The Pronunciation of English by Students in Guangxi, South China

David Deterding
Universiti Brunei Darussalam, Brunei Darussalam

Abstract

This paper analyses the pronunciation of 24 students in Guangxi, South China, based on their reading a short text. It reports that the occurrence of [w] in place of /v/ is one of the most salient features of their pronunciation. In addition, they tend to use [s] for voiceless TH and [d] for voiced TH, omit dark /l/ in the coda of words such as full and wolf, merge long and short vowels such as fleece and kit, and use full vowels in function words such as 'to' and 'as'. However, they tend not to insert a vowel at the end of words such as 'and', a feature reported for the English spoken in other parts of China, and the incidence of stressed pronouns at the end of a phrase is less than reported elsewhere. We can therefore conclude that some features are shared with the rest of China, but at the same time some features seem to mark the English of Guangxi as distinct from the English of the rest of China.

Keywords: *English in China, pronunciation, voiced fricatives, TH sounds, vowel length, epenthetic vowels, consonant cluster simplification, word stress, sentence stress*

1. Introduction

English language teaching was first introduced in China as a 'barbarian' language in the late nineteenth century (Adamson, 2004, p. 21). Since then, and particularly since 1993, there has been a massive increase in the learning of English in China (Hu & Adamson, 2012, p. 12). Bolton and Graddol (2012, p. 3) put the number of learners in China at about 400 million, and Kirkpatrick (2007, p. 146) suggests that the total number now probably outnumbers the population of the UK and USA combined. Of course, their ability in the language remains uncertain (Crystal, 2003, p. 68), but even if only a small proportion are proficient, that still represents a large number, so the way that they speak English is of considerable interest. Indeed, Seidlhofer (2011, p. 7) notes that non-native speakers of English around the world now substantially outnumber native speakers, so they are playing an increasingly influential role in shaping the development of the language, and it is therefore likely that the way English is spoken in China will have some impact on the way the language evolves in the future.

Substantial work has been done on the grammar and lexis of English in China (e.g. Xu, 2010), but rather less research has been conducted on pronunciation. Deterding (2006a) analysed the pronunciation of thirteen students from northern and central provinces, but the data included no speakers from the south of the country. Since then, Schneider (2011) has described the pronunciation of six speakers from southern provinces such as Guangdong and Fujian, Ao and Ling (2012) have provided a brief overview of the pronunciation of ten speakers from Yunnan Province in the south-west of China, and Li and Sewell (2012) have analysed the pronunciation of six speakers from North China and six from the South, all studying in a Hong Kong university.

The current research describes the speech of university undergraduates in Nanning, the capital of Guangxi Zhuang Autonomous Region in the south of China. It is the home of the Zhuang people, who constitute the largest ethnic minority in China. Although the majority of the people living in Guangxi are Han Chinese, about 33% of the 49 million are Zhuang (China Today, 2014), and they speak a Tai language that is related to the language of Thailand. To the east of Guangxi is Guangdong Province, where Cantonese predominates. Many of the speakers in the current study are native speakers of Cantonese, so it is possible that Cantonese has affected their pronunciation. To the west of Guangxi is Yunnan, though the ethnic make-up there is somewhat different, as there are only a few speakers of Zhuang while there are more of other minority languages such as the Yi and Bai (Ao & Ling, 2012).

In this paper, I will analyse the pronunciation of speakers of English in Guangxi, and I will evaluate how their pronunciation differs from the English spoken in Yunnan and also the rest of China that has been described in previous papers.

2. Speakers

In February 2011, I visited Guangxi University in Nanning and recorded 24 first-year English language majors, 20 women and four men. The gender imbalance is unfortunate, but it reflects the population of students who select English language as their major at Guangxi University. Some information about the speakers is shown in Table 1, where female speakers are prefixed by 'F' and males by 'M'. Most were aged 19 or 20 at the time of the recording, though one (F19) was aged 18 and one (F11) was aged 21.

The 'English Start' column indicates the age at which they started learning English. Most had been learning English for between six and ten years, though F20 had been learning it for eleven years and F7 for twelve. Although nowadays most students would start learning English in primary school, it was common in the late twentieth century for schools to be poorly resourced with the result that many pupils only started learning English in the first grade of Junior High School (Zhang, 2012, p. 69), so the fact that some of these speakers only started learning English at the age of 13 is probably typical of those currently enrolled in university.

Table 1 Details of the speakers, including the age they started learning English, whether they listed Cantonese as a language they speak with one or more relatives, and any other variety of Chinese they speak

Speakers	Age	English Start	Canto-nese	Other	Speakers	Age	English Start	Canto-Nese	Other
F1	19	13	✓		F13	19	13	✓	
F2	20	10	✓	Linzhou	F14	20	9	✓	
F3	20	13	☒	Guilin	F15	20	13	☒	Zhuang
F4	20	13	✓	Cunhua	F16	20	13	☒	Zhuang
F5	19	12	☒	Guilin	F17	20	13	☒	Guilin
F6	19	13	✓		F18	19	9	✓	Hunan
F7	20	10	✓	Zhuang	F19	18	9	☒	Linzhou
F8	20	12	☒	Zhuang	F20	20	9	☒	Yulin
F9	19	10	☒	Zhuang	M1	20	13	☒	Guilin
F10	20	8	✓		M2	19	12	☒	Zhuang
F11	21	13	✓	Zhuang	M3	19	9	☒	Guilin

All are able to speak Putonghua ('Mandarin'), though some stated that they rarely use it in informal situations. Ten of them stated that they speak Cantonese with one or more relatives, and some (F7, F11 and F13) listed it as the language they use most often with friends. All but five stated that they speak another variety of Chinese, eight of them listing Zhuang, six listing Guilin Dialect (a southern dialect of Mandarin), and a few others listing something else. Inevitably, the frequency with which they use these different languages varies, with F18 stating that she speaks Cantonese with all her relatives and also her friends, while F2 only uses it with her grandparents and F4 only uses it with her cousins. Similarly, F8 claimed to speak Zhuang with all her relatives and also her friends, others such as F16 and M2 use it with all their relatives but not with friends, and F9 uses it only with her grandparents.

