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SANSKRIT AS A LANGUAGE OF WIDER COMMUNICATION

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1.0 The languages spoken in present day India are distributed into four groups, viz. Indo-Aryan, Dravidian, Mundarian, and Tibeto-Burman. Indo-Aryan forms in turn a branch of Indo-European, one of the major and better understood language families of the world. Greek, Italic, Celtic, Germanic are some of the branches included in this family, but the nearest relative of Indo-Aryan is , however, the Iranian branch represented now by Persian, Pashto, Balochi, Kurdish and some other languages. The term Aryan is derived from the word *ārya* 'noble' which was used to refer to the people who spoke these languages. Since the people of ancient Iran also used the same name to refer to themselves, the term Indo-Aryan was coined to distinguish the Indian Branch from the Iranian.

It is generally believed that Indo-Aryan was introduced to India more than 3000 years ago by tribes who came here as invaders and later settled after conquering the people who had preceded them. The linguistic history of Indo-Aryan is described in three important periods called Old Indo-Aryan, Middle Indo-Aryan, and New Indo-Aryan. The changes that the language underwent during the course of these 3000 years are responsible for what was one language to deserve different names at different times of its development. Old Indo-Aryan comprises several dialects of which Vedic and Sanskrit are the two well documented dialects. Middle Indo-Aryan consists of Pali and the Prakrits; New Indo-Aryan includes Bengali, Oriya, Punjabi, Gujarati, Marathi and Hindi to name some of the important languages which are mainly spoken in the northern part of the country.

The evolution of Sanskrit is believed to have taken place in three stages, viz. the Vedic period, the Epic period, and the Classical period. Within each period, it is however possible to note several stages. Classical Sanskrit must not be taken as having developed directly from the language of the Epics and the latter in turn from the language of the Vedas. It may be best viewed that in each period there were several spoken dialects of which one of them was selected and favoured as the standard for use in literature. The language of the Rigveda was probably based on one of the dialects of the North-west and the literary norm of the Classical writers may have developed in the area known as Madhyadesa, what now forms the Eastern Punjab and the Western U.P. Although the literary norms may at the beginning be based on a spoken dialect, they develop in course of time into conventionalised forms and will cease to be the speech of any one community or of any one geographical area. This is what may have happened in the case of Sanskrit. The spoken forms must have been different from the literary norms in their idioms and grammatical structures.

The oldest literary documents of Indo-Aryan are the Vedas. The Vedic literature was very vast and of the extant, four branches, viz. Rig, Yajus, Sāma, and Atharva, are held important and represent the four offices of the priests in the sacrificial rites. Each Veda has to its credit the Brāhmaṇas, which are the earliest commentaries on the Vedas and discussions on ritualistic problems. Then follow the Āraṇyakas embodying the thoughts on problems of God and origin of humanity, and lastly the Upaniṣads, the early philosophical treatises which are the sources of later philosophical systems.

The desire to preserve intact the Vedic tradition gave rise to the science of phonetics (Śikṣā), the science of etymology (Nirukta), the science of grammar (Vyākaraṇa), and the science of prosody (Chandas). The ritualistic aspect of the Vedas helped developing the science of astronomy (Jyautiṣa), and the science of ritual (Kalpa) which in turn gave rise to the later socio-religious literature called the Śrauta, Gṛhya, and the Dharma sūtras.

From the early attempts at analysing Sanskrit language in the Prātiśākhyas and the Nirukta, there evolved a school of grammarians of whom Pāṇini may be specially mentioned. The Indian grammatical tradition has made great contribution to modern linguistic theory and method. The concept of zero and technical terms like *sandhi, svarabhakti,* and *samprasāraṇa,* are known to all linguists. In recent years, Pāṇini was rediscovered and it generated a series of studies clarifying several issues in syntactic analysis. Leonard Bloomfield, the pioneer of American Structural linguistics, termed Pāṇini's grammar of Sanskrit as 'one of the greatest monuments of human intelligence'[1]. Not only in the science of grammar, but in other areas as well, Sanskrit is the repository of all that is best in Indian tradition. This may be seen in the scientific treatment of such topics as economics (Arthaśāstra), art of love (Kāmaśāstra), and medicine (Āyurveda).

The Ramayana and the Mahabharata are the two great epics and have served as treasure house of stories for themes in the later Kāvyas. Poets like Kālidāsa and Māgha and prose writers like Bāṇa and Subandhu may easily be counted among the literary giants of the world. The Hindu writers tried their hand at all types of literary composition and excelled in every one of them. The Sanskrit Commission (p. 73) has rightly noted that 'the total output of this literature easily transcends in extent everything which any other ancient or medieval literature can show'[2].

WAS SANSKRIT EVER SPOKEN?

The Vedas consist of valuable evidence for dialect variation. The older parts of the Rigveda show only an *r* sound. In its younger parts we may note the substitution of *l* sound for an original *r* sound. Atharvaveda records a greater number of words with the *l* sound. All this points to the existence of spoken dialects one of which was raised each time to the literary status. There are a few casual references in the Brāhmaṇa literature about the dialectal status of particular areas. In the Kauṣītaki Brāhmaṇa the dialect of the Northwest tract is mentioned as the standard form of speech.[3] The Satapatha Brāhmaṇa describes the Kuru Pañcālas as speakers of the best variety.[4] In the same text

there is a passage which narrates how the Asuras were easily recognised from their speech by the Devas.[5] The Asuras are described as employing *l* sounds for *r* sounds. The Prātiśākhyas, the Nirukta of Yāska, and the Aṣṭādhyāyī of Pāṇini, all have documented instances of regional variation.

The pronounciation of *r* and *ṛ* is given as alveolar by the Prātiśākhyas but they are cerebral for the Pāṇinīyas. This difference is believed to have correlation with the regional varieties, the former with the Western and the latter with the Eastern dialects. The Taittirīya Prātiśākhya views the *yamas* as belonging to the following syllable while the Vājasanēyi Prātiśākhya takes it as belonging to the preceding syllable. This distinction may again be linked up with different speech areas.

Similarly, Yāska has noted differences in the use of certain grammatical as well as lexical items. For example, *na* which was used in the Vedic language to denote both 'comparison' and 'negation' was used only in the latter sense in post-Vedic speech. Similarly, *nu* in the Vedic language had the meaning of 'uncertainty' besides its use as a simple verse filler. In the latter language it means only 'uncertainty'. Of the lexical differences, we may cite that the word *dātra* was current in the Northwest for a 'sickle' whereas in the East the word *dātiḥ* was used for the same.

Pāṇini too mentions in his Aṣṭādhyāyī regional variations. The Eastern dialect is noted as employing the word *vartakā* in the sense of a 'bird' for which *vartikā* was used in the Northern dialect.

Dialects other than what is preserved in the texts and referred to, generally by the term Sanskrit, must have also existed along with the latter. Evidence for their existence is available in the later Middle Indo-Aryan dialects. Final *-as*, for instance, has developed to *-e* in some Prakrit dialects while in others the treatment is like that in literary Sanskrit, i.e. *-o*. There are again dialectal variations in the treatment of long vocalic *r* of verb roots in the participle forms. Sanskrit records a twofold development, namely *ūr* and *īr*, depending on the preceding consonant (e.g. *pūrṇa* from *pṝ* 'to fill', but *jīrṇa* from *jṝ* 'to wear out'). In

the latter instance, Prakrit dialects attest Old Indo-Aryan *ūr* instead of *īr*, e.g. *jūṇṇa*< **jūrṇa*.

Sanskrit was a spoken language and the vast literature in this language is a solid testimony to this fact. It was not limited to any particular area, but was spoken throughout the length and breadth of the country. Regional peculiarities observed by Pāṇini and others confirm this thesis. It was spoken not only by the Brahmins but was equally used and understood by other social classes. If the word Saṃskṛta is taken in the meaning 'polished, purified, correct speech', it may then be thought of as the speech of the educated class of the Aryan society. Others must have spoken substandard varieties. They could nevertheless understand the standard form and may have even mastered it so as to use it on occasion. The Ramayana records the story of a demon, who when disguised as a Brahmin, could also speak chaste Sanskrit.[6] Otherwise, he may have spoken a non-standard form of Sanskrit or a non-Aryan speech. Similarly, Hanuman knew Sanskrit speech as the Brahmins spoke it[7], but spoke probably either a different language or a different variety of Sanskrit. In the Classical drama, characters representing higher social classes spoke Sanskrit; others spoke varieties of the Prakrit. The fact that Sanskrit and the Prakrits were used side by side suggest that they were mutually intelligible and the people were bilinguals. The audience before whom these dramas were staged must have also had a control over both Sanskrit and other local and social varieties.

Thus the number of dialectal differences in the Vedic speech, the evidence of the Prakrits, the numerous rules in Pāṇini which govern the language as a spoken tongue, the evidence of the dramas, all these point to the fact that Sanskrit was a spoken language. Within their class, the members may have used their own speech as a mark of identity and whenever it involved members of different social groups, they may have employed the standard variety. This latter may have been primarily the speech of the upper class.

SANSKRIT THROUGH THE AGES

India has always been a nation of many languages. This multilingual situation did not, however, come in the way of unity and oneness of Indian culture. Language has never been an issue and Sanskrit, of course, was taken as the binding force. It was designated as *Girvāṇabhāratī* as it is, for the orthodox Hindus, of divine origin, is sweet like nectar and as it occupies an enviable position in the group of sister languages.

People of this vast country have always been bilinguals and even multilinguals. The role of these languages in the life of an Indian was clearly defined and there was never a conflict between their functions. Sanskrit by which we now understand 'the polished' variety was used in more formal situations like religious ceremonies, discussions on philosophical and scientific matters, and the vernaculars were employed in non-formal occasions such as routine conversations among friends and relatives. Thus, we may say that Sanskrit and the spoken dialects were in complementation in that Sanskrit had its role to play in the religious as well as cultural life and the spoken forms in the social life. We have already alluded to the fact that Sanskrit too developed from one of the spoken dialects and was elevated to the position of a literary standard. The spoken dialects are commonly referred to by the term Prakrits. This explains the mutual intelligibility of Sanskrit and the Prakrits. The pre-Aryan population which had to learn Sanskrit and the Prakrits were the real bilinguals. As Sanskrit developed into literary standard, we see that at a later date it is again a variety of Prakrit which was employed for literary compositions. Thus, we note that Mahavira, an older contemporary of Buddha, preached his sermon in a Prakrit dialect called Ardhamāgadhī and his sayings are preserved to us only in this dialect. Similarly, Buddha too delivered his sermons in a spoken dialect which is identified as Māgadhī. He further is said to have insisted that his disciples should understand the master's teaching in their mother tongue, *sakāya niruttiyā,* and not translate it into their own speech. It is clear by this that both Mahavira and Buddha wanted to

emphasize the spoken non-standard forms rather than the standard variety since they desired that their teaching should reach and benefit the common man. It is also evident that among their disciples there were some who spoke neither Sanskrit nor any variety of Prakrits as their native language. For understanding and comprehension alone the medium of mother tongue was allowed and the teachings were not only delivered but later preserved in a variety of spoken form. This situation could not have been possible without the existence of a strong bilingualism. In later times, even Buddhists and Jains took recourse again to Sanskrit for their literary activities since it was thought that Sanskrit could be the only medium for any serene and scientific writing. The Buddhists especially developed a new variety called the Hybrid Sanskrit which was Sanskrit with Pali influences.

Coming to the Middle ages, we find again Sanskrit regaining its importance. It became a sort of common link language among the speakers of different mother tongues. Thus in his Naiṣadhīyacarita, Śrīharṣa describes the suitors of Damayantī from all parts of India as speaking to each other in Sanskrit to avoid mutual unintelligibility.[8] Another poet, Bilhaṇa in the 11th century, mentions in his Vikramāṅkadevacarita that in Kashmir even women in every home spoke Sanskrit and the Prakrits like their mother tongue.[9] Conditions may have been probably the same more or less in other parts of India, particularly among the cultured classes.

Sanskrit has always been the most potent force that has welded the whole of Indian subcontinent into unity. It was the bridge language between the Aryan north and the Dravidian south. Many a southerner has nourished this language. He did not consider Sanskrit as a foreign language thrust upon him. The great Ācāryas–Śankara, Rāmānuja, and Madhva wrote *bhāṣya* 'commentary' on the Bhagavadgita which is read by every one alike in the country. The great Sāyaṇa who wrote commentary on the Vedas was in the Vijayanagara empire. The other two Vedic commentators, Venkaṭamādhava and Bharataswāmi were under the Cholas and the Hoysalas. Mallināthasūri who commented on

the works of Kālidāsa was a southerner. Kumārila Bhaṭṭa, Appayya Dīkṣita, Maṇḍana Miśra were all great sanskrit scholars from the south and enriched this language by their writings. Śankara born in the state of Kerala travelled all over the country and established Maṭhs in all the four corners of this land. This he could achieve only through Sanskrit, the link language, which was understood in all parts of the country. Even today, religious discourses are given in Sanskrit and people from different regions participate in this with equal facility. This glorious tradition of the past must be continued to maintain the unity of the nation and it is possible only through this great language.

SANSKRIT IN PRESENT DAY INDIA

The literary activity in Sanskrit is not something of the past; it is going on continuously even to this day and many Kāvyas, prose works, dramas and essays are being produced in this language as in the olden days. While keeping with the tradition on the one hand, the modern writers have, on the other, also come in contact with the West. New trends like patriotism and political consciousness may be witnessed in these compositions. Evils of society and of religion have been utilised for plots of the dramas. The aim of the dramas in this period is not simply to entertain; they aim at social welfare, national unity and depict contemporary events. This is a clear proof for Sanskrit not to be qualified as a dead language as far as literary activity is concerned. There seems to be, however, a partiality towards dramatic compositions since they can also be produced on stage and thus will be more effective than the Kāvyas which can only be read and enjoyed.

There are a number of journals and magazines in Sanskrit. They include three dailies, two weeklies, two fortnightlies and eighteen monthlies. Of this last, mention may be made particularly of *Saṃskṛta Sāhitya Pariṣatpatrikā* from Calcutta, the oldest Sanskrit newspaper, which publishes research articles besides original dramas and poetry. There are about fourteen quarterly journals and eight half-yearly journals of which probably *Saṃskṛta*

Pratibhā published by the Sahitya Academy, New Delhi is the most important. It consists of four sections, one each for poetry, prose, drama, and translation besides book reviews. There are six journals which are issued once a year of which mention may be made of *Śikṣājyotiḥ* the publication of Delhi Central Sanskrit Vidyapeetha and *Saṃskṛta Raṅga* of Madras.

The impact of this great language is still very much with us. The Sanskrit name for India, *Bhārata*, has been officially recognised. The national motto is an expression in Sanskrit-*satyam eva jayate* 'truth alone triumphs'. The national anthem is 90% Sanskrit and 10% sanskritic. The motto of the Lok Sabha is *Dharmacakrapravartanāya* 'for the promulgation of the wheel of Law'. The All India Radio has the guiding principle *bahujanahitā ya bahujanasukhāya* 'for the good of the many and for the happiness of the many'. Life Insurance Corporation's motto again is expressed in Sanskrit, *yogakṣemaṃ vahāmyaham* 'I take the responsibility for access and security'. The daily prayer of an Indian is *sarvejanāḥ sukhino bhavantu* 'may all beings be happy' expressed in Sanskrit. He sees the country's unity in every act of his and expression to this effect is always given in Sanskrit. At daily bath he recalls the great names of the rivers, holding equal respect to them whether they belong to his region or not-*gaṅge ca yamune caiva godāvari sarasvati, narmade sindhu kāveri jale'smin sannidhiṃ kuru*. Sanskrit is thus our greatest cultural heritage and presents a national outlook which is one of unity.

SANSKRIT AND OTHER INDIAN LANGUAGES: MUTUAL INFLUENCES

The relation of Sanskrit to other Indian Languages has never been one of conflict. From the time they came in contact they appear to be ever moving towards each other's system and have been going through a process of convergence. This is evidenced at all the levels of the language, viz. phonology, grammar, and lexicon. Sanskrit added to its sound system a new series of sounds called the retroflex sounds which later developed contrastive value and came to be differentiated from

the dental sounds. This influence on Sanskrit has been convincingly demonstrated by scholars to have been made by the Dravidian languages which possess retroflex sounds at all stages of their development. The Dravidian languages have, in their turn, added the aspirated sounds which were native to Sanskrit.

Vedic language shows a rich verbal system. Finite verb expressing number and person (but not gender) was an integral part of each sentence. In later Sanskrit, we notice the beginning of nominal construction in which predication is made not by a finite verb but by a nominal which agrees with the subject for number and gender (but not for person) - e.g. *raghuvaṁśakāvyam kālidāsena viracitam* 'Kālidāsa wrote the poem, Raghuvaṁśa.' Dravidian languages abound in such constructions, noun phrase followed by another noun phrase (e.g. Telugu: *vāḍu mancivāḍu* 'he is a nice person'). It is possible to think that this type of construction independently developed in both Dravidian and Indo-Aryan. Since such constructions are not found in the Vedic language, but are very commonly found in later language, Dravidian influence has been suggested for this development in Sanskrit. Similarly, the grammatical systems of both Sanskrit and Dravidian show in common the use of gerund or non-finite form of the verb to express subordinate action in complex sentences. e.g. Sanskrit: *jālam prasārya taṇḍulān prakṣepsyati* 'having spread the net, (he) will scatter rice': Telugu: *āyana kāfi tāgi skūliki veḷḷāḍu* 'He went to school, after drinking coffee'. The characteristics of onomatopoetic stems is panIndic and involves at least clearly the Indo-Aryan and the Dravidian languages. The particle *iti* in Sanskrit and the past non-finite form of the verb meaning 'to say' in the Dravidian languages have similar function: they mark quotations. Again, Sanskrit morpheme *api* and the Dravidian *-um*, though differing in phonological representation, have the same semantics. We can hardly think of accident for these features found in common between the two language families. Given bilingualism between the two families in North India at this period, there can not be any other solution than

diffusion from one language family into the other.

