

# DRAVIDIAN VARIETIES OF INDIAN ENGLISH

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## Abstract

*In this study, I examine some phonetic characteristics of the English vowels and consonants produced by speakers of the four major Indian languages from the Dravidian family: Kannada, Malayalam, Tamil, and Telugu to determine how and why these varieties differ from each other and from General Indian English (CIEFL 1972) and whether there is in some sense a "Dravidian Indian English". I find that the vowel quality and quantity, and to some extent the type of rhotic, appear attributable to the Dravidian languages, while stop aspiration and pre-voicing, as well as the lack of post-vocalic rhotics, seem to follow the description of the model, GIE. Overall, while there are some characteristics common to the Dravidian varieties of Indian English, the case for a Dravidian English is yet unclear.*

## Introduction

Indian English began to gain recognition as a distinct variety of English over 40 years ago (Bansal 1969, CIEFL 1972, Kachru 1983). As described by Schneider (2007) in his Dynamic Model, English in India has reached at least stage 3, "nativisation", in which "the shape of English is a strongly localized one, a characteristic which is due to some extent to the fact that learners have approximated not inaccessible external models but rather local ones" (2007: 167). Indian English is arguably in stage 4 "endonormative stabilization", in which the localized norms provide the target for acquisition. Such stabilization is followed by differentiation among varieties, whether regional or social.

While some variation within Indian English (IE) has been reported and described, many studies focus on the English of speakers from a single first language (L1), and/or on only one aspect of that English, as in, for example, Maxwell and Fletcher 2010, Das 2001, Jose 1992, and Pandey 1980, so that detailed studies of comparable data from speakers of different Indian L1s are still lacking. I examine here some phonetic characteristics of the English produced by speakers of the four major Indian languages from the Dravidian language family: Kannada, Malayalam, Tamil, and Telugu. By looking at vowels and consonants, I examine how and why these varieties differ from each other and from General Indian English (CIEFL 1972) and try to determine whether there is in some sense a "Dravidian Indian English", as I have previously argued for a "Tibeto-Burman Indian English" (Wiltshire 2005).

The four languages are the most widely spoken Dravidian languages, and each is the official language of its state. Table 1 presents the number of speakers of each L1 from the 2001 census, as well as from 1991; the 2001 census did not include the number who reported knowing English as a second or third language, so these are provided here from the 1991 census. As all these numbers are self-reports, they may

not be fully accurate and are likely to be overestimates of the fluent English speakers at the time. Vijayanunni (2000), reporting on the 1991 census, calculates that of the speakers of all scheduled languages as an L1, approximately 11% speak English as a second or third language. Table 1 shows that, among speakers of these four Dravidian L1s, the percentage of the population speaking English averages to approximately 14 percent. These are not out of line with some estimates in the literature; Crystal (1997) reports that estimates range from 3-20%, depending on how “fluent” a speaker must be to qualify.

<i>Dravidian Language</i>	<i>Where spoken Primarily</i>	<i>Total # speakers of L1 in 2001<sup>1</sup></i>	<i>Total # speakers of L1 in 1991<sup>2</sup></i>	<i># with English as 2<sup>nd</sup> language (1991)</i>	<i># with English as 3<sup>rd</sup> language (1991)</i>
Kannada	Karnataka	37,924,011	32,753,676	3,091,484	832,763
Malayalam	Kerala	33,066,392	30,377,176	6,692,407	704,134
Tamil	Tamil Nadu	60,793,814	53,066,368	7,092,118	355,490
Telugu	Andhra Pradesh	74,002,856	66,017,615	5,460,642	1,867,606
Totals		200,787,073	182,214,835	22,336,651	3,759,993

**Table 1**  
**Number of Speakers of L1s and Number of those knowing English**

### Methodology

Five proficient English speakers from each L1 background were recorded reading a word list, sentences, and a paragraph, and then answering questions from an IE speaking interviewer, a native speaker of Telugu. The subjects were of similar ages, ranging from 20-27, and similar education levels, either graduate or post-graduate. The age range was chosen so that subjects were raised in a post-1980s environment of increasing acceptance of General Indian English as a valid norm, yet were old enough to be highly educated and proficient speakers of English. Most began learning English in KG, except two Tamil speakers and all five Telugu speakers, who began later (further details are available in the Appendix). Recordings were made in Hyderabad, India, on a Sony TCD-D8 DAT player using a head-mounted Shure SM10A microphone, then digitized into a CSL MODEL 4400.

The data was transcribed, with use of Praat 4.0.28 to verify transcriptions and to measure formant frequencies and durations for the vowels and VOT/aspiration for

<sup>1</sup> 2001 census data accessed February 12, 2013 from: [http://censusindia.gov.in/Census\\_Data\\_2001/Census\\_Data\\_Online/Language/part1.htm](http://censusindia.gov.in/Census_Data_2001/Census_Data_Online/Language/part1.htm).

