. This point is illustrated by the grammatical examples in (29a, b) from Mandarin.

- (29) a. ni xiang-zhidao shei mai-le sheme?
you wonder who buy-ASP what
'For what person x, you wonder what x bought?' (Huang 1982: 525)
- b. Hufei xihuan nei-benshe_i xie de shu?
Hufei like that-CL who write MOD book
'For what person x, Hufei likes the book that x wrote?' (Cheng and Rooryck 2000: 2)

Huang concludes that Chinese does involve covert *wh*-movement of a *wh*-phrase into the specifier of the clause in which it takes scope at the semantic interface but covert movement is impervious to the island constraints imposed on overt movement. Opinions sharply divided at the time regarding the status of this conclusion; some thought this is a problem for a unified theory of movement whereas others took the different constraints imposed on overt and covert movements as evidence in favor of the semantic interface (Logical Form) as a distinct level of representation from the surface syntactic structure (S-Structure). As correctly noted by Reinhart (1997, 2006), however, it is impossible to state Huang's statement within the Minimalist Program because it hypothesizes no level such as surface syntactic structure in the first place. Tsai (1994) proposes an alternative minimalist theory of the Chinese *wh*-question pattern. Specifically, Tsai argues that nominal *wh*-in-situ do not undergo movement at all but instead are interpreted/licensed in situ through unselective binding (Baker 1970; Pesetsky 1987; Cole and Hermon 1998; Bruening 2007; see also Hagstrom 1998) whereas adverbial *wh*-in-situ must move and hence show island effects since they are not qualified for unselective binding. Unselective Binding is a movement-free licensing operation for *wh*-in-situ whereby *wh*-phrases are translated as open expressions (Kamp 1981; Heim 1982) and gain quantificational force by having their variables bound by a higher interrogative operator generated in the scopal position. More simply put, Tsai essentially argues that an interrogative operator in Chinese is base-generated directly in the scope position separately from a variable, as shown in (30) and binds the variable without the help of syntactic *wh*-movement.



This analysis correctly predicts the lack of the island effects in (29a, b) because *sheme* ‘what’ and *shei* ‘who’ are licensed in-situ and do not move at all. The same analysis also predicts that adverbial *wh*-phrases such as *weishenme* ‘why’ are island-sensitive (Huang 1982), as in (31a, b).

- a. * Hufei xiang-zhidao shei *weishenme* shengqi?
Hufei want-know who why get-angry
'What is the reason x, Hufei wonders who gets angry for x?'
- b. * Ni bijiao xihuan [*weishenme* gongzuo] de ren)?
you more like why work MOD people
'For which reason x, you like better the people who work for x?'

undergo movement and cause island-sensitivity, as shown in (31a, b). Now, the crucial idea pushed by Cole and Hermon is that Malay differs from English and Chinese in that it allows both options in (32a, b). When it adopts Option One, Malay behaves like English in that it exhibits overt movement of a *wh*-phrase into the scopal specifier of CP and causes island violations, as shown in (33a, b). When it adopts Option Two, Malay behaves like Chinese in that it exhibits the *wh*-in-situ strategy for nominal *wh*-phrases and concomitant categorial-sensitive requirement imposed on *wh*-in-situ, as shown in (34a, b) and (35a, b), respectively.

(33) Singapore Malay

- a. * *Apa_i* (yang) [awak agak [di mana_j [Mary beli t_i t_j]]]?
 what that you wonder where Mary bought
 ‘What do you wonder where Mary bought?’
- b. * *Di mana_i* [kamu fikir [Ali suka [perempuan yang tinggal t_i]]]
 where you think Ali like woman that live
 ‘Where do you think Ali like the woman who lives?’

(Cole and Hermon 1998: 227)

(34) Singapore Malay

- a. *Awak* agak [di mana [Mary membeli *apa*]]?
 who wonder where Mary buy what
 ‘What do you wonder where Mary bought?’
- b. *Kamu* fikir [Ali suka [perempuan [yang tinggal *di mana*]]?
 you think Ali like woman who live where
 ‘Where do you think Ali likes the woman who lives where?’