In the area of lexicon, however, we find the greatest influence. When Indo-Aryan was introduced into India, there were already speakers of Dravidian and Munda languages. The intimate contact of almost 3000 years between the speakers of Indo-Aryan and the native languages of India at that time has brought many words of these languages into Sanskrit. Many native words which were found in use in the Vedic language were gradually lost in later Sanskrit since a change had come about in the socio-cultural life of the Hindus. To compensate this loss it acquired a large number of new words from various sources. The languages spoken in India before Aryans entered made a sizeable contribution to the vocabulary of Sanskrit. This influence is probably the greatest in the case of Dravidian. The words which can be identified with certainty as Dravidian run into several hundred. A similar portion is contributed by the Munda languages. The words, *aṅganā* 'woman', *kadalī* 'banana', *tāmbūla* 'betel', *mātaṅga* 'elephant', *lāṅgala* 'plough' *sarṣapa* 'mustard', which are very commonly used in Sanskrit have been identified as of Munda origin.

It is quite understandable that a language borrows words when new objects and concepts are introduced in the life and culture of the people speaking that language. It is however surprising that words are borrowed for objects for which native words were already available in the language. Thus, Sanskrit has borrowed from Dravidian, terms for 'cat' *biḍāla,* 'tiger' *śārdūla,* 'bear' *bhallūka,* and 'elephant' *nāga,* although it had words for all these animals, *mārjāra, vyāghra, ṛkṣa,* and *hastin,* respectively. This kind of situation is probably explained as due to a large number of non-natives participating in the linguistic activity of Sanskrit.

It is suggested that the Aryan invaders were probably outnumbered by the Dravidians but being equipped better for war, they were able easily to conquer and push the Dravidians down south. It appears that the Aryan population was not strengthened by later additions to the original number. After

they got settled, they may have married from the Dravidian community, providing a firmer foundation to their rule in India. The Dravidians too, bound by matrimonial alliance, may have accepted the Aryan rule without further resistance. The relation of Aryan to Dravidians after the latter's subjugation must have been a very friendly one, similar to the relation of the Scandinavians to the Anglo-Saxons in England. It is further suggested that in the first period of their contact bilinguals were recruited chiefly from the native population. Support for such an assumption is provided in the greater number of Sanskrit loans in Dravidian as opposed to relatively a small number of Dravidian words in Sanskrit.

IMPORTANCE OF SANSKRIT

Sanskrit is the source of knowledge and the key to understand the history and culture of the country. It is not a classical language in the way in which Greek and Latin are; it has been alive in an extraordinary way, its character and connection with the living present being unique. The modern terminology in science and technology is being built with its resources; its concepts and ideologies have endowed the nation with its characteristic values. In a Seminar held recently,[10] it was observed that Indian languages favour Sanskrit as source for adoption and for coining new terms. Among the various constituents, viz. Sanskrit, Perso-Arabic, and English, in the modernizing process of Indian languages, we find more of Sanskritized renderings of culturally infused concepts. The reason for this, it is thought, lay in the linguistic structure of Sanskrit language which possesses high potentiality in affixation and word compounding and richness in abstract concepts and discursive terms, besides being a rich storehouse of knowledge.

Many a foreign scholar has emphasised the greatness and importance of Sanskrit. Prof. H.H. Ingalls of Harvard University has remarked that it is Sanskrit literature and science, Sanskrit philosophy and religion that have given India the only free unity she ever possessed. Similarly, A.Y. Sirkin, a younger Russian

Indologist, observed that the Soviet readers and scholars look upon Indian Literature not merely as an unmatched source of knowledge about India's past, but also as the key to a better understanding of the Indian people. Prof. F.W. Thomas of Oxford remarked in his presidential address at the Trivandrum session of the Oriental Conference, that "for higher education on the humanistic side, the Sanskrit is in India an imperative requirement. It would be indeed preposterous if Indians... were without access to that knowledge which alone can enable them to realise the situation in which they find themselves... In view of the great linguistic divisions of the country if it is to be one country, it may be worthwhile to ask whether Sanskrit may not again rise to the occasion...."

Sanskrit has a claim, says Prof. Thieme, to be ranked among the great world literature with regard to scope and variety of subject matter, accuracy and depth of thought, formal strictness and polish of expression. As for the students of linguistics, the knowledge of Sanskrit is of utmost importance. It was the discovery of Sanskrit by the West which paved the way for the development of Comparative linguistics. Whatever modern Indian Languages one may study, whether Aryan or Dravidian, the background of Sanskrit discipline is a great asset. In a similar tone, M. B. Emeneau of the California University cautions that "because of the heavy reliance of the languages of India on Sanskrit, it is imperative that any one specializing in a modern language of India, should have some knowledge of Sanskrit, and the greater his specialisation the more need of Sanskrit. In his preparation of teaching materials in Hindi or Tamil he must present the Sanskrit part of the vocabulary completely. Real competence is possible only through an understanding of Sanskrit structure. A small sample of the Hindi or Tamil vocabulary can be handled in ignorance of Sanskrit structure; without a knowledge of this structure, it is impossible to teach the student how to predict future borrowings".

This antiquity of Sanskrit, the richness of its literature and above all the ability of its grammatical structures to face upto any age and any developments of thoughts and tackle them adequately are accepted widely. Sanskrit literature is classic in the sense that it actually played the role of model for the old Indian

literature as they developed in dialects related to Sanskrit and in such unrelated languages as Tamil. The growth of all Middle and Modern Indo-Aryan languages and their literature has been largely the result of the impact of Sanskrit and its literature. The earlier works in the Indian languages have been versions of Sanskrit epics and the Purāṇas. The foremost works in all languages, not exempting those of the Dravidian family, have been the Ramayanas in those languages.

What is necessary for modern India is a common medium for inter-provincial education transcending the mother-tongue stage, a common medium through which principles of Government could be laid down, i.e. Government Acts could be enacted, for all the provinces, a common medium that could secure a uniform and identical judicial procedure and administration of law possible all over the country. Such a common medium can only be Sanskrit. One of our own leaders in modern times, Pandit Jawaharlal Nehru, expressed eloquently the unique heritage preserved in this language. He said, "If I was asked what is the greatest treasure which India possesses and what is her finest heritage, I would answer unhesitatingly-it is the Sanskrit language and literature, and all that it contains. This is a magnificient inheritance, and so long as this endures and influences the life of our people, so long the basic genius of India will continue".

Such is the importance of Sanskrit. It may be neglected at our own peril. It is too well known to emphasise that Sanskrit has contributed to the national solidarity in the past and is the one language which can still bind people from all parts of this vast country culturally, emotionally, and spiritually. It is not confined to any particular region and does not interfere in the growth of any regional language. It has on the other hand proved an inexhaustible treasure-house of vocabulary from which all Indian languages whether belonging to the Aryan group or the Dravidian have drawn through the centuries. It is not a dead language; it continues to enrich our languages and literatures

and everything that India stands for. It is so intertwined with every aspect of our life that we cannot think of India without at the same time thinking of this great language. It will remain with us as long as there may be India, as long as there may be Vindhya and the Himalayas, and as long as there may be Gangā and Godāvarī.[11]

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3. K.B. vii. 6-*tasmād udīcyām diśi prajñātarā vāgudyata udañca u eva yanti vācam śikṣitum yo vā tata āgaoohati tasya vā śuśrūyanta iti ha smāhaiśā hi vāco dikprajñātā* 'therefore in the northern quarter is speech uttered with more discernment and northwards go men to learn speech, he who comes thence to him men hearken, so he used to say for this was the quarter discerned by speech'.
4. S. B. III.2.3.15 - ... *tasmād atrottarāhi vāg vadati kuru-pañcālatrā vāghyesā* ...'... wherefore speech sounds higher here among the Kuru Pañcālas...'
5. S. B. III.2.1.23 - *te' surā āttavacaso he' lavo he' lava iti vadantaḥ parābabhūvuḥ* 'the Asuras being deprived of speech, were undone, crying *he'lavaḥ he' lavaḥ*'
6. Ramayana 3.2.58 - *dhārayan brāhmaṇarūpam ilvalaḥ saṃskṛtam vadan* 'Ilvala disguised himself as a Brahmin, and speaking Sanskrit'.
7. Ramayana 5.30.17- *dvijātir iva saṃskṛtām* '(speaking) Sanskrit like the Brahmins'.
8. Naisadhiyacarita X. 34-*anyonyabhāsānavabodhabhīteh saṃskṛtrimābhir vyavahāravatsu/ digbhyas sametesu nrpesu tesu sauvargavargo na janair acihni//* See also Raghavan (1972).
9. Vikramāṅkadevacarita 18.6 - *yatra strīṇām api kim aparam janmabhāsāvadeva/ pratyāvāsam vilasati vacaḥ saṃskṛtam prākṛtam ca//*
10. "Seminar on Modernisation of Indian languages in News Media," organised by the Department of Linguistics at Osmania University (Feb. 1-3, 1978).
11. *yāvad bhāratavarṣam syād yāvad vindhyahimālayau/*
yāvad gangā ca godā ca tāvad eva hi saṃskṛtam//

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(Note: Items no. 2 and 4 in the above list proved very helpful to the author in preparing this article.)

VACCU 'TO COME' AND VEḶḶU 'TO GO' IN TELUGU: MEANING AND FUNCTION

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Vaccu ' to come' and *veḷḷu* 'to go' in Telugu in various speech -act situations have acquired certain extended meanings as well. The main objective of this paper is to observe the various meanings intended of *vaccu* and *veḷḷu* on the basis of deictic features of speech -act theory and their pragmatic function in the language.

1. INTRODUCTION: *vaccu* and *veḷḷu* are distinguished from other verbs of 'event' or 'action' in terms of the semantic feature, MOVEMENT. These verbs and their synonyms[1] exhibit various extended or peripheral meanings depending on the context in which they are used. Not only the context but also the thought[2] and the situation[3] play a vital role in the extension of meanings of these verbs.

The basic meaning of the verb *vaccu* is 'to come' and its extended meanings are 'to arrive', 'to approach', 'to be possible'. Basically the verb *veḷḷu* and its synonym *pōvu* mean 'to go'. *veḷḷu* has the secondary meaning 'to leave' and *pōvu* is used in the sense of 'to proceed' 'to pass', 'be over' 'to be lost', and 'to die'. The verb *canu*[4] synonymous with *veḷḷu/pōvu* 'to go' basically means 'to go' and is extended in the sense of 'to be gone', 'to perish', 'to pass', 'to pass for night', 'to obtain', 'to get', 'to reach'.

Another characteristic feature of these verbs is that in certain contexts they presuppose/imply the meaning of the verb *uṇḍu* 'to stay' (1, 2, 3).

1.	ninna	ḍipārṭmeṇṭ	ku	vaccaēnu
	Yesterday	Department	to	came

'I came to the Department Yesterday'

I was there (in the Department) only - (Implicational meaning).

2. ninna ḍipārṭment ku vel̤l̤ænu/ pōyānu

Yesterday Department to went

'I went to Department Yesterday'. (Implicational meaning as in 1).

3. ninna ḍipārṭment lō unnānu

Yesterday Department in stayed / present

'I was there in the Department Yesterday'.

Sentences (1) and (2) are semantically as well as contextually true synonyms in the sense both are past actions performed by the speaker in the context where the hearer was not supposed to be present at the time of the event. Sentence (3) can be used in the context when both the speaker and the hearer were present in the Department but did not meet each other. Now we will observe the various meanings of these verbs on the basis of the deictic features, context, situation and thought and other verbs which have acquired the meanings of *vaccu* and *vel̤l̤u*

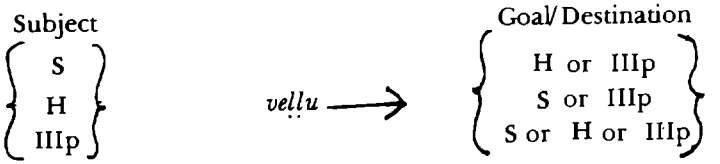
2. DEICTIC FEATURES: Interpretations or suppositions based on deictic properties of PERSON, PLACE and TIME contribute much to the meanings of the verbs *vaccu* and *vel̤l̤u* complicating the semantics and pragmatics of these two verbs. PERSON deixis involves the S(peaker) and H(earer). PLACE deixis involves the P(lace) of E(vent) - GOAL or SOURCE[5] in the sense where the movement takes place and the P(lace) of U(tterance). TIME deixis involves the T(ime) of E(vent) and the T(ime) of U(tterance).

PERSON AND GOAL: The participants in a speech-act situation, i.e., S and H are central in the interpretation of sentences with *vaccu* and *vel̤l̤u*

4.	a)	nēnu	nī	daggaraku	vaccaēnu
		I	you	near to	came
		'I	came	to you.'	
	b)	nēnu	sīta	inṭiki	vaccaēnu
		I	sita	house to	came
		'I	came	to Sita's	house'.
5.	a)	nīvu	nā	daggaraku	vaccaēvu
		You	me	near to	came
		'You	came	to me'.	
	b)	nīvu	Sīta	inṭiki	vaccaēvu
		You	Sita	house to	came
		'You	came	to Sita's	house'.
6.	a)	vāḍu	nā	daggaraku	vaccaēḍu
		he	me	nearer to	came
		'He	came	to me'.	
	b)	vāḍu	nī	daggaraku	vaccaēḍu
		he	you	near to	came
		'He	came	to you'.	
	c)	rama	sīta	inṭiki	vaccindi
		Rama	Sita	house to	came
		'Rama	came	to Sita's	house'.

It is logical to think that when S is the subject of a sentence with *vaccu,* the movement of S is either towards H as seen in 4(a) or a third person as in 4(b). If the H is the subject of the sentence then the movement of H is either towards S or third person as in 5(a) and 5(b), and if the third person is the subject of the sentence, then the movement of the third person is either towards S or H or third person as in 6(a), 6(b) and 6(c). These deictic relations can be summarised

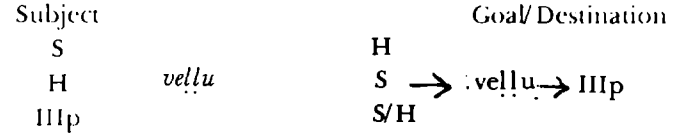
as follows:



In the case of *vellu* also similar interpretations can be made.

7.	a)	nēnu	veḷḷaēnu		
		I	went		
		'I	went'		
	b)	nēnu	sīta	inṭiki	veḷḷaēnu
		I	sita	house to	went
		I	went	to 'Sita's	house'.
8.	a)	nīvu	veḷḷaēyu		
		You	went		
		'You	went'.		
	b)	nīvu	sīta	inṭiki	veḷḷaēvu
		You	Sita	house to	went
		'You	went	to Sita's	house'.
9.	a)	vāḍu	veḷḷaēḍu		
		He	went		
		'He	went'.		
	b)	rama	sīta	inṭiki	veḷḷindi
		Rama	Sita	house to	went
		'Rama	went	to Sita's	house'.

If S is the subject of a sentence with *vellu* then the goal of the movement of S is not towards H but towards a third person, if the H is the subject of a sentence, then the goal of H is not towards S but towards a third person, if the third person is the subject of a sentence, the goal of movement is not towards S and /or H, but towards the third person as can be seen in sentences 7-9. The following formula will reflect these relations:



PLACE, TIME AND GOAL: As we noted earlier, place deixis involves PU and PE and time deixis involves TU and TE. PE denotes the goal or the place towards which movement takes place. PU is the place where the sentence is uttered. TE is the time at which the movement occurs and TU is the time at which the sentence is uttered.

THE CONTEXT OF PU = PE: In this situation the phrase that denotes the place, contains the proximate demonstrative adjective *i* 'this' or is represented by the proximate demonstrative place adverb *ikkaḍa* 'here'. This is absolutely true of the sentences with *vaccu* (observe sentences 10-12) whereas in the same context sentences with *vellu* are somewhat unacceptable (observe sentences 13-15), except while indicating a place on a map, i.e., acceptable in very exclusive contexts where PU ≠ PE.

10. nēnu ī ūru vaccānu
I this city came
'I came to this city'.

11. nīvu ī ūru vaccāvu
You this city came
'You came to this city'.

12. vāḍu ī ūru vaccāḍu
He this city came
'He came to this city'.

13. nēnu ī ūru vellānu
I this city went
'I went to this city'.

14. nīvu ī ūru vellāvu

You this city went
'You went to this city'.

15. vāḍu ī ūru veḷḷaēḍu
He this city went
'He went to this city'.

We can also have the above sentences with the proximate demonstrative place adverb *ikkaḍa* 'here'. Some general observations regarding the relationship between person and place deixis are as follows.

I Sentences (10)–(12) are noticed in the context where PU = PE

1. *ī* 'this'/*ikkaḍa* 'here' is a place where S and H are at PE at U.
2. In communication through telephone, letter, etc., the presence of H is the place indentified by *ī* 'this'/*ikkaḍa* 'here' is not presupposed.

II. When the above sentences are presumed in the context of PU ≠ PE.

1. In this context *i* 'this' / *ikkaḍa* 'here' refers to the place where S and H are away from PE at TU
2. In communication through telephone, letter etc., the presence of S in *i* 'this'/*ikkaḍa* 'here' is not presupposed but the presence of H is expected to be optional while refering to the place *i* 'this'/*ikkaḍa* 'here' at the time of utterance in this particular context. We can assume the following from the sentences (13)–(15).
3. These sentences are unacceptable in the context of PU = PE but are quite acceptable in the context of PU ≠ PE.
4. In the situation of PU = PE, *i* 'this'/*ikkaḍa* 'here' denotes the place where S and H are not at all present at TU at PE.
5. The absence of S and H at *ī* 'this'/*ikkaḍa* 'here' is observed

even in communication through telephone, letter, etc. PU ≠ PE does not necessarily imply that TU = TE. Compare (16) with (17).

16. ninna vāḍi*kkaḍa*ku vaccāḍu
Yesterday he here to came
'He came here Yesterday'.

17. ninna vāḍi*kkaḍa*ku vaccāḍu appuḍu *ikkaḍa* lēnu
Yesterday he here to came then here neg
'I was not here when he came Yesterday'.

It could be noticed that TE is distinct from TU. In (17) this difference is clear, when 'he' moved to PE at TE, S was not present at PE though present at TU. (16) presupposes the presence of S at PE at TU as well as TE.

THE CONTEXT OF PU ≠ PE: The phrase denoting PE in the situation like this permits either the remote demonstrative adjective *ā* 'that' or the remote demonstrative adverb *akkaḍa* 'there'. Observe the following sentences.

