OSMANIA PAPERS IN LINGUISTICS

Combined Special Volume

IN HONOUR OF
PROF. H.S. ANANTHANARAYANA

Editor

J. VENKATESWARA SASTRY

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CITATION PRESENTED TO
PROF H.S. Ananthanarayana
ON THE EVENT OF HIS RETIREMENT FROM SERVICE AT
OSMANIA UNIVERSITY

Born in a family well versed in Vedic traditions, Prof. H.S. Ananthanarayana had the advantage of acquiring classical Indian linguistic tradition, before it was supplemented with western formal learning in USA. In his long checkered academic career, he has been a Research Fellow, an Instructor, a Lecturer, a Reader and a Professor and his career was capped by the UGC recognition wherein he was appointed as a National Lecturer.

He shouldered numerous administrative and academic responsibilities in Osmania University and other learned institutions. He has been the Head of the Department, Chairman, Board of studies, Dean, Faculty of Arts in Osmania apart from being a member of Board of Studies in other Universities. He has had a unique distinction of being the President of Dravidian Linguistic Association and Linguistic Society of India, simultaneously. He has taught and lectured in many Universities in India and abroad. He has actively participated in a number of national and international seminars. Although his formal designation is Professor of Historical Linguistics, his research covers a wide range of areas. He has written on Sanskrit, Prakrit, Panini and Tolkappiar. His explorations into the Sanketi language has brought its structure to the Knowledge of fellow linguists. In a sense, we can call him the Panini of Sanketi. He has published six books and seventy articles in English and Kannada, popular as well as Scholarly in Journals, encyclopaedias and anthologies.

Professor Ananthanarayana belongs to that generation of linguists which has continuously expanded its vistas of intellectual pursuit by extending its areas of exploration rather than shrinking into a well protected narrow shell of specialisation.

Professor Ananthanarayana has served the Osmania University for nearly three decades. He has trained several generations of linguists, some of whom have become his own colleagues in the department.

The qualities that his friends and colleagues have always cherished are his ever willingness to take up challenges, always standing by his colleagues and love for the students. Though, at times, his communicative performance may have been at variance with his communicative competence, its tenderness is, nevertheles, quite palpable.

Wishing Prof. Ananthanarayana a happy, healthy, prosperous retired life and active academic endeavours.

HIS EVER LOVING COLLEAGUES AND STUDENTS.

PROF. H.S. ANANTHANARAYANA

Publications of Prof. H.S.Ananthanarayana

a) *Books* :

1970. *Verb Forms of the Taittiriya Brāhmaṇa*. Poona : Deccan College.

1973. *A Prakrit Reader*. Mysore : Central Institute of indian Languages.

1976. *Four Lectures on Pāṇini's Aṣṭādhyāyī*. Annamalainagar : Annamalai University.

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b) *Papers* :

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2. Syllable in Sanskrit, *Proc. of the Seminar on the Syllable
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of Linguistics, Osmania University.

3. The meaning of Tenses and Modes in the Indian Tradition,
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Department of Linguistics, Osmania University.

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1976. Some Sanskrit Suffixes in Kannada, *Sreekaṇṭhatīrtha* :
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- 1980. Languages of India, *Prabuddha Karnāṭaka* 62.no.1. 25-36.
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- 1969. *Morphology*, Vol. I. 684-85.
- 1971. *Homophonous Forms*, Vol. III, 151-52.
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Contribution to other Encyclopaedias : (In Press)

1. *Sankēti Tamil*, Dravidian Encyclopaedia.
2. *Pāṇini 's grammar*,   -do-
3. *Pāṇinīya śikṣā*, Bhāratiya Bhāṣātattva Mīmāmsā.
4. *Bhāradwāja Śikṣā*,   -do-
5. *Āpiśali śikṣā*,   -do-
6. *Vyāsa śikṣā*,   -do-
7. *Varṇasūtras of candragomin*,   -do-

Popular articles in Souvenirs:

1. The original home of the Sankētis, Mysore 1970.
2. Linguistic Taboo, Hyderabad: Souvenir of the third AICL 52-55, 1972.
3. A Survey of the languages of India, Hyderabad: Souvenir of the third AICL 37-43.

Bio-Academic Vitae of Prof. Ananthanarayana

Date of Birth   :   May 23, 1931

Qualifications   :   M.A. Sanskrit (Mysore),
                             Ph.D. Linguistics (Texas)

Fields of special
        interest: Comparative and Historical
                            Linguistics, Indo-Aryan
                            Lexicography,Language
                            Typology, Indian Grammatical
                            Theories.

4. Positions held (Including administrative experience)

i) Lecturer in Sanskrit, University of Mysore,
    Mysore.   1954-59

ii) Research Fellow in Indo-European
    Linguistics, University of Texas at
    Austin, USA.   1959-60

iii) Special Instructor in Hindi, University
     of Texas at Austin, USA.   1960-62

iv) Instructor in Hindi, University of
    Chicago, USA.   1962-63

v) Lecturer in Linguistics, Osmania
    University, Hyderabad.   1963-68

vi) Reader in Linguistics, Osmania
    University   1968-77

vii) Research Scientist Associate IV,
     University of Texas at Austin, USA.   1971-72

viii) Professor of Historical Linguistics,
      Osmania University, Hyderabad   1977 - 79

ix) In-charge Head, Department of
    Linguistics, Osmania University,
    Hyderabad   1967,1970 &
                                                 1974

x) Head of the Department of Linguistics,
   Osmania University, Hyderabad   1979-83
xi) Faculty member, Linguistic Institute,
   University of Texas, USA   1960 Summer
   1961 Summer

xii) Faculty member, Summer Schools of
   Linguistics of LSI   1964-70
xiii) Faculty member, Summer Linguistic
   Institutes   1976,1977 &
   1982.
xiv) Coordinator, Centre of Advanced
   Study in Linguistics, Osmania
   University   1986-1990
xv) Dean, Faculty of Arts,
   Osmania University   1990-91

5. Academic distinctions :

I Rank. M.A.(Sanskrit), University of Mysore.
Gold Medalist.
Vice-President, Linguistic Society of India, 1982-84
Vice-President, Dravidian Linguistics Assn. 1987-88
Member of the Council of Management of
     Deccan College, Pune, 1984-87
President, DLA, 1988-89
President, LSI, 1988-90
UGC National Lecturer, 1989-91

6. Editorial and other experience :

Editor, Osmania Papers in Linguistics, 1975-77.
Member of the Executive Committee, Linguistic
     Society of India, 1968-70,1972.
Member of the Editorial Board,
     International Journal of Dravidian Linguistics, 1981 -

Member of the Committee on Publications,
Linguistic Society of India, 1973-75.

7. Life Membership in Learned Societies :
Linguistic Society in America (1963).
Linguistic Society of India (1961)
Dravidian Linguistic Association (1972)

8. Attendence at Conferences :
IX   International Conference of Linguistics,
     Harward University, (U.S.A.), 1962.
II   International Conference on South Asian Languages
     and Linguistics, Osmania University, Hyderabad, 1980
     International Seminar and Conference on Dravidian
     Linguistics, Trivandrum, 1986.
All India Oriental Conference, Calcutta (1969),
     Kurukshetra (1974), Poona (1978).
All India Conference of Linguistics, Poona (1970),
     Hyderabad (1972), Delhi (1974), Calcutta (1980),
     Delhi (1978).
All India Conference of Dravadian Linguists, Tirupati
     (1972), Bangalore (1977), Hyderabad (1981),
     Pondicherry (1982).
International seminar on Panini, Poona (1981)

9. Languages Known :
Tamil, Kannada, Telugu
Hindi, (Marathi), Sanskrit
English, German, French

EDITOR'S NOTE

Though it was not anticipated, the structure of this combined special volume, which is being presented to Prof.H.S.Ananthanarayana in appreciation of his contribution to the Department of Linguistics at Osmania University, is really unique, in the sense it has contributions from varied areas of linguistics. There are sixteen papers including a review article: four dealing with phonetics and phonology; three papers concerned with historical linguistics; two out of these three focus on Dravidian studies; only one paper which has child language acquisition process as its theme; two papers which speak about Pan- Indian language features of the verb forms; another couple of papers that have contact and convergence of Indian languages as the core point of discussion. The remaining four papers are related to some specific aspect of Telugu language. Thus, the present volume,though it is slightly delayed,with its multidimensional approach to different areas of linguistics, will be an addition to the existing literature in Indian Linguistics Studies.

Prof. Ananthanarayana is one of the founder - editors of the *OPIL*, and we in the department feel that the dedication of this combined special volume is a fitting tribute to him.

Editor

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PALATAL SIBILANT :
ASPECT OF ASPIRATION

Dinker Deshpande
osmania university

Abstract: *By drawing examples from Marathi and Hindi and quoting extensively fromIndian traditional grammarians, this paper concludes that Sanskrit Sibilants are aspirated sounds and more so in case of palatal Sibilant*

The second and fourth consonants of all the classes of stops are aspirated consonants in almost all Indo Aryan Languages. Western linguists aslo treat these consonants as aspirated ones. So, this is an undisputed fact accepted by all. In Indian tradition even semi vowels and sibilants are also treated on the level of aspiration. In *siddhānta Kaumudi* of Bhattōji Dīkshita we come across a statement, which reads thus - *'Vargāṇām PrathamaTṛtīya Pañcama Yaralavāśca alpaprāṇāḥ anye mahāprāṇaḥ* ' i.e., First, third and fifth consonant of stop-classes and the semivowels are unaspirated sounds and rest are aspirated. The *Tatvabōdhini* commentary on this explains again thus - *'Vargāṇām Dwitīya caturthō Śalaśca mahāprāṇaḥ'* i.e., Second and fourth consonants of stop classes and sibilants are aspirated sounds. The cynosure for us is that the sibilants are treated as aspirated sounds. Thus Indian tradition in phonetics emphasises that just as all the sounds are either voiced or voiceless so also all the sounds are either aspirated or unaspirated sounds. Western phoneticians

have treated sibilants as fricatives only and not as aspirated sounds. Even panini has not mentioned the aspiration of sibilants. Sibilants are called *ūṣma* consonants i.e. warm consonants by Indian grammarians. *Siddhānt Kaumudi* of *Bhaṭṭōji Dīkshit* is almost a rearrangement of paniniṣ *Aṣhṭādhyāyi.* Then how is that *Bhaṭṭōji Dīkshit* has called sibilants as aspirated when panini has not called likewise? It seems *Bhaṭṭōji* has taken cue from *Vājaśanēyi prātiśākhya* wherein sibilants are called *ūṣma* sounds and in the commentory it is explained that *ūṣma* means *mahāprāṇa* also. Thus Indian phonetic tradition clearly establishes S, Ś andṢ as aspirated consonants.

Many a times sibilants are changed to *h* in Neo-Indo Aryan languages. The retroflex sibilant Ṣ changes to Kh almost invariably. There are of course a few exceptions in Marathi. This sound was treated as Ṣ or *kh* even in old days. Thus we have *ṣat* and *khat* tradition. The cluster *kṣ*, which is found abundantly in Sanskrit, changes to *kh* in NIA languages. The data I have collected has no retroflex sibilant and therefore this sibilant is not relevant for my conclusions. The data consists of some Sanskrit *tadbhawa* (i.e., formed from Sanskrit) words. The words are in vogue mostly in Marathi and Hindi. The behaviour of palatal sibilant is to be noted here. The follwoing table gives complete data.

	Sanskrit	Marathi	Hindi	Gloss
1.	Pāśa	phasa	phasa	a noose
2.	śānta	santha	--------	placid, calm
3.	veśa	------	bhesa	dress
4.	śarkarā	sākhar	sakkar	sugar
5.	kiśa	khisa	khisā	shreddings, bits
6.	kośā	khoss(khoca)	khosa	to tuck, to prod
7.	laśuna	lasuna	lahasan	garlic

8.	śāṇa	sahāṇ	--------	a whet stone
9.	śaṭi	sāḍi	sāḍi	saree
10.	śāṭī	chāṭī	-------	sanyasi's garment
11.	śakaṭa	chakaḍā	chakaḍā	bullock cart
12.	kēśa	kesa	-------	hair

The above data gives clear indication that the palatal Sibilant *Ś* has more aspiration than *Ṣ* and *Ś* changes to *S* passing its extra aspiration to the consonant in proximity in *tadbhawa* words. Examples 1 to 6 are so clear that no other comment is necessary. When the consonant in proximity is not a stop, the *Ś* has split into two parts i.e., one, the occlusion part and two the aspiration part. The aspiration part has become *h* and the occlusion part has changed to *S*. This is evident in examples 7 and 8. Example 9 again falls in line with examples 1 to 6. Though the word *sadhi* has given place to *sadi* in Hindi, the word *sadhi* is in vogue in Punjabi even now. Examples 10 and 11 show how *Ś* has changed to *ch*, the aspirated stop and not to c the unaspirated one. The sandhi sutra also says *saschoti*" i.e., *Ś* changes to ch in certain conditions. Now why *Ś* should change to *ch* and not to c? Acceptance of extra aspiration in *Ś* should be an answer to this. In pāli this phenomenon of aspiration is noticed but there the aspiration has no definite pattern. *paraśu'* (skt)changes to *pharasu'* and *kubja* changes to *khuji* and therefore some linguists call this as sporadic aspiration. In the examples given above we clearly see a definite pattern, tendency f *Ś* changing to *S* and passing its extra aspiration to adjacent stop. In Marathi I could get only one *tadbhawa* word *keśa* (skt, *kēśa* ex.No12) wherein this pattern is not followed, but then the exception may prove the rule. From the data given above we may not be able to establish a phonetic law but we can definitely of establish 'phonetic tendency'. Finally the question of points of articulation of *Ś* and *S* may arise. In the tradition of paini *Ś* is palatal and *S*

dental. While passing on its extra aspiration why palatal
should change to dental? In fact from the time of pāli and
prakrt the articulation of *Ś* has slowly beome alveolar and *Ś* has
become front palatal i.e., it has come close to alveola. In this
condition, chage of point of articulation is not at all impossible.
Thus following conclusion could be drawn.

(The sibilants are aspirated sounds in Indian tradition.
The retroflex sibilant has a tendency to change to *kh.*
The palatal sibilant is more aspirated than dental sibilant
and in the course of development it changes to *S* passing
on its aspiration to adjacent consonant, or splits into *h*
and *s,* or changes to *ch;* leaving no doubt about its extra
aspiration.)

Colophone - I am very much thankful to Dr. H.S.
Ananthanarayana of the Department of Linguistics, for some
valuable suggestions and to Dr.P.Sriramachandrudu, retd.
Professor of Sanskrit for giving me one or two important
references.

MEASUREMENTS OF FORMANT FREQUENCIES OF URDU VOWELS

Mohd. Ansari
Osmania University

Abstract: *This paper deals with the acoustic features of Urdu vowels in terms of their quality, as measured from the spectrograms. The measurement of formant frequencies of vowels in hertz is provided and discussed in detail.*

Basically, the spectrograms of speech represent a visual display that shows the frequency dimension horizontally, while the intensity is shown by varying degrees of darkness – depending on the source. Broadly three types of spectrographic analysis were used. They are namely; (i) Broad band or wide band, (ii) narrow bands, (iii) Continuous amplitude display. For this it was felt convinient to use the broad band analysis, for the reason that this type of analysis is very helpful in the analysis of segmental phonemes. By and large, the broad band spectrogram involves analysis with 300 cps filter which results in the display of formant structures. These formant structures are regions of energy concentration (H.M.Tryby). These formants appear horizontally starting at the bottom of spectrograms and are called formant one (F_1), formant two (F_2), formant three (F_3) etc., where F_1 deals with height of the tongue, F_2 deals with backness of the tongue; lower F_1 is for a high vowel, high F_1 is for a low vowel and F_2 is high for a front vowel, F_2 is low for a back vowel etc.

Measurements of Formant Frequencies of Vowels:

The sound when produced will be the sum of different vibrations and has corresponding frequency components in its spectrum. The black and slightly dark regions in the spectra of vowels correspond to the basic frequencies of the vibrations of the air in the vocal tract. The regions of the spectrum in which the frequency components are relatively large are known as formants (every region of vowel seen to be large, so is treated as formants). The formant shapes and their concentration of energy does not only helping recognisation of the vowels but also gives us a detailed image of how each vowel behaves different from the other. The formants of a sound are thus aspects of it which are directly dependent on the shape of the vocal tract, and are largely responsible for the characteristic quality. The formant relations that specify the vowels of Urdu are inherently relationed rather than absolute. Since different sized supralaryngeal vocal tracts will produce different absolute formant frequencies. If we start with the vowels like /i, u, a/, the vowel /i/ has the highest F_3 of all Urdu vowels, it also has the high F_2 as you can see in Table-I.

Table-I: Frequency values of vowels:

Vowel	Formant frequencies (cps)		
	F_1	F_2	F_3
i	500	2000	2800
I	550	1800	2500
a	800	1300	2300
A	750	1400	2500
u	500	800	2350 ⎤ not clear
U	550	900	2300 ⎦

e	700	2000	2700	
O	600	1000	2600	
Ai	650	1800	2700	
Au	500	1000	2750	etc

Table-I shows the values of F_1, F_2 and F_3 of vowels which form past of the lexical items given to be spoken by native speakers of Urdu which spectrograms have been made. The over all frequency of each vowel has been measuring the steady state of formants and tabulated on Table-I.

The contrast between short and long vowels can be identified by having a vowel plot diagramatically in figure 1 (as shown below). F_1 and F_2 of both short and long vowels were measured as pronounced by the informants. Figure 1 indicates the location of vowels according to their formant measurement of each vowel is shown at the intersection of the reading of the measurements of F_1 and F_2. It appears that with /a/ and /A/ is not only a quantity.

F_2

3000	2600	2200	1800	1400	1000	600
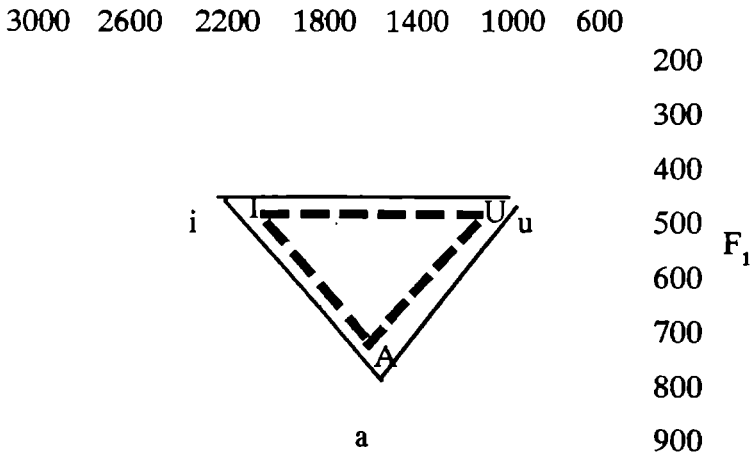
Figure 1 : Short and long vowels

difference but a substantial quality difference as well. The
broken line indicates short vowels and the solid line indi-
cates long vowels. That there is difference in quality as
well as duration between the long and short counter parts
of high front, /I/ and /i/, and of high back /u/ and /U/
vowels.

The values of F_1, F_2 and F_3 of /i/ is 500 cps, 2000
cps, 2800 cps respectively (See Table I). But the F_2 of /u/
and /U/ is low about 800 cps than other vowels. The /i/
and /u/ yield two   vertices. Vertices of the acoustic vowel
triangle, where the first and second format frequencies are
plotted (See figure 1). The vowel /a/, which is specified by
F_1, F_2 tending to converge each other at about 1000 cps.
The mean values of F_1, F_2 of /a/ 800 cps, 1300 cps respec-
tively. Here it should be noted that the formant frequency
pattern of Urdu vowels are distinctive. For instance, /i/, F_3
of /i/ is high of all Urdu vowels, F_1 lowest, some times
equal (eg. /u/ and /Au/). This distinctiveness may account
for its perceptual advantages *visa-vise* other vowels.
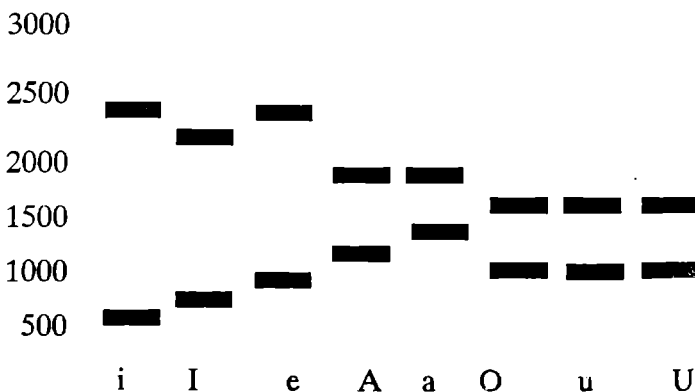
Figure 2: Formant frequency of Urdu vowels.

It can be seen (in figure 2) that the first format (i.e. the lowest in the spectrum) is at a low frequency for the vowels /i/ and /u/ (500 cps) and it is a little higher for each of the vowel /e/ (700 cps), /a/ (800 cps) etc., as can be seen from figure 2. The second formant becomes progressively lowered for each of the vowel in this series. The frequency of the vowel /a/ has the highest F_1 and the frequency of vowel /i/ has the highest F_2.

If we observe the F_1 pattern of the vowels in a set of words shown in Table II.

Table-II: Resonance parameters for steady–state (vowel) sounds

Vowel	Word	Formant frequencies (cps)		
		F_1	F_2	F_3
i	mil	500	2500	3000
I	mIl	550	2200	2800
A	mAl	800	1400	2500
a	mal	850	1300	2300
U	mUl	550	900	——
u	mul	500	800	——
e	mel	700	2250	2750
o	mol	600	1000	2300

For vowels such as these in/mil, mIl, mel and mal/, the chief cause of the vibration in the frequency of the first formant is the vibration in the size of the degree of con-striction in the vocal tract. The tongue is closest to the roof of the mouth for the word/mil, mul etc./, and for each of the other words, it is little close. For vowels such as those

ın/mol, mul, mUl/ the variation in the frequency of the first formant is largely determined by the position of the point of maximum at the constriction at the back of the mouth. As the point of maximum constriction moves further from the glottis, the frequency of the first formant decreases. In some cases such as those in /mil, mol and mul/; as the constriction increases the frequency of the second formant decreases. However, the variation in the second formant may also due to the rounding of the lips.

Acoustic description of Urdu vowels :

/i/: The vowel /i/ seems to possess format frequencies at (F_1) 500 cps., (F_2) is 2000 cps, and (F_3) 2800 cps. The duration varies from 120m.sec. to 260m.sec. and the average is 180m.sec.

/I/: The vowel /I/ has the formant frequencies at (F_1) 550 cps., (F_2) 1800 cps, and (F_3) 2500 cps. Its relative duration varies from minimum 80m.sec. to maximum 120m.sec. and average duration of /I/ is 100m.sec.

/e/: The vowel /e/ has the formant frequencies at (F_1) 700 cps., (F_2) 2000 cps., and (F_3) 2700 cps. The duration of /e/ ranging fom 100 m.sc. to 240 m.sec. and its mean duration is 205 m.sec.

/A/: The vowel /A/ has formed formant frequencies at (F_1) 750 cps., (F_2) 1400 cps., and (F_3) 2500 cps. The duration of this vowel is ranging from 40 m.sec. to 160 m.sec. and its mean duration is 90 m.sec.

/a/: The vowel /a/ seems to possess formant frequencies at (F_1) 800 cps., (F_2) 1300 cps., and (F_3) 2300 cps.

And its relative duration varies from 140 m.sec. to 280 m.sec. and average duration 230 m.sec.

/o/: The vowel /o/ seems to posses formant frequencies at (F_1) 600 cps., (F_2) 1000 cps., and (F_3) 2600 cps. The duration varies from 100 m.sec. to 200 m.sec., the average duration is 160 m.sec.

