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STUDIES IN EDUCATION AND PSYCHOLOGY

**THE REPRESENTATION OF ENGLISH SOUNDS
IN
THE GUJARATI SCRIPT**



M. S. PATEL

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**FACULTY OF EDUCATION AND PSYCHOLOGY
Maharaja Sayajirao University of Baroda
BARODA**



**INDIAN INSTITUTE OF
ADVANCED STUDY
SIMLA**

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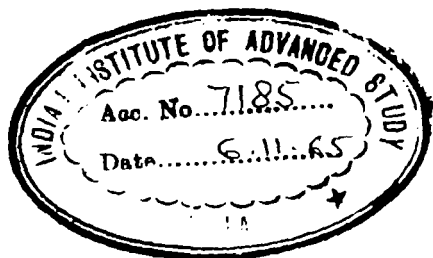
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THE EDITOR'S NOTE

The recent advances in the field of Linguistics have revealed that a comparative analysis of the primary and secondary languages would greatly facilitate the study of the latter. In the present investigation, Dr. M. S. Patel has not only compared the sound systems of Gujarati and English, but has also devised and elaborated a phonetic notation in Gujarati that can be used with ease and advantage by the Gujarati children learning English. The immense practical value of the investigation will be recognized by the teachers of English, who have been unable to make use of the International Phonetic Alphabet all these years for the obvious reason that the learning of two scripts—Roman and Phonetic would almost simultaneously impose too heavy a strain on the young learner who has already been struggling with the script of his mother tongue and that of Hindi, the national language of India.

We are happy to publish this useful monograph in the hope that it will indicate the future lines of development in the field of Comparative Linguistics in India and inspire other workers in India to devise and follow up such notations in other modern Indian languages.

15th December, 1958.

T. K. N. MENON

INTRODUCTION

What follows is the account of a useful investigation carried out in response to a need keenly felt by the teachers of English in India and numerous other countries where they are confronted with a similar problem. The hypothesis that has stimulated this investigation is that children beginning to learn English in the secondary schools of India face a situation which requires them to learn the scripts of three languages, namely, their mother tongue, Hindi and English and that if we expect them to learn the phonetic notation of English besides these three scripts to enable them to acquire proper English pronunciation, it is something beyond the capacity of most of them. This hypothesis is borne out by the fact that all attempts including that of Dr. Michael West at teaching phonetic notation to the young learners of English in India have not met with success. What surprises me most is the fact that no effort has been made during all these years to face the problem realistically and evolve a notation in the learner's own language that has a reasonable chance of ready and spontaneous acceptance by teachers and pupils alike by virtue of its ease and simplicity.

I must acknowledge that the credit for hitting upon this brilliant idea of great practical value that simple phonetic notation in the scripts of Indian languages is both possible and desirable goes to Mr. J. C. Catford, Director, School of Applied Linguistics, University of Edinburgh. I am grateful to him for suggesting that I should work out a scheme of representing English sounds in Gujarati script. His supreme command of the phonetics of English coupled with

his knowledge of the sound systems of Indian languages proved very helpful to me in the successful execution of this project.

How far this investigation goes in solving one of the major problems of English teaching in India can be judged by its practice in actual classroom situations. I am looking forward to its actual try-out in co-operation with the English teachers undergoing training in the Faculty of Education and Psychology, Baroda University, those whom I shall meet at various refresher and short-term courses organized by the Department of Extension Services of the Faculty and those at the practising schools on and off the campus. If the results of this valuable experiment are encouraging, I am confident that it will have far-reaching consequences for the teaching of English in Gujarat, which will inspire English teachers elsewhere to adapt it with profit in their regional languages.

M. S. PATEL

CONTENTS

The Editor's Note	..	..	..	iii
Introduction	..	..	..	v
I The Problem	..	..	..	I
II Phonetic Transcription		..	..	7
III Principles and Procedures		..	..	II
IV English Vowels	..	..	..	14
V English Diphthongs		..	..	23
VI English Consonants		..	..	28
VII English Consonant Clusters		..	..	4I
VIII Specimen Transcriptions		46
Bibliography	5I

TABLE 10

THE 1950-51 FLOOD

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CUMULATIVE LOSS	CUMULATIVE LOSS
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THE PROBLEM

The language controversy that arose in the wake of independence in India in 1947 shows signs of dying down with the emergence of a generally acceptable three-language formula, which assigns to English the position of a third compulsory language to be taught for six or seven years in secondary schools and four years in universities. Our main problem, however, is how to teach it to all during the time available with best results. Those who are concerned with the teaching of English in India are aware of the peculiar difficulties with which the young learner of English has to grapple during the first few years of learning. The situation he finds himself in is unique, considering the fact that he is expected to do something different from what the learners of English in most other non-English-speaking countries do. According to the new language pattern which is being introduced in Indian secondary schools now, the study of English will begin in the first or first second grade of a secondary school or in the fifth or sixth grade of the school system. The child will learn his mother tongue during the first four years of the school system, begin the study of Hindi, the national language, in the fifth grade and English in the fifth or sixth grade. The non-Hindi-speaking child will thus learn three languages having three different scripts in most cases. A Gujarati-speaking child, for instance, will learn the Gujarati alphabet to begin with, the Devanagari alphabet in the fifth grade and the Roman alphabet in the sixth grade. In like manner, a Hindi-speaking child will learn another modern Indian language as his second language with a different alphabet in a

majority of cases. In other words, Indian children going to secondary schools will have to learn the mechanics of three different scripts about the time they are twelve years old and many more things too. The burden was heavy enough even before 1947 when they were expected to learn two languages during the same period. The necessity of learning a third language having nothing in common with his own language imposes an additional burden on him, which children in most other countries are not expected to carry. An American or a European child learns modern European languages like French, Spanish, English, German, Italian or Russian without having to learn another script and with the advantage of a common cultural background. In most other countries of Asia and Africa, a large majority of children learn their own languages and another foreign language preferably English or French.

In view of the peculiar circumstances prevailing in India consequent on the introduction of the three-language formula, I believe (and fortunately I am not alone to hold this belief) that some kind of simple alphabet in Indian languages for transcribing English sounds is needed for teaching correct English pronunciation to Indian learners of English. Herein lies the justification for the present investigation. The use of the International Phonetic Alphabet is good as an ideal, but considering the difficulties in its widespread adoption, we would be well advised to discover some simple notations in Indian languages, which can be practised without entailing the burden of learning a new script. If past experience is a reliable guide, the attempt at teaching another unfamiliar phonetic notation has little chance of success. Dr. Michael West's simplified numerical notation did not become popular, with the result

that most English teachers and pupils transcribe English words and phrases unsystematically in the scripts of their own languages, utterly disregarding the distinctive features of the English sounds. Hence the complaint that Indians are good writers but bad speakers of English. If one visits a typical secondary school in India, one will find that the English teacher writes new words and phrases and also their pronunciation in his mother tongue on the black-board and the children transcribe them in their note-books for future reference. The only way to improve this state of affairs and thus the pronunciation of the children is to devise a systematic phonetic notation in their own script.

English is found to be a difficult language by average Indian children not so much because of its inherent difficulty as the fact that it has a totally different cultural setting, that it has a different script bearing no relation to their native languages and that unlike Indian languages its spelling and pronunciation have no rational phonetic basis. A careful consideration of all these facts leads me to the belief that the teaching of two scripts—Roman and phonetic—at the same time has little chance of success in India and that teachers will persist in their old practice of writing English words and phrases in the scripts of their own languages, unless they have an equally simple method of representing English sounds.

Is it desirable to let the old practice continue or can we devise a simpler notation to guard against incorrect pronunciation and persuade teachers to adopt it in the best interests of the learners of English? It need hardly be said that the widely current practice cannot be allowed to continue without a serious detriment to the interests of young learners. The aim of teaching English in India is to

enable children not only to read English for enjoyment and information, but also to acquire skill in speaking, writing and aural comprehension. It is a matter of common knowledge that Indians speak English fluently, but when they talk with a native English speaker or a foreigner, they find it difficult to understand him or to make themselves easily intelligible to him. We enjoy an advantage over most other nations of the world in respect of the fact that we have a long tradition of learning English at schools and universities. We are good at grammar and vocabulary, but our pronunciation is far from satisfactory. Most of us are not mindful of the fact that there are differences between the systems of significant sounds in our native languages and English. After ten or eleven years' study of English some of us are surprised and somewhat chagrined to realise how little they understand when faced with spoken English. Yet instead of associating this difficulty with the sound system, they often attribute it to the speech habits of the native speaker. When they are confronted with the printed page, they can usually interpret the meaning correctly. It is not the different speech habits that are causing their difficulty; they simply do not recognize the sounds of the language, and they are unable automatically to recognize and systematize these sounds unless they have had practice in doing so.