<sup>2</sup> 1991 census data accessed May 18, 2003 from <http://www.censusindia.net/>.

the consonants. The vowels and consonants were compared to the inventories of their L1s and to General Indian English (CIEFL 1972). For vowels, the first two formants of the monophthongs were measured and plotted to compare inventories; the durations of vowels that were similar in quality were also measured to determine if length was used contrastively. For consonants, the following phonetic features were examined: VOT for both voiced (b) and voiceless (p, t/ʈ, k) word-initial stops, the occurrence (pre- or post-vocalically) and type of rhotics used, and the occurrence and frequency of labiodental fricatives and glides/labio-velar glides. The vowels and consonants show transfer from the L1s in all groups, and often when the L1s share family resemblances, so do their Englishes. Aspiration and prevoicing indicate a role for the model, General Indian English, while the use and form of rhotics and glides shows similarities across the four groups.

### Vowels

Based on the symbols given in CIEFL (1972), the system of contrasting monophthongal vowels in General Indian English is provided below in Table 2. There are twelve main vowels, with the vowels in parentheses indicating common variants (personal or regional), which CIEFL considers within the range of the prestigious dialects.

	<i>Front</i>	<i>Central</i>	<i>Back</i>
<i>Close</i>	i: ɪ		u: ʊ
<i>Close-Mid</i>	e: (ɛ:)	əɾ (ə:r) ə	o: ɔ:
<i>Open-mid</i>	ɛ		(ɔ, ɔ:)
<i>Open</i>	æ	a: (a:)	ɒ (:)

**Table 2**  
**General Indian English Monophthongs (CIEFL 1972)**

In this “target” system of vowels, we find contrasts in both quality and quantity for the high or close vowels; that is, the vowel in *heat* is both longer and more tense than the vowel in *hit* (/i:/ vs. /ɪ/); similarly for *hoot* vs. *hook* (/u:/ vs. /ʊ/). The description of General Indian English in CIEFL (1972) mentions that there is no contrast between the vowels of *caught* and *cot*, as is common in American Englishes (vs. British Englishes which usually do have the contrast), and that the model allows for both rhotic and non-rhotic varieties. In non-rhotic varieties, an ‘r’ sound is not produced after vowels syllable-finally, resulting in a variety of diphthongs.

In order to evaluate vowel systems, I am looking here at the monophthongs only, and in order not to prejudge the vowel qualities of different varieties, I will refer to the vowels using keywords (as in Wells 1982). These keywords were chosen to represent the contrasts of General Indian English, with the addition of using both *cot*

and *caught*, to check whether they do not contrast, as predicted. For each keyword, the first and second formants were measured in the middle of the vowel for the female speakers of Kannada, Malayalam, and Tamil, and for the male speakers of Telugu. Male and female formant values may not be comparable, so the majority type was chosen for each L1. The resulting system of contrasts in quality in English are compared to the L1 inventories below, and length is then discussed separately.