/U/: The formant freqneucy of vowel /U/ possess at (F_1) 550 cps., and (F_2) 900 cps. It does not found the formants further. The concentration of energy may observe due to the influence of following/preceding consonants (especially fricatives). The duration of /U/ is varies from 80 m.sec. to 160 m.sec. and the average value is 110 m.sec.

/u/: The vowel /u/ seems to possess format frequencies at (F_1) 500 cps., and (F_2) 800 cps. Formats will not formed further. The concentration of energy may observe due to the influence of following/preceding consonants (especially fricatives). The duration of /u/ varies from 200 m.sec. to 280 m.sec. and its average duration is 220 m.sec.

Conclusion :

The measurements of the first three formant frequencies of the vowels show F_1 relatively low for long vowels (i, a, e, o and u) and higher for corresponding short vowels (I, A and U), which means the long vowels are articulated by the body of the tongue more close than the corresponding short ones similarly with in the front vowel group or series the long /i/ has higher F_2 than the short /I/ and among the back vowel series there is opposite position of F_2 from the front vowel pairs in that /u/ has relatively

lower F_2 than the short /U/. Therefore, both /I/ and /U/ are centralized when compare to their long counterparts. This may be observed on the frequency plots of F_1 and F_2 shown in figure 1. The amount or extent of centralization is more for front vowel pair than the back vowel pair. Thus the so called long vowels are spread out a wider area than the corresponding short vowels.

Within the series of both front and back vowels, the first three formants of vowels all have energy concentrations in the regions below 3000 cps. /u/ and /i/ have the F_1 frequency at 500 cps. which is lowest than other vowels, and /a/ has the highest F_1 around 800 cps. which /u/ has the lowest F_2 around 800 cps., the /i/ has the highest F_2 frequency at 2000 cps.

What is important in this study is that the pairs like i/ I, u/U, and a/A – have change in their format positions of both F_1 and F_2 where the frequency of F_1 representing the long /i/ and /u/ are lower than the corresponding short /I/ and /U/ and the frequency of F_2 is higher for /i/ than for /I/ and lower for /u/ than in the case of /U/, thus centralises the short vowels when compared to their counter parts.

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Visiting Scholars

Date	Scholar	Topic
6-3-1990	Dr. Ian Smith Dept. of Linguistics York University,Ontario,Canada.	
3-4-1990	Dr.Alokananda Mittar Indian Statistical Institute,Calcutta.	
3-4-1991	Dr.L.M.Khubchandani Centre for Communication Studies, Pune	1. Imperatives of Language Standardization 2. Meaning and Interpretation in Sociolinguistic Perspective
6-4-1991	Dr.B.N.Patnaik Indian Institute of Technology, Kanpur	Yet Another Generative Approach to Grammer
25-4-1991	Dr.Balasubramaniam CAS in Linguistics Annamalai University Annamalainagar	Astadhyayi and Tolkappiam
8-8-1991	Prof.David Brazil University of Brimingham, U.K	Discourse Intonation
26-10-1991	Dr.Jane M.Christian, Associate Professor, Dept of Anthropology, University of Alabama, USA	Field experiences of an Anthropologist in Rural India
8-11-1991 & 11-11-1991	-do-	Language and Mind Development

TELUGU PHONOLOGICAL STUDIES: A CRITICAL REVIEW

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I would like to start this review with a discussion of a thirteenth century grammar of Telugu – Andhra Bhasha Bhushana by Ketana Kavi. This is assumed to be the first grammar of Telugu, at least in Telugu. Andhra Sabda Chintamani, a Telugu grammar in Sanskrit, is attributed to Nannaya of the eleventh Century, the first Telugu poet. But not all scholars accept it as of Nannaya and as Pre-Ketana.

Ketana's grammar is in Telugu verse – 192 stanzas of four lines each. His fourteenth stanza talks of the relationship between Sanskrit and Telugu :

1. Mother Sanskrit is to all languages
   Due to her a part is formed
   On her own a part all together
   It got famous in the name of Telugu (14)

He makes a five way distinction of lexical items – *tatsama, tadbhava, acca tenugu, dēśya, grāmya*. He defines tatsama as a word with Telugu case marker added to a Sanskrit base. He also says with approval :

2. The other four save tatsama

All people say are pure Telugu

Gramya no one welcomes

It fits in while condemning others (27)

Ketana makes a very perceptive remark about vowel length in the final position of loan words if the word has more than one syllable:

3. Leaving aside monosyllabic words

The length of the word final position

When pruned the words became Telugu

They fit into the general pattern (31)

He then quotes *strī, dhī* and *srī* as acceptable in Telugu and tells us that in *gaurī, vāNī* and *maNī* the final length is lost. After explaining how Sanskrit loans are nativised Ketana says :

4. I have explained

How are uttered the Sanskrit words in Telugu

There are others not explained

They mix up in Telugu as they are

Now he goes on to explain the phenomenon of Sandhi:

5. The last sound of the first word unleft

The first sound of the next word

When joined Sandhi is the result

I shall explain all these junctions (44)

One of the interesting remarks he makes is about the 'nasal' after short vowels and long vowels:

6. The nasal after short vowel letters may be heavy or light. Both are welcome in literary compositions. But on long vowels it will be half (56 & 57).

It seems that by then nasal length and vocalic length were already developing paradigmatic relationship.

Eg. *ghanuDu* ~ *ghanunDu* 'big man', *kunkuDu* ~*kū̃ kuḍu* 'soap nut'.

The 'trace' of nasality was represented in literary Telugu in the form of 'ardhanuswaera'.

Ketana notices vowel changes in the vocative case. In some cases 'u' becomes 'a' and in others a short vowel acquires length (102). He also discusses the loss of gemination of a word when it is compounded with another word.

7. *Illu, kallu, mullu, pallu, villu*
   kannu, munnu, vennu, cannu
   When with the consonant of the next word
   Combined the gemination is pruned (121).

eg.   *mullu*   —   *mulupoda*
       (thorn) —   (thorny bush)

   kannu—   *kanugonalu*
   (eye)   —   (corner of the eye) (122)

The demonstrative concept is expressed by $\bar{a}$ (that/those) and $\bar{i}$ (this/that)

8) Verily *a, i* and *e*
   when with the next syllable
   Joined they shorten
   and while shortening the next consonant
         geminates (136).
   eg. $i + koduku \rightarrow ikkoduku$ (137)

In certain areas of Andhra Pradesh the infinitives of 'nu' ending verbs (eg. *tinuta* 'eating') have their medial syllable 'nu' reduced to 'anuswara'*(tinta)*. Ketana refers to it in his grammar (159). Obviously this is a pretty old phenomenon.

Ketana seems to realize the strong need to bring in meaning to explain phonological processes.

9) *'ālu'* becomes *'rālu'*
   when suffixed to a quality base (168)

eg*Javarālu*   *Pātakurālu*

   (young lady)   (sinner)

He seems to have noticed also an intricate relationship between long/short vowel and long/short consonant. We have already seen some examples in this regard (8). He notices this relationship in imperatives:

10. While calling others, long letters shorten and carry gemination (171)

   Eg. $r\bar{a}$ –   *rammu*(Come!)
           $p\bar{o}$ –   *pommu*(go!)

The second set of forms are used even now while subordinating direct narrations:

Eg.   *pommannāḍu* (Go, said he)
       rammannāḍu (Come, said he)

This gemination is absent if the vowel is short:

Poḍuvu —   *poḍavamannāḍu* (172)
(Pierce! attack!)

Ketana says

11.   *malliya*   (Jasmine)
       gaddiya   (Throne)

are preferable to *malle, gadde* (177). I had once suggested (1972) that 'e' ending forms should have been later developments as e/o do not operate in noninitial syllables. The 'e' forms are very few and they also have   alternatives though considered non-standard:

$$gaddiya \sim gadde$$
$$gaddi$$

Ketana derives *Verbal forms* from verb + pronominal suffixes.

12.*kanina* + *vāḍu* → *kanināḍu* → *kannāḍu* (181)

For a detailed survey of Telugu grammars see Rajasekhara Sarma (1973).

The next set of grammars I would like to refer to are
Bāla Vyākaraṇam (1858) and *Praudha Vyākaraṇam* (1885).
Both these grammars discuss phonology under two head-
ings: *sounds* and *sandhi* . Chinnayasuri's *Bāla Vyākaraṇam*
starts with the varnamala of Sanskrit (50) Prakrit (40) and
then of Telugu (36). Among Telugu sounds (full) 'nasal'
and 'Trace Nasal' (half nasal) are treated as separate sounds.
This tells us that the 'sound' here is an abstract entity
rather than a surface phonetic entity. A clear division is
made between Sanskrit loans and native words.

In other words the Etymological dimension is given
due recognition. In the case of consonants the voiced and
voiceless distinction is captured by the distinction of
Paruṣha (Tense) and *Saraḷa* (lax). A clear distinction is
made between dental and palatal allophones. They are
declared as *savarṇās* – the sounds which are "mutual
friends" (*paraspara mitramulu*) as they undergo the same
phonological processes.

Words are divided into two groups *'n'* ending and
'non - n' ending. This distinction is mainly valuable for
sandhi contexts. *'n'* is optionally present in surface reali-
zation. This points to the fact that the grammarian recog-
nized an underlying representation for each word from
which post-sandhi forms are derived through phonological
processes.

The 'trace nasal' (*ardhānuswharās*) can be full nasal
only after a short vowel, not after a long vowel. This again
establishes the realization that nasality and vocalic length
are somehow paradigmatically related. The nasal sound is
found in Telugu words only before tense and lax conso-
nants (only stops). If a word is seen with this nasal before

a non-stop one can say it is a non-native word.

Prauḍa Vyākaraṇa by Bahujanapalli Sitharama charyulu does not keep Sanskrit sounds and Telugu sounds separate. Both the sounds are treated as part of *Āndhrabhāṣha*. Generally the scholars treat this grammar as a complement to *Bāla Vyākaraṇam.*

Korada Ramakrishnaiah treats *sandhi* in detail in his book Sandhi (1956). The traditional grammars written in Telugu are very close to the process models in their treatment of *sandhi*. They take a particular form as basic and derive other forms by means of *sandhi* rules. Along the lines of multidimentionality, the traditional grammars recognized the nonphonic dimensions of morphology, etymology and variety. Though they do not make an explicit distinction between paradigmatic and syntagmatic dimensions, their treatment of nasality, trace nasal, gemination and vowel length show their awareness of these aspects.

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N℃WS OF THE DEPARTMENT

Visiting Teachers

5-12-1990	Prof.C.J.Daswani Head of the Department of Non-formal Education of SC/ST, NCERT, Delhi.	1. The Place of Sindhi in India 2. Towards a Model of Learning 3. Linguistics and Literarcy 4. Translating from and into Indian Languages 5. Linguistics in the University system
19-12-1990	Prof.S.K.Verma, Director, CIEFL	Second language Teaching in India : Sociofunctional Perspective
30-12-1990	Dr.Anvita Abbi Associate Professor, Jawaharlal Nehru University, Delhi	Language Contact and South Asian Areal Universals
23-10-1991	Prof.Ram Adhar Singh CIIL, Mysore	Lexicography
12-11-1991	Prof.L.M.Khubchandani Centre for Communication Studies, Pune	Language Planning in Education
25-11-1991	Dr.S.S.Joshi, Head, Dept.of Anthropo-logical Linguistics, PunjabiUniversity, Patiala	Polysystemic approach to tonology
10-12-1991	Dr.V.Liudmila Kokhlova, Institute of Asian and African Countries, Moscow State university Moscow	1. Language Situation in Russia 2. Linguistic studies in Soviet Union 3. Indian linguistics - the Russian Contribution

DEVELOPMENT OF VERB-FORMS IN TELUGU CHILDREN

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Present study combines longitudinal and cross-sectional designs to show the evolution of verb-forms in child language based on evidence from three Telugu subjects, aged between 1:6 and 2:6. This study reveals that a child will have an intermediate stage where two kinds of verb-forms are in alternation before they become stabilized in the speech. The data consists of both spontaneous speech samples as well as elicited speech.

1.0 Telugu-Verb

The Telugu-Verb may be finite or non-finite on the syntactic or the outer distribution level. A finite-verb may be the only constituent of a sentence, while non-finite verb always occurs as a satellite to a finite-verb. On morphological level, a finite-verb always possesses a morpheme indicating person which is lacking in the non-finite (Krishnamurti, 1961). Certain finite forms at the morphological level do not carry the marker indicating person (Ramarao, 1975) - eg. rāwaccu 'can come' *telusu* 'know'.

1.1 Classification

According to Venkateswarlu (1982) the mood in Telugu verb is of four major types:

(I) Indicative

(ii) Imperative

(III) doubt expressing

(iv) subjunctive

Andronov (1970) also indicates that Telugu possesses four
types of mood: (I) indicative (II) imperative (III) potential
(suppositional) and (iv) conditional (subjunctive). Of all
moods, indicative is fully conjugated for PNG and tense.
Imperative mood is used in commands, requests, directions;
here subject is unspecified second person, and verb always
refers to future time.

Hortative (Krishnamurti, 1961) or hortatory (Lisker,
1963 and Sambasivarao, 1969) is sometimes considered to
be an imperative (Brown 1840, Arden 1873 and Venkates-
warlu 1982). This is formed by adding-$d\bar{a}+m(u)$ to the verb
stem and takes first person plural inclusive subject.

Indicative positive form of a Telugu finite verb has the
following structure.

	Past	**Non-past**
1.	$\bar{id}\,\bar{æ}\text{-}nu$	$\bar{id}u\text{-}t\bar{a}\text{-}nu$
	'I swam'	'I shall swim'
2.	$m\bar{u}s\text{-}\bar{æ}\text{-}nu$	$m\bar{u}s\text{-}t\bar{a}\text{-}nu$
	'I closed'	'I shall close'
3.	$vinn\bar{a}nu$	$vin\text{-}t\bar{a}\text{-}nu$
	'I heard'	'I shall listen'

Future tense in Telugu has many labellings given by many

people viz, 'Present-future' by Lisker (1963) and Andronov (1970), habitual present and future by Arden (1873; *'viśuddha vartamāna'* (simple present) by Venkateshwarlu (1982); future habitual by Krishnamurti and Gwynn (1985) non-past by Sambasivarao (1969), present tense by Brown (1840). Frequently occuring future tense suffix form *-tā-* comes after the verb stem.Past progressive like *'cēstunnāḍu'* (He was doing) and future progressives *'cēstunTāḍu'* (He will be doing) are present. Past progressive form is also referred to non future durative; (imperfect) present continous tense.

1.2 Non-finite

A non-finite verb is subcategorized into four forms according to its function in the sentence:

(I)   Verbal participle
       (a) past verbal participle
       (b) Present progressive verbal participle

(II)   the conditional verbal participle
(III) the concessive verbal participle
(Iv)   the relative verbal participle

All of these are formed by special suffixes added to the verb stem. The verbal participles of past and present are used to conjoin a sequence of actions while the conditional and concessive are used to indicate respectively a conditional and a concessive relationship between two actions. The relative verbal participles are used to qualify a noun or a pronoun, They may be either affirmative or negative.

In Telugu there are three more forms- the infinitive, the verbal noun, the participial noun. They have been included in the non-finite category by Andronov (1970).

1.3 Methodology

Present study combines longitudinal and cross-sectional designs to show the evolution of verb-forms in child language based on evidence from three Telugu subjects, aged between 1;6 and 2;6. The subjects are Swati-1;6-a girl, Kaushik 2;0-a boy, Sweta-2;3-a girl. Swati's data is taken from C. Nirmala (1981), whom she studied for six months. Data from the other two children were collected by me, for a period of three months with fifteen days interval between sessions. The data consists of both spontaneous speech samples as well as elictied speech.

1.4 Objectives of the study

It seems a child cannot acquire all kinds of verb-forms simultaneously. There should be an order in the acquisition relating to the age. This study tries to explore the following objectives.

(a) Present study reveals that a child will have an intermediate stage where two kinds of verb-forms are in alternation before they become stabilized in the speech.

(b) It gives out, the frequency of finite and non-finite verbs in the production of speech of these children.

(c) It also focusses on "when the imperatives and the horatives come into existence in the speech"

(d) It provides a description for the durative verbs and their development in the speech.

1.5 D a t a

It starts with the first child's i.e, Swati 1;6 acquisition of verb-forms.

1.5.1 Swati had a few verbs with the past tense used in place of non past verbs from 1;6 onwards. She used past forms first rightly in the context.

1;7		AF	CF
	1.	*tinṭunnā*	*tinnā*
		to eat dur.	eat p
		(I am) eating	(I) ate

Here the child used past form in the place of non-past. 1;8 By this age she acquired non-past forms referring to non past action.

2.	AF	CF
	Pilustā	*tiltā*
	'(I) will call'	'(I) will call'

1;9 Here Swati had a confusion or intermediate state where both past and non-past could be interpreted by the investigator.

3.	AF	CF
	amma occindi	*ammottini*
	'mother came'	mother came/will
		come.

At 1;0 she could show a clear distinction between past and non-past, and was able to give past and non-past with the same verb.

4. **AF**   **CF**

(a) *ostōndi*   *ottōndi-ottōni*
' (She) is coming'   ' (she) is coming'

(b) *occindi*   *ottini*
' (She) came'   ' (She) came'

Even after showing that kind of distinction, she made a mistake in using same form for past and non-past.

5. **AF**   **CF**
Koḍatāḍu   *Kottāḍu*
' (He) will beat'   '(He) beat/will beat'

After this stage these past and non-past forms both were clearly expressed by her.

At 1;ll durative verbs emerged in her speech.

6. **AF**   **CF**
tinṭ-un-nānu   *tintunnā*
eat-dur. pre.prog. I sg, ' (I) am eating'
'(I) am eating'

This type of construction with durative verbs was not shown with many verbs.

After this stage there were no more alternations between past and non-past. Durative verbs emerged in Swati's speech at 1;11, formed by verbal base+ durative suffix as in adult form (eg.6.). These durative verb forms were used for nonpast.

7. **AF**   **CF**
tinṭānu   *tintunnā*
' (I)will eat'   ' (I) am eating'

Hortatives and imperatives were not present in her speech. Swati had only two non-finite verbs in her speech at 1;9 and 1;10.

1;9.   **AF**   **CF**
8.   *tīsi cūstā*   *tītitūttā*
'(I)will open and see '(I) will open and see'

1; 10   (b) *tīsukoni vastā*   *tīkottā*
' (I) will take and come ' '(I) will take and come'

1.5.2. Kaushik - 2; 0 - a boy : He had past and non-past-forms with clear distinction between them by the time I started collecting speech samples from him. At 2; 0 he had shown very productive use of non-finite verb-forms whereas these were not productive in Swati's speech.

2;0   **AF**   **CF**
9.   *vacci kottindi*   *vacci kottindi*
'(It) came and hit'   (it) came and hit'

Context : He was playing with an aeroplane when it was in running position. It came and hit him

.

Kaushik at 2;0 did not produce durative forms, these were replaced by non-past forms

10.   **AF**   **CF**
vastunnādi   *vattundi* (AF: *vastundi*)
' (It) is coming'   ' (It) will come'

Context : Referring to a train (a toy) which is moving towards him. It is clear from the context that the expected verb form should be in continuous tense.

11.   **AF**   **CF**
peddatta intiki pootaa   *peddatta intiki pootunnaa*
(I) will go to big aunt's house' I am going to big aunt's house.

Investigator : *ippuḍē pōtunnāwā*

           ' now (you) are going '

Child   : *Ūh, amma*

           ' mother'

Investigator : *ammawaccœkapōtāwā*

           'after mummy comes (you) will go.'

Child   : *a*

           'yes'

Utterance (11) clearly shows that the child at 2; 0: 15 used durative form of the verb in the place of non-past or future tense. At 2; 1 durative non-past verb forms were established in his speech referring to proper contexts

.

12.   **AF**   **CF**

        bālāḍutunnāru   *bālātunnālu*

        '(They, are playing ball' '(They) are playing ball'

Hortatives and imperatives both were shown at 2; 1:15 in his speech.

13.   **AF**   **CF**

        ikkaḍē rāddāmu   *ikkalē lāddām*

        'Let us write here'   'Let us write here'

14.   **AF**   **CF**

        rāyi   · *lāyi*

        'write II p.Sg. imp. 'write II p.Sg. imp.

Hortative expressions were many when compared to imperatives at this age in his speech.

      Habitual expressions were shown by Kaushik at 2; 2.
2;2.

15.   **Context** :Referring to a face cream.

          AF   **CF**

      rāsukunṭāru   *lātukuntālu*

      '(They) apply   '(They) apply

      (habitual)'   '(habitual)'

This non-past form is used for habitual purposes even in the

adult model (for me).

At 2; 2: 15 These habitual verb forms were expressed in non-finite verb constructions.

16.	AF	CF
	vēsukuni pōtāru	*ēcuni pōtālu*
	'(He)' goes using a	'(He) goes using a
	(motor cycle)	(motor cycle)

Context : He wanted to say that his father goes on motorcycle to his office.

Before 2;2:15 he had all non-finite in only one type i.e., verbal participle form. At 2;2;15 he used a conditional verbal participle of a non-finite verb.

17. Context : He was saying that "a purse will have money inside" and he was asking me to look into it.

AF	CF
kāwālanṭē cūḍu	*kālantēcūlu*
'If (you) want, see'	'If (you) want, see'

At this stage these were not productive.

1.5.3   Sweta 2;3-a girl : Sweta had shown a clear stage at 2; 3 as it was in continuation of the earlier child kaushik's (2;0 to 2;3) speech. By the time I started collecting data with her, she had past, non-past, duratives, hortatives and imperative forms in her speech. As for the non-finite verb forms, she used verbal participle constructions productively and quite a few conditional verbal particple forms at 2;4 and 2;5. At 2;5 she used causative constructions.

2;5	AF	CF
18.	*teppistundi*	*teppittundi*
	'(She) will make	'(She) will make
	(someone) to get'	' (someone) to get'

At 2;4 she could describe past event in progression with non-past durative form.

Context : She was giving information about what happened in the morning, when her father was putting something.

19.	AF	CF
	ḍāḍi peḍtunnāru....	*ḍāḍi pettunnālu....*
	'daddy was putting....	'daddy was putting.....

1.6 Results

I report the results obtained from this study on the development of verb-forms in the above children as they are in the order.

First child Swati (1;6) used finite verb froms extensively from the beginning i.e., from 1;6 onwards. At 1;9 & 1;10 only two non-finite forms were shown in her speech (8a & b). In her speech past forms (1;7) evolved first and followed by non-past forms (1;8) . And then at 1;9 she mixed these two functions and expressed by one form as a result both the functions could be interpreted by the investigator. By 1;10 she could attain a stage where both the forms were stabilized in her speech. At 1;11 duratives, emerged in her speech, but they were not productive. Hortatives and imperatives were not available in her speech.

The above stage of aquisition of verb-forms was continued in Kaushik's (2;0) speech. He got past and non-past as well placed in his grammar. At 2;1 he was able to produce hortatives and imperatives (eg. 13 &14 respectively). Nonfinite verb forms were many at 2;0 itself and these were all of verbal participle formations (eg.9) and they were productive in his speech. At 2;0 he started using non-past in place of durative non-past (eg.10). At2;0;15 he used durative verb form in place of non-past form (eg.11). By 2;1 durative nonpast verb-form were well used in his speech. He crossed the intermediate stage between non-past and durative non-past by 2;1. Even though, the durative form was settled (eg.12),

it was not productive in his speech. At 2;2 habitual verb forms (expressed by non-past form even in adult model) were present in his speech (eg. 15). These expressions were even used in non-finite verbal constructions (eg.16) at 2;2:15. At 2;2;15 he had one conditional verbal participle (eg.17).