Granting that it is necessary to insist on the Indian students learning a good pronunciation of English, we have seen that it is neither desirable nor expedient to ask them to learn two scripts at the same time closely in the wake of two scripts he has already learnt. The present investigation has been undertaken with a view to overcoming this difficulty. My object is to discover if it is possible to adapt

Gujarati and for that matter any other Indian script for use as a phonetic notation for the transcription of English. I am conscious of the difficulties likely to arise in the practice of this new notation and its true value will be ascertained when it is tried on a sufficiently large scale with Gujarati-speaking children beginning to learn English. The new notation will have an advantage over the International Phonetic Alphabet inasmuch as it eliminates the need for learning a fourth script simultaneously with the third one, and also over the current practice of writing English in the normal Gujarati script, which cannot indicate the correct English sounds for obvious reasons. It will be of great help to the millions of Gujarati-speaking children learning English as a foreign language all over Greater Gujarat.

Gujarati is one of the four major modern languages of Northern India. It possesses highly developed literature and is used as the medium of instruction and examination in all colleges affiliated to Gujarat University. It is spoken in the whole of Maha Gujarat bounded by the island of Cutch in the west, Mount Abu in the north, Dohad in the east and Thana in the south. It includes two Portuguese territories of Daman and Div. Gujarati is the language of trade and commerce for the whole of Western India. It is spoken outside Gujarat by the Gujaratis in Bombay, Karachi, Poona, Bangalore, Madras, Calcutta, Singapore, Rangoon, East Africa and South Africa. Narmad, a famous poet of Gujarat, aptly described the situation in a well-known poem when he said: "Wherever a single Gujarati lives, there is Gujarat." It is difficult to give the exact number of Gujarati speakers, but a rough estimate would put them at about 30 millions in the whole world.

Gujarati like other North Indian languages is derived

from Sanskrit through Prakrit. It is about 1,000 years old and its earliest records go back to the twelfth century. It has its own script derived from the Devanagari script in which Sanskrit is traditionally written. Here are some of the characteristic features of the Gujarati script and vocabulary :

1. There is a letter for every Gujarati sound, and every letter stands for that one sound only.
2. Letters are the same as in Sanskrit or variants of the original Sanskrit letters, but the customary headline on top of every letter has been dropped in Gujarati.
3. No sound is indicated by more than one letter and no letter indicates more than one sound.
4. There are no silent letters.
5. Most words are inherited from Sanskrit through Prakrit through successive stages of phonetic change.
6. Most words have roots to which prefixes and suffixes are added.
7. Of the loan words those from Sanskrit outnumber those from Hindi, Urdu, English, Persian, Arabic, Portuguese and other languages.

My problem is, to put it briefly, to adapt Gujarati script for representing English sounds so as to divest the new notation of its associations with original Gujarati sounds and to invest it with correct English sounds.

II

PHONETIC TRANSCRIPTION

Professor Daniel Jones defines phonetic transcription as "an unambiguous system of representing pronunciation by means of writing, the basic principle being to assign one and only one letter to each phoneme of the language."¹ It is a convenient method of showing sound-order graphically. This graphic representation of sound-order appeals to the visual memory and thus assists the auditory memory.

It has long been known that different types of phonetic transcription are needed for different purposes. Henry Sweet published his *Handbook of Phonetics* in 1877, in which he dealt with the systems which he called 'Narrow Romic' and 'Broad Romic.' Narrow Romic was scientific, while the various forms of Broad Romic were practical. He designed his alphabet primarily to meet the practical linguistic needs of the learners and speakers of English.

The idea of establishing a phonetic alphabet which should be applicable to all languages was first put forward by Otto Jespersen in a letter to Paul Passy, who published it in his journal *Dhi Fonétik Tilcer* in June 1886. The idea appealed to the members of the International Phonetic Association, which was inaugurated in the same year by a small group of language teachers in France under the different name of "The Phonetic Teachers' Association." They had found phonetic theory and phonetic transcription of value in connection with their work and wished to popularize the methods that they had found so useful.

¹ *An Outline of English Phonetics*, p. 6.

The members of the IPA after consultations extending over more than two years draw up the first version of the International Phonetic Alphabet. The {original International Phonetic Alphabet of 1888 contained quite a number of the special letters used today, but it was imperfect in various ways. The Council of the IPA has therefore spared no efforts since 1889 to remedy defects, improving upon signs which proved unsatisfactory. The present system which has emerged after considerable additions and alterations is a very effective instrument for transcription on international lines. It can be used both in 'broad' and 'narrow' forms for the phonetic representation of all the principal languages of the world.

Professor Daniel Jones began to realize about 1930 that his EPD (English Pronouncing Dictionary) type of transcription of Southern British English was not the simplest possible transcription that could effectively help the foreign learner towards ability to pronounce English properly. He looked at the question from the point of view of the numerous foreign learners whose sole object is to learn to speak English well, and who have no need either to become phoneticians or to concern themselves with more than one variety of English pronunciation. In his view a transcription for the use of the foreign learner need not be so much a precise record of the speech of particular English people as a guide designed to give him a pronunciation which can be recognized as 'good English'. This 'good' pronunciation need not be a particular variety or dialect. The Received Pronunciation (RP) of the South Englanders is not necessarily a kind of standard pronunciation acceptable to all native speakers of English. The teachers of English in India will be well advised to teach a pronunciation which

is clear and distinct, which is free from slovenliness and to encourage a pleasing voice and manner of speech.

Two types of phonetic transcription are generally followed in Great Britain, namely, Daniel Jones type and Ida Ward type. The former is 'broad'; the latter is 'narrow'. The 'broad' transcription represents only the phonemes of English, using for this simple purpose the minimum number of letter shapes of simplest Romanic form together with such prosodic marks as may be necessary for the avoidance of lexical ambiguity. Mr. David Abercrombie calls this kind of transcription 'simple phonemic'. A transcription is narrow if it includes special symbols to denote particular allophones (members of phonemes).

Professor Daniel Jones is of the view that his EPD transcription is more inclusive than it need be and that it is unduly multilateral for an average foreign learner. He therefore suggests that a still simpler system—one in which the number of special letters is diminished to an irreducible minimum—is what would meet the needs of foreign learners best. The simplified transcription which he recommends to them is phonemic, unilateral, simple and very exclusive. It combines neatness of appearance with effectiveness as an aid to teaching pronunciation.²

Professor Daniel Jones' views on pronunciation and transcription are of great value to us in determining what type of pronunciation we are going to teach to Indian children and in devising a new notation in Gujarati for representing sounds. Following his suggestion, we shall keep our system unilateral and use diacritical marks with known Gujarati letters rather than import letters from

² Jones, Daniel : An Outline of English Phonetics, pp. 348-49

other languages. This exclusive use of Gujarati letters, helped by diacritical marks wherever necessary, will make the new notation easy, simple and intelligible—a fact which will go a long way in making it popular and acceptable to teachers and students alike.

III

PRINCIPLES AND PROCEDURES

While devising a scheme of representing English sounds in the Gujarati script, I have constantly borne in mind that the sound systems of both the languages are quite different. I have made a comparative study of both English and Gujarati sound systems and their normal scripts. The fact that every language has its distinctive sounds and that no two seemingly similar sounds in two languages are exactly identical hardly needs emphasis.

This principle may be illustrated by a reference to the three k-sounds of the English words *keep*, *cool* and *call*. The k-sounds in these three words are three different sounds articulated at the different parts of the palate; but an Indian speaker of English is apt to take them as one sound exactly equivalent to the k-sound in his language. In order to guard against such errors, I have carefully studied the distinctive features of English sounds individually as well as in words and selected suitable Gujarati letters to represent them. The teachers who teach this notation will have to take care that they and their students do not equate these new symbols to the Gujarati sounds they represent in other situations. In other words, the p-sound in *pill* should be taken as the native English sound in this word quite distinct from the p-sound in Gujarati which is not aspirated as in *pill*. Each Gujarati letter representing a corresponding English sound will have to be invested with the proper English sound in its real setting through suitable conventions at the initial stage; otherwise the purpose of devising this simplified

notation will be defeated. I have made phonemic analyses of English and Gujarati languages in cooperation with Mr. J. C. Catford whose knowledge of the phonology of Indian languages has been exceedingly useful to me in the clarification of many intricate points arising out of the present investigation.

I have kept before my mind the following guiding principles in the construction of the Gujarati notation :

1. As the new alphabet is intended for writing words and connected texts, attention has been paid not only to the appropriateness of each Gujarati letter from a phonetic point of view, but also to the suitability of letters as regards typographical harmony, the needs of the printer and written form.

2. When the English sounds are employed for distinguishing one word from another, they are represented by two distinct letters. Ordinary Gujarati letters are used for English sounds, but wherever they are likely to be confused with native Gujarati sounds or wherever there are no equivalent Gujarati sounds, diacritical marks have been employed with a view to associating them with proper English sounds.

3. The rules of assimilation, which are optional in Gujarati, are not expected to be followed, with the result that a word beginning with a vowel is not assimilated with the last letter of the preceding word. For instance, ' This is my book ' is transcribed as ' ધિસ ઇન્ માઈ બુક્! '. It may be transcribed as ' ધિસિન્ માઇ બુક્ ', but such an assimilation is apt to confuse the children, defeating the very aim which has inspired the construction of this notation.

