

Reevaluating Rhoticity in Brunei English: The Case of the Kedayan

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Abstract

Previous accounts on Brunei English have all revealed that speakers of this variety show tendency to rhoticise instances of postvocalic-*r*, leading to the general conclusion that Brunei English (BrunE) is rhotic, at least insofar as comparison to the neighbouring English varieties of Singapore and Malaysia is concerned. One of the cited reasons for the prevalence of rhoticity in the English of the Bruneians is the transfer effect from the subjects' first language (L1), the rhotic Brunei Malay. This paper aims to further assess this claim by looking at a segment of the Brunei population known to speak a non-rhotic Malay dialect – the Kedayans. Read speech samples from 10 Kedayan speakers comprising two different age groups were analysed, the results of which were then compared to the subjects' responses in a survey on their lingua-identity percepts. The findings reveal a variety of English that is non-rhotic, and what appears to be an age-grading effect with regard to *r*-vocalisation. Whereas there are almost zero instances of rhoticity in the speech of the older speakers, the younger speakers, who also have lesser affiliations with the Kedayan dialect, show variability in their *r*-realisations. In addition to challenging the view that rhoticity is an effect of spelling pronunciation, this paper concludes that rhoticity in BrunE can be explained as an effect of contact from the L1, and that it appears to be an age-associated pattern that manifests with decreasing age.

Introduction

Rhoticity in Brunei English (BrunE) has been much studied in the past beginning with the seminal works of Salbrina (2010) and Salbrina and Deterding (2010) who, based on their results of an almost 50% occurrence of *r*-coloured tokens in their data, claim that this English variety is rhotic. The Singaporeans in their studies, however, are noted to have a much lower instance of *r*-colouring (8.3%). The prevalence of rhoticity in BrunE is deemed peculiar for two reasons: one, non-rhotic British Received Pronunciation is the model taught and endorsed in Brunei schools; and two, BrunE, being an offspring of British English due to its protectorate past, is expected to be similar to its “colonial siblings” in Singapore and Malaysia, both of which are generally non-rhotic.

The observations recounted in Salbrina (2010) and Salbrina and Deterding (2010) are also reported in Sufi (2016) who finds that 16 of the 30 Bruneians studied have markedly rhotic accents compared to only 2 out of 30 Singaporeans. Nur Raihan (2017) takes a different approach and conducts a diachronic investigation comparing the pronunciation recordings of Universiti Brunei Darussalam's (UBD) undergraduates that were made 6-9 years apart. She notes that there is a statistically significant increase in the numbers of rhotic speakers and *r*-coloured tokens between the two recordings (52.4% versus 90.5% for speakers, and 34.4% versus 74.3% for *r*-colouring), indicating that BrunE is becoming increasingly rhotic. Singapore English is also reportedly becoming rhotic with Tan (2012) claiming that *r*-vocalisation is linked to “high education, intelligence and is highly desired” (p. 1957).

A few reasons have been offered to explain the high incidence of rhoticity in the Bruneians' speech. Whereas influence from the American media has been cited frequently as

a probable cause, Nur Raihan (2015) interestingly also attributes spelling pronunciation as to why Bruneians articulate postvocalic-*r*. This explanation, however, does not adequately capture the situation in Singapore where spelling pronunciation has also been known to occur (Deterding & Nur Raihan, 2017). If rhoticity were indeed an instance of vocalisation of orthographic *r*, then it would be expected for the Singaporeans to also have a significant number of *r*-coloured tokens. This, however, was not the case in the Brunei – Singapore comparative investigations by Salbrina and Deterding (2010) and Sufi (2016).

In addition to being a derivational effect of Americanisation, all the BrunE rhoticity studies point to the influence of Brunei Malay, the first language (L1) of the Brunei participants, as another plausible explanation for the apparent rhotic nature of BrunE. As reported in Clynes (2014), Brunei Malay is heavily rhotic, unlike the variant spoken in Singapore, which is non-rhotic. Contact transfer is also offered as an explanation for the lack of *r*-colouring in Sufi's Singapore data. His subjects, majority of whom are of Chinese ethnicity, speak either Singapore Mandarin or Hokkien in addition to English, and the two Chinese varieties are reported to be non-rhotic.

Using this premise as a starting point, this paper seeks to investigate the extent to which L1 rhoticity (or lack thereof) affect the realisations of postvocalic-*r* in English words by Bruneians. This present work departs from the previous studies by focusing on an indigenous group in Brunei called the Kedayan whose L1 is widely documented to be non-rhotic (Clynes, 2014; Soderberg, 2014). It is worthwhile to note here that one of the only two non-rhotic speakers in Nur Raihan's (2017) study professes to be a proficient speaker of Kedayan. This, and other evidence mentioned above suggest that when the L1 is non-rhotic, the L2 English is expected to be non-rhotic as well. This paper seeks to further explore the observations made from the previous studies by addressing the following research questions:

1. Does L1 contact transfer sufficiently explain *r*-vocalisation in L2 English of the Bruneians?
2. Would the use of the rhotic Brunei Malay alongside Kedayan yield results different for those whose dominant code is Kedayan?
3. What other constraints, if any, affect variation of rhoticity in BrunE?

The Kedayan

Apart from Brunei, the Kedayan can also be found in the Malaysian states of Sabah and Sarawak with a population of 45,000 in the former, and 30,000 in the latter (Soderberg, 2014). Also spelt Kadaian and Kadian (Maxwell, 1970), an etymological analysis of the word "Kedayan" based on dictionaries and classical literary works reveals that it has its roots in Javanese Malay to roughly mean "royal escorts" (Maxwell, 1983). This leads to the theorisation that the ethnic Kedayan originated from the Indonesian island of Java (Ahmad Ibrahim, Siddique & Hussain, 1985) who first came to Brunei during the fifth sultan's reign in the 16th century and settled in the country as rice planters (P. M. Sharifuddin, 1969). This account, however, has been dismissed as mere folklore, notably by Amde (2008) who believes that the Kedayan are original inhabitants of the Borneo island.