Sweta (2;3)- a girl, also expressed an idea through her study, as if she was continuing the acquisitional processes in the growth of verbforms, from kaushik (2;0-2;2:15). Sweta by 2;3 had past, non-past, progressives/duratives, hortatives imperatives, and habituals in her speech. In Sweta's speech duratives (non-past) were very productive by 2;4. The advancement in her, was, that she could make use of durative verb-form for describing the past event. This was not at all present in the other two children. Past habituals were not present even in this child. At 2;5 she had causative verb forms. The conditional verbal participle of non-finiteverb forms were improved in her speech. The verbal participles, which were used by kaushik and Swati, were only restricted to future, past verbal participle construction was used by Sweta to represent past function. Other kinds of non-funite forms were not present. All the results have been tabulated according to the developmental stages in the following tables I & II.

1.7 Discussion

From the results, my observations through this study are supporting the objectives which are taken for the present study. I have given the data in the order of development of verb-forms from onestage to the other. The study shows very clearly that past forms come first and early and will be followed by non-past forms. C. Nirmala (1981) has proposed the same idea which substantiates my observation. Although

Nirmala's work is a descriptive study based on evidence from
Telugu children, it does not reveal the developmental stages.
as far as verb-forms concerned. It does not tackle the
intermediate states where child is kept under an alternation
stage in choosing and using of forms. Some western works
also substantiate my observations regarding the acquisition
of past verb-forms. Stephany (1981) has reported that during
an early phase of acquisition of Modern Greek children used
activity verb as well as telic verbs in past tense form.
Regarding syntactic component of the argument Radulovic
(1975) observed that during his acquisition of serbo-croat of
the age 2;0-2;2, past froms were imperfective and these
include activity verbs. Smoizynska's (1978) study shows
imperfective activity verbs in the past form can also be found
in the early corpora of children learning polish. (CF.Weist
1984)

In this study, a verb is classified as finite or non-finite
and both forms were used in the past forms by these children.
In the non-finite form as verbal participle, the non-finite verb
is shown in past tense and the finite verb, which is supposed
to indicate for person number, gender, is in non-past form.
Durative forms seem to be late in the acquisition when
compared to past and non-past in this study.

There are two more studies which contradict my
observations regarding acquisition of past form. They are
studies of Dipaolo & Smith (1978) and Harner (1981) who
worked with American children and found that even 3 years
old children have some capacity to use past tense inflections
to describe only 50% prior situations, this weak performance
improved with their age.

Present study also reports that hortatives and impera-

tives take precedence over habitual forms. This study does not explain the reflexives, as I did not include them in it. I observed through this study, that Sweta, who is older child among three, could use all three forms - hortatives, imperatives habituals in productive manner.

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Table 1

Name of child	Age	Finite			Non-Infinite	
		Past (p)	Non-past (n-p)	dura-tive (dur)	Verbal participle	Condi-tional verbal participle
Swati	1;7	p	p	-	-	-
	1;8	p	p/n-p	-	-	-
	1;9	p/n-p	p/n-p	-	one verb	-
	1;10	p	n-p	-	one verb	-
	1;11	p	n-p	dur.	-	-
Kaushik	2.0	p	n-p	dur.	many	-
	2;0;15	p	n-p/dur	dur/n-p	"	-
	2;1	p	n-p	dur	"	-
	2;2	p	n-p	dur	"	-
	2;2;15	p	n-p	dur	"	oneform
Sweta	2;3	p	n-p	dur	produc-tive	many
	2;4	p	n-p	dur	produc-tive	produc-tive
	2;5	p	n-p	dur	produc-tive	produc-tive

Table - II

Name of Child	Age	Horta-tives	Impera-tives	Habituals
Swati	1;6-1;11	-	-	-
Kaushik	2;1	many	a few	-
	2;2	productive	many	a few
Sweta	2;3-2;6	productive	productive	productive

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STATIVE EXPRESSIONS IN INDIAN LANGUAGES
(Some Semantic and Syntactic Aspects)*

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An attempt is made in this paper to present some semantic and syntactic properties of **stative predicates** in Telugu which are also known to be common to many other languages of India. The essential characteristics of statives are as follows :

1. Expressions representing 'states' are typically abstract nouns or adjectives which fall broadly into such semantic categories as mental, physical, instinctive, impulsive, climatic, accidental and qualificatory (qualitative, dimensional, color), etc. Such a classification (combined with other specific semantic features) accounts for a number of syntactic consequences apparent in sentences containing stative predicates.

2. Stative predicates typically carry the feature [- Agentive] according to Gruber (1965:135-68). According to Lakoff (1966) statives do not occur as 'true imperatives', lack progressive aspect (*be-----ing*) and *do-so* pro-forms. Lakoff suggests that [+Stative] should be assigned as an inherent feature of a verb in deep structure. He, however, does not discuss the semantic structure of verbs which require this feature assign-

ment. Fillmore (1968: 30-1) suggests that Stative predicates require a Dative case whereas active verbs an Agentive case in their deep structure. The contrast is shown in the frame features of verbs as [——D] for Statives and as [—— A+ 0] for actives.

3. Stative expressions are minimally one-place or one-argument predicates, e.g. *John is hungry* = H(a), where H = 'be-hungry', a = 'John'. It is possible to consider climatic states as minimally zero-place predicates in which the zero is replaced by a dummy subject *it* in English, e.g. It is cold = C($\emptyset$) (Leech 1970: 68). In Telugu, such expressions lack a surface subject, e.g. *caligā undi* 'it 's cold'.

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4. All statives (with, perhaps, the exception of climatic) represent conditions that occur to animate beings or objects and therefore cannot be expressed independent of the beings or objects that 'have' them or 'undergo' them. In other words, 'states' are attributes which do not exist independent of 'possessors' of such attributes.   Only in a philosphical or metalinguistic sense can one talk of 'tallness', 'hunger', etc. as in *what is 'hunger'?, what is 'tallness'?*, etc. Even when we use words like 'poverty', 'intelligence', 'anger' in sentences without expressing the possessors of these states, they are always understood as states relevant to human beings: *Poverty is the worst enemy of mankind.*

5. There are three basic ways of framing propositions with stative predicates, perhaps, in all languages of the world. (I use the following formalism in order to make some generalizations about statives in Indian languages.)

Let P= Possessor of a state (animate being or object) and S= State, and +, : , ←, predicators, then

I (a)   P : S = To P, there is S
  (b)   **P** : S = P is S
II (a)   P ←S = To P, S occurs, comes, etc.
  (b)   **P** ←S = **P** becomes S
III (a)   P+ S = To P, **S** is (habitually)
  (b)   P+S = **P** has S (habitually)

Ia and Ib are synonymous with only difference in focus. In Ia it is the state (S) that is predicated and in Ib it is the possessor (P) that is predicated, e.g.

(1)   *w ā ḍiki ā kaligā undi* (= P :S)
        he-to hunger is-it
        'he has hunger'
(2)   *w ā ḍu ā kaligā unn ā ḍu* (=**P** :S)
        he hunger is-he
        'he is hungry'

Notice that *undi* (3 n. sg.) has agreement with the grammatical subject S (i.e. *ākali* 'hunger'), and *unnāḍu* has agreement with the subject P (i.e. *wāḍu* 'he'). In the case of qualitative states, which are not characteristically human, only propositions in which P is predicated occur and not the P : *S* type.

(3)   *w ā ḍu poḍugugā unn ā ḍu* (= **P** : S)
        'he is tall'

but not

(4)   **w ā ḍiki poḍugugā undi* (=*P : S)
        'to him is tallness'

On the other hand, climatic states in Telugu can be predicated only in P : <u>S</u> type of propositions and not in **P** : S (*cali* 'cold'):

(5)   *wā ḍiki caligā undi* (P :S)
'to him, there is cold' or 'it is cold for him'
but not
(6)   **wā ḍu caligā unnā ḍu* (P:S)
'he is cold'.

Notice that, even in English, with the exception of 'cold' and 'heat' and their variants, the other weather conditions like 'rain', 'fog', 'snow', cannot be predicated as human experiences, as would be in *he is rainy, * he is snowy, etc.

Propositions IIa and IIb are again synonymous, although IIb is restricted only to qualificatory states, e.g :

(7)   *wā ḍiki ā kali awutunnadi*
he-to hunger is occurring
'he is getting hungry'
(8)   *wā ḍu poḍugu awutunnā ḍu* '
'he is getting tall'.

Telugu and the other Indian languages generally employ Ia and IIa, whereas English Ib and IIb. The difference between (a) and (b) in each case is thus a surface difference and they are perfectly inter-translatable. I and II are not synonymous, since a proposition of Type II can be contradicted by a proposition of Type I and vice versa.

(9) a.   He is getting hungry, but he is still not hungry.
    b.   He is not hungry, but he will get hungry (soon).

If the 'time' identified by the stative predicate in II is prior to the 'time' identified by that in I, we have a logical contradiction.

(10)   *w ā ḍiki ā kali ayndi k ū ni wāḍu ā kalig ā lēḍu*
'? He got hungry but he is not hungry'

Type III with the absence of *-gā* following S is character-istically employed in a truly possessive sense where the possessed is [+ concrete] :

(11)   *w ā ḍiki illu undi*
to-him a -house is-it
'he has a house'

A small set of statives which are more external and non-transient occur in propositions of IIIa type.

(12)   *w ā ḍiki bh ā gyam undi*
to-him wealth   is
'he has wealth'

These are mostly the states which occur in English sen-tences like X has y : he has competence, he has education, etc. Notice, on the contrary, this frame cannot be employed for instinctive and impulsive states in English, e.g. *John has hunger.

Since most Indian languages lack the verb 'have', IIIb does not occur. As in the case of I and II, IIIa and IIIb are synonymous and inter-translatable.

6.   Propositions of types I and II can be expressed either referentially (referring to a particular P or a particular S) or generically. These contrasts are expressed in Telugu in the verb inflection (aspectual), whereasin English they are mani-fested by the choice of the article and or by the form of the verb (tense-aspect), or by a manner adverbial.   The concerned semantic featue may be termed [±Definite].

Ia. P : S (+Def.) (13) *w ā ḍiki ā kalig ā undi*
to him there is hunger
'he is hungry'

(-Def.) (14) *w ā ḍiki (eppuḍū)   ā kalig ā unṭundi*
to him there (habitually)
is hunger (always)
'he is always hungry'

b. **P** : S (+ Def.)   (15) *w ā ḍu   ā kalig ā   unn ā ḍu*
'he is hungry'
(-Def.)   (16) *w ā ḍu eppuḍū   ā kalig ā   untaḍu*
'he is hungry always'
II a. P← S (+Def.) (17) *w ā ḍiki   ā kali wēstunnadi*
to him hunger is occuring
' he is getting hungry'
(-Def.) (18) *w ā ḍiki eppuḍū ā kali wēstundi*
to him always hunger occurs
'he always becomes hungry'

Verbless equative sentences in Telugu can be derived by
positing [-Def] as a feature of the predicate in the deep
structure.

(19) *ā yana peddamaniṣi*
'he (is) a gentleman'
(20) *w ā ḍu poḍugu*
'he (is) tall'

Sentences like (20) can be derived from sentences like
(3) by optionally deleting the predicator, if the state mentioned
is [+Qualificatory] and if there is a feature [-Def] attached to
the predicate.

7.   In the above formalism, the symbol complexes [:S]
[←S] [+S] should each be taken as a predicate consisting of a
stative noun or adjective (S), and a predicator (: + ←)
represented by an auxiliary verb or copula. In the case of

statives characterizing the 'existential aspect', the predicator
(: +) is typically the verb 'to be' (Te. *un-*). The 'transitory
aspect' of states is predicated by a closed set of verbs meaning
'come', 'occur', 'hit', 'strike', etc. The common ones for Telugu
are: *wacc-* 'to come', *aw-* 'to happen, occur', *wēs* - 'to happen
(intensely)', *tagulu* 'to hit, strike', *paṭṭ-* 'to stick', *cēs-* 'to do'.
The selection of these is conditioned by the semantic structure
of the stative nouns or adjectives which they follow. Thus
instincts and certain emotions come, 'fear', 'cold', 'heat' and
'viral diseases' hit, madness sticks or rises (details discussed
below).

     The predicators are all intransitive verbs and therefore
cannot take -*kon* (refl.) which is the property of Agentive verbs
alone, e.g. *waṇḍu* 'to cook', *waṇḍukon* 'to cook for oneself'.
Both semantically and syntactically these predicators behave
differently from their homphonous forms used as main verbs.
The causative of *wacc* 'to come' as main verb is *rappinc* 'cause
someone to come', but in its use as a predicator of statives its
causatives are *cēs-* 'to make' and *tecc* 'to bring', e.g.

    (21) a. *n ā ku ā sangati   jn ā pakam waccindi*
            to me that fact   memory   came
            'I remembered that fact'
        b. *w ā ḍu n ā ku ā sangati jn ā pakam tecc ǣ ḍu/*
          c ē s ǣ ḍu
          'he brought that fact to my memory' or
          'he reminded me of that'

     Notice that even in the causative sentence, the noun denot-
ing 'possessor' of 'state' still remains in the dative case. When
an active verb is changed into a causal, the subject NP of the
active sentence takes the instrumental case in the Causative
sentence.

(22) a. *w ā ḍu pani cē s ǣdu*
'he did the work'
   b. *n ē nu wāḍic ǣta pani c ē yinc ǣnu*
'I got the work done by him'

Before presenting some details about the semantic struc-
ture of statives, it would be helpful to explain a few grammati-
cal facts of Stative sentences in Telugu. The surface represen-
tations of (Ia) P:S and (Ib) **P** : S are as follows:

Ia. P : S = P*ku* - S *g ā undi* /*unnadi*
   b. P : S = P - S *g ā unn ā ḍu*

(-*ku* 'to' (dative morpheme); *un*- 'to be', -*ga* 'manner, like'
(Stativizer)'. *un* 'to be' is a defective verb which has the
following inflection in finite forms :

Non-future		**Future-habitual**	
3 sg.m	*un-n ā -ḍu* 'he is/was/ has been/	*un-ṭ ā -ḍu*	'he will be, he habitually is'
pl (hum)	*un-n ā -ru* 'they are/were/ have been'	*un-ṭ ā -ru*	they will be, they habitually are"
3 sg f.n.	*un-na-di*/ *un-di* 'she or it is, was, has been'	*un-ṭun-di*	'she or it will be/habitually' is
pl. (non-hum)	*un-n ā -y* 'they are were/ have been'	*un-ṭ ā -wu*	'they will be/ habitually are'
2 sg	*un-n ā -wu* 'you are/were/ have been'	*un-ṭ ā -wu*	'you are/were/ have been'
pl.	(same as for 3 human pl.)		
1 sg	*un-n ā -nu* 'Iam/was/have been'	*un-ṭ ā -nu*	'I will be/ habitually am'
pl.	*un-n ā -m* 'we are/were/ have been'	*un-ṭ ā -m*	'we will be/ habitually are'

A pecularity of this verb is that its grammatical past tense is used for all non-future tenses and aspects. Compare, for instance, the paradigm of tin- which belongs to the same morphophonemic class as *un-*; *tin-n ā -nu* 'I ate', *tin-ṭ- ā nu* 'I habitually eat'. There is no simple present form 'I eat' here, as in the case of *un-n ā -nu* 'I am'. The durative form of all other verbs are derived by adding the inflected forms of *un-* to a bound non-past stem, e.g. *tin-ṭ-un-n ā -nu* 'I am/was/have been eating'. *-g ā* is added to stative nouns and adjectives before the copula *un-*. Its function seems to be that of an 'adjectivizer', e.g.;

(23)	*g ō ḍa tellag ā undi*
	'the wall is white
(24)	*w ā ḍiki ā kalig ā undi*
	'he is hungry'
(25)	*w ā ḍiki ā kali undi, rucil ē du*
	'he has hunger, but no taste'

The contrast between (24) and (25) seems to be that in (24), the state identified by *ā kali* is tied up with definite time reference, whereas in (25) it is mentioned as a 'state' coexisting with the 'possessor' without definite time reference, in the same way that 'has' is interpreted in 'he has intelligence' in English.

In the following the semantic structure of Statives is examined tentatively. The substantial semantic categories are :

a. *Instinctive* : hunger, fear, sleep, waking, etc.
b. *Impulsive*: anger, sorrow, joy, distress, arrogance, etc.
c. *Mental/Psychological* : memory, forgetfulness, intelligence.

d. *Characteristically human and humane* : kindness, honesty, carefulness, anxiety, happiness, misery, beauty, ugliness, wealth, poverty, fame.

e. *Health conditions :*
   (i) General: good health, illness, fever, etc.
   (ii) Specific (names of diseases) : malaria, typhoid cholera, headache, etc.

f. *Climatic :*
   (i) Human experiences: cold, chill, heat, warmth
   (ii) Others : fog, snow, rain, sunshine, moonlight, etc.

g. *Accidental States*: luck,profit,loss, etc.

h. *Qualificatory or Attributive ('true adjectives') :*
   (i) Measure: long, short, tall, stout, slim, broad, etc.
   (ii) Qualities perceivable by touch: hard, soft, smooth, rough, etc.
   (iii) Qualities perceivable by eye: white, black, red, ugly, beautiful, etc.
   (iv) Qualities perceivable by tongue: salt, pepper, hot, bland, sweet, sour, bitter, astringent, etc.
   (v) Qualities perceivable by nose: fragrance, stink,etc.

Redundant Features

_Categories (a) - (g) (except f ii) are all [± Animate]; (a) is [+Human]; (b) - (e) are [+Human] (h) is [+ Animate]; states listed under (h iv) require [+ Human] as experiencer and [-Animate] as the object possessing the quality, e.g.:

   (26) *(wā ḍiki) ī paṇḍu tiyyagā undi*
   .   'this fruit is sweet (for him)'.

In such expressions the 'experiencer' is not expressed.
[+Transient]:

Certain states are more transient than others. Those under (d) are more spread out in time than instinctive and impulsive states. This is reflected by the absence of *-gā* in the former:

(27) a. *w ā ḍiki j ā garta undi*
   'he has carefulness' [IIIa]
   b. *w ā ḍu j ā gartag ā unṭ ā du*
   'he is watchful, alert'

but not

   c. **w ā ḍiki j ā gartag ā undi* [IIa]

Compare these with:

   d. *w ā diki k ō pamg ā undi* [IIa]
   'he has anger'.

It has already been explained that where a given stative occurs both as P : S and P + S, the latter means a habitual (non-transient) state and the former a transient state. The point here is that 'some statives' are always treated as though they are [-Transient] and they lack propositions of P :S type, e.g.*daya* 'kindness', *n ī ti* 'honesty', *jāgarta* alertness',*bhāgyam* 'wealth', *daridram* 'poverty', *garvam* 'arrogance', *sukham* 'happiness', *caduwu* 'education', *k ī rti* 'fame', etc. These are mostly the ones which occur in English as 'Z has Y' from which 'X is Y' is transformationally derivable: John has fame =John is famous.

[±Marked] or [±Positive]

   (28) a. *w ā ḍiki jnapakam undi* (P+S)
         to him, memory is
         'he remembers'
   There is no - *g ā* expression for this :
      b. **w ā ḍiki jnap ā kamg ā undi* (*P : S)

'Memory' is a positive (unmarked) state of the mind, just as 'seeing' is an unmarked state of the eye, and 'hearing' that of the ear, so on and so forth. Most languages have expressions only for negative (marked) states and not for the unmarked ones. Notice that we can say in English:

    [+Marked] [-Marked]

(29) a. He is blind : *He is ? [able to see]
    b. He is deaf : *He is ? [able to hear]
    c. He is mad : He is ? [? normal]
    d. He is lame : He is ? [able to walk normally]
    e. He is forgetful : *He is memoryful

When there is an attribute, the unmarked states become marked and have **P** + S type of expressions : *he has good sight, he has good hearing, he has good memory*, etc. In Telugu also Stative expressions occur for [+ Marked] or [-Positive]. Those carrying this feature occur as P + S without -*gā*. In other words, they behave like [-Transient].

(30) *w ā diki cewuḍu (undi)* = P+S or P ∅ **S.**
    'he has deafness'
(31) *w ā diki picci (undi)* 'he has madness'

In the case of *jnāpakam* 'memory' [-Transient] → [+Marked].

[±Recurring]

This feature accounts for states whic. 'come', 'hit', as opposed to those which 'occur', 'happen'. Appropriate predicators are selected by this feature.
    kulā s ā 'being in good' health' [-Rec.]
    jwaram 'fever'   [+Rec.]
(32) a. *w ā diki kul ā s ā gā undi* (P : S)
      It is fine for him 'he is fine'
    b. *w ā du kul ā s ā g ā unnāḍu* (P : S)
      ' he is fine'
but not
    c. * *w ā diki kul ā s ā waccindi* (P←S)
      'good health come to him'

As opposed to

(33) a. *w ā ḍiki kō pamg ā undi* (P :S)
     'to him there is anger'
   b. *w ā ḍu kō pamg ā unn ā ḍu* (**P** : S)
     'he is angry'
   c. *w ā ḍiki kō pam waccindi* (P ← S)
     'anger came to him'
      'he became angry'

The features [± Recurring] may be utilized to distinguish between 'states with accompanying feelings' and 'states without feelings, Consider, for instance,

(34) a. He is rich (intelligent, beautiful, etc.)
   b. *He feels rich (intelligent, beautiful, etc.)
   c. He is sleepy
   d. He is feeling sleepy
   e. He is awake
   f. *He is feeling awake

[+Recurring] specifies several states besides instinctives and impulsives which are generally characterized as 'feelings'. In Telugu some of the non-feeling states specified by [+ Recurring] are : *picci* 'madness', *nawwu* 'laughter', *ē ḍupu* 'crying', *pogaru* 'arrogance', *kala* 'dream'. These occur in P←S with *wacc-* 'to come' as the predicator.
[- Recurring] : *teliwi* 'intelligence, *j ā garta* 'alertness', *andam* 'beauty', etc.These require *kalugu* 'to happen' as predicator in P←S type of expressions.

[±Recurring]: *l ā bham* 'profit', *naṣṭam* 'loss', *sand ē ham* 'doubt', *melakuwa* 'waking from sleep', *santōsam* 'joy, *sukham* 'happiness', *dukkham* 'misery'.

[±Tangible]

kala 'dream' is in a class by itself. It occurs only in IIa type of proposition P-S with *wacc* - as the predicator.

(35) a. *wāḍiki kala waccindi*
'a dream came to him' or
'he dreamt'
b. **wāḍiki kalagā undi* 'to him, there is a dream'
c. **wāḍu kalagā unnāḍu* '*he is dreaming'
d. **wāḍiki kala undi* '*he has a dream'.

The impossibility of b,c,d is due to the fact that 'dreaming' is a state for which the speaker has no apparatus to judge with. This shows that statives, by and large, are expressions of states from which there is some tangible evidence for the speaker to make judgments about. All statives which can characterize animate beings or objects in the form 'P has S', or 'P is S' are [+ Tangible].

[±Inherent] or [±Quality]

In predicating qualificatory states (see (h) above), Telugu and the other Indian languages do not have the normal sentence types Ia (P : S), IIa (P←S), IIIa (P +S). Instead, they have Ib (P :S), IIb (P ←S) , and IIIb (P +S)

(36) a. *wāḍu poḍuggā unnāḍu* (P :S)
'he is tall'
b. *wāḍu poḍugu awutunnāḍu* (P Ṡ)
'he is becoming tall'
but not c. **wāḍiki poḍugugā undi* (P ← S)
'he has tallness'
d. **wāḍiki poḍugu waccindi* (P: S)

'tallness came to him' 'he became tall'

In the case of IIIb = **P** + S, Telugu optionally deletes the predicator *un-* 'to be'

> e. *wāḍu poḍugu* 'he is tall'
> *adi poḍugu* 'it is tall'

It appears that there is a basic distinction between 'true statives' and 'qualities'. The latter are qualities which are basically inherent to beings and objects and therefore require that the possessor of these be predicated. It would be interesting to explore if there is any language in the world which would express a sentence like

(37) a. The mountain is high

as b. *There is height to the mountain.

Secondly most of these are marked [±Animate] whereas true statives are [± Animate]. This is perhaps what distinguishes true adjectives from stative adjectives, e.g. *white* vs. *wise*.