4. It must be borne in mind that phonetic transcriptions are valueless to students, who have not learnt to form sounds which the phonetic letters represent, that is, who have not learnt to form the speech sounds of a foreign language. He can learn to make English sounds with the greatest accuracy and in the shortest time, if the teacher tells him precisely what to do with his organs of speech and gives him exercises in the production of sounds. When he can make the individual sound with fair accuracy, he will be in a position to begin learning sequences of sounds; phonetic transcription will tell him what are the proper sequences to learn in order to express the ideas he wishes to communicate.

The discussion of the principles and procedures governing this investigation should now lead to the description of the new notation in Gujarati.

IV

ENGLISH VOWELS

Professor Daniel Jones defines a vowel as "a voiced sound in forming which the air issues in a continuous stream through the pharynx and mouth, there being no obstruction and no narrowing such as would cause audible friction".³ He uses the term 'pure' vowel to designate a vowel during which the organs of speech remain approximately stationary in contradistinction to a 'diphthong' during which the organs of speech perform a clearly perceptible movement. There are many shades of pure vowel-sounds

Chart of English Vowels

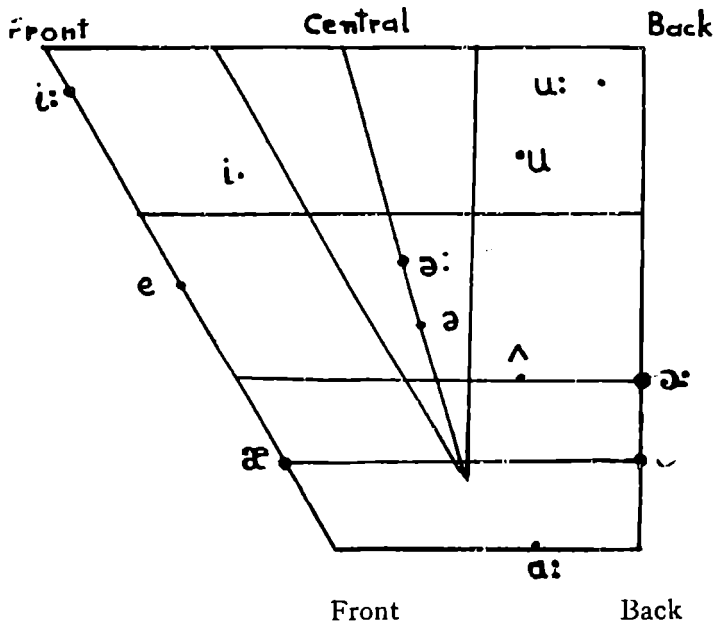


Fig. 1

³ *An Outline of English Phonetics*, p. 23

in English, of which twelve are of special importance for the foreign learner of English. It is convenient to number them, while representing them by the notation suggested by Professor Daniel Jones :

1	2	3	4	5	6	7	8	9	10	11	12
i:	i	e	æ	a	ɔ	ɔ:	u	u:	ʌ	ə:	ə

We can plot all these twelve vowels on a simplified chart which will be of great use in the practical teaching of English.

We have already seen that the native Gujarati vowels do not have the same quality and quantity (length) as the native English vowels and therefore while representing the latter in the Gujarati script, we should stress this point clearly. A letter-for-letter translation of English letters into Gujarati ones will result in confusion unless their distinctive features are compared and contrasted. The Gujarati alphabet comprises the following pure vowels and diphthongs :

Chart of Gujarati vowels and Diphthongs

Vowels	Short	અ	ઇ	ઉ	—	—	—	—
	Long	આ	ઈ	ઉ	એ	ઐ	ઓ	ઔ
Diphthongs		આઈ	આઉ	ઉઈ	ઐ	ઐઉ	ઔ	ઔઈ

Fig. 2

The pure Gujarati vowels may be shown on the Cardinal Vowel diagram as follows :

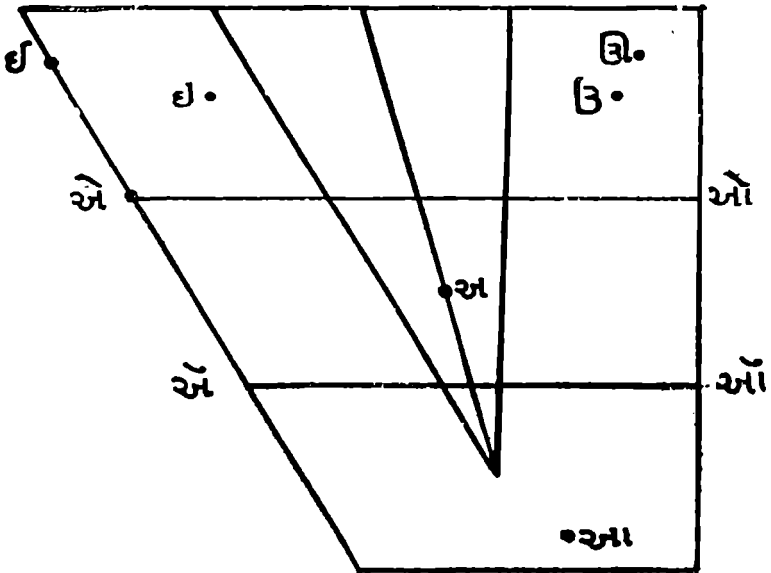


Fig. 3

A careful study of the above charts will indicate the wide divergence between the vowel systems of English and Gujarati. While representing the English vowels in Gujarati, we shall use similar Gujarati vowel symbols as far as possible, investing them with the quality of the native English vowels. In some cases, I shall take recourse to suitable diacritical marks to be added to the original Gujarati symbols. In the following chart I give the symbols of English vowels and corresponding ones in Gujarati I propose to use for the transcription of English vowels in Gujarati :

No.	English Symbol	Gujarati Symbol	Illustration	
1	i:	ઈ:	see	સી:
2	i	ઇ	sit	સિદ્
3	e	એ	set	સેટ
4	æ	એ	sat	સેટ
5	a:	આ:	calm	કા:મ
6	ɒ	ઓ	not	નોટ
7	ɔ:	ઓ:	bought	બોટ
8	u	ઉ	put	પુટ
9	u:	ઊ:	soon	સૂન
10	ʌ	અડ	but	બુટ
11	ə:	અડ:	bird	બર્ડ
12	ə	અ	above	અબુવ

Fig. 4

Let us attempt a formal description of the manner of forming the English vowels and compare and contrast them with their equivalents in Gujarati, so that the Gujarati learner of English may be able to perceive clearly the points of contact and difference between the two and discover the true nature of the English vowels.

Vowel No. 1: i: ઈ:

Description :

- (a) Front of tongue raised towards hard palate.
- (b) Tongue raised almost to close position.
- (c) Lips spread to neutral.

The sound is considered by many to be pronounced with considerable muscular tension of the tongue.

The Gujarati *ɛ*-sound is supposed to be short and *ɛ̄*-sound to be long. The distinction between *ɛ* and *ɛ̄* is, however, not scrupulously observed in speech by most native speakers. The English *i*:-sound as pronounced by Gujarati speakers is often wrong in quantity or length and they tend to superimpose their Gujarati *ɛ̄*-sound on the English *i*:-sound.

Vowel No. 2: *i* *ɛ̄*

Description :

- (a) Front of tongue raised towards hard palate, the highest point of raising being towards the central position, *i. e.*, it is considerably retracted from a fully front vowel position.
- (b) Tongue raised slightly higher than half-close position.
- (c) Lips somewhat spread.

It will be observed from a palatogram of this vowel that the air-passage is considerably wider than in the case of Vowel No. 1. Many foreigners do not make the necessary difference of timbre between the English short *i* and long *i*:. They pronounce *rich* like *reach* and *sit* like *seat*. The correct English vowel may be acquired by trying to pronounce in a slack sort of way, or by making it more like *e*.

Vowel No. 3: *e* *ɛ̄*

Description :

- (a) Front of tongue raised.
- (b) Tongue raised about half the distance between close and open.
- (c) Lips neutral to spread.

It will be observed from a palatogram of this vowel that the air-passage is wider than in the case of short *i*. The English *e*-sound should be distinguished from the Gujarati *એ*-sound, which is half close near to Cardinal *e*. The common English *e*-sound is intermediate between the Cardinal *e*-sound which is half-close and Cardinal *e*-sound, which is half-open.

Vowel No. 4: *æ* ઍ

Description :

- (a) Front of tongue raised.
- (b) Tongue raised approximately one-sixth of distance from open to close, *i.e.*, about half-way between Cardinal 3 and 4.
- (c) Lips neutral to spread.

