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THE VOWEL SYSTEM OF GUJARATI



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Department of Education and Psychology
Maharaja Sayajirao University of Baroda
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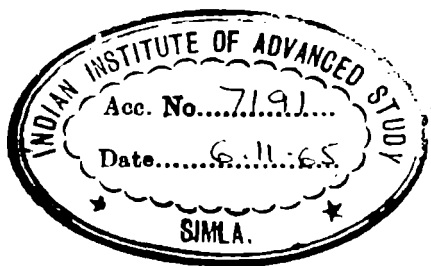
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THE EDITOR'S NOTE

It is now generally recognized that linguistics has to play an important role in the study of primary and secondary languages. We brought out last year Dr. M. S. Patel's useful monograph entitled "The Representation of English Sounds in the Gujarati Script" which has been warmly received by language teachers as well as linguisticians.

The recent advances in the field of descriptive linguistics in America should awaken our linguistic scientists to the need for analysing Indian languages by using the latest techniques devised by Bloomfield, Tragger, Smith and their compeers. The present monograph is the outcome of researches carried out by Dr. M. S. Patel and Shri J. J. Mody into the sound system of Gujarati. It is a first step to the scientific analysis of spoken Gujarati. It is hoped that their study of the vowel system of Gujarati will be followed by an analysis of its consonants and an eventual determination of the segmental and supersegmental phonemes of modern spoken Gujarati.

S. N. MUKERJI



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I Introductory :

An attempt is made here to describe the phonology of Gujarati. Such attempts have been made in the past by linguists and scholars of Gujarat. This article embodies the results of an investigation into the phonology of Gujarati in the light of modern advances made in the field of linguistics.

Spoken Language :

Language means primarily the spoken language, 'the speech of the ordinary man in ordinary natural conversation'.¹ The subject of the present investigation is 'the speech of the ordinary educated middle and upper-class people of Gujarat'² including Saurashtra.

The new approach in linguistics is the study of a language in terms of its own internal structure. This applies to Gujarati also. Gujarati should be studied as Gujarati,³ and not in terms of the standards and measurements of any other language like English or Sanskrit.

Our Grammar Books :

Till now our grammar books have based their description of the Gujarati language on the patterns

¹ Jones, D. : An Outline of English Phonetics, p. 13.

Dave, T. N. : ગુજરાતી ભાષામાં વર્ણવ્યવસ્થા, p. 1.

² Dave, T. N. *ibid.*, pp. 1-2.

Divatia, N. B. : વેદવ્યાજી, p. 30.

³ Dave, T. N. : *op. cit.* p. 4.

of either Sanskrit or English. They are inadequate, out-dated and unscientific. Our children are taught the letters ઃ and ળ not realising in the least that the sounds represented by these two letters vanished from Gujarati centuries ago. Attempts were also made to include English sounds of f, z, etc., into Gujarati phonology.⁴ Gujarati has no place for them.

II—Meaning and Characteristics of A Phoneme :

Phoneme and Allophone :

The first step in studying any language is to determine its phonemes and this requires the understanding of phonemic principles. Phonemes are the basic concepts of speech. They are the sound features common to all the speakers of the language.⁵ The phoneme is described by Jones as 'a family of sounds'.⁶ Allophones are the members of such a family having some sort of relation amongst themselves. In popular view certain sounds are considered to be one though they are different. The 'p's in 'pack, speak and skip' are different sounds but they are members of one phoneme /p/. The aspirated 'p' of 'pack', the unaspirated 'p' of 'speak' and the 'p' with unreleased stop of 'skip' are its allophones. Similarly the ળ of જલદી is dental

⁴ પહેલી ગુજરાતી સાહિત્ય પરિષદનો રિપોર્ટ : લેખો : 'વર્ણવિજ્ઞાન', 'લેક્ષણવિદ્યે નિબંધ', 'એક નવો વ્યંજન' વી.

⁵ Gleason, H. A. : An Introduction to Descriptive Linguistics, p. 9.

⁶ Jones, D. : An Outline of English Phonetics, p. 49.

and the ʃ of ʃ is alveolar, but all the same they are members of the general phoneme $/\text{ʃ}/$ and individually are its allophones.

Gleason defines the phoneme as ' a class of sounds so used in a given language that no two members of the class can ever contrast. '7 According to Bloomfield, a phoneme is ' a minimum unit of distinctive sound feature. '8 It is the minimum feature by which words are distinguished. If we compare two words કરમ and ગરમ we find that ક and ગ are the two features that distinguish the two words and hence $/\text{ક}/$ and $/\text{ગ}/$ are two distinct phonemes.

Their Characteristics :

The phoneme is a hypothetical assumption made by linguists to group together the different speech sounds considered to be one and the same by the native speaker of a particular language. For an Englishman ' k, kh and q ' are one sound being members of the phoneme $/\text{k}/$. For a Gujarati ' k and q ' are one, but ' kh ' is different, *i.e.*, Gujarati has two phonemes $/\text{k}/$ and $/\text{kh}/$. For an Arab ' k ', ' kh ' and ' q ' are different, *i.e.*, Arabic has three phonemes $/\text{k}/$, $/\text{kh}/$ and $/\text{q}/$.⁹

Every language has a definite and usually limited number of phonemes. It may not have certain

⁷ Gleason, H. A. : An Introduction to Descriptive Linguistics, p. 24.

⁸ Bloomfield, L. : Language, p. 79.

⁹ Gleason, H. A. : *op. cit.*, p. 161.

sounds at all, e.g., Gujarati does not have f, z, θ, etc., and English does not have α, ε, ə, etc.

An utterance is a sequence of allophones and not of phonemes.¹⁰ Allophones are conditioned by the phonetic context and are mutually exclusive. Allophones can be described phonetically, phonemes cannot be so described. The smallest difference between two words is that of a phoneme. According to Gleason stress, pitch and even clause-terminals are also phonemes; even the gap between the two words 'night rate' as contrasted with 'nitrate' is a phoneme. Gleason calls this absence of sound 'open transition'.¹¹

A native speaker of the language may not be able to distinguish two allophones of the same phoneme, e.g. ળ of જલદી and ળ of ખાલડી, but he will instinctively know whether two sounds belong to one phoneme or two different phonemes.¹² A Gujarati will instinctively know that /ઙ/ and /ઞ/ are two different phonemes.

Minimal Pair :

The best way to determine a phoneme is to find a pair of words, such as કરમ and ગરમ, wherein the only difference is that of /ક/ and /ગ/, which are two different phonemes. Such a pair of words is called

¹⁰ Gleason, H. A. : An Introduction to Descriptive Linguistics, p. 170.

¹¹ *ibid.*, pp. 42, 43, 50.

¹² Jones, D. : The Phoneme ; Its Nature and Use, p. 18.

the 'minimal pair'.¹³ This way we can get an inventory of the phonemes of a language.

But there are certain sounds for which no minimal pair is available, particularly for vowel sounds. If such a pair is found, so far so good. It is a direct and conclusive proof that the two sounds are two distinct phonemes in a language. But if no such pair is found—if it is rather hard or impossible to find such a pair to distinguish a vowel from a consonant—then the instinctive knowledge of the native speaker must be relied on to determine whether a sound is a phoneme or not. Jones has not been able¹⁴; to find a minimal pair for two vowels /ʌ/ and /ə/ nor can it be found for /ʌ/ and /p/, but /ʌ/, /ə/ and /p/ are distinct phonemes.

III Meaning and Characteristics of a Vowel as Distinguished from a Diphthong :

Speech sounds are grouped into vowels and consonants. A vowel¹⁵ is a voiced sound having no obstruction in the mouth and no narrowing of the passage so as to cause any audible friction when the air stream passes through the mouth. A consonant is a sound that is not a vowel. A syllable consists of a vowel with one or more consonants before and/or after it. But some times a consonant like 'l, m or n' may be syllabic and a vowel may be non-

¹³ Gleason, H. A. : *op. cit.*, p. 16.

Jones, D. : *op. cit.*, p. 39.

¹⁴ Jones, D. : *The Phoneme : Its Nature and Use*, p. 17.

¹⁵ Jones, D. : *An Outline of English Phonetics*, p. 23.

syllabic.* In a pure vowel the articulatory organs take up certain position according to the nature of the vowel and remain steady for the time of its pronunciation. But when two vowels occur consecutively in speech, the organs move from one position to the other and the vowel glide has to be expressly made. A diphthong consists of such an independent vowel glide.¹⁶

IV Characteristics of Gujarati :

Gujarati Script and speech :

However we may claim that Gujarati script is phonetic, it is a fact that there is no perfect harmony between the sounds and the symbols. The trouble is not with individual letters of the script. Each one represents one particular sound and only one, but when letters are joined into a word the word as a whole is many a time pronounced differently from what the letters mean, e. g., કહે, પહાણો, કદા, સદ્યાદિ, સત્ય, ગોળ, રાત્ય, etc.