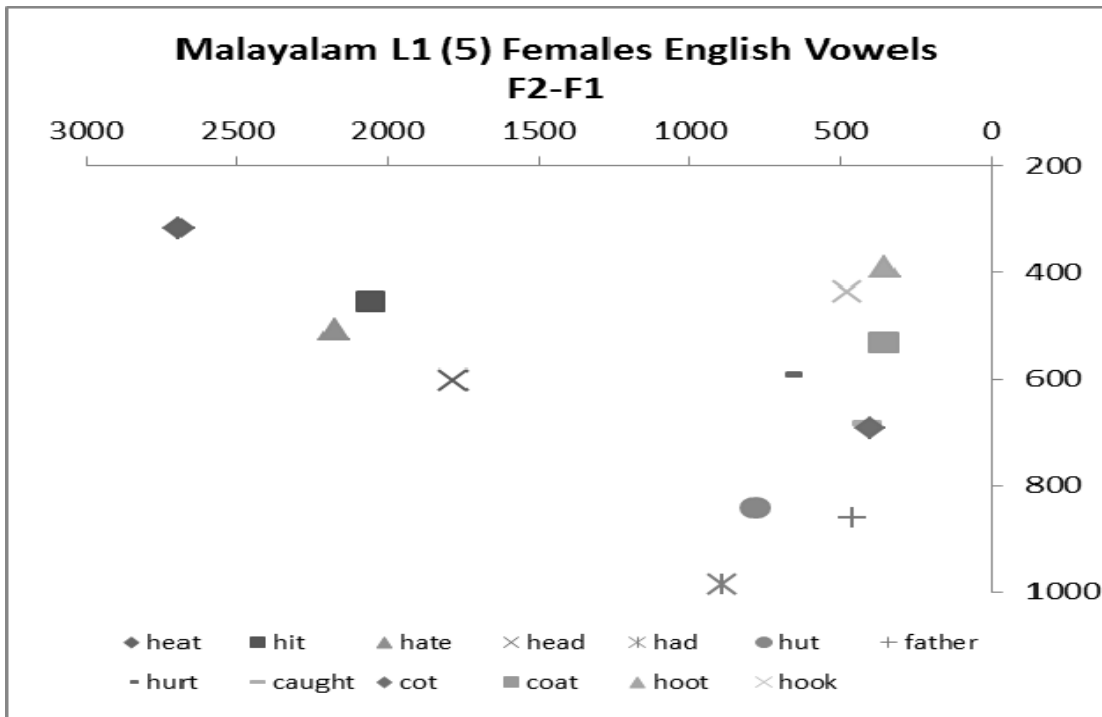
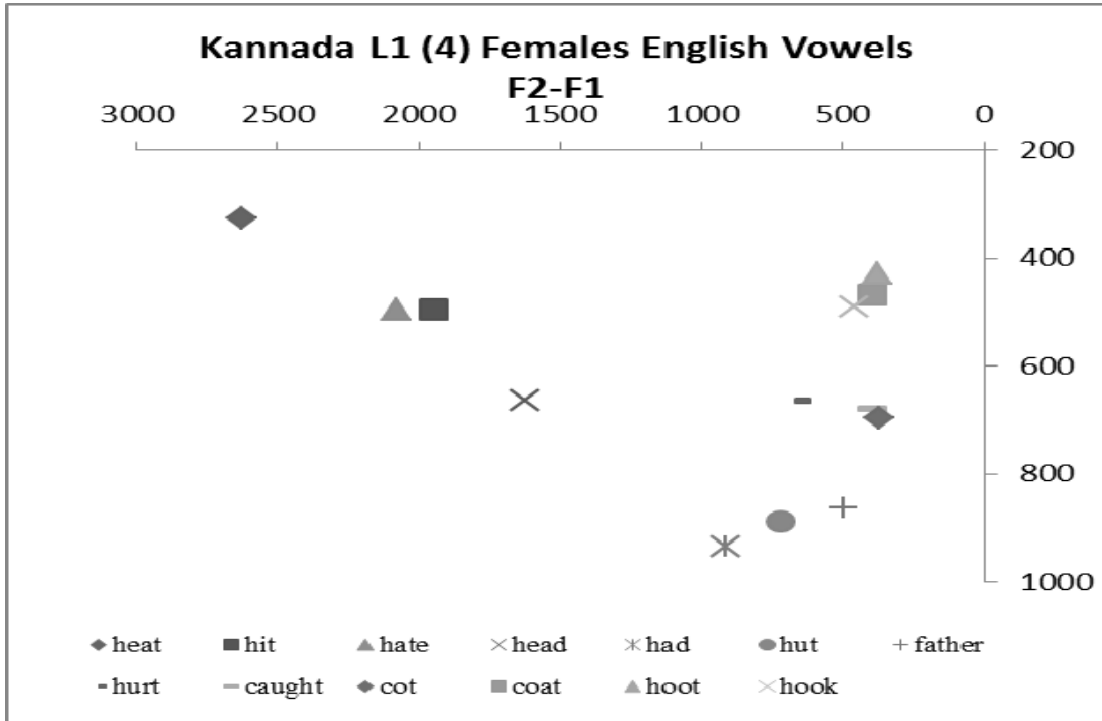
The first languages of the speakers in the study generally have simpler vowel inventories than the target GIE. Phonemically, each has a long and short pair of front and back high vowels, front and back mid vowels, and central low vowels; some have a short central ə type vowel as well, while Telugu and Kannada have an additional front low vowel. All four are reported to distinguish vowels of the same quality by the use of vowel length, a general characteristic of Dravidian and Proto-Dravidian (Krishnamurti 2003, Reddy 2003).

<i>Kannada</i> (Sridhar 1990, Rajapurohit 2010)			<i>Malayalam</i> (Asher & Kumari 1997)			<i>Tamil</i> (Christdas 1988, Balasubramanian 1972-3)			<i>Telugu</i> (Reddy 1999; Krishnamurti 1957)		
i: i		u: u	i: i		u: u	i: I		u: ʊ	i: i		u: u
e: e		o: o	e: e		o: o	e: e		o: o	e: e		o: o
				ə			ə				
æ	a: a			a: a			ɐ: ɐ		æ:	a: a	