The correct sound of *æ* can generally be obtained by remembering that *æ* has a sound intermediate in quality between Cardinal *e* and *a*. It is useful in practising this sound to keep the mouth very wide open. The sound may also be obtained by trying to imitate the baaing of a sheep. Gujarati does not have this sound.

Vowel No. 5: *a*: ઁ

Description :

- (a) Back of the tongue is concerned in the formation of this sound.
- (b) Tongue quite low down in the mouth; an open vowel.
- (c) Lips neutrally open.

This vowel is nearer to Cardinal *a* than to Cardinal *a*. It is somewhat similar to the Gujarati ઝુ with the difference of length. The Gujarati ઝુ is half-way between Cardinal *a* and Cardinal *a*.

Vowel No. 6: ઝુ

Description :

- (a) Back of tongue raised.
- (b) Raising is very slight—a little higher than Cardinal *a*; an open vowel.
- (c) Slight open lip-rounding.

Gujarati speakers have a somewhat similar sound in their speech and therefore it will not be difficult for them to produce this sound correctly with a particular attention to the manner of its production.

Vowel No. 7: ઝુઃ

Description :

- (a) Back of tongue raised.
- (b) Tongue raised to near the Cardinal 6 position; an open vowel.
- (c) Lips considerably rounded.

The sound ઝુઃ is best acquired by imitation, while observing carefully the position of the lips. A very near approach to the correct quality is obtained by trying to produce the tamber of the English short ɔ with lips in the position for the Gujarati close o-sound.

Vowel No. 8: ઝુઃ

Description :

- (a) Back of tongue raised towards soft palate; the raising is slightly advanced from the full back position.
- (b) Tongue raised to a little above half-close position.
- (c) Lips generally close rounded.

This sound is the member of the English u-phoneme when the vowel is relatively short. Oo has the sound u when followed by k as in *book, look, took, nook, hook* and also in *foot, good, hood, stood, wood, wool*, etc. Gujarati speakers do not make the necessary difference of tamber between the English short u and long u: . Thus some of them will pronounce *pull* too much like *pool*, and *full* too much like *fool*.

Vowel No. 9: u : @:

Description :

- (a) Back of tongue raised towards soft palate.
- (b) Tongue raised almost to close position.
- (c) Lips close rounded.

This vowel is relatively long.

This sound is very similar to that of the Gujarati long vowel @ with a little more length.

Vowel No. 10: ʌ ʌʃ

Description :

- (a) Back of tongue raised, but not fully back; somewhat advanced towards a central position.
- (b) Tongue raised not quite one-third of the total distance from open to close; near the Cardinal ɔ line.
- (c) Lips neutral.

This is a new sound for a Gujarati learner to whom the difference between ə and ʌ is not clear. He should remember that while producing this sound the tip of the tongue generally touches the base of the lower teeth. He can obtain the sound by unrounding his variety of o-sound. It is intermediate between ə: and a: and it may be taught by directing the learner to make a sound about half-way between ə: and a: .

Vowel No. 11 ʌʃ: ə:

Description :

- (a) Central part of the tongue raised.
- (b) Tongue raised about half-way between open and close.
- (c) Lips neutral.

This vowel is the member of the ə-phoneme used when the vowel is relatively long. It is not possible to make this sound properly with a wide open mouth. It is in this respect very different from ʌ. It is the usual sound of stressed er, ir, ur and yr when final or followed by a consonant as in *her, fir, bird, turn* and *myrtle*. This s a very difficult sound for a Gujarati speaker, who will usually add some kind of r-sound at the end. The most important point to be borne in mind is that there is no lip-rounding in pronouncing a ə: ; the lips are spread as for i: .

Vowel No. 12: ə əː

Description :

- (a) Central part of the tongue raised.
- (b) Tongue raised about one-third of the way from open to close.
- (c) Lips neutral.
- (d) The vowel is always very short.

This vowel is often called the neutral vowel or 'schwa'. This is an easy sound for a Gujarati speaker. His chief difficulty is not in making the sound, but in knowing when to use it. Ordinary English spelling gives no indication as to when ə is to be used and consequently he continually replaces it by some other vowel which the spelling suggests to him. For example, he will say *above, about china* as *ebva, ebaut, tsaina*. His attention should be drawn to the fact that ə only occurs in unstressed syllables.

ENGLISH DIPHTHONGS

It is customary to consider a diphthong as a combination of two vowel sounds, so pronounced as to form one syllable. As a matter of fact it is a gliding sound. The tongue starts in one vowel position and glides towards another vowel position by the most direct route. A diphthong is made by one impulse of the breath. English diphthongs are usually written phonetically with two letters, the first representing the starting point of the tongue, and second the direction in which it moves; but it does not actually reach the position of the second vowel. There are nine diphthongs in English, which may be represented by the notation suggested by Professor Daniel Jones.

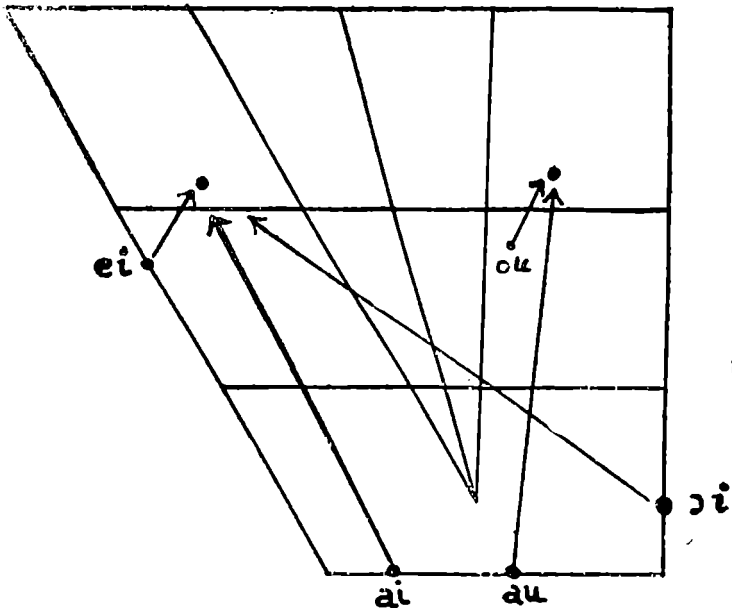


Fig. 5

13 14 15 16 17 18 19 20 21
 ei ou ai au ɔi iə eə ɔə uə

Let us show them on the Cardinal vowel diagram.

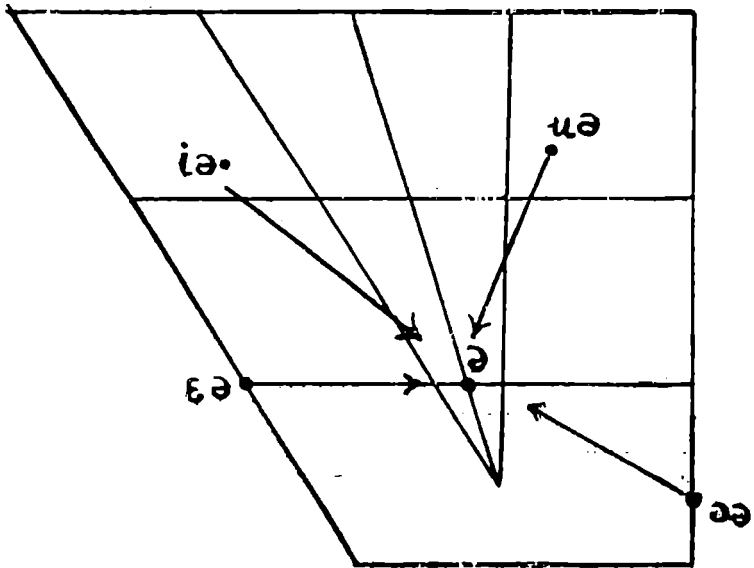


Fig. 6

The following chart gives the symbols for English diphthongs and those I propose to use in Gujarati :

No.	English symbol	Gujarati Symbol	Illustration
13	ei	એઇ	play પ્લેઇ
14	ou	ઓઉ	go ગૌ
15	ai	આઇ	my માઇ
16	au	આઉ	now નાઉ
17	ɔi	ઑઇ	boy બૌઇ
18	iə	ઇઅ	here હિઅ
19	eə	એઅ	there થેઅ
20	ɔə	ઑઅ	more મૌઅ
21	uə	ઉઅ	poor પુઅ

We shall now attempt a formal description of the manner of forming the English diphthongs and compare and contrast them with their Gujarati equivalents which we have devised newly on the basis of those suggested previously.

Diphthong No. 13: ei એઇ

Description :

The tongue starts in the position of a vowel somewhat below Cardinal vowel No. 2, and moves towards the position of i. As the movement is through a very small distance, this diphthong is said to be narrow.

This diphthong presents no difficulty to a Gujarati speaker. If he is told to pronounce the English Vowel No. 3 (e) with No. 2 (i) immediately after it, the result will be near approximation to ei. He must not forget that ei is a diphthong and not the same as his vowel એ.