3. Data

The twenty-four speakers were recorded directly onto a computer in a special-purpose recording studio at Guangxi University with a high quality microphone placed a few centimetres from their mouths. Each student read a short text, the Boy Cried Wolf passage (Deterding, 2006b), which is especially designed to facilitate the description of all the consonants and vowels of English.

The Boy who Cried Wolf

> There was once a poor shepherd boy who used to watch his flocks in the fields next to a dark forest near the foot of a mountain. One hot afternoon, he thought up a good plan to get some company for himself and also have a little fun. Raising his fist in the air, he ran down to the village shouting "Wolf, Wolf." As soon as they heard him, the villagers all rushed from their homes, full of concern for his safety, and two of his cousins even stayed with him for a short while. This gave the boy so much pleasure that a few days later he tried exactly the same trick again, and once more he was successful. However, not long after, a wolf that had just escaped from the zoo was looking for a change from its usual diet of chicken and duck. So, overcoming its fear of being shot, it actually did come out from the forest and began to threaten the sheep. Racing down to the village, the boy of course cried out even louder than before. Unfortunately, as all the villagers were convinced that he was trying to fool them a third time, they told him, "Go away and don't bother us again." And so the wolf had a feast.

I also interviewed them for about three minutes, but this paper will focus on an analysis of the Wolf passage.

The data was analysed using Praat, Version 5.3.55 (Boersma & Weenink, 2013), which enables repeated detailed listening of extracts of speech and also acoustic measurement. In the analysis below, first the consonants and then the vowels of these speakers will be discussed. Finally, two aspects of their suprasegmental speech will be considered: word stress and sentence stress.

In the analysis, to avoid making prescriptive statements about the pronunciation of some sounds, the conventions of Wells (1982) will be adopted. The sounds at the start of words such as *think* and *then* will be referred to as voiceless TH and voiced TH respectively, and lexical keywords will be used to refer to some vowels, so the vowels in words such as *feast* and *fist* will be referred to as FLEECE AND KIT RESPECTIVELY.

4. Results

4.1 Voiced fricatives

Standard Chinese has no voiced fricatives, apart from the sound at the start of a word such as 日 rì ('sun') which under some analyses is described as a voiced retroflex fricative that might be represented as / ʐ / (Duanmu, 2007, p. 24). Although Chinese has voiceless fricatives such as /f/ and /s/, the voiced equivalents /v/ and /z/ do not occur. (The sound at the start of 子 zì, 'son', which is written as 'z' in Pinyin, is in fact an affricate, not a fricative.) Cantonese also has no voiced fricatives (Zee, 1999).

Although Standard Zhuang has a sound that might be shown as /v/, it is actually pronounced as the approximant [β], and there are no other voiced fricatives in Zhuang (Wikipedia, 2014). As a result of the absence of voiced fricatives in their indigenous languages, one of the most salient features of the pronunciation of these speakers is the consonant at the start of *village and villagers* being produced as [w] rather than the expected /v/. These two words each occur twice in the Wolf passage, and of the total of 96 tokens, 49 (51%) are produced with [w], and seventeen of the twenty-four speakers have [w] in at least one of these tokens, so only seven of them have [v] in all four tokens. It is notable that Ao and Ling (2012) reported that this use of [w] in place of /v/ did not occur in their data from Yunnan Province, even though the two provinces are neighbouring. Similarly, Schneider (2011) stated that the phenomenon only occurred once in his data, in the word *province*. It seems that the widespread use of [w] in place of /v/ is idiosyncratic of the English of Guangxi.

One might then ask if it is influenced by the occurrence of /v/ pronounced as [β] in Zhuang. The eight speakers of Zhuang have an average of 2.1 tokens of [w] in the four tokens of *village* and *villagers*, while the sixteen who do not speak Zhuang have an average of 2.0 tokens, so this provides little evidence for an influence from Zhuang ($t=0.17$, $df=22$, $p=0.8$, ns). However, we might note that F7, F8 and F11 stated that they speak Zhuang with all their relatives, and they use [w] in place of /v/ in all four tokens of *village* and *villagers*, while F9, who uses Zhuang only with her grandparents, never uses [w] in these words, so perhaps people who speak Zhuang regularly have a greater tendency to use [w] in place of /v/ in English. Five non-Zhuang speakers, F1, F5, F10, F14 and F18, also have [w] in all four tokens of village and villagers, but it is possible that they are influenced by a language which is widely spoken around them even though they do not themselves speak it.

Producing the /z/ at the start of *zoo* causes less difficulty for these speakers. Only one speaker, F7, has an approximant that might be shown as [ɹ] at the start of *zoo*. In addition, F17 has an affricate [dz], F16 has [ʃ], and two others, F6 and F8, have [s] instead of /z/, but the remaining nineteen speakers have [z]. One other feature of the pronunciation of *zoo* is that nine of the speakers have [m] at the end of the word. It is not clear why this occurs.