Of the seven indigenous groups of Brunei, the Kedayan are the second largest after the Brunei Malays. The community is spread far and wide across the county with the main cluster groups concentrated in several sub-districts of Brunei-Muara, such as Mentiri, Sengkurong, Kilanas and Kota Batu (Awang Muhammad Hasanan, 2008). It is this widespread presence of the Kedayan in Brunei that has been cited as one of the reasons to refute the claim that the Kedayan were originally from Java. The argument is that if they were indeed nonnative to Brunei, then the Kedayan would only be concentrated in and around one location, such as the Tutong group which are found only in the Tutong district (Suriani, 2012). The following

figure shows the areas in Brunei where the Kedayan communities can be found, the distribution of which was mapped by the authors based on documented accounts of the Kedayan locales (e.g. Awang Muhammad Hasan, Suriani 2012).

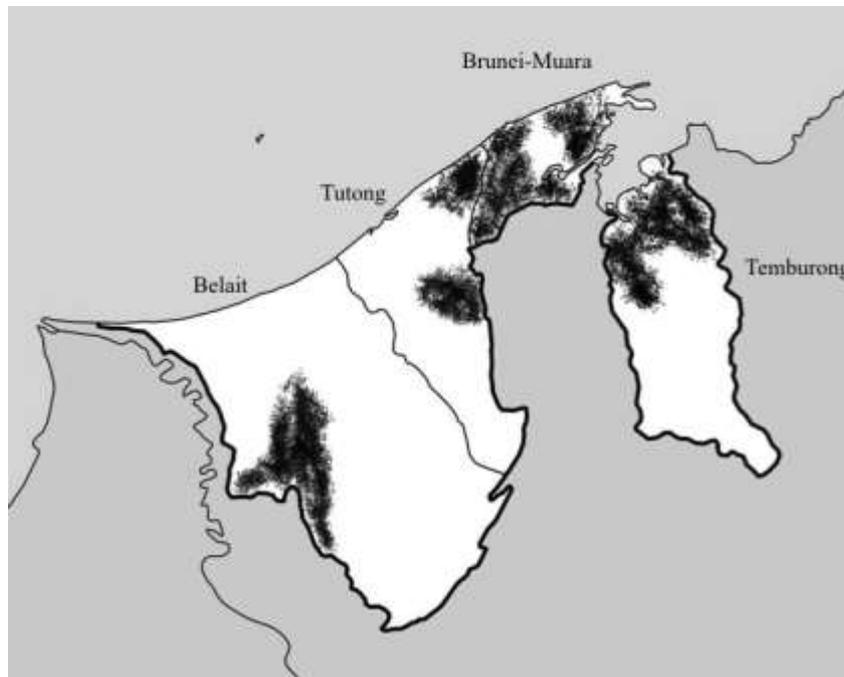


Figure 1. Map of Brunei, showing the different locations of ethnic Kedayan communities

Kedayan and Brunei Malay

There seems to be some confusion with the linguistic term Kedayan with some sources (e.g. Simons & Fennig, 2017) conflating it as being one and the same as Brunei Malay. In actual fact, of the seven indigenous languages in Brunei, Brunei Malay is the dominant lingua franca whilst Kedayan has the largest number of speakers of the remaining five minority languages (McLellan, Noor Azam & Deterding, 2016, p. 13). These two Malay dialects are highly similar with a 94% cognate (Nothofer, 1991) whereas Soderberg (2014) gives a more modest figure of 83-89%. Tests on dialect intelligibility (Moody, 1984) and investigations on lexicostatistics (Smith, 1984) strengthen the claim that Brunei Malay and Kedayan are members of one language, and given that they share a common grammar and, to a large extent, vocabulary, it can be confidently argued that the two are mutually intelligible. Although Soderberg (2014) puts the figure of Kedayan speakers in Brunei between 100,000 to 200,000, the actual figure might actually be much lower as, due to the high shared cognate between this dialect and Brunei Malay, and widespread intermarriage between the various ethnic groups, Kedayan is now categorised as endangered (McLellan & Jones, 2015, p. 20). What this means is that Kedayan is gradually falling out of use as preference is given to Brunei Malay for daily interactions, particularly among the new generations.

The few areas in which Kedayan differs from Brunei Malay seem to be in the pronunciation. Whereas Brunei Malay is a three-vowel system with /a, i, u/ (Poedjosoedarmo, 1996, p. 40; Clynes, 2014), Kedayan has an additional three which are the long vowel equivalents /a:, i:, u:/ (Muhammad, 1991; Sipiah, 1992). According to Muhammad, the long vowels are used in instances where there is an underlying medial or terminal *r*-sound in Standard Malay, which means that words such as *marah* ‘angry’ [marah] and *pasir* ‘sand’ [pasir] are pronounced without the flap [r] as [ma:ah] and [pasi:] respectively. Poedjosoedarmo explains that the presence of the long vowels is a “result from the loss of

post-vocalic /r/” in Kedayan (p. 41). Soderberg (2014), however, has a differing view from Muhammad and asserts that vowel lengthening only applies to word-final [r], and not medial ones. Whatever are the beliefs of the scholars on this matter, the above accounts serve to confirm that the *r*-sound is absent in Kedayan.

Methodology

Subjects

As this paper’s main objective is to investigate the pronunciation of postvocalic-*r* in English words by Kedayan speakers, careful attempts were made to record subjects who are not only of Kedayan ethnicity, but also those who use the Kedayan dialect in their daily communication. However, to recruit respondents who exclusively speak Kedayan is not a possible task, because, as mentioned above, the widely used lingua franca in the country is Brunei Malay and most, if not all, indigenous Bruneians would have adequate knowledge of this dominant dialect. The researchers, therefore, strived to only record those who profess to speak Kedayan growing up, and who still actively use it in private domains, such as at home and within their community.