Diphthong No. 14: ou ઓ

Description :

The first element of this diphthong is somewhat advanced from a fully back o, and there is not much movement of the tongue ; the lips are slightly rounded.

A speaker of Gujarati should remember that when he says ઓ the ઓ-sound of the diphthong ઓ is not the same as an ordinary ઓ. He can produce the approximately correct sound by saying ઓ with a medium lip-rounding, leaving the tongue in the position of ઓ. He should not replace the English diphthong ou by his Gujarati long vowel ઓ.

Diphthong No. 15: ai આઇ

Description :

The tongue starts somewhere near the position of Cardinal a and moves towards i.

This diphthong does not present a difficulty to a Gujarati speaker, but he often pronounces a word like *fire* or *society* incorrectly. They are transcribed as *faiə*, *səsaɪeti* in English, but he is likely to transcribe them incorrectly as *fajə*, *sosajeti* in English and as ફાયઅ and સોસાયેટી in Gujarati.

Diphthong No. 16 : au આઉ

Description :

The tongue starts at a point about half-way between Cardinal No. 4 and No. 5 and moves towards u.

The diphthong au is the usual sound of ou as in *loud* and *house*. This diphthong presents no difficulty to the speakers Gujarati.

Diphthong No. 17 ; oi ઔ

Description :

The tongue position of the first element is a little higher than that of the English ɔ, and the movement is towards i.

This diphthong is the regular sound of oi and oy as in *oil*, *boy*, etc. Gujarati speakers should remember that oy is pronounced as oi and not as oj as they often do in words like *boy*, *employ*, *toy*, etc.

Diphthong No. 18 : iə ઇઅ

Description :

The tongue starts in the position of i and moves towards the neutral vowel ə.

A Gujarati speaker often wrongly begins this diphthong with long tense i: instead of with lax i and finishes it with some variety of r-sound. He says here as *hi:ər* instead of *hiə*.

Diphthong No. 19 : əə

Description :

The starting point of the tongue is near to Cardinal ə position and the tongue moves from front to back towards the central position.

əə is the regular sound of the group of letters *air* as in *pair, fair*, etc. It is also the sound of *ear* and *are* as in *bear, spare*. The words *there, their, scarce* and *aeroplane* are exceptions to the above rule and are pronounced as θɛə, skɛəs and ɛərəpleɪn. A Gujarati speaker should guard against the mistake of beginning this diphthong with a very close e.

Diphthong No. 20 : ɔə ઝૃ(૧૨)

Description :

The tongue starts a little below Cardinal ɔ position and moves towards the neutral ə.

Many speakers of RP do not use the diphthong ɔə at all, but replace it always by ɔ : (English Vowel No. 7). They pronounce the words *coarse, score, four* and *door* as kɔ:s, skɔ., fɔ : and dɔ:. A Gujarati speaker will find this pronunciation easier than one with Diphthong No. 20,

Diphthong No. 21 : uə ઉ૨૫

Description :

The tongue starts from the u position and moves to ə.

The most common mispronunciation of uə by some Gujarati speakers is to begin it with u : (similar to English Vowel No. 9) instead of with lax u. They often add a r-sound at the end of the diphthong when there is an r in the spelling. Thus they would pronounce *poor* as pu:ər instead of puə. They can easily overcome this difficulty by learning to pronounce u with ə immediately after it.

VI

ENGLISH CONSONANTS

Ida Ward defines a consonant as " a sound accompanied or unaccompanied by voice, in which there is either a complete or partial obstruction which prevents the air from issuing freely from the mouth."⁴ The old definition of a consonant as a sound which cannot be pronounced without a vowel is wrong, for it is quite easy to pronounce a consonant without a vowel. In fact, in many languages there are words consisting entirely of consonants.

The distinction between vowels and consonants is based on acoustic considerations, that is, on the relative sonority or carrying power of the various sounds. Even semi-vowels are regarded as consonants on account of their gliding nature, their shortness and their lack of stress as compared with the succeeding vowel.

Consonants are classified according to the organs articulating them and the manner of articulation. The following charts show the consonants in English and Gujarati :

⁴ *The Phonetics of English*, p. 65

English Consonants

		Labial								
		Bilabial	Labio-Dental	Dental	Alveolar	Post-Alveolar	Palato-Alveolar	Palatal	Velar	Glottal
Plosive	Voiceless	p			t					k
	Voiced	b			d					g
Affricate	Voiceless						ts			
	Voiced						dʒ			
Nasal	(Voiced)	m			n				ŋ	
Fricatives	Voiceless		f	θ	s		ʃ			h
	Voiced		v	ð	z	r	z			
Lateral	(Voiced)				l					
Semi-Vowel		w						j		

Fig. 8

Gujarati Consonants

			Velar	Palatal	Retroflex	Dental	Labial
Stops	Voiceless	Unaspirated	ક	ચ	જ	ટ	પ
		Aspirated	ખ	છ	ઝ	ત્થ	ફ
	Voiced	Unaspirated	ગ	જ્ઞ	ઙ	દ	બ
		Aspirated	ઘ	ઞ	ઞ	ધ	ભ
Nasals			ઙ	ઞ	ઞ	દ	બ
Semi-Vowels				ય	ર	લ	વ
Fricatives	Voiceless		શ	ષ	સ		
	Voiced		હ				
Tapped Lateral	Voiced				ળ		

Fig. 9

Consonants are either voiced or voiceless. Voiced consonants are those which are accompanied by the vibration of the vocal cords, while all sounds in which the vocal cords are apart are said to be voiceless. All vowels are voiceless sounds. Voiced and voiceless consonants differ not only in the presence or absence of voice, but in vigour of articulation and breath force ; the voiced consonants are weaker in articulation and less breath force is used.

It should be remembered that the voiced consonants in English in initial and final positions are not fully voiced, *i.e.*, in initial and final positions the vibrations of the vocal cords do not begin immediately on the formation of the consonant, but some way through the articulation ; in final positions, the vibrations cease before the consonant comes to an end.

The following chart shows the notation of English consonants as used by Professor Daniel Jones and the one in Gujarati I suggest for use by the Gujarati learners of English :

No.	English Symbol	Gujarati Symbol	Illustrations					
1	p	પ, પ્	put	પુટ	spin	સ્પિન	top	ટોપ
2	b	બ, બ્	bin	બિન	rubber	રબ્બર	rub	રબ્બ
3	t	ટ, ટ્	tin	ટિન	stem	સ્ટેમ	net	નેટ
4	d	ડ, ડ્	den	ડેન	fodder	ફોડર	nod	નોડ
5	k	ક, ક્	come	કમ્	skin	સ્કિન	rock	રોક
6	g	ગ, ગ્	go	ગૌ	finger	ફિંગર	pig	પિગ
7	tʃ	ચ્	church	ચર્ચ				
8	dʒ	જ્	judge	જજ				
9	m	મ	make	મેક				
10	n	ન	not	નોટ				

No.	English Symbol	Gujarati Symbol	Illustration
11	l	લ	long લોલ
12	l	લ, લ	little લિટલ
13	f	ફ	full ફુલ
14	v	વ	verb વર્કઃબુ
15	θ	થ	thin થિન
16	ð	ધ	then ધેન
17	s	સ	some સર્મ
18	z	ઝ	zeal ઝીલ
19	ʃ	શ	ship શિપ
20	z	જ	pleasure પ્લેઝર
21	r	ર	run રન
22	h	હ	hat હટ
23	w	ઉવ	want ઉવોન્ટ
24	j	ય	you યુઃ

Fig. 10

We shall now describe the manner of the formation of the English consonants and compare and contrast them with the sounds of their symbols in Gujarati.

This is a voiceless bilabial plosive. In pronouncing the principal member of the English p-phoneme the air passage is completely blocked by closing the lips and raising the soft palate. The air is compressed by pressure from the lungs, and when the lips are opened the air suddenly escapes from the mouth, and in doing so it makes an explosive sound ; vocal cords are not made to vibrate.

When p is followed by a stressed vowel, it is pronounced with considerable force, and a noticeable puff of breath or aspiration (*i.e.* a slight h) is heard after the explosion of the p and before the beginning of the vowel. This aspiration is strong when p is initial as in *put*, but less strong when it is preceded by s as in *spin*. The ordinary p-sound in Gujarati has no aspiration and therefore a Gujarati speaker is likely to mispronounce the p-sound of English. In order to distinguish between the two sounds, we shall use p^h when p is aspirated and p when p is not aspirated.

b^h, b

The English b-sound is formed like the English p-sound except that the force of exhalation is weaker and the vocal cords are made to vibrate so that 'voice' is produced during the articulation of the sound. The English b is therefore a voiced bilabial plosive.

As the members of the b-phoneme are wholly or partially voiced, they do not have aspiration in the ordinary sense of the term, but as compared to the Gujarati b-sound, it has some aspiration. We shall use the symbol b^h for the aspirated b-sound and b for the unaspirated one.

t^h, t

The English t-sound is a voiceless alveolar plosive consonant. In pronouncing it the air passage is completely blocked by raising the soft palate and raising the tip of the

tongue to touch the teeth-ridge. The air passage is compressed by pressure from the lungs, and when the tongue is removed from the teeth-ridge, the air suddenly escapes through the mouth, making an explosive sound.