(Cole and Hermon 1998: 228)

(35) Singapore Malay

- a. * *Fatimah* menangis *kenapa*?
 Fatimah cry why
 ‘Why did Fatimah cry?’
- b. *Kenapa_i* *Fatimah* menangis t_i ?
 why Fatimah cry
 ‘Why did Fatimah cry?’

(Cole and Hermon 1998: 226)

Cole and Hermon suggest that the partial *wh*-movement option in Malay, as illustrated in (36), arises when a *wh*-phrase consists of an operator and variable in the single word entry as in English that has moved overtly to an intermediate, non-scopal position of CP. This movement then is followed by the covert movement of the interrogative operator alone into the matrix scopal position.

(36) Singapore Malay

- Ali memberitahu kamu tadi [_{CP} *apa_i* (yang) [_{TP} Fatimah baca t_i]]?
 Ali told you just now what that Fatimah read
 ‘What did Ali tell you just now that Fatimah was reading?’

(Cole and Hermon 1998: 225)

4.3. *Wh-Questions in CSE, Parametric Resetting and Systemic Transfer*

Extending Cole and Hermon's (1998) minimalist theory of the typology of *wh*-questions to CSE, I propose that the emergence of the diversity of *wh*-question-formation strategies in CSE was made possible by the lexical choice parameter shown in (32a, b). Specifically, CSE behave like Malay, not like Chinese and English, in that it allows both Option One and Option Two with regards to the lexicalization of the interrogative operator and *wh*-variable. According to this analysis, overt *wh*-movement of the English-type arises in CSE when the interrogative operator and *wh*-variable are combined as a single lexical entry in the syntactic derivation. The operator + variable element undergoes movement to the matrix, scopal specifier of CP for the purposes of Full Interpretation. The *wh*-in-situ option of the Chinese-type obtains when the interrogative operator is base-generated directly in the scope position of CP, unselectively binding the in-situ *wh*-variable. Finally, the partial *wh*-movement case holds when the operator and variable are combined together to be moved into the non-scopal specifier of CP, followed by the movement of the operator alone into the matrix, scopal specifier of CP.

Our proposed analysis makes several predictions regarding the syntax of *wh*-questions in CSE and Singapore Bazaar Malay that are actually borne out. The predictions are concerned with three areas: a) island-sensitivity of full and partial movement, b) non-interrogative uses of *wh*-variables and c) the inability of *wh*-adverbials to be licensed by unselective binding.

4.3.1. Prediction 1: Island-Sensitivity of Full and Partial Movements

First of all, our analysis predicts that *wh*-words in CSE and Singapore Bazaar Malay that are overly moved to the specifier of the matrix CP should obey the island constraints (i.e. the *Wh*-Island Constraint and the Complex-NP Constraint) whereas in-situ *wh*'s should not. This prediction is indeed verified. The examples in (37a, b) and (38a, b) show that overly moved *wh*-phrases are island-sensitive, unlike their in-situ counterparts; see also Yeo (2010a) for the same observation. The same pattern holds true for Singapore Bazaar Malay, as shown in (39a, b) and (40a, b).

- (37) CSE
- a. *What_i you wonder [where_j Mary bought *t_i* *t_j*]?

b. You wonder [where_j Mary bought what *t_j*]?
- (38) CSE
- a. *Where_i Ali like [girls who live *t_i*]?

b. Ali like [girls who live where]?
- (39) Singapore Bazaar Malay
- a. **Apa_i* [lu agak [mana_j [Mary beli *t_i* *t_j*]]]?

what 2SG wonder where Mary bought

‘*What do you wonder where Mary bought?’
 - b. ? Lu agak [mana [Mary beli *apa*]]?

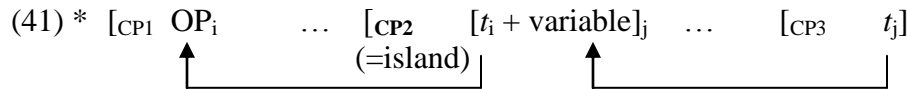
2SG wonder where Mary buy what

‘*What do you wonder where Mary bought?’