18. nēnu ā ūru vaccānu
I that city came
'I came to that city'.

19. nīvu ā ūru vaccāvu
You that city came
'You came to that city'.

20. vāḍu ā ūru vaccāḍu
He that city came
'He came to that city'.

21. nēnu ā ūru veḷḷānu
I that city went
'I went to that city'.

22. nīvu ā ūru veḷḷāvu
You that city went
'You went to that city'.

23. vāḍu ā ūru veḷḷāḍu
He that city went
'He went to that city'.

As we pointed out earlier, the above sentences can also have remote demonstrative adverb in place of remote demonstrative adjective. We can make the following observations from the above in the context of PU ≠ PE.

1. *ā* 'that/*akkaḍa* 'there' is a place where S and H are not at TU.
2. In communication through telephone, letter, etc., H is supposed to be present at the Goal (PE) *ā* 'that'/ *akkaḍa* 'there'.

a) S AS SUBJECT OF THE MOVEMENT: The situation where the subject is the first person: The context of PU = PE: In this context *vaccu* is used and the supposition of the presence of H can be made only at TU and not at TE.

The context of PU = PE: In this context we have the following two possibilities:

I The use of *vaccu* with the condition that S expects, expected or found H in PE at TE.

24. rēpu nēnu ḍipārṭmeṇṭuku vastānu nīvu akkaḍē uṇṭāv kadā ?
    tomorrow I department to come you there only stay will
    'Tomorrow I will come to Department, will you be there only?'
25. ninna nēnu ḍipārṭmeṇṭuku vaccānu nīvakkaḍa kanipinca lēdē ?
    Yesterday I department to came you there see neg neg, exl.
    'Yesterday I came to the Department (but I did not find you there) but you were not to be seen 'there'.
26. ninna nēnu ḍipārṭmeṇṭuku vaccinappuḍu nīvakkaḍē unnā vu
    Yesterday I Department to having come then you there only present
    'You were there only when I came to the Department yesterday'.

II. The use of *veḷḷu*: Here S does not or did not find H at PE at TE (27-28).

27. rēpu nēnu ḍipārṭmenṭuku veḷḷinapuḍu nīvakkaḍa uṇḍavēmō
tomorrow I Department to having gone then you there not present neg. exl.
'You may not be present in the Department when I go there tomorrow'.

28. ninna nēnu ḍipārṭmenṭuku veḷḷaēnu nīvakkaḍa kanipinca lēdē
Yesterday I Department to went you there appear past neg. exl.
'Yesterday I went to Department but I did not find you there'.

Even in this context *vaccu* can be used if PE is the habitual dwelling of H (29).

29. rēpu nīvu inṭlō lēnappuḍḍu nēnu mī inṭiki vastānu
tomorrow you house in not present then I your house to come
'Tomorrow I will come to your house in your absence'.

30. manamu anukunnaṭlu nēnu ā ṣāpuku vastē nīvakkaḍa lēvu
we (incl. you) planned as I that shop to came you there neg
'I came to the shop as we planned but you did not turn up'.

The above examples (29-30) do not contradict the supposition that S moved towards H, because the movement of S in these instances is atleast towards a place where S expected H to be present or a place where H used to live or a place with which H is associated. The factors which control the use of *vaccu* and *veḷḷu* are

a) the expectation of S about the presence or absence of H at PE.

b) PE as a dwelling place of H.

So in this case of PU ≠ PE, the supposition of the presence of H is made at TE. The following chart will show the movement of S in relation to PE, PU, TE, TU and H.

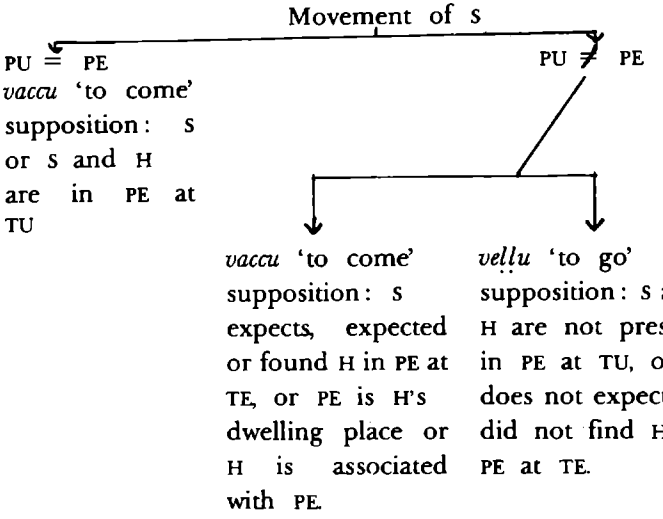


Chart 1. Movement of S in relation to PE, PU, TE, TU and H.

b) H as subject of the Movement: Here the situation does not imply the reverse of that of S as the subject of movement. The context of PU = PE: The verb *vaccu* is used in this context and throws light on the presence of S or S and H in PE at TU (31-32).

31. nīvu āfīsuku vaccaēvu
You office to come
'You came to the office'.

32. civariki nīvu inṭiki vaccaēvu
at last you house to came
'At last you came home'.

The context of PU ≠ PE: In this situation we have the following two possibilities.

I *vaccu* is used if S conveys or tries to convey or pretends his

presence in PE at TE or in case of PE as S's dwelling place (33-36).

33. rēpu nīvu ḍipārṭmenṭuku vastē unṭānu
tomorrow you Department to come if present
'I will be there if you come to the Department tomorrow'.

34. ninna nīvu ḍipārṭmenṭuku vaccinappuḍu unnānu
yesterday you Department to having come then present
'Yesterday I was there in the Department when you came'.

35. ninna nīvu ḍipārṭmenṭuku vaccinappuḍu lēnu
yesterday you Department to having come then neg.
'Yesterday I was not there in the Department when you came'.

36. nīvu inṭiki vastē unṭānu
you house to come if present
'If you come home I will be there'.

S in (33) - (36) is making of his presence in PE at TE but not at TU whereas S in sentence (35) makes sure of his absence in PE at TE. Hence in this context the S of the sentences with *vaccu* always makes explicit his presence or absence to H at the Goal (PE) and S will be static with regard to the verb *vaccu* whereas in the same context the H is subjected to perform the action of the verb *vaccu* towards the Goal where S is supposed to be present but S may be absent in certain situations.

II. *vellu* is used if S conveys his absence in PE at TE In this context.

37. rēpu nīvu ḍipārṭmenṭuku veḷḷinappuḍu nēnakkaḍa uṇḍanu
tomorrow you Department to having gone then I there present neg.
'I will not be in the Department tomorrow when you go there'.

38. ninna nīvu ḍipārṭmenṭuku veḷḷinappuḍu nēnakkaḍa lēnu.

yesterday you Department to having gone then I there neg.
'I was not in the Department yesterday when you went there'.

We infer the following from sentences (37-38):

a) S clearly conveys and is quite sure of his absence at the Goal at TE.
b) The movement of the H is supposed to take place towards the goal at TE where as S and H are associated with each other.
c) Sentence (38) may look like unacceptable but it is acceptable in the context PU ≠ PE where H expects the presence of S at the Goal and performs the action which S presupposes when S is at PU and confirms his absence at TE to H.

39. rēpu nēnu iṇṭlō lēnappuḍu nīvu vastāvēmō
tomorrow I house in neg. then you come excl.
'You may come to my house in my absence tomorrow'.

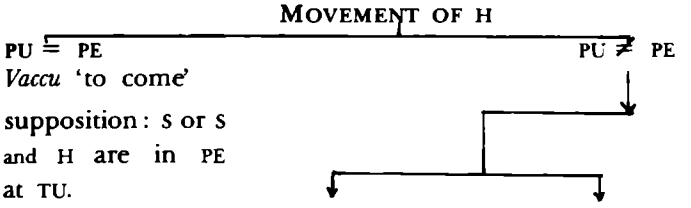
40. manamu anukunnaṭlu nīvu ṣāpuku vastē nēnakkaḍa lēnu
we planned as you shop to came I there neg.
'As we planned you came to the shop, but I was not there'.

(39) and (40) do not contradict the supposition that H moved towards S, because the movement of H in these instances is atleast towards a place where H expected S to be present or a place where S used to live or a place with which the S is associated. The two factors which control the use of *vaccu* and *vellu* are

1. The expectation of H about the presence or absence of S at PE (Goal).
2. PE as a dwelling place of S.

In the case of PU= PE, the supposition of the absence of S is made at TE. But in the case where PU= PE, the supposition of the presence of S and H is made at PE at TU. The following chart brings out these

relations of H in terms of PE, PU, TE, TU and S.



Vaccu 'to come'
supposition: S conveys or tries to convey or pretends his presence in PE at TE, or PE is S's dwelling place.

vellu 'to go'
supposition: S and H are not present in PE at TU; or S conveys his absence in PE at TE.

Chart 2. Movement of H in relation to PE, PU, TE, TU and S.

c) THIRD PERSON AS SUBJECT OF THE MOVEMENT: In case of third person as the subject of the movement the situation is the same as that of the movement of H except that wherever S's presence or absence is predicted, H's presence or absence can also be optionally predicted.
The context of PU = PE: The context here permits the verb *vaccu*. The context of PU = PE: It shows two possibilities.

a) *vaccu* is used if S conveys or tries to convey or predicts his presence and or H's presence or absence in PE at TE, or PE is S's and or H's dwelling place.

41. rēpu vāḍu ḍipārṭmenṭuku vastāḍu nēnakkaḍē unṭānu
tomorrow he Department to come I there only present
'I will be in the Department when he comes there tomorrow.

42. rēpu vāḍu ḍipārṭmenṭuku vaccinappuḍu nīvakkaḍē uṇṭāvu
tomorrow he Department to having come then there only present
'You will be in the Department when he comes there tomorrow'.

43. vāḍu ninna ḍipārṭmenṭuku vaccinappuḍu nēnu lēnu/unnānu
He yesterday Department to having come then I neg. present
'I was/not in the Department when he came there yesterday'.
44. vāḍu ninna ḍipārṭmenṭuku vaccinappuḍu nīvu lēvu/unnāvu
He yesterday Department to having come then you neg. present
'You was/not in the Department when he came there yesterday'.
45. vāḍu vaccinappuḍu nēnu inṭlō lēnu/unnānu
He having come then I house in neg. present
'I was/not at home when he came'.
46. vāḍu vaccinappuḍu nīvu inṭlō lēvu/unnāvu
He having come then you house in neg present
'You were/not at home when he came'.

From (41), (43) it is clear that S conveys or predicts his presence or absence at the Goal in the context of PU= PE. In the same way we can interpret (42) and (44) that S conveys or predicts the presence or absence of H at the Goal in the context of PU≠ PE. With this we can conclude that at PU≠ PE either S or H or both will be present or absent at the Goal, the terminal of the movement of the third person as in (47) and (48).

47. rēpu vāḍu ḍipārṭmenṭuku vaccinappuḍu manamu uṇḍamē mō
tomorrow he Department to come then we present neg. excl.
'We may not be in the Department when he comes tomorrow'.
48. rēpu vāḍu ḍipārṭmenṭuku vaccinappuḍu manamu uṇṭāmu
tomorrow he Department to come then we present
'We will be there in the Department when he comes there tomorrow'.

Form sentences (45) and (46) we come to know that PE is S's or H's dwelling place or both are associated with PE (47, 48).

b) The use of *vellu*: It is used when S and or H are not present in PE at TU, S conveys his and/or H's absence or presence in PE at TE.

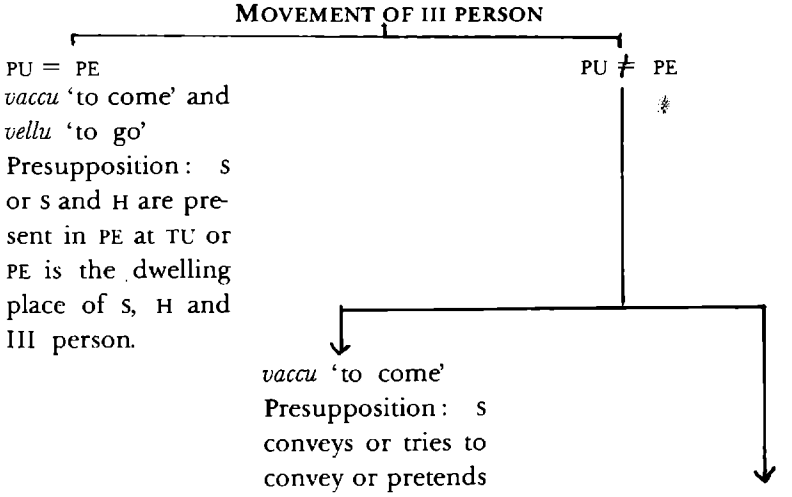
49. rēpu vāḍu ḍipārṭmeṇṭuku veḷḷinappuḍu manamakkaḍa uṇḍavēmō
tomorrow he Department to having gone then we there present neg. exl.
'Tomorrow we may not be in the Department when he comes'.

50. ninna vāḍu ḍipārṭmeṇṭuku veḷḷinappuḍu nīvu lēvu
yesterday he Department to having gone then you neg.
' Yesterday you were not in the Department when he came'.

51. ninna vāḍu ḍipārṭmeṇṭuku veḷḷēṭappuḍu nīvu/nēnu lēvu/lēnu
yesterday he Department to going while then you I neg. neg.
'Yesterday you/I were/am not there while he was going to Department'.

The S in (49) conveys that S and or H are not present at the Goal at TU. Whereas in (50) S conveys H's absence in PE at TE.

Sentence (51) is an example for the context PU = PE where S conveys his and H's absence at the Goal with which both of them as well as the third person are associated with. The following chart will show the movement of the third person in relation to PE, PU, TE, S and H.



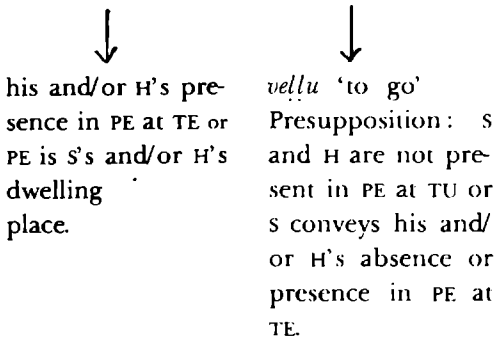


Chart 3. Movement of third person in relation to PE, PU, TE, TU, S and H.

MORE ABOUT GOAL (PLACE OF EVENT): Suppose two persons were having a telephonic conversation about a third person (their friend) who was about to visit India. H knows that the third person will stay at S's place for some time. S's house is the Goal for both H and III person as well.

52. a) inkā rālēdu ī rōjē bōmbē vaccindi
yet come neg. this day only arrived at Bombay
'Not yet, Today only she arrived at Bombay'.

b1) ellundi madrās vastundi
day after tomorrow Madras will come
'Day after tomorrow she will come to Madras'.

b2) ellundi madrās veltundi
day after tomorrow Madras will go
'Day after tomorrow she will go to Madras'.

c) *ikkaḍa* oka rōju undi maḷḷi bōmbē veḷḷipōtundi
here one day stay again Bombay will go away
'After staying one day here, she will go away to Bombay again'.

53. aitē nēnippuḍu rānu nēkstwīku vastānu
then I now come neg. next week will come
'Then I will not come now, but I do come in the next week'.

(52a) presupposes that the III person was expected to come to the S but it so happened that the III person arrived at Bombay

first. In case of (52) (b1 and b2) the following suppositions can be made.

1. *Vastundi* 'will come' in (52) b1 is used in the context of PU = PE and S's supposes that the III person would move to S's place after visiting Madras.
2. *Veltundi* 'will go' in (52) b2 and *vellipōtundi* 'will go off' are also used in the same context as above PU ≠ PE.

The place to which the actor moves or from where actor proceeds (i.e., Goal) on some purpose is generally marked by dative case suffix *-ki, -ku* 'to' otherwise it is not. Hence we find the following two situations on the basis of the use of the dative case marker:

I It is obligatory to use the dative case marker when the purpose is specific.

54. a) nēnu baḍi ki velaēnu
I school to went

* a2) nēnu baḍi *vellaēnu
I school went
'I went to school'.

b1) nēnu mī iṇṭiki veccaenu
I you house to came

* b2) nēnu mi illu *vellaēnu
I your house came
'I came to your house'.

In the above sentences the speaker's intention to proceed towards the Goal (PE) with certain specified aim is clearly mentioned.

II. The use of the dative marker is optional when there is no specific aim in the intension of the S towards performance of his movement.

55. a1) nēnu kenaḍā vaccaēnu
I canada came

a2) nēnu kenaḍāku vaccaēnu
I Canada to came

'I came to Canada'.

b1) nēnu īrōju maṭham veḷḷaēnu
I today Math went

b2) nēnu īrōju maṭhāniki veḷḷaēnu
I today Math to went
'I went to Math today'.

3. ACCOMPANYING MOVEMENT: A close examination of sentence (56) brings out the judgement indicated under a-d.

56. vāḍu nitō vastāḍu
he you with come F.T, 3rd. per, sing, M.
'He will come with you'.

a) The supposed movement of 'you' (H) followed by the accompanying movement of 'He' (III person).

b) The movement of 'He' is overt in the sentence.

c) It is also assumed that the intention of S and/or III person or they prefer to accompany the H only, but not with any one else.

d) It can also be pretended that it is the order of S to III person to accompany the H only or H to take the III person with him.

Hence this sentence could be analysed as *nivu veḷḷu vāḍu nī tō vastāḍu* 'you go and he will come with you' by the suppositions under (a), (b) and (c). In case of supposition (d), it is analysed as *nīvu veḷḷu nītō vāḍni tīsuku veḷḷu* 'You go and take him along with you'.

The presuppositional status of *nīvu veḷḷu* 'you go' can be easily observed when the following sentences are compared.

57. a) nīvu *veḷḷu* vāḍu nītō rādu
you go he you with come neg.
'You go, he will not come with you'.

b) vāḍu nitō rāḍu
he you with come neg.

'He will not come with you'.

58. a) nīvu *veḷḷu* vāṇṇi nītō tīsuku veḷḷoddu
you go him you with take go do not
'You go, do not take him along with you'.

b) vāṇṇi nītō tīsuku veḷḷoddu
him you with take go do not
'Do not take him along with you'.