Three families with at least three generations of Kedayan speakers were chosen as subjects for this study. The three families reside in areas within the Brunei-Muara district, which have been identified as established Kedayan communities (Liah, 2003). A total of 10 Kedayan speakers was recorded (labelled S1 – S10), all of whom are female, and their ages vary from the 20s to the late 50s. Within this range the respondents can be divided into two broad age groups: the young, who are in their 20s and the old, aged 40 and above. In order to minimise risks to do with detail obscurity and variability, it was decided to exclude male subjects, and to limit the ages of the respondents to those who are not younger than 20 and older than 60. In addition to the reading tasks, a questionnaire eliciting information on the informants’ socio-linguistic background was disseminated during the course of data collection. The purpose of this survey is to see if the subjects’ professed L1 and perceived affiliations to Kedayan are tied in any way to rhoticity in L2 English. Among the questions asked in the survey are their perceptions of Kedayan as either a native or a second language, their perceived dominant code, and their proficiencies in spoken Kedayan and Brunei Malay. Details on the informants are as shown in Table 1, whereas their responses to the questionnaire are discussed in the results section.

| Group | Subjects | Ages | Highest Education Level | Occupation |
|-------|----------|------|-------------------------|---------------|
| Old | S1 | 46 | Secondary school | Clerk |
| | S2 | 51 | Secondary school | Homemaker |
| | S3 | 58 | Bachelor’s | Teacher |
| | S4 | 48 | Secondary school | Teacher |
| | S5 | 46 | Secondary school | Teacher |
| Young | S6 | 23 | Pre-university | Undergraduate |
| | S7 | 23 | Pre-university | Undergraduate |
| | S8 | 25 | Pre-university | Undergraduate |
| | S9 | 23 | Pre-university | Retail |
| | S10 | 24 | Secondary school | Retail |

Table 1. Details of informants

Data

As with previous studies investigating rhoticity in Brunei English (with the exception of Sufi, 2016), the current investigation also utilises Deterding's (2006) *The Boy Who Cried Wolf* passage (henceforth the *Wolf*, see appendix) for data collection. Within the passage, only eight words satisfy the phonetic contexts for the analysis of *r*-colouring (as per Feagin, 1990). The continuum of contexts, shown in Table 2 and arranged in hierarchical order according to Feagin's findings, was also incorporated in several studies investigating rhoticity in traditionally non-rhotic accents such as Irwin and Nagy (2007) and Asprey (2007).

| Environment | Most <i>r</i> | Variable <i>r</i> | | Least <i>r</i> |
|-------------|----------------|-------------------|---|-------------------|
| | 1 schwa +rC | 2 schwa + r | 3 V +r(C) | 4 Unstressed r |
| VOWEL | NURSE | FUR | NEAR SQUARE START NORTH FORCE | LETTER |

Table 2. Feagin's (1990) contexts for *r* analysis

Using the information in Table 2 as guidance, instances where *r* is least likely to be realised such as when it is preceded by a stressed vowel (e.g. *poor*) and where the *r* is in an unstressed position (e.g. *pleasure*) are disregarded.

Salbrina and Deterding (2010) only selected 7 tokens for analysis, but that was largely because the passage they had used was an earlier version of the one proposed by Deterding (2006), which was missing the word *short*. Nur Raihan (2017), on the other hand, only selected 5 tokens, omitting *dark*, *course*, and *third*, and a likely reason for that is because of the large data sample (42 respondents in total) which made the overall number of tokens sufficient for her examination. The selected target words for the present analysis, and information on the *r* context for each token are shown in Table 3. In total, 80 tokens were analysed.

| Environment | Most <i>r</i> | Variable <i>r</i> |
|--------------|----------------|--|
| | NURSE | Postvocalic ± consonant (e.g. NEAR, SQUARE) |
| Target words | <i>heard</i> | <i>dark</i> |
| | <i>concern</i> | <i>short</i> |
| | <i>third</i> | <i>more</i> |
| | | <i>course</i> |
| | | <i>before</i> |

Table 3. Target words and *r* phonetic contexts

Data analysis

Recordings were made on a digital recorder in the subjects' homes. The sampling rate was fixed at 24kHz and 16-bit resolution and saved in the form of a wave file. The speech samples were then analysed acoustically and perceptually, both using Praat (Boersma & Weenink, 2006), with the acoustic investigation entailing the observation of the movement of the third formant (F3) in the target segment.

The percept associated with rhoticity is evidential acoustically through the lowering of F3 (Epsy-Wilson et al., 2000; Hayward, 2000) in which "the third-formant onset of /r/ needs

to be lower in frequency, fairly close to the second-formant onset” (O’Connor et al., 1957: 34). The low F3 at the onset of *r* is believed to contribute to the perception of rhoticity and that the “lower the F3, the greater the degree of rhoticity” (Ladefoged, 2003, p. 149). This can be illustrated in Figure 2, which is a spectrogram of the word *course* uttered with and without *r*-colouring. There is a distinct lowering in the frequency of the third formant of the *r*-coloured *course* from the 3000 Hz range to 1770 Hz, as indicated by the arrow.



Figure 2. A spectrogram of *course* pronounced with and without *r*-colouring

However, as acknowledged by Salbrina and Deterding (2010), there were instances in which a rhotacised vowel did not result in a descending F3 but rather, an overall low F3. An example of this is shown in Figure 3, which is a spectrogram of an *r*-coloured *dark*. When compared to the spectrogram in Figure 4, which is of the same word pronounced without *r*-colouring, it can be seen that whereas there is hardly any difference in the third formant’s movement, the F3 of the *r*-coloured *dark* occupies a lower space of the frequency spectrum (around 1900 Hz) than that of the non-*r*-coloured token (around 2900 Hz).