But Gujarati is not so inconsistent as English. Rather we can confidently say that phonetic spelling is essentially congenial to the genus of Gujarati.¹⁷ And even the few discrepancies that are there do not come in the way of the natural pronunciations of the people. Spelling interference with pronunciations is very little in Gujarati as compared to that in English.

* Infra page 9

¹⁶ Jones, D. : *op. cit.* p. 58

¹⁷ Divatia, N. B. : *નેડણી*, pp. 19 to 23

But a linguist must account for those discrepancies, however small they may be.

At the outset some characteristics of Gujarati language must be borne in mind before we start describing the pure vowel phonemes. Firstly Gujarati is not a 'stress language',^a nor a 'tone language'^b but a 'sound language'.^c Stress is there always on the first vowel of a word¹⁸ but it is not so significant as it is in English. In English shifting of the stress, e.g., 'c^ontest' and 'cont^est' changes the meaning of the word and makes a verb of a noun. English is a stress language. Tone is also there, e.g., અહીં યા મળશે? is interrogative simply because of the change in tone, but it is not so significant as in Chinese. In Chinese change of tone changes the meaning of the word. Chinese is a tone-language. Secondly clusters of consonants or a loose consonant at the end of a word is something not congenial to the genius of Gujarati. Whatever clusters of consonants are there, their natural tendency is to disintegrate and a vowel creeps in between the two consonants (સ્વરલક્ષિત), e.g., સખત, તરફ, જનમ, ધરમ, etc. An educated Gujarati may write ધર્મ, જન્મ, સખત, સર્જન but he will speak ધરમ ધક્કો, જનમનો દુખી, સખત મહેનત (મે'નત), સરજનહાર in his ordinary conversation. All Sanskrit words like જગત્, મનસુ, ઉત્સુ, આપદ્, વિદ્વાન્, સાક્ષાત્, પરિષદ્, અકસ્માત્ have turned into જગત, મન, ઉપા, આપદા,

^a સ્વરભારપ્રધાન

^b સ્વરપ્રધાન

^c શ્રુતિપ્રધાન

¹⁸ Patel, G. D. : સ્વરભાર અને તેનો વ્યાપાર, Ch. III

વિદ્વાન, સાક્ષાત, પરિષદ, અકસ્માત in the mouth of a Gujarati. The last consonant is not tolerated. Either a vowel comes to support it or it drops off.

Symbols for Sounds:

The symbols used in this article are those of the International Phonetic Alphabet (I. P. A.) or the letters of the Gujarati script. The alternative of Gujarati letters is availed of owing to the unavailability of special types for the I. P. A. symbols and also of the easy understandability of Gujarati letters. Moreover, the phonetic description is based on the system of cardinal vowels¹⁹ invented by Daniel Jones.

V. Pure Vowel Phonemes in Gujarati :

1 અ (ə) :

અ is the first letter of our alphabet. In its pronunciation only the vocal cords vibrate and all other organs of speech remain neutral. Only the lips open a little to let the resonant air pass through, but they are neither spread nor rounded but are just normal. Hence અ is called the neutral vowel. It is called the central vowel also, because it is neither front nor back, neither close nor open, neither high nor low.

અ is the unadulterated, unmodified ' pure voice '.²⁰ This pure voice is liable to modifications by the

¹⁹ Jones, D. : An Outline of English Phonetics, Ch. VIII, pp. 29 to 35.

²⁰ Aplen, W. S. : Phonetics in Ancient India, p. 59-60.

action of various articulatory organs giving rise to a series of vowels ઈ, ઉ, etc.

2 ઞ (Λ) :

The first variation of this pure voice, *i. e.* ઞ is caused when an accent falls on it. When ઞ is stressed, the front part of the back of the tongue is raised a little.²¹ It would be better to use the symbol ઞ to represent the stressed sound. ઞ occurs always in a syllable with a primary or a secondary accent.

3 ઞ (ં) :

This is a shorter variety of ઞ which we are accustomed to call લઘુપ્રયત્ન ઞ, or શાન્ત ઞ, or દ્રુત ઞ. For the sake of convenience the symbol ઞ is used to differentiate the vowel from the other varieties of ઞ.

Characteristics of ઞ :

ઞ is very much shorter than ઞ. If the length of ઞ is about 0.08 second²² and that of ઞ is about 0.05 second, then the length of ઞ may be taken as less than 0.01 second. ઞ may be compared with ə₁ of Jones²³ *viz.*, the middle vowel of the words 'malady, melody, salary, etc.' 'મેલડી, મેલડી, સેલરી'. The other characteristic is that ઞ occurs always at the end of a word or a syllable.²⁴ It has no capacity to form a syllable by itself. ઞ is always non-syllabic.

²¹ Jones, D : An Outline of English Phonetics, p. 86.

Dave, T. N. : ગુજરાતી ભાષામાં વર્ણવ્યવસ્થા, p.27

²² Dave, T. N. : *Ibid.*, p. 32.

²³ Jones, D. : *Ibid.*, p. 92.

²⁴ Dhruva, K. H. : વાચ્સ્પયાપાર p. 9, ' આપણો અક્ષર પદપદાંશને છેડે

It would be better to call this vowel as syllable-ending rather than non-syllabic.

Place of अ, अ, and अ in speech :

Let us illustrate with concrete examples how the three varieties of अ play their part in actual speech. In the word रमत, the अ in र is the stressed अ, the अ in म is the neutral अ and the अ in त is the non-syllabic अ. A long list of such words can be piled up illustrating all the three varieties of अ, viz. रतन, वयन, परत, गगन, नगर, तरत, जमलु, सकणी, सकणी, समज, क्रज, तरक, शरद, नरम, गरम, धरम, करम, पतन, सप्तत, etc. In words like नव, जन, etc., the first अ is the stressed अ and the second अ is the non-syllabic अ. The neutral अ is absent. Such words are also numerous in Gujarati, viz. पद, रज, कलु, नम, मन, क्र, जव, तप, पलु, पण, कर, लव, वर, रम, डण, रथ, वण, लप, पग, अस, etc.

Distribution of अ :

We have seen that the last vowel in the above words is अ. It occurs last in words like साप, तोप, पीर, सूर, गागर, कीमत, गुलाब, डकीकत, मरामत, etc. The middle vowel in the following words is also अ, viz. योपडी, लाकडी, ठिकतुं, पथरो, गरया, दीकरो, आपदा, सायुसे etc. It occurs as the third vowel in सावरणी, धातरुं, गोरमटी, पगरुं, etc. Again as the second and the fourth vowel in तलवार, अथपार, दरकार, जलवीर, सरजन, आसपास, धरमम, मागशर, लोकलाज, मिजलस, etc. Also as the third and the last in डवालदार, कपटपान, अतरनाक, गोरमनाथ, etc., and the second and the last in छमछमाट, तरवराट, पुशमिजज, etc.

Distribution of अ and अ :

Among the other two vowels the accented अ is

always the first vowel in words like जन, रमत, पथरो, सरजन, तलवार, अतरनाक, गरीय, डवालो, etc. The neutral अ is the second in रमत, नाटक, प्रगति, माणुसो, आरय, सावरणी, गोरभनाथ, etc. and the third in सरजन, कदावर, जभाषट, तरवरट, सविनय, etc.

Looking to the distribution pattern of all the three we see that अ occupies always the first position in a word; अ occurs always last in a word or a syllable and अ is never first and never final in a word.

अ is not at all found in English.²⁵ The only vowel similar to it is ə.²⁶ Words like रमत in English end in consonants, e. g. 'cup-board' (kʌbəd), summon, govern etc.

Syllabic Divisions :

Looking to the syllabic division of the words we see that the words रमत, रतन and others are disyllabic, e. g., र-मत, र-तन etc. Words like पद, रज are monosyllabic e. g., प-द, र-ज. Words like योपडी कुतरो are disyllabic, e. g., यो-प-डी, कु-त-रो. Words like सरजन, तलवार, अलवीर are also disyllabic, e. g., स-र-जन, अ-ल-वीर, त-ल-वार and दातरकुं, गोरमटी are trisyllabic, e. g. दा-त-र-कुं, गो-र-म-टी, and अतरनाक, डवालदार are also trisyllabic, e. g. अ-त-र-नाक, ड-वा-ल-दा-र, तर-व-राट etc.

From all the above illustrations, it will be clear that अ occurs always at the end of a syllable.²⁷ A vowel that does not form a syllable by itself may

²⁵ Ibid., p. 10.

²⁶ See supra, para 9.

²⁷ See supra, para 10.

rather seem strange, but as we have seen above, Gujarati language does not tolerate loose consonants at the end of words.²⁸ For a Gujarati it is absurd or rather impossible to pronounce words as બન્, નન્, રમન્, રતન્, ચોપડી, કુત્રો, મગ-દાસુ, દલ્પત્રાન્, દાતકું, ગોરગી, સ્થાપના, અસ્તીર.