(40) Singapore Bazaar Malay

- a. * *Di mana_i* [lu 2SG fikir [Ali suka [perempuan yang tinggal *t_i*]]]
 where 2SG think Ali like woman that live
 ‘Where do you think Ali like the woman who lives?’
- b. Lu fikir [Ali suka [perempuan [yang tinggal *di mana*]]?
 2SG think Ali like woman who live where
 ‘Where do you think Ali likes the woman who lives?’

A similar prediction can be made for the case of partial *wh*-movement. Recall that, under Cole and Hermon’s analysis, a partial *wh*-movement configuration obtains when the operator + variable phrase undergoes short-distance movement into an intermediate specifier of CP, followed by the movement of the operator alone into the scopal specifier of CP. As empirical support for this analysis, they note, citing the observation first made by Saddy (1991) for Indonesian, that island constraints obtain in Singapore Malay when an island boundary intervenes between the surface position of the partially moved *wh*-phrase and the specifier of the matrix CP. That is, the following configuration is blocked due to the island constraints because the covert *wh*-movement crosses the island boundary in Step 2 of the derivation in (41).



Step II (Covert Operator Movement) Step I (Overt *Wh*-Movement)

The prediction of our proposed analysis, then, is that the partially moved *wh*-phrase in CSE should also show the island-sensitivity in the configuration in (38). The contrast between (42a) and (42b) shows that this prediction is borne out in CSE. Similarly, the examples in (43a, b) show that partial *wh*-movement is also island-sensitive in Singapore Bazaar Malay

(42) CSE

- a. * John like [the man [that think *what_i* [Mary eat *t_i*]]]?
 b. John like [the man [that think [Mary eat *what*]]]?

(43) Singapore Bazaar Malay

- a. * Lu sayang [perempuan yang Ali fikir [yang telah jumpa *siapa*]]?
 2SG love woman that Ali think that already meet who
 ‘Who do you love the woman who Ali thinks met?’
- b. Kamu sayang [perempuan yang Ali fikir [*siapa_i* yang telah jumpa *t_i*]]?
 2SG love woman that Ali think who that already meet
 ‘Who do you love the woman who Ali thinks met?’

4.3.2. Prediction 2: Non-Interrogative Uses of *Wh*-Variables

Second, when Option One in (32a) is chosen for the *wh*-in-situ construction, the question word itself a variable that is bound by an interrogative operator. As a natural consequence of this strategy, we expect that *wh*-words should be able to be bound by non-interrogative operators

such as existential operators as well. Thus, we predict correctly that there is a non-interrogative use of *wh*-phrases in Singapore Bazaar Malay, as shown in (44a, b).

(44) Singapore Bazaar Malay

- a. Dia tak beli *apa-apa* untuk saya.
 he NEG buy what-what for me
 ‘He did not buy anything for me.’
- b. Dia tak beli *apa-pun* untuk saya.
 he neg buy what-also for me
 ‘He did not buy anything for me.’

In (44a), the variable *apa* ‘what’ is successfully bound by the existential operator/quantifier represented by reduplication (*apa-apa* ‘what’). Similarly, in (44b), the variable is bound by the existential quantifier *-pun* ‘also’. These examples are exactly what we expect since Singapore Bazaar Malay can choose between Option One and Option Two shown in (32a, b). Now, if *wh*-questions in CSE have arisen from the syntax of the corresponding *wh*-questions in Singapore Bazaar Malay, we predict that a *wh*-phrase in CSE should also be able to serve as an independent variable that can be bound by a non-interrogative operator. This prediction is indeed borne out. In (45a-c), *wh*-phrases such as *what*, *who* and *where* can be bound by the universal quantifier represented by the phrase *also never*.

(45) CSE

- a. I *what* also never eat.
 ‘For all *x*, I did not eat *x*.’
- b. I *who* also never meet.
 ‘For all *x*, I did not meet *x*.’
- c. I *where* also never go.
 ‘For all *x*, I did not go to *x*.’