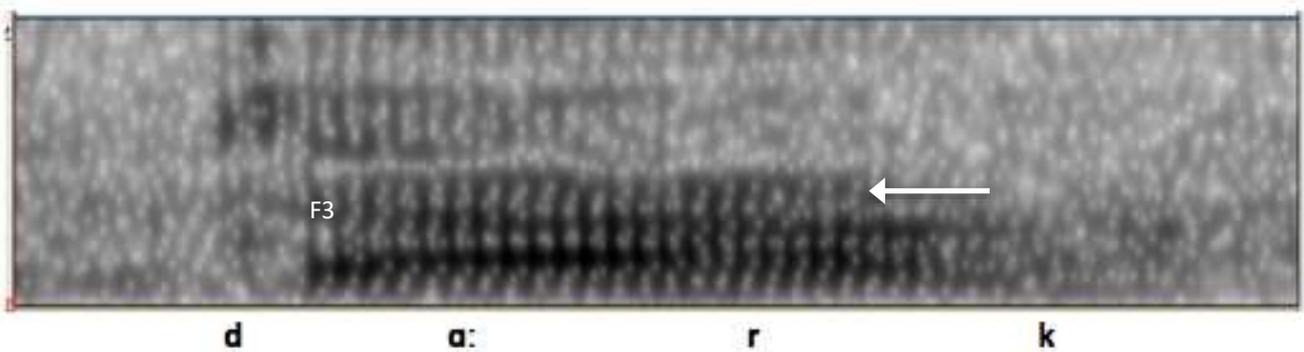


Figure 3. A spectrogram of *dark* pronounced with *r*-colouring

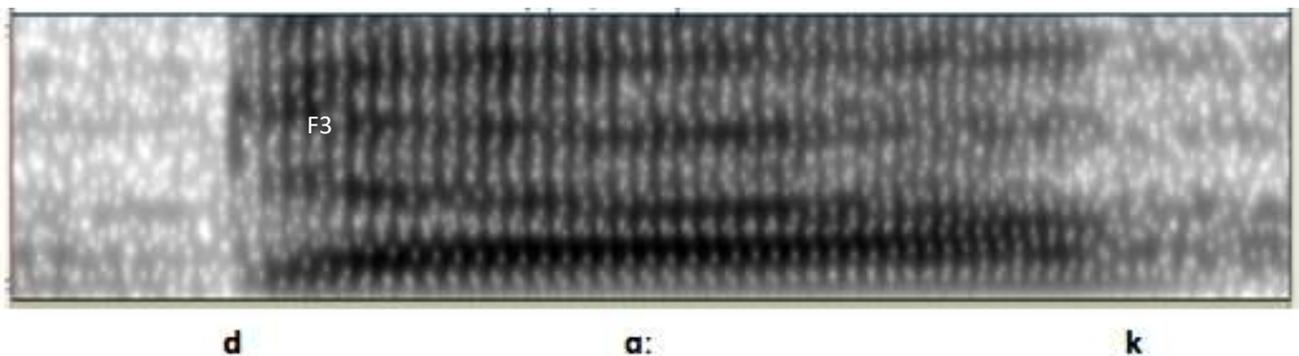


Figure 4. A spectrogram of *dark* pronounced without *r*-colouring

Another interesting observation from Figure 3 is the apparent closeness of F3 to F2 to the point of merging as one acoustic formant. Several studies have remarked that the percept of rhoticity involves F3 being close to F2 (e.g. Lister, 1957; Stevens, 1998), with Stevens arguing for the emergence of an additional formant, F_R , “in the frequency range normally occupied by F2” (p. 540-1) along with an overall dip of the actual F3. Indeed, challenges of adequately describing the phonetic attributes of the *r* phoneme have been acknowledged by other researchers (e.g. Heselwood & Plug, 2011) with Lindau (1985, p. 165) arguing that the low F3 is a specific marker for the approximant American English /r/ and “not a pervading property of rhotics.” Rhotics, which include non-approximants, should be regarded as a family of sounds sharing some phonetic exponents and cannot be defined by one unifying feature (p. 166). Given that the *r* phoneme is “prone to vary in many and subtle ways” (Scobbie, 2006, p. 338) and is realised along a hierarchical scale of varying rhotic strength, this paper cannot do justice to the intricate details of the variation beyond treating rhoticity as a binary variable of simple absence or presence of the phoneme. As it is generally agreed that whenever *r* follows a vowel the third formant is consistently observed to descend through the spectra, this present study, therefore, adopts the customary association of a low-frequency F3 as a principal acoustic marker of rhoticity, and measurements of F3 are achieved as follows: when a dip is observed, the value is taken at the point of the lowest descent whereas when the formant movement is stable, it is taken at the point around the centre of the frequency segment.

The perceptual analysis involves listening to the target tokens and judging instances of *r*-colouring. The auditory judgment is then confirmed acoustically through the method described above and the value of the F3 is noted. Both authors participated in the analyses and checks on inter-rater reliability reveal an agreement of ~90%.

Results

Auditory analysis

Prior to analysing the individual tokens, the investigators made notes of their general impressions of the subjects' pronunciations by listening to each of the 10 recordings once and then classifying the subjects as either rhotic or non-rhotic speakers. With the exception of S8, who not only pronounces the postvocalic-*r* but also has a marked American accent evidenced by the tap [ɾ] in the words *shouting* and *later*, and the unrounded vowel [ɑ] in *flocks* and *shot*, the remaining speakers are classified as either “non-rhotic” or “variable”. A speaker is marked as “variable” if there is a considerable mixture of rhotic and non-rhotic realisations of the tokens. The results of the general impression on rhoticity together with the perceptual analysis of the target words are summarised in Table 3 and the production of the individual tokens illustrated in Figure 5.