(38) a. John is wise (**P** : S)
    b. John has wisdom (**P** + S)
    c. The wall is white (**P** : S)
    d. *The wall has whiteness.

Summary of Conclusions

1. True statives are all marked [+ Animate] and [-Agentive]. True adjectives which look like statives in surface structure have deep structure differences which are manifested in syntax differently in different languages.

(39) a. John is cold [True Stative]
       b. It is cold for John.
       c. John is dark [True adjective]
       d. *John has darkness

In Indian languages 'true statives' characteristically occur with 'Possessor' in the dative case, and 'true adjectives' do not have this property.

2. All stative expressions occur in three basic types of propositions.
       Ia. To P, there is S
        b. P is S
       IIa. To P, S comes, occurs
        b. P becomes S
       IIIa. To P, S (is) (Habitual)
        b. P has S (Habitual)

Indian languages generalize Ia, IIa, and IIIa, whereas English and other European languages generalize Ib, IIb, and IIIb. (a) and (b) are true translation equivalents and are therefore synonymous. It appears that no language uses 'true adjectives' in propositions of the type Ia, IIa, and IIIa.

3. The semantic structure of stative expressions can be described in terms of complex symbols consisting of substantive features plus such general features as [±animate] [±Human], [±Definite], [±Transient], [±Inherent], [±Marked], [±Recurring], etc. This area needs to be explored more intensively.

4. Climatic statives may be specified [+Locative] and [±Animate]. The minimal argument of a climatic stative expression is ø or a Locative phrase.

5. The predicators of stative expressions are of two classes (1) copula 'to be' in predicating the 'existential aspect' of states; (2) auxiliaries, generally implying 'motion' or 'happening' in predicating the transitory aspect of states. The characteristic predicators of this class in Indian languages mean 'come', 'occur', 'hit', 'strike', etc.

6. A thorough analysis of stative expressions in Indian languages along the lines suggested here will throw light on the inter-translatability of these languages, in addition to providing insights into language universals.

7. Some languages may use simple verbs in the place of a noun/adjective + be, come, etc. Te. *kala wacc* 'a dream to come' = English 'to dream'. Even the same language may use alternative expressions of this sort, Hindi *nīnd ānā* 'sleep to come' as well as *sōnā* 'to sleep'. These facts look like surface features, language specific or idiosyncratic. However, hypothetically, it appears that languages which generalize Ib, IIb and IIIb types of propositions tend to use simple stative verbs more extensively than those which generalize types Ia, IIa, and IIIa. English belongs to the former group and Indian languages to the latter. If this is found true, we have one more parameter for studying language typologies.

8. The absence of 'imperative', *'do----so'* pro-forms and other such syntactic clues are a direct consequence of the semantic structure of stative predicates which distinguishes them from non-statives and actives. some of these syntactic properties are language specific and not universal like the absence of the progressive aspect *'be-ing'* for stative verbs *know, see, hear,* etc. as opposed to *learn, look* and *listen.* Telugu has the progressive aspect even with verbs like *kanabaḍu* 'to appear', *winabaḍu* 'to be heard, etc.

9.   That all statives have two aspects, 'existential' and
'transitory', seems to emerge as a language universal. These
may be called 'stative' (existential) and 'enstative' (transitory)
aspects of stative predicates. Enstatives like 'become hungry'
'get angry' should not be called actives simply because they
can occur as *be---ing'* forms.

10. A thorough analysis of stative expressions in Indian
languages along the lines suggested here will throw light on
the intertranslatability of these languages, in addition to pro-
viding insights into language universals.

The appendix to this paper presents a list of stative
predicates in Telugu with corresponding predicators, and the
types of the underlying propositions in which they occur in
terms of the conventions set up in this paper.

Appendix

A.

[+Human , -Conscious]
    Pred.

		I		II		III		
I	II	(a)	(b)	(a)	(b)	(a)	(b)	
(:)	(←)	P:S	P:S	P ←S	P← S	P+S	P+S	
kala	- *wacc*	-	-	+	-	-	-	'dream'

This belongs to a class by itself as explained in the
paper. The following expressions are ungrammatical.

    *nāku kalagā undi 'to me, it is dreamy'
    *nēnu kalagā unnānu ' I am dreamy '
    *nāku kala undi 'I have a dream'

The following selectional features are assigned to this item:
[+Transient, +Recurring, -Tangible, - Inherent]. With the
redundancy rule [- Conscious] → [- Tangible], we can
eliminate [- Tangible] from the matrix.

B.(i)

(i) [+ Instinct, + Human]

(1) *ākali*	un	aw wēs	+	+	+	-	+	-	hunger
(2) *nidra*	un	wacc	+	- (?)	+	-	+	-	sleep
(3) *bhayam*	un	wēs	+	- (?)	+	-	+	-	fear
(4) *melakuwa*	un	wacc	+	+	+	-	+	-	awakening

(ii) [+Impulse, +Human]

(5) *kōpam*	un	wac	+	+	+	-	+	-	anger
(6) *wicāram*	un	kalugu wacc	+	+	+	-	+	-	sadness

(7) *santōsam un*	*wacc*	+ +	+ -	+ -	joy
	kalugu				
(8) *garvam un*	*wacc*	+ +	+ -	+ -	vanity

(II) [+Impulse, +Human]

.

	Pred.		I		II		III		
.	I	II	(a)	(b)	(a)	(b)	(a)	(b)	
	(:)	(←)	P:S	P:S	P←S	P←SP+S	P+S		
(9) *siggu*	un	*kalugu*	+	+	+	-	+	-	shyness
		wacc							
(10) *dukkhamunkalugu*			+	+	+	-	+	-	sorrow
(11) *sukham*	un	*kalugu*	+	+	+	-	+	-	happiness
(12) *aduru*	un	*kalugu*	+	+	+	-	+	-	anxiety

Instincts are [+Animate], impulses are [+Human]. All the four possible types occur in most cases, the blanks being idiosyncratic, e.g.

P:S *wādiki garvamgā undi* 'he is vain'
P:S *wādu garvamgā unnādu*
P←S *wādiki garvam waccindi* 'he became vain'
P+S *wādiki garvam undi* 'he has vanity' (habitually)

All these can be marked [± Transient]. All Instincts are [+ Recurring]; *sukham* (11) 'happiness' is [-Recurring]. All Instincts and Impulses are [+Tangible] and [-Inherent].

C.(i)

[+ Climatic, ± Human]

(1) *cali*	un	*wēs*	+ -	+ -	(+) -	cold,chill
(2) *ukka*	un	*pōs*	+ -	+ -	- -	stuffiness
		pett				sweat

(3) *eṇḍa*   *un*   *kās*   + -   + -   - -   sun
                 paḍu

(4) *cīkaṭi*   *un*   *paḍu*   + -   + -   - -   darkness

C. (ii)

[+Climatic , -Ani, +Location]

	Pred		I		II		III		
	I	II	(a)	(b)	(a)	(b)	(a)	(b)	
	(:)	(←)	P:S	P:S	P ←S	P ←S	P+S	P+S	
(5) *mancu*	*un*	*paḍu*	+	-	+	-	+	-	snow
(6) *wāna*	*un*	*kurus*	+	-	+	-	+	-	rain
(7) *wennela*	*un*	*kās*	+	-	+	-	+	-	moonlight
(8) *gāli*	*un*	*koṭṭ* *wīc*	+	-	+	-	+	-	wind

States marked [-Human] cannot be predicated as human experiences. P:S & P ←S have either no grammatical subject or they carry a locative complement. *(ikkaḍa) wānagā undi* 'it is rainy (here)', not **nāku wānagā undi* '*to me, it is rainy'. Only *cali* 'cold' and *ukka* 'stuffiness', *eṇḍa* 'sun', *cīkaṭi* 'darkness' can be predicated as human experiences with State as focus, e.g. *nāku caligā undi* 'it is cold for me', *nāku cīkatigā unnadi* 'it is dark forme '. Even here the possessor cannot be focussed as in English, e.g. I am cold *(*nēnu caligā unnānu).*

All climatic states can occur normally with Locative compliments, L:S, L ←S (L = Locative phrase)

    akkaḍa wānagā undi 'it is rainy there'
    akkaḍa wāna kurisindi 'it rained there', etc.

These states are basically divided into two :

[± Human] 'cold' 'heat' 'sun' 'dark'
[- Human] 'rain' 'snow' 'moonshine' 'wind', etc.

All climatic states are [+ Transient, +Recurring, + Tangible, - Inherent].

D. (i)

[+Health , - Common]

Pred

		I		II		III		
I	II	(a)	(b)	(a)	(b)	(a)	(b)	
	(:)(←)	P:S	P:S	P←S	P←S	P+S	P+S	
1. *kulāsā un cikk*		+	+	+	-	?	-	good health
2. *ārōgyam un kalugu*		+	+	+	-	+	-	good health
3. *jabbu un wacc*		+	+	+	-	+	-	sickness
4. *susti un cēs*		+	+	+	-	-	-	ailment
5. *jwaram un wac*		+	+	+	-	+	-	fever

(ii) [-Common]

6. *kalarā*	-	*wacc*	-	-	+	-	-	-	cholera
7. *malēriā*	-	*wacc*	-	-	+	-	-	-	malaria
8. *ṭayfāyiḍ*	-	*wacc*	-	-	+	-	-	-	typhoid
9. *ṭībi*	*un*	*wacc*	-	-	+	-	+	-	TB
10. *picci*	*un*	*wacc*	-	-	+	-	+	-	madness
11. *cewuḍu un*	*wacc*		-	-	+	-	+	-	deafness

General health conditions are specified as [+Common].Specific diseases are [-Common]. All are [+Human]. A feature [+ Good] may be utilized to distinguish *ārōgyam* 'good health' as [+Health , +Common, +Good] from *susti* 'ailment'[+Health , +Common , -Good]   Diseases are

specifiable as [+Health , - Common , -Good]

.

General health conditions and chronic diseases are [-Transient] ; viruses are [+Transient]. 'Good health' is [-Recurring], 'bad health' and disesases are [+Recurring]. All are [+Tangible] and [-Inherent], e.g.

> *wāḍiki jabbugā undi* 'he is ill'
> *wāḍu jabbugā unnāḍu*
> *wāḍiki jabbu cēsindi* 'he became ill'
> *wāḍiki jabbu undi* 'he has illness' (Chronically)
> **wāḍiki kalarāgā undi*   'he is choleric'
> **wāḍu kalarāgā unnāḍu*
> *wāḍiki kalarā waccindi*   'he got cholera'
> **wāḍiki kalarā undi*   'he has cholera'

E. (i)

.

[+Animate, + Accidental]
        Pred

			I		II		III		
	I	II	(a)	(b)	(a)	(b)	(a)	(b)	
	(:)	(←)	P:S	P:S	P←S	P←S	P+S	P+S	
(1) *adruṣṭam*	un	*kalugu wacc*	-	-	+	-	-	-	luck
(2) *lābham*	un	*kalugu wacc*	-	-	+	-	+	-	profit
(3) *naṣṭam*	un	*kalugu wacc*	-	-	+	-	+	-	loss
(4) *cāwu*	-	*wacc*	-	-	+	-	+	-	death

The first three are [+Human], the last [+Animate]. All are [+Recurring], [+Tangible]; the last is [+Transient], but others are [±Transient]. We cannot say

wāḍiki cāwu undi 'he has death'

as though death is a non-transient state or possession. But *wāḍiki adruṣṭam undi* ' he has luck' is grammatical. (2) and (3) can occur in P:S or P:S as two-argument predicates

wāḍiki wyāpāram lō	'It is profitable for him
lābhamgā undi	in business'
? wāḍu wyāpāramlō	'he is profitting in business'
lābhmgā unnāḍu	

F.

[+Health . -Instinct, - Impulse, + Common]

Pred

	I	II.	I (a)	(b)	II (a)	(b)	III (a)	(b)	
	(:)	(←)	P:S	P:S	P ←S	P ←S	P+S	P+S	
(1)*jnāpakam*	*un*	*wacc*	-	-	+	-	+	-	memory
(2) *daya* -	*un*	*kalugu*	-	-	+	-	+	-	kindness
(3) *nīti*	*un*	-	-	-	-	-	+	-	morality
(4) *nijāyuī*	*un*	-	-	-	-	-	+	-	honesty
(5) *jāgarta*	*un*	*kalugu*	-	+	+	-	+	-	alertness care
(6) *sukham*	*un*	*kalugu*	-	+	+	-	+	-	happiness
(7) *dukkham*	*un*	*kalugu*	-	?	+	-	+	-	misery
(8) *wicāram*	*un*	*kalugu*	-	+	+	-	+	-	sadness
(9) *bhāgyam*	*un*	*wacc kalugu*	-	-	+	-	+	-	wealth
(10)*daridram*	*un*	*wacc*	-	-	+	-	+	-	poverty
(11) *kīrti*	*un*	*wacc*	-	-	+	-	+	-	fame

All the states in this class can be specified by the matrix [÷Human, -Instinct,-Impulse,-Health.] All of them are [-Transient], [+Tangible], and [-Inherent]. Only 9-11 are [±Recurring]; the rest are [-Recurring]. These latter states 'exist' or 'occur', and do not 'come'. These states are treated as semi-permanent possessions rather than as 'transient' feelings. (5) *jāgarta* 'alertness' and (6) *sukham* happiness, (7)*dukkham* 'sorrow', (8) *wicāram* 'sadness' are the only ones that occur in three possible propositions.

E.g.: P:S *wādiki dayagā undi*   'to him, there is kindness'
　　　P:S *wādu dayaga unnādu* 'he is kind'
　　　P ← S *wādiki daya kaligindi* 'he became kind'
　　　P+S　*wādiki daya undi*　　'he has kindness'
　　　P:S *wādiki jāgartagā undi* 'he is alert'
　　　P:S · *wādu jāgartagā unnādu*
　　　P ← S *wādiki jāgarta kaligindi* 'he became alert'
　　　P+S　*wādiki jāgarta undi*　'he has alertness'

G.

[+Inherent, ±Animate]

	Pred		I		II		III		
	I	II	(a)	(b)	(a)	(b)	(a)	(b)	
	(:)	(←)	P:S	P:S	P←S	P←S	P+S	P+S	
(i) *podugu*	un	aw	+		+				tall
poṭṭi	un	aw	+		+				short
ettu	un	aw	+		+				high·
lāwu	un	aw	+		+				stout
sannam	un	aw	+		+				thin
pedda	un	aw	+		+				big
cinna	un	aw	+		+				small

(ii) *gaṭṭi*	*un*	*paḍu/aw* +		+	hard
metta	*un*	*paḍu/aw* +		+	soft
nunna	*un*	*paḍu/aw* +		+	smooth
garuku	*un*	/aw	+	+	rough
(iii) *tella*	*un*	*paḍu/aw* +		+	white,fair
nalla	*un*	*paḍu/aw* +		+	black,dark
·*erra*	*un*	*paḍu/aw* +		+	red
pacca	*un*	*baḍu/aw* +		+	green/ yellow
(iv) *andam*	*un*	-	+	-	beauty
asahyam	*un*	-	+	-	repulsion
(v)*uppa-*	*un*	*paḍu/aw* +		+	salt
kāram	*un*	/aw	+	+	hot
cappa	*un*	*paḍu/aw* +		+	bland
tiyya	*un*	*paḍu/aw* +		+	sweet
pulla	*un*	*paḍu/aw* +		+	sour
cēdu	*un*	/aw	+	+	bitter
wagaru	*un*	/aw	+	+	astringent
kamma	*un*	aw	+	+	tasty
(vi)*wāsana*	*un*	*koṭṭ wacc*	+	+	fragrance

Most, if not all, of these attributes are inherent features of
objects or animate beings. (i) to (iv) are [+Animate], (v) and
(vi) are [-Animate]. In propositions containing these predi-
cates, the 'possessor' of the state is not the 'experiencer'. The
experiencer is always [+Animate]. Examine, for instance:

P:S *wāḍiki ākaligā undi*   'he is hungry'

P:S *wāḍu ākaligā unnāḍu*
P:S *wāḍu nallagā unnāḍu* 'he is dark (black)'
but not
P:S **wāḍiki nallagā undi*   '*to him, is blackness'

In the first pair *wāḍu* 'he' is the possessor of the state of hunger, he is also the experiencer of 'hunger'. In the second pair the experiencer is the one making the utterance about his visual experience. The possessor of the state is not its experiencer. For this reason we can say *nāku wāḍu nallagā unnāḍu* 'to me, he is (seems) dark' but not 'to him, there is darkness'. Where the experiencer is also the possessor of the attribute we get a two-place predication.

wāḍiki mogam nallagā undi 'to him, the face is dark'
(his face is dark)

We can represent the deep structure contrasts by the following diagram.

(1) *wāḍu ākīligā unnāḍu* ⎱ 'he is hungry'   P=Possessor
    wāḍiki ākaligā undi ⎰   E=Experiencer
                                              A=Attribute

Proposition

```
                    Proposition
                   /          \
                  /            \
        Possessor - E          Predicate
              |                   /    \
              |                  /      \
           wāḍu              State    Predictor
           wāḍiki              |          |
                            ākaligā    unnāḍu
                            ākaligā      undi
```
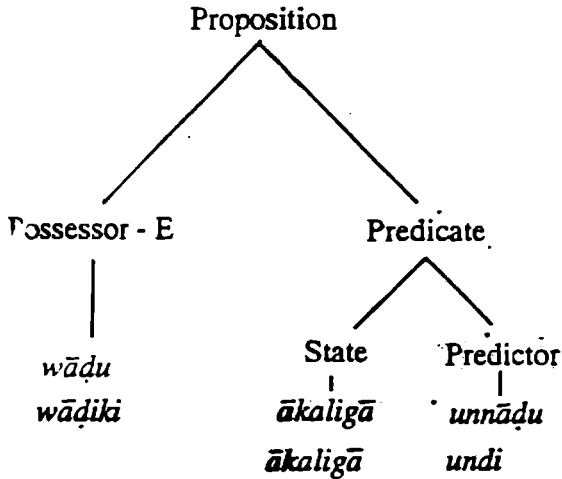
(2) *(nāku) wāḍu nallagā unnāḍu* 'he is dark'   (speaker =I)
    P_2 who is not E in the embedded proposition does not occur in the dative.

Proposition

```
                    Proposition
                    /        \
                   /          \
                  /        Predicate
                 /          /     \
                /          /       \
               /          /     Predicate
              /          /        /    \
             /          /        /      \
        P₁ = E      P₂ = E    State   Predicator
           |          |         |         |
         nāku       wāḍu     nallagā    unnāḍu
```
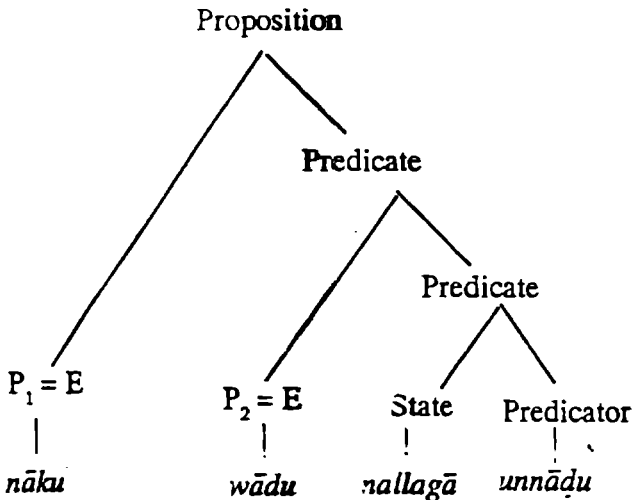
_(3) *wāḍiki mogam nallagā undi* ' to him, the face is dark'

This proposition is possible because P_2 is a body part or possession of P_1. We may generalize that where we have P_1 and P_2,P_1 should be Experiencer or Possessor of the object denoted by P_2. Where P_1 = Experiencer or True Possessor, certain syntactic constructions are blocked.

Proposition
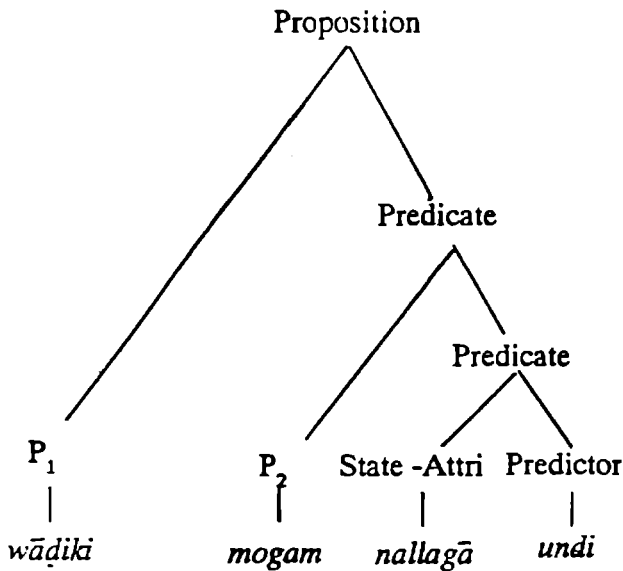
Another characteristic of attributive (stative)predicates is that they occur in sentences without a copula under P+S type (?).

wāḍu poḍugu 'he is tall' (habitual) (that -man +taliness)
ī koṇḍa ettu 'this hill is high (habitual) (this hill +height)
ā abbāyi nalupu 'that -boy is dark'   (that boy+darkness)

The statives are derived abstract nouns.Such constructions are not possible with states which may be characterized as experiences of possessions.This class of predicates has $P \leftarrow S$ type

(P becoms S) as in English. This is a feature not shared by the
other statives.

wāḍu sannabaḍutunnāḍu 'he is becoming lean'
paṇḍlu tiyyabaḍḍāy   'the fruits turned sweet'

In other words these are 'inceptive verbs' derived from attribu-
tive adjectives. The following sentence types deserve expla-
nation:

P+S *ī paṇḍuku pulupu undi* 'this fruit has sourness'
     ī puwwuku wāsana undi 'this flower has fragrance'

A NOTE ON THE TENSE OF 'EXISTENTIAL' AND 'TRANSITORY' ASPECTS OF STATIVES

The 'existential aspect' of a stative is necessarily durational,
i.e.
wāḍu kōpamgā unnāḍu   'he is angry, he was angry,
                             he has been angry'

If no definite time adverbial is used, the state of anger
attributed to the person is said to obtain at the time of the
utterance. There is no indication when the state 'began' and
how long the person 'has had' the state. In other words an
unmarked existential aspect has only one terminal (the time of
utterance) of the time span indicated. A time adverbial of the
type 'from morning till evening', 'for three hours' can be added
in which the two terminals of duration may be indicated. The
time focussed by the verb is a strech rather than a point when
an existential predicator is used (i.e., *undi, unnāḍu*, etc.). But
in the case of 'transitory' predicators like 'he became angry' ('to
him, anger came') the time focussed by the predicator is a
'point' and not a 'span'. Transitory predictors do not take
durational adverb complements

*wāḍiki ninnaṭi nunci kōpam'*he became angry since
waccindi   yesterday'

This situation seems to hold good for many other languages.The following diagrams represent the contrast between 'durational' and 'transitory' aspects of statives. Leech calls them 'perfective' and 'inceptive' (Leech 1970:57-8).

Durational (TL= time of locution)

(1) Unmarked with time-terminals unrepresented as in
    'He knows' (= Present)

Past   ⌐| Future
————————————————⌐|—————————————
                            |
                           TL
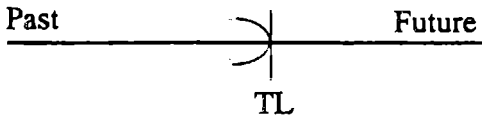
(2) One terminal stated, anchored to TL. (Present Perfect)
    'He has been angry for three hours'

Past   ⌒| Future
————————————————⌒|—————————————
                        |
                       TL
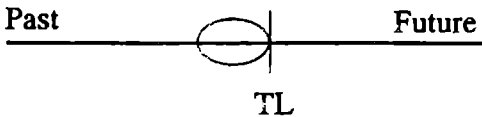
(3) Two terminals stated of which one terminal is not anchored to TL. (Past or Past Perfect) 'He was angry yesterday'.

