

A multi-dimensional approach to English for Global Communication: Pragmatics of International Intelligibility

PAROO NIHALANI(Department of English, Oita University)

ellparoo@cc.oita-u.ac.jp

Abstract

The consonant system of English is relatively uniform throughout the English-speaking countries. Accents of English are mainly known to differ in terms of their vowel systems as well as in the phonetic realisations of vowel phonemes. The results of an acoustic study of vowel phonology of Japanese English, Singapore English and Indian English are presented, and an attempt is then made to compare the vowel phonology of these non-native varieties with that of Scottish English and RP. Various native varieties of English are thus shown to differ from each other in major ways, as much, perhaps, as the non-native varieties differ from the native varieties. Nevertheless, native speakers of English appear to be mutually intelligible to a degree that does not extend to non-native varieties. Obviously there are features that various native accents have in common which facilitate their mutual intelligibility, and these features are not shared by non-native accents. It is proposed that the foreign learner adopt certain core features of English in his pronunciation if he is to use English effectively as an international language. The common core that is significant in the communication process will be discussed. In conclusion, some pragmatic implications for the English language education in the new millennium will be articulated.

1. INTRODUCTION

In recorded history there has never been a language to match the present global spread and use of English (Stevens 1982, Quirk and Widdowson 1985, Kachru 1986, Smith 1983, 1986). It has been estimated that there are as many as 2 billion people who have some ability in English. Whatever the total number, non-native users of English outnumber the native users. According to Kachru (1985), the current sociolinguistic profile of English may be viewed in terms of three concentric circles. These circles represent the types of spread, the patterns of acquisition, and the functional allocation of English in diverse cultural contexts. The Inner Circle refers to the traditional cultural and linguistic bases of English. The Outer Circle represents the institutionalized non-native varieties (ESL) in the regions that have passed through extended periods of colonization. Even if only 10 percent of the population in the Outer Circle uses English, it adds up to about 110 million. The Expanding Circle includes

regions where the performance varieties of the language are used essentially in EFL contexts (i.e., varieties that lack official status and are typically **restricted** in their uses).

It is well known that the consonant system of English is relatively uniform throughout the English-speaking countries. Accents of English, however, are mainly known to differ in terms of their vowel systems as well as in the phonetic realizations of vowel phonemes. Attempts have been made in the ESL context to codify non-native accents (Bansal 1966; Tay 1982; Tiffen 1974) spoken in the 'Outer Circle'. Very little is available by way of scientific description of English as a Foreign Language used in the 'Expanding Circle'. This paper draws heavily on the data from English spoken in Japan that, according to Kachru, represents 'the Expanding Circle'. The paper is divided into three parts. To begin with, I present the results of an acoustic study of vowel phonology of Japanese English (hereinafter called **JE**), and then compare it with that of Standard Singapore English and Educated Indian English – varieties of English spoken in the 'Outer Circle'. I will then attempt an interesting parallel that obtains between the vowel phonology of these non-native varieties and that of **RP** and Standard Scottish English- two native varieties spoken in the 'Inner Circle'. In conclusion, some pedagogic implications for the planning of English pronunciation courses will be articulated.

2. METHODOLOGY

The data on vowels in Japanese English has been collected from 6 subjects who are undergraduate students of Oita University in Japan. The subjects chosen are adult Japanese (4 male and 2 female students) between eighteen and twenty years of age. Each speaker was asked to read a list of words in the carrier frame 'Say C-V-C again' where C represents a consonant and V represents a vowel. The list contained words representing 10 potentially accented simple vowels (monophthongs) as given below:

- | | |
|---------|---------|
| 1. PETE | 6. PUT |
| 2. PIT | 7. PORT |
| 3. PET | 8. POT |
| 4. PAT | 9. BOOT |
| 5. PART | 10. BUT |

It is hoped that the carrier frame will provide a context and ensure that speech resembles a **natural** spoken language. The recording was done under ideal lab conditions and noise

interference was kept to a minimum. The subjects were advised to read in their most natural way and at their normal conversational speed. Each speaker read the list of words, repeating each phrase three times. As a result, there were three tokens for each vowel for each of the speakers.