If we compare (57 a) with (57 b) we notice that even without *nīvu veḷḷu* 'you go' sentence (57 b) conveys the total meaning of (57 a). In this context both sentences seem to be paraphrases of each other. Sentence (57 b) otherwise has the following meanings:

1. S is confirming that 'He' (III person) is not accompanying H, or S does not intend to send 'He' with H.
2. S also confirms that 'He' is not willing to accompany H.
3. S also suggests or leaves the matter to H whether he wants to stay or go as 'He' is not accompanying H. Note the following examples:

59. a) S. vīḍu nītō rāḍu
he you with come neg.
'He will not come with you'.

H. nēnu ekkaḍaki veḷḷaṭam lēdu
I anywhere to going not
'I am not going anywhere'.

There are certain differences in the usage of *vaccu* and *veḷḷu* in denoting accompanying movement compared with movement without accompanyment. If the accompanying movement is with S and/or H then *vaccu* is used consistently. But if the movement is not with S and/or H, then either *vaccu* or *veḷḷu* is used. The selection of *vaccu* or *veḷḷu* in the accompanying movement depends on certain specifications.

If the subject of the presupposed sentence is either H or S then *vaccu* is used as in the following contexts:

a) S as the subject of the sentence followed by the accompany-

ing movement of H, takes the movement towards the goal excluding III person.

60. nīvu nātō vastāvu
you me with come
'You will come with me'.

b) S as subject of the sentence followed by the accompanying movement of III person, may assume the movement towards the goal with either H or III person.

61. vāḍu nātō vastāḍu
he me with come
'He will come with me'.

c) H as the subject of the sentence followed by the accompanying movement of S presupposes that both of them are moving towards the goal exclusive of III person.

62. nēnu nītō vastānu
I you with come
'I will come with you'.

d) S as subject of the sentence followed by the accompanying movement of III person assumes the movement as made towards the S and/or III person.

63. vāḍu nītō vastāḍu
he you with come
'He will come with you'.

If the subject of the sentence is III person then the selecting of *vaccu* depends on the following context:

a) III person as the subject of the sentence followed by the accompanying movement of S presupposes the movement of both the entities as performed towards the goal, H and/or III person.

64. nēnu vāḍitō vastānu
I him with come
'I will come with him'.

b) III person as the subject of the sentence followed by the accompanying movement of H presumes the movement as being made towards the goal, S and/or III person.

65. nīvu vāḍitō vastāvu
you him with come
'You will come with him'.

On the basis of the observations made above, we come to the conclusion that if the movement of III person is taking place towards S and/or H or some III person followed by the accompanying movement, the verb *vaccu* is used. If the movement of the III person followed by the accompanying movement of S and/or H or III person takes place away from the Goal, the use of *vaccu* is prohibited, and *vellu* serves the purpose of moving away from the Goal. This basic distinction is also applicable with the accompanying movement. The use of *vellu* in the above context is observed in the following sentences:

66. a) nēnu vāḍitō veltānu
I him with go
'I will go with him'.

b) nīvu vāḍitō veltāvu
you him with go
'You will go with him'.

c) vāḍu vāḍitō veltāḍu
he him with go
'He will go with him'.

4. *Vaccu* AND *Vellu* WITH DIRECTIONAL ADVERBS: The study of *vaccu* and *vellu* with directional adverbs can be presented under three subsystems:

1. Adverbs of vertical direction like *paina* 'up' and *kinda* 'down'.

2. Adverbs of horizontal direction like *mundu* 'infront' *venuka*

'behind' and *pakkana* 'beside'.

3. Adverbs with direction towards/away from a closed location towards inside and outside *lōpala* and *bayaṭa* respectively.

ADVERB WITH VERTICAL DIRECTION: *paina* and *kinda* when followed by the verbs *vaccu* and *veḷḷu* presupposes the presence of S and/or H in the vertical direction. The place of utterance also decides what verb had to be selected in which context. The following examples will reveal this situation:

67. a) nēnu paiki vaccaēnu
I upto came
'I came up'.

b) nēnu kindaku velaenu
I downto went
'I went down'.

68. a) nēnu paiki velaēnu
I upto went
'I went up'.

b) nēnu kindaku vaccaēnu
I down to came
'I came down'.

(67a) and (67b) presupposes that H is on a higher place. When S is down and wants to inform H that he would come up, he uses the verb *vaccu*. When S and H are both on a same higher place S uses the verb *veḷḷu* to ask H to go down. Thus the place of utterance plays an important role in selecting the appropriate verb.

(68a) and (68b) presupposes that H as well as S are at a lower place at the TU. The movement of S towards the higher place, away from H is indicated by *veḷḷu* placed after the adverb *paina*. If the movement is of S towards H, who is at a lower place, *vaccu* follows the adverb *kinda*. These are examples involving the first person in this situation but similar interpretations

are possible in the case of other persons also.

ADVERBS OF HORIZONTAL DIRECTION: When the verbs *vaccu* and *veḷḷu* are used with the adverbs of horizontal direction *mundu, venuka* and *pakkana.* The supposition can be made about the presence of S and/or H in the forward or backward or at the side of the subject of the sentence or H of the sentence. The distance of event (may sometimes) condition the selection of the appropriate verb.

69. a) nēnu munduku veḷḷaēnu
I infront to went
'I went infront of (you)'.

b) nēnu venukaku veḷḷaēnu
I behind to went
'I went behind (you)'.

c) nēnu pakkaku veḷḷaēnu
I beside to went
'I went beside (you)'.

70. a) nēnu munduku vaccaēnu
I infront to came
'I came infront of (you)'.

b) nēnu venukaku vaccaēnu
I behind to came
'I came behind (you)'.

c) nēnu pakkaku vaccaēnu
I beside to came
'I came beside you'.

There is considerable difference of meaning between (69) and (70). The study of these sentences reveal that when denoting the movement of S towards H, *vaccu* is used whereas for the movement of S away from the H, *veḷḷu* serves the purpose.

ADVERBS WITH DIRECTION OF CLOSED LOCATION: When *vaccu* and *veḷḷu* are collocated with the adverbs denoting the direction of closed location *lopala* and *bayaṭa.* It is assumed that the presence

of S and/or H is inside or outside such a place.

71. a) nēnu iṇṭilōpalaku vaccaēnu
I house inside to came
'I came inside of the house'.

b) nēnu iṇṭilōpalaku vellaēnu
I house inside to went
'I went inside of the house'.

72. a) nēnu iṇṭibayaṭiki vaccaēnu
I house out to came
'I came out of the house'.

b) nēnu iṇṭibayaṭiki vellaēnu
I house out to went
'I went out of the house'.

Sentences (71a) and (72b) suppose the presence of H inside the house and (71b) and (72a) suppose the presence of H outside the house. In this context also the PU contributes much to the selection of *vaccu* and *veḷḷu*. The place of utterance (PU) coincides with that of the presence of H in this context. Hence S selects the choice of using these verbs depending on the location of H as well as the direction of S's movement, if it is towards H may be either inside or outside, S uses *vaccu* but in other case where S's movement takes place away from H may be either inside or outside, S uses *veḷḷu*.

5. BASIC MEANINGS OF *Vaccu* AND *Veḷḷu*: So far we have observed the basic meaning of *vaccu* and *veḷḷu* in terms of deictic features in various contexts. Now let us observe some more shades of meanings of these verbs. In certain contexts these verbs stand for the meanings 'leave', 'reach', 'arrive', 'proceed', 'pass', and 'approach'. These meanings can be studied on the basis of the movement, non-movement and location of S and/or H in relation to the movement or non-movement assigned to the subject of the sentence. Here the movement is noticed as vehicular and non-vehicular. Along with these relations the PU, PE, TU, TE, are also important to define these meanings. Different types of the

movement of the subject can be observed e.g. a) Past: viewed as static at the time of utterances b) Future/Habitual: considered to be in action at the time of utterances, c) Present progressive: viewed as action in progress at the time of the utterance.

In the first situation *vaccu* denotes 'to arrive', 'to reach', and *vellu* means 'to leave', 'to depart', 'to miss', 'to reach', in addition to the meaning 'to come' and 'to go' respectively.

73. a) rayilu vaccindi
train came
'The train came'.

b) rayilu vastundi
train will come
'The train will come'.

c) rayilu vastōndi
train is coming
'The train is coming'.

74. a) rayilu vellindi
train went
'The train went'.

b) rayilu veltundi
train will go
'The train will go'.

c) rayilu veltōndi
train is going
'The train is going'.

75. a) rayilu madrās vaccindi
train Madras came
'The train came to Madras'

b) rayilu madrās vastundi
train Madras will come
'The train will come to Madras'.

c) rayilu madrās vastōndi
train Madras is coming
'The train is coming to Madras'.

76. a) rayilu madrās veḷḷindi
train Madras went
'The train went to Madras'.

b) rayilu madrās veḷtundi
train Madras will go
'The train will go to Madras'.

c) rayilu madrās veḷtōndi
train Madras is going
'The train is going to Madras'.

Our earlier discussion of deictic notions in the meanings of *vaccu* and *veḷḷu* also explain the meanings of the above sentences in the same way. But in certain contexts these verbs convey specific meanings for example 'arrive', 'reach', etc in the case of *vaccu* and 'leave', 'depart', 'reach', in the case of *veḷḷu*. These meanings will be clearly noticed when they are compared with one another in different contexts.

Sentences (73abc) acquire the meaning 'to arrive' when they are placed in the following situation/context where the S and/or H are supposed to be waiting for the train.

77. a) padaṇḍi rayilu vaccindi
let us go train came
'Please come/get up, the train has arrived'.

b) ikkaḍikē rayilu vastundi
here only train will come
'The train will come/arrive here only'.

c) twaragā padaṇḍī rayilu vastōndi
hurry up let us go train is coming
'Please hurry up, the train is arriving'.

Notice that S and H are at PU and somewhere close to PE at TE.

Sentences (74b and c) can be used when S and/or H are moving with the train with the intension of travelling in the

train *veḷḷu* also means 'to leave', 'to depart', and 'to miss' as (78) and (79).

78. a) rayilu pōyindi ippuḍēm cēyanu
train went now what do can
'The train has left, what can I do now'.

b) kāsēpaṭlō rayilu pōtundi
few minutes within train will go
'The train is about to depart within a few minutes'.

c) twaragā randi rayilu pōtōndi
soon come train is leaving
'Please come soon, the train is leaving'.

79. a) rayilu pōyindi bassulō veḷatanu
train went bus in will go
'The train has left, I will go by bus'.

b) tewūlu twaraga rayilu potundi
get ready soon train will go
'Get ready soon, otherwise the train will leave'.

c) inkēmundi rayilu pōtōndi
nothing is there train is going
'There is nothing to do now, the train has been leaving'.

In case S and/or H are supposed to travel on a particular train, then *povu* in (78) uttered by S will mean 'to leave' or 'to depart' when the subject, the train of the sentence in this case is supposed to start moving from the goal. (If it is not the situation then these verbs mean 'to go' as observed in (74).

In a situation when S and/or H are supposed to travel on a particular train but are not able to, then *veḷḷu* means 'to miss' (79a and c). In (79)b the S is conveying H that there is every chance of their not getting into the train if H makes a delay.

Now let us compare the meanings of sentences (75) with (80) and (76) with (81).

80. a) rayilu ayidiṇṭiki madrās vaccindi
train 5.0' clock at Madras came
'The train came to Madras at 5.0' clock'.

b) rayilu ayidiṇṭiki madrās vastundi
train 5.0' clock at madras will come
'The train will come to Madras at 5.0' clock'.

c) rayilu ayidiṇṭiki madrās vastōndi
train 5.0' clock at madras is coming
'The train is coming at 5.0' clock'.

81. a) rayilu ayidiṇṭiki madrās veḷḷindi
train 5.0' clock Madras went
'The train reached to Madras at 5.0' clock'.

b) rayilu ayidiṇṭiki madrās veltundi
train 5.0' clock Madras will go
'The train will reach Madras at 5.0' clock'.

c) rayilu ayidiṇṭiki madrās veltōndi
train 5.0' clock Madras is going
'The train is reaching Madras at 5.0' clock'.

Sentences (75) and (80) indicate the contexts where the verb *vaccu* reflects the meanings 'to reach', and 'to arrive' respectively. In other words each of these sentences possesses both the meanings 'to reach', and 'to arrive' in two different contexts. The contexts can be defined in terms of the place of utterance and the movement or the non-movement of the speaker.

In the context where S is at PU i.e., at train on which S is travelling, the verb *vaccu* conveys the meaning 'to reach'. The forms *vaccindi, vastundi* indicate the past or TU, future and present progressive situations respectively. In case S is present at the goal, the verb *vaccu* means 'to arrive'. Here S is not supposed to move with the train.

In sentences (76) and (81) *veḷḷu* shows the meanings 'to leave' and 'to reach' at two different contexts. The PU and the movement of the S along with the subject and non-movement of the S should be taken into account for deciding the two contexts

of these sentences. In the context of the S at the PU which is at movement (S also moving along with the subject), the verb *vellu* indicates the meaning 'to reach'. In the context where S is at the PU which is stationary (S is not performing the movement alongwith the subject), the verb *vellu* has the meaning 'to leave'.

The context of S and/or H at movement and subject not at movement: In this context the verb *vaccu* acquires the meanings 'to reach', 'to come across', 'to approach' and *vellu* means 'to across', or 'to pass on' as can be seen from the following examples:

82. a) bridji vaccindi
bridge came
'The bridge came'

b) adavi vaccindi
forest came
'The forest came'

83. a) bridji pōyindi
bridge went
'The bridge has gone'.

b) adavi poyindi
forest went
'The forest has gone'.

In all the above examples the subject of the sentences is a static entity.

In a situation where S and/or H are static and the subject of the sentences is at movement both the verbs show the change of one state into the other.

84. a) nīllu vaccaēyi
water came
'The water came'.

b) gāli vaccindi
wind came

'The wind came'.

85. a) nīḷḷu pōyāyi
water went
'The water went off?'

b) gāli pōyndi
wind went
'The wind went off?'

6. EXTENDED USES OF *Vaccu* AND *veḷḷu* : The verbs *vaccu* and *veḷḷu* show a wide range of extended meanings in the lexicon of Telugu language.

1. The loss of a body part like skin, eyes, etc., and senses like sight etc., is denoted by the verb *pōvu* and regaining of the same is conveyed by the verb *vaccu*. The verb *veḷḷu* can not be used in the place of *povu* in this context though the two verbs share the general meaning 'to go'.

86. a) vaḍiki cupu poyindi
him to sight lost
'He lost his eye sight'.

b) vāḍiki cūpu vaccindi
him to sight got
'He got back eye sight'.

2. Loss or gain of concrete possessions can also be indicated by *vaccu* and *povu* (87). Failure at an examination, losing moisture, colour, beauty etc., can also be indicated by *pōvu* (88), but *vaccu* can not be used to indicate the opposite.

87. a) vāḍiki illu vaccindi
him to house came
'He got a house'.

b) vādi illu pōyindi
his house gone
'He lost his house'.

c) vāḍiki illu pōyindi
him to house went

'He got/acquired a house as his share/He was allotted a house'.

88. a) parīkṣa pōyindi
exam went
'The exam is lost'.

b) rangu pōyindi
colour went
'The colour faded out'.

3. Gaining in respect, prestige, value, strength, etc., can be indicated by *vaccu* and a loss of the same by *pōvu*.

89. a) vāḍiki kīrti vaccindi
him to fame came
'He got fame'.

b) vāḍiki paruvu pōyindi
him to prestige went
'He lost prestige'.

4. Most parts of the animate body or their activities can be perceived at a psycho-semantic level. Getting them is denoted by *vaccu* and losing them by *pōvu*.

90. nidra vaccindi/pōyindi
sleep came went
'I got sleep/lost sleep'.

Note that while *pōvu* can be used to refer in the meaning 'to lose' to any sort of thing or activity pertaining to the body *vaccu* can not replace *pōvu* in all these cases. For example vāḍiki kālu poyindi 'He lost his leg' can only be true in case of replacing body parts by artificial limbs.

5. Mental activities reaction, desires, anxiety, confidence etc., can be indicated by the use of *vaccu* and *pōvu*. Here also the verb *veḷḷu* cannot replace *pōvu*.

91. a) vāḍiki kōpam vaccindi
him to angry came
'He got angry with .....'.

b) vāḍiki kōpam pōyindi

him to angry went
'He lost angry with .....'.

6. Gain in social status, rank, academic achievements etc., can be indicated by *vaccu* and their loss by *pōvu*

92. a) vāḍentō payiki vaccaēḍu
he a lot upto came
'He came up a lot in life'.

b) vāḍi plaēnu talakindulai pōyindi
his plan upset went
'His plan has got spoiled'.

c) vāḍentō edigipōyāḍu
he a lot grow went
'He has grown up a lot'.

d) vaccē ēḍādiki padō claēsuku vastāḍu/pōtaḍu/veltāḍu
coming year to 10th class to will come/go
'He will come/go to 10th class by next year'.

7. *vaccu* is generally used to convey the meaning of coming to a conclusion or decision.

93. a) oka abhiprāyāniki vaccaēru
one decision came
'They came to a decision'.

b) vāḍiki rōjulu daggariki vaccaēyi
him to days near to came
'The days have come close (to an end) to him'.

c) kadha modaṭiki vaccindi
story begin to came
'The story came to begin/repeat'.
(no progress was made)

8. Occurence of all sorts of sufferings, difficulties and indisposition of the body is indicated by *vaccu*. Disappearance of these is denoted by *pōvu*.

94. a) vāḍiki samasyalu vaccaēyi/pōyāyi
him to problems came went

'Problems came/went to him'.

b) vāḍiki jvaram vaccindi/pōyindi
him to fever came went
'Fever came/went to him'.

vaccu can also be used as a verb of cognition (Krishnamurti 1970). In this context the experiencer (noun phrase) is in the dative case and the verb has neuter gender agreement. The subject of the sentence may be a noun or a noun phrase reflecting a skill, faculty or craft.

95. a) vāḍiki telugu vaccindi
'He learned Telugu'.

b) vāḍiki telugu vastundi
'He knows Telugu'.

c) vāḍiki telugu vastunnadi
'He is learning Telugu (He is picking up Telugu)'

d) vāḍiki telugu *vaccu*
'He knows Telugu'.