Past   ⌒⌒ | Future
————————⌒⌒——————|—————————————
                        |
                       TL
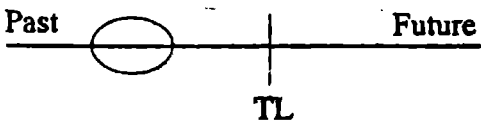
These three varieties are expressed by the same form of copula in Telugu.

Transitory

$$\downarrow$$

Past $\leftarrow \mid \rightarrow$ Future

TL
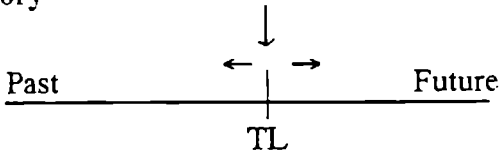
any point in past or future or at TL.

Examples:

wāḍiki kōpamgā undi 'he is/was/has been angry'
wāḍu kōṛ ːmgā unnāḍu
wāḍiki kōpam wastundi   'he will become angry'
wāḍiki kōpam waccindi   'he became angry'
wāḍiki kōpam wastunnadi   'he is/was/has been getting
                                      angry'

* Note

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Grammar : August 15-23, 1970.Center for South Asia Studies,
University of California, Berkeley.
It gives me great pleasure to dedicate this to my old colleague and
friend Prof.H.S.Ananathanarayana. _____ _ _ _____ _

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A NOTE ON THE NONSEPARABILITY OF TENSE AND ASPECT

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Osmania University

Abstract: *It has been rather a vexing problem to separate tense and aspect in natural languages, even though there is a broad agreement among linguists on what constitutes tense and what constitutes aspect. This difficulty mainly arises from the fact "in many languages the formal encoding of tense is not seperate from the formal encoding of aspect". However, Comrie makes the distinction between tense and aspect on conceptual basis. This note tries to explore such a possibility of distinguishing. in Telugu and outlines the problems that arised.*

Comrie, succinctly expresses the distinction by saying that aspect is situational internal and tense is situation external. He elaborates it by saying that 'aspect is concerned with the internal temporal constituency of a situation" whereas "tense is grammaticalized expression of localization in time".

The present note is strictly a characterological exploration which might at least facilitate future typological or areal investigations of Tense and aspect in Indian languages.

Before going into the topic proper, I would like to outline the tense system of Telugu as I understand.

It is customary to identify three tenses, namely, present, past and future in Telugu . Taking the verb "to come" as an instance the following forms can be taken as illustration.

Future	Present	Past
was-t $\bar{a}$ -nu	*wast-unn $\bar{a}$ -nu*	*wacc- $\bar{æ}$ -nu*
I come	I am coming	I came

The future form also expresses habitual aspect, which depends upon linguistic and non-linguistic contexts. The past form is indefinite to proximity or remoteness. The past and future forms can be used with the present implication (? relevance) like.

    (1)   *iɾ. ..'ē ι ʌsiānu* "I will come right away" .

    (2)   *ippuḍē waᵤcǣnu* "I have come right now"

Though both the forms have present implications, the past denotes a completed action and the future form denotes a yet-to-start action.

The present verb form is readily a progressive form with no time marking. It can be used in future and past also as the following examples suggest.

    (3)   *rēppodduna mi inṭiki kāfīki wastunnānu*
        'Tomorrow morning, I will be coming to your house for (a cup of) coffee'

    (4)   *ninna mī ṭinguayipō gānē inṭikiweḷutunnānu*
        'I was going home immediately after the meeting'

    (5)   *ippuḍē bazāru nunci wastunnānu*
        'Right now, I am coming from the market'

As the above example suggest that the tense of 'present' form is not independent but depends upon some other time expression in the sentences. It is true that a sentence with no explicit clue for time, often gets present interpretation. It is however quite natural to give a present interpretation, for a form that expresses an on going action with no time reference. Present tense is an unmarked tense and there are many languages which have no morphological markings for it. By the above examples we can say that Telugu marks past and nonpast in verbs and present is not linguistically coded. The present interpretation of the verb forms depend upon either the time

reference elsewhere or the absence of it.

Equational sentence in Telugu have no explicit verbs. They express the states and qualities of Topic noun phrases.

(6) *ā me andamayinadi*
'She is pretty'

(7) *atanu mū rkhuḍu*
'He is an idiot

(8) *ā yana ḍā kṭaru*
'He is a doctor'

The above sentence are non action sentences that express states, qualities or professions. In the absence of any other clue, they express the qualities of the topic noun phrases which must be true at the time of the speech act. They are actually tenseless sentences and they get present interpretation because of the unmarked quality of present tense. They can be made sensitive to past reference only by lexical expression of time. They cannot be made future sentences even by lexical choice. The equivalent of certain semantic ranges of the English verb 'to be' in Telugu is 'undu' which usually expresses the location of an object in time-space continuos. In some dialects the tense inflected forms are the following.

Past & Present	Future
unn- ā -nu	*un-ṭ- ā nu*
I am & was	I will be

(9) *Sinh ā g ā ru ninna ḍhilli l ō unn ā ru*
iww ā la haidarab ā dul ō unn ā ru
repu maisūrl ō uṇṭā ru

"Dr. Sinha was in Delhi yesterday, (he) is in Hyderabad today and (he) will be in Mysore tomorrow"

For this dialect of Telugu the Tense distinction is future and non future. What is common to both action verbs and stative verbs, is that past verbs express factual information and the future verbs express expected information. In these finite

verbs, it become difficult to separate factual from the past and expectational from the future. It is possible to take factual and expectational as primary and past, present and future are derived from the linguistic and non linguistic contexts.

Coming to nonfinite verbs, there are two participles which are generally called past participle and present participle as in the following typical sentences.

(10)   *atanu annam tini nidra pōyāḍu*
       'He ate (his) meal (and) slept

(11)   *āme nawwutū māṭlā dutundi*
       'She smiles while she talks'
       'She talks with a smile'

These nonfinite verbs donot specifically denote any time. The typical functions of these non finite verbs are that the past participle serialises the actions chronologically and the present participle, expresses simultaneity. There are many other functions which are treated elsewhere. Many of the functions are derived from the semantic content of the predicates and probably from the nature of the external world. When these nonfinite verbs are used in immediate proximity they function as attributes to the main verbs expressing the state, habit or quality of the agent.

(12)   *atanu kā lejiki annam tini weḷṭāḍu*
       'He goes to college by eating a meal'

(13)   *atanu caduwutū nidra pōtāḍu*
       'He sleeps while reading (a book)'

In the above sentences it is not so much of sequentiality or simultaneity that are expressed but they express state or a habit. The priority of the action expressed in the nonfinite verbs looks like an iconic feature related to their occurrence in a sentence. The tense interpretation is a derived factor but not inherent in the participles. The negative participle clearly express a state rather than an action in these sentences.

(14)   *atanu annam tinakundā kā lejiki well æ̃du*
'He went to college without eating his meal'
There is only one negative one negative non finite participle corresponding to both of the positive non finite participles. The descrepency in the presuppositions between corressponding positive and negative forms is expected.

Telugu also has another set of participles used in relativizations. The past and present relative participles correspond to the past and present finite verbs illustrated earlier. The future like relative participle is a more generalized one and does not point to any time. Corresponding to all relative participles, correspond to the past and present finite verbs illustrated earlier. The future like relative participle is a more generalized one and does not point to any time. Corresponding to all relative participles there is only one negative participlewhich usually denotes a quality or state in attributive position.

(15)   *klā sukut r ā niw ā du kā lē jiki enduku*
       waccinattu?
       'Why has he come to college when he does not come to class'
       (The person who doesn't come to class)
The above discussion points out to the fact that aspects and tenses are quite intertwined in such a way that they are not separable. Whether the forms denote primarily tense or aspect depends upon the linguistic and non linguistic contexts as well as the perspective of an observer. I do not mean to say that it is the general case. I only intend to say that this is the case in some languages.

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CONSEQUENCES OF SYNTACTIC CHANGES IN CONTACT SITUATION

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University of Delhi

When two languages come in contact, borrowing of phonological, morphological and syntactic features takes place.Interaction due to prolonged contact betwen two languages belonging to two genetic groups may result in a language with a totally different grammatical structure. Dakkhini[1] spoken in Andhra Pradesh and the other southern parts of India provides one such example. Prior to the formation of Andhra Pradesh, Hyderabad and the other area of Telangana were under Muslim rule. Contact between Telugu speakers and Urdu speakers started around 14th century when Muslim invaded south. Such a bilingual situation that prevailed for more than five centuries resulted in the present variety of Dakkhini which in many ways is identical to Telugu in its syntactic traits and is radically different from Hindi-Urdu as well as from earlier variety of Dakkhini that emerged in the fourteenth century and existed as a written laguage till the seventeenth century[2].

As a language undergoes process of syntactic change due to contact:

(I) It expands its structure and function leading to the emergence of new device/devices to expres certain construction types that are not found in the source language. Development of *bol ke* the past participial form of verb *bol* 'say' and

ki as complementizer in Dakkhini along with their multiple function[3] provides examples of such a device not found in the source language. The following examples are illustrative.

1. *D: Unõ a: ta: bolke bola: pan nãi: a:y a:*

  he will come COMP said but NEG come

  ' He said that he will come but did not come.'

2. *D: unõ kab a:ta: ki mere ku nãi: ma:lum*

  he when will come COMP I DAT NEG know

  ' I do not know when he will come'

  The development of the new complementizer *bol ke* and extention of fuction of *ki* can be attributed to Telugu, the donor language.

3.*T: wa:ḍu osta:ḍ ani ceppy a:ḍu ka:ni   ra:le:du*

  he   will come COMP said   but did not come

4.T: wa:ḍu yeppuḍu osta:ḍo: na:ku teliyadu

  he   when   will COMP I DAT do not know

  (II) When two languages come in contact   as a result of convergence either one of the two languages incorporates syntactic rules of the other language almost in toto leading to Extreme Convergence[4] (i.e. convergence of two systems). A one to one correspondence between the form and function in case of two complementizers *bol ke* and *ki* the syntactic changes involved in the shift of a presentential complementizer found in Hindi-Urdu (sentences (5) & (6) below to a post sentential complementizer in Dakkhini (sentences (1) and (2) above) on the Dravidian pattern. The multiple functions[5] performed by these complementizers are evidence for convergence of two systems where either one incorporates the rules of the other almost in toto. Following examples are illustrative:

(5) *H-U: us ne kaha: tha ki vah a:yega: par nahĩ:a:ya:*
        he ERG said was COMP he will come but NEG
come

(6) *H-U: mujhe nahĩ:pata: ki vah kab   a: yega: ?*
        I DAT NEG known COMP he when will come

(III) An existing construction in the recipient language may
be reanalysed to incorporate new construction types of the
donor language into its system. By reanalysis[6] we mean a
mechanism of syntactic change which may or may not lose
its original function and is reanalysed to perform various new
functions. Complement constructions with *bōl ke* and *ki* and
relative participle with *sō* in Dakkhini are examples of such
a reanalysis. The complementizer *ki* has been reanalyzed to
perform the various functions in addition to functioning as a
generalized postposed complementizer (*ki* functions as a
disjunctive marker (both clausal and phrasal), as dubitative
marker, as an indefinite liner in relative constructions, as a
staller etc.) *bōl ke* the post participial form of the verb bōl 'say'
has been been grammaticalized. bolke performs various
functions such as: as a reason marker, purposive marker,
purposive marker, quotative, to express thought and desire or

intention, is used for naming and labelling, as quotative etc.
(For detailed discussion ,see Arora 1987) losing its lexical
meaning. Furhter, the adjectivalizer *so*, a correlative marker
in Hindu-Urdu is re-assigned an entirely a new set of func-
tions such as adjectivalizer, (pronomial as well as predica-
tive), complementizer, Linker in negative verbal participles
and in reason clauses[7] . Such a reassignment of functions to
sō illustrates that there need not be any commonness of a
particular item between the source and borrowing languages
in reanalysis in contrast to the reassignment of functions in

Dakkhini to the Hindi-Urdu complementizer *ki* where the basic function *ki* forms the focus for the extension of domains of the complementizer in Dakkhini.

(IV) Syntactic change may lead to elimination of an existing category on the pattern of the language which it comes in contact with. The loss of *ne* the ergative marker and loss of the verb 'to be' as a tense carrier in the final position[8] in most of the constructions are instances which support this. The following examples are illustrative:

(7) D: *anjayya: ca:y pi: liya:*
            Anjayya   tea   drank
            'Anjayya drank tea.'

(8) H-U: *anjayya: ne ca:y pi: li:*
            Anjayya ERG tea drank
            'Anjayya drank tea.'

Telugu does not have any ergative marker.

(9) T: *anjaya:ø   ca:y ta:gina:ḍu*
            Anjayya   tea   drank
            'Anjayya drank tea'.

        Loss of verb 'to be' can be illustrated by the following example. Notice that Telugu too does not have verb 'be' in the final position.

(10) D: *unõ mẽre ghar ku rõz a:ta ø*
            he my home DAT every day come IMPF
            'He comes to my house every day.'

(11) H-U: *wah rõz mẽre ghar a:ta: hai*
            he everyday my home come IMPF is

(12) T: *wa:ḍu rozu na: inṭi ki osta:ḍu*
he everyday my home DAT come IMPF

such a change involving the loss of the verb 'to be' in the final position supports the claim made by Li and Thompson (1977) that "Copula is extremely susceptible to change, it can be easily lost, borrowed or redeveloped (p.16. Intr.)". The loss of gender-number agreement especially in relative participles and the loss of genitive in participial construction[9] in Dakkhini are further examples of this principle.

The loss of gender, number and person agreement can be seen in the following example.

(13) D: *ghar ku a:re   sō*   *bacca:*
home   DAT is
comingADJR   boy
bacci:
girl
baccē
boys
bacciyã:
girls

'The girl/girls/boy/boys who are coming home.'

As opposed to this Hindu-Urdu does show agreement in participial constructions:

(14) H-U: *ghar   a:ta: hua   larka:*
home *a:ti: hui: larki:*
a:ta   a:te   hue   larkē

Telugu as expected does not show the agreement.

(15) T: *intiki   ostunna*   *pilla*
home DAT will come   girl
pilaga:ḍu
boy

pillalu
girls
pilawaḍu
boys

(V) On the other hand, an existing category may be expressed by a new morpheme on the pattern of the donor language. Once again the complement construction provides one such example. The complement construction with post sentential complementizer *kar ke*, the past participial form of the verb *kar* 'do' can be expressed by the complementizer *bol ke* which has potential to replace *kar ke* in almost all the functions. Due to existance of *kar ke* as a post sentential complementizer in earlier Dakkhini as well as in the present day Dakkhini we hypothesize that *kar ke* was already being used as a post sentential complementizer in Dakkhini but innovation of *bolke* on the pattern of *ani* (the post sentential complementizer in Telugu) has replaced *karke*. *karke* might have acted as a catalyst for the borrowing of *bolke* complementizer with various functions from Telugu into Dakkhini, which in turn might have introduced its different functions to *kar ke*. On the basis of the this type of change we can conclude that a particular syntactic change may have effect of triggering the syntactic change in other element resulting in a complement construction with two complementizers competing with each other in various functions[10]. Complementizer *bolke* and *karke* show almost indential behavior in their functions.

(16) D: *un   a:ta: karke/bolke bola: pan nai a:ya:*
         he will come COMP COMP said but NEG came
         'He said that he will come but did not come.'

Thus, a new complementizer with verb 'say' (ie. *bolke*) emerged due to syntactic reanalysis in contact situation.

(VI) Synatactic change in a contact and convergent situation may lead to total or partial loss of obligatory distinctions. An expression or an element may become less obligatory thus showing the tendency towards loss or optional occurrence of that expression or element on the pattern of the donor language. One can think of such a situation in Dakkhini where the Hindu-Urdu genitive is replaced by ∅ in participles or is replaced by other categories such as the dative *ku* as in sentence (18) and the complementizer *bolke* in sentence (20). The following are illustrative.

(17)H-U: *ra:m ki: di: hui kita:b*
     Ram DAT give PERF PPLE book
     'The book that Ram gave.'

(18) D: *ra:m ∅ diye   so kita:b*
     ram   give PERF ADJR   book

(19) H-U: *mujhe ghar ja:ne ki:· jaldi: hai*
     I DAT home go INF GEN hurry is
     'I am in a hurry to go home.'

(20) D: *mere ku ghar jāne ku   jaldi: hōri*
     I DAT home go INF DAT hurry hap
                  -pening
        ja:na: bōlke
        go INF COMP

   Notice that the genitive in sentence (17) above functioning as a status reducer (as it reduces the status of a clause to that of a phrase) in Hindu-Urdu is deleted in Dakkhini (sentence (18) above). The deletion of the genitive as a status reducer can be explained by hypothesizing that it is due to convergence with Telugu as illustrated in sentence (21) below:

(21) T: *ra:mudu   iccina   pustakam*
           Ramudu   give PERF ADJR   book

The replacement of the genitive by the dative in Dakkhini (sentence (20) above) is due to a syntactic process which we lable as 'dativization'[11] which again is due to convergnce with Telugu.

(22) T: *na:kuintiki po:vada:niki   tondarga: undi*
           I   DAT home DAT go INF DAT   hurry is

The reason for the retention of the gentive in Dakkhini in addition of the dative *ku* in some sentences as in sentence (23) below and the complementizer *bolke* could be that a syntactic change is still in progress and at present the *bolke* type construction, the dative and the genitive are three competing constructions. The follwoing sentence with all the three complementizers is illustrative:

(23) D: Maĩ vã: ja:na kã   bhot   košiš kara:
           I   there go INF   GEN a lot   tried
                      ja:na: *bolke*
                      go INF   COMP
                      ja:ne   ku
                      go INF   DAT

'I tried a lot to go there.'

The distinction between the dative and the genitive is minimized in many constructions. Thus the loss of the genitive is still in a transistional stage whereas in case of the ergative and non ergative consturctions the distinction is lost completely due to loss of the ergative marker *ne*. The loss in

total in the sense that loss of *ne* has resulted in the change where the verb agrees with the subject in Dakkhini unlike Hindu-Urdu where the agreement is between the object and the verb. The following examples are illustrative.

(24)H-U: *ra:m si:ta: ne   ca:y pi:*
                                 ERG tea   drank
             ra:m/sita   drank tea.

(25) D: *ra:m ∅   ca:y piya:*
          Ram   tea   drank
          'Ram drank tea.'

    D: *si:ta: ∅   ca:y pi:*
          sita   tea   drank
          'sita drank tea.'

(VII)   In additon to the elimination or loss of obligatory distinctions, convergence may lead to syntactic change resulting in innovation of certain distinctions which become obligatory. Syntactic as well as formal distinction between verbal and relative particilpes in Dakkhini can be regarded as an evidence, such a distinction is an innovation on the Dravidian pattern as Indo-Aryan languages do not maintain such a distinction. Verbal participles in Dravidain languages are used to link a subordniate clause to the main clause[12]. They never be used as adjectives unless an adjectivalizer is attached. Hindi - Urdu has three kinds of participles: imperfect, perfect and conjunctive participles. The imperfect and perfect participles can be used as verbal as well as relative participles and they are indentical in form. The following examples are illustrative:

(26) H-U: *vah   ka:m karte hui   T.V. dekh rahi: thi:*
           she work do IMPF PPLE T.V.seePROG was
           'she was watching T.V while working.'

(27) H-U: *ka:m karti: hui: larki:*
           work do IMPF   PPLE: girl
           'The girl who is working.'

(28) D: *use   gaye hue   bahutdin ho   gaye hai*
           him go PERF PPLE manydays have happened
           Iit is many days since he has gone.'

(29) D: *gaya: hua: larka:*
           go PERF   PPLE boy
           'The boy who has gone.'

    Thus we see that imperfect and perfect participles are
homophonous in its verbal and adjectival usage.The same is
not the case with Dhakkhini.

(30) D: *bacca: khate ue kuch   tobi: socra:*
           boy   eat IMP PPLE something EMPH thinking
           'The boy is thinking something while eating.'

(31) D: *kha:na: kha:te   so   bacca:*
           food   eat IMP ADJR   boy
           'The boy who is eating.'

(32) T: *ma: pillaga: ḍu annam   tinṭu: e:mo:*
           a:loçincukonṭu nna:ḍu
           my boy   food   eat IMPF
           PPLE something was thinking

(33) T: *annam tintunna*   *pillaga:du*
          food eat IMPF PPLE   boy

Hence we notice that syntatic change due to conver-
gence can result in loss of certain distinction as well as
innovation of certain new ones:

(VII) A construction may be partially retained and a hybrid
construction may be formed due to contact induced change
where part of the construction is retained from the recipient
language either in function or in form. The hybrid relatives
in Dakkhini provide such an example. Hybrid relatives
exhibit parital similarity with Telugu as well as Hindi-Urdu
in the form and function. In such a construction, in Dakkhini,
though a relative pronoun is used (the one found in HIndi-
Urdu) in place of the interrogative pronoun on Dravidian
pattern, the post sentential relative linker *ki* too is retained
which shows theTelugu influence.

(34) D: *Jo admi: Ku amma: paise dyo boli ki vo admi: ku de*
      REL PRO man DAT mother money give said COMP
      that mna DAT give
    Give money to the person when the mother asked you to
    dyo.'
    give to '

There is a parallel syntactic construction in Konkani,
which shows identical pattern with regard to the usage of the
relative prooun and linker as in Dakkhini. Consider the
following example from Nadkarni(1970):

(35) *jo mha:nta:ro pe: par va: ccet a:ssa(ki) to*
      which old man paper reading is linker that
      da:ktarn a:sse

doctor is

'The old man who is reading a paper is a doctor.'

Thus, in the process of convergence a language shows innovation replacing an earlier form by new construction types, or retention, where the recipient language retains the earlier constructions along with the borrowed ones with similar function with the result that the two constructions compete with each other with similar functional distribution. In addition, the language also shows internal development and has novel innovations which can neither be attributed to the donor language nor to the recipient language but are result of contact independent developments. These innovations though less in number when compared to borrowed construc-tions and retentions are worth discussing.[13]

A close examination of complementation, dativiza-tion. conjunctive participles and noun modification [14] reveals an extensive grammatical convergence which pro-vides counter evidence to the claim that"the grammatical systems of two languages are impenetrable to each other (Meilett 1938)"[15] and also to the claim that "no where do we find any but superficial interinfluencings (Sapir 1927)".[16] However, such a convergence in grammar provides an example to what has been stated by Kuiper (1974) as"a language can adopt foreign syntactical construction while retaining its inherited morphological elements". A study of Dakkhini syntax provides further support for claims such as "language change can result in such for reaching changes that the effected language assumes a different structural type".[17]

Notes

1. Considering different views (Grierson (1918), Shirani (1928),
    Bloch (1930), Saxena (1952),Verma and Verma (1959),
    Zore (1960), Chaterjee (1963), Sadique (1964), Khan (1954,
    1969), Haque (1964) and meterial available on Dakkhini it
    seems convincing to consider Dakkhini as a form of lan-
    guage which originated around Delhi and developed with
    the conquest to Muslims from Delhi to Punjab and was
    influenced by other dialects such as Haryanavi, Khari boli
    and Braj spoken in Delhi and the surrounding areas. Later it
    travelled through Gujarat, Maharashtra, Andhra   and
    Karnataka with the conquest of Khilji.

    The language was further taken to the south during Tuglaq's
    period. Later, when the capital was shifted back to Delhi, a
    large number of people stayed back. These people (both
    Hindus and Muslims) were from different places and spoke
    mixed language which had in it the elements of Punjabi,
    Haryanavi, Rajasthani, Khariboli and Braj.