| Subjects | General impression on accent | <i>r</i> -coloured | Non- <i>r</i> -coloured | <i>r</i> -coloured tokens |
|------------------------|------------------------------|--------------------|-------------------------|--|
| S1 | Non-rhotic | 0 | 8 | None |
| S2 | Non-rhotic | 0 | 8 | None |
| S3 | Non-rhotic | 0 | 8 | None |
| S4 | Variable | 1 | 7 | <i>before</i> |
| S5 | Non-rhotic | 0 | 8 | None |
| S6 | Variable | 1 | 7 | <i>course</i> |
| S7 | Variable | 5 | 3 | <i>heard, short, course, before, third</i> |
| S8 | Rhotic | 8 | 0 | All |
| S9 | Non-rhotic | 1 | 7 | <i>more</i> |
| S10 | Variable | 1 | 7 | <i>third</i> |
| Total out of 80 | | 17 (17.5%) | 63 (77.75%) | |

Table 3. Auditory results of *r*-colouring

As evidenced from Table 3 and Figure 5, the token analysis seems to support the general impressionistic findings, where all of the subjects categorised as non-rhotic also produce zero instances of *r*-coloured tokens with only S9 realising the *r* in *more*. As expected, the only speaker identified as rhotic (S8), vocalises the *r* in all eight words, whereas the four subjects who have been labelled “variable” show pronunciation variations in the target items. A closer inspection reveals that three of them (S4, S6 and S10) produce more non-*r*-coloured tokens than coloured ones, and only one subject, S7, displays a reverse pattern.

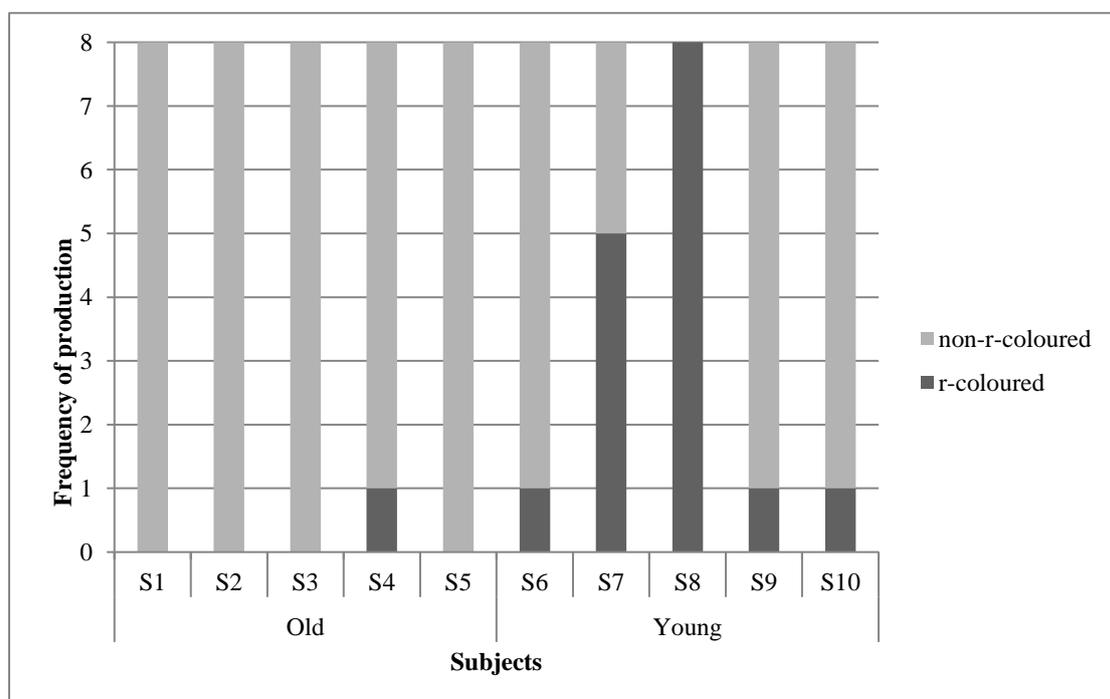


Figure 5. Production of tokens and realisation of *r*

Also interesting to note from Figure 5 is an apparent age-grading effect where it appears that the tendency to rhotacise vowels is prominent among the younger subjects. Only one speaker in the old group (S4) vocalises the *r* in one of her tokens, whereas all the young speakers display at least one instance of *r*-colouring. To check whether age has a bearing on rhoticity, the Fisher's Exact Test is conducted on the data in Table 4. The test reveals that the association between rhoticity and age is statistically significant ($p < 0.05$).

| | <i>r</i> -coloured | non- <i>r</i> -coloured | Total |
|-------|--------------------|-------------------------|-------|
| Old | 1 | 39 | 40 |
| Young | 16 | 24 | 40 |
| Total | 17 | 63 | 80 |

Table 4. Counts of tokens by age group

Setting a margin of 5 out of 8 tokens as a marker for rhoticity, where a subject with 5 or more *r*-coloured tokens is classified as rhotic, only 2 (S7 and S8) fall into the rhotic category. The remaining eight subjects (80%) are, therefore, categorised as non-rhotic speakers.

A closer look at the individual tokens to see if there is any relationship between the phonetic environment and *r*-colouring susceptibility does not seem to reveal any definitive pattern (see Figure 6 and Table 5). There is at least one instance of *r*-colouring of the tokens and four words appeared thrice each: *third*, *more*, *course*, and *before*. Statistical tests on whether there is any association between phonetic contexts and *r*-vocalisation prove to be non-significant ($p = 0.786$). However, given the rather small sampling size, and that the methodology was not specifically designed to investigate linguistic constraints on rhoticity, considerable caution needs to be exercised in interpreting this result.