Vaccu also denotes the ability of the subject at the time of utterance.

96. a) nāku pāṭalu *vaccu*
'I know/knew singing'.

b) nāku vanṭa *vaccu*
'I know/knew cooking'.

7. COMPOUNDS VERBS WITH *vaccu* AND *pōvu/vellu*:

We come across a series of compound verbs by the combination of these verbs with other verbs in specific context. Different meanings of these compounds can be observed.

cani pōvu 'to die': It is never used in isolation and is always used with *pōvu*. In modern Telugu the verb *canu* itself refers to losing life, hence in combination with *pōvu* it acquires the meaning 'to die'.

The verb *pōvu* is also used in the meaning of 'to die' in

contexts indicating politeness and respect towards the subject of the sentence.

vellipōvu. 'to leave' : Participle form (velḷi) of the verb *veḷḷu* 'to go' followed by *pōvu* 'to proceed', reflects the meaning 'to leave' (96). Apart from this basic meaning *eḷḷipōvu* also shows the meaning 'to die' in certain contexts.

96. vāḍu vellipōyāḍu
'He left/went/He is no more'.

vaccipōvu 'to pay visit : If *pōvu* is used with the participle form (*vacci*) of the verb *vaccu*, it gives the meaning 'to pay a visit'.

97. a) vāru mā iṇṭiki vaccipōtuuṇṭāru
'They visit my house now and then'.

b) vāru mā iṇṭiki vaccipōtāru
'They will come to my house and then go'.

rāka pōvu/rāka pōdu : If *pōvu* is joined as it is to the negative participle it implies doubt as can be seen in the following examples.

98. vāḍu rākapōvu
'He may not come'.

99. cūḍaka *pōvu*
'(He) may not see'.

100. āme rākapōdu vastundi
'Why not, she will certainly come'.

When *pōvu* is added to the negative participle of any verb it indicates the past tense negative form.

101. a) rāḷēkapōyaḍu
'(He) could not come'.

b) tinalēkapōyāḍu
'(He) could not eat'.

vaccu when used with the infinitive form of a verb signifies permission, possibility or probability.

102. cēyocccu 'can do' or 'permitted to do'.

The compound verb *pōvaccu* denotes the negative aspect of permission, possibility or probability when added to negative participle of verbs.

103. cēyaka pō*vaccu* '(He) may not do it'.

vaccu added to the present patriciple of any verb denotes a habit, continuous action or activity.

104. cēstū vaccaē ḍu 'He has been doing/He came while doing (stopped the work & came)'.

vellu/pōvu added to the present participle of any verb denotes continuous action or activity.

105. cēstū vellaē ḍu/pōyaḍu '(He) went on doing/Hestopped the work & went'.

vaccu when added to the past participle form of the verb *valayu* means that the action or activity was unavoidable.

106. cēyavalasi vaccindi 'It had be done'.

vaccu ádded to the infinitive of a verb gives the meaning to offer service or to do the action.

107. cēya vaccindi '(she) came to do/offer services'.

pōvu joined to the infinitive signifies action about to be carried out.

108. cēya bōyindi '(She was) about to do'.

When *vellu/povu* is affixed to the past affirmative participles of verbs it denotes completeness.

109. vaccipōyindi / vellipōyindi 'come and left'.

8. CONCLUSIONS: We infer from the above that the verbs *vaccu* and *pōvu/vellu* behave quite differently from other verbs on different semantic and pragmatic aspects. They can be studied fully only when interpretations or suppositions based on deictic properties of PERSON, PLACE and TIME are taken into account.

Notes:

* I am grateful to my teachers for their valuable comments.

1. The verbs *vellu, pōvu* and *canu* 'to go' are synonymous. Regarding *canu* 'to go' see footnote 4, section 7.

2. Knowledge and working of the mind of a native speaker - For more details see Levinson (1983).

3. Contexts specifies situations. A context can possess more than one situation. Situation is always created by S and H.

4. The verb *canu* 'to go' is confined to literary variety and its discussion is avoided in this paper since it is basically a study of the spoken variety.

5. The terms GOAL and SOURCE are interchangeable depending on the direction of movement at the PE. GOAL refers to the place where the movement is perceived. In case of moving away from the GOAL it can be treated as the SOURCE of the event. That is, the GOAL and the SOURCE are one and the same refering to the place of event, where the movement takes place. For example, the place of event is the GOAL in the case of *vaccu* 'to come' and SOURCE in the case of *vellu / pōvu* 'to go'. In the former case the place of event is the GOAL and in the latter it is the SOURCE. The direction of the event is crucial in distinguishing the meanings of these verbs. Hence, I would prefer to use the term GOAL for both these cases throughout the paper. For more discussion see Fillmore (1966), Lyons (1977).

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PHONETIC CONDITIONING OF DURATION OF VOWELS AND CONSONANTS IN TELUGU*

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This paper concentrates on one aspect of conditioned phonetic duration of Telugu vowels and consonants as they occur both in isolated words and connected speech, namely their intrinsic duration as it correlates with the following phonetic dimensions: vowel height (i.e. tongue height); frontness of backness of vowels; place and manner of articulation of consonants; and presence or absence of voicing of consonants. In discussing the results, a comparison is made between the Telugu data and those from English and other languages in order to find out to what extent the findings from this investigation corroborate those of other experimental studies. .The comparison shows that certain modifications are necessary with regard to some statements that have been made about general or universal tendencies.

0. INTRODUCTION: In this paper I will concentrate on one aspect of conditioned phonetic duration of Telugu segments, namely their intrinsic duration. The term 'intrinsic duration' has to do with "the duration of a segment as determined by its phonetic quality" (Lehiste, 1970 : 18), i.e. variation in duration which is conditioned by the nature of the segment itself. The other conditioning factors of segment duration such as neighbouring sounds, position in utterance, number of sounds/syllables and other suprasegmental features are not dealt with here. A detailed investigation of these factors can be found in Nagamma Reddy (1981).

The part of this study which is concerned with isolated words is based on the examination of sets of minimal meaningful pairs consisting mainly of disyllabic structures. The material used was assembled not specifically for this purpose but with a wide range of problems in mind.

The measurements were taken from spectrographic and from kymographic recordings. Where spectrograms are involved,

this is specifically mentioned. In other cases it is to be taken that kymograms were used. The tables presenting information about duration give measurements in centiseconds (cs). Details of the principles followed in the determination of segment boundaries can be found in Nagamma Reddy (1981) ; they are not set out here, since the crucial factor is the consistency of the method used for each sound, for what we are concerned with is comparison of sounds in Telugu rather than absolute values.

The data used for this study consist of a thorough investigation of the recordings made of the speech of B. Ramakrishna Reddy (B.R.R), an educated speaker of the Rayalaseema dialect, as spoken in the Chittoor district of Andhra Pradesh. These recordings were checked against the speech of two other speakers. The results were similar for all three speakers.

1. VOWELS: In the phonetic literature it has been mentioned that vowel duration may be systematically affected by such factors as vowel height, the following consonant, stress, number of syllables in the word, position in the word (or an utterance), overall phrase length and the semantic importance of the word.

Delattre (1962: 1141) discusses "eight factors of vowel duration in American English ..., three 'internal' factors that are in the vowel itself, and five 'external' factors all to be found in the single consonant that follows the vowel. In the correlating order shorter vowel/longer vowel these eight factors are: (V1) Vowel abridging/Vowel expanding, (V2) less open vowel/ more open vowel, (V3) monophthong/diphthong, (C1) surd consonant/ Sonant consonant, (C2) stop consonant/fricative consonant, (C3) liquid consonant/solid consonant (all except r and l), (C4) oral stop consonant/nasal stop consonant, (C5) more frontal consonant/further back consonant (within each of the six categories: surd stops, surd fricatives, sonant oral stops, sonant nasal stops, sonant fricatives, liquids)"

After having discussed these factors, he concludes that variations in vowel duration are phonemically learned under

only one of the eight factors listed above —— the abridging/expanding factor (also called lax/tense) —— and that under the seven other factors, variations in vowel length are physiologically conditioned; and secondly that the chance of conditioning factors to be universal, to operate cross-linguistically, is far from negligible.

So the present investigation was made in order to see whether variations in vowel duration rest upon learned habits of the phonemic structure of Telugu, or are conditioned by inherent articulatory factors; and to what extent the conditioning factors operate in the same way in Telugu as they do in English and other languages. For the study of variation in vowel duration, the influence of vowel height (i.e. tongue height) and the part of the tongue (i.e. the part of the body of the tongue which is raised) are taken into consideration.

1.1. VOWEL HEIGHT: The tendency for open vowels to be longer than close ones has been observed by numerous investigators in many languages. The observations reported by Heffner (1937), House and Fairbanks (1953), Lehiste (1960), House (1961), Malmberg (1963) and Jones (1967) for English; by Metz(1914) for Italian; by Navarro Tomas (1916) for Spanish; by Maak (1949) for German; by Fischer-Jørgensen(1955) for Danish; by Abramson (1962) for Thai; by Delattre (1964) for English, German and Spanish; and by Jacobsen(1968) for Czech show differences in duration between open and close vowels. The open vowels are longer than the close ones. On the other hand, the observations noted by Fintoft (1961) for Norwegian and by Strain (1969) for Persian show no such differences in vowels.

The figures quoted by Lehiste (1970 : 18) from Elert (1964) for Swedish also show clear difference in duration in vowels according to vowel height. However the figures given by Fant (1973 : 15) for the same language, Swedish, contradict Lehiste's proposals. He points out that "open vowels are shorter than close vowels, (in this context,) contrary to established rules of vowel length increasing with degree of opening (Elert, 1964 ; and

Lindblom, (1968)". Lehiste (1970 : 18) comments that the differences in vowel length according to degree of opening are physiologically conditioned and thus constitute a phonetic universal. But in Fant's view there is no such significant tendency for open vowels to be longer than close ones; on the contrary, there could be an opposite tendency.

In view of these observations, it is proposed to investigate whether such differences in duration between open and close vowels exist in Telugu; and also to obtain data which could make it possible to answer with more certainty the question whether vowel duration is influenced by vowel height at all.

In order to examine this, a full set of ten Telugu vowel phonemes, short and long, occurring in ten minimally different words in the same position were chosen. Only medial vowels are chosen in this study because of the difficulty of obtaining accurate measurements for initial vowels. The material is divided into two groups of words, one consisting of five of the aforementioned ten words which have the form CVCCV, in which the five short vowels /i, e, a, o, u/ occur, and the other group consisting of the other five which have the form CV:CV, in which the five different corresponding long vowels /i:, e:, a:, o:, u:/ occur. This is done in order to observe the differences in vowels within the categories of phonologically short and long vowels. The consonant preceding the vowel under investigation is a voiceless bilabial stop, and the consonant following the vowel is a voiceless retroflex stop in each case.

Several of the kymograms of each word, pronounced by B.R.R., were made and the duration of the first vowel in each group was measured and compared. The measurements do not include the aspiration (release) of the preceding plosives. Words with long vowels were repeated 5 times and those with short vowels 9 times, over a period of two months (intermittently).

The list of words, the maximum and minimum durations of each vowel (i.e., in 9 tokens in the case of short vowels, 5 tokens in the case of long vowels) and their average durations in cs are given in the following Table.

Short Vowel Group					Long Vowel Group				
Word	Vowel	Mini mum	Maxi mum	Aver age	Word	Vowel	Mini mum	Maxi mum	Aver age
pitta	i	6	10	7.2	pi:ta	i:	23	30	25.0
petta	e	8	12	10.0	pe:ta	e:	24	28	26.4
putta	u	6	9	7.4	pu:ta	u:	23	31	26.0
potta	o	8	12	10.0	po:ta	o:	24	31	27.2
patta	a	7	10	9.1	pa:ta	a:	25	30	27.8

Table 1. Duration of each vowel in cs in the first syllable in disyllabic words in isolation.

As can be seen from Table 1, there is a correlation of vowel duration with vowel height as far as the averages are concerned. There is a progressive increase in duration within the short vowel group from close /i, u/ to half-close /e, o/. But there is no increase in duration from half-close /e, o/ to open /a/ as one would expect according to the classification of vowels in Telugu made by earlier phoneticians/phonologists. Similar observations, i.e. /a/ being shorter than half-close or half-open vowels, are made by Cochrane (1970 : 274) with regard to vowel durations in Australian English. His conclusions are attributed to 'phonological pressures'. Though the vowel /a/ is considered as an open vowel in Telugu by many scholars, strictly speaking, phonetically, it is not as open as the long Counterpart (i.e. /a:/). In this regard Kelley (1959 : 151) may be right in treating this vowel along with half-close vowels on the same axis. Thus his vowel chart is as follows:

i u

e ə o

The statement made by Lehiste (1970 : 18) that the greater length of open vowels is due to the greater extent of the articulatory movements involved in their production (as also that of Fischer-Jorgensen (1964) that the motor command for timing is the same irrespective of the quality of the vowel, but execution

of the command may be delayed owing to the movements to be made) leads one to expect a short value for /a/ in Telugu, where it is produced with smaller movements - neutral lips and the narrow distance between the jaws. Hence, as far as averages are concerned, the length vowels is according to theory as proposed by Lehiste and Fischer-Jorgensen.

There is also increase in length according to vowel height within the long vowel group. There is a progressive lengthening from close /i:, u:/ to half-close /e:, o:/ and from /e:, o:/ to open /a:/. The differences are, however, very small (one to two cs only).

If we compare both the long vowel group and the short vowel group, there is a greater difference between close and non-close vowels among the short vowel group than the long vowel group. In most cases there is a good agreement between the minimum and its average duration when they are compared in each column, but the maximum values for each vowels especially among the long vowel series, do not seem to show differences between close and open vowels. Open vowels are longer than close ones only when the averages are taken into account, otherwise they vary in individual sets. The long vowels do not show any systematic differences between the close and open varieties. If there is such an articulatory constraint on the segments one would expect it to be systematic.

In the light of the preceding facts from Telugu it is only appropriate to say that there is a slight tendency for open vowels to be longer than close ones when the averages are considered, but the differences as very small.

1.2. PART OF THE TONGUE: One of Malmberg's general rules claims that the back vowels are often shorter than the corresponding front vowels, and that this may apply to nearly all languages (Malmberg, 1963 : 75). As far as I could reinterpret the figures given for Swedish by Fant (1973 : 115), there seem to be such differences in duration between front and back vowels, in agreement with Malmberg's claims. However, the results from Telugu as seen from Table I do not agree with Malmberg. They show no

such differences and stand as counter-evidence to the claim made by Malmberg in that the back vowels are longer than the corresponding front vowels. These observations regarding Telugu are in consonance with those of Jacobsen (1968 : 141) for Czech vowels at least as far as some Telugu speakers are concerned.

According to the present results, however, the back vowels in Telugu being longer than the corresponding front vowels is in agreement with the physiological theory referred to by Lundschultz (1967) (Lehiste, 1970)) that "the back vowels should be longer than the corresponding front vowels, the back of the tongue articulating more slowly than the front of the tongue. Furthermore, rounded vowels should be longer than the corresponding unrounded, the rounding being a rather complicated articulation". This is also supported by Fischer-Jørgensen's (in 1964 : 177) discussion of general tendencies with reference to Danish, Spanish and some other languages.

2. DIPHTHONGS: The duration of Telugu dipthongs, /ai/ and /au/ has been measured in order to compare them with the duration of short and long vowels. One view about this relationship is found in Mair (1918 : 21) : "The duration of any long vowel is to the duration of its corresponding short vowel as 7 : 3. Diphthongs hold the middle between 7 : 3. If the duration of a long vowel would be 0.35 seconds, a diphthong would be 0.20-0.25 and the short vowel 0.15 seconds". Data used in the present study, however show that in Telugu the diphthongs have about the same duration as the long vowels in comparable environments (e.g. paina, paita paunu, etc. in comparison with pa : ta, etc.). The duration of diphthongs in disyllabics is about 27.6 cs. The explanation for this has been that "diphthongized vowels are longer because they require ariculatory motions towards two successive targets" (Lindblom, 1967 ; 1-29). Thus many of the observed differences in vowel duration in English seem confirm the descriptions given for many other languages, with the notable exception of Malayalam, in which the duration of diphthongs is surprisingly close to that of the short vowels rather than the long vowels. (See Velayudhan and Howie, 1974 ; 101).

3. CONSONANTS: Consonants also show variation in their dura-

tion, depending on place of articulation, manner of articulation, and voicing. Details on the intrinsic duration of consonants can be found in Lehiste (1976 ; 227). The present paper gives only the most salient facts for the discussion of the particular aspect of the duration of consonant segments in Telugu. Considerations of space make it impossible to reproduce here all the available data. A full account with detailed statistical tables, is available in Nagamma Reddy (1981).

3.1 PLACE OF ARTICULATION: Only plosives and nasals are taken up here since they are produced at various places of articulation as compared to, say trills which are produced in Telugu at only one place.

3.1.1 PLOSIVES: The duration of the following Telugu plosive phonemes at five places of articulation — labial, dental, retroflex, palatal and velar is investigated in this section: p, t, ṭ, c, k; b, d, ḍ, j and g in initial and medial position, and their long counterparts in medial position. There are no word-final plosives in the native vocabulary of Telugu.

3.1.2 WORD-INITIAL UNASPIRATED VOICELESS PLOSIVES: A few minimal/subminimal pairs of disyllabic words containing initial voiceless plosives but occurring immediately after the word/ pa: ta/ 'old' were made use of to make it possible to measure the duration of the word-initial voiceless plosives; only those words are chosen which have an /a/, see Table 2. Hence each voiceless plosive is preceded by the same word /pa: ta/ and followed by the same /a/. The following table gives the list of words used and the measurement of the duration of /p, t, ṭ, c, k/. Each figure represents a single reading.

Utterance (preceded by pa: ta)	Plosive type	Closure	Open Interval	Closure + Open interval
paṭṭa	p–	6.0	1.5	7.5
taṭṭa	t–	7.0	1.5	8.5
ṭabbu	ṭ–	7.0	1.0	8.0
caṭṭi	c–	6.0	5.0	11.0
kaṭṭi	k–	7.0	2.0	9.0

Table 2. Duration of the word-initial (but phrase medial) voiceless plosives in disyllabic words in cs. (Spectrographic measurements).