3. INSTRUMENTATION

Descriptions of vowel quality based on auditory perceptions are impressionistic and rather subjective. The two features of 'tongue height' and 'backness' are best defined in acoustic terms. The use of the sound spectrograph in describing the vowels enables reliable and objective measurements of the vowels based on formant frequencies. The following table gives the mean values of the formant frequencies for Japanese English vowels.

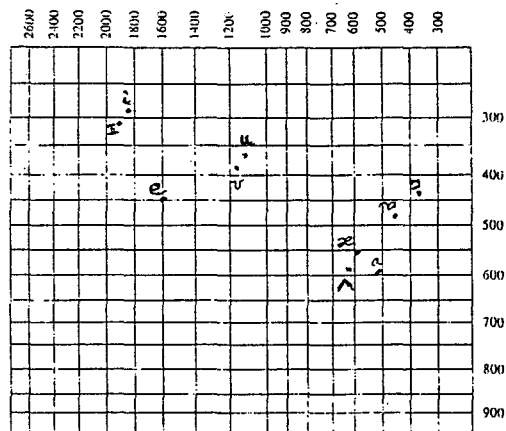
<Table 1> Mean Values of F1 and F2' frequencies for JE Vowels

Speakers		1	2	3	4	5	6	MEAN
i	F1	280	260	300	300	280	350	295
	F2'	2000	1990	1650	2100	1970	1350	1843
ɪ	F1	300	300	300	400	300	280	313
	F2'	2000	1900	1650	2100	1900	1820	1895
e	F1	500	500	400	400	450	450	450
	F2'	1750	1500	1550	1900	1500	1400	1600
æ	F1	400	680	450	380	650	750	551
	F2'	400	520	1000	520	550	550	590
ɑ	F1	500	700	700	300	650	750	600
	F2'	500	400	600	550	550	500	516

Λ	F1	610	590	540	610	540	620	585
	F2'	800	520	600	650	600	550	620
ɒ	F1	500	400	500	500	450	500	475
	F2'	400	400	450	400	550	500	450
ɔ	F1	500	400	400	400	400	500	433
	F2'	400	200	400	400	400	400	366
ʊ	F1	400	350	350	460	350	450	393
	F2'	1050	500	1400	1340	1450	1450	1198
u	F1	380	315	380	420	400	300	365
	F2'	1000	900	1600	1000	1100	1400	1166

4. ANALYSIS OF DATA

Mean frequencies of F1 and F2' (the distance between F2 and F1) were computed for all tokens of 6 vowels for all the subjects and have been plotted on the logarithmic scale with F1 on the ordinate, reading downwards on the vertical axis, and F2' (F2-F1) on the abscissa, reading right to the left as shown below in the vowel formant chart.



<Figure 1> Formant Chart for JE Vowels

A vowel is identifiable by its F1 and F2' frequencies. A careful examination of the vowel formant chart clearly points to the phenomenon of **conflation** of some pairs of vowels such as:

[i] and [ɪ]
 [ɒ] and [ɔ]
 [ʊ] and [u]
 [ɑ] [ʌ] and [æ]

Since vowel segments of each pair tend to cluster together, there seems to be hardly any significant qualitative difference among these pairs of vowels. No wonder, pairs of words like *beat* and *bit*, *pot* and *port*, *cat*, *cart* and *cut*, and *pull* and *pool* very often sound indistinguishable from each other in Japanese English.

Based on the acoustic results, the vowels in JE can be classified as follows:

VOWEL	DESCRIPTION
[i] [ɪ]	high front
[e]	low-mid front
[æ] [ʌ] [ɑ]	low back
[ɒ] [ɔ]	low-mid back
[ʊ] [u]	high-mid back

Conflation of Pairs of Vowels in JE Vowels

1. Tenseness

(a) When /i/ and /ɪ/ are presented to a Japanese student in pairs such as *bit* and *beat*, *sit* and *seat*, the distinction doesn't come across clearly to him. Both of these vowels belong to high front area of the vowel trajectory. Japanese has only one phoneme /i/ in this area and is rather short. It seems that the Japanese vowel phonology heavily influences the perception and production of English vowel sounds. The feature that differentiates /i/ from /ɪ/ in English is 'tenseness': /i/ is '+ tense', while /ɪ/ is '- tense'

or 'lax'. The contrast of tenseness and laxness is systematically seen between the pairs such as /i/, and /ɪ/, /u/ and /ʊ/, and also /ɔ/ and /ɒ/ in English English. In Japanese however, tenseness is **not** the decisive feature in order to differentiate two vowels in each pair. The fact that Japanese lacks this contrastive feature results in some kind of difficulty for the Japanese learners in acquiring the ability to maintain such distinctions.

(b) A close examination of the vowel chart points to one other interesting set of English vowels, e.g., /æ/, /ɑ/ and /ʌ/. The acoustic data tends to confirm my personal classroom experience that a Japanese finds it hard to maintain and recognize any difference among these three vowels. As a result, the words *hat*, *heart* and *hut* or *bad*, *bard* and *bud* are almost homophones.

2. Lip-rounding

Lip-rounding is another feature that presents a problem to a Japanese learner of English. Considering the higher F2' characterizing the set of high back vowels /u/ and /ʊ/, it may be noted that both these vowels are pronounced with an advanced (rather centralised) tongue position. Moreover, these two vowels in Japanese English lack 'lip-rounding'. Lip-rounding, however, is noted to be most typical of the high back vowels in English. Obviously, the fact that Japanese English vowels have no lip-rounding, whether front or back, gives the student enormous amount of trouble, especially in producing the English high back vowels.

5. DISCUSSION

The present acoustic study, though small in its sample size, provides enough evidence that a JE speaker fails to maintain sufficient perceptual distance between two vowels in each pair. In native English, each of these pairs is reported to have a high functional load. Therefore the textbooks on English pronunciation repeatedly have pointed out that if a speaker of non-native English fails to maintain this distinction, it could cause a lack of 'comfortable' mutual intelligibility when (s)he interacts with speakers of other varieties of English.

An acoustic study (Nihalani 1995), undertaken five years ago on Standard Singapore English (SSE), also points to a similar phenomenon of conflation of the same pairs of vowels. Tay (1982), Brown (1988), Ong (1994) and also several other Honors theses have referred to the same phenomenon. Bansal (1966) makes a mention of the same phenomenon in respect of Educated Indian English. We could probably now make a generalization that there is a

conflation of pairs of vowels not only in the varieties of English spoken in the 'Outer circle' but also in the 'Expanded Circle'. Having said that, let me hasten to add that one comes across a similar phenomenon in respect of almost the same pair of vowels in Scottish English (a variety spoken in the 'Inner Circle') as well. Given below is the comparison of the Vowel Phonology of five varieties of English from the three concentric circles.

<Table 2> Vowel Systems of Standard Englishes

	SSE	EIE	JE	SCOTISH	RP
bead	i	i	i	i	i
bid				ɪ	ɪ
bed	ɛ	ɛ	e	e	e
bad			ɑ	a	ɑ
bard	ɑ				
bud	ʌ	ʌ			
pot	ɔ	ɔ	ɔ	ɔ	ɒ
port					ɔ
pull	u	u	u	u	ʊ
pool					u

Most of research in the past on the non-native varieties has sought to identify the ways in which a non-native variety **deviates** from a native variety at the segmental level and has highlighted the so-called segmental interference. Bansal's study, for example, identifies the lack of contrast between 'cot' and 'caught' in Indian English. The same is true of Standard Singapore English and Standard Scottish English as well. To my mind, this is a minor feature because for most speakers of Standard American English, there does not exist, for example, a contrast between 'bomb' and 'balm'. Both Indian and American speakers of English distinguish between 'caught' and 'court', but this distinction is lost in British English. If keeping the segmental distinction were the primary purpose of teaching spoken English, we would have to teach speakers of General American and RP to keep the distinctions they do not

maintain. Tay (1982), Bansal (1969) and Tiffen (1974) point out that the diphthongs /eɪ/ and /əʊ/ are realized as monophthongs. The same is true of the JE as well. But isn't this true for most North American varieties and Scottish English as well? I wonder why no segmental interference of any kind has ever been reported in respect of these two native varieties. Obviously, there seems no justification why the speakers of English from the 'Outer' and 'Expanded' circles be advised to change their speech habits whereas nobody expects Scots or North Americans to conform to RP or any other particular model.

All the discussion of 'international intelligibility' and concern for native-like standards has been primarily viewed from the perspective of monolingual societies. This unfortunately runs counter to the sociolinguistic realities and pragmatics of language teaching. English today functions as a vehicle of 'internal' communication in the 'Outer Circle', and 'external' communication in the 'Expanded Circle'. English is acknowledged to be the main language of international communication. With the demographic distribution of its speakers all over the world, **diversity** seems inevitable. The learner of English therefore is dealing with a language that offers a bewildering variety in its main transmission phase – its pronunciation. Language teachers, on the other hand, have pleaded for some kind of 'international uniformity', which has undoubtedly existed only in grammar, lexis and its written form. People have invariably demonstrated some kind of tolerance in respect of phonology/pronunciation. In sociolinguistic circles, we do recognize the importance of 'variation'. Nonetheless, the foreign learner needs and expects firm recommendations as to the forms that he should adopt in pronunciation as in grammar. The so-called "received pronunciation" (RP) was indeed adopted fifty years ago by the BBC for use by its newsreaders and remains valid as the foundation of a model for imitation abroad. RP, to my mind, is the dead horse in 'nineties'. As regards RP, Gimson remarks: "there are indeed clear signs that in the less rigid structure of present-day British society, the younger generations feel little of the veneration for the so-called 'received pronunciation' (RP) which used to characterize the attitudes of their elders". Abercrombie (1965:14) observes in this connection: 'RP is an anachronism in the present-day democratic society'. Because of the ever-increasing use of English as a world language, there *may* well of course emerge a form of 'international' pronunciation of English that may contain features of the major national types of English. How *far* such a solution lies, I wonder. But it certainly seems to be a distinct possibility, in not too distant a future.

Characteristics of 'international' pronunciation

What could be the phonetic features characterizing such a form of 'international' pronunciation of English? 'Ease of intelligibility' and 'Social Acceptability' are the two main criteria suggested by British linguists such as Abercrombie (1956), Gimson (1970) and Halliday et al., (1964). Two foreigners of the same nationality (Singaporeans, for example) can converse with total understanding in English using their own phonetic and phonological systems. They run a serious risk, however, of being quite unintelligible to a speaker of English from the 'Outer' or 'Inner' circle. The learner must therefore adopt certain *basic* features of English in his pronunciation if he is to acquire a linguistic tool of international use.

It is commonplace knowledge that various native varieties of English differ from **each** other in major ways, as much, perhaps, as the nonnative varieties differ from the native varieties. Nevertheless, native speakers of English appear to be **mutually** intelligible to a degree that does not extend to the nonnative varieties. Obviously there are features that various native accents have in common which facilitate their mutual intelligibility, and these features are not shared by the nonnative accents. If so, it becomes the responsibility of the language planners to identify these common properties and build them into the curriculum so that the foreign learner acquires an accent that is acceptable in all international circles. This problem is of particular importance in a cosmopolitan society as in Singapore, where we find a free mingling of the British, American, Australian, and other accents.

My initial hypothesis is that the common core of all native accents is to be sought, not at the segmental level at which native and nonnative varieties of English exhibit a baffling degree of differences. It is well known that American accents differ radically from the British accents and both from the Australian accents mainly in their system of vowels. If we examine the common core at this level, we can hardly come up with any significant set of properties that distinguish them from the common core of the nonnative accents, as we have seen in the data presented above. It is also well known that all these native accents make use of a stress-timed rhythm, while most nonnative accents make use of a syllable-timed rhythm. It is this observation that has led to the hypothesis that we must seek the common core of native accents at the supra-segmental level. If this hypothesis turns out to be correct, then the implication for pedagogy would be that we may retain the national identity by keeping the segmental features and gain 'ease of international intelligibility' by acquiring the supra-segmental features. This use of English in the expression of national identity is most aptly stated in the words of Professor Tommy Koh, Singapore's former Ambassador to the United

States: "...when one is abroad, in a bus or train or aeroplane and when one overhears someone speaking, one can immediately say this is someone from Malaysia or Singapore. And I should hope that when I'm speaking abroad my countrymen will have no problem recognizing that I am a Singaporean". (Quoted in Tongue, 1974)

6. CONCLUSION

The key to international intelligibility, in fact, lies more in knowing how to move the voice according to accepted patterns of stress and melody than in making or recognizing correctly the component sounds. I therefore recommend the 'top-down' approach in which the emphasis is shifted from the teaching of segments to the teaching of supra-segmental features. So, instead of taking the learner systematically through each English vowel and consonant, perhaps one could concentrate on the 'gross' regional features, and then quickly move on to features such as word accentuation and rhythm. It is conceivable that a speech style could be constructed which includes the essential elements of word accentuation and rhythm that are most significant in the communication process, but it also retains its national segmental variations that help the speaker maintain a sense of national identity.

In conclusion, the foreign learner must adopt certain basic features of English in his pronunciation if he is to use English effectively as an international language. High in importance among these features come the accentuation patterns of the language and an alternation of strong and weak syllables, with an essential obscuration of segments in the latter. It may be advisable for the learner to be exposed to many varieties of pronunciation, including native and non-native as well, in order to enrich his repertoire. Undoubtedly, one meets many varieties as one listens to radio, television, films. But exposure of this kind should also be systematically incorporated in the learning program. Moreover, the core component of supra-segmental features be introduced through various activities such as drama, nursery rhymes, debates and role-playing etc... making the learning process more realistic and natural.

<REFERENCES>

- Abercrombie, David (1956) Problems and principles in language study. London: Longman.
- Abercrombie, David. (1965) Studies in Phonetics and Linguistics. London: Longman.
- Bansal, R.K. (1966) The intelligibility of Indian English. Unpublished Ph.D. dissertation, University of London.

- Bansal, R.K. (1969) The intelligibility of Indian English. Hyderabad: Central Institute of English and Foreign Languages.
- Brown, Adam (1988) "Vowel differences between Received Pronunciation and the English of Malaysia and Singapore: which ones really matter". In New Englishes: The case of Singapore, Joseph Foley (ed.), 129-147, Singapore: Singapore University Press.
- Gimson, A.C. (1970) An Introduction to the pronunciation of English. London: Edward Arnold.
- Halliday, M.A.K., McIntosh, A. and Stevens, P.D. (1964) Linguistic Sciences and Language Teaching. London: Longman.
- Kachru, Braj B. (1985) Standards, codification and sociolinguistic realism: the English language in the Outer Circle. In Quirk and Widdowson, eds. 1985
- Kachru, Braj B. (1986) The power and politics of English. *World Englishes* 5.2-3: 121-40
- Kachru, Braj B. (1990) World Englishes and applied Linguistics. *World Englishes*, Volume 9, 3-20.
- Nihalani, Paroo. (1995) Phonology of non-native accents of English: Evidence from Singapore English, in Proceedings of Thirteenth International Congress of Phonetic Sciences, Stockholm, Sweden, Volume 3, pp. 504-507.
- Ong Hwee Ping (1994) An acoustic analysis of vowels in Singapore English, Unpublished Honors thesis, Department of English, National University of Singapore.
- Quirk, R and Henry Widdowson, eds. (1985) English in the World. Cambridge: Cambridge University Press
- Smith, Larry E., (ed.) (1983) Readings in English as an international language. London: Pergamon
- Stevens, Peter (1982) World English and the World's Englishes; or, Whose language is it, anyway? *Journal of the Royal Society of Arts* 120, 5311: 418-31
- Tay, Mary (1982) The phonology of educated Singaporean English. In *English World-Wide*. Volume 3(2): 135-145.
- Tiffen, B. (1974) The intelligibility of Nigerian English, Unpublished Ph.D. dissertation, University of London.
- Tongue, R.K. (1974) The English of Singapore and Malaysia. Singapore: Eastern Universities Press.
- Wong Soon Fen (1987) The Formant Structure of Vowels in Singaporean English. Unpublished Honors thesis, Department of English Language and Literature, National University of Singapore