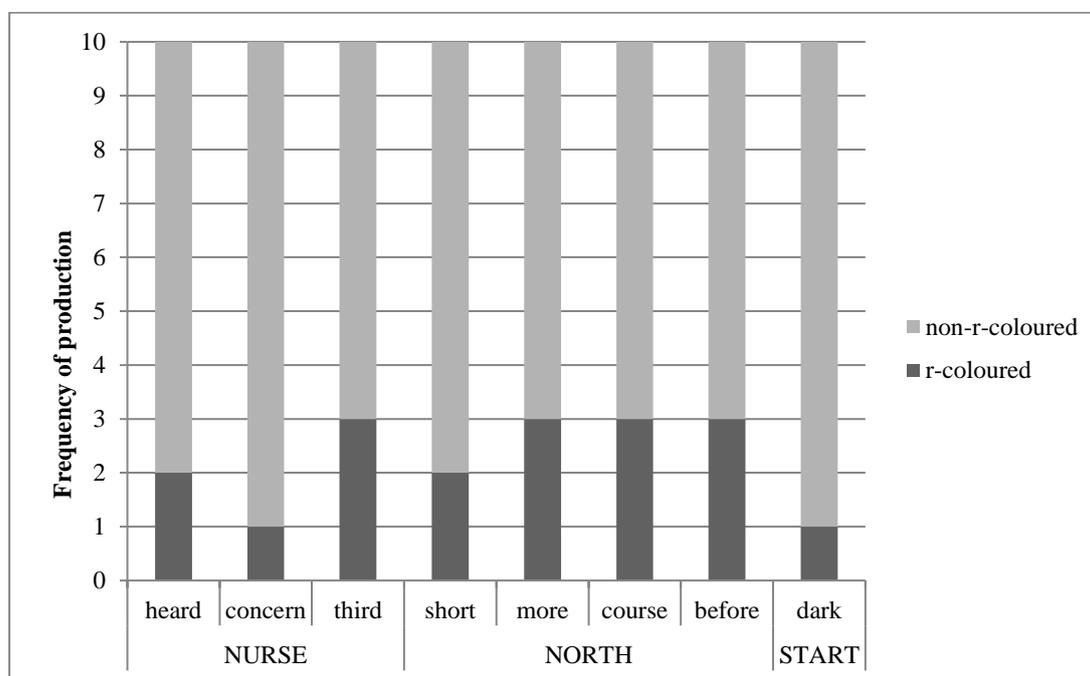


Figure 6. Frequency of token productions

| | <i>r</i> -coloured | non- <i>r</i> -coloured | Total |
|-------|--------------------|-------------------------|-------|
| NURSE | 6 (20%) | 24 (80%) | 30 |
| NORTH | 11 (27.5%) | 29 (72.5%) | 50 |
| START | 1 (10%) | 9 (90%) | 10 |

Table 5. Counts of tokens by phonetic context

Acoustic analysis

Table 6 shows the average F3 and standard deviation for each subject with the results presented as two major columns: non-rhotic versus rhotic. There seems to be little difference between the average F3 values of the two groups ($p=0.26$) but the smaller sub-sample of rhotic speakers limits the statistical power of the test.

Further analyses entail comparing the third formant of the 18 *r*-coloured tokens against the non-*r*-coloured ones (see Table 3 and Figure 6 for the numerical breakdown) and, following the earlier significant finding of an association between *r*-vocalisation and age, F3 values of the young versus the old groups.

| Rhotic | | | Non-rhotic | | |
|---------------|----------------|-----------|-------------------|----------------|-----------|
| | F3 (Hz) | SD | | F3 (Hz) | SD |
| S7 | 2579 | 250 | S1 | 2579 | 250 |
| S8 | 1985 | 88 | S2 | 1985 | 88 |
| | | | S3 | 3119 | 119 |
| | | | S4 | 2884 | 190 |
| | | | S5 | 3274 | 196 |
| | | | S6 | 2946 | 293 |
| | | | S9 | 2672 | 159 |
| | | | S10 | 2198 | 209 |
| Average | 2274 | 276 | Average | 2980 | 274 |

Table 6. Average F3 and standard deviations (SD) of rhotic versus non-rhotic speakers

As evident from Figure 7, the third formant values of the *r*-coloured tokens are, on average, lower than their coloured counterparts and the non-overlapping boxplots indicate a difference between the two groups of tokens. The difference is found to be statistically significant ($t= 9.77$, $df = 77$, two-tailed, $p < 0.0001$), which confirms the researchers' perceptual judgments of the absence or presence *r*-colouring in the tokens. This also suggests that the F3 values are a reliable measure of *r*-vocalisation.