4.3.3. Prediction 3: *Wh*-adverbials Cannot be Licensed by Unselective Binding

Finally, recall that adverbial *wh*-phrases cannot be licensed in situ by unselective binding because this semantic operation requires the phrases to include a nominal restrictor, as argued by Reinhart (1997, 2006). In other words, this type of phrase must undergo syntactic movement into the scopal specifier of CP to fix its scope. Our proposed analysis, thus, correctly predicts the contrast in grammaticality between the example in (24) (repeated here as (46)) and the example in (47).

(46) Singapore Bazaar Malay

- ?? Lu nangis *kenapa?*
 2SG cry why
 ‘Why did you cry?’

(47) Singapore Bazaar Malay

- Lu nangis *apa.sal?*
 2SG cry what.reason
 ‘Why did you cry?’

(46) is bad because *kenapa* ‘why’, being an adverbial *wh*-phrase, cannot be licensed in situ and hence must undergo obligatory movement to create an operator-variable structure. (47) is fine, on the other hand, because *apa.sal* ‘what.reason’ contains a nominal element in it that is a licit target of unselective binding. As we already saw in section 3.1, CSE exhibits the striking similarity with Singapore Bazaar Malay in this regard. This point is illustrated by the examples in (3a, b), repeated here as (48a, b).

- (48) a. *Why* Mary must leave early?
 b. * Mary must leave early *why*? (Chow 1995: 38, 39)

This result leads us to another prediction. The reason that the adverbial *wh*-phrase *why* cannot be licensed in situ is that it does not contain a nominal variable in it. Accordingly, we predict that this *wh*-phrase should not be able to serve as a variable bound by a non-interrogative operator in the context of universal quantification. Again, this prediction is borne out by the example in (49). Note, furthermore, that the adverbial *wh*-phrase *kenapa* ‘why’ in Singapore Bazaar Malay cannot be interpreted as a variable bound by a non-interrogative operator, as shown in (50a, b).

- (49) CSE
 * I *why* also never cheat.
 ‘For all *x*, I did not cheat because of *x* reason.’

- (50) Singapore Bazaar Malay
 a.* Ali kecewa *kenapa-kenapa* saya gembira.
 Ali disappointed why-why I happy
 ‘Ali is disappointed for whatever reasons I am happy.’
 b.* Ali kecewa *kenapa-pun* saya gembira.
 Ali disappointed why-also I happy
 ‘Ali is disappointed for whatever reasons I am happy.’

4.3.4 Systemic Influences from Singapore Bazaar Malay and the Malay Substrate Hypothesis
 Thus far, I have demonstrated three parallels between Singapore Bazaar Malay and CSE with respect to a) island-sensitivity of full/partial *wh*-movement, b) non-interrogative uses of *wh*-variables and c) the inability of in-situ for adverbial *wh*-phrases. These parallels strongly suggest that the substratum influence under investigation is systemic in the sense that the entire subsystem of the grammar of Singapore Bazaar Malay (the morphosyntax of *wh*-words) is transferred into that of CSE. As two anonymous reviewers point out, there is no doubt that there is some degree of congruence between Malay and the Chinese languages with regards to *wh*-movement. For example, we have discussed island effects for *wh*-movement and the use of *wh*-words as indefinite variables bound by existential/universal quantifiers but these languages are quite similar in these regards. We have already illustrated the island-sensitivity in Chinese and Malay in sections 4.1 and 4.2. The two kinds of examples show that certain *wh*-phrases in Chinese consist in variables, not variables + interrogative operators. First, Cheng and Huang (1996) observe that question words such as *shei* ‘who’ behave as variables bound by a (phonologically null) universal quantifier, as shown in (51a). Second, Aoun and Li (1993) point out that *wh*-words in Mandarin can be bound by a non-interrogative operator, as illustrated in (51b). Note that the other Sinitic languages, Cantonese and

Hokkien, behave similarly to Mandarin in these regards, as shown in (52a, b) and (53a, b), respectively.