From table 2 we can see that the order of closure duration of plosives is k/ʈ/ʧ > c/p; the open interval is c>k/ʈ/p>t; and the closure + the open interval is c>k>t>ʈ>p. This shows that there is some difference in the order depending on the closure, the open interval and the closure + the open interval.

We may conclude on the basis of the observations from table 2 that, though the differences in the duration of plosives are small there is a slight tendency (if the /c/ is excluded from the series as being an affricate and thus possibly having a tendency to be long) for the velar to be longer and the labial to be shorter than any other plosives in the series. Thus, the word-initial voiceless plosives, in Telugu, are in this order: k>t>ʈ>p. The dental is longer than the retroflex if the open interval is included, otherwise (i.e. if only the closure is considered) the dental is either equal to or smaller than the retroflex. This may also be because of the fact that the retroflex on the whole has minimum open interval and sometimes there is practically none; whereas the dental plosive always has a longer open interval than the retroflex.

Generalizations regarding the relative durations of plosive consonants at different places of articulation have mostly been made on the basis of an examination of voiced plosives. The result has been an assumption that for consonants in general, labials are longer than alveolars and velars (see Fischer-Jørgensen, 1964 : 177 and Lehiste, 1970 : 27). It is accepted by them and some other investigators, however, that as regards voiceless plosives the situation is confused. Thus Falc'hun (1951), for example, found that in Breton the voiceless labial is shorter than the alveolar and velar. As the above examination shows, this corresponds to the situation in Telugu. It follows that we cannot generalize to say that, other things being equal, labial consonants will be longer than the other consonants.

(3) WORD-INITIAL UNASPIRATED VOICED PLOSIVES: The duration of initial voiced plosives b, d, ḍ, j/ and /g/ have been measured in both monosyllabics and disyllabics. The monosyllabic words consist of the form CV (:). Measurements given for these plosives in Table 3a include the open interval as well. (The voiced plosives are usually devoiced towards the end of their closure, i.e. at the time of their release).

Plosive type	Before a Short Vowel					Mean Duration	Before a Long Vowel					Mean duration
	i	e	u	o	a		i:	e:	u:	o:	a:	
b-	8.5	13.0	10.0	11.0	9.0	10.3	8.5	12.0	9.0	10.0	10.0	9.9
d-	9.0	11.0	12.0	12.0	8.0	10.4	8.0	10.5	10.0	10.0	7.0	9.1
ḍ-	13.0	11.0	13.0	12.0	9.5	11.7	9.0	8.0	11.0	13.0	8.5	9.9
j-	13.0	13.0	12.0	13.0	15.0	13.2	12.0	12.0	11.0	10.0	15.0	12.0
g-	13.0	13.5	13.5	14.5	14.0	13.7	13.0	13.5	12.0	13.0	13.5	13.0
Mean	11.3	12.3	12.1	12.5	11.1	11.9	10.1	11.2	10.6	11.2	10.8	10.8

Table 3a. Duration of the initial voiced plosives in cs in monosyllabic words. Averages of two readings. (Spectrographic measurements).

As can be clearly seen from the table, the mean durations of the plosives /b, d, ḍ, j, g/, before a short vowel are in the order g>j>d>ḍ>b. The velar plosive is longer than any other plosive in the series as was observed for initial voiceless plosives. Also, in addition to that, b, d, ḍ, j and g (before a short vowel) show a marked difference in their durational order. There is an increase in duration when the point of articulation shifts further back in the mouth. That is, the backer the articulation of a plosive the longer is its duration, unlike the tendency found for English by Lehiste (1970).

Before a long vowel, however, there is a slight variation in the order, in that the dental is shortest among the series (that is, shorter even than the labial). But we still can find the tendency

for velar plosive to be longer than any other plosive in the series concerned. This, however, seems to differ in comparable minimal meaningful disyllabic pairs as shown below.

Plosive Type	Before a Short Vowel			Before a Long Vowel		
	Closure	Open Interval	Closure + Open Interval	Closure	Open Interval	Closure + Open Interval
b-	9.5	1.5	11.0	8.3	2.0	10.3
d-	13.0	1.0	14.0	10.3	1.2	11.5
ḍ-	9.5	0.5	10.0	8.3	0.5	8.8
j-	9.5	5.0	14.5	8.0	5.0	13.0
g-	11.0	2.0	13.0	8.3	2.3	10.5

Table 3b. Duration of initial voiced plosives in cs in disyllabic words. (Averages of two readings).

As can be seen, the duration (i.e. the closure + the open interval) of the voiced plosives, before either a short or a long vowel, has the following order: j> d> g> b> ḍ. The open interval shows j> g> b> d> ḍ. Though the closure duration shows a slight variation among the series concerned, the dental is longest in both environments. The ḍ being shortest, strengthens Lehiste's proposal that the sounds articulated with the most mobile articulator -- the tip of the tongue --should generally be shorter than the others. (See Lehiste, 1970 : 28).

(3) WORD-MEDIAL UNASPIRATED PLOSIVES: The material used for the study of these intervocalic plosives, consists of the series of isolated words of the form V : CV, in which there were 5 different initial long vowels /i :, e :, u :, o : and a :/ and 8 different plosives / p, t, ṭ, k; b, d, ḍ and g/. The consonants /c/ and /j/ are not included in this list as they belong to separate class, i.e. affricates.

The duration of the word medial, short plosives in various vowel environments have been measured both from kymograms and spectrograms, pronounced by the same speaker. Each figure in Table 4 represents average of 10 readings in the case of spectrograms and 15 readings in the case of kymograms.

Voiceless plosives			Voiced plosives		
Plosive type	Measurements from spectrograms	Measurements from kymograms	Plosive type	Measurements from spectrograms	Measurements from kymograms
-p-	12.6	12.7	-b-	9.2	10.0
-t-	11.2	12.0	-d-	8.2	9.3
-ʈ-	10.0	10.6	-ɖ-	6.8	7.3
-k-	13.4	13.2	-g-	9.8	10.1

Table 4. Mean duration of intervocalic short plosives in cs in cs in disyllabic words.

A comparison of the two methods shows very close agreement. They show the relative duration of plosives in the order: velar > labial > dental > retroflex. This confirms further that even in intervocalic position there is general tendency for the velars to be longest and for the retroflex to be the shortest in the series when compared to the others. However, the difference between voiced velar and labial is smaller than the difference between voiceless velar and labial.

(4) WORD-MEDIAL LONG UNASPIRATED PLOSIVES: The measurements of these plosives have been taken only from the kymographic records. The figures given in the table represent the average of two/three readings (two in set II and three in set I).

	Voiceless plosives			Voiced plosives		
	Word	Plosive type	Average duration	Word	Plosive type	Average duration
Set I	appa	-pp-	28.0	abba	-bb-	25.0
	atta	-tt-	30.0	adda	-dd-	26.0
	aʈʈa	-ʈʈ-	27.0	aɖɖa	-ɖɖ-	24.0
	akka	-kk-	26.0	aggi	-gg-	21.0
Set II	guppa	-pp-	30.0	gubba	-bb-	26.0
	gutta	-tt-	30.0	gudda	-dd-	26.0
	guʈʈa	-ʈʈ-	31.0	guɖɖa	-ɖɖ-	28.0
	gukka	-kk-	32.0	gugga	-gg-	30.0

Table 5. Mean duration of intervocalic long, unaspirated plosives in

cs in disyllabic words.

In set I, the order of voiceless plosives in terms of duration, is as follows: tt> pp> ʈʈ> kk. But in set II, it is the other way round, i.e. kk> ʈʈ> pp> tt. One obvious reason that can be postulated for this difference in the order of same plosives in two different sets, is that of a preceding vowel. When the plosives are preceded by /a/ the dental is, on an average, longer than any other plosive in the series, and when the same plosives preceded by /u/, the velar rather than the dental, is longer than any other plosive in the series. This raises the point that the duration of the plosive at various places of articulation may also be influenced by the type of vowel that precedes, and hence one should take an account of this when comparing the orders in different positions in the same language or in different languages.

This point is strongly supported by the figures for the duration of the corresponding set of voiced plosives, where we see the order dd> bb> ɖɖ> gg when the preceding vowel is /a/, but the order gg> ɖɖ> bb/dd when the preceding vowel is /u/. [1]

We might conclude, on the basis of the observations on intervocalic plosives, that if the plosives are preceded by a vowel /a/, the dental plosive is longer than the others, and if they are preceded by a vowel /u/, the velar is longer than the others. This makes one feel that the different orders found in the series of plosives may be influenced by the vowel environment (i.e. the type of vowel). Hence the relative duration of plosives and the variations found in their order with different positions in the word and with different plosives may not be just due to the difference in place of articulation, but also may be due to other factors such as the quality of contiguous vowels.

However, what is evident from all the tables of all plosives in initial and medial positions is that the labial plosive in Telugu is never longer than the other plosives. This is in contradiction to the statement made by Lehiste (1970 : 28) with respect to place of articulation that "labials are longer than alveolars and velars, other

factors being kept constant".

5. ASPIRATION OF PLOSIVES: All plosive consonants in Telugu (except, the retroflex perhaps) are followed by aspiration, in the sense that there will be at least a short "open interval" between the release of this consonant and the beginning of the following vowel. However, from the point of view of aspiration, plosives in Telugu fall into two contrastive sets, depending on whether the amount of aspiration is phonemically significant or not. The term "aspirated plosives" here, is normally reserved for plosives with phonemically significant aspiration.

(5.a) OPEN INTERVAL OF UNASPIRATED PLOSIVES.

Plosive type	Number of tokens	Minimum	Maximum	Average duration
p–	8	2.0	2.5	2.1
t–	8	1.5	2.0	1.8
ʈ–	5	1.0	1.5	1.4
k–	10	3.0	4.0	3.6
b–	8	1.5	2.0	1.8
d–	8	1.0	2.0	1.6
ɖ–	6	0.5	1.5	1.1
g–	10	2.0	3.0	2.5

Table 6. Duration of open interval of word-initial unaspirated plosives in cs in disyllabic words.

The order we find from this table is: k> p> t> ʈ; g> b> d> ɖ. Thus, the open interval after initial plosives has variation in its duration depending on the type of plosive consonant it follows. These relationships, that is k/g> p/b> t/d> ʈ/ɖ seem to be constant throughout the data analysed from Telugu. Thus it is more common to find a longer open interval after velars than after other plosive consonants, and a shorter open interval after retroflex consonants than after others in the series.

Nowhere in the data does the open interval become progressively longer as the point of articulation shifts farther back in the mouth, as was observed for English by Peterson and Lehiste

(1960). The inclusion of retroflex in the series of plosives seems to disallow a simple rule of this nature.

However, the order given for initial plosives in Telugu seems to be in agreement with that for intervocalic plosives as well.

Plosive type	Number of tokens	Minimum	Maximum	Average duration
-p-	14	1.0	4.0	2.2
-t-	12	1.0	2.0	1.6
-ʈ-	18	0.0	1.0	0.9
-k-	18	2.0	4.0	2.8
-pp-	21	1.0	3.0	1.7
-tt-	23	1.0	2.0	1.3
-ʈʈ-	25	0.5	1.0	0.7
-kk-	20	2.0	4.0	2.5
-b-	12	2.0	3.0	2.2
-d-	11	1.0	2.0	1.2
-ɖ-	14	0.0	1.0	0.3
-g-	18	1.0	2.0	1.5
-bb-	22	1.0	3.0	1.4
-dd-	24	1.0	2.0	1.1
-ɖɖ-	27	0.5	1.0	0.6
-gg-	19	2.0	3.0	2.1

Table 7. Duration of open interval of intervocalic unaspirated plosives in cs in disyllabic words.

From this table we see that the open interval after voiceless plosives, short or long, is in the order k(k)> p(p)> ʈ(ʈ)> t(t). This is in agreement with the order noted for initial voiced and voiceless plosives.

With regard to voiced plosive series in table 7, we find a difference in the order of open interval, depending on whether the plosives are short or long. Short voiced plosives show b> g> d> ɖ, whereas long voiced plosives show gg> bb> dd> ɖɖ. The latter order is in agreement with that noted for initial voiced and voiceless plosives and for intervocalic short and long voiceless plosives.

Peterson and Lehiste's (1960) data suggest that "aspiration may become progressively longer as the point of articulation shifts farther back in the mouth", but this, as shown above, is not supported by the Telugu data. On the contrary there seems to be a variation in the open duration depending on the place of consonant articulation and on voicing. Thus in general, the retroflex is always followed by a short period of open interval when compared with others, and the velar in the voiceless set (irrespective of the difference in position and the length of closure) is always followed by a longer period of open interval when compared to others in a given series. But in the short voiced plosive series there is a slight tendency for this open interval to be longer after labial than after velar.

In Table 7, we further see that the differences in the open interval of labial and velar are greater in the voiceless set than in the corresponding voiced set. This leads us to conclude that the open interval is definitely longer after the velar if it is voiceless, otherwise (i.e. if voiced) it may vary.

(5.b) ASPIRATION OF PHONEMICALLY ASPIRATED PLOSIVES

Although for certain speakers, and perhaps for all speakers in certain styles, aspiration of plosive consonants is not distinctive, there are words in which, in certain styles of pronunciation, aspiration is found of noticeably greater duration than in the examples on which Tables 6 and 7 are based. A few examples of aspirated plosives show their duration of the period of aspiration as in the following Table.

Word-initial position		Word-medial position	
Plosive type	Average duration	Plosive type	Average duration
p^h–	6.5	–p^h–	6.0
$ʈ^h$–	6.0	–$ʈ^h$–	5.0
k^h–	8.5	–k^h–	8.0
b^h–	9.2	–b^h–	9.6
d^h–	8.2	–d^h–	8.6
g^h–	8.0	–g^h–	7.6

Table 8. Duration of aspiration of phonemically aspirated

plosives in cs in disyllabic and trisyllabic words.

Two points emerge from this table. Firstly, the order of consonants in terms of duration of aspiration is the same in both initial and medial positions. Secondly, there is a difference in the order of aspiration depending on whether the consonants are voiced or voiceless. Thus, the order for voiceless plosives is kh>ph>th in initial and medial positions. For voiced consonants the order is: $b^h > d^h > g^h$.

It will be seen that for the voiced set there is an increase in duration of aspiration as the point of articulation shifts further forward in the mouth. However, it must be noted that the retroflex consonant is absent from this set. What is clear is that the Telugu data summarised in Table 8 in no way support a simple statement that "aspiration may become progressively longer as the point of articulation shifts further back in the mouth" (Lehiste 1970 : 22).

3.1.2. NASALS: The two nasals /m/ and /n/ ocurring word-initially in comparable minimal meaningful disyllabic words, show their durations, on an average, 8.0 cs and 7.2 cs, respectively. Though on an average /m/ is longer than /n/, in many individual contrasting pairs it is equal to /n/. The difference between them in an initial position, is very small.

Initial nasals		Medial nasals			
Short		Short		Long	
Nasal type	Average duration	Nasal type	Average duration	Nasal type	Average duration
m–	8.0	–m–	10.8	–mm–	26.3
n–	7.2	–n–	7.9	–nn–	24.8
		–ɳ–	-5.8 -	–ɳɳ–	23.5

Table 9. Duration of nasals in cs in disyllabic words.

The figures given in the Table 9 for medial nasals also suggest that there is a tendency for the labial nasal to be longer than the alveolar and retroflex, and the alveolar to be longer than the retroflex: i.e. m>n>ɳ. The same order stands even when they

are long.

The differences in nasals are smaller in initial position than in intervocalic position. Furthermore, in the latter position the difference between labial nasal and alveolar nasal is greater than the difference between alveolar and retroflex. The durational differences for these intervocalic nasals are relatively stable and more consistent than for initial nasals.

3.1.3. PLACE OF ARTICULATION -CONCLUSION

It is to be noted that so far the effect of place of articulation on the duration of consonants has been observed mainly for plosives and fricatives, nasals being rather neglected in general discussions of the subject. However, the nasals examined here seem to be in agreement with the statement made for consonants other than nasals by Lehiste (1970 : 27) that "labials are longer than alveloars..., other factors being kept constant" (see also Fischer-Jørgensen, 1964 : 177).

In conclusion, we may say that as far as the place of articulation(of consonants in Telugu)is concerned, voiced consonants (i.e. plosives or nasals) give support to Lehiste's and fischer-Jørgensen's generalisations. Voiceless consonants (i.e. plosives and/or fricatives), on the other hand, do not.

3.2. MANNER OF ARTICULATION: The relationship of consonant duration and manner of articulation has been observed, for instance, by Falc'hun (1951), Fintoft (1961), Elert (1964), and Lehiste (1966, 1970). Falc'hun states that in Breton, voiced fricatives are shorter than nasals and nasals are shorter than voiced plosives, and voiceless plosives are shorter than voiceless fricatives. The latter point is supported by Fintoft's findings (1961 : 36) that in Norwegian, voiceless fricatives are always longer than any other consonants. However, Elert finds that in Swedish this may be true only in the case of sentences, and it is not true with regard to isolated words. He finds that the plosives in a list of isolated words have significantly longer duration than the fricatives, whereas in a list of sentences, the voiceless fricatives either show no significant difference from the plosives or are longer. Therefore, though Lehiste also finds in Estonian that the

intervocalic /s/ has always longer duration than a plosive, she makes a remark that "presently available information does not enable one to draw generally valid generalizations about the influence of the manner of articulation of a consonant on its duration" (Lehiste, 1970 : 30). So it seemed interesting to see whether there are any such durational variations associated with the manner of consonant production in Telugu.

A comparison of voiceless plosives with their corresponding voiceless fricatives in intervocalic position in minimal pairs of disyllabic words showed that on an average there is a slight tendency for fricatives in this position to be longer than plosives. The difference, however, is very small, the average durations being 11.8 cs for fricatives and 11.4 cs for plosives respectively.

It may be mentioned here that some of the minimal pairs (when not arranged) show no difference in duration between a plosive and a fricative. Only when a large number of occurrences are considered do the fricatives in minimal pairs show a slight tendency to be longer than the plosives. This supports Lehiste's observation that "a fricative might be longer than a sound involving closure; but this is not always the case" (1970 : 29). However, she (1966 : 43) is of the opinion that "sibilants appear to have a certain intrinsic relative duration that causes them to appear as longer than any other initial sounds". This seem to be the case in Telugu as far as initial fricatives are concerned, but is (as has already been indicated) less markedly so in the case of intervocalic plosives.