Existence of અ illustrated :

The non-syllabic or rather the syllable-ending અ is so short that some linguists are tempted to deny its existence altogether. The following few illustrations will clear the last tinge of doubt. Its place in Gujarati language cannot be denied. Ask any educated Gujarati to pronounce કુત્રો and પુત્રો. Will he pronounce ત્રો and ષો exactly alike? Even the most casual observer will notice the difference. This is illustrated by pairs of words like નકશી-અક્ષી, પથરો-પત્રા અલ્પ-દલ્પત, સર્વોદય-ગરબો. The existence of the syllable-ending અ can best be demonstrated by words in which the preceding consonant is a bilabial stop. If the last sound is a consonant as in English words like stop, gap, skip, cab, nib, etc. normal breathing starts before the stop is released and /p/ or /b/ remains unreleased. But if the last sound is a vowel as in Gujarati words like તપ, આરબ, ગરીબ, લાલ, કરમ, તરફ the bilabial stop is released, the lips are felt and seen to open gently a little for a short while²⁹ and the voice of અ is audible to a careful observer and then the normal breathing is resumed. The same thing happens after the પ of ચોપડી³⁰ and ષ of રાબડી.

²⁸ See supra, para 8.

²⁹ Divatia, N. B. : Gujarati Language and Literature, Vol. I, p. 208.

³⁰ *Ibid.*

*અ, યુ, and ઝ are phonemes :

Lastly there remains the question whether the three vowels અ, યુ and ઝ are allophones of one phoneme or three distinct phonemes. That અ (A) and ઝ (ə) are two phonemes is beyond doubt.³¹ It is only necessary to establish the phonemic character of યુ. Let us examine the word કમળો. It is pronounced in two different ways and means two different things even though the written form does not provide any clue to that. The difference is noticed in the actual use of the word in speech. When a Gujarati speaks the sentence મગનભાઈને કમળો થયો છે., and again he speaks તળાવમાં ઘણાં કમળો ખીટ્યાં છે., it will be seen that the letter મ in કમળો is pronounced differently in the two sentences. What is the difference? In the first case the ઝ in મ is the non-syllabic ઝ and in the second case it is the neutral vowel અ. The former કમળો means 'jaundice' and the latter કમળો means 'lotuses.' The matter does not end there. કમળો meaning jaundice is disyllabic કમ-ળો, while કમળો meaning lotuses is trisyllabic કુ-મ-ળો. It is only due to the force of habit that a Gujarati will unconsciously make out the difference in meaning according to the context in which the word is used and will pronounce accordingly in the correct manner. Such illustrations can be multiplied. Compare હું રમતો રમતો ઘેર ગયો, with હું ફિટ્ટ, ટેનિસ વગેરે રમતો રમતો હતો. In the first sentence both રમતો રમતો have identical pronunciation while in the second sentence

³¹ Jones, D. : The phoneme : Its Nature and Use, p. 40.

they have different pronunciation. The difference lies in the fact that રૂમ-તો (games) is trisyllabic and the અ in મ is the neutral vowel અ, while રૂમ-તો (playing) is disyllabic and the અ in મ is the syllable ending અ. Again compare the pronunciation of ય in કાચલો in (i) આંગા ઉપર બે કોચલો^a છે, and (ii) તેણે સળગતો કોચલો^b આંબી દીધા; that of ત in કાતરો in (i) ક્યામાં ત્રણ કાતરો^c છે, and (ii) થકિના છોડ પર કાતરો^d છે; that of લ in બેલગામ in (i) એની છલ બેલગામ^e છે, and (ii) એ બેલગામ^f ગયો છે; that of સ in (i) અસમાન^g and (ii) આસમાન;^h that of ખ in (i) બેખખરⁱ and અખખર;^j that of ષ in (i) માણસો^k and (ii) સાણસો;^l that of ર in (i) આરમત^m and (ii) છોડરમતⁿ; All these prove the same fact.

If the minimum distinctive sound feature is a phoneme, then the two vowels અ and અ are two distinct phonemes. So also અ and અ cannot be allophones of one phoneme because, allophones are mutually exclusive, one cannot occur in the same or identical phonetic context in which the other occurs.³² In the above illustrations it will be seen that અ and અ occur in identical phonetic contexts. Hence અ, અ અ are three vowel phonemes of Gujarati. અ and અ are similar in quality, the only difference lies in their length. અ is very short.

4 ય (j) :

Any student of Gujarati speech will naturally

a: cuckoos; b: live coal; ; c: scissors; d: insect; e: uncontrolled; f: a town in the South; g: unequal; h: sky; i: uninformed; j: newspaper; k: men; l: pincers; m: child's play; n: childishness.

³² See supra, para 4.

and in the normal course of study, come across such words as રાત્વ, શોત્વ, ગોત્વ, સદ્વ, વદ્વ, પ્રીત્વ, etc., wherein the final vowel અ is spoken with a palatal touch. It may be called the તાલવ્ય અ (the palatal ə) This vowel is heard with varying degrees of the palatal touch in various regions of Gujarat. The palatal touch is totally absent in Surat and Broach regions. There the people speak રાત, સદ, વદ, પ્રીત, etc., Coming north to the region between Baroda and Nadiad—the central Gujarat—it is not so dominant as it is in the north Gujarat. There it is conspicuous and easily noticeable. But in Saurashtra it is so prominent in speech that it is considered to be a characteristic Kathiawadi feature in other parts of Gujarat. In the pronunciation of this vowel the speech organs are placed in the normal position as that for the neutral vowel અ, only the front part of the tongue is raised a little—very little—towards the palate, but not to the extent of turning the sound into ઈ or consonant ય

Distribution of ય :

The distribution of ય (we may use the symbol ય to distinguish the vowel from the consonant ય) follows a definite pattern,³³ viz., (a) imperative of verbs લખ્ય, મેર્ય, દોડ્ય, ગોખ્ય, આપ્ય, રમ્ય etc. , (b) in verbs બન્ય છે, ગાય છે, લેય છે, દેય છે, etc., (c) in feminine nouns આંખ્ય, રાત્ય, ગાંધ્ય, તથ્ય (તિથિ) નાર્ય etc., (d) in adverbs કાલ્ય બાર્ય, નત્ય (નિત્ય), etc., (e) in the middle position in આદ્યમ, સાત્યમ, પૂત્યમ, નાટ્યક, પાત્યક, etc.

³³ Divatia, N. B. : બેડણી, pp. 45 to 48.

This vowel is generally represented by the symbol for the consonant ય in writing. This has caused much misunderstanding regarding its vocalic nature. That the letters ય્ય, ત્ય, ળ, ર્ય, ન્ય *etc.* are called weak conjuncts is simply misleading. ય in the above words is not the consonant ય + vowel અ, but is a vowel itself.³⁴

Nature of consonant ય :

Let us examine the nature of the consonant ય. In the production of the consonant ય the speech organs take up the position of ઈ, but in the case of ઈ the organs maintain that position till finishing the sound, while in the case of the consonant ય considerable tongue-movement is made towards the finish. It is only due to the movement of the tongue towards the finish that the consonantal sound of ય is perfected.³⁵ In the vowel ય the organs take up the position of the neutral vowel અ and the rising of the tongue gives it the palatal touch. There is not that considerable movement of the tongue towards the finish.

The vocalic character of ય can well be illustrated by comparing it with the consonant ય. Compare (i) સાંખ્ય^a એક દર્શન છે, with (ii) જે વિપત આવે તે સાંખ્ય^b. Again (i) આ વાતમાં કોઈ તથ્ય^c નથી, with (ii) આજે કઈ તથ્ય^d

³⁴ Patel, G. D. : સ્વરભાર અને તેનો વ્યાપાર, p. 45.

³⁵ Heffner, R. - M. S. : General Phonetics, pp. 154-155.

^a School of Indian Philosophy.

^b Endure.

^c Truth.

^d તિથિ date.

થઈ? Also (i) આ બાગ રમ્ય છે, with (ii) જા, જઈને બાગમાં રમ્ય^f; and સાત્યકી with સાત્યમ્, સત્ય with રાત્ય, કન્યકા with પૂન્યમ. The distinction is easily noticeable in speech. The letter ય in અગત્ય, અત્યન્ત, તાલવ્ય, નિત્ય, અસહ્ય, રાજ્ય, ગાયન ધાયલ, કાવ્ય, અત્યજ represents the consonant ય but in કાયદો, કાયદો, આયડી, વહ્નિયુર, શશિયુર, દુષ્પિયુલ, represents the vowel ય

Two Varieties of ય

From the distribution pattern of ય we see that in the words of the group a, b, c and d and in words like કાયદો, આયડી, ય behaves like the non-syllabic, syllable-ending ય; and in the words of group e and in the words like વહ્નિયુર, શશિયુર it behaves like the neutral અ. *i. e.* it is syllabic, *e. g.*, કાયદો is 'કાય-દો' and શશિયુર is 'શ-શિ-યુર.' This shows that there are two varieties of ય, and we may distinguish them by symbols ય and ય.