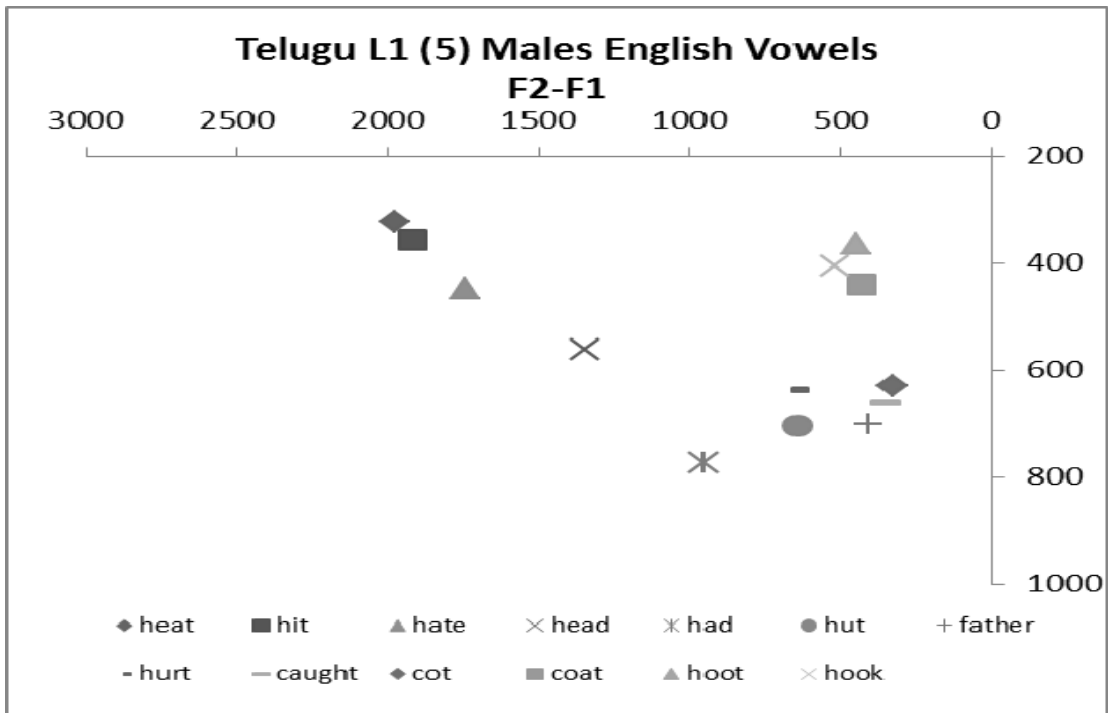
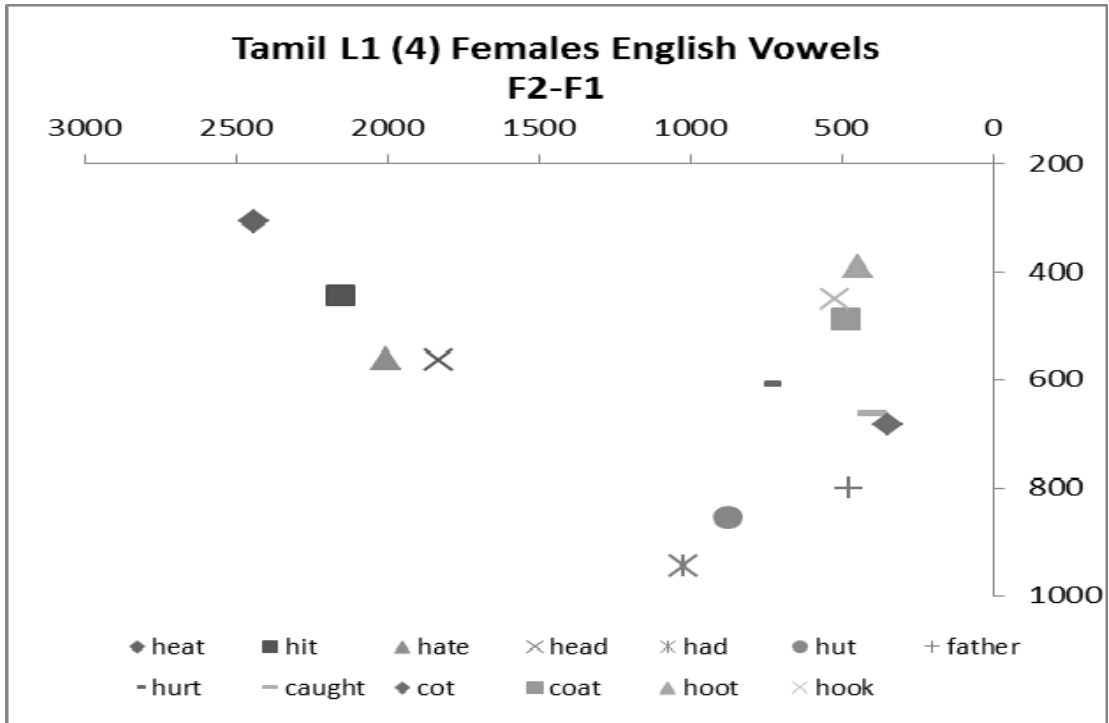
**Table 3**  
**Monophthong inventories in the L1s**

The first two formants of the vowels read by the four groups of speakers were measured and plotted in Figures 1-4, with F1 inversely plotted on the vertical to represent height, and F2-F1 on the horizontal as an indication of frontness/backness. The vowels are labelled by the thirteen target words being read, so as to not prejudge the quality of the vowel that would be used. Reports are for females from Kannada, Malayalam, and Tamil, and for males from Telugu, so that the largest set of speakers could be reported without mixing males and females in a chart.