Given the difficulty of obtaining precise measurements of duration for initial voiceless consonants, measurements were taken only of voiced consonants (except aspirated plosives) in initial position. Average durations show: Voiced plosives (10.9cs)> nasals (7.7cs)> laterals (6.7cs)> semivowels (6.2cs)> trill (5.0cs). This agrees closely with Falc'hun's findings for Breton. The trill has the shortest duration among the voiced consonant series and this agrees well with the general tendency stated by Lehiste (1970).

It may be mentioned here that the aspirated plosives, whether voiced or voiceless, are on average longer than all other consonant types.

A similar order of relative duration is found in the case of intervocalic short and long consonants. Short consonants grouped into classes according to their manner of production have the following order of relative average duration: voiceless plosives (11.5cs) > voiceless fricatives (10.6cs) > semivowels (9.0cs) > voiced plosives (8.3cs) > nasals (8.0cs) > laterals (7.1cs) > trill (3.0cs). Long consonants show the following order: Voiceless plosives (27.8cs) > voiceless fricatives (25.5cs) >voiced plosives (23.9cs) > semivowels (23.8cs) > nasals (23.6cs) > laterals (21.6cs) > trill (20.1cs).

These orders of average durations are, as has been made clear, based on figures resulting from consonants grouped into classes. They should not be allowed to obscure the fact that comparison of individual consonants sometimes shows slightly different orderings. Plosives and nasals at different points of articulation provide and example. Thus p (11.9cs) > m (10.2cs) > b (9.6cs) ; t (11.2cs) > d (8.4cs) > n (7.9cs) ; ṭ (10.3cs) > d (6.5cs) >n (5.8cs). That is to say that, while the average duration of nasals is shorter than the average duration of plosives, the average duration of the voiced bilabial nasal is longer than the average duration of any voiced plosive. Similarly, it is the comparatively short duration of /f/ and /h/ within the group of fricatives that makes voiceless fricatives as a group significantly shorter than voiceless plosives. If /f/ and /h/ are excluded, the average durations for the two groups are almost the same.

One further point that needs to be mentioned is that the relative order of average durations is not necessarily the same as the relative order of maximum durations. Fricatives, for example have an average duration that is shorter than or equal to (depending on whether /f/ and /h/ are included) that for voiceless plosives. However, the maximum duration for fricatives is 14.0cs, whereas that for plosives is 12.2cs. It is only when one takes the average for all fricates that one gets a gets a result that agrees with Elert's (1964) findings for Swedish that fricatives are shorter than plosives.

3.3. PRESENCE OR ABSENCE OF VOICING: The difference between voiced and voiceless consonants has been described, linguistically, in terms of one distinctive feature only. However, it has been shown that there are at least eight (Slis and Cohen,, 1969 ; Slis, 1970) or ten (Delattre, 1958) different acoustical attributes that seem to be related to the voiced - voiceless distinction. Among these attributes, the duration of the consonant itself is one of the factors found to be associated with the distinction, in that voiceless consonants, particularly plosives, appear to be longer than the voiced consonants.

This has been found to be the case in various languages. Discussion of it can be seen by several researchers, for example, Denes (1955), Lisker (1957), Fintoft (1961), fischer-Jørgensen (1968), Slis (1970). To find out whether this is also the case with Telugu, the following measurements were made to compare the duration of the voiced and voiceless plosives.

Since the closure duration of the voiceless plosives cannot be measured when they are in initial position, only medial plosives have been taken into consideration. The following tables give the average durations of voiced and voiceless plosives and the period of their aspiration.

	Short consonants			Long consonants		
Plosives	Voiceless	Voiced	Difference	Voiceless	Voiced	Difference
Bilabial	12.7	10.0	2.7	29.0	25.5	3.5
Dental	12.0	9.3	2.7	30.0	26.0	4.0
Retroflex	10.6	7.3	3.3	29.0	26.0	3.0
Velar	13.2	10.1	3.1	29.0	26.0	2.5
Mean:	12.1	9.2	3.0	29.3	25.8	3.3

Table 10. Mean duration of intervocalic voiced and voiceless plosive contrasts in cs in disyllabic words.

As can be seen from Table 10, the voiced plosives are consistently shorter than the corresponding voiceless plosives. The average difference between voiced and voiceless is about 3cs (ranging between 2.5cs and 4cs. Voiced plosives are always shor-

ter than voiceless plosives in comparable environments.

The same tendencies have been found even with the duration of the open interval after voiceless and voiced plosives. But the differences are less stable when compared to the total duration of a plosive where the duration of plosives always shows a clear difference without any overlapping between voiced and voiceless.

	Initial			Medial					
	Short			Short			Long		
	Voiceless	Voiced	Difference	Voiceless	Voiced	Difference	Voiceless	Voiced	Difference
Bilabial	2.1	1.8	0.3	2.2	2.0	0.2	1.7	1.4	0.3
Dental	1.8	1.6	0.2	1.6	1.2	0.4	1.3	1.1	0.2
Retroflex	1.4	1.1	0.3	1.0	0.3	0.7	0.5	0.5	0.0
Velar	3.6	2.5	1.1	2.8	1.5	1.3	2.5	2.1	0.4
Mean	2.2	1.8	0.4	1.9	1.3	0.5	1.5	1.3	0.3

Table 11. Mean duration of open interval after voiced and voiceless unaspirated plosives in cs in disyllabic words.

Table 11 shows that there is a certain difference in the duration (when the average is taken into consideration) of open interval after voiced and voiceless closure. It may have to be pointed out here that this open interval is always voiceless even when preceded by voiced plosive. However, the average duration of open interval after p, t, ʈ and k is longer than after b, d, ɖ and g.

When the individual environments are taken into account, the differences in the open interval after voiced and voiceless closures are not as consistent as they are in the case of closure duration of a plosive. This shows that the differences in the open interval are not factors in distinguishing voiced and voice

less pairs. Though we find some differences in duration of open interval following voiced and voiceless, it is less than half a centisecond and may therefore not be significant. On the otherhand, in initial position the difference is more consistently maintained in English (than in Telugu) and the differences are large enough to serve as a cue to distinguish voiced from voiceless counterparts.

A few examples of aspirated plosives were examined and they show the opposite tendency from that observed for unaspirated plosives, in that the average duration of the open interval following voiced plosives is longer than that following voiceless plosives. In initial position the average duration of open interval is 7.0 cs for voiceless plosives and 8.5 cs for voiced. In medial position the respective figures are 6.3 cs and 8.6 cs.

With regard to plosive consonants, we conclude by saying that voiceless plosives are consistently longer than their voiced counterparts in comparable environments. The same is the case with consonants in general, in that the voiceless consonants of Telugu (plosives and fricatives) are longer than the voiced consonants (plosives, nasals, laterals, semivowels and trill) in comparable environments. The reason for this has been explained by several researchers. Discussing this, Lisker 1974 : 2407 notes: "Thus it is claimed ... either that voiceless stops and fricatives involve a greater expenditure of articulatory energy and hence longer closure, or that fortis obstruents have as a consequence of their more forceful articulation longer closure that are usually voiceless".

Though such generalisations appear to apply to a wide range of languages, there are differences within similarities. Thus, if we compare German (as reported by Fischer-Jørgensen, 1976 : 162 ; 170) with Telugu, we note that in both languages the voiceless consonant is longer than the voiced. However, the factors involved in this difference are not the same for the two languages. In German there is a significant difference in the open interval, but not in the closure, whereas in Telugu the significant difference is in the closure, not in the open interval.

4. COMPARISON OF VOWEL AND CONSONANT DURATION: If one takes the figures for average durations, short vowels are longer than short consonants and long vowels are longer than long consonants. The following are the mean values for intervocalic consonants. and non-final vowels in disyllabic words : Short vowel 9.6 cs, short consonant 9.0 cs, Long vowel 28.5 cs and long consonant 24.3 cs.

There is a larger difference between long vowels and long consonants than between short vowels and short consonants. The result is that a sequence of long vowel + short consonant has a longer duration (36.0 cs) than does a sequence of short vowel + long consonant (33.4 cs)

The difference in duration between vowels and consonants is less clear-cut if one takes account, not of consonants in general, but of certain classes of consonant. For instance, if compare vowels with voiced consonants, vowels will always be longer than voiced consonants. But if the comparison is with voiceless consonants, we find that: (1) in the case of long vowels and long consonants, a vowel will be either longer than or equal to a consonant and (2) in the case of short vowels and short consonants, a vowel will be equal to or shorter than a consonant.

5. VOWELS IN CONNECTED SPEECH: Although Telugu vowels, both short and long, are much shorter in connected speech than in isolated words, the variations in duration according to tongue height are more or less the same in both cases. The following table gives the average duration of each vowel in non-final position in connected speech.

Short vowel	Average duration	Long vowel	Average duration
i	5.7	i:	11.0
e	6.3	e:	11.1
u	4.4	u:	10.8
o	5.4	o:	10.8
a	4.7	a:	13.2

Table 12. Duration of non-final short and long vowels in connected speech (in cs).

From the above table, it would seem that there is one dif-

ference between connected speech and isolated words as regards the relative duration of vowels: whereas in isolated words back vowels are longer than front vowels, in connected speech we see the opposite tendency. This may have to do with the fact that in the samples of connected speech utterance-initial vowels were also counted, whereas the figures for isolated words take account only of vowels occurring between consonants. In Telugu, initial vowels commonly have an on-glide, and this may be longer in the case of front vowels than in the case of back vowels.

6. CONSONANTS IN CONNECTED SPEECH: Though consonants also show variation between connected speech and isolated words, in that they are shorter in connected speech, this variation is generally not so marked as in the case of vowels. Variation in the duration of consonants in terms of their place of articulation does not in all respects follow the patterns noted above for isolated words. Thus, the order of variation of duration in this respect is as follows:

c/t	>	p	>	k	>	ṭ;
(9.8)		(9.5)		(8.5)		(6.0)

Voiced plosives, on the other hand, show:

b	>	d	>	g	>	ḍ
(8.4)		(6.5)		(6.4)		(4.4).

Among nasal consonants, the bilabial nasal shows a longer duration than the alveolar. Thus /m/ has an average duration of 4.7 cs and /n/ of 4.3 cs. Two things are to be noted here. Firstly, in the case of both voiced plosives and nasals, bilabials are longer than dental/alveolar consonants. This is in agreement with Lehiste's and Fischer-Jørgensen's findings (cf 3.1.3 above).

In connected speech there is a variation in the duration of consonants associated with manner of articulation. The order of this variation is as follows: Fricatives (10.3 cs); Voiceless plosives (8.7 cs); Voiced plosives (6.5 cs); Nasals/laterals (4.6 cs); Semivowels (3.7 cs); Trill (2.4 cs).

This confirms the results of the investigation into the duration of consonants in isolated words in that voiced consonants are consistently shorter than voiceless consonants. There are, however, dif-

ferences in the order in respect of manner of articulation (cf. 3.2 above).

7. CONCLUSION: This investigation allows certain conclusions with regard to the intrinsic duration of sounds in Telugu. If vowels are short, there is tongue height influence on their duration. If vowels are (phonologically) long, then there is no systematic relationship in this respect between close and open vowels. With regard to the opposition frontness/backness, the tendency is different for isolated words and connected speech: in isolated words, the back vowels are longer than the front vowels, whereas in connected speech, the front vowels are longer than the back vowels.

As far as consonants are concerned, the one consistent feature of duration is that, in both isolated words and connected speech, voiceless consonants are longer than voiced ones. Place of articulation and manner of articulation also have some influence on the intrinsic duration of consonants, but this influence is less consistent. For instance, among the voiceless plosives, there is a tendency for velars to be longer, but there are environments in which the dental has the greatest duration. Among voiced plosives the tendency is for velar (mostly) or dental to be longest in isolated words, but for the bilabial to be longest in connected speech. To be contrasted with these variations is the fact that, in the sets of both voiced and voiceless plosives in disyllabics, the shortest is always the retroflex. This no doubt is partly the result of the relative shortness of the open interval in the case of retroflex consonants, a factor which we have already noted as preventing a generalisation for Telugu that the open interval for unaspirated plosives becomes progressively longer as the point of articulation shifts further back in the mouth. A consistent feature if one examines consonants from the point of view of manner of articulation is that the trill is always the shortest in the set. At the other end of the scale, voiceless fricatives are longest in word-initial position or in connected speech; the consonants of longest duration may be either voiceless plosives or voiceless fricatives.

If one compares vowels and consonants, a number of factors have to be taken into account. Thus, if one compares vowels with voiced consonants, vowels will be shown to be longer. But if the comparison is with voiceless consonants, we find in the case of long vowels and long consonant, a vowel will be either longer than or equal to a consonant, and in the case of short vowels and short consonants, a vowel will be equal to or shorter than a consonant.

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1. It should perhaps be mentioned that the data underlying the figures in Table 5 were not specifically prepared for the investigation of this question of the possible effect of place of articulation on the duration of plosives. To that extent, the figures are perhaps all the more significant. And it also confirms the tendency found by Fischer-Jørgensen that "g is longer than d after u" (1964 : 203).

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NEWS OF THE DEPARTMENT - 1983

AWARD OF RESEARCH DEGREES

The following scholars were awarded M. Phil. degrees:

1.	Ravi Eshwarchand	*Study of a sound change in Gondi dialects* (Supervisor: Prof. Bh. Krishnamurti)
2.	K. Mahalingam	*The Structure and function of relative clause in Tamil* (Supervisor: Dr. B. Lakshmi Bai)
3.	M.V. Ramanaiah	*Ave: A tribal Dravidian speech* (Supervisor: Dr. B. Ramakrishna Reddy)

NATIONAL SEMINAR

A national seminar on 'Language Variation and Language Change' was organised on January 6-7, 1983. Professor R.M.W. Dixon, Professor of Linguistics at Australian National University, Canberra, inaugurated the seminar. The seminar was aimed at bringing together active historical linguists in the country and providing a forum for exchange of views with other scholars (socio-linguists, psycholinguists and language typologists) who have insights into different mechanisms of language change. Twenty papers were presented at the seminar.

VISITING SCHOLARS

1) Prof. R.M.W. Dixon, Professor of Linguistics at the Australian National University, Canberra, Australia, was a Visiting Fellow at the Department from January 5 to February 14, 1983. Professor Dixon is an expert on Australian languages and has also published extensively on Theoretical Linguistics. During his stay, Professor Dixon gave two intensive courses, one on *Australian Linguistics* and the other on *English Semantics*. Both the courses were attended not only by the departmental staff and students but also by linguists from other institutions in the country.

2) Dr.S.N. Sridhar, Professor of Linguistics at the State University of New York, Stony Brook, U.S.A., delivered two lectures on August 8th and 9th 1983 on *'Research Strategies in Psycholinguistics'* and *'Standardization in Kannada'*

DISSERTATION ABSTRACTS

Study of a Sound Change in Gondi Dialects
(M. phil Thesis 1983)

Ravi Eshwarchand

The scope of the present work is confined to the investigation of sound changes that have affected pre-Gondi * *l̤* in modern Gondi dialects. The work consists of three chapters. Chapter I 'Introduction' deals with the methodology, a description of Gonds and their language and the treatment of this problem by earlier scholars. Chapter II discusses different approaches to sound change, i.e. Neo-grammarian, Structuralist, Generativist and Lexical Diffusionist and explains how exceptions to sound change are handled in each approach. Chapter III deals with the changes relating to pre-Gondi * *l̤* in modern Gondi dialects. Conclusions are given at the end of the three chapters. Besides, two Appendices are given: Appendix I consists of the etymologies relevant to the present study which are drawn from DED(S); Appendix II consists of the names of villages in Adilabad and Seoni districts in which data were collected from informants.

A study of the sound changes of pre-Gondi **l̤* in modern Gondi dialects was undertaken on the assumption that the changes are still in progress. The data were collected from over seventy villages in the Adilabad district of Andhra Pradesh and the Seoni district of Madhya Pradesh.

The reflexes of pre-Gondi **l̤* in initial position in the Gondi material of Adilabad district are *l*, *r̤* and *r* as shown below:

1. * l̤ > l / # – (e.g. * l̤ōn 'house' > lōn)
   * l̤ey 'young' > ley)

2. * ḷ > ṛ > r/# – (e.g. * ḷōn 'house' > rōn)
* ḷey 'young' > ṛiy)

Of the above two changes, change (1) is limited to Sirpur Taluk area, i.e. the Eastern part of Adilabad, and all the lexical items show the change without any exceptions. Change (2) is operative in Adilabad, Asifabad and Utnoor Taluks, i.e. the Western part of Adilabad, and all the lexical items show *r-* for * *ḷ-* except one item which has the flap *ṛ-*. However, in Seoni Taluk of Seoni district, pre-Gondi * *ḷ* is represented as *r* initially in all items in both the Northern and Southern parts. The post-vocalic (medial and final) pre-Gondi * *ḷ* is represented as *r* throughout Adilabad. In the word-final position, pre-Gondi * *ḷ* is represented as *r* in both North Seoni and South Seoni.

e.g. * sēlaḷ 'sister' > sēlār
* poraḷ 'mother-in-law' > pōrār

But in the medial position, pre-Gondi * *ḷ* is represented as *r* in the speech variety of North Seoni and as *ṛ* in the speech variety of South Seoni.

e.g. * veḷ-ci 'light' > verci (N.S.)
> veṛci (S.S.)

* vali 'wind' > vari (N.S.)
> vaṛi (S.S.)

Pre-Gondi * *ḷḷ* changes to *ll* in both Eastern and Western parts of Adilabad:

* ḷḷ > ll/V — V (e.g. * uḷḷi 'onion' > ulli
(–long) * kaḷḷe 'thief' > kalle
* puḷḷa 'sour' > pulla)

In Seoni, pre-Gondi * *ḷḷ* is represented as *ll/l* in both Nothern and Southern parts.

e.g. * kaḷḷe 'thief' > kalle (N.S. and S.S.)
* piḷḷa 'young of an animal' > pīla (N.S. and S.S.)