(51) Mandarin

- a. *Shei* xian lai, *shei* jiu xian chi.
 who first come who then first eat
 ‘For all x, if x comes first, then x eats first.’ (Cheng and Huang 1996: XXX)
- b. Wo *shenme* dou bu zhidao.
 I what all not know
 ‘I don’t know anything.’ (Aoun and Li 1993: XXX)

(52) Cantonese

- a. *Bin gor* lei xin, *zau bin gor* sik xin.
 who come first then who eat first
 ‘For all x, if x comes first, then x eats first.’
- b. Ngo *matye* dou mm zidou.
 I what all NEG know
 ‘I don’t know anything.’

(53) Hokkien

- a. *Xiang* seng lai, *xiang* seng jia.
 who first come who first eat
 ‘For all x, if x comes first, x eats first.’
- b. Wo *shenmedou* bu zhidao.
 I what all neg know
 ‘I don’t know anything.’

However, the existence of partial movement and the inability of *wh*-adverbials in situ in both Singapore Bazaar Malay and CSE, not in the Chinese languages (Hokkien, Mandarin and Cantonese), provide crucial grammatical evidence in favor of the Malay substrate hypothesis.

4.3.5. Sinitic vs. Malay Influences on CSE and Implications for Substratist Explanations

I have argued thus far based on detailed comparison of the syntax of *wh*-questions in CSE, Bazaar/Baba Malay and the Chinese languages in favor of the claim that the vernacular varieties of Malay have contributed a systemic substratal influence on the development of the grammar of CSE. An anonymous reviewer points out, even if this claim is substantiated, an important question remains as to why the vernacular varieties of Malay would influence just one grammatical pattern (*wh*-questions) while other areas clearly show substratal influences from Sinitic varieties (Hokkien, Cantonese, Mandarin), as shown in much work on CSE (Bao 2001, 2005, 2010; Bao and Lye 2005; Bao and Khin Khin 2010; Lee et al. 2009). Although a fully developed answer to this question must be left for future research, I am not entirely convinced that Sinitic influences on CSE are more significant than Malay influences. For example, topic-prominence in CSE (Alsagoff and Ho 1998) has been argued to have developed from Sinitic influences (Bao and Lye 2005). However, it is also well-known that Malay is typologically a topic-prominent language (Tan 2003; Poedjosoedarmo 200X). Bao and Khin Khin (2010) have

presented considerable evidence that Bazaar Malay topic-structures are point-to-point identical with those of Chinese; see also Lim 1988 for the view that topic-prominence is also a structural feature of Baba Malay. Accordingly, until systematic convergence is found between CSE and Chinese languages with regards to surface-true exponents of topic-prominence *to the exclusion of Baba/Bazaar Malay*, we cannot conclude that topic-prominence in CSE is a by-product of the Sinitic grammar.

This methodological caution also applies to other allegedly Sinitic features of CSE, such as copula drop, illustrated in (54), because both Cantonese (Sinitic) and (Bazaar) Malay exhibit these features, as shown in (55) and (56).

- (54) CSE
 Careful, laksa very hot.
 ‘Careful, the laksa is very hot.’ (Ansaldo 2009: 140)

- (55) Cantonese
 Che1 hou2 wu4jou4.
 car very dirty
 ‘The car is very dirty.’ (Goddard 2005: 103)

- (56) Singapore Bazaar Malay
 Buku tu baru.
 Book DEM new
 ‘That book is new.’

More generally, the substratist explanation for CSE is conclusive only when a pattern is found in CSE that is possible in the Chinese languages but *not* in the vernacular varieties of Malay or vice versa. I formalize this argumentation as in (57).

- (57) Substratist Argumentation in CSE: A feature F in CSE is a substratal influence from a language L_1 if L_1 exhibits F and *no other languages* ($L_2 \dots L_n$) exhibit F.