2. Written texts that are available (starting from 14th century
    onwards) include Banda Nawaz (1388,1423), Ashraf( )
    Abdulla (1613), Wajahi (1636), Mohummad Sharif(1700),
    Mahmood Shah Husaini(1819), Mir Asgar Ali Kazi (1869),
    Abidshah Al Hasan ul Husain (1670), Mahmood Shah
    Husaini(1819), Abdulla(1623), Gausi Dakkhini (n.d.),Vali
    (). These works are found in different sources (Sharma1954,
    1962,1964), Panchal (1978), Telang(1975).

3. .- For multiple functions performed by *ki* see Arora (1987),
    Subbarao and Arora (1989). For the functions performed by
    bolke see Arora (1987).

4. See Subbarao and Arora (1989).
5. See Arora (1987), Subbarao and Arora (1989).
6. See Arora (1987), Arora and Subbarao (1989)

7. For detailed discussion,see Arora (1987), Arora and Subbarao (1988).
8. '*be*' is not lost totally, its occurence can be seen in many other positions.
9. For a detailed discussion, see Arora and Subbarao(1990).
10. For detailed discussion, see Arora(1987).
11. Dativization is considered as Dravidian phenamenon by Subbarao (1983).
12,13. For detailed discussion, see Arora(1987).
14. For detailed discussion, see Arora (1989).
15. Quoted in Weinreich (1963).
16. Also quoted in Weinreich (1963).
17. Belic' in the 6th International Congressof Linguistics as mentioned in Weinreich (1963).

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LANGUAGE IN USE AND CONVERGENCE : SOME PRELIMINARY THOUGHTS

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That there has been linguistic convergence due to prolonged contact between speakers from different languages families in India, is now an established fact (Emeneau : 1956, 1969; Chatterji : 1953, Southworth : 1974, Kuiper : 1967, Caldwell : 1856). The data used by scholars for such assertions were primarily confined to written records for obvious reasons. Consequently, the observations may be said to be relevant for what got codified as normative language. It would not be unreasonable to believe that the speakers did have other variants available to them for interaction at different sociolinguistic domains which did not necessarily match the normative use. Unfortunately, there is little data available on the actual language use in face to face interactions necessitating innovations and adaptations in linguistic strategies for pragmatic functions. There must have been bilingualism across language family boundaries at the grassroots level to such an extent that the mutual influences were not merely confined to the borrowing of formal properties of language (lexical as well as grammatical) but also penetrated the various discourse strategies adopted by the speakers for day to day informal conversations. In the absence of historical evidence for language use in prehistoric India, the only way to recon-

struct such information can be through exploring the 'cur-
rent patterns of language use' (Shapiro and Schiffman :
1981, p. 144).

Even synchronic formal grammars do not generally
encode information about how available normative struc-
tures and lexicon in a given language can be, and are,
exploited by the speakers for non-literal purposes in order
to achieve pragmatic ends. For instance, as far as we know,
no grammar of Indian languages tells us how an FTA (face
threatening act – see Brown and Levinson : 1978) can be
committeed by using a higher level honorific pronoun where
a lower level honorific or non-honorific pronoun is
required (i.e. saying *qap* or *aapni* where *tum* or *tumi "You"*
is expected in Hindi and Bangla respectively). Or, how a
potential FTA can be redressed by the use of past tense
where the reference is to the future (Subbarao, Agnihotri,
Mukherjee: 1991).

Some current studies dealing with the use of vector
verbs to indicate attitudes (Abbi : 1991), question words
for non-question functions (Lakshmi Bai : 1991), and
causatives, passives and other syntatic strategies for polite-
ness (Subbarao *et al* : 1991) indicate the pragmatic aspects
of linguistic convergence in India.

This paper deals with some discourse strategies com-
monly shared by speakers of Dravidian languages like Tamil
(Ta), Telugu (Te) and Kannada (K) on the one hand, and
Indo-Aryan languages like Hindi (H), Bangla (B) and Ma-
rathi (M), on the other. The following similarities, we be-
lieve, could not be the result of an historical accident. We
contend that as the speakers of Indo-Aryan and Dravidian
language families participated in and shared more and more

activities requiring communication, they felt the necessity for the expansion and modification of their linguistic repertoire. The similarities increased as a result of convergence as the communication needs grew in more and more social contexts.

1. Establishing the identity of the topic : A strategy commonly used for identifying the topic about which the speaker would proceed to make a comment is to introduce the topic with a tag question in the first clause and follow it up with the intended comment. For instance,

1) (H)   *khanna hai na, bilkul bekaar aadmi hai*
   Khanna is no absolutely useless man is
   'You know Khanna! He is an absolutely useless man.'

2) (B)   *oije holde baaRiTaa chilo naa, še   baaRiTaa*
   that yellow house   was   no   that house
   bhumikOmpe Ekabaare bheñe gEche
   earthquake in totally break gone
   'You remember that yellow house! It is completely destroyed in the earthquake.'

3) (Te) *aayana unnaDu kadaa, okka pani kuuDaa*
   he   is   no   one   work   too
   sariga   ceyyaDu
   correctly   will not do
   'He! He will not do anything correctly.'

4) (Ta)*inda poDavai irukku illa, idu daan avaL vaangi*
　　this　sari　　　　is　　not this only she having

　　kuDuttaaL

　　bought gave

　　'This sari you see! This is what she has bought
　　for me.'

5) (K)　*nii idi yella, niin obba hucca*
　　　 you are no　 you　 one　 mad
　　　 'You? You are a mad person.'

6) (M)　*haa　 raam aahe na,　 agdii　　 bekaar*
　　　 this　 Ram　 is　 no　 absolutely　 useless

　　　 mulgaa　 aahe
　　　 boy　　 is

　　　 'You know Ram? He is absolutely useless.'

　　In the Dravidian languages besides the tag question
indicator namely Te. *kadaa,* Ta. *illa* etc., the suffix –*ee*
can also be used with the verb 'be' in the topic introducing
clause as will be clear from the following examples from
these two languages.

7) (Te)　*nuvvu　 unnaav - ee,　　 niiku　　 eppuDuu*
　　　 you　　 are　 suffix　 to you　　 always
　　　 tiNDi　　 dhyaasee
　　　 food　　 thinking
　　　 'You? You are always thinking of food.'

8) (Ta)　*naan　　 irukeen - ee,　 inda visayattula talai*
　　　 iDa
　　　 I　　 am suffix this　 matters in　 head　 put
　　　 maaTeen
　　　 will not
　　　 'As for me, I never get involved in such matters.'

2. **Enumeration** : While enumerating a set of items or entities especially when the speaker is trying to recall them, he tends to use a lexical item meaning 'after that' or 'later' interspersed with the items being enumerated.

9) (Ta) *naan, mohan, apparam aruN ellarum poonoom*
      I   Mohan   later   Arun   all of us   went
      'Me, Mohan and Arun and all of us had gone.'

10) (Te) *benDekaayaluu, ullipaayaluu, tarvaataa allam*
        okra   onions   later   ginger
      kaavaali
      needed
      'We need okras, onions and ginger.'

11) (K) *kannaDa pustakagaLu ive, tamil pustakagaLu*
      Kannada   books   are Tamil   books
      aamel a   telugu   pustakagaLu
      afterwards Telugu   books
      'There are Kannada books, Tamil books, and
      Telugu books.'

12) (B) *aaj   Onek raannaa korechi. Daal,*
      today a lot cooking   I did   lentils
      cOccoRi,   bhaate,   taarpOr, maach
      friend vegetable mashed food after that   fish
      'I have cooked a lot today. There is lentils, fried
      vegetables, mashed food and fish.'

13) (M) *aruN, hariis̄, mahes̄ tyaanantar kon bara*
      Arun, Harish, Mahesh after that who well
      'Arun, Harish, Mahesh, after that, well, who ...?'

The frequent use of such a lexical item for enumeration in the conversational language may have been responsible for its being acquired earlier than other processes of conjoining by children. Nirmala (1981), for instance, points out that early conjoined structures produced by Telugu children is with *tarvaata* 'after that' or 'later' and not the process of vowel lengthening, also a major conjoining strategy.

3. Discourse Openers : One of the commonly used discourse openers in languages of both Indo-Aryan and Dravidian stock is a lexical item meaning 'more'. The strategy is more appropriate when the intimacy or informality between the interlocutors is presupposed. A few illustrations are given below :

14) (H) *aur   bataaiye   kyaa   haal caal   hā ī*
      more tell   what   matter   is
      'And, how are things?'

15) (B) *aar   ki   khObor*
      more what   news
      'And, what's the news?'

16) (M) *aaNkhiin   bolaa   kaay   haalcaal   aahe*
      more   say   what   matter   is
      'And what else, how are things?'

17) (Te) *inka   ceppu   andaru   baagaa   unnaaraa*
      more   say   all   good   are
      'And, is everyone alright?'

18) (Ta) *innum   enn appaa   enna   visayam*
         more   what address   what   matter
                      of endearment
         'And, how are things?'

19) (K) *innu   eenide   heeLu*
         more   what is there   say
         'And, say what else?'

This strategy is also used to keep the conversation going.

4. Discourse Closure : In the Indo-Aryan and Dravidian languages that we have examined, a word meaning 'good' is commonly employed to close the discourse. For example, all the following utterances may end a telephonic conversation.

20) (H) *accha jii   rakh   dūū*
         good   polite form   put   shall I
                      of address
21) (M) *bara mi   aata   Theeuu, kaa?*
         good I   now   put it   what
         'Okay shall I put it down?'

22) (Ta) *nalla-tunka*
         good politeness form
         'Okay Sir.'

23) (Te) *mancidi   uNTaanu*
         good   I remain
         'Okay.'

24) (K) *oLLeyadu*   *iDalee*

good it   shall I put it

'Okay, shall I put it down?'

Another aspect of a culturally conditioned discourse closure occurs when taking leave in face to face communication. In some Indo-Aryan and Dravidian languages it is customary for the person taking leave to say 'I will go and come' or 'I am coming/I come' instead of 'I am going'. The person from whom leave is taken is traditionally expected to respond with statements like 'Having gone, come' or just 'come'.

person taking leave says			person from whom leave is taken says	
25) (B) *aaši*	*giye/ aaši*		*ešo*	*giye/ešo*
I come	having gone		you come	having gone
26) (M) *mi*	*aata*	*eto*	*yaa*	
I	now	will come	you come	
	or			
mi	*zaaun*	*yeto*		
I	having gone	will come		
27) (Dakkhıni)				
mãĩ jaake	*aataa*	*hũũ*	*jaake*	*aao*
I having gone	come	aux	having gone	come
28) (K) *hoogiddu*	*bartini*		*hoogiddu*	*banni*
having gone	I will come		having gone	come
	or			
bartini				
I will come				

29) (Te) *pooyi*   *vastaa*   *pooyi*   *raa*

having gone I will come having gone come

or

vastaa

I will come

30) (Ta) *pooyiTTu*   *vareen*   *poyiTTu*   *vaa / vaa*

having gone I come having gone come

or

vareen

I come

Note that while Bangla and Marathi share this feature with the Dravidian languages, standard Hindi does not. Dakkhini like in many other features agrees with Dravidian languages in this respect.

5. Attention Drawers : In face to face interaction a common way of drawing someone's attention in both Indo-Aryan and Dravidian languages is by the use of the demonstrative pronoun of proximity followed by a participle or suffix. As will be clear from the examples given below Tamil and Telugu use the suffix *–oo* and *–goo* respectively. Bangla uses the complementizer *je* corresponding to the Dravidian suffixal elements.

31) (Ta) *idoo   maa   inda veNDakkaay velai enna*

hay honorific this   okra   price what

term (f)

'Look here lady! What is the price of Okra?'

32) (Te) *idigoo   cuuDaNDi   fiziks   DiparTmenT*

this-suffix please   Physics Department

see

ekkaDa

where

see

'Please look here! Where is the Physics Department?'

33) (B) *ei   je,   aamaaye Ekebaare dekhtei paacho*
         this comp me   at all   to see can
         naa   je
         not   comp
         'Here, you are ignoring me totally.'

While standard Kannada does not seem to have this feature, Kannada as spoken in Raichur, Gulbarga etc. which are in the proximity of the Telangana region shares this feature with Telugu as illustrated in the following example:

34) (K) *igoo / ikaa   illi   nooDu*
         this   voc. here   see
         'Look here.'

It is interesting that while Bangla shares this feature with the Dravidian languages, Hindi and Marathi on the other hand use other attention drawers like H. *suniye* 'listen' *dekhiye* 'see' and M. *he pahaa* 'here look' etc., which seem to be more commonly used across languages.

6. Expressing Indefiniteness : Dravidian languages like Tamil and Telugu have the dubitative suffix *–oo* which 'indicates some vagueness or doubt in the speaker's mind' (Asher, 1985 : 4). Note, for example, the following sentences from Tamil, Telugu and Kannada.

35) (Ta) *kozandaiki   pasiyoo*
          child   to   hunger suffix
          'Could it be that the child is hungry?'

36) (Ta) *enna   aahumoo*

what   will happen suffix

'Don't know what will happen.'

37) (Te) *eemavutundoo*

what will happen suffix

'Don't know what will happen!'

38) (K) *eenu aagattoo   gottillaa*

what will happen   not known

'One does not know what will happen.'

It may be noted here that unlike Hindi, Bangla and Marathi show parallelism in this regard with Dravidian. In the place of the Dravidian suffix, both Marathi and Bangla exploit the complementizer *ki* and *je* respectively for this purpose. The following examples from these two languages will make the point clear.

39) (B) *ki   je   hObe*

what comp. will happen

40) (M) *kaay hoNaar aahe kii*

what happen is   comp

'Do not know what is going to happen.'

It has been pointed out by Subbarao and Arora (1989) that the complementizer *ki* has acquired new roles in Dakkhini under the influence of Telugu and one of these functions is the dubitative one. Note, for instance, the following sentence from Dakkhini :

41) (Dakkhini)

> *kyaa   karte   ki*
>
> what   he/she will do   comp.
>
> 'I do not know what she/he will do.'

7. Special uses of numerals : Indian languages make some very special pragmatic uses of certain numerals. The numerals thus involved are the equivalents of English one, two and four.

a) One : In languages like Tamil and Telugu the numerals for one followed by the emphatic suffix *–ee* can be used to express the intensity of feelings of pleasure and pain, especially the latter, of physical conditions like being sleepy, tired, bored, vexed etc. as can be seen in the following few examples :

42) (Ta) *enakku   oree   pasi*
>
> to me   one emph   hunger
>
> 'I am extremely hungry.'

43) (Ta) *siiT kaDeccudunu avanukku ooree   gusii*
>
> seat got therefore   he   extreme   happiness
>
> 'Because he got the seat he is so full of joy.'

44) (Te) *ninnaTinunci   naaku   okaTee   talanoppi*
>
> yesterday from to me   one emph.   head pain
>
> 'Since yesterday I have a very bad headache.'

45) (Te) *ii   mandutoo   okaTee   nidra*
>
> this   medicine with   one emph   sleep
>
> 'Because of this medicine I am feeling too sleepy.'

In Kannada such an expression is used more to describe a continuous process as in the following examples:

46) (K) *ondee maLE*

one   rain

'It has been raining nonstop.'

47) (K) *ondee aLu*

crying

'Crying has been going on.'

A parallel of this can also be observed in Hindi, Bangla and Marathi. Hindi uses *ekdam,* Marathi uses *ekdam* and rarely *ekac* and Bangla uses *Ekebaare.* In Hindi *ekdam* can be used for indicating extremes of qualities or situations both good and bad while Marathi tends to use such an expression to refer to only negative attributes. Observe a few examples from both of these languages :

48) (H) *laDkaa   to   ekdam   kaalaa   hai*

boy   emph.   absolutely   dark   is

'The boy is absolutely dark .'

49) (H) *makaan   to   ekdam   fast   klaas   hai*

house   emph.   absolutely   first   class   is

'The house is just first class.'

50) (M) *mulaacaa   abhyaas   ekdam   vaayiT   aahe*

boy of   training   absolutely   bad   is

'The boy's training is really of a poor quality.'

In Bangla *Ekebaare* is used largely to indicate 'com-

pleteness' as will be obvious from the following examples:

51) (B) *baapre   ki   briSTi, bhije gechi Ekebaare*
         oh father! what rain   wet   gone   totally
         'Goodness, what rain! I am drenched completely.'

52) (B) *baaRi   Ekebaare   khaali*
         house   completely empty
         'The house is completely empty.'

(b) **Two** : Indian languages across families generally use the numeral two to indicate 'littleness' in quantity or time. Observe the following examples :

53) (H) *do   din   kii   zindagii hai kyaa ronaa dhonaa*
         two day of   life   is   why   cry   etc
         'Life is short, why should we fuss about it!'

54) (B) *du   paataa inriji   poRe nijeke khub poNDit*
         two pages English having oneself much scholar
                                   read
         mone   kOre
         feel   does
         'Having learnt a little of English he thinks him-self to be a great scholar.'

55) (M) *don ghaas khaaun ghe*
         two morsel eat   reflexive
         'Eat at least a little.'

56) (Ta) *nannaa kodikkaracca reNDu   kaDugu*
         well   boil at the time two   mustard
         pooDaNum
         should be put

'When it is boiling well a little mustard should be added.'

57) (Te) *eedoo   reNDu   Dabbulu sampaayiddaamani undi*
        just   two   money   making   · is
        'I am Just thinking of making some money.'

The littleness can also be expressed by a combination of the numerals one and two, with the order being variable in the different languages.

58) (H) *ek   do   din   aur   ruk   jaao*
      one two day more stay go
      'Stay for a few more days.'

   (B) *dui   Ek   din   aaro   theke jaao*
      two one day more stay go
      'Stay for a few more days.'

59) (M) *malaa ek don goSTii vicaaraaycyaa aahet*
      to me one two matter ask   are
      'I have to find out about a few things.'

60) (Ta) *oNNu   reNDu   paZuttu   kuuDa   peyDuttu*
      one   two   having ripened too   gone
      'A few have even got ripened.'

61) (Te) *anduloo   okaTi   reNDu   pagili   pooyinay*
      that in   one   two   broken   gone
      'Out of those, a few have got broken.'

It should be noted here that while Kannada does not much favour the use of the numeral two for indicating the concept of littleness, differing thereby from Tamil and

Telugu, it also resorts to frequent use of the combination of one and two for the same purpose. For instance,

62) (K) *onderaDu   tuttu   tindu   hoogu*
one two   morsel having eaten   go
'Eat a little and go.'

These languages also combine the numeral one with the word for half in that order to convey the meaning '*a few*' as indicated in the following sentences :

63) (H) *ekaadh baar mil cukaa   hũũ māĩ unse*
one half time meet completed aux I with him
'I have met him couple of times.'

64) (B) *rOšogolla šOb šeš   hoe   gEche mone hOe*
rasgullas all finish happen went   seems
dekhchi   Ek aadhTa   běceche kina
I will see one half classifier   remains or not
'Looks like all the Rasgullas are over, I will see if a few are left or not.'

65) (Te) *okaToo aroo pooyi   unDa   vaccu*
one   half having gone be come
'It is possible that a few are gone.'

66) (Ta) *oNNu ara iruntaa   kuDěě*
one   half if there is give
'Give even if you have a few.'

(c) **Four** : The numeral four is also used in two different special ways in these languages. Like the numeral two it can also be employed to indicate the 'littleness' of something as in the following examples :

67) (H) *caar din kii caandinii phir andherii raat*
four day of moonlight then dark night
'Happiness is transient.'

68) (B) *aar caarTi bhaat naao*
more four rice take
'Take a little more rice.'

69) (Te) *naalugu roozula bhaagyaaniki inta*
four days happiness this much
kharcu enduku
spending why
'Why should we spend a lot for a happiness which is going to be short lived.'

A second meaning in which the numeral four is used is to indicate 'different types' or 'variety'. The following sentences from different languages illustrate this use :

70) (H) *caar loge ke biic uThne baiThne kaa*
four people of center stand sit of
taur tarika to aanaa caahiye
manners etc emph particle come definitely
should
'One should know atleast how to conduct oneself among a group of people.'

71) (H) *caar log   caar baatē karenge, tum sabkii*
         four people four talk   will do   you all of
         fikr   kaise kar sakte ho
         worry   how do   can   aux.
         'Different people will say different things. Why
         should you worry about every one?'

72) (Ta) *naalu peerooDa seerndu irukka kattikkaNum*
         four   persons with having to stay learn should
                                       mixed
         'One should learn how to get along with differ-
         ent people.'

73) (Te) *naluguritoo   kalisi melisi   unDaalaNTee*
         four persons with harmony   remain if
         koncam   oorpu   unDaali
         little.   patience   should be
         'If you wish to live with people in harmony, you
         should have some patience.'

It is interesting to note that unlike the other lan-
guages, Bangla uses the numeral five and not four for this
function. This point will be clear from an observation of
the following examples from Bangla :

74) (B) *lekha   pORa   šekheni šOmaaje pããc joner*
         writing reading has not learnt in five people of
                                        the society
         šonge   oTha bOša   korte jaane   na
         with   stand sit   doing know   not
         '(S)he is not educated and therefore does not
         know how to move with people.'

75) (B) *păăc jone   păăc kOtha   bolbe,   tumi   kaan*
        five person   five   talk will say   you   ear
        diyo   naa
        give   not
        'Different people will say different things, you
        don't pay any attention.'

Conclusion

With limited data from very few languages, we have
merely skimmed through the surface of the issue of study-
ing 'current patterns of language use' towards contributing
to 'some sociolinguistic reconstruction' (Shapiro and
Schiffman : 1981. p. 149) leading to 'linguistic stratigra-
phy' (Southworth 1974) of India as a sociolinguistic area.
We realise that it is a very rich area for investigation in-
volving more indepth study of more languages covering
the other language families as well. Work along these lines
will not only give a fuller picture of languages as they
were in use in prehistoric India but may also throw some
light on the nature and extent of bilingualism that might
have existed and gone undocumented. Such endeavours
will help us to transcend the limitations of linguistic de-
scriptions which are abstractions divorced from language
use and therefore do not provide a comprehensive picture
of what a language is and does in a larger context.

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INDICES FOR STANDARD TELUGU ■

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Abstract: *While society urges linguistic sensitivity, scholars provide evidence for linguistic variation. Linguistic geographers provide data for geographical variation and sociolinguists provide the same for social variations. The underlying factor, language in its true form, holds people together inspite of diverse manifes tations geographically or socially. This paper is aimed at disproving the stand taken by earlier scholars who stated that a modern standard Telugu pronounciation is tobe found in the speech of educated speakers of the Coastal dialect. In turn it also suggests some indices for standard Telugu. As such there is no standard Telugu and a standard pronunciation may be evolved now.*

1.0 The Telugu speaking districts of Andhra Pradesh State which are on the periphery, have a bordering state where some other language of the Dravidian family or the Indo-Aryan language family is spoken. For example: the Srikakulam district in the north coastal area (Kalinga) borders Orissa state where the Oriya language of the Indo Aryan language family is spoken. Vijayanagaram and Visakhapatnam districts have common borders with Madhya Pradesh where Hindi, a language of the Indo Aryan language family is spoken. Khammam also belongs to this group. Adilabad, Nizamabad and Karimnagar share a boundry with Maharastra state,

where Marathi, a language of the Indo Aryan language family
os spoken. Mahabubnagar, Kurnool and Ananthapur have
common borders with Karnataka, where Kannada, a Dravid-
ian language is spoken. Chittoor manily, and Nellore partly,
have Tamilnadu state at the borders where Tamil, a Dravidian
language is spoken . Nellore, although it has features common
to the coastal dialect, has Sandhi phenomena like the
Rayalaseema group. A situation of bilingualism is prevalent
in the districts which have other languages on their borders.On
the eastern side, Andhra Pradesh has the long coast of the bay
of Bengal[1].

Having considered the districts which lie on the
periphery, we are left with some central areas. Of these areas,
Warangal and Nalgonda districts in Telangana have a good
number of Urdu speakers, as does Cuddapah in Rayalseema
area. All these three districts, though lying in the central parts
of Andhra Pradesh, are considered to be bilingual areas[2] But,
inspite of this factor, the Warangal dialect is considered as a
regional standard for Telangana speech and Cuddapah dialect
for that of Rayalseema speech.