Finally, there is the voiced fricative /ʒ/ that occurs in the middle of *pleasure* and *usual*, a sound that is frequently produced as [ɹ] in the English of people from China, especially those from places such as Beijing, Liaoning and Shandong in the north of the country (Deterding, 2006a). Li and Sewell (2011) confirmed that the occurrence of [ɹ] in *usual* is mostly found in the north of China, as all five instances of this substitution in their data occurred with speakers from the north.

Just three of the Guangxi speakers, F2, F14 and F17, have an approximant (either [j] or [ɹ]) in the middle of *pleasure*. All the others have a fricative, though for some of them it is partly devoiced to [ʃ]. The same three speakers also have an approximant in *usual*, and four others do as well: F6, F7, F8 and F11. It is not clear why *usual* seems to be more problematic than *pleasure*. However, overall, /ʒ/ seems to be a little less troublesome

than /v/ for these speakers. In fact, four of the speakers (F1, F5, F10, F18) who have [w] in all four tokens of *village* and *villager* have a clear fricative sound, either [ʒ] or [ʃ], in both *pleasure* and *usual*.

The other voiced fricative of English, /ð/, will be discussed in the next section.

4.2 The TH sounds

The sounds at the start of words such as *think* and *this* are the most variable consonants of English, not just in new varieties of English but also in traditional native-speaker varieties. For example, speakers in London typically use [f] and [v] (Wells, 1982, p. 328), those in Ireland and New York have [t] and [d] (or their dental equivalents) (Wells, 1982, pp. 429, 515), while many people in the ASEAN countries in Southeast Asia use [t] and [d] (Deterding & Kirkpatrick, 2006), speakers in Hong Kong often have [f] and [v] (Deterding, Wong & Kirkpatrick, 2008) and people in Germany tend to have [s] and [z] (Swan, 1987).

For voiceless TH, Deterding (2006a) reported that speakers in China who did not have [θ] tended to have [s] instead, and this has been confirmed by Ao and Ling (2012) for speakers in Yunnan and both Schneider (2011) and Li and Sewell (2012) for speakers from elsewhere. The current data also finds this use of [s] for voiceless TH. There are three words in the Wolf passage with initial voiceless TH: *thought, threaten* and *third*, and the realisation of this initial consonant is shown in Table 2.

Table 2 Realisation of voiceless TH

Word	[θ]	[s]
Thought	13	11
Threaten	20	4
Third	18	6
Total	**51 (70.8%)**	**21 (29.2%)**

It can be seen that [θ] occurs in nearly 71% of the tokens, but [s] also sometimes occurs. Three speakers (F2, F7, F14, all of them speakers of Cantonese) use [s] in all three tokens, eight others (F4, F5, F6, F11, F12, F16, F17, M2) use [s] in one or more tokens, and the remaining thirteen speakers use [θ] throughout. It is noteworthy that even the Cantonese speakers never use [f], the pronunciation that is often found in Hong Kong (Deterding, Wong & Kirkpatrick, 2008), and furthermore none of them use [t], the sound that occurs throughout most of Southeast Asia (Deterding & Kirkpatrick, 2006).

The results also show that [s] is most common in *thought*, even though this word is near the start of the passage when speakers might be expected to be most careful with their pronunciation. One possibility is that *threaten* has most instances of [θ] because it is the least common word, on the basis that speakers are more likely to be influenced by the spelling for less common words. In the Corpus of Contemporary American English (COCA) database, *threaten* is ranked 1401 in a list of the most common words, while *thought* and *third* are ranked 761 and 585 respectively (COCA, 2014). However, this suggested correlation between word frequency and occurrence of [s] does not hold for the other two words, as *thought* is less frequent than *third* but it exhibits a higher occurrence of [s].

There are many words in the Wolf passage with voiced TH at the start, including *the* and *that*. However, they are often spoken rather fast, so it is hard to determine what sound occurs at the start. Here, I will just analyse the pronunciation of *there* (the first word in the passage) and *this* (which occurs at the start of a sentence and is stressed). The realisation of the sound at the start of these two words is shown in Table 3.

Table 3 Realisation of voiced TH

Word	[ð]	[d]
There	6	18
This	4	20
Total	**10 (20.8%)**	**38 (79.2%)**

It can be seen that about 79% of the tokens have [d] rather than [ð] at the start. Two speakers (F20, M1) have [ð] in both tokens, six others (F1, F3, F4, F10, F13, F14) have [ð] in one token and [d] in the other, and the remaining seventeen speakers have [d] in both tokens.

The fact that a non-standard pronunciation is common in *there* and *this* is consistent with the suggestion that pronunciation of the TH sounds might be related to word frequency, as these words are two of the most common words in English, being ranked 53 and 20 respectively in the COCA data. However, perhaps one should not compare function words like these with content words such as *thought, threaten* and *third*.

The occurrence of [s] as a realisation of voiceless TH is consistent with the findings of Deterding (2006a) for other parts of China. Deterding (2006a) further reported that voiced TH could be either [d] or [z], depending on the place of origin of the speaker, and this is consistent with the current data, as only [d] is found for speakers in Guangxi. Ao and Ling (2012) reported that only [z] occurred as a replacement for voiced TH in Yunnan, and this confirms that the pronunciation of speakers in Guangxi and Yunnan is quite distinct even though they are neighbouring provinces. Both Schneider (2011) and Li and Sewell (2012) reported [d] as well as [z] occurring as realisations of voiced TH in their data, but both studies included speakers from a range of different places.