In this light, previous attempts to demonstrate the Sinitic substratal influences on CSE are not conclusive due to the systematic lack of a detailed three-way comparison among CSE, the Chinese languages and the vernacular varieties of Malay. Therefore, I contend that, while there is no denying that there have been some influences from Sinitic languages on CSE, their roles on the formation of this variety has been somewhat over-estimated in the literature. This tendency seems to be largely due to the fact that very few studies (Daw 2005 for Bazaar Malay; Pakir 1986, Thurgood 1998, Yap 1996 for Baba Malay) have been devoted to elucidate the grammar of the vernacular varieties of Malay as a point of comparison in the substratist explanation for the CSE grammar whereas Sinitic data are easily accessible given the current demographics and the predominantly Sinitic language environment in Singapore; after all, Baba Malay is an almost extinct contact variety whereas Singapore Bazaar Malay is nobody’s mother tongue used for interethnic communication that shows considerable variation across speakers and regions. If we dig deeper, however, more similarities between CSE and Baba/Bazaar Malay are likely to be uncovered, as the Malay and Chinese languages share strikingly similar typological profile, and more careful structural analyses of the differences behind these surface similarities would reveal

that both Baba Malay and Bazaar Malay have actually participated actively in the genesis and development of the grammar of CSE in the dynamic multilingual contact ecology in Singapore; see also note 2 for relevant discussion. For this reason, except cases where the scenario explained in (57) holds true, a more fruitful approach to CSE to adopt as a research strategy is an eclectic one along the lines of Umberto Ansaldo's *Typological Matrix* (Ansaldo 2004, 2008, 2009a, b; see also Mufwene 2001, 2008 and Schneider 2007), whereby "contact language formation is the result of typological alignments in the multilingual ecology in which contact takes place" (Ansaldo 2009b, p. 145). According to this approach, features such as topic-prominence and zero-copula, have been selected by CSE as a result of the grammatical congruence between Sinitic and Malay, both of which independently possess these features rather than a result of the exclusive substratal influences from one or the other language. This congruence-based approach, thus, would necessitate a serious consideration of the phenomena in CSE that have been used to argue for the Sinitic substratal influences on this contact variety.

5. Conclusions

This paper has presented new evidence from an in-depth comparison of the syntax of *wh*-questions in Bazaar Malay, CSE and the Sinitic languages in favor of the Malay substrate hypothesis on the formation of CSE. Crucial evidence for this hypothesis comes from the existence of partial *wh*-movement and the inability of adverbial *wh*-in-situ. First, the Chinese languages (Hokkien, Cantonese and Mandarin) are obligatorily *wh*-in-situ languages whereas both Bazaar Malay and CSE permit the partial *wh*-movement. Second, both CSE and Bazaar Malay disallow *wh*-adverbials in-situ, an option that is perfectly grammatical in the Chinese languages. I have proposed that the surface diversity of the *wh*-question-forming strategies in CSE has manifested itself under the substratal pressure of the grammar of Bazaar Malay. More specifically, like Bazaar Malay, CSE allow two options with regards to the formation of *wh*-phrases in its lexicon: an interrogative operator can either be combined with a variable in a single phonological word, as in Standard English, or can be base-generated directly in its scope position unselectively binding a *wh*-variable, as in the Chinese languages. I have further demonstrated that the proposed parametric resetting also correctly predicts a number of other structural similarities between *wh*-questions in Bazaar Malay and CSE with respect to island-sensitivity of full and partial movement and non-interrogative use of *wh*-variables under quantificational contexts. These parallels suggest that the substratum influence from Malay is systemic in that the entire subsystem of the grammar of Singapore Bazaar Malay (i.e., the morphosyntax of *wh*-words) has been transferred into that of CSE. Evidence for the Malay substrate hypothesis, if any, has thus far been largely based on socio-historical considerations of the contact ecology of Singapore. In this regard, the results of this paper are significant in that it has presented the first strictly grammatical arguments in favor of this hypothesis. The paper also has suggested that the Sinitic influences on the grammar of CSE have been rather overestimated in the literature because Malay and Chinese are typologically very congruent (e.g., topic-prominence, pro-drop, copula drop, predicative/verbal adjectives) and hence it is very difficult to tell merely based on outwardly appearances whether an alleged substratal feature of CSE has arisen from one or the other languages or both. I hope to have shown in this paper that only a more finer-grained structurally-informed analysis of the systematic differences behind the surface similarities in these languages, such as the one presented here, can uncover the identity of primary substratal languages of CSE and the genesis/development of this variety, more generally.

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