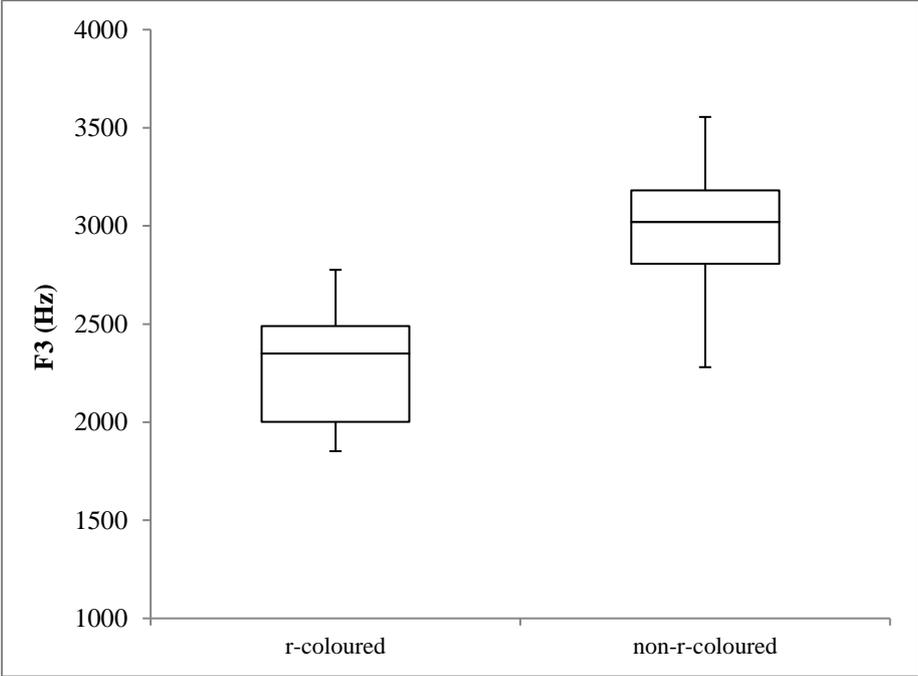


Figure 7. F3 values of *r*-coloured versus non-*r*-coloured tokens

Figure 8 presents the results of a between-group comparison of F3 values for all the tokens. From the figure it can be seen that the F3 values for the young group are noticeably lower in the region and the range of values is wider, which is expected given the considerable variability of *r*-vocalisations among the young speakers. This is in contrast to the old group whose relatively short box indicates data that is more compact. The boxplots show robust differences between the young and the old, and statistical comparison returned a significant effect ($t= 9.09$, $df = 78$, two-tailed, $p < 0.0001$).

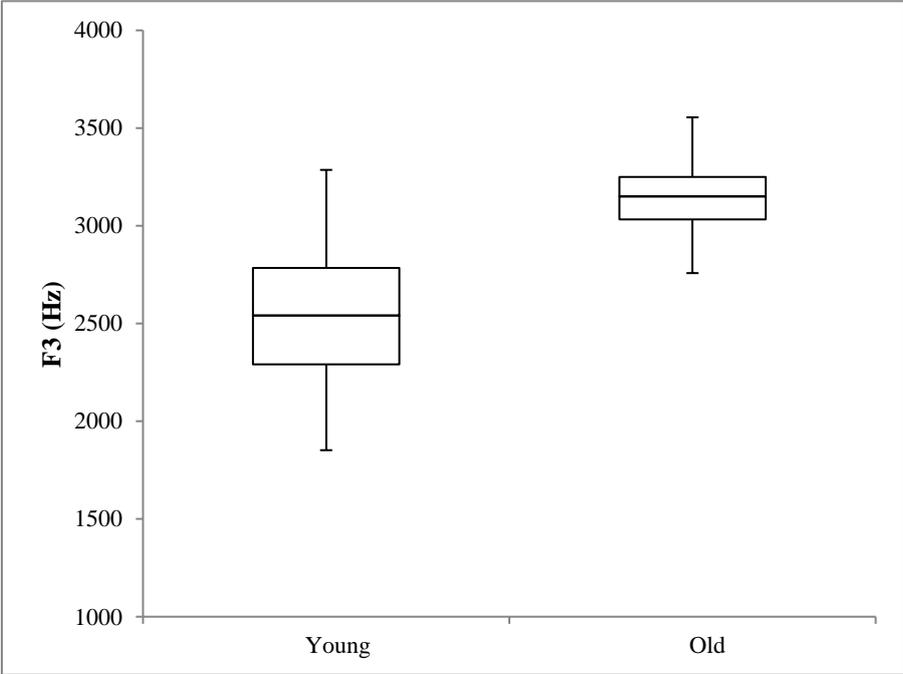


Figure 8. Age difference in F3 values

Kedayan and rhoticity

Given that one of the objectives of this study is to investigate the link between the subjects' L1 and *r*-vocalisation in L2 English, this section discusses and compares the subjects' responses in the questionnaire against the findings reported above. Of particular interests are the questions on their perception of Kedayan as either a first or second language, their perceived dominant code, and their self-rated proficiencies in spoken Kedayan and Brunei Malay. Of the latter, their responses are ranked as follows: (1) understand but cannot speak; (2) understand and can speak with great difficulty; (3) understand and speak but with some difficulty; (4) understand and speak comfortably, with little difficulty; and (5) understand and speak fluently like a native speaker. A summary of the results is presented in Table 7.

All five of the old respondents and only two of the young (S6 and S10) indicate native-like proficiency in Kedayan and, with the exception of S6, they all regard Kedayan as their first language. The remaining three of the young speakers claim to speak and understand Kedayan but with some difficulty. Of perceived dominant code, five women answered Kedayan, four of whom are from the old group and one from the young. The remaining gave Brunei Malay as the code they use daily, while two speakers (S6 and S7) wrote down English. This is not an unusual response as the number of young Bruneians who claim to speak English as their first language has been observed to be on the increase. A survey conducted recently on over 120 Bruneians by one of the authors (in preparation) reveals that English has taken over from Brunei Malay (57.5% versus 41.2%) as the preferred language for everyday use.

| Group | Subject | Classification | No. of <i>r</i> -coloured tokens | Proficiency in spoken Kedayan | Proficiency in Brunei Malay | Kedayan as first or second language | Dominant code |
|-------|---------|----------------|----------------------------------|-------------------------------|-----------------------------|-------------------------------------|---------------|
| Old | S1 | Non-rhotic | 0 | 5 | 4 | First | Kedayan |
| | S2 | Non-rhotic | 0 | 5 | 5 | First | Kedayan |
| | S3 | Non-rhotic | 0 | 5 | 5 | First | Kedayan |
| | S4 | Non-rhotic | 1 | 5 | 5 | First | Kedayan |
| | S5 | Non-rhotic | 0 | 5 | 5 | First | Brunei Malay |
| Young | S6 | Non-rhotic | 1 | 5 | 5 | Second | English |
| | S7 | Rhotic | 5 | 3 | 4 | Second | English |
| | S8 | Rhotic | 8 | 3 | 5 | Second | Brunei Malay |
| | S9 | Non-rhotic | 1 | 3 | 4 | Second | Brunei Malay |
| | S10 | Non-rhotic | 1 | 5 | 5 | First | Kedayan |

Table 7. Summary of interview responses and findings

A closer inspection of Table 7 reveals a pattern in which those who profess to be highly proficient in spoken Kedayan and who regard the dialect as both their L1 and dominant code for day-to-day interaction, display low instances of *r*-colouring in their speech. This is true for the older speakers who, with the exception of S4, have zero occurrences of *r*-vocalisation. When responses to the questions are varied, which is the case with the young speakers where many regard Kedayan as their second language, there seems to also be some degree of variability in their realisations of *r*.