Thus only the Prakasam, Guntur, Krishna and East &
West Godavari districts are unaffected by any external
language influence. This may be one of the reasons for
scholars to consider the speech of Coastal districts as the
standard language.

The capital city, Hyderabad, is situated in Hyderabad
district. It is the smallest district not only in Telangana area,
but in the entire state. It has 36% Urdu speaking population.
The single largest minority linguistic group in Andhra Pradesh
is the Urdu speaking population, and it numbers around 7% of
the total population of the state. At this juncture it is interesting
to note that the Telugu language variety used in the capital

city of the Telugu speaking state is not considered as standard language[3].

All the scholars (ofcourse,in the case of Telugu they are in countable numbers) study only the so called standard language, that is, the educated speech of the coastal dialect. The amount of scholarship devoted to Telangana Telugu and Rayalaseema Telugu is amazingly small.

The Rayala seema districts are geographically situated on the plateau and because of hot climate and desert like terrain, vegetation is scarce. The Telengana districts are under-developed, because of the lack of interest in developmental activities, shown by the feudal kings of the area in the past. Some districts of Telangana, for example Nizamabad and Warangal, are very fertile. But others, like Medak and Nalgonda, are drought prone. The coastal districts are very fertile and irrigation facilities are well developed. As a result. the people there are comparatively rich. Naturally, rich individuals have more say in matters of common interest.This may be another reason why the costal speech is considered to be the standard language[4].

2.0 At the time of Independence there were only two Universities catering for the needs of the entire area. Andhra University in Visakhapatnam was controlling collegiate education in the coastal districts, while Osmania University in Hyderabad was responsible for educational development in the Telangana districts.

Upto the 1950s, Osmania University gave preference to Urdu and Persian studies. The Rayalaseema districts had no university. They were affiliated to either Madras or Andhra Universities. After independence, in the year 1954,   Sri Venkateshwara University was established at Tirupathi. At

present we have eight Universities - Andhra University in Visakhapatnam and Nagarjuna University in Guntur (in the coastal area); Osmania University in Hyderabad and Kakitiya University in Warangal (in the Telangana area); Sri Venkateshwara University in Tirupathi and Sri Krishnadevaraya University in Ananthpur (in the Rayalaseema area), and finally the Andhra Pradesh open University, besides a Central University at Hyderabad.

This above factual survey shows that only Andhra University in Viskhapatnam (in the Coastal area) was initially concerned with studying the modern Telugu language. As a matter of fact, the language faculty in most of the university colleges in the Coastal and Rayalaseema area, until recently, belonged originally to Andhra University. Visakhapatnam was considered as a seat of learning for Telugu studies during these days. This fact contributes towards a further reason for the Coastal dialect being considered as standard.

3.0 We have seen that (i) the coastal districts are far away from outside influences; (ii) the coastal people are comparitevely rich, and (iii) the coastal area is well developed in matters of eduction. Where all these three features co-exist, mass communication establishes firm roots. That is exactly what has happened in the case of Telugu. The newspapers, radio, cinema and journals of the whole Telugu- speaking community were managed by speakers from coastal areas. The users of the language tried to influence usage and also varieties that exist in other areas. This situation existed in the period between 1940-65, and prompted Krishnamurti (1957) to observe that the educted speech of the coastal dialect is what can be considered as standard Telugu. It is also the cause of Sjoberg's(1962) observation that a Sanskrit-like formal style exists in parallel with a relaxed informal style. All other

Telugu scholars and linguists who worked on Telugu language never looked beyond this point.

The observations of Krishnamurti and Sjoberg are appropriate to those prticular times. Now the situation has changed. What I mean to say is that the democratic set-up of the present day has produced neo-groups of speakers of the language who in the past were not in the limelight. The extremely complex ideas about language, eduction, and society of present day theoretical sociolinguists make the problem more difficult to deal with.

The question of defining standard Telugu is a non-controversial point to discuss according to many purists (including many pedagogues). What forms this standard assumes is the controversial point of discussion between purists with their absolutist views of correctness handed down from such grammarians as Chinnayasuri (1860), and repeated in school books from then on, on the one hand, and on the other, linguists who are aware of the history and diversity of Telugu and its usages. The attack from the traditionalists still goes on virtually unabated.

3.1 The modernists (linguists and non-traditional language scholars), however, have now assumed a different position for themselves by questioning the very notion of standard   Telugu. As Edward Stephenson (1974 : 211) observes, it is an interesting change ' from attackers who believe in an absolute standard to attackers who believe in no standard'. This notion of no standard is further strengthened by my data of fourteen subjects who are all lecturers in the Andhra Pradesh State Education department. The data present a relatively wide variation in the speech of the subjects. The traditionalists only take grammar into account when assessing the standard and give less importance to the pronunciation. They are thus not

aware of the wide variation in pronunciation which needs to be taken into consideration along with other parameters. As noted above, traditionalists are concerned more with a written standard form, but the modernists are concerned with the spoken standard form of the language, with an emphasis on pronunciation.

'Admittedly, standard... is difficult to define, is constantly changing, and is relative not only to time but to situation and place as well' (Stephenson 1974 : 211). Stephenson continues his arguement further and states that 'Human languages tend to have both vertical and horizantal dimensions. Vertical lines separate the regional dialects and horizantal lines separate the social dialects' (ibid. : 212). These statements of Stephenson are considered when I examine the situation obtaining in Telugu dialects[5].

Modern standard Telugu used in present - day literature and the mass media, has been identified as that variety which is based on the speech of educated people of the central (or Coastal) area. The language of the Coastal districts is accepted as the standard variety (cf. Krishnamurti 1957, 62; Kostic et.al 1977). It is also noted that there are differences between standard Telugu and non-standard varieties, particularly in phonology and morphology. 'In the process of acquistion of education, speakers of non-standard Telugu make a conscious effort to acquire the phonemic distinctions of standard Telugu' (ibid. : 2). This point is relevant for our discussion.

3.2 In the process of acquisition of education, non-standard speakers are subjected to strict vigilance to make them acquire the standard phonetic features but not the morphological features or syntax. It is a sort of audio-visual training for the non-standard speaker, because he is able to see the syllabary in printed form and to hear it pronounced by the teachers in a

standard way. Apart from this type of artificial classroom training, the learners do not have much opportunity to hear these sounds in natural language surroundings. In other words, education introduces certain phonetic features to the non-standard speakers, which they have to learn as they do in the case of foreign language sounds. As we are aware, in such situations there is always the possibility of under differentiation or over differentiation. The question that arises then is, whether it is justified to eqate education with the use of the standard form ? My answer to this self-posed question is that it is not. My data provide ample evidence to demonstrate that even educated speakers do not have certain phonetic features in their speech which have been identified by Krishnamurti (1962) and Kostic et.al. (1977) as standard features. Kostic et.al. have come to the conclusion that inadequate eductional background of the speakers is responsible for the substandard variety, and that by identifying certain phonological features as standard, in accordance with prescriptive attitudes to the language, it is possible to describe a standard variety.

3.3 As Milroy and Milroy (1985) rightly point out, 'prescription depends on an ideology (or set of beliefs) concerning language which requires that in language use, as in other matters, things shall be done in the "right" way' (ibid. : 1). Linguistics is primarily a descriptive - oriented discipline. Linguistics is descriptive, not prescriptive. A linguist is interested in what is said, not what he thinks ought to be said. He describes language in all its aspects, but does not prescribe rules of correctness' (Aitchison 1978 : 13). In this connection it is also necessary to remind ourselves of the observations of Daniel Jones (1956 : XVI). Ignoring these and other such remarks, certain scholars set themselves up as public guardians of usage, commenting on supposed misuse of language and on supposed language decline.

Milroy and Milroy-(1985) refer to the formal structures of language as opposed to actual use of language - particular occasions. Their ' formal structure ' can be equated with that of *la langue* (approximately equal to 'language system') and their 'use of language' to *la parole* (approximately equal to language use) of Ferdinand de Saussure. It may also be equated with ' competence ' and ' performance ' of Chomsky (1965). Competence, according to Chomsky, is the underlying rules of language which the native speakers know. This is an abstract feature. When anyone comments about language, it is this abstract system that they have in mind, but they apply it to the language use.   What is considered as 'standard' language is approximately this abstract language system. There are absouletly no speakers who represent the total abstract language system' in their speech, and majority of speakers do not practice it in actual language. Some speakers, depending on their educational level and the degree of formalness that the situation demands, may switch over to this abstract system.   This infact is in an artifical language situation. Generally all the people continue to use nonstandard varities and still claim to agree that only the 'standard' form is 'correct'. This is a clear mismatch.

It is also noted by many linguists that no spoken   language can ever be fully standardised. Spoken language is diverse in its forms and functions, whereas the norms of the grammar of written languages are uniform. Thus written usage in a way contributes towards the standardisation of speech.   This has been carried over into prescriptive pronouncements on usage. Spelling has been considered at the uniform level of language use, and this in turn has contributed towards pronunciation. This is the condition obtaining in the languages of the world in general. Languages may also exhibit the principle of uniformity in usage,

applicable in other levels of linguistic organisation, i.e., sentence construction etc.. But in Telugu the standardisation has taken a different turn. The written language, i.e. spelling, is considered as the measuring rod for standard prounciation, but the written language is not taken as a basis for standardisation for other levels of linguistic description viz, morphology and syntax. For them the basis is the so-called 'standard' spoken variety. As this involves regional variations, there is no agreement over it.

4.0 Need For Standard Telugu

The need to define standard Telugu may be agreed upon by people for various reasons. I discuss these reasons under the headings proposed by Wolfram and Fasold (1974) who do not accept the concept of standard language, as opposed to the majority of sociolinguists.

1. Propriety

It is   agreed that different styles of speech are appropriate on different ocasions, but often there is confusion of dialect with diction.

2. Psychological Theory

According to this, a standard language may serve a unifying function, by linking an individual speaker with a large community. Where as the unifying function may unite individual speakers, what is identified as the separatist function opposes the standard language to other languages or varities as a sepertate entity, thus potentially serving as a symbol of national identity (ibid.22). Further, Wolfram and

Fasold say that these above-mentioned functions homogenise
the language. Language standartisation seems to be inevi-
table in most countries of the world. It is also observed by
Wolfram and Fasold that one must realistically concede the
establishment of prescriptive norms, for correct speeh is an
inevitable by-product of the awareness of behavioural norms
of all types.

If lai guage standardisation is an historical inevitability,
Mayers (1974) wonders why prescriptivists find it difficult to
help it along.

3. Power and Prestige Theory

According to this, the rich and influential have matters
in their own way in the language. Frederick Crews (1974)
observes that, ' the speech habits of one linguistic group... the
group, not surprisingly, containing nearly all the most pow-
erful members of ciety,' constitutes the standard
language(Crews 1974:1673). If this is acceptable, then there
is absoluetly no need to consider the middle-class speakers'
speech habits. Similarly, if the Brahmin speech is considered
as the standard form, or at least as much the closest to it, there
is little reason to consider the forms of other speakers. But,
neither the economic class nor the social class alone contrib-
ute towards a standard Telugu[7].

4. Better-tool Theory

This notion explains the individual's belief that the
'formal' language is necessary for a particular purpose. Those
who argue in favour of this theory, probably have vocabulary
in their minds. One is at a loss to know whether they mean
vocabulary alone, or also pronunciation. In languages like
Telugu, mere usage of vocabulary may not be useful.

Vocabulary may be used by speakers without adhering to the standard pronunciation. Telugu has borrowed Sanskrit vocabulary, and spelling pronunciation is a must in these cases[8].

It is opined now that there is no pressing need to define a presently non-existent form of the language. By trying to define the standard form of language we may raise more problems than we solve. As an anony mous scholar has noted, 'every man would have been willing, and many would have been proud to disobey'.

5.0 Can (and should) Standard Telugu be Defined?

In a way any attempt to define standard Telugu is redundant because most of us already know what it is: it is that kind of Telugu which Telugu people do not speak.

Kostic et.al (1977) have described the educated Costal speech as the generally accepted form of standard Telugu. But as pointed out earlier, 'eduction' is a concept which needs further clarification and consideration.

In recent years it has been repeatedly demonstrated by sociolinguists, that observed linguistic changes often correlate with social factors, e.g, Labov (1972), Trudgill (1974), Miloroy and Milroy (1978). Labov (1964) at the end of his thought-provoking paper, observes a set of those children who need the ability to use standard language, (but) do not learn this form of the language' (ibid. 497). In a discussion that followed, Labov was asked to enumerate 'the indices of standard English in New York City' that had been the subject matter of his study. These indices are part of the language that children need to be able to use.[9] In other words they are prescriptive features of a standard language. For Labov, the features are as follows.

·1. The use of *r* in post-vocalic and pre-consonantal position;

2. The Vowel of *bad, ask, dance, had, and cash.*

3. The stressed vowel in *awful, coffee, office.*

4. The use of (θ) in *thing, thin.*

5. The use of [ə̃] in *them, the*

6.0   Suggested Indices for standard Telugu

Just as Labov provided indices for standard English, I would like to attempt the same for Standard Telugu. Reasons for selcting the particular fearures as indices are given below.

1. The use of Aspiration

Aspiration as a phonetic and phonogical feature occurs only in the borrowed lexical items from Sanskrit to Telugu. Education in ancient days was restricted to a privileged class. As a result, the speech of that particular group of speakers was enriched by aspiration as a phonemic feature. Even in that class of speakers, uneducated individuals may or may not preserve this feature. Thus aspirsation was looked upon as a mark of social prestige. Because the feature has acquired a prestigious status, uneducated spekers (and the educated also in some cases) created a number of hyper forms in the language. For example:

gha:li   <   *ga:li*   'breeze'

okkha   <   *okka*   'only one'

These in fact, are used for emphasis by upper-caste speakers who have aspiration in their phonological system. Modern education has given the feature of aspiration to all speakers in the written form. But in speech it has no place. Hyper forms are present only in speech and not in writing.

Furthermore, when aspirated consonants occur in the second syllable, the general trend is to shift the place of aspiration to the first syllable. In my data I have forms such as:

'ba:dha	>	*bha:da*	'problem, pain'
'ga:ndhi:	>	*gha:ndi*	'Mahatma Gandhi'
'katha	>	khata	'story'

Aspirating consonants at the appropriate places is one of the features which can be considered as a standard index. This is a caste marker according to my data.

2.   Use of Fricative [f]

This is a sound borrrowed into Telugu from Urdu in ancient times and English in modern times. It has no   corresponding grapheme in the Telugu syllabary. It is roughly equated with the voiceless bilabial aspirated plosive [ph] grapheme. Using [f] as a fricative sound is also a marker of education and social prestige. Uneducated speakers do not pronounce[f]. Certain castes may use [ph] instead.   Uneducated speakers who do not have aspirates in their system equate it with[p].

3.The Use of Retroflex (Lateral,Nasal and Sibilant)

Retroflexion is non-native to Sanskrit. It was orginally borrowed from the Dravidian languages. Strangely enough,

the retroflexion of lateral, nasal and sibilant has been
reborrowed into Telugu, and is used by Brahmin speakers.
The native Telugu vocabulary has the retroflex stop series in
word-initial and word-medial positions. The frequency is
relatively less than that of dental or alveolar stops. Also, there
are retroflex L and η in native Telugu forms, but these are
instances found only in certain morphological processes. For
example:

> *kannu* 'eye' + *lu* 'pl. suffix *kaηLu* kaLLu eyes
> *baDi*   'school' + *lu* *baLLu* schools
> *paηDu* 'fruit' + *lu* *paηdLu* fruits
>   PaLLu

L and η do not occur in word-initial position. In word-medial
position they are found mostly in gemination as far as native
Telugu vocabularly is concerned. The vocabulary of native
Telugu with a single retroflex[L] or [η] has either become
obsolete or has been reduced to dilect variant status.

The retroflex sibilant [S] may occur in word-initial
position, but with reduced frequency. In word-medial posi-
tion it is found in clusters with a retroflex [T], or may occur
singly.

Unlike the earlier two features, this is neither a caste
feature nor a feature reflecting educational status. It has
something to do with wider socio-cultural exposure of the
speakers.

4. The Vowel [æ]

This low front vowel is a clear marker of geographical
region, and is found in the coastal dialect. It also occurs in the
Rayalseema dialect, but only in vowel harmony and Sandhi
situations. The Telugu Academy dialect bulletins indicate that
[æ] is fast acquiring phonemic status in the Rayalseema

dialect due to the influence of Coastal speakers (the so-called 'standard' speakers). The bulletins show that the Rayalseema dialect has the following forms : the Coastal and Telengana forms are shown for comparison:

Coastal: *vaccǣDu* 'he came'

Rayalaseema: *vaccina: ḍu*

Telangana: *vacciNDu*

[ǣ] never occurs in the Telangana dialect. A front, mid-vowel corresponds to this low front vowel. In mono-morphemic forms [ǣ] corresponds to [e :] or a [y] glide followed by [a :]. For example:

Coastal	Telangana	Gloss
mǣka	*me : ka*	'goat'
bǣnku	*be : nku*	'bank'
	bya : nku	

Unlike the three earlier features, this is regionally based feature. Telangana speakers who do not have this sound in their repertoire are able to recognise the other groups by the presence of [ǣ] in their speech and they, in turn, are identified by others because of the absence of [ǣ]. Telangana speakers cite as justification for their antagonism to [ǣ] that there is no grapheme for this vowel in the syllabary.

5. Retention of Unstressed Second Syllable

The Telugu stress patterns offer a peculiar situation.[10] The second syllable in a trisyllabic or polysyllabic word is unstressed. In the Coastal and Rayalaseema dialects this unstressed vowel is retained at least in the form of a [ə]. But in the Telangana dialect this second unstressed syllable is lost, thus giving room for internal Sandhi (as scholars describe it). The clusters thus created are very many, and many of these clusters are restricted in their distribution to word-medial position only. In fact, Telangana Telugu has acquired this

feature under the influence of Urdu. It is said that in the Urdu language, the second syllable is weak and is generally lost, thus giving rise to word-medial clusters. The Telangana area was under Urdu speaking kings for a long time, and during that time the Telugu language was second to Urdu. In effect, the Telugu of Telangana developed the phonetic feature of dropping the unstressed second syllable. Most Telugu dialects have syllable-timed rhythm,i.e., an even rhythm is maintined throughout. Telangana Telugu differs from this, and appears to have, partly, stress-timed rhythm.

In the five features mentioned bove, the last two features relate to regional dialect varitions. The presence of [ae] is attributed to the influence of English and also to a phonetic development from *ina* (with a loss of nasal). Consonantal clusters are attributed to syllable loss resulting from the influence of Urdu. The other three features reflect the social situation.

6.1   Language is not a watertight compartment and language seepage takes place in all the social situations, and any analysis needs to be able to handle this. The indices suggested by me indicate whether the speaker is moving towards standardisation of the language or away from it, as far as pronunciation is concerned.

Standard pronunciation is widely considered to be the same as spelling pronunciation. Speakers are considered to be standard speakers if they retain all the features of spelling pronunciation. Sometimes we find in the data   certain examples where speakers cross the sociolinguistic bariers and move towards standard pronunciation.

Notes

1. This bilingualism may be a situation with or without diglossia. Fishman (1967) in his expanded theory of diglossia, warns us that diglossia and bilingualism are to be carefully distinguished and separetely studied.

2. The bilingualism prevailing in these areas was, till recent times, considered as bilingualism with diglossia. Urdu was used for H functions and Telugu for L functions.

3. After the formation of seperate state of Andhra Pradesh, many people migrated to Hyderabad (which forms part of the Telangana area) and settled there. Thus two different dialect speakers of the same language came into regular contact with each other. This situation has given rise to a peculiar position in the Telugu language.

(a) A speaker of dialect A acquires the features of B and is able to communicate in both A and B. This particular type of speaker need not be from only coastal or only Telangana area. Both dialect speakers are in good numbers. This is what Fishman (1967) identifies as bilingualism.

(b) Some groups of speakers consider that their dialect is superior to the other and so observe bilingualism with   diglossia. They restrict their own dialect for all H uses and the other dialect for L uses. We observe this tendency in the speech habits of coastal immigrants to the Telangana dialect area. Recent Telugu movies knowingly or unknowlingly adopted this technique in order to create some unwanted humour.

4. During the 1950s and later, it was a bilingualism with diglossia situation which existed in the Telugu speaking areas of Hyderbd City and District. Onthe other hnd the rest of the Telugu speakers present another sitution. They also practice bilingualism with diglossia, but for a different reason. In communicatingwith coastal speakers they use that dialect, and in all other cases they adhere to their own Telangana dialect. Note that there is no H and L function division.

5. Telugu dialects are defined in accordance with Ruth McConnell's (1979) definition of dialects. According to that definition 'A dialect is a subvriety of a language, either regional or social. It is distinguished from other subvarieties of the same language by unique

combination of language features : pronunciation (including stress and intonation) grammaticl forms, words and expresions, meanings of words and expressions'.

6. Ironically enough, this observation coincides with the situation ..taining in Telugu

7. Chomsky (1965 : 4) suggests that the primary concern of a linguistic theory is limited to the 'ideal speaker-listner, in a completely homogeneous speech-community'. Cassidy (1986 : 205) quotes the above statement of Chomsky and argues that while attempting to propose a thoery about language, it is necessary to look in to the language carefully. Chomsky's observation presupposes linguistic variation within speech communities, but at the same time un-ideal data are as relevant as the data that a thoeretician makes use of. He observes that variation is intrinsic to language and the theoretician must admit the realities of unidealised language. He argues that it is not for the theoretician to choose the language variety and frame theories, but that his function is to look at the language as it is.

8. Pringle (1983) observes that two opposed forces are at work in linguistic change. Firstly, there is the principle of imitation. When two speakers interact with one another each of them tries to adopt his speech slightly so that the other person can understand better. This in a way is an attempt towards a common form of the language, which may be identified as a standard language. Secondly, there is the principle of impulse to differentiate. When two speakers interact, one of them may try to show how his speech differs from that of the other. This is achieved by making use of an artificially elegant language variety, or by exaggerating every sound so that it represents the written form of the language. This type of speech is far removed from the normal day-to-day speech. The other speaker who may be bewildered by this, either keeps away from it, or imitates and acquires it incorrectly. Thus the social distance of classes is maintained.

9. The first principle of Pringle (1983) is applicable to this phenomenon. A similar attempt is made for identifying indices for standard Telugu.

10. For a fuller discussion of Telugu stress rules, see Venkateswara Sastry (1987).

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RELATIVIZATION IN TELUGU ■

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The purpose of this paper is to study the different types of relativization strategies in Telugu and also to see which NP positions can be relativized in Telugu in terms of the nounphrase accessibility hierarchy proposed in Keenan and Comrie (1977).

The accessibility hierarchy (AH) is : SU > DO > IO >OB > GEN > Ocomp > where '>' means is more accessible than (SU stands for ubject, Do for Direct object, Io for Indirect object,OB for oblique Gen for genitive,O comp for object of comparison).

Keenan and Comrie (1977) propose the following > constraints which according to them held universally.

1. A language must have a primary relative clause forming strategy.
2. If a primary strategy in a given language can apply to a low position on the AH, then it can apply to all higher positions.

Keenan and Comrie observe that relative clauses formed on subjects are always amongst the most acceptable in any language, and those formed on objects of comparison, are judged to be only marginally acceptable.

Three different types of relativization processes in Telugu are discussed. They are as follows: a. participal, b. clausal and c. peri-clausal, of the three types, (a) and (b) are major types where as (c) is close to clausal but is of conversational sty¹ ⁻he ⁻⁻⁻ ⁻⁻⁻es are discussed below.

a. *participial:* This type does not have any explicit relative morpheme. The verb takes on its attributive form and the modified noun becomes head of the construction.

e.g.

1. *rāmu konna pustakam bāṇwundi*

   The book which Ramu bought is nice.

2. *ninna waccina atanu nā snē hituḍu*   ⁻

   The one who came yesterday is my friend.

b. *Clausal:* Corresponds to *wh* type relative clause in English or *jo-vo* type clauses in Hindi. There are two cor-relative markers ē and ā which correlate with each other in this type. This type can also be called as correlative.

e.g.

3. *ē sanchi erragā wundō ā sanchi bā wundi*

   The bag which is red is nice.

4. *ē abbāyi nā pustakamu cimpāḍō a abbāyi parigetti poyāḍu*

   The boy who tore my book ran away.

c. Peri-clausal: This type is more close to the clausal type. This type pre-supposes a speaker and an addressee. It also implies that the object and event mentioned have

previous reference in the discourse and the addressee is understood to have the knowledge of it.

e.g.

5. *ninna waccēḍē ataḍu nā snē hituḍu*

   The one who came yesterday is my friend.

6. *erra cīra kaṭṭukunnaḍē āme nā cellelu*

   The one who wore a red saree is my younger sister.

The above mentioned types are syntactic types of relativization. The semantic types like restrictive and non-restrictive which are widely discussed in literature also exist in Telugu.

Restrictive relative clauses serve to specify or narrow down the class or entities designated by the modified noun phrase.

For e.g.

7. *ē ammāyi gulābi gaunu wēsukundō ā ammāyi nā kūturu*

   The girl who is wearing a pink frock is my daughter.

8. *ē ciluka wēpa ceṭṭupai kūcundō ā ciluka nādi*

   The parrot which is sitting on the neem tree is mine.

In the above mentioned examples the common noun which is the head is restricted from others.

A non-restrictive clause lacks this specifying function and induces essentially extraneous information about the modified noun. The non-restrictive relative clause gives

additional information about the head NP which is the subject of the main clause e.g.

9. *dillīlo uṇṭunna akka haidrābad waccindi*

The sister who stays at Delhi came to Hyderabad.

According to Ramarao (1975) unique reference is not restricted like,

10. *ākāśamlō merisē sūryudu andariki weḷṭuru istādu*

The shining sun gives light to everybody.

According to Keenan and Comrie (1977) languages differ as to which NP positions can be relativized and these differences are dependent on that of the other positions.

It will be seen as to which NP position will be relativized in Telugu in both the participal and clausal relative type. Examples are given below taking subjects first.

Subject Relativization

Participial type:

11. *rēpu wastunna abbāyi mā pāta snēhitudu*

The boy who is coming tommorrow is our old friend.

Clausal type:

12. *ē ammāyi fasṭ wastundō ā ammāyiki praiju istāru*

The girl who comes first will get the prize.

Direct Object Relativization

Participial type:

·13. *rama tinna araṭi paṇḍu tiyyagā unnadi*

Clausal type:

14. *rama ē araṭi paṇḍu tinnadō ā araṭi paṇḍu
cālā tiyyagā unnadi*

The banana which Rama ate is very sweet.

Indirect Object

Participial type:

15. *sīta gauriki iccina pustakamu pōyindi*

Clausal type:

16. *sīta ē pustakamu gauriki iccindō ā pustakamu
pōyindi*

The book which sita gave to Gauri is lost.

Genitive

Participial :

17. *mīru cūsina abbāyi cellelu ūrlō lēdu*

Clausal:

18. *mīru ē abbāyi cellini cusærō ā abbāyi cellelu ūrlō
lēdu*

The boy's sister whom you saw in not in town.

Object of Comparison

Participial type:

19. bindu konna pustakamu kanṭē kamala konna pus-
    takamu karīdainadi.

Clausal type:

20. bindu ē pustakamu konnadō ā pustakamu kanṭē ka-
    mala konna pustakamu karīdainadi

    The book that Kamala bought is costlier than Bindu's
    book.

Oblique position:

   This position includes locatives, instrumentals and
   ablative NP's.

Locative

Participial:

21. ṣi:lā balla mīda peṭṭina golusu kanapaḍaṭam lēdu
22. ṣi:lā ē golusu balla mīda peṭṭindō ā golusu kana-
    paḍaṭam lēdu

    The chain which Sheela kept on the table is lost.

Instrumental Relativization

Participial type:

   23. mīna kūralū kōsina katti cālā tēju

Clausal type:

24. mīna ē katti tō kūralū kōsindō ā katti cālā tēju -
    The knife with which Meena cut the vegetables is
    very sharp.

Ablative Relativization:

Compared to all the NP positions, ablatives seem to be the problem area for relativization in Telugu, examples are given below.

25. *āṣa madrās nunci haidrābād waccindi*

Participial type:

26. **āṣa waccina madras*

Clausal types:

27. *āṣa ē madras nunci haidrābād waccindō ā madrās*
    It is Madras from where Asha came.
28. *atanu kālēji nunci iṇṭiki waccēḍu.*

Participal type:

29. **atanu iṇṭiki waccina kālēji.*
30. **atanu waccina kālēji.*

Clausal type:

31. *atanu ē kālēji nunci waccēḍō a kālēji*
    The college from where he came.

32. *nēnu ūru nunci pustakālu teccǣnu.*

Participial type:

33. *nēnu pustakālu teccina ūru*

Clausal type:

34. *nēnu ē ūru nunci pustakālu teccǣno ā uru*
    The place from where I bought the books.

According to Ramarao (1976) the ungrammaticality of the examples 26, 29 and 30 may be due to the intransitivity of the verb and grammaticality of 32 may be due to the transitivity of the verb. However, example 32 is ambiguous which can be resolved by the context.

In general participial relativization of ablatives seem to be a problem in Telugu. There can be different reasons attributed to the problem like:

a.   Examples 25, 28 and 33 are sentences with ablative phrases which might be creating a problem for Participial Relativisation inablatives by breaking the phrase.

b.   Paticipial relative type does not have either a relative pronoun or a correlative marker.

c.   The ablative marker *nunci* is deleted in the participal relative type.

The combination of these factors might be creating a problem because in other NP positions, participial relativization is possible.

The very fact that gloss in English could be given to all the Telugu relativization examples shows that all NP positions can be relativized in English. The possibility of ablative relativization in English could be due to the retention of case markers and use of relative pronoun.

Except ablatives in oblique case, all other NP's are relativizable in Telugu.

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UNEDUCATED TELANGANA TELUGU: HISTORICAL PERSPECTIVE

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Abstract: *There are regional and social dialects in Telugu. Uneducated Telangana Telugu is one of the social dialects of Telangana Region. Though it is used only in nonformal situations, it is full of Dravidian lexicon and some of them were used in literature too. This paper aims to point out how some lexical items which were considered standard once upon a time lost their value in the modern colloquial standard language.*

1. Introduction

Telugu, one of the literary languages of Dravidian family is spoken in Andhra Pradesh. The attestations of this language are available to us right from 6th Century onwards in prose form. Inscriptions in poetic form are available from 9th Century A.D. Both in prose and poetry the variety used for writing was different from colloquial spoken variety. The development of literary variety took place separately from *Vyavahārika Bhashaa* right from pre Nannayya period itself. Till the beginning of 19th century, colloquial variety was not used for writing purposes, and was considered non standard variety. As a result of *vyavaharika Bhashodyama* the distance between literary and colloquial dialects was reduced.

At present, there are four regional dialects in Telugu

(Krishnamurti 1979). North (Telangana), southern (Rayalaseema), Eastern (Srikakulam, Visakhapatnam), Central (Krishna, Guntur, East and West Godavari Districts). The variety widely used in newspapers, Television, Radio and fiction is based on the speech of the educated middle and upper classes of Central Andhra Pradesh.

Rest of the social dialects and regional dialects are confined only to non formal situations. Differences between standard and non standard can be linguistically formulated mainly in Phonology, Verb and noun inflexion and the choice of certain lexical items. In this paper an attempt is made to show how the uneducated Telangana speakers chose to use words of Dravidian origin and some of which were very much in vogue in literary dialect, when compared to the lexical items used by the speakers of standard dialect.

2.0 Methodology

Lexical Items peculiar to the uneducated Telangana speakers were collected by observing their speech. They were compared with the corresponding items from Standard dialect. Later, Cognates from other Dravidian languages are given to point out their origin. Based on Suryarayandhra Nighantuvu it was also observed whether these lexical items were used in literary dialect or not. This study enables us to know about the history of these lexical items which lost their place in Standard usage.

1. kontabo:vu   It means 'to carry'. This word is used in the uneducated class of Telangana contrary to the standard form. Ta. *koḷ (koḷv- , koṇṭ-)-*) to seize, receive, buy Ma. *koḷka (koṇṭ - imper, ko)* to hold, *Ka., keḷ, koḷu, koḷḷu* (koṇd – mod imp. ko) seige, take away, take; Kod.koll

(kovv– kond–) to take, *Konda* to bring; *Tu.* konu to take, held, keep *Te.* konu (kont) to buy, take, hold take up *Kol.* kor to bring; *konda·kor (kon- kot-) –*) to purchase. (D.E.D. 1788) If the above cognates are compared, the forms either kol – or kon – are found in combination with –t, one of the nonpast suffixes which has an allomorph–t after stems ending in – n. Tamil, Malayalam, kannada and Telugu show the forms like kond or kont.

In modern Standard Telugu *konu* means 'to buy'. However in literary Telugu, the usage of this verb is found with the meaning 'to hold'. which in the following compounds convey the meaning 'to take'.

1. *gay konu*	<	*kaykonu*	to take
hand to hold		hand to hold	
2. *cē konu*			to take
3. *koni povu*		*kon + i + pōvu*	to take
having hold	go		
4. *koncu bōvu*		*kon + cu + pōvu*	to take

In the last two items *kon* occurs with Past Participle –i– or present participle –*cu*– which in turn are combined with another verb *Pōvu* 'to go' giving a new meaning 'to take'. Same compound with non past participle is continued in the uneducated Telangana Telugu in the form *konta bo:Vu* or *koncabōvu* which disappeared in Standard variety.

2. *Padanu:* It stands for 'wetness' in the speech of uneducated Telangana speakers, *Ta. Pata (–pp), (–tt–)* to

become moist, marshy; patam 'water, dampness, moisture; *KO*, padam wetness of land, *Tu. padam* puni to become wet *Kui. pete* soft, damp; padanu, *Padunu* moisture, dampness, wetness. (D.E.D. 3227). The cognates are found either with–m or with–n. In Old Tamil there was alternation between m and n, *maram, maran* 'tree', *kulam kulan* tank. Corresponding to these forms Telugu shows *mranu* tree, *kolanu* 'tank'. Old Kannada has *kalan* 'battlefield' (*Ta. kalam/n*). Kolan 'tank', *Penan* 'corpse' (Ta. *Pinam/ n*), *maran* 'tree' with n as opposed to *dalimbam* 'white cloth'; *Odam* 'boat' etc with –*m* (.Subrahmanyam 1983). Since this alternation is a common phenomenon in Dravidian languages, some languages showed –*m*– and some other –*n*–. This offers a stronger evidence to point out that *Padanu* is of Dravidian origin. This word is attested in Sabda Ratnakaram in the sense of 'a unit to indicate the rainfall which dampens the soil upto the depth of ten inches'. The word in its broader sense is retained in Telangana among uneducated speakers.

3. *karre :* It stands for 'black' corresponding to which the word *nalupu* is used in standard variety, cognates for *karre* are given below; *Ta.* kāru black; *karukkal* darkness, cloudiness; *Ma: kari,* karu black; Ko. *kar* black; To. *kary* scorched Ka. *Kari* blackness Tu. *kariya* blackness Te. *karu* black [D.E.D.1073(a)] though the form *karre* was not attested in D.E.D, it can be derived from *kāru* as the alternants are found in Telugu for other words also with both long vowel followed by a single consonant and short vowel followed by geminated consonants, e.g.: *ceyi, ceyyi* 'hand' *neyi, neyyi* 'ghee' etc., The word *karu* is found in modern colloquial standard only in certain compounds.

e.g. *kāru ci : kati*   thick darkness
      kāru mabbulu   black clouds

The phonologically modified form *karre* was used in literary dialect which is retained in non standard dialect also.

4. *Pōri, PōraDu:* These words stand for 'girl' and boy respectively in the uneducated Telangana Telugu. Cognates of this word are as follows. Ma. *Pora* a glutton, *Ka, Pora* child, little boy little girl *Tu, Pora,* pare lad; pori lass *Go, Pori* young of pig. *Te. Pōri* girl; *PōraDu* boy (D.E.D. 4603). In the standard Variety *Pilla, ammayi* girl; *Pilla VaaDu, abbayi* boy are used. The word *Pore* was used in literary dialect in the sense of a child which is retained in the dialect under discussion.

5. *kō:pu:* It stands for 'cup'. It cannot be treated as a modified form of English word cup, because cognates are found in other Dravidian languages.

Go. (SR) *kopa* small earthen Vessel (TR) *kopa* small earthen Pot *Pe kopel* smallpot *kol.* (SR) *koja* 'cup' Go. *khoja* bowl (D.E.D. 2191). In all these languages it is found with the same vowel *O* either short or long. If *kopa* were to be a borrowing from English cup, it would have become *kaPPu* instead of *kopa* follwing the pattern of other borrowed words with the same canonical shape.

English	Telugu	
buk	*bukku*	'book'
Dram	*Drammu*	'Drum'
bas	*bassu*	'bus'

It can therefore be said that *kōPa* found in the speech of uneducated Telangana speakers can be traced back to Dravidian origin.

6. *nūku, ūku* : Its central meaning is 'to push'. It is also used in the context of "to push the garbage out, to sweep" in the uneducated Telangana dialect. Following are the cognates from other Dravidian languages. *Ta. nukku* to shove, push, thrust side. *Ka. nūku nugu,nuŋku*to shove, push reject; *Kod. nu.k* to push; *Tu. nukuni* to thrust push; Te. *nūku* to shove, push, thrust out; nūkudu shoving; *Kol. nūk* to push so as to move. (D.E.D. 3083). The usage of this verb is found in literary dialect also in the context of 'to push' which has disappeared from Standard colloquial dialect whereas it is retained in the dialect in question. In their speech the usage is extended to other context 'to sweep', *nūku* 'to sweep' alternates with *ūku*. The proto Dravidian initial n–is occasionally lost in many Dravidian languages.

e.g. **ni: (n)*   *i:vu (O.Te)*

Similarly *nūku*   ūku 'to sweep'

Both *nūku* and *ūku* are in usage in the speech of uneducated Telangana speakers.

7. *Ōkāram* : It means 'to vomit'. Which corresponds to *vānti:* of standard Telugu. This nonstandard form has cognates in other Dravidian languages.

*Ta.okkalam, okkalippu,*oŋkal retching
Ma. okkanam retching, nausea; *Ka. okari*
      okarike, okarisuha, okala 'to retch', *vomit*
Ka. okari, Vomiting *okarisu* to retch
Te. okara, Okarinta, okarincu retching (D.E.D.866)

This word was attested in *Sabda Ratnakaram* also, though it was substituted by a Sanskrit borrowing*Vānti* in standard dialect.

8. *Paylam*: This is used by uneducated speakers of Telangana in the sense of 'be careful'.

Paylam   biDDa   Careful   daughter (Voc)
                    be careful O! daughter.

The standard form *padilam* from which Paylam is derived is used in different contexts.

e.g. *dabbu   Padilangā   dācuko*
     money   carefully   hide
     keep money carefully

The word *jāgrata* is used in standard variety in the context where *Paylam* is used by uneducated class of Telangana. Though the words like *jagrte, badrva* are prevalent in the sense of 'carefully' in colloquial Kannada, Kittel in his dictionary shows the occurrence of *Padulamve* (O.ka) *hadulave* (Mod. ka) "well being", safety, As far as Tamil is concerned the word *Padanam* is given in Tamil dictionary compiled by Kazagam according to which this word occurs in literary dialect in the sense of 'careful, to protect'. At present it is replaced in the colloquial standard variety by *jāgrata* 'careful'. In Telugu also the word *Padilam* is used in the sense of 'careful' in literary dialect, which in colloquial standard Telugu is used with certain lexical items only.

9. *dubba:* It stands for 'soil, dust' in the un educated variety of Telugu. In the standard variety *dummu* is used. Both the forms are derived from the same proto Dravidian form undergoing different kinds of phonological changes.

The cognates from other Dravidian languages are as follows.

Ta. tumPu 'dust'. *Ka. dumbu* id; *Te. dummu*

dumaramu id. Based on these cognates **tumPu* can be reconstructed to Proto Dravidian stage.

*NP > NB in Kannada and Telugu.

Further, in Telugu assimilation has taken place in opposite directions in nonstandard and standard dialects resulting in different phonological forms.

PDr * *tumPu*   >   *dumbu* (Te)

　　　　　　dummu   *dubba*

　　(Anticipatory   (Perseverant

　　Assimilation)   Assimilation)
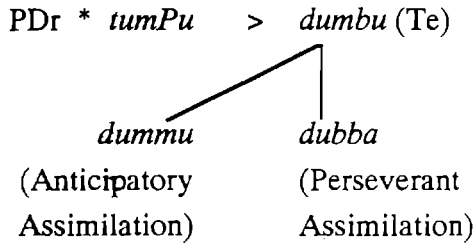
10. *bokkalu:* It stands for bones, In the standard dialect the word *emukalu* is in usage. The word *bokkalu* is a modified form of *bomikalu* which is found in the literary dialect. Cognates from other Dravidian languages are as follows.

Te. bomika, bomike, boke bone. *Kol . bokka*

NK. bokka Pa. *bula* id. Go (L) *boka*

(M) *bula* id. Ka. *mule* Kod. *mule*

Though the form *emukalu* is of Dravidian origin it is not attested in *Sūryarāyāndhra nighaṇṭuvu* as being used in literary dialect. The word *bomikalu* which was used in literary dialect is retained in modified form in the uneducated Telangana dialect.

Conclusion

The lexical items used in the uneducated Telangana dialect are not only of Dravidian origin but were used in the literary dialect also. These are replaced in modern colloquial standard variety with forms, either borrowed from Sanskrit or Dravidian words which were not used in literary dialect. It can therefore be said that, this particular variety of Telugu shows more of old literary forms which are of Dravidian origin.

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NEWS OF THE DEPARTMENT

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TIME SIGNALING LINGUISTIC FORMS IN TELUGU AND THEIR MEANING*

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Abstract: *The time signaling linguistic forms in Telugu are systematically explored to understand their role in capturing linguistic timé as a pure semantic notion.*

The **time signaling linguistic forms** (hereafter called TSLFs) are those which express time in any human language. These forms vary in form and meaning from language to language. In this paper an attempt is made to deal with the role of Telugu TSLFs in expressing time. For the sake of convenience, we shall dévide the following presentation into three sections, viz. the future, the present, and the past.

The Future

We can precisely define the future as a time subsequent to the coding time (C). This can be shown in the following way:

Future

$$\overset{\bullet}{C}$$
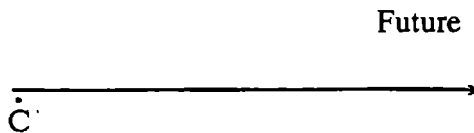
When we assume that some event will take place during this time, we are said to be talking about future time. No one knows what is going to happen in the time that is to be

or will come hereafter. So all the propositions which we talk about may or may not take place. Leech (1971) is of the opinion that we cannot be so certain of future happenings as we are of past and present events. Even then in our day-to-day discourse we are rather compelled to assume, speculate or predict about some events as happening at a specific point or during a specific period of future time. As in the case of the past and the present time, this too has no physical limit, but shifts according to the time of coding.

The following ten TSLFs are used to denote future in Telugu; they are:

1. The future tense
2. Infinitive + past progressive tense of $p\bar{o}$
3. The past progressive tense
4. The future progressive tense
5. Infinitive + future tense of $p\bar{o}$
6. Infinitive + future progressive tense of $p\bar{o}$
7. Past verbal participle + future tense of *un*
8. Infinitive + *(v)* + $\bar{a}li$
9. Infinitive + *(v)* + $\bar{a}lsi$ + *uṅdi*
10. The past tense.

These TSLFs can express future in Telugu though there is a certain degree of semantic variation between them.

1. The future tense is very likely the most usual one employed for future in Telugu. This tense can be used with a time expression for a definite future arrangement as in the following examples:

1. *rēpīsamay āniki nēnu ḍillī lo untānu.*
   'By this time tomorrow, I will be in Delhi.'

2. *ī ādivāraṅ sinimāki veltānu.*
   'I will go to a movie this Sunday.'

It also indicates an additional idea of promise, inten-
tion or inevitability. The relative frequency of this form in
Telugu is much higher than the other forms used for future
reference.

As mentioned above, the future tense is used to pre-
dict, opine, assume or speculate about a future event as
shown in (3), (4) and (5) below:

3. *atanu rēpu vastā ḍanukuṅtānu.*
   'I suppose he'll come tomorrow.'

4. *bahuśā vānni jaillõ peḍatāru.*
   'They'll probably put him in jail.'

5. *vāḍu parīkṣa feyilavutāḍēmō!*
   'Perhaps he'll fail in the examination!'

In a way, the verbs like *anukonu* in (3) and the adverbials
like *bahuśā* in (4) and *ēmō* in (5) are adding something
to the intended meaning of the proposition.

The future tense is also used to foretell future events,
as in (6) and (7):

6. *mana dēśaṅ vaccē śatābdāntanikallā svayaṅ
   samruddhamautundi.*
   'Our country will become self suffucient by the
   end of next century.'

7. *marō vandēñḍlalō mānavuḍu visvāñtarāḷānni jayistāḍu.*
'In another hundred years, man will conquer the outer space.'

When a future proposition is made with the help of conditional, temporal, or sometimes, purposive sentences, the future tense is used in the main clause:

8. *vāḍiki cebitē ninnu cañputānu.*
'If you tell him, I'll kill you.'

9. *vāna velisāka veldāmu.*
'After the rain stops, we will go.'

10. *vāḍu tiṅṭāḍani māṅsañ vaṅḍutunnānu.*
'I am cooking mutton so that he'll eat.'

Sometimes, certain events will take place without the intentional involvement of a person. Consider the following example:

11. *atanni rēpu kālējilō cūstānu.*
'I shall see him in the college tomorrow.'

This event will take place on its own, because both persons study in the same college and attend regularly.

Similarly, the future tense is used to denote a future event as a fact:

12. *vaccē nelalō ugādi vastuṅdi.*
'Ugadi comes in the next month.'

13. *ī nelākhariki nāku mupphai ēṅḍlu niṅḍutāyi.*
'I will be thirty years by the end of this month.'

The future tense with a subject in the first person may be used to express intention made at the moment of decision:

14. *"rājā! emiṭalā unnāv?" ani aḍigiṅdi.*
    "talanoppigā uṅdi."
    "paḍukō. ḍāktarni pilustānu."
    '"What's the matter, Raja?" she asked.'
    'I've got a headache.'
    'Lie down and I'll call the doctor.'

Now look at another example:

15. *– vaccēppuḍu nākō nōtbuk testāvā?*
    – alāgē, testānulē.
    '– Will you get me a note-book while returning home?'
    '– Certainly, I'll get it.'

Unlike (14), the prediction in (15) is not the new information but it is a response given to a request. This difference is due to the difference in the discourse features of the examples concerned.[1]

Future habitual events can also be expressed in the future tense:

16. *paurṇami rōjulu mallī mallī vastāyi.*
    'The days of fullmoon will come again and again.'

17. *ikamī daṭagūdā vasaṅtaṅ tarvātanē grīṣmaṅ vastuṅdi.*
    'In future also the hot season follows the spring season.'

This tense is usually employed in the formal announcements of the future programmes of the political leaders, high officials or foreign dignitaries in newspapers, radio and TV news bulletins. Following are some of the representative examples:

18. *amerikā rāyabāri misṭar buṣ āgaṣṭu 15 vēdukallō pālgoṅṭāru.*
   'The American ambassador, Mr. Bush, will participate in August 15 celebrations.'

19. *usmāniyā yūnivarsitī vī. sī. maṅgaḷavāraṅ nāḍu akhila bhāratīya bