EVERYTHING YOU WANTED TO KNOW ABOUT HOW STRESSED SINGAPOREAN ENGLISHES ARE

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1 Singaporean English(es) and stress

It is somewhat intriguing that, in spite of Singapore’s multi-ethnic multilingual population, most work on Singaporean English (SE) has essentially documented it as a homogeneous whole. Largely because the ethnically Chinese comprise the majority of the population, perhaps, many studies, explicitly or implicitly, simply use Chinese Singaporeans as a representative sample – certainly this also serves to control the variable of ethnic group and mother tongue, though the latter only in part, given the plethora of Chinese languages spoken by Singaporeans. The consequence of this, however, is that most of what has been documented as Singaporean English then is often really Chinese Singaporean English.

Where Singaporean English prosody is concerned, the situation is not much different. There has been renewed interest in its analysis in the past decade, with studies being less impressionistic and more systematically conducted than in the past, but again most still use Chinese Singaporeans as their sample (e.g. Deterding 1994a; Low 1998). It is promising that a few recent studies have started examining ethnic variation in SE prosody (Ariyaratne 2001; Lim 1996, 2000; Tan 1999; Wee 2000), primarily in intonation, and now, in stress.

It is well known that the phonetic realisation of stress in different languages and in different varieties of a language varies widely (Laver 1994), with prominence being produced by a selection or combination of the parameters of loudness, duration, pitch prominence or movement, and vowel quality. So although stressed syllables in Standard Southern British English (StdSBrE), for example, tend to be louder, longer and
higher than unstressed syllables, this is cannot simply be assumed for other varieties of English. However, most work on SE stress has done just that, with researchers, often BrE speakers themselves, making judgements on stress based on their own perceptions (e.g. Platt & Weber 1980; Tongue 1979) or simply assuming the higher pitched syllable to be the stressed syllable (e.g. Low 1998), even though pitch has been noted to be an unreliable cue for SE stress (Yeow 1987). The phonetic correlates of stress in SE – and in ethnic varieties of SE – have to established first before any reasonable investigation of other phenomena in SE stress can be conducted.

2 Current work on SE stress

In this section, some recent findings on SE stress and focus will be described. These are drawn mainly from two pieces of research, which complement each other, in that one used an acoustic analysis of an experimental corpus, and, in the other, spontaneously occurring data was auditorily analysed. Together they begin to provide us with a comprehensive picture of stress and focus in SE.

2.1 Acoustic correlates and stress placement in experimentally controlled speech (also see Lim & Tan 2001; Tan 2001)

In an attempt to identify the phonetic cues for SE stress, a very specific corpus of experimentally-controlled data was elicited from speakers.

Subjects: The subjects were three Chinese, three Indian and three Malay male university undergraduates, between 23 and 26 years’ old. All are Singaporeans who have never lived abroad, were educated in Singapore, learning English and their respective mother tongue in school to pre-university level, and effectively bilingual in English and their mother tongue, the latter being the language used at home.
Material & procedure: Most previous work on SE stress has focussed on word stress placement (e.g. Low 1998; Low & Grabe 1999; Sng 1991). The use of noun-verb pairs or compounds and phrases were felt, however, not to be viable options as SE speakers do not make distinctions using different stress placement (Deterding 1994b; Platt & Weber 1980; Sng 1991; Tay 1982; Tongue 1979). Making the assumption that varieties of SE signal focus in the way StdBrE does, the material aimed to elicit neutral and emphatic stress in the sentence. Subjects were provided with 30 pictures, and were asked three questions (Q) per picture, in their answers (A) to which they had to use the sentence construction provided with each picture. The three questions were designed to elicit responses with a particular stress type and placement and, consequently, a different level of stress on the target item. In example 1, corresponding to example 1a, the item in bold is that which is stressed; lemon is the target item, with its varying levels of stress in parentheses (NS: neutrally stressed, ES: emphatically stressed, US: unstressed).

(1)  
Q1: Which fruit do you want?  
A: I want the lemon. (NS)  
Q2: You want the apple?  
A: I want the LEMON. (ES)  
Q3: Your mother wants the lemon?  
A: I want the lemon. (US)  

Example 1a: Picture with prompt, corresponding to example 1.

Additionally, target items were placed at two different positions within the utterance: utterance-finally and within the
first noun-phrase of the sentence – to investigate if SE speakers do indeed place prominence utterance-finally (Low & Grabe 1999; Platt & Weber 1980); this would also investigate if the acoustic correlates of stress differ depending on their different positions within the utterance.

Choice of data and measurement: Six SE speakers (two from each ethnic group) listened to the recorded utterances and indicated the word within each utterance they felt to be most prominent; utterances with fewer than five matching judgements were discarded. It is notable that although listeners could for the most part identify a most prominent word, many had difficulty identifying the actual syllable (in a polysyllabic word) stressed. The unit of measurement used then was that of the word, rather than the syllable. Utterances were digitised using the Kay CSL (Computerised Speech Laboratory) and measurements were made of 3 parameters: (i) highest fundamental frequency (F₀) value and (ii) highest energy level (intensity) within the target item, and (iii) duration of the entire target word.

2.1.1 Acoustic correlates of SE stress

F₀, intensity & duration in Chinese, Malay and Indian varieties of SE were measured and tested for significance in:

(1) unstressed (US) and neutrally stressed (NS) items: overall, and in non-utterance-final & utterance-final positions
(2) neutrally stressed items in utterance-final and non-utterance-final position
(3) unstressed, neutrally stressed and emphatically stressed (ES) items

Neutral stress: 27 sets of utterances were analysed, giving a total of 486 utterances for all subjects. Two-tailed t-tests (p<0.05) were performed. (See figure 1 and table 1.) In Indian SE, the difference between US and NS in both F₀ and amplitude, in both positions in the sentence, was significant. Duration, however, was insignificant in all contexts. In Malay