On the outset, there appears to be a three-way link between lingua identity as a Kedayan, age and rhoticity: the older speakers have strong affiliations with their non-rhotic Kedayan dialect and consequently, display little to no *r*-colouring in their English pronunciations. The younger speakers, on the other hand, feel less strongly towards Kedayan and this lack of affinity leads to random variability in their *r*-realisations. However, it is not possible to confidently assert a direct connection between Kedayan lingua-identity with non-rhoticity.

This is because subjects S6 and S9, whose responses in the questionnaire indicate wavering attachment to the Kedayan dialect, produce the same number of non-*r*-coloured tokens as S4 and S10, both of whom regard themselves as proficient speakers and users of Kedayan. Having said that, it can be argued that age is a viable factor here, with the older subjects adhering to traditionalistic pronunciation behaviour influenced by their L1, and the young speakers displaying more robust speech patterns representative of the contemporary state of the Brunei community.

Discussion

This study sets out to investigate the assertions of earlier studies of a link between rhoticity in Brunei English and the L1. It has investigated rhoticity as realised by speakers of an ethnic group whose dialect is widely documented to be non-rhotic. Results from the study provide answers to the three research questions repeated here:

1. Does L1 contact transfer sufficiently explain *r*-vocalisation in L2 English of the Bruneians?
2. Would the use of the rhotic Brunei Malay alongside Kedayan yield results different for those whose dominant code is Kedayan?
3. What other constraints, if any, affect variation of rhoticity in BrunE?

Analyses of read speech among the Kedayan speakers indicate not only a relationship between their L1 with realisations of English postvocalic-*r*, but also suggest that the production of postvocalic-*r* interacts with age. The results also point to some implications of participants' perceptions of their preferred lingua identities on their *r*-realisations, but the findings for this are not definitive.

Of the young group, only two of the five are classified as rhotic speakers, which is an interesting finding given that recent research work on rhoticity in BrunE among university-aged students (i.e. Sufi, 2016; Nur Raihan, 2017) reveal a greater number of rhotic than non-rhotic speakers. Instances of *r*-coloured tokens are also relatively low in the present study among the young speakers (40%) when compared Nur Raihan's (73.4%). One factor that sets these speakers apart is their L1; whereas majority of the informants from the previous studies were ethnically Brunei Malay, the subjects of the present research are of Kedayan ethnicity, all of whom claim to speak Kedayan as either a first or second language. An almost complete absence of *r*-colouring is recorded in the older Kedayan speakers, and when these findings are assessed holistically, the high incidence of non-rhoticity points to one common denominator as a plausible explanation: the non-rhotic Kedayan dialect. The results here appear to corroborate the findings on Singapore English by Salbrina and Deterding (2010) and Sufi (2016) in which the high prevalence of non-rhoticity is postulated to be due to the subjects' non-rhotic mother tongues, i.e. Singapore Malay, Singapore Mandarin and Hokkien. Indeed, the effects of L1 articulatory norms on L2 productions and evidence of substratum phonological influence have been well documented in second language acquisition research (e.g. Ioup & Weinberger, 1987; Major, 1988; Olsen, 2010) with Van Coetsem (1988) labelling this contact phenomenon "imposition". However, this definition of imposition translates to the use of L1 features in order to compensate reduced proficiency in the L2. This does not seem to be the case with regard to BrunE (or Singapore English) because the presence or absence of postvocalic-*r* does not say anything about one's proficiency in L2 English. To put it differently, proficient (or non-proficient) Bruneian speakers of English can have accents that are either rhotic or non-rhotic, and one factor that determines to which of the two groups the speakers belong is their L1.

This finding has consequently raised some questions on the pronunciation-spelling effect as a reason for marked rhoticity in the English of the Bruneians (Nur Raihan, 2017). Had it been the case that the orthographic presence of *r* leads to rhoticity, it would, therefore, be expected for the Kedayan speakers to display similar pronunciation patterns as those reported in Nur Raihan's study. However, as the results of the current study show, there is a strikingly high rate of non-rhoticity in the Kedayan subjects, which indicates that the presence of *r* in the target words did not affect the pronunciation outcome. Spelling-pronunciation may account for other observed features of BrunE, such as having LOT instead of STRUT in *company* and realising the lateral in *salmon*, but whether it adequately explains the pervasiveness of rhoticity in BrunE is subject to debate.

The findings of this investigation also show significant differential rates of *r*-vocalisations between the two age groups, where the older speakers showcased lower overall instances of *r*-colouring than the younger ones. The increasing use of *r* with decreasing age seems to suggest a generational change at play, and that rhoticity is an associated feature of youth speech. Indeed, previous studies on rhoticity in BrunE have investigated the speech of Bruneians aged in their 20s, with Nur Raihan (2017) reporting a significant increase in rhoticity and *r*-colouring in the data taken 6-9 years apart from two similarly-aged groups of university students. It is possible that the patterns reported here represent a period of ongoing change towards rhoticity in BrunE, with Americanisation being one of several influencers for this trend (Salbrina & Deterding, 2010; Sufi, 2016; Nur Raihan 2016, 2017). A similar observation has been made in Singapore where Tan (2016) notes that the tendency to produce postvocalic-*r* is greater in the younger speakers than the older ones, and exposure to "highly Americanized English-language media in Singapore" has been offered as one reason for this change phenomenon.

Based on the findings reported in this paper, rhoticity appears to be an age-graded sociolinguistic variable, and it is hypothesised that it will stabilise in the Brunei community over time. If rhoticity is indeed manifestations of an innovation in the Brunei community, then future research should include a comparison of the modern-day linguistic situation with evidence from the past, whilst also taking into consideration the gender variable, and informants from various other L1s.

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