ય is a Phoneme :

If a minimal pair is a conclusive proof, then the following pairs of words will show that ય is a phoneme. Compare (i) વર્ગમાં ચાર^e છોકરા છે, with (ii) ખેતરમાં લીલી ચાર્ય^h ઊગી છે. Again compare (i) ગોરⁱ દક્ષિણા માંગે છે, with (ii) ગોર્ય^jમાનો વર કેસરિયો, and also રાખ^k with રાખ્ય^l. Phoneme (ય) has two allophones ય and ય as

-
- e Beautiful.
 - f Imperative of play.
 - g Four.
 - h Grass.
 - i Brahmin.
 - j Goddess ગૌરી.
 - k Ashes.
 - l Keep (imperative).

described above. v and w are mutually exclusive and one does not occur in the phonetic context in which the other occurs; and no pair of words is found wherein both occur in the same phonetic context.

5 v (w):

This is a twin brother of v . In its pronunciation the speech organs are placed in the normal position as that for the neutral vowel a , only the lips are rounded a little, but not to the extent of turning the sound into u or the consonant w . This vowel is found in imperative second person plural of verbs, *viz.*, જવ , થાવ , ખાવ , ગાવ , *etc.*. They are spelt in the alternative as જઐ , થાઐ , ખાઐ , ગાઐ . The very fact that this vowel is represented by v or ઐ leads us to the conclusion that it is neither v nor ઐ but some thing in-between. The consonants v and w are called semi-vowels. They are lying on the border line of consonants and vowels. With a slight slackening of effort they turn into vowels.

Nature of consonant v :

In producing the consonant v the speech organs take up the position of u and the lips are rounded. In the case of u the lips maintain that position till finishing the sound, while in the case of the consonant lips give up the rounding and spread out towards the finish. It is only due to the movement of lips towards the finish that the consonantal sound of v is perfected.³⁶ Moreover the consonant v is labiodental in Gujarati while the vowel sound under

³⁶ Heffner, R.M.S. : General Phonetics, pp. 154-55.

discussion is bilabial. φ is a consonant in तक्षत, जभावट, वडाणु, वरदान, लावताल *etc.* The imperative singular forms, *viz.*, लाव, आव, अताव, *etc.*, contain the consonant φ . The alternative in speech is लाव्य, आव्य *etc.*, and the sound is labio-dental.

φ is a phoneme :

Again राव, गाव are spelt in English as 'rao, gaon'. This shows that φ is a vowel. We may use the symbol φ to represent the vowel. Also कुंवर and नेवर are written कुंअर, नेउर alternatively. This again leads us to the conclusion that like its twin-brother φ , φ also has two varieties, *viz.*, (i) the syllable ending φ as in जव, आव, *etc.*, and (ii) the syllabic φ as in नेवर, कुंवर, *etc.* If the minimal pair is a conclusive proof, then φ is also a phoneme as can be seen from the pairs जव-जवः; आव-आव and it has two allophones φ and φ

6 आ (a) :

This vowel is too familiar to need any detailed description. It is similar to cardinal a, the open front vowel. It has no definite pattern of distribution and occurs in any position, stressed or unstressed—initial, middle or last, *e. g.*, गाडी, अवाज, गरभा, धंरवार, आसपास, इमाल, आसन, तमाशो, नवराश, अनाडी, गोपाण, अराजत. Its phonetic status is self-evident. No proof is necessary.

Two Allophones of आ :

आ has two allophones, the accented आ and the unaccented आ. The nature of the two allophones can best be illustrated by words like डाडा, मामा, दादा,

etc. Though in writing both the letters in each word look identical, in actual speech the difference between the two **अ** is obvious and easily noticeable.⁸⁷ The first **अ** is stressed and stronger and so is more audible. The second **अ** is unstressed, weaker and a bit shorter also. Both the varieties are found in words like राज्ञा, राज्ञ, सामान, आसपास, etc.

7 ँ (i) :

This also is a familiar vowel and needs no discussion nor proof to give it a phonemic status. It is similar to cardinal **i**, the close front vowel. It is found in words like निशाण, कविता, नित्य, निशदिन, धडियाण, छथियार, कामियाण, दरियो, रविराज, मतिमान. It never occurs last in a word. In writing we may write मति, पति, रवि, शनि, रति, प्रीति, *etc.*, but in actual speech the last **ँ** in नदी and मति are pronounced identically. The last **ँ** of a word in speech is always longer than the vowel described here, but not so long as the **ँ** in रीस, भाज *etc.* The **ँ** is pronounced alike in accented or unaccented positions, hence it is a monophone, *e. g.*, निशदिन, पुशमिज्ज, निशाण, *etc.* It is commonly called the इरव **ँ**, *i. e.* short **i**.

8 ई (i:) :

This one is also a familiar vowel. It is similar to cardinal **i**, the close front vowel. It is rather more similar to English **i**: Its phonemic status needs no proof. It differs from the preceding vowel in regard to length as well as quality also. It is tense specially in a stressed syllable. It is heard in धी, भी,

⁸⁷ Patel G. D. : रवरलार अने तेने व्यापार, p. 5.

રીત, રીસ, વક્રીલ, ખીજ, ખીકણુ, ગીતા, ગરીબ, કરીમ, શરીર, જીવન, કડી, ગરબી, અરઠી, કારમી, ખરીદી, નકશી, કોદી, નદી, તસ્વીર, etc. It is called the દીર્ઘ ઈ, *i.e.* the long i :

Two allophones of ઈ :

This vowel has also two allophones, the stressed ઈ and the unstressed ઈ. As in the case of આ the two allophones are illustrated by words like ધીધી, દીડી, મીની, ધાડી, ખીખી, etc. The first ઈ in each words is stressed and is stronger and tenser than the second ઈ which is weaker, a bit shorter and less tense. The stressed ઈ is more audible also. The unstressed ઈ, though shorter is not so short as the દૂરવ ઈ described before. The ઈ in રીસ, ખીજ, is stressed and in શરીર, વક્રીલ. નદી, is unstressed.

9 ઉ (u) :

ઉ is also a familiar vowel. It is similar to cardinal **u**, the close back vowel. It is a phoneme. It is heard in words like ઉધાર, ઉપાડ, ઉપર, અમુક, અનુરાગ, સુથાર, ધુતારો, કુમાર, કુતરો, મુઝવણુ, જુદાઈ, etc. It is called the દૂરવ ઉ, the short u. Like short ઈ this vowel also never occurs last in a word. In writing we may write ભાનુ, ધેનુ, બાબુ, મધુ, etc., but in actual speech the last ઉ in બાબુ and કાબુ are pronounced identically. The last ઉ of a word in speech is always longer than the vowel described here, but not so long as the ઉ in ખૂબ, રૂપ, etc. . ઉ is pronounced alike in stressed and unstressed positions, so it is a monophone. *e.g.*, ઉપર, અમુક, અરુચિ, નાખુશી, ધુમાડો, etc.

10 ઊ (u:) :

ઊ is also a familiar vowel and is similar to cardi-

nal **u**, the close back vowel—rather more similar to English **u**:. It is a phoneme. It differs from the preceding vowel in regard to length as well as quality also. It is tense especially in a stressed syllable. It is heard in उ, भूय, इप, वृ, गिरम, नमूतो, भेदूत, मजूर, आपर, सूरज, आनजू, समूह, आभेह्य, पूरव, कृवे, etc. It is called the दीर्घ उ, the long u:.

Two allophones of उ :

This vowel has also two allophones, the stressed उ and the unstressed उ. As above the two allophones are illustrated by words like पूर, वृत्त, भूय, etc. The first उ in each word is stressed and is stronger and tenser than the second उ which is weaker, a bit shorter and less tense. The stressed उ is more audible also. The unstressed उ is not so short as the इस्व उ described before. The उ in इप, भूय, नूर is stressed but in रजू, पर, यर is unstressed. Though we may write वृत्तु, इत्तु, वृत्तु the second vowel is the weaker allophone of उ in speech.

11 ऐ (e) :

This one is also a familiar vowel and is similar to cardinal **e**, the half-close front vowel. It is a phoneme. It is heard in देश, सेवक, देवा, रमेश, ततप्पेव, पर-पर, तर, ऐटक, केशव, उगवे, ऐटले, क्लेत, etc.. It is called the (narrow) संवृत ऐ in contrast to the (wide) विवृत ऐ which follows. The reason for the use of this special terminology is that both are represented by one symbol ऐ in script. ऐ is pronounced alike in stressed and unstressed positions, *e.g.*, रेशम, रमेश, रमशे.

12 એ (E) :

Every Gujarati produces this vowel in his every day speech but is generally not aware that he speaks a vowel different from the previous one. It is the sound of એ in કેદી, નેણુ, એ, etc. An attempt was made to distinguish this vowel by an inverted માત્રા, but anyhow the new device could not become popular. If it had been, we could write કેદી, નેણુ, વેણુ, એ, વેર, વેરાગી, ભરવ, ખેર, છંલ, કેમ, મેં. તેમ, હેમ, કેરી, etc.