In English it is aspirated when it is followed by a vowel in a stressed syllable as in *taken* in the same way as p. The Gujarati t-sound is retroflex as well as dental as shown in Fig. 9. A Gujarati speaker is apt to use a retroflex t [t̡] in place of the English t. In pronouncing the retroflex sound the tip of his tongue touches the roof of the mouth further back than for the English t. He has therefore to be careful in the production of the English t-sound. We shall use the symbols $t̡$ and t for aspirated and unaspirated t-sounds respectively.

d $d̡$, d

The English d-sound is a voiced alveolar plosive consonant. It is formed like the English t-sound except that the force of exhalation is weaker and the vocal cords are made to vibrate so that 'voice' is heard.

As the members of the d-phoneme are wholly or partially voiced, they do not have 'aspiration' in the ordinary sense of the term, but as compared to the Gujarati d-sound, it has some aspiration. We shall use the symbol $d̡$ for the aspirated d-sound and d for the unaspirated one.

k $k̡$, k

The English k-sound is a voiceless velar plosive consonant. In pronouncing it the air passage is completely blocked by raising the back of the tongue to touch the fore part of the hard palate and the soft palate is at the same time raised so as to shut off the nose passage. The air is compressed by pressure from the lungs and when the contact of the tongue with the palate is released by lower-

ing the tongue, the air suddenly escapes through the mouth and in doing so makes an explosive sound.

The precise sound of k depends to some extent on preceding vowels. The amount of aspiration of k before a vowel varies like that of p and t. For example, it has considerable aspiration before a stressed vowel as in *come*, while an unstressed k as in *baker* and a k following s as in *sky* have less aspiration.

The Gujarati k-sound has no aspiration as the English one. A Gujarati speaker is apt to pronounce the sound very feebly and not to insert any aspiration after it. The consonant then sounds to an Englishman like a weak g. He should therefore be careful to pronounce the initial k with considerable force of breath. We shall use the symbol ᳵ for the aspirated k and ᳶ for the unaspirated one.

g ᳵ, ᳶ

This is a voiced velar plosive consonant. It is formed by the English k except that the force of exhalation is weaker and it is not voiced.

It has no aspiration in the ordinary sense of the term, but as compared to the Gujarati g-sound, it has some aspiration. We shall use the symbols ᳷ and ᳸ for the aspirated and unaspirated sounds respectively.

t᳷ ᳸

This sound is a voiceless palato-alveolar affricate consonant. In pronouncing it the air passage is completely blocked by raising the soft palate and raising the tip and blade of the tongue into a closed position in which the main part of the tongue is shaped nearly as for ᳹ .

The articulation of the Gujarati ᳺ -sound is further

forward than in English, but a Gujarati speaker should have no difficulty in pronouncing it nearly correctly.

dz ઝ

This is a voiced palato-alveolar affricate consonant and is formed like tʃ except that the vocal cords are made to vibrate so that voice is produced during the articulation of the sound.

It should be remembered that the Gujarati tʃ and dz sounds are produced by the normally spread-out blade of the tongue well against the teeth-ridge and it may even advance towards the teeth. The difference between the Gujarati ઝ and જ sounds and the English tʃ and dz sounds is that in the former the articulation is further forward than in English.

m મ

The English m-sound is a voiced bilabial nasal consonant. In its formation the mouth passage is completely blocked by closing the lips; the soft palate is lowered, so that the air emitted by pressure from the lungs passes out through the nose; the tongue is held in a neutral position and the vocal cords are made to vibrate so as to produce 'voice'.

A Gujarati speaker has no difficulty in producing this sound.

n ન

This is a voiced alveolar nasal consonant. The Gujarati n-phoneme has four members; the principal one is alveolar like the English n. Before ડ, ઘ, ઙ, ઘ, it is dental; before ઢ, ણ, ઞ, ણ, it is retroflex and before ઝ, ઞ, જ, ઝ, it is palatalized.

ળ ઙ

This is a voiced velar nasal consonant. Gujarati has the same sound and therefore a Gujarati speaker should experience no difficulty in pronouncing words containing it, such as *bring, sang, long, anchor*, etc.

l લ, લ

There are several varieties of l in English, but for our purpose it is sufficient to distinguish between two. These are known as 'clear' l and 'dark' l. They are members of the same phoneme, the difference being that clear l occurs only before vowels and before j, while dark l is only used before all other consonants and finally. Thus clear l is used in *leave, lake, million*, while dark l is used in *feel, field, people*. In *little*, the initial l is clear, while the final one is dark.

These sounds are voiced alveolar lateral consonants.

Gujarati has only the clear l and therefore the speakers of Gujarati do not pronounce the dark l correctly. They wrongly pronounce words like *little, people, table, struggle*. The best way of obtaining it is to place the tip of the tongue between the teeth in the lateral position, and try to pronounce vowel u without rounding the lips.

f ફ

This is a breathed labio-dental fricative consonant. In Gujarati f is a bilabial sound similar to the sound made in blowing out a candle. A Gujarati speaker is therefore apt to confuse it with the English f-sound which is obtained by pressing the lower lip against the upper teeth. He can remedy the error by holding the upper lip out of the way and practising the sound with the lower lip firmly pressed against the upper teeth.

v ३

This is a voiced labio-dental fricative consonant. It is acquired by pressing the lower lip firmly against the upper teeth and producing voice. Gujaratis generally replace v by a frictionless continuant v̄ in which the lower lip touches the central front teeth lightly and is so held as to allow the air to escape chiefly at the sides. To pronounce it correctly they should force the air through the narrow passage formed by pressing the lower lip firmly against the upper teeth and producing voice.

θ ३

This is a breathed dental fricative consonant. It is articulated by the tip of the tongue against the upper teeth, the main part of the tongue being fairly flat. The Gujarati ३-sound is dental acquired by adding aspiration to the ३-sound. A Gujarati speaker may learn to acquire θ by starting with an exaggerated form of it, placing the tip of the tongue so that it projects out between the upper and lower teeth.

ð ३

This is a voiced dental fricative consonant. The Gujarati ३-sound is dental acquired by adding aspiration to the ३-sound. A Gujarati speaker may acquire ð correctly by adding voice to the θ-sound as shown earlier.

s ३

This is a breathed blade-alveolar fricative consonant. Gujarati speakers find no difficulty in pronouncing this sound correctly.

z ३

The z-sound is the voiced consonant corresponding to the breathed s. It is a voiced blade-alveolar fricative

consonant. It is acquired by adding voice to the s-sound. Gujarati does not have this sound, with the result that Gujarati speakers substitute it by their palatal voiced stop. They can remedy this error by practising singing the sound z on various notes.

સ ઝ

This is a breathed palato-alveolar fricative consonant. It is articulated by the tip and the blade of the tongue against the hinder part of the teeth-ridge, the whole tongue being simultaneously held in a raised position. There is protrusion of the lips also. The Gujarati ઝ-sound is made without protruding the lips. A correct English s may be acquired by trying to keep the tongue very loose and by retracting the tip of the tongue and exaggerating the lip-protrusion.

ઝ ઝ

This is a voiced palato-alveolar fricative consonant. It is formed like s except that the air pressure is weaker and the vocal cords are made to vibrate so that voice is produced during the articulation of the sound. Gujarati speakers find it difficult to pronounce this sound correctly. They should first acquire the correct s-sound and then add voice to it. They should distinguish it from their ઝ-sound, which is an aspirated voiced affricate in Gujarati.

ર ઝ

The English r-sound is a voiced post-alveolar fricative consonant. It is articulated by the tip of the tongue against the back part of the teeth-ridge, the main body of the tongue being kept low and the front being held concave to the palate and the whole tongue being laterally contracted. The Gujarati ઝ-sound is made by raising the tip of the tongue to the retroflex position and then making

it fall flat after hitting the teeth-ridge with the underneath side on the way. To acquire the English r-sound, the best thing for a Gujarati speaker to do is to practise all kinds of voiced alveolar fricative sounds (Z, z, ð), using considerable force of the breath and trying to keep the tongue loose. He should practise with sudden jerks of the breath. After some practice he should hit upon the position in which the tongue will begin to vibrate slightly.

h હ

The letter h denotes the sound of pure breath having a free passage through the mouth. Generally a speaker of Gujarati finds no difficulty in pronouncing this sound.

w વ

This is a labio-velar semi-vowel. In Gujarati there is no w-sound and therefore a Gujarati speaker is liable to confuse it with his v-sound. To acquire this sound correctly his speech organs should start in position for a variety of u and immediately leave this for some other vowel position. The vocal cords are made to vibrate so that voice is heard.

j ય

This is an unrounded palatal semi-vowel. The Gujarati ય-sound is similar to the English j-sound except that in the former there is very little voice, while the latter is voiced. A Gujarati speaker can acquire it by making his vocal cords vibrate while producing his own ય-sound.