4.3 Word-final consonant clusters

The tendency to simplify consonant clusters is a shared property of all varieties of English (Schreier, 2005, p. 27), and in British English it is normal to omit a final /t/ when it is at the end of a word-final consonant cluster and the next word begins with a consonant, such as in phrases like *next day, last chance, first light, west region, soft centres* and *drift by* (Cruttenden, 2014, p. 314). However, this omission of a word-final /t/ is less common if the next word begins with a vowel.

The speakers in Deterding (2006a) showed an aversion to simplifying word-final consonant clusters, believing such pronunciation to be lazy, and they preferred instead to insert an extra vowel at the end (to be discussed below). In contrast, the speakers in the current study often omit the final consonant in words such as *fist* and *forest*.

Here, I will just consider three tokens, all of which involve word-final /st/: *fist in, forest and,* and *feast*. In the first of these, *fist* is a stressed monosyllabic word followed by a word beginning with a vowel; in the second, the /st/ occurs at the end of an unstressed syllable in *forest* followed by a word beginning with a vowel; and *feast* is a stressed monosyllable that occurs as the final word of the passage. The omission of the /t/ in these three tokens is shown in Table 4.

Table 4 Word-final consonant cluster simplification

Word	/t/ retained	/t/ omitted
fist in	13	11
forest and	13	11
Fast	23	1
Total	**49 (68.1%)**	**23 (32.9%)**

Just one speaker (F19) omits the /t/ in all three tokens. Eight speakers (F1, F4, F7, F9, F11, F15, F17, M1) omit the /t/ in *fist in* and *forest and* but retain it in *feast*. Two speakers (F13, F14) omit the /t/ in *fist* in but retain it in the other two tokens, and two speakers (F2, F12) omit the /t/ in *forest* and but retain it in the other two tokens. The remaining eleven speakers retain the /t/ in all three tokens.

The results in Table 4 show that the /t/ is omitted in nearly half of the tokens of *fist* in and also *forest and*, but it is almost always retained in *feast*. This mirrors one aspect of the data reported in Deterding (2006a): the speakers there were more likely to produce citation forms for words before a pause, but they often did not exhibit fluent linking between words. And in the current study, while the speakers nearly all produce a /t/ in the final word, *feast*, they do not use word-final /t/ to link words together in *fist in* and *forest and*. In fact, in many cases there is a short pause after the /t/ in *fist* and *forest*.

The pattern of omitting the /t/ more often in *fist in* and *forest and* than the final word *feast* is also found in Brunei English (Deterding & Salbrina 2013, p. 28), and the lack of

linking between words has been noted for other varieties of English in Southeast Asia, including Singapore English (Deterding, 2007, p. 18).

For word-final consonant clusters, the main difference between the current study and Deterding (2006a) is that, in the current Guangxi data the speakers often omit the final /t/, while in the earlier study the speakers inserted an epenthetic vowel, an issue that will now be discussed.

4.4 Epenthetic vowels

One of the most salient features of the pronunciation of speakers from northern and central China is an epenthetic vowel occurring after word-final consonants, so *and* often gets pronounced as [ændə]. In fact, Deterding (2006a) reported that every one of his thirteen speakers regularly did this. For example, twelve of them inserted a vowel in the middle of the phrase *and so*, and seven of them inserted a vowel in *wind blew*. Li and Sewell (2012) confirmed these findings, as eight of their twelve speakers included a vowel in *and scolded* and seven included one in *and saw*, while Schneider (2011) reported that three out of his six speakers regularly inserted a final vowel after words such as *grade, but, child* and *wind* and one just did it occasionally, but the remaining two speakers did not exhibit this phenomenon.

While a similar epenthetic vowel sometimes occurs with the Guangxi speakers, it is much less common than reported in Deterding (2006a). In fact, in the 24 recordings of the passage, there are a total of just 19 instances. Only ten speakers ever exhibit the phenomenon, and for five of them, there is just one instance. The most common occurrence of vowel insertion is at the end of the word *village*: for F2, F16 and F17, both tokens of *village* have an added vowel, in some cases as long as 200 msec, making the word sound like *villagy*, and F9 and F13 have an added vowel in one of the tokens.

Apart from *village*, the instances of this epenthetic vowel are at the end of the first word in the following phrases (with the duration of the added vowel shown in brackets): F2, *used to* (88 msec); F3, *and two* (55 msec); F5, *not long* (94 msec); F7, *and once* (75 msec), *and two* (105 msec), *and duck* (62 msec), *and began* (62 msec); F11, *wolf, wolf* (243 msec); F13, *used to* (60 msec), *escaped from* (69 msec); M2, *had just* (71 msec).

If we consider the phrases *and two, and once, and duck* and *and began*, there are a total of five instances of an epenthetic vowel in these four phrases from the twenty-four Guangxi speakers, which suggests that the rate of insertion is about 5.2% for these four phrases. This is much lower than the 61.5% reported for the two phrases *and the sun* and *and so* in Deterding (2006a) and also the 58.5% reported for similar phrases involving and by Li and Sewell (2012). Clearly the Guangxi speakers differ from speakers from other parts of China in this respect, and only F7 (with four tokens) has a pattern of vowel insertion after *and* which approaches that reported by Deterding (2006a) and Li and Sewell (2012).

4.5 Word-final single consonants

Above, I discussed the omission of /t/ from the end of a consonant cluster. Here I will consider single consonants at the end of a word. Chang (1987, p. 226) notes that speakers of English in China may produce *duck* either as [dʌkə] or as [dʌʔ], and Deterding (2006a) reported the first pattern, with six out of thirteen speakers inserting a vowel at the end of *agreed* in the phrase *agreed that* and five of them inserting a vowel in the middle of at last.

However, the second pattern, omission of the final consonant (or its replacement with a glottal stop) is more commonly found in the Guangxi data. In the phrase *foot of*, the /t/ is absent for three speakers, F1, F2 and M2; and in the phrase *hot afternoon*, the /t/ is omitted from the end of hot by eight speakers (F6, F7, F8, F9, F11, F17, F19, F20). Just as with final /t/ in a consonant cluster, we find that there is little evidence of the /t/ being used to link the two words.

We might also consider the word *duck*, the word highlighted by Chang (1987). In the Wolf passage, it occurs at the end of a sentence, in the phrase *its usual diet of chicken and duck*. Two speakers (F19, F20) have a glottal stop at the end of this word, but all the others have [k], and none have an epenthetic vowel, so it seems that most of these speakers in Guangxi do not exhibit the pattern described by Chang (1987) for this word, at least when it occurs at the end of a sentence.

4.6 /i/ and /r/

There is an occasional tendency to confuse /l/ and /r/, though this is much less frequent than in Japanese English (Riney, Tagaki and Inutsuka 2006). Confusion between /l/ and /r/ usually occurs with consonant clusters, just as in Hong Kong English (Deterding, Wong & Kirkpatrick, 2008). There are just two instances in the Guangxi data involving an initial consonant, with an initial [l] in ran (F7 and M2), and two tokens involving a medial consonant, with [l] in *forest* (F7) and [r] in *actually* (F8). However, *raising* and *racing* never start with [l], and *long* and *looking* never start with [r].

For consonant clusters, there are five tokens of *from* with [l] (two from F7, one from M1, and two from M2). In addition, there are seven tokens of [r] occurring instead of the expected /l/, two involving *plan* (F13 and M2), two involving *pleasure* (F13 and F16), two involving *exactly* (F13 and F14), and one involving *unfortunately* (F13). Finally, there are two tokens of *flocks* in which the /l/ is omitted (F13 and F16), so the word sounds like *fox*.

In summary, there are eighteen tokens of confusion between /l/ and /r/ or omission of /l/, and fourteen of them involve consonant clusters. Thirteen of the eighteen tokens are from just three speakers, F7, F13 and M2, two of whom, F7 and F13, use Cantonese widely, and they both stated they speak it with their cousins and also their friends, so it is possible that this feature is more prevalent with Cantonese speakers of English, such as those in Hong Kong. However, overall, seventeen of these twenty-four speakers in Guangxi never confuse /l/ and /r/.

4.7 Omission of dark /i/

The previous section discussed /l/ in the onset of a syllable. In the coda of a syllable, either before another consonant such as in wolf or at the end of a word such as *full*, /l/ in English is usually pronounced as a dark /l/ that can be represented as [ɬ], with the back of the tongue raised and a quality similar to [u] (Roach, 2009, p. 48). In fact, in many varieties of English, including that of London, /l/ in the coda of a syllable is actually pronounced as a vowel (it is vocalised), so *field* can be pronounced as [fɪʊd] (Cruttenden, 2014, p. 90). However, even with this L-vocalisation, the /l/ is not usually deleted, so *wolf* and *woof* are generally differentiated in Britain.

L-vocalisation is common in the English spoken in China, and the complete omission of the /l/ is also found. Deterding (2006a) noted *small* being pronounced as [smɔ:], and Ao and Ling (2012) reported that, when reading the Wolf passage, nine out of their ten speakers had no /l/ in *wolf* and four of them pronounced *full* as [fɔ:] while others pronounced it as [fu:].

The omission of dark /l/ in *wolf* and *full* is also common in the Guangxi data. Fourteen of the twenty-four speakers have no /l/ in the phrase *wolf, wolf,* so in many cases it sounds like the shepherd boy was barking like a dog when he ran down the hill, and seventeen of them omit the /l/ in *full of*.

We might note that omission of /l/ after a back vowel and before a final consonant is a natural process that has been affecting English pronunciation for centuries, so for example /l/ was present in the Middle English pronunciation of *walk*, *folk* and *half* but it is absent from the modern English pronunciation of these words (Algeo, 2010, p. 149), and Wells (2008, p. 23) lists *almond* as normally having no /l/ in modern British English (though 75% of Americans still prefer it with /l/), and furthermore the /l/ in *although* can optionally be omitted (2008, p. 24). However, the incidence of /l/ omission after back vowels is rather more widespread in the English spoken in China.

4.8 Rhoticity

There seems to be an increasing incidence of rhoticity in some varieties of English in East Asia that used to be non-rhotic. For example, Brunei English is usually assumed to be based on British English, which is mostly non-rhotic, but it has been reported that about 50% of university undergraduates in Brunei now have a rhotic accent, particularly having r-colouring in open syllables such as *more* and the second syllable of *before*, and it is suggested that this may result from the combined influence of American English and Brunei Malay, both of which are rhotic (Salbrina & Deterding, 2012). The same may be happening in Singapore, and though the incidence of rhoticity is lower than in Brunei, partly because neither the Chinese nor the Malay spoken in Singapore is rhotic, it is highest for well-educated speakers, so it may be a growing phenomenon (Tan, 2012).

What about the English spoken in China? Is there a growing incidence of rhoticity? If there are influences from the first language of speakers, one might expect that those from the north of China would exhibit a higher incidence of rhoticity, as the Standard

Chinese of Beijing has widespread rhoticity in such words as èr ('two'), but this is largely absent in south China.