This vowel is similar to the cardinal E the half-open front vowel; rather more similar to English æ *i. e.* opener than E but less open than æ It is called the (wide) વિવૃત એ.

One Symbol for two vowels :

The trouble with it is that it is represented in script by the same symbol એ which denotes the preceding vowel also, *vtz.*, the સંવૃત એ. The vowel એ is so familiar to a Gujarati that inspite of its large use in speech he does not even care to notice how differently it is represented in script. He does not even feel the need for a separate symbol for it. May be, the ordinary Gujarati is not even aware of the difference between એ and એ. He pronounces the two vowels naturally, and makes out from the context which pronunciation is intended. He depends upon the every day speech in his family, in school, in society and not on the symbol. The deep-rooted habit helps him in his recognition of the vowel indicated by the symbol.

એ is a phoneme :

Compare the pair of sentences (i) રમેશે ખાંડ વેરી^a છે, and (ii) રમેશ શેખરનો વેરી^b છે. Even though વેરી is written alike in both the sentences, a Gujarati will naturally pronounce the first વેરી with the સંવૃત્ત એ and the other વેરી with the વિવૃત્ત એ. Again the pronunciation of ઢેરી in (i) રાજ ઢેરી^c રાણી, and (ii) રાજપુરી ઢેરી^d and that of ભેરવ in (i) ઢાટને ખીંટી ઉપર ભેરવ^e, and (ii) વેતાલ ભેરવ^fની પૂજા. This shows that the વિવૃત્ત એ is a phoneme.

Characteristics of એ :

The special characteristic of this vowel is that it usually occurs in a stressed syllable, which is always the first in a word in Gujarati.³⁸ The સંવૃત્ત એ can occur as the first vowel in a word, and also can afford to occupy the middle or the last position, e. g., રેશમ, રમેશ, રમશે. But the વિવૃત્ત એ does not bear a secondary place. It loses half of its વિવૃત્તત્વ (wideness, rather openness) and becomes અર્ધવિવૃત્ત even in a syllable with a secondary stress, e. g., ચાંપાનું, વાંકાનું, અમલનું, વેરનું, જમણું, હેમણું. This અર્ધવિવૃત્ત એ is an allophone and is identical with cardinal E. It is heard also in પટેલ ઝવેરી, પૂનેમ, સાપેણુ, લલે, કરે, બોલે, લખે છે, etc.

13 ઓ (O) :

ઓ is a familiar vowel. It is a phoneme. It is

a : spilt ;

b : enemy ;

c : of ;

d : mango ;

e : hang ;

f : demon god.

³⁸ See Supra, para 7.

the same as cardinal O, the half close back vowel. It is heard in પોરસ, પટોળું, અશોક, ગરબો, નવરો, ઘસરેલો, કાથમીર, કમોદ, ગોટાળો. It is called the સંવૃત ઐ in contrast to the વિવૃત ઐ which follows. ઐ is pronounced alike in stressed and unstressed positions, e. g., ઘોડો, ડોબો, ઐસડ, આસો, સોપારી, etc.

14 ઐ ('ઠ') :

This is a twin brother of the વિવૃત ઐ. Like that vowel this also is represented by the symbol ઐ in script which is used for the previous vowel, viz. the સંવૃત ઐ. The attempt to use the inverted માત્રા for this vowel also met with the same fate as that for the વિવૃત ઐ. Otherwise we could write કોણુ, ગોળ, etc. It is similar to cardinal ઠ the half open back vowel, rather identical with the English ઠ :. It is heard in સો, કોદાળી, કોલ, કોને, ખોરાક, મોત, કોહું, રોક, કોજ, etc.

This vowel is also so familiar that inspite of its wide use in everyday speech, a Gujarati does not notice that he is using a different vowel, and does not feel the need for a separate symbol for it. He makes out from the context which vowel is indicated by the common symbol for both. He recognizes it through force of habit.

ઐ is a *Phoneme* :

Compare the ઐ in (i) ગોળ^aમેલ પરિપદ and (ii) ગોળ^b-ધાણા વહે^cચ્યા; also in (i) ઘરમાં ઐરી^c થઈ and (ii) આંગણામાં

a : round;

b : gur;

c : theft;

ચોરી કરી^d; and in (i) ત્રિકોણ^e and (ii) કોણ^f છે?; and also in (i) ગોદડાંની ખોળ^g and (ii) શોધ ખોળ^h. This shows that the વિવૃત ઓ is a phoneme.

Like વિવૃત ઓ this vowel also occurs usually in a stressed syllable *i. e.* the first in a word.³⁹ It does not bear a secondary place. It loses half of its વિવૃત્વ and becomes અર્ધવિવૃત; and then it becomes identical with cardinal ɔ. It is an allophone. It is heard in કરો છે, લખો છે, etc.

Case of ઋ (r) :

Gujarati language lost ઋ from its phonology centuries ago. But it still finds a place in Gujarati script. Hence it would not be out of place to mention it here. The real vowel sound is never heard in Gujarati speech. The words ઋષિ, અમૃત, દષ્ટિ, સૃષ્ટિ, are in actual speech રુશી, અમૃત, દશ્ટી, સુશ્ટી. It may be mentioned here in passing that ૫ has also vanished from Gujarati speech. ૫ and શ are pronounced alike. It is doubtful whether any one knows the real vocalic sound of ઋ of 25 centuries ago. The Gujarati will speak ર or રુ in its place, the Bengali and the north Indian will say રિ and the Maharashtraian will say રુ. This leads us to the conclusion that none of them knows the real vowel sound. At least in Gujarati it

d : marriage pandal;

e : triangle;

f : who;

g : cloth cover;

h : research

³⁹ see supra para 7.

has no place in speech. Even Shastris are heard speaking, पंचामृत as पंचाम्रुत, अमृत as अम्रुत or अमरुत.

VI—Aspirated Vowels in Gujarati :

Aspiration is an action of the breath. The air stream from the lungs gets an unobstructed free passage through the larynx and the mouth and the result is the sound caused by friction which is like હ. When the breath is accompanied by voice we get the voiced હ. The former sound is the ઔરસ્ય હ, and the latter sound is the કણ્ઠ્ય હ of the old tradition of Indian phonology. In Gujarati speech, we have only the voiced હ—the કણ્ઠ્ય હ—which is a consonant, the ઔરસ્ય હ as an independent sound has vanished.

The ઔરસ્ય હ is pure breath⁴⁰ (શ્વાસ) *i.e.* the aspiration. In Gujarati, though aspiration does not occur as an independent sound either as a consonant or a vowel, it plays a very important part. Aspiration in Gujarati is a sound feature પ્રાણુધ્વનિ⁴¹. When it fuses with consonants like ક ગ ય જ ટ ડ ત દ પ and થ it gives as a whole class of aspirates, *i.e.*, ખ ઘ ઙ ઝ ઞ ઢ ટ ધ ડ્ and ભ. But when it fuses with vowels it generates a new series of aspirated vowels.

Though aspiration plays a very important part in Gujarati speech, *i. e.*, changes the quality of the vowels, it remains in the background. It is an element thinner than the vowels⁴² and hence it is not

⁴⁰ Allan, W. S. : Phonetics in Ancient India, p. 60.

⁴¹ Dhruva, K. H. : વાગ્વ્યાપાર, p. 16.

⁴² Patel, G. D. : સ્વરભાર અને ંયાપાર, p. 49.

easily observable in speech. Even though a native speaker uses the aspirated vowels in his every-day speech he is unaware of the fact that he uses a different set of vowels. The following illustrations will bring out this point very clearly. In the two sentences (i) આકાશમાં તારા ચમકે છે, and (ii) તારા ઘરમાં ચાર છે, the આ of તા in તારા of the first sentence is a pure vowel and the આ of તા in તારા in the second sentence is an aspirated vowel. Though the word તારા is written identically in the two sentences, the difference in pronunciation can be clearly marked by actually pronouncing the two words.

But a native speaker does not wait to analyse the difference. He is too familiar with both the sounds to give a serious thought to it. By force of habit he distinguishes the sound, uses the aspirated or the unaspirated vowel as the case may warrant, without bothering himself to know how the word is spelt in script.

Again he will speak (i) વૃટારાએ કેરે વરતાવ્યો, and (ii) અમે શહેરમાં ગયા હતા, with an aspirated એ in કેરે and શહેર even though aspiration is indicated by હ in શહેર and in કેરે it goes without any special symbol for it. The pronunciations of કેરે and શહેર would have been the same if they were written as (i) વૃટારાએ કહેરે વરતાવ્યો and (ii) અમે શેરમાં ગયા હતા. The only difference would be that કહેરે and શેર would look strange in script because they are not the accepted spellings.

The orthography of Gujarati is very inconsistent in respect of the representation of aspirated vowels.

In some words it is represented by the symbol ળ, e. g., શહેર, પહેર, વહાણ, etc., while in others no symbol at all is used, e. g., નાનું, ફેર, ઘેરા, etc. Again the symbol ળ represents the voiced consonant ળ (કણ્ઠ્ય ળ) also in some other words and pronounced as such, e. g., મહાસભા, જાહેર, શહીદ, etc. In spite of this chaos the native speaker relies on his instinctive knowledge of the pronunciations of these words which he had picked up from his childhood and does not rely on the written forms of the words.

Scholars and linguists of Gujarati have advocated various symbols for the representation of aspiration in vowels. Here are the various symbols advocated : (૧) ળ⁴³, (૨) વિસ્તર્ગ ચિહ્ન (:)⁴⁴ to be put after the letter, (૩) a dot (.)⁴⁵ under the letter, (૪) a dot (•)⁴⁶ after the letter, (૫) અવગ્રહ ચિહ્ન (૨)⁴⁷ after the letter and (૬) an apostrophe (')⁴⁸ after the letter. The use of ળ is unadvisable for reasons given above. Other symbols are worth consideration. But the last symbol has at least, got some currency in the language. Novelists who wanted to render into script the actual speech of their characters, have taken advantage of the apostrophe (') with good effect and the reading public are familiar with it. Hence without any claim for its scientific unassail-

⁴³ Divatia, N. B. : જ્ઞેડણી, p. 43, (૭૯ન).

⁴⁴ Shastri, K. K. : વાચ્વિકાસ, p. 18, (એ : ન).

⁴⁵ Dhruva, K. H. : વાચ્વ્યાપાર, p. 17, (એન).

⁴⁶ Patel, G. D. : સ્વરભાર અને તેનો વ્યાપાર, p. 227, (એ • ન).

⁴⁷ Panchal, A. J. : ઉચ્ચારશાસ્ત્ર પ્રવેશિકા, p. 55, (એડન).

⁴⁸ According to Narmad. (એ'ન).

ability, apostrophe (') will be used in this article to denote the aspiration and the symbol ૬ to denote the voiced consonant.

The use of apostrophe and the discontinuance of the use of ૬ to represent the aspirated vowels in script may seem strange in some words because the familiar written forms are spelt differently *e.g.*, લો'ઈ (લોઈ),* સ'ઈયર (સદિયર), ઉ'(ઉં), ક્યું'(કહ્યું); while in others it may not look so strange. *e.g.*, મા'રાજ (મહારાજ), ના'તું (નહાતું), પા'ડ (પહાડ). Hence to familiarise the reader with the new way of writing, below are given a few illustrations how the words will be written phonetically.

Words written with ૬ : મહારાજ, મહેલ, લોહિયાળ, પહેલો, etc., will be written as : મા'રાજ, મે'લ, લો'ઈયાળ, પે'લો, etc.

Words written without ૬ : નાનું, તમે, માંડે, ખીક, etc., will be written as : ના'નું, ત'મે, મા'ંડે, ખી'ક, etc.

Words in which ૬ is a consonant : મહાસભા, નાહક, શહીદ, લોકશાહી, etc., will not be disturbed and will be written as they are.

Coming to the enumeration of aspirated vowels in Gujarati speech, after this much preliminary discussion of the subject, we find that there is a whole series of aspirated vowels in Gujarati language which runs parallel to the series of pure vowels. The aspirated vowels of Gujarati phonology are illustrated below :

અ' : (Λ^h) અ'મે, ત'મે, સ'વાર, અ'મણાં (હમણાં).*

આ' : (a^h) આ'ંડે, લા'ણી, દા'ડો, (દહાડો), વા'ણુ (વહાણુ).

* The standard spellings are given in brackets.

- ઇ' : (i^h) વિ'વા (વિવાહ), ચિ'ડિયલ, ચિ'ન્ન (ચિહ્ન)
 ઈ' : (iː^h) ખી'ક, ચી'ડ, વી'હું, રી'ડ.
 ઉ' : (u^h) કુ'વાડો, ઉ'નામણો, ઉ' (હું).
 ઊ' : (uː^h) ઊ'નાળો, ચૂ'લો.
 એ' : (e^h) દે'રૂં, વે'વઈ.
 ઐ' : (E^h) મે'લ, (મહેલ), કે'વત (કહેવત)
 ઓ' : (o^h) મો'ટું, ડો'ણું, લો'ઈ (લોહી)
 ઔ' : (ɔ^h) પો'ર, કો'ડ, મો'લાત.

Generally the aspirated vowels are found as first vowels in Gujarati words, but there are some words in which the middle vowels also are aspirated, e g., ભવ'ઈ, પરાર', કુલે'ર, પરો'ણો, ઇલા'ઈદા. Nowhere they are found as last vowels in words.

The aspirated vowels have a limitation also. Unlike the pure vowels they do not combine with certain consotants, e.g., ખ ધ ડ ઢ ઝ ઞ ક ઢ થ ધ ક્ ભ હ and ળ.

Illustrations of the other consonants are given below :

ક : કે'ર, કે'વત (કહેવત)*	પ : પા'ડ (પહાડ), પો'ચ (પહાંચ)
ગ : ગાં'ધી, ગા'ઢ	બ : બે'રો (બહેરો), બાર' (બહાર)
ચ : ચા', ચૂ'લો,	મ : મા'રાજ (મહારાજ), મે'લ (મહેલ)
જ : જે' જે'મ	ય : કચું, (કહું), ડા'યા' (ડાહ્યા)
ટ : ટા'ટું, ટે'લ (ટહેલ)	ર : રો'યણી (રોહિણી), પરો'ણો
ડ : ડા'પણ (ડહાપણ), ડે'હું (ડહેહું)	લ : લા'ણ (લાહણ), લા'ચ (લાહ)
ત : તે'વાર (તહેવાર), તારૂં	વ : વા'ણ (વાહણ), વ'ઈતરૂં
દ : દા'ડમ, દો'ઢ	શ : શે'ર (શહેર), શા'ઈ (શાહી)
ન : ના'નમ, ને'ર (નહેર)	સ : સે'જ (સહેજ), સ'વાર

* The standard spellings are given in brackets.

Lastly, the consideration about the phonemic value of aspiration in Gujarati phonology. The following pairs of words will show that aspiration is 'the minimum unit of distinctive sound feature.'⁴⁹

કાન (ear) : કા'ન (કહાન—Krishna)*

વેણુ (વાણી—speech) : વે'ણુ (વહેણુ—current)

મૈલ (dirt) : મૈ'લ (મહેલ—palace)

વેર (enmity) : વે'ર (વહેર—saw dust)

According to Bloomfield aspiration, *i. e.*, the symbol (') in writing, is a phoneme. But according to Jones⁵⁰ each one of the aspirated vowel is phoneme. It means either one, or ten more phonemes will have to be added to Gujarati phonology. Any way, aspiration has a phonemic status in Gujarati speech and it would be advisable to consider aspiration / ' / as one phoneme instead of making the number of phonemes in Gujarati unwieldy.

VII. Nasalised Vowels in Gujarati Speech :

When, in the action of producing a speech sound, the soft palate is lowered and a part of the air stream is allowed to pass through the nose, the sound is said to be nasalised. Nasalisation, like aspiration does not occur as an independent sound in Gujarati speech, but plays its part as a feature of other speech sounds—નાસિકથ ધ્વનિ.⁵¹

As a sound feature, nasalisation either fuses with

⁴⁹ Supra : p. 3.

⁵⁰ Jones, D. : Phoneme : Its Nature and Use, p. 85.

⁵¹ Dhruva, K. H. :

* The standard spellings are given in brackets.

voiced unaspirated consonants ગ જ ડ ઢ and બ, and gives rise to five nasal consonants ઙ અણુ ન and મ; or with pure vowels and generates another whole series of nasalised vowels.

Nasalised vowels play a very important part in Gujarati speech. The native speaker is familiar with them, and being conscious of its existence he can distinguish them from other sets of vowels with little effort.

Nasalisation is represented by a dot (·) over the letter—અનુસ્વાર—in Gujarati script. Here again the Gujarati orthography is inconsistent, because the same diacritical mark is used to represent the nasal consonants when they form the first part of conjuncts, *e. g.* રૂઝા-રૂઝા, સપ્તયજ-સપ્તયજ, કણ્ઠ-કણ્ઠ, દન્ત-દન્ત, કર્પ-કર્પ. Such a use of અનુસ્વાર has led Gujarati scholars to classify અનુસ્વાર into two categories⁵²; (1) તીવ્ર અનુસ્વાર (Strong nasality), and (2) ક્ષમલ અનુસ્વાર (weak or soft nasality) What goes by the name of તીવ્ર અનુસ્વાર represents as we have seen above, simply one of the five nasal consonants ઙ અણુ ન or મ.

In the above illustrations, the pronunciation of any of the words would not be different even if it is written with a nasal consonant or with an અનુસ્વાર. Many words in Gujarati language are written in both the ways and they both are accepted standard spellings, *e. g.*, બંધન-બંધન, સંબંધ-સંબંધ. But there are many other words which if written with a nasal consonant would look strange and unfamiliar *e. g.*,

⁵² Divatia, N. B. : Gujarati Language and Literature p.

કડ્કાસ, અણ્ટસ, મન્દી, સમ્પ, ચચ્યળ even though their pronunciations are not different from those when they are written as ક'કાસ, અ'ટસ, મ'દી, સ'પ, ચ'ચળ. Such words with what is traditionally known as તીવ્ર અનુસ્વાર are illustrations of conjuncts in speech, even if they may or may not be spelt in script as such. Hence તીવ્ર અનુસ્વાર is out of question in a discussion of nasalised vowels.

We are concerned here with that variety of nasality which traditionally goes by the name ઢ્રમલ અનુસ્વાર. This is the element which makes vowels nasalised., e. g., આંખ, કૂંચી, ઊંધ, રેંથા, ઘાંઘાટ. For the purpose of this article, it seems advisable to use the diacritical mark (·) અનુસ્વાર to denote the nasalised vowels as above and nasal consonants to denote the so-called તીવ્ર-અનુસ્વાર. Hence even at the risk of looking unfamiliar, conjuncts in speech will be written as પકુખો, ચચ્યળ, ખણ્ડી, અન્ધાર, સમ્પ, etc. The difference between the so-called તીવ્ર and ઢ્રમલ અનુસ્વાર is that, in the case of તીવ્ર અનુસ્વાર the nasal consonant and the consonant following it are two different sounds while in the case of ઢ્રમલ અનુસ્વાર the nasality and the vowel are one sound. Nasality in the latter case is merely a sound feature of the vowel.

The nasalised vowels are illustrated below :

અ : (ā̄) : ક'ઈક, જ'ઈ, ન'ઈ (નહીં), દ'ઈ (દહીં).

આ : (ā̄) : આંખ, ચાંચ, રાંક, નિરાંત,

ઇ : (ī̄) : નિંદાવતું, વિંદાવતું, સિંચાવતું.

ઈ : (ī̄) : ઈટ, ખીંટી, વીંછી, છીંકણી.

ઉ : (ū̄) : કુંવારો, કુંભાર, ઘુંધટ, કુંપળ,

- ઊં : (ū :) : ઊંટ, ચૂંક, સૂંક, ગૂંચ.
 ઐ : (Ē :) : ખૈંચ, ઐશી, ફટો, રૈંટિયો.
 ઔ : (ō) : ઘૌંઘાટ, નૌંધ, તૌંતેર, મૌંધું.

Like the aspirated vowels, the nasalised vowels are also generally found as the first vowels in Gujarati words, but there are many words in which the middle and the last vowels are also nasalised, *e.g.*, નિરાંત, અમૂંઝણુ, ઊઠાંતરી, મીનાં, કાપકું, રૂપાં, વળાંક. But ઐ and ઔ are exceptions, they are usually the first vowels like their counterparts ઐ and ઔ⁵³—the pure vowels. Moreover, unlike aspirated vowels, the nasalised vowels combine with all consonants.

There is another variety of nasalised vowels in which the nasal feature is stronger than that found in the preceding set of nasalised vowels, *e.g.*, સંયમ, સંરક્ષણુ, સિંહ, હિંસા, etc. Such a nasalisation of vowels should have been really termed તીવ્ર અનુસ્વાર instead of the traditional one in which the અનુસ્વાર represented one of the nasal consonants. Though the nasalised vowel in સંયમ, સિંહ etc. is pronounced with a little stress, it does not represent a nasal consonant conjoined with another consonant. Not only may it look strange to write સમ્યમ or સન્યમ, સમશય or સનશય, સિમ્હ or સિન્હ, હિમ્સા or હિન્સા etc. but it would also be awkward to pronounce like that. The symbol (◡) is used here to distinguish the strongly nasalised vowels from the weaker variety. The following are the illustrations of the stronger variety :

⁵³ Supra, pp. 24, 26

अँ : (\bar{a}^w) or (\bar{a}^j) : अँश, वँश, सँवाद, सँयम

आँ : (\bar{a}^w) : भाँस, साँसारिक,

इँ : (\bar{i}^w) : डिँसा, सिँड

ऊँ : (\bar{u}^w) : झुँवाणीस, झुँवातेर.

(The small j and w represent glides)

It will not be out of place here to draw the attention to a peculiar phenomena of speech sounds. An incidental but unavoidable transitory j (य) glide⁵⁴ is heard between the nasalised vowel of सँयम, सँयोग, etc., and the following य. A similar w (व) glide⁵⁴ is heard between the nasalised vowel of सँरक्षायु, सँवाद, अँश, डिँसा, सिँड, etc., and the following र व श स and ड. Similarly an 'n' like sound is heard between the vowel of सँलाप, यौँलो and the following ल. The intermediate unavoidable sounds of the glides are the cause of the stress on this type of nasalised vowels.

These four vowels with strong nasality are circumscribed by the condition that they are always followed by य र ल व श स or ड only, e. g., सँयोग, सँरक्षायु, यौँलो, झुँवाणीस, झेँकाँश, भाँस and सिँड.

Such words are mostly तत्सम but there are few तद्भव words also, e. g. डँसार, डँसारे, अँसरी, यौँलो. But the opposite is not true. The vowels preceding य र ल व श स ड may be pure vowels or softly nasalised, e. g., यौँयो, ड्राँस, धेँश, डुँवारे, etc.

Now-a-days there is a tendency amongst some speakers to pronounce कन्स, कन्सार, सन्सार, पन्सरी, perhaps

⁵⁴ Infra, p. 39

for the sake of style, but in that case -સ is a conjunct in their speech and the preceding vowel is a pure vowel. The ordinary pronunciations are ક્કસ, ક્કસાર, સ્સસાર, ળ્સસરી, with nasalised vowels.

Again many a time it happens that the neighbouring pure vowel is coloured -- rather seems to be nasalised—with the nasality of a nasal consonant, *e. g.*, કાંન, પાંન. નાંખ, માંખ, etc. Many a time the nasality of a nasal consonant departs from it, leaving a homorganic voiced consonant in its place and turns the preceding pure vowel into a nasalised vowel, *e. g.* મીનડી-મીંદડી, સાણુડી-સાંડડી, આખણુ-આંખણુ etc. Both the forms of such words are current in Gujarati speech and both the forms are accepted spellings in writing also.

Last comes the consideration about the phonetic value of nasalised vowels. The following illustrations will show that nasality is also a minimum unit of distinctive sound feature⁵⁵.

- 1 ભાંગ (a herb)—ભાંગ (break); કાન (loved one)
કાંન (spin); દાન (ferocious)—દાંન (tooth).
- 2 ચોક (street square)—ચોક (shock); આકો (a herb)
—આંકો (numerical figure)
- 3 વશ (under control)—વૈશ (dynasty); હસ (laugh)
—હૈસ (swan); માસ (month)—મૈસ (meat)

Like aspiration⁵⁶ nasality also should be considered as a single phoneme instead of adding 12 more phonemes to the Gujarati phonology. The two

⁵⁵ Supra, p. 3

⁵⁶ Supra, p. 32

varieties of nasality in vowels, *viz.*, strong (◡) and and soft (◡̣) may be considered its two allophones.

Lastly, it has been found that sometimes a vowel is both aspirated and nasalised, *e. g.*, યુ'વાણું, ઉ' (હું), † ઊ'ધ, ગાં'ધી, ન'ઈ (નહી), દ'ઈ (દહી), ઍ'શી, નૌ'ધ, etc.

Again, the nasality of the word-ending ઉ has weakened in Gujarati speech, *e. g.*, યુ', સારું, રાતું, ઘણું, etc. These are spoken with such a weak nasality that it is almost inaudible in speech. In the south Gujarat and in the Charotar region it has already vanished. The same is the case with words like, ઘણાં, સારાં, રાતાં, etc. This is perhaps due to the fact that Gujarati is passing through an evolutionary change.

VIII Diphthongs in Gujarati Speech :

A diphthong is an independent vowel glide.⁵⁷ The speech organs start from the position of one vowel and glide over towards the position of another vowel, but do not actually reach that position.

A diphthong differs from a succession of two consecutive vowels. In a succession of two vowels, the two are separate speech sounds and two separate syllables, while a diphthong is one gliding sound and one syllable. In the word યૈરિ (યૈર), યૈ is a diphthong, but in અથઈ તિ* અ and ઈ are two separate vowels coming one after the other. Also in a succession of two vowels, there is a little diminution of tone be-

† Standard spellings are given in brackets.

⁵⁷ Jones, D. : An outline of English Phonetics, p. 219.

ween the two vowels as can be distinctly observed in ઉરિષ્ઠા.*

Again a diphthong differs from a transitory glide. The transitory glide is the incidental sound produced when the organs of speech are passing from the position of one speech sound to that of another by the most direct route.⁵⁸ It is an incidental, unavoidable, transitory sound—a connecting sound of very short duration.⁵⁹ It is natural, inevitable and effortless. A diphthong is also a vowel glide, but it has to be voluntarily and expressly made. It requires effort on the part of the speaker.

When ષ or ષ્ is followed by another vowel, a j glide (ય) is heard between the two vowels and the following vowel seems to be coloured by the palatal shade of ષ or ષ્. So નદીએ is heard like નદીયે; ઉરિ આવોને is heard like ઉરિયાવોને; ષ્ચ, ષ્ચા, ષ્ચે, ષ્ચો, etc., are heard as ષ્ચ, ષ્ચા, ષ્ચે, ષ્ચો, etc. Similarly there occurs a w glide (વ) after ઉ or ઊ. The j and w glides and an n-like sound are heard in words like સ્વપ્ન, સ્વપ્ન, સ્વપ્નો, etc. These transitory sounds are not consonants,⁶⁰ but are mere palatal, labial, or nasal shades. When અ or આ is followed by અ or આ there is heard also a j glide (ય).⁶¹ Hence the following અ or આ looks like ય or યા. The j and w glides along with

* In Sanskrit these would be અથેતિ and ઉરીષ્ઠા.

Sandhi is not made in Gujarati.

⁵⁸ *Ibid.*, p. 1 §3.

⁵⁹ *Ibid.*, §216.

⁶⁰ Jones, D. : An Outline of English Phonetics, §. 231

⁶¹ अवर्णा यश्चुक्तिः ।

the following vowel for the purpose of this article will be represented by ય and ળ with a dot below them to distinguish them from the consonants ય and ળ

The old traditional Gujarati phonology has given us only two diphthongs ઐ and ઔ (અઈ and અઉ). But Gujarati speech seems to have an abundant crop of diphthongs. They are as under :

1. અઇ : (ai) : મિઠઈ, અઈનાર, ગઈ, નવઈ.
2. અઉ : (au) : અઉટું, કઉતક, અઉદ, સુતરઉ.
3. આઅ : (aə) : ઈલાઅચી, રાઅનું, આઅનો, આઅડી.
4. આઈ : (ai) : જુદાઈ, વનરાઈ, બાઈ, પરાઈ.
5. આઉ : (au) : અમાઉ, ઉઠાઉ, ફળાઉ, ગાઉ.
6. એઈ : (ei) : એઈ એઈ, તાએઈ, શેઈડી, એઈ.
7. એઉ : (eu) : ગે'ઉ, બ'નેઉ.
8. ઐઈ : (oi) : ડાઈ, દોઈ, લેઈ, રસોઈ.
9. ઐઉ : (oū) : બેઉ, ખોઉ, રાઉ.

The following are weak diphthongs :

10. ઈઅ : (ie) : દિઅર, પિઅર, ઈઅળ,
11. ઈઆ : (ia) : ઈળિઆ, મદ્દિઆ, બળિઆ.
12. ઈઉ : (iū) : ઘોડિયું, ફદિયું, લગ્નિયું.
13. ઈએ : (ie) : કદિએ, ઇએ, નદિએ (નદી ઉપર)
14. ઈઓ : (io) : દરિયો, કડિયો, ચણિયો.
15. ઉઆ : (ua) : રુવાળ, માલપુવા, જુવાળ.
16. ઉએ : (ue) : રુવેલ (રવાળ), કુવે (કુવા ઉપર), જુવે, રુવે.
17. ઉઈ : (ui) : જુઈ, મુઈ, બહુઈ.
18. ઉઓ : (uo) : મુવો, કુવો, જુવો.

Note : In ઐઉ and ઈઉ - ઉ is nasalised.

To illustrate more clearly diphthongal nature of the above vowel glides, below are given some illustrations wherein the two vowels are two separate

consecutive speech sounds, e. g., અથઈતિ, નાઈલાજ, ઠાઉદી, અતિઅધ્ય, નદીઓ, નદીએ (કર્તાથે) ઘોડાએ, તેઓ, etc.

The following two sentences will illustrate how a diphthong differs from two consecutive vowels,

(i) નદીએ ના'વા જય હા ગોરૂમાં, and

(ii) રેલ આવ્યા પછી નદીએ વે'ણુ બદલ્યું.

In first નદીએ the pronunciation is નદિએ and it is faster than the second નદીએ. In the first નદીએ there is no diminution of tone between ઈ and એ while there is such a diminution of tone between ઈ and એ of second નદીએ.

The weak diphthong is called weak because its two vowel components look like two separate vowels, but they are diphthongs all right because there is no diminution of tone between them.

To distinguish the j and w glides in diphthongs i. e.,—the symbols ય and વ from the consonants ય and વ, below are given a few illustrations wherein ય and વ are consonants. પદયાત્રા, ક્રિયાત્મક, નિયમ, નિયોગ, ભાવવાહી, સિવાય, શિવાલય, પવન, etc.

There are a few triphthongs also in Gujarati speech; we may call them all weak triphthongs because of the reasons given above for weak diphthongs.

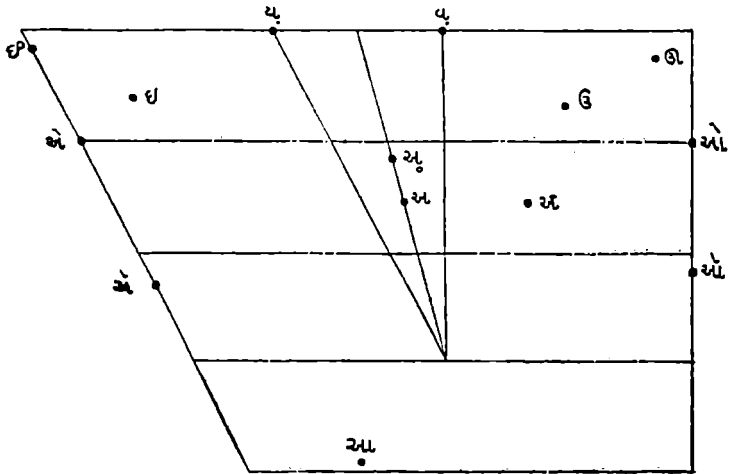
1. અઈઅ : (Aiə) : સ'ઈયર, સઈયદ, મઈયત, યઈયર.
2. અઈઆ : (Aia) : રુપઈયા, તઈયાર, મઈયા, મ'ઈયારી.
3. અઈઓ : (Aio) : જઈયો, લડવઈયો, તરવઈયો, સર'ઈયો.
4. અઈઉ : (Aiū) : પપઈયું, રવઈયું, ન'ઈયું.
5. અઈએ : (Aie) : જઈયે, ખઈયે.

6. અહિઓ : (auo) : અહિઓ
7. ઓઈઓ : (oia) : ઓઈઓ (ઓહિઓ), ઓઈઓ.
8. ઇઆઈ : (iai) : ઇઆઈ, વહિઆઈ.
9. ઓઈઈ : (oiu) : ઓઈઈ.
10. ઓઈઓ : (oio) : ઓઈઓ.

Many a time aspirated and nasalised vowels also take part in diphthongs and triphthongs e. g. યાઈ (યાહી), અંઈયાં (અહીંયાં), પિંયર, ખેઉ, મંઈયર, નંઈયું, ઠંઈ (ઠહી), ઠંઈક, સાંઈ.

IX Summary :

This completes the discussion of the vowel system of Gujarati speech. Phonemically we may say that there are 16 vowels phonemes—14 pure vowels, 1 aspiration phoneme and 1 nasalisation phoneme. There are 10 aspirated vowels, 8 nasalised vowels, 4 strongly nasalised vowels.



(^ˆ) આસન્ય ASPIRATION

([˙]) નાસિકાન્ય NASALISATION

The Chart of the positions of the Gujarati vowels.

There are also 18 diphthongs and 10 triphthongs in Gujarati speech. Below is given the table showing the vowel phonemes.

Vowel Phonemes :

Sr. No.	Phoneme	Description	Examples
1	અ ઠ	The neutral vowel	રમત, તરત, વજન
2	અ̇ ʌ	The stressed અ	રમત, તરત, નવ, પુદ
3	અ̇ ʌ̇	The non-syllable અ	રમત, નવ, ચોપડી
4	ય j	The palatal અ	શોક્ય ગોર્ય
5	વ w	the labial અ	જવ કુંવર
6	આ a	—	કાગળ અનાજ
7	ઇ i	The short ઇ	નિશાળ કવિતા
8	ઈ i:	The long ઈ	ટ્રીસ નદી
9	ઉ u	The short ઉ	ઉધાર અનુભવ
10	ઊ u:	The long ઊ	ઊડ કાબૂ મજૂર
11	એ e	The narrow એ	રેશમ રમેશ રમશે
12	ૐ E	The wide ઐ	વૈલુ નૈલુ વૈર
13	ઓ o	The narrow ઓ	ઓસડ આસો નહાર
14	ૐ o	The wide ઔ	ઔરાક ગોળ દોડ
15	(') (ʰ)	The aspiration phoneme	વા'લુ પે'લો ઊ'નું
16	(˘) (˙)	The nasalisation phoneme	આંખ, ઊંધ, વૈંશ, સિંહ

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