Thus in the western dialect of Adilabad, there is only one lexical item, i.e. *ṛiy young* < * *ḷey,* in which pre-Gondi * *ḷ* represented as *ṛ* initially. This lone form provides the phonological link between * *ḷ* and *r*. In the present study, the sound change * *ḷ* > *ṛ* > *r* in the initial position provides evidence for the lexical diffusion and rules out the Neogrammarian assumption that the exceptions are due to either

borrowing or analogy. The remnant of the sound change (i.e. * *ley*'young' > *ṛiy*) cannot be the result of borrowing because no other dialect of Gondi, for that matter, not even the neighbouring Sirpur dialect has correspondence with an initial falp *ṛ*. The evidence for a possible analogy as the cause for the residue is also not found in the language. Thus, the only possible way to account for lone remnant is the termination of the sound change * *l̤* > *ṛ*> r which did not affect the word *ṛiy*.

THE STRUCTURE AND FUNCTION OF RELATIVE CLAUSE IN TAMIL (M.Phil. Dissertation, 1983)

K. Mahalingam

This study gives a brief introduction to the treatment of relative clauses in Tamil from Tolkaapiyar to the present day. The focus of the thesis is to examine whether or not correlative relative clause is native to Tamil or not and whether it is functionally same or different from the participial relative clause. Both spoken and written varieties of Tamil are examined. For spoken variety speech samples from natural conversations and group discussions pertaining to matters of general interest as well as platform speech and radio talks are considered. The structural characteristics of different types of relative clause constructions are discussed in chapter II. The third chapter incorporates an historical account of the correlative relative construction in Tamil. It is argued that while both the correlative and participial relative clauses can be used to relativize the definite head noun, correlative relative clause alone is preferred for relativizing indefinite head nouns indicating thereby a clear functional contrast between the two types. A substantial part of the thesis is devoted to examine the structural difference between restrictive and non-restrictive relative clauses in Tamil. A three way classification of Tamil determiner system is attempted on the basis of functional clues.

AVE: A TRIBAL DRAVIDIAN SPEECH
(M.Phil DISSERTATION, 1983)

M.V. Ramanaiah

'Ave' is a South Central Dravidian language spoken in Kalahandi and Koraput district of Orissa. The present study is based on its two principal dialects viz. Hendurghat and Sringeri. 'Ave' shares many phonological, morphological, lexical and grammatical traits with Kui-Manda subgroup.

The first Chapter of the dissertation introduces the language and its speakers and touches upon some of the socio-cultural aspects

of their life. The second chapter describes word phonology. In the chapter on Morphophonemics certain common Sandhi processes are described with illustrations. Feature analysis is used wherever it is found more useful than segment analysis. In the fourth chapter Noun morphology is dealt with. The first subsection covers gender and number. Gender in Ave, like in other Dravidian languages, is a natural one. Due to its contact with Indo Aryan languages, it has acquired Indo Aryan masculine marker *-a* and feminine marker *-i*. There is a small set of nouns mostly kinship terms, in which this kind of gender distinction is found. The next subsection describes noun formation. While nominal derivation with primary derivative suffixes is not a very productive process in Ave, there is another process called appellative formation which is very productive. Next come the sections on case-formation, pronouns, numerals, adjectives and particles in that order. The final chapter deals with verb morphology. All the verbal suffixes have both voiceless and voiced variants whose distribution is not always phonologically conditioned. A list of vocabulary is given in the appendix.

NEWS OF THE DEPARTMENT - 1984

AWARD OF RESEARCH DEGREES

The following scholars were awarded M.Phil. degrees:

1. Sanghamitra Saha — *A study in linguistic acculturation: Calcutta settled U.P. Hindi speakers Bengali* (Supervisor: Dr. H. S. Ananthanarayana).
2. T. Nagaraja Chetty — *The Kuttia dialect of Kui* (Supervisor: Dr. B. Ramakrishna Reddy)
3. Mina De — *Bangla Gerunds* (Dr. Aditi Mukherjee)
4. R. Y. Kulkarni — *A linguistic analysis of the weaver's occupational vocabulary in Kannada* (Supervisor: Dr. H. S. Anantha-narayana)
5. A. Gayatri — *Semantics of Telugu verbs: A restricted*

study of cuisine and movement
(Supervisor: Dr. B. Ramakrishna Reddy)

A National Seminar on 'Morphology' was organized on January 6 and 7, 1984. Professor Mark Aronoff, Professor of Linguistics, the State University of New York at Stony Brook inaugurated the seminar. The purpose of the seminar was to provide a forum for experts in different branches of linguistics with different theoretical persuasions to exchange their latest thinking on the role of word in human language and to appreciate the place of morphology in linguistic theory. In all 28 papers were presented and discussed during the two days. An important highlight of the seminar was a special session on 'The word in the languages of India' in which papers were read by eminent scholars on the definition and illustration of word in Telugu, Tamil, Kannada, Malayalam, Sanskrit, Hindi, Gujrati, Kashmiri, Bengali and Oriya.

Visiting Scholars:

1) Prof. Mark Aronoff, Professor of Linguistics, State University of New york at Stony Brook, U.S.A., was a Visiting fellow in the Department in January 1984. He inaugurated and participated in the National Seminar on Morphology on January 6 and 7, 1984. He gave a series of lectures on 'Morphology in Generative grammar' at the department which was attended by scholars from Institutions in Hyderabad and outside.

2) Professor Gerald B. Kelley, Professor of Linguistics, Cornell University, USA, was a visiting fellow in Residence at Osmania for three months from January to March 1984. During his stay here, Professor Kelley delivered a series of lectures on 'Topics in Sociolinguistics'. He also gave some special lectures in the post graduate classes of the Department.

3) Dr. M. Israel, Professor of Linguistics, Madurai Kamraj University, spoke on 'Grammatical categories in Tolkappiam' on July 13, 1984.

4) Professor Robert King, Professor, University of Texas, at Austin gave a lecture on 'Current developments in Historical linguistics' on August 10, 1984.

DISSERTATION ABSTRACTS

A STUDY IN LINGUISTIC ACCULTURATION: CALCUTTA SETTLED U.P. HINDI SPEAKERS' BENGALI. (M.Phil. dissertation, 1984)

Sanghamitra, Saha

The sociolinguist finds, in India, many challenging situations for studying the processes of language contact. For the present study the linguistic scene of Calcutta, a miniature India, has been selected. Attention has been focussed on the variety of Bengali used by the Hindi speaking U.P. migrants settled in Calcutta for their business. The research points out several phonological (e.g. use of prothetic *h* in the 1st person pronominal forms, retention of conjunct consonants, distinction between */y,j/*, and */v,b/* and grammatical features (e.g. different types of echo-word formation, improper distribution of the specifier, deviation in the use of case-inflections) characterise this variety of Bengali. An attempt is also made to explain the deviant features. The Bengali used by the U.P. migrants presents three peculiarities, more or less uniformly found among these speakers, viz. extension of the native (i.e. Hindi) pattern, wrong acquisition and usage of Bengali features due to insufficient exposure to the target language, and innovation (or new pattern). The study has confirmed that a fixed model is not applicable for studying the sociolinguistic patterns in different language contact situations.

A LINGUISTIC ANALYSIS OF THE WEAVERS' OCCUPATIONAL VOCABULARY IN KANNADA (M. Phil. dissertation 1984)

R. Y. Kulkarni

The thesis is mainly concerned with the compilation of the Weavers' occupational vocabulary in Kannada, a Dravidian language. Bijapur district in North Karnataka which has been known as an important center for weaving for a long time has been selected for this purpose. Following the traditional method of collecting data by field work, 1160 entries are identified and presented in alphabetical order. Main entry items where variants are found are selected on the basis of their general usage. Syn-

onyms areindicated and are listed alphabetically. Loan words are recognised and their sources are also noted. Multiple meanings are entered according to the lexicographical practice and cross references are also shown. Diagrams of instruments connected with weaving are supplied at the end for easy identification and proper understanding. Prefixed to the vocabulary list is a grammatical sketch which brings out a few differences in the system as compared with that of literary Kannada. The sketch includes sections of phonology, morphophonemics and morphology.

BANGLA GERUNDS

(M.Phil Dissertation 1984)

Mina De

In Bangla four types of constructions, gerunds, participles gerundives and action nominals have the same decinences namely *wal, no* and *ba,* which have the same phonological conditioning irrespective of whether or not they function as a gerund suffix (chapter I). It is argued in Chapter II that the morphological markers alone are not enough to identify a gerund form in Bangla and syntactic and semantic clues are provided for the identification of a gerund. It is argued that due to their dual characteristics, verb-like and noun-like,gerunds form a transferred category (V; N). In chapters III and IV it is shown that a (V; N) in Bangla forms a G(erund) P(hrase) that occurs either as an NP or in a PP. When GP occurs as an NP two simultaneous syntactic structures appear to be valid, viz. one with an integral GP and the other where the G, i.e. the (V; N) has been adjoined to the finite verb next to it in the sentence. In a sentence where the GP occurs in a PP the subject of the (V; N) sometimes takes the genitive case marker while elsewhere it takes the nominative casemarker. When there is an integral GP under the PP, the subject takes the genitive marker whereas in other cases, where the P is cliticized to its preceding (V; N) and thus forms a transferred category (V; P), the subject of the newly formed (V; P) takes the nominative marker.

SEMANTICS OF TELUGU VERBS: A RESTRICTED STUDY OF CUISINE AND MOVEMENT

(M.Phil dissertation 1984).

A. Gayatri

Since the appearance of the book 'Semantics: studies in the science of meaning' by Breal in 1900 semantics has acquired much attention from linguists. New trends and theories have been proposed in semantics mainly on the basis of the Indo-European languages. The present work is a survey of and a contribution to semantic study of Telugu verbs, especially cuisine and movement within the framework of field theory and semantic componential analysis. The study aims at classification of verbs into various semantic domains on the basis of field theory and semantic componential analysis and testing the viability of these theories in the description of Telugu, a Dravidian language. The results so obtained for Telugu may form basis for the study of other Indian languages. Chapter one on 'Introduction to Semantics' throws light on the basic concepts of semantics, discusses the methodology followed in this study and scope of the research.

The second chapter entitled 'An Introduction to Semantic Analysis: Semantic Cuisine in Telugu' deals in detail with semantic componential analysis with special reference to semantic cuisine in Telugu.

The third chapter 'Semantics of movement verbs in Telugu' deals with directional and non-directional movement verbs in Telugu on semantic basis. The use of deictic categories in the description of directional verbs of movement has been treated exhaustively.

The chapter on 'Semantic components and Principal semantic domains of Telugu verbs' sketches the semantic structure, properties of semantic components and classification of the principal semantic domains of Telugu verbs. It also provides a table, summing up the semantic features of nearly five hundred verb-roots.

NEWS OF THE DEPARTMENT - 1985

AWARD OF RESEARCH DEGREES

The following scholars were awarded M. Phil. degrees:

1.	B. Suvarchala	*Central Dravidian Comparative Phonology* (Supervisor: Dr. Bh. Krishnamurti)
2.	A. Parimalagantham	*Tamil influence on Madurai Cobblers' Telugu* (Supervisor: Dr. H. S. Ananthanarayana)
3.	T. Ramesh	*The influence of Kannada on Telugu spoken in the border district of Karnataka and Andhra Pradesh: A study in language interaction* (Supervisor: Dr. H. S. Ananthanarayana)

NATIONAL SEMINAR:

A two day National Seminar on 'Tense and Aspects in Indian Languages' was held on January, 11 and 12. The keynote address of the seminar was 'Towards a general theory of tense' by Prof. Bernard Comrie of University of South California, U.S.A. Besides Osmania University, the following Universities and Institutes were represented by the participants - London School of Economics, Univeristy of Pennsylvania, Philadelphia, Central Institute of Indian Languages, Mysore, University of Delhi, Madurai Kamraj University and Central Institute of English and Foreign Languages. In all about twenty papers were read at the seminar.

VISITING SCHOLARS

Ms. Jean Aitchison, Senior lecturer, London School of Economics and Social Sciences, London was a Visiting Fellow at the department for five weeks starting from January 1st 1985. She was a resource person for consultation on research in language acquisition and aphasia study. She also gave a course of lectures on (1) Methodological aspects of Psycholinguistic studies, (2) Processes of Speech Production and (3) Linguistic

investigation of aphasia.

2. Sri Iravatham Mahadevan, I.A.S., formerly Jawaharlal Nehru University Fellow was a Visiting Fellow at the department from February 15th to 28th, 1985. During his stay in the department, he offered a short intensive course on indian Palaeography (origin and evolution of the writing system of major Indian languages). Besides linguists and language teachers, scholars from the fields fo archaeology and ancient history attended the course.

3. Dr. Roland Posner, Professor, Teachnische Universitat, Berlin, West Germany, visited the department on 4th and 5th January 1985. He gave two lectures on 'Sentence Connectives' and 'Iconicity in syntax'.

4. Dr. D.P. Pattanayak, Director, Central Institute of Indian Language, Mysore, visited the department and spoke on 'Being and Becoming Billingual in India'.

5. Dr. G. Leither, Frerie University, West Berlin, delivered a lecture on 'Uses and functions of reported speech in media'.

6. Dr. Richard Mckee, Professor, School of Oriental and African Studies, London, visited the department and delivered a lecture on 'Generative Enterprise'.

7. Dr. Indira Y. Junghare of University of Minnesota, USA, spoke on 'Prominence in Indo-Aryan and Dravidian'.

DISSERTATION ABSTRACTS

CENTRAL DRAVIDIAN COMPARATIVE PHONOLOGY

(M. Phil Thesis, 1984)

B. Suvarchala

The present study is a systematic and detailed presentation of Central Dravidian phonology. The term 'Central Dravidian' used in this work refers only to five languages, viz., Kolami, Naiki, Parji, Ollari and Gadaba. All these are tribal languages without any orthography. The main purpose of the work is to reconstruct the Proto-central Dravidian (PCDr.) phonemes and to observe their reflexes in different CDr. languages. The main sources of the data are: *A Dravidian Etymological Dictionary* and *A Dravidian Etymological Dictionary- Supplement* by T. Burrow and M.B. Emeneau and Konekor Gadaba: *A Dravidian Language* by

P: Bhaskara Rao. The etyma found in a minimum of two of the five CDr. languages have been considered in the present comaparative study for reconstructing the appropriate PCDr. forms and identifying their later development.

The thesis consists of six chapters. In chapter I, the CDr. languages, sources and phonemic system of Proto-Dravidian are discussed. The vowels, consonants, consonant clusters, and geminates found in the CDr. Languages are discussed in chapters II, III, IV and V, respectively. In all these chapters, tables are given which show how each PCDr. phoneme is represented in different languages in different entries. The results are discussed in chapter VI. The data collected are presented in six appendices at the end of the work.

The main findings of the thesis are as follows:

(i) PDr. *ẓ is replaced by ɬ in Naiki.

(ii) PDr./PCDr. *n- is represented as n- /ɸ- in the Wardha dialect of Kolami and Naikri and as ɸ- in Naiki.

Besides these, it is also proved in the present work that one of the rules proposed earlier by Bh. Krishnamurti in the case of Parji vowels, which states that a mid-front vowel *e/ē* becomes a low vowel *a/ā* in Parji before the liquids *l* and *r*, is not correct.

TAMIL INFLUENCE ON MADURAI COBBLERS' TELUGU

(M. Phil. dissertation 1985)

A. Parimala Gantham

Studies in Bilingualism are very fruitful area of research and India provides many an opportunity in this area. Each study brings out intriguing results. It provides an answer to the probable date of migration of linguistic communities from one place to another. It indicates the nature of contact between the languages and the kind of convergence. The present research attempts a study of one such situation, viz. the influence of Tamil, the dominant language, on Telugu spoken by the Cobblers in Madurai. The deviant features of this variety of Telugu as compared with Standard Telugu are

clearly brought out. After a brief introduction in which language contact and convergence phenomenon is discussed, the demographic background of the migrant community is presented. A brief description of the methodology used in the study is followed by a detailed presentation of the linguistic variations in Madurai Cobblers' Telugu at the phonological, grammatical and lexical levels. The questionnaire employed for eliciting data, the texts and details of the informants are listed in the appendix. In the phonology, there is a merger intervocalically of */p/* and */m/* with */v/*, as well as */k/* and */g/* with */h/*. The grammar presents loss of features (e.g. Dem. plural *waaḷḷu*), extension (e.g. 1st per. sg. suffix to 3rd per. fem. sg. and neuter), as well as innovations (e.g. fut. habitual marker *naa*). On the basis of the evidence available (e.g. the forms */eedi/*, */türuka/*, the development of *c* to *s*), it is suggested that these speakers may have hailed from the border of Telangana and Rayalaseema and that they might have migrated during the latter half of the 15th or the first half of the 16th century.

THE INFLUENCE OF KANNADA ON TELUGU SPOKEN IN THE BORDER DISTRICT (KOLAR) OF KARNATAKA AND ANDHRA PRADESH: A STUDY IN LANGUAGE INTERACTION

(M. Phil dissertation 1985)

T. Ramesh

Besides 'Introduction' and 'Conclusion', the thesis consists of five chapters. The developments characteristic of Kolar Telugu is treated in three chapters devoting one each to phonology, grammar and lexicon. Methodology and the concept of maintenance and shift have taken a chapter each. The texts elicited from the informants, the questionnaire used for the purpose, and a list of reference items are given at the end.

Kolar is a District in Karnantaka State with the majority of the population speaking Telugu as their mother tongue and Kannada as the regional language. Following the conventional Sociolinguistic methodology, the study has focussed on the degree of impact of Kannada on Telugu in all the linguistic levels. Data is collected from 25 Telugu informants and 15 Kannada informants selected at random.

Of the phonological developments, we may specially mention the change of */a/* to */e/*, loss of final */m/*, and substitution of retroflex for dentals. In the grammar, we may note the use of Kannada interrogative pronoun */yavadi/* 'which', classifier */jona/*, loss of distinction between human and non-human numeral category, dropping of oblique suffix */-ti/*, and the derivation of the purposive form by adding the dative suffix directly to the verb.

Although Kolar Telugu is much influenced by Kannada, it has still retained a few of the archaic features e.g. the past tense markers */e, -i, iti/*, the future tense marker */-ta/*, second person */nivu/* 'you', and the imperative form */adugunvi/* 'pl. tell'.

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