In the Guangxi data, just two speakers, F10 and F18, have rhotic English, with both pronouncing *more* and *before* with r-colouring. Both of these speakers are Cantonese speakers, though both stated that they had lived in Nanning all their lives, so there is no evidence that they might have been influenced by exposure to people in Hong Kong or elsewhere.

Schneider (2014, p. 19) suggests that American English is the predominant model in China, but the small number of rhotic speakers in the current study suggests that this American influence does not extend to Guangxi. Perhaps it is more extensive in the large eastern cities such as Beijing and Shanghai. It will be interesting to see if the incidence of rhotic pronunciation increases throughout China in the future, particularly with widespread exposure to American films and music in the modern globalised world.

4.9 Final /n/

Duanmu (2007, p. 68) reports that there is often an absence of complete closure for final /n/ and /ŋ/ in Standard Chinese, especially with open vowels, with the result that the rhyme of a syllable such as 三 (*sān*, 'three') may become a long nasalised vowel. This phenomenon often affects the pronunciation of English in China. Deterding (2006a) noted that, of the 39 tokens of *sun* in his data, 13 were pronounced as a heavily nasalised vowel followed by a nasal consonant and 15 had no perceptible final consonant, so only 11 had the partly nasalised vowel followed by [n] that is expected in English. Ao and Ling (2012) report the same phenomenon sometimes occurring with *afternoon* and *soon*, so in their data it occurred with close vowels as well as open vowels.

In the Guangxi data, in the word *fun*, five speakers have no final consonant, ten speakers produce a heavily nasalised vowel followed by [n], and nine pronounce the word as might be expected in British English, with some (but not too much) anticipatory nasalisation followed by [n]. All but one of the Zhuang speakers have the standard pronunciation, and only M4 has heavy nasalisation. In contrast, three of the Cantonese speakers have no final [n], four have a heavily nasalised vowel, and just three have the standard pronunciation, so this feature of pronunciation seems to be affected by the home language of the speakers.

4.10 Vowel length

Although Chinese has long vowels in open syllables such as 妈*mā* ('mother') and short vowels in closed syllables such as 慢màn ('slow'), the length of the vowel is predictable from the structure of the syllable and so it is not contrastive (Duanmu, 2007, p. 41). As a result, speakers of English in China often fail to make a distinction between the long and short vowels of English, so vowel pairs such as the fleece and kit vowels may be merged. In fact, this is one of the small number of pronunciation features of Chinese English mentioned by Kachru and Nelson (2006, p. 169), and it is also listed by Chang (1987, p. 225).

Comparing the length of vowels by means of acoustic measurement is problematic, as duration inevitably depends on speaking rate, and people constantly vary the rate at which they speak. However, in English, the long/short vowels also differ in terms of quality (Roach, 2009, p. 16), so FLEECE is usually more close and more front than kit. We can therefore judge the quality of these two vowels, and if they have a similar quality, then we assume they are merged.

There is a minimal pair for fleece and kit in the Wolf passage: *feast* and *fist*. By measuring the first two formants (F_1 and F_2), we can obtain an estimate of the quality of the vowels. In Figure 1, the formants of these two tokens for all twenty-four speakers have been converted to an auditory Bark scale (Hayward, 2000, p. 141) and then plotted to show an estimate of how they are scattered in terms of the open-close dimension (the vertical axis) and the front-back dimension (the horizontal axis). This plot just shows the top left part of the vowel quadrilateral, so a vowel with F_1 = 6 Bark and F_2 = 12 Bark would be a mid central vowel such as [ɜː].

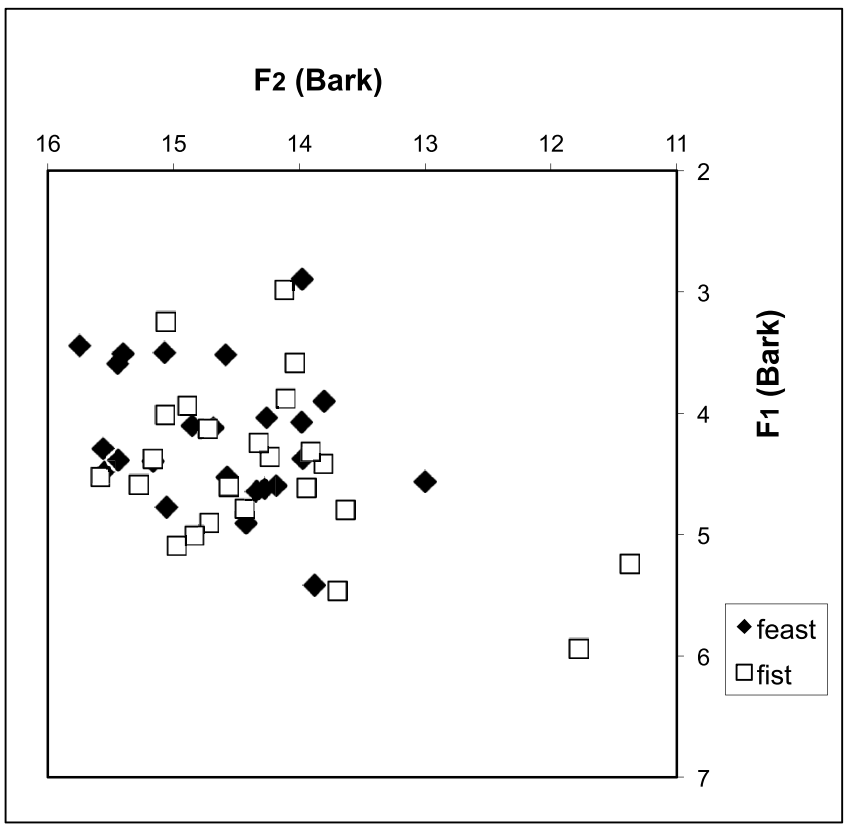

Figure 1. Scatter plot of the vowels in feast and fist

In Figure 1, the two tokens of *fist* on the lower right have a centralised quality, but they should be discounted, as the speakers (F3 and F8) both mis-read the word as *first*. For the other speakers, the distribution of the two vowels is clearly overlapping, and overall there is little evidence of a distinction between them.