The charts reveal that in all four varieties, some distinctions among GIE vowels are not consistently made. For the front vowels, Kannada and Malayalam speakers share a similar pattern, producing *heat* distinctly from *hit* and *hate*, but producing *hit* and *hate* very similarly to each other. The vowel for *head* is also distinct, resulting in a three-way contrast among the non-low front vowels.



**Figures 1 & 2**  
**Contrasts of monophthongs in Kannada and Malayalam**



**Figures 3 & 4**  
**Contrasts of monophthongs in Tamil and Telugu**

For Tamil and Telugu speakers, we see different patterns. Tamils distinguish *heat* from *hit*, and both from *hate* and *head*, but *hate* and *head* are produced much the same. Telugus, on the other hand, produce *heat* and *hit* with nearly the same quality, while distinguishing them from *hate* and *head*, which are also distinct from each other. All four groups thus have a three-way distinction among non-low front vowels, and furthermore, all four have a distinct low central vowel for *had*.

Some of the back vowel patterns show similarities among all four groups, although the Malayalam group tends to keep six of the seven vowels distinct. The high back vowels of *hoot* and *hook* are close together in all four groups, although they overlap only for the Telugu speakers. The vowel of *coat* overlaps that of *hook* except for Malayalam L1 speakers and, as in the GIE model, the vowels of *caught* and *coat* overlap for all groups. The vowels of *hurt*, *hut*, and *father* are all distinct from each other, as well as from the vowels in *cot/caught* and the higher vowels of *hoot*, *hook*, and *coat*. Thus the back vowel systems show a five (Kannada, Telugu), six (Tamil), or seven (Malayalam) way contrast in quality, with a shared lack of any *cot/caught* distinction and a common tendency in three of the four to produce *hoot*, *hook*, and *coat* with similar qualities.

As it appears that some contrasts in monophthongs are not made by vowel quality, I also measured the duration of vowels to see if contrasts are made by differences in length, as used in the L1s of these speakers. In Table 4 below, vowels appear in bold if the vowel is more than one-third longer than a vowel of similar quality. All four L1s appear to use vowel length to distinguish the vowels in *heat* vs. *hit*, and *hate* vs. *head*. Malayalam and Tamil have a great difference in length for the vowels in *had* vs. the first vowel of *father*, while Kannada, Malayalam, and Telugu have similar differences in length for the vowels of *hoot* vs. *hook*. By these measures, the vowel of *coat* appears to belong with the longer vowels. Although the recordings were not made with any control for rate, these measures do support the possibility that length is used for contrast in Dravidian Indian Englishes, just as it is known to be used in Dravidian languages (Krishnamurti 2003, Reddy 2003).

<i>Item &amp; GIE vowel</i>	<i>Kannada</i>	<i>Malayalam</i>	<i>Tamil</i>	<i>Telugu</i>
heat - [i:]	190	190	182	172
hit - [ɪ]	82	76	89	74
hate - [e: (ɛ:)]	205	230	213	182
head - [ɛ]	126	125	148	109
had - [æ]	228	256	272	188
father - [a:(ɑ:)]	170	187	194	157
coat - [o:]	203	206	234	180
hoot - [u:]	168	183	193	148
hook - [ʊ]	89	86	158	85

**Table 4**  
**Vowel Duration in Milliseconds, for English produced by the Four L1 Groups**

## Consonants

The consonants of General Indian English, according to CIEFL (1972) are given in Table 5 below. As with the vowels, the symbols in parentheses represent alternative but acceptable pronunciations. The “/” is used to indicate that the sounds vary allophonically.

	<i>Labial</i>	<i>Labio-Dental</i>	<i>Dental</i>	<i>Alveolar</i>	<i>Post Alveolar</i>	<i>Retroflex</i>	<i>Palatal</i>	<i>Velar</i>	<i>G l o t t a l</i>
<i>Stop</i>	p (p <sup>h</sup> ) b		(t) t <sup>h</sup> d			t (t <sup>h</sup> ) d		k (k <sup>h</sup> ) g	
<i>Affricate</i>					tʃ (tʃ <sup>h</sup> ) dʒ				
<i>Nasal</i>	m			n				ŋ	
<i>Fricative</i>		f		s z	ʃ				h
<i>Approx</i>	ʊ/w			r			j		
<i>Lat. Appr</i>				l		(l)			

**Table 5**  
**Consonant Inventory of General Indian English (CIEFL 1972)**

In previous descriptions of Indian English, several common observations are made. The distribution of aspirated and unaspirated voiceless stops, which is systematic in some varieties of English, has been described as either unsystematic or all unaspirated (Nair 1996, Coelho 1997). Table 5 shows the unaspirated variant as common, except in the case of dentals where the unaspirated version is in parentheses. While both [ʊ/w] are listed in Table 5, the use of [ʊ] rather than [w] is reported to be widespread (Saghal & Agnihotri 1988). Furthermore, the “r” listed in the table is generally a flap or a trill in pre-vocalic position (Bansal 1976, Saghal & Agnihotri 1988, Coelho 1997). Taking these observations one-by-one, I evaluate the consonants of my Dravidian L1 subjects, comparing their Indian English to their L1s.