VII

ENGLISH CONSONANT CLUSTERS

For the speakers of Gujarati who learn English there are a number of sounds not on his patterns, which he must learn to discriminate when he hears English and produce when he speaks it. This determining of the distinctive sounds that differ is the first step in the scientific comparison of English with Gujarati. Each language has its own set of distinctive sound features; it also has a limited number of characteristic sequences of consonants and vowels which make up the structural pattern of the syllables and words. It is therefore necessary to find the positions in which the distinctive sounds can occur and the clusters which they may form. For example, η is a distinctive sound but it never occurs initially in any word in English or Gujarati. It is easy to pronounce it in a post-vocalic position as in *king* or *ring*. Gujarati has the sound combinations *st* and *sp* and a Gujarati speaker can easily pronounce them when they occur initially as in *station* or *special*. Some Hindi speakers, however, find it hard to pronounce them. They will frequently pronounce them as *isteisn* and *ispeɪl*. There are in English as in Gujarati a great many consonant clusters. A Gujarati speaker does not find it difficult to pronounce them as he does have them in his own language. There are many combinations which occur in initial or prevocalic position in English. We shall tabulate them with their transcription in Gujarati :

Initial cc—

No.	English	Gujarati	Illustrations	Transcription in Gujarati
1	pl	પ્લ	play, plough, plea	પ્લેઇ, પ્લાઉ, પ્લી:
2	pr	પ્ર	pray, press, prop	પ્રેઇ, પ્રેસ્, પ્રોપ્
3	pj	પ્જ	pure, pupil, puny	પ્યૌઅ, પ્યુ:પિલ્, પ્યુ:નિ
4	tr	ટ્ર	tray, tree, true	ટ્રેઇ, ટ્રી:, ટ્રુ:
5	tw	ટ્વ	twine, twig, tweed	ટ્વાઇન, ટ્વિગ્, ટ્વી:ડ્
6	tj	ટ્જ	tube, tune, tulip	ટ્યુ:બ્, ટ્યૂન, ટ્યુ:લિપ્
7	kl	ક્લ	clay, claw, clue	ક્લેઇ, ક્લૌ:, ક્લુ:
8	kr	ક્ર	crew, crow, cry	ક્રૂ:, ક્રેઇ, ક્રાઇ
9	kw	ક્વ	quick, quack, quake	કિન્ક્, ક્વેક્, ક્વેઇક્
10	kj	ક્જ	cube, cure, cue	ક્યુ:બ્, ક્યૌઅ, ક્યુ:
11	bl	બ્લ	blow, blue, black	બ્લૌ, બ્લ્યુ:, બ્લૅક
12	br	બ્ર	broad, bread, brown	બ્રૌ:ડ્, બ્રેડ્, બ્રાઉન
13	bj	બ્જ	beauty, bugle, bureau	બ્યુ:ટિ, બ્યુ:ગ્લ્, બ્યુઅરૌ
14	dr	ડ્ર	drew, dry, drip	ડ્રૂ:, ડ્રાઇ, ડ્રિપ્
15	dw	ડ્વ	dwel, dwarf, dwindle	ડ્વેલ્, ડ્વૌ:ફ્, ડિવન્ડલ્
16	dj	ડ્જ	duke, dual, during	ડ્યુ:ક્, ડ્યુ:અલ્, ડ્યુઅરિન્ડ્.

17	gl	गल्	glow, glide, glass	गलठि, गलाठड्, ग्लाःस्
18	gr	ग्र्	gray, grass, greet	ग्रेथ, ग्राःस्, ग्रीःद्
19	gw	ग्व्	Gwen	ग्वेन्
20	gj	ग्य्	gue, guava	ग्युः, ग्वावअ
21	sp	स्प	spend, spin, spoil	स्पेन्ड्, स्पिन, स्पौथल
22	st	स्ट	stay, stone, still	स्टेथ, स्टठिन, स्टिल्
23	sk	स्क	skin, score, sky	स्ठिन, स्क्रोअ, स्काथ
24	sm	स्म	small, smoke, smear	स्मोःल्, स्मठिक्, स्मिअ
25	sn	स्न	snow, snare, sneeze	स्नठि, स्नेअ, स्नीःञ्
26	sl	स्ल्	slay, slow, sleep	स्लेथ, स्लठि, स्लीःप्
27	sw	स्व	swear, swell, swin	स्वेअ, स्वेल्, स्विम
28	sf	स्फ	sphere, sphinx	स्फिअ, स्फिउक्स्
29	mj	म्य्	mute, music, mule	म्युःट, म्युःजिक्, म्युःल्
30	nj	न्य्	new, nutrition, nuisance	न्युः, न्युट्रिशन, न्युःसन्स्
31	lj	ल्य्	lute, lure, lunar	ल्युःट्, ल्योअ, ल्युःनअ
32	fl	फ्ल	flow, flee, fly	फ्लठि, फ्लीः, फ्लाथ
33	fr	फ्र	free, fruit, fry	फ्रीः, फ्रूःट्, फ्राथ
34	fj	फ्य्	few, fury, fuse	फ्युः, फ्युअरि, फ्युःअज

35	vj	વ્ય	view	વ્યઃ
36	θr	થ્રૂ	through, throws, thread	થ્રૂઃ, થ્રૂઠિ, થ્રૂડ
37	sr	શ્ર	shrink, shriek, shrewd	શ્રિઠ્ઠક, શ્રીઃક, શ્રૂઃક
38	hw	હવ્	where, why, which	હવેઅ, હ્વાઠ, હ્વીઅ
39	hj	હય	hue, huge, human	હ્યૂઃ, હ્યૂઃઠ હ્યૂઃમન

Initial ccc—

No.	English	Gujarati	Illustrations	Transcription in Gujarati
1	spl	સ્પલ્	splash, spleen, split	સ્પલેશ, સ્પલીન, સ્પિલટ
2	spr	સ્પ્ર	spray, spread, spring	સ્પ્રેઇ, સ્પ્રેડ, સ્પ્રિંગ
3	spj	સ્પય્	spurious, sputum	સ્પ્યુઅરિઅસ્, સ્પ્યુઃટમ્
4	str	સ્ટ્ર	straw, string, stroke	સ્ટ્રોઃ, સ્ટ્રિંગ, સ્ટ્રોક
5	stj	સ્ટય્	stew, steward, stupid	સ્ટ્યુઃ, સ્ટ્યુઅડ, સ્ટ્યુઃપિડ
6	skl	સ્કલ્	sclerosis	સ્કિલ્અરઠિસિસ્
7	skr	સ્ક્ર	screw, scratch, script	સ્ક્રૂઃ, સ્ક્રેચ, સ્ક્રિપ્ટ
8	skw	સ્કવ્	square, squint, squat	સ્કવેઅ, સ્કવન્ટ, સ્કવૉટ
9	skj	સ્કય્	skew	સ્ક્યુઃ

English has many clusters that occur non-initially, *i.e.*, as medials or finals. The finals are those that are the result of adding the inflectional endings that English has in the plural of nouns, in the third person singular of verbs and in the preterit of verbs. According to Dr. Charles Fries, there are in all 151 post-vocalic consonant clusters which occur in English.¹ Of these, 65 occur at the ends of single morpheme words, and 86 are formed by the adding of z or s or d or t as inflections. A Gujarati speaker will not find it difficult to pronounce them as he does have all of them in his own language. He can deal with all these non-initial clusters consisting of cc or ccc *ad hoc* by use of conjoint consonants in Gujarati.

¹ *Teaching and Learning English as a Foreign Language*, p. 18.