An alternative way to analyse these tokens is to compare the two tokens from each speaker and see how far they are separated from one another, both auditorily and acoustically. The acoustic distance can be derived by calculating the Euclidean distance between the two tokens on Figure 1. Excluding the tokens of F3 and F8, we find that the tokens of *feast* and *fist* of sixteen speakers are perceptually very similar and acoustically less than 1 Bark apart, and the tokens of just four speakers, F4, F6, F9 and F14 are distinct. This confirms that the overwhelming majority of the speakers do not make a distinction between the long and short vowels of English.

Three out of the four speakers who do make a distinction between *feast* and *fist*, F4, F6 and F14, are speakers of Cantonese. It is possible that the distinction between short and extra short vowels in closed syllables in Cantonese (Zee, 1999) helps these speakers to differentiate the long/short vowels of English in *feast* and *fist*.

4.11 Diphthong reduction

Although Standard Chinese has diphthongs such as /ai/ and /au/ (Duanmu, 2007, p. 40), they can never be followed by a consonant, as the final nasals /n/ and / ŋ / can only occur after a monophthong vowel. Adopting a systemic analysis, Halliday (1992) suggests that the Chinese syllable can end in a y-prosody or a w-prosody, and either of these can be oral or nasal, and this gives four possible endings: a diphthong ending in [i] (front oral), a diphthong ending in [u] (back oral), a final [n] (front nasal) and a final [ŋ] (back nasal), which neatly models the impossibility of a diphthong being followed by a nasal final.

Li and Sewell (2012) report that in their data diphthongs were sometimes shortened in closed syllables, particularly with the vowel in *stone* being pronounced as [ɒ], and four of their twelve speakers had a shortened vowel for *mouth*.

In the Guangxi data, thirteen of the speakers have a monophthongal vowel in *time*, while one speaker, M3, has no final [m] in the word, so only ten of the speakers have the expected pronunciation [taɪm]. Although the monophthong for the thirteen speakers can be quite long, so the pronunciation might be shown as [taɪm], the loss of a diphthongal quality is consistent with the phenomenon reported by Li and Sewell.

The difficulty of producing an English diphthong followed by a final consonant has also been noted for speakers from Vietnam, as, just like Chinese, Vietnamese only has diphthongs in open syllables. However, the solution adopted by speakers from Vietnam is to omit the final consonant rather than making the vowel a monophthong (Hansen, 2006, p. 20).

4.12 Vowel reduction

In British English, a reduced vowel such as [ə] tends to occur in the weak form of function words like *of*, *to* and *as* (Roach 2009, p. 93) as well as in the unstressed fist syllable of content words such as *confess* and *convince*. In fact, Wells (2008, p. 175, 183) lists alternative pronunciations starting with [kɒn] for these two content words, but he includes the symbol '§' to show that these alternatives are 'non-RP'.

The occurrence of a full vowel rather than a reduced vowel in function words and the unstressed syllables of content words is one of the most widely reported features of new varieties of English around the world (Mesthrie and Bhatt 2008, p. 125) and it is found throughout southeast Asia (Deterding & Kirkpatrick, 2006). In fact, it might be considered a standard feature of emergent World Englishes that probably serves to enhance the intelligibility of speech in an international setting (Deterding, 2010).

For function words, Deterding (2006a) reported that, of a total of 65 tokens of the function words *that, than, to* and *of* produced by his speakers from China, all but three tokens were produced with a full vowel. Ao and Ling (2012) similarly reported that most tokens of of had a full vowel in their data from Yunnan, and in fact the articles a and the were also often produced with full vowels. The results for to (in to get) and the two tokens of as (in as soon as) in the Guangxi data are shown in Table 5.

Table 5 Vowel reduction in function words

Word	Full vowel	Reduced vowel
to (get)	22	2
As (soon as)	22	2
(As soon) as	20	4
Total	**64 (88.9%)**	**8 (11.1%)**

It can be seen that the overwhelming majority of the tokens of *to* are produced with a full vowel rather than [ə]. Only two speakers, F11 and F20, have a reduced vowel in this word. Similarly, the just two speakers, F3 and F17, have a reduced vowel in the sentence-initial token of *as*, and in addition to F3 and F7, two more speakers, F12 and F14, have a reduced vowel in the second token of *as* in the phrase *as soon as they heard him*. This confirms the findings of the other studies, that the incidence of vowel reduction in function words is extremely low in the English spoken in China.

In contrast, Deterding (2006a) reported that the first syllable of *considered* was usually produced with [ə], with ten out of thirteen speakers having vowel reduction, while seven of them had [ə] in the first syllable of *confess*. For the Guangxi data, nine speakers have [ə] in the first syllable of *concern* while fifteen have [ɒ]. However, this is somewhat misleading, as all but one of the speakers with [ɒ] actually stress the first syllable of this word (to be

discussed in the next section), and only one speaker, F4, has a full vowel in the unstressed syllable. A better estimate of the occurrence of [ɒ] in unstressed syllables of content words is offered by analysis of *convinced*. In this word, six speakers (F1, F3, F6, F11, F19, M2) have [ɒ] while the other eighteen all have [ə].

This is consistent with the suggestion of Deterding (2006a) that speakers of English in China may produce the expected citation form of content forms, including [ɒ] in unstressed syllables, but they almost never use the weak forms of function words. This phenomenon probably reflects the widespread memorisation of vocabulary, involving extensive imitation of the citation forms of words, but a lack of learning words in context.

4.13 Word stress

Word stress in English is complicated, depending on such things as the morphology of the word, its grammatical category, how many syllables it has, and its phonological structure (Roach, 2009, p. 76). While one can attempt to derive rules for stress placement, there are rather a lot of exceptions (Brown, 2014, p. 125). Not surprisingly, speakers around the world tend to have varying patterns of word stress, sometimes ironing out a few of the exceptions. For example, in Singapore, many speakers stress the second syllable of *colleague*, because it has a long / iː / vowel which would usually be stressed (Deterding, 2007, p. 32). Note, for example, that *antique, defeat, esteem*, *mystique* and *police* are all stressed on the second syllable in which the vowel is / iː /. Similarly, in Brunei, *character* may be stressed on the second syllable because it is followed by two consonants, by analogy with trisyllabic words such as *disaster, encounter, remember, semester* and *September* (Deterding & Salbrina, 2013, p. 42).

In the Guangxi data, the word which most often has an unexpected stress placement is *concern*. Eight speakers produce it with stress on the first syllable (F1, F3, F6, F7, F10, F13, F19, M2). It is not clear why this word is affected but other words are not, as, for example, no speakers pronounce *convinced* with initial stress. One thing to note in this respect is that *concern* is a noun in the passage while *convinced* is a verb, and it is common for nouns to have initial stress while verbs do not. Maybe the stress pattern in *concern* found among the speakers in Guangxi arises from analogy with the initial stress in other nouns such as *comfort*, *conduct*, *contact*, *contour* and *convoy*. We might also note noun/verb pairs like *console*, *construct*, *contrast*, *convert* and *convict* in which the noun is stressed on the first syllable but the verb on the second.

Aitchison (1991, p. 82) states that, in the late sixteenth century, just three words had a noun/verb contrast like this, but by 1934 there were more than 150 such pairs, including *addict, export, import, suspect* and many more. Indeed, the process seems to be continuing, as *address* seems to be following the trend, especially in America, where Wells (2008, p. 10) reports that 58% of people prefer the noun to have stress on the first syllable. Perhaps the speakers in Guangxi are ahead of their time by stressing the first syllable of *concern* when it is a noun.

There are no other obvious patterns of unexpected word stress in the Guangxi data. Schneider (2011) reported *competence* stressed on the second syllable by three out of six of his speakers, but other patterns, such as *linguistics* stressed on the first syllable and *England* stressed on the second syllable, were isolated tokens in his data.

4.14 Sentence stress

In British or American English, pronouns are almost never stressed, unless they are contrastive. However, stress on a sentence-final pronoun is common in Singapore (Levis, 2005) and throughout Southeast Asia (Deterding & Kirkpatrick, 2006).

Deterding (2006a) reported that eleven out of thirteen speakers in that study placed considerable emphasis on the final pronoun in the phrase *fold his cloak around him*. Li and Sewell (2012) confirmed this pattern, as nine out of twelve speakers stressed the final pronoun in *looked out of the window and saw him*, while six of them stressed the final *him* in *ran away with him*.

This stressing of final pronouns is comparatively rare in the Guangxi data. Just six of the twenty-four speakers (F2, F3, F6, F10, F17, M2) stress the final pronoun in *as soon as they heard him*, and only three of them (F2, F3, F6) stress *him* at the end of *they told him*.

5. Conclusion

Some patterns in the English spoken in Guangxi are similar to the patterns reported for speakers from elsewhere in China: the tendency to use [s] for voiceless TH (and the avoidance of other replacements, such as [t] or [f]); the widespread omission of dark /l/ to the extent that *wolf* may sound like *woof*; the heavy nasalization of a vowel before a final nasal in a word such as *fun*; and the avoidance of vowel reduction in function words.

However, there are other patterns that make the English spoken in Guangxi distinct: the widespread use of [w] in place of /v/; the use of [d] but never [z] as a realisation of voiced TH; and the preference for simplifying word-final consonant clusters rather than inserting an epenthetic vowel at the end of a word. And it is interesting that, even though Guangxi is a neighbor of Yunnan, the pronunciation in the two places is distinct, with Guangxi favouring [d] for voiced TH while Yunnan has [z], and Guangxi's regular replacement of /v/ with [w] not reported in the Yunnan data.

There has been some debate about whether Chinese English might be emerging as a distinct variety (Xu, 2010; Li & Sewell, 2012). The Guangxi data show that there may be some features shared throughout the country, but there are also substantial differences. Only time will tell if some of these differences will be ironed out as people travel more widely in the country, so that a national variety might emerge.

One might also note that some of the features of the Guangxi data are shared by other new varieties of English, especially the avoidance of vowel reduction in function words and also maybe the lack of linking between words. Finally, speakers of English in Guangxi might even be in the forefront of some changes taking place in the evolution of English, such as

initial stress on *concern* when it is a noun. It will be interesting to see if this pattern gets adopted by other speakers.

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Author

David Dieterding, Ph.D. (1990), University of Cambridge, is Professor at the University of Brunei Darussalam, where he teaches Phonetics, Translation, Forensic Linguistics and Research Methods. His research focuses on acoustic phonetics, Brunei English, and misunderstandings in English as a lingua franca.
dhdeter@gmail.com