**Voicing/Aspiration:** In the L1s, Malayalam, Telugu, and Kannada are reported to use a four way contrast of voicing/aspiration, especially when borrowings are included or speakers of educated varieties are being described, as here. Tamil, on the other hand, tends to have fewer, or even no, contrasts; at its most basic, voicing and aspiration do not contrast, but a phoneme such as /p/ is realized as [p], [p<sup>h</sup>], and [b] in various contexts. On the other hand, literate speakers of Tamil do use a voicing contrast such as [p] vs. [b] word-initially, due to a large number of borrowed words with initial voiced stops (such as [b]) in common use (Reddy 2003), and even voiced aspirates may appear in learned contexts or for borrowed words. Inventories for the L1s are provided in Table 6.



<i>Stops in the L1s</i>	<i>Labial</i>	<i>Dental</i>	<i>Alveolar</i>	<i>Retroflex</i>	<i>Palatal</i>	<i>Velar</i>
<i>Kannada</i>	p <sup>h</sup> p b b <sup>h</sup>	t <sup>h</sup> ṭ ḍ ḍ <sup>h</sup>		t <sup>h</sup> ṭ ḍ ḍ <sup>h</sup>	c <sup>h</sup> c ɟ ɟ <sup>h</sup>	k <sup>h</sup> k g g <sup>h</sup>
<i>Malayalam</i>	p <sup>h</sup> p b b <sup>h</sup>	t <sup>h</sup> ṭ ḍ ḍ <sup>h</sup>	t	t <sup>h</sup> ṭ ḍ ḍ <sup>h</sup>	c <sup>h</sup> c ɟ ɟ <sup>h</sup>	k <sup>h</sup> k g g <sup>h</sup>
<i>Tamil</i>	p b	ṭ ḍ		ṭ ḍ	c ɟ <sup>3</sup>	k g
<i>Telugu</i>	p <sup>h</sup> p b b <sup>h</sup>	t <sup>h</sup> ṭ ḍ ḍ <sup>h</sup>		t <sup>h</sup> ṭ ḍ ḍ <sup>h</sup>	c <sup>h</sup> c ɟ ɟ <sup>h</sup>	k <sup>h</sup> k g g <sup>h</sup>

**Table 6**  
**Phonemic Stop inventories in the L1s**

There have been some phonetic descriptions of aspiration in some of the L1s. Andronov (1969) says aspiration of voiceless stops in Kannada "varies considerably: not infrequently it is either very weak or is absent altogether" (1969: 21). Lisker and Abramson (1964) measure the Voice Onset Time (VOT) of Tamil voiced and voiceless stops, and find the voiced stops have a long lead time: 62ms for /g/, 78ms for /d/, and 74ms for /b/; the voiceless have little aspiration and short VOTs: 24ms for /k/, 8ms for /t/, and 12ms for /p/, consistent also with Balasubramanian (1975) who reports short VOTs for the voiceless stops. Reddy (1992) measures VOTs for all four kinds of stops in Telugu, and averages across places of articulation to get 83ms for voiceless aspirated, 24ms for voiceless unaspirated, 7 for voiced unaspirated, and 81 for voiced aspirated.

Although the L1s differ in the contrasts in voicing/aspiration for stops, all speakers made a consistent distinction between voiced and voiceless stops in English. Measures of aspiration (positive VOT) were taken from words of English with voiceless stops in word initial position, and measures of prevoicing (negative VOT) from 16 words beginning with [b] (Table 7).

<i>Aspiration (tokens)</i>	<i>Kannada</i>	<i>Malayalam</i>	<i>Tamil</i>	<i>Telugu</i>
p (15)	32	26	49	40
t/ṭ (20)	22	15	40	27
k (30)	44	39	72	50
overall avg.	34	29	57	41
<i>Prevoicing</i>				
b (80)	(-)96	(-)83	(-)97	(-)94

**Table 7**

<sup>3</sup> While these are often listed with the palatals for symmetry, they are phonetically usually alveopalatal affricates.

**Mean VOT (ms) for L1 Groups producing [p t/ t̥ k] and [b] in Initial Position  
in Isolated English Words (Number of Tokens per L1 in Parentheses)**

While all speakers aspirated some of the voiceless stops, the Tamil L1 speakers showed the greatest tendency towards consistent aspiration of voiceless stops, while the Malayalam L1 speakers had the least, and hence the shortest VOTs. Speakers from all four languages heavily prevoiced the voiced stops. Thus regardless of the extent (or lack) of aspiration of voiceless stops, a distinction is clearly made between p/b, t/d, k/g.

The GIE model is said to tend towards unaspirated stops, with free variation. While the variation is clearly present, there is also more aspiration than might be expected from the L1 measures, particularly for the Tamil speakers. A potential explanation, suggested in Wiltshire and Harnsberger (2006), is that the presence of a contrast between aspirated and unaspirated stops in the L1s of India may make learners assume that an unadorned stop such as “p” is intended to convey the unaspirated phoneme, while the lack of a phonemic difference between aspirated and unaspirated stops in Tamil does not convey the same restriction to Tamil English speakers.

For the voiced consonants, on the other hand, the long lead time of prevoicing resembles that of Tamil, but not of Telugu. Similarly, Wiltshire and Harnsberger (2006) found that Gujarati speakers of English had large negative VOTs for their voiced stops, greatly exceeding that of Gujarati. The heavily voiced stops in word-initial position may be a characteristic of GIE.

**Glides:** The Dravidian L1s do not make distinctions between bilabial [w] and labiodental glides [ʋ], nor do they have native labiodental fricatives [v/f]. All have a labiodental glide [ʋ], which in some cases varies allophonically with a labiovelar [w] or bilabial glide. For example, Malayalam has [w] as an allophone when /ʋ/ is preceded or followed by a back vowel, or preceded by a consonant (Jose 1992), while Kannada has [ʋ] before front vowels, [w] before back vowels, and [β] elsewhere (Andronov 1969). Tamil has epenthetic [w] which appears before round vowels, but otherwise has [ʋ] (Christdas 1988).

The General Indian English target (Table 5) does not include any voiced labiodental fricative [v], but it does include both [ʋ/w], with the “/” intended to indicate that the two sounds vary allophonically. Furthermore, as mentioned above, the use of [ʋ] rather than [w] is reported to be widespread (Saghal & Agnihotri 1988). To determine whether that is true for the speakers of Dravidian L1s, six words with each spelling (w or v) were transcribed from all five speakers of each L1, for a total of 30 tokens for each. Although the data are limited, some preliminary patterns are emerging: for Kannada, Malayalam, and Telugu speakers, there is a fairly strong distinction between sounds used for the “w” spelling, primarily [w] vs. sounds used for the “v”, both [ʋ] and [v]. Only the Tamils use the labiodental approximant for most, although one speaker followed the pattern of consistently used [w] for words spelled with “w” and [ʋ/ʋ] for words spelled with a “v”. The word list contained

words spelled with “w” before front vowels (*weather*) as well as words spelled with v before back-rounded vowels (*volunteer*), so they were not merely following L1 patterns.

	<i>Kannada</i>			<i>Tamil</i>			<i>Telugu</i>			<i>Malayalam</i>		
	<i>w</i>	<i>v</i>	<i>v, f</i>	<i>w</i>	<i>v</i>	<i>v, f</i>	<i>w</i>	<i>v</i>	<i>v, f</i>	<i>w</i>	<i>v</i>	<i>v, f</i>
<i>w spelling</i>	27	3	0	14	16	0	23	7	0	24	6	0
<i>v spelling</i>	5	15	10	4	21	5	1	22	4	0	25	5
<i>totals</i>	32	18	10	18	37	5	24	29	4	24	31	5

**Table 8**  
**The Use of w /v/ v, f in 6 Words spelled with w or v**

In previous studies, Gujarati English showed free variation between [v] and [w], with [v] more frequent (Wiltshire & Harnsberger 2006), and Saghal & Agnihotri (1988) report very limited use of [w] (20-33% of the time) for all their speakers, although they did not specify the mother tongues for those speakers. Since their data was gathered in Delhi, it is possible that they are primarily native speakers of Indo-Aryan languages, as were the Gujaratis in Wiltshire and Harnsberger (2006), and that the Dravidian speakers have developed their own pattern of making a contrast in their English.

**Rhotics:** All the L1s have an alveolar tap rhotic [ɾ]. In addition, Kannada is reported to have a trill [r] (Andronov 1969), Malayalam has a retroflex tap [ɽ], and Tamil has a retroflex continuant [ɻ]. While the model allows for rhotic and non-rhotic varieties (CIEFL 1972), IE has also been described as rhotic, for example when Saghal and Agnihotri (1988:54) write that Indian speakers are said to use a flapped or trilled /r/ in all positions. On the other hand, they also found that post-vocalic rhotic use was low (12%) among the most prestigious, English-medium educated students, vs. 62% for students educated in the vernacular.

For each speaker in the current study, the rhotics from 34 words with the rhotic in pre-vocalic position and 42 words with rhotics post-vocalically were transcribed, using a spectrograph from Praat to verify where necessary. The results are presented in Table 9. Clearly, most rhotics were pronounced pre-vocalically, and most were not pronounced post-vocalically. The percentage of post-vocalic use (7-15%) fits with the high prestige varieties of Saghal and Agnihotri (1988), and may reflect the high level of education of the subjects, rather than any particular Dravidian tendency.

<i>Rhotics in L2</i>	<i>Kannada</i>	<i>Malayalam</i>	<i>Tamil</i>	<i>Telugu</i>
<i>Prevocalic</i>	98% n=169	99% n=170	100% n=169	97% n=169
<i>Modal rhotic</i>	ɾ (52%)	ɾ (49%)	ɻ (43%)	ɾ (54%)
<i>Others</i>	ɻ (30%), r (10%),	ɻ (21%), ɽ (10%)	ɾ (36%), ɻ (12%),	ɻ (21%),

	ɹ (5%), ø (2%), ɻ (1%)	ɹ (9%), r (8%) ɻ (2%) ø (<1%)	ɹ (7%), ɻ (2%) r (1%)	ɹ (8%), ɹ (4%), r (9%), ɻ, ɹ (<1%)
<i>Postvocalic</i>	12% n=210	7% n=210	15% n=206	15% n=208
<i>Modal rhotic</i>	ø (88%)	ø (93%)	ø (85%)	ø (85%)
<i>Others</i>	ɹ (6%), ɻ (3%), r (2%), r/ɹ/ɹ (<1%)	ɹ (4%), ɹ, ɻ (1%)	ɹ (9%), r (2%), ɻ (3%)	r (8%), ɹ (4%), r, ɹ (1%)

**Table 9**  
**The Use and Variety of Rhotics**

Prevocally, we find a great deal of variation in the rhotics used, even by individuals. The most common rhotic for Kannada, Malayalam, and Telugu speakers was the tap [ɹ], which was also fairly widespread in Tamil. However, the Tamil speakers had a greater tendency to use an approximant, perhaps reflecting the presence of the continuant in their L1. The Tamil-style raised approximant also appeared in the English of all Tamil speakers, indicating transfer as this is not part of the GIE system.

Jose (1992) describes Malayalam English as tending to have approximant [ɹ] finally, flap after consonants, trills initially, and partially devoiced taps “in places where RP /r/ is realized as voiceless approximant” (1992: 161). More data would be needed to evaluate whether the variation in the appearance of rhotics in these data conform to such a pattern.

**Conclusions**

Looking at segments in the English of these four groups of speakers, we see the role of the most important factors in the development of Indian English varieties: transfer from L1 and the target English. The chart below summarizes findings so far:

	<i>Kannada</i>	<i>Malayalam</i>	<i>Tamil</i>	<i>Telugu</i>
front lack of contrast	e:/ɪ	e:/ɪ	e:/ɛ	i:/ɪ
back lack of contrast	u:/ʊ/o:?	u:/ʊ?	o:/ʊ?	u:/ʊ/o:?
quantity/length contrast	yes	yes	yes	yes
stop aspiration	rare	rare	common	common
stop pre-voicing	yes	yes	yes	yes
rhotics, type	r/ɹ	r/ɹ	ɹ/r	r/ɹ
rhotics, postvocalic	no	no	no	no

v/w contrast	yes	yes	no?	yes
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**Table 10**  
**Summary of Characteristics examined in Dravidian Varieties of English**

The vowel quality and quantity characteristics appear attributable to the L1s. Stop aspiration and pre-voicing seems to follow the description of the model, GIE. The type of rhotics to some extent is based on the L1, while their avoidance postvocally can be attributed to following the high prestige variety of the IE model. The development of a contrast between /v/ and /w/ seems to be newly emerging.

While there are some characteristics common to the Dravidian varieties of Indian English, such as vowel length and rhotic types, the case for a Dravidian English is far from clear. Anecdotally, speakers of Indian English can generally guess the L1 of other Indian English speakers; there is even some evidence that speakers of other varieties of English can distinguish northern and southern varieties of Indian English (Hindi vs. Telugu L1 speakers, in Redford and Sirsa, to appear). Clearly there is a great deal of further work to be done on segmentals, as well as suprasegmentals such as stress and rhythm which I have not begun to address here, which will give us a more complete picture of how these varieties differ, and why.

#### **Appendix subjects recorded**

- Kannada:** 1M/4F, ages 21-23, two from Bangalore lifelong and one moved there when 1 year old, 2 from Shimoga; parents' native tongue Kannada; parents commonly speak English and Hindi, with a few speakers of Tamil, Malayalam and Telugu as well. Started English: two in LKG (age 3) one in KG (4), one at 1<sup>st</sup> standard, one at age 6; all speak Hindi as well.
- Malayalam:** 5F, ages 20-23, all from Trichur, Kerala; parents' native tongue Malayalam; parents commonly speak Hindi and English as well; all started English in LKG-UKG (3-5 yrs old); four speak Hindi also.
- Tamil:** 1M/4F, ages 21-24, from central Tamil Nadu; parents all speak Tamil as L1; only 2 had parents who spoke English. Three started English from LKG (age 3), in English medium schools, one from 3<sup>rd</sup> standard (age 8), and one from 10<sup>th</sup> standard (age 14) but throughout BA.
- Telugu:** 5M, ages 23-27, from coastal districts of Andhra; parents L1 Telugu, only 1 father knew English as well. Began learning English 5<sup>th</sup>, 7<sup>th</sup>, 6<sup>th</sup> standard, one in college, one as graduate. All speak Hindi also.

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