VIII SPECIMEN TRANSCRIPTIONS

After suggesting appropriate Gujarati symbols for all English sounds, it is now possible for us to transcribe English words, structures and paragraphs in the Gujarati script.*

A Words

beak	બિઃક	dark	ડાઃક	moon	મૂઃન
these	ધીઃઝ	top	ટોપ	sponge	સ્પંજ
meet	મીઃટ	not	નોટ	gun	ગન
team	ટીમ	watch	વૉચ	judge	જજ
king	કિંગ	long	લોંગ	shut	શટ
fit	ફિટ	paw	પૉઃ	pearl	પર્લ
become	બિઃકમ	door	ડોઃ	bird	બર્ડ
tell	ટેલ	law	લૉઃ	turn	ટર્ન
pen	પેન	more	મૉઃ	learn	લર્ન
bed	બેડ	push	પુશ	thirst	થર્સ્ટ
deaf	ડેફ	good	ગુડ	along	અલોંગ
pat	પેટ	look	લુક	attempt	અટમ્પ્ટ
bad	બેડ	room	રુમ	collar	કોલર
cat	કેટ	pool	પૂલ	pay	પેઇ
man	મેન	boot	બૂટ	day	ડેઇ
bath	બાઃથ	tomb	ટૂમ	post	પોસ્ટ
task	ટાઃસ્ક	goose	ગૂઃસ્	cold	કોલ્ડ
violent	વાઇઅલન્ટ	debt	ડેટ	thank	થેન્ક
iron	આઇઅન	dust	ડસ્ટ	then	થેન

* These have been selected from *Deepak Readers* (Oxford University Press), which embody the New Syllabus based on the Structural Approach officially prescribed in many Indian States.

bow	ਘਾਭਿ	kettle	ਕੁੱਟਲ੍	thus	ਥਕੁਸ੍
cow	ਕੁਭਿ	cool	ਕੂਲ੍	though	ਥੁਭਿ
loud	ਲਾਭਿਓ	cake	ਕੁੱਖਕੁ	see	ਸੀ:
dear	ਦਿਅ	give	ਗਿਵ੍	song	ਸੋਂ ਓ
cheer	ਚਿਅ	gas	ਗੱਸ੍	sound	ਸਾਭਿਓ
near	ਨਿਅ	girl	ਗੁੱਲ੍	zeal	ਜੀ:ਲ੍
air	ਅੰਅ	choose	ਚੂ:ਝੁ	zoo	ਜੂ:
pair	ਪੈਅ	cheap	ਚੀ:ਪੁ	diseases	ਦਿਓ:ਝਿਝੁ
bear	ਭੈਅ	charm	ਚਾ:ਮੁ	shoe	ਸ਼ੁ:
care	ਕੁੰਅ	gem	ਯੋਮੁ	ship	ਸ਼ਿਪੁ
pour	ਪੌਅ	jar	ਯਾ:	shy	ਸ਼ਾਯੁ
pore	ਪੌਅ	joy	ਯੋਯੁ	pleasure	ਪਲੇਯੁ
roar	ਰੌਅ	age	ਅਯੋਯੁ	leisure	ਲੇਯੁ
shore	ਸ਼ੌਅ	leave	ਲੀ:ਵੁ	car	ਕਾਰੁ
poor	ਪੂਅ	lick	ਲਿਕੁ	mark	ਮਾਰੁ
tour	ਟੂਅ	lamb	ਲੰਮੁ	heat	ਹੀ:ਟੁ
pure	ਪ੍ਰੋਅ	feed	ਫੀ:ਡੁ	hill	ਹਿਲੁ
pill	ਪਿਲੁ	fat	ਫੈਟੁ	hat	ਹੈਟੁ
public	ਪਬਲਿਕੁ	farm	ਫਾਰਮੁ	wet	ਓਵੈਟੁ
bee	ਬੀ:	vain	ਵੇਯਨੁ	want	ਓਵੌਂਟੁ
bark	ਬਾਰੁ	vow	ਵਾਓ	wool	ਓਵੂਲੁ
tin	ਟੀ:ਨੁ	very	ਵੇਰਿ	yield	ਯੀਲੁ
talk	ਟੌਕੁ	thin	ਥਿਨ	yard	ਯਾਰੁ
		theft	ਥੈਫੁ	young	ਯੰਗੁ

B

STRUCTURES

1 This is my book.
ਫਿਸੁ ਖਯੁ ਮਾਯੁ ਯੁਕੁ.

That is your book.
ਥੈਟੁ ਖਯੁ ਯੋਅੁ ਯੁਕੁ.

- 2 This is a pen. That is an arm.
 ઘિસ્ ઇન્ અ પેન્. ઘેટ્ ઇન્ અન્ આઃમ્.
- 3 This is { Arun. He is a boy.
 { Leela. She is a girl.
 ઘિસ્ ઇન્ { અરુન્. હિ ઇન્ અ ઝાઇ.
 { લીલા. શીઃ ઇન્ અ ગર્લ્.
- 4 This is his shirt. This is her sari.
 ઘિસ્ ઇન્ હિઝ શર્ટ્.
 ઘિસ્ ઇન્ હર્ ડ્ અ સારી.
- 5 You are { Ashok.
 { Usha.
 યુઃ અર્ { અશોક્.
 { ઉષા.
- 6 I am { Sudhir.
 { Sudha.
 આઇ અમ્ { સુધિર્.
 { સુધા.
- 7 Ramesh is here. Radha is there.
 રમેશ્ ઇન્ હિઝ.
 રાધા ઇન્ ઘેઝ.
- 8 It is a pen.
 ઇટ ઇઝ અ પેન્.
- 9 My book is here.
 માઈ બુક ઇન્ હિઝ.
 Your book is there.
 યોઅ બુક ઇન્ ઘેઝ.
 His book is here.
 હિઝ્ બુક ઇન્ હિઝ.
 Her book is there.
 હર્ બુક ઇન્ ઘેઝ.
- 10 This chair is here.
 ઘિસ્ ચેઅ ઇન્ હિઝ.
 That chair is there.
 ઘેટ્ ચેઅ ઇન્ ઘેઝ.

Paragraphs

1 Leela and Kamala took their ball to their school yesterday. Kamala threw it to Leela. Leela caught it. She threw it to Kamala. Kamala caught it. She threw it over the desk. She threw it over Meera's head. Meera was under the desk. Leela caught it. She threw it under the desk. Meera caught it.

લીલા અને કમલા દુક ધેઅ યૌલ્ ટ ધેઅ રકૂલ્ યેરટઅડેમ્.
કમલા યૂઃ ઇટ ટ લીલા. લીલા ક્કાઃટ ઇટ. શીઃ યૂઃ ઇટ ટ કમલા.
કમલા ક્કાઃટ ઇટ. શીઃ યૂઃ ઇટ અઉવ્અ ધ ડરેક. શીઃ યૂઃ ઇટ અઉવ્અ
મીરાબ્ લેડ. મીરા ઉવ્ગ્ અડઅ ધ ડરેક. લીલા ક્કાઃટ ઇટ. શીઃ
યૂ ઇટ અડઅ ધ ડરેક. મીરા ક્કાઃટ ઇટ.

2 A bus came down the road. The old man put up his hand but the bus did not stop. It was full of men. The man said, "Every bus is full of men. I shall go to the bus stop." The boys said, "We will go to the bus stop with you. We will take the bag. It is heavy." The boys held the bag between them. They took it to the bus stop.

અ યાડસ્ ક્કેમ્ ડાઉન ધ રહિડ. ધ અઉલ્ડ મેન પુટ અડપ્ લિન્
લેન્ડ યાડ ધ યાડસ્ ડિડ નોટ સ્ટોપ. ઇટ ઉવોન્ પ્રુલ્ અવ્
મેન. ધ મેન સેડ "એવ્રિ યાડસ્ ઇન્ પ્રુલ્ અવ્ મેન. આઈશલ્ ગઉ
ટ ધ યાડસ્ સ્ટોપ." ધ યૌઠન્ સેડ, "ઉવિ ઉવિલ્ ગઉ ટ ધ યાડસ્
સ્ટોપ ઉવિથ્ યૂઃ. ઉવિલ્ ટેઇક ધ બેગ. ઇટ ઇઝ હેવિ." ધ યૌઠન્
હેલ્ડ ધ બેગ બિટ્વીન ધમ. ધેઈ દુક ઇટ ટ ધ યાડ્ સ્ટોપ.

3 A ploughboy who had spent all his life in the country, was sent on a message into a neighbouring town which he had never been to before. As he was walking

through one of the streets, a dog rushed out of a passage and tried to bite him. The ploughboy looked round and tried to find a stone to throw at the dog. But the road was made of large fixed paving stones ; he could not find a single loose stone. " What a funny place this is," he said, " all the stones seem to be tied up, while the dogs are let loose. "

આ પલાકળાઈ હુ હડ રપેન્દ ઓલ્ હિન્ લાઇક ઇન્ ધ ફકન્દિ ઉવન્
 સૈન્ ઓન્ અ મેસિન્ ઇન્દ અ નેઇઝિક્ ટાકિન્ ઉવિય્ હી:ડ નેવ્ અ ખી:ન્ ટૂ:
 ખિડ્ગા. ઓન્ હી: ઉવન્ ઉવો:કિક્ ઝૂ: ઉવકન્ અવ્ ધ રદ્દી:ટ્સ, અ ડોગ્
 રકશ્ આઉટ્ અવ્ અ પેસિન્ અન્ ટાઇડ ટ ખાઇટ્ હિમ. ધ પલાકળાઈ હુકર
 રાકિન્ અન્ ટાઇડ ટ ફાઇન્ડ અ રટકિન્ ટ ઝૂક અટ ધ ડોગ્. બકટ્ ધ રકડ્
 ઉવન્ મેઇડ્ અવ્ લા:ન્ ફિકરેટ્ પેઇવિક્ રટકિન્; હી: કુડન્દ ફાઇન્ડ અ
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 ધ રટકિન્ સી:મ્ ટ ખિ ટાઇડ્ અકપ, ઉવાઇલ્ ધ ડોગ્ આ: લેરે લૂ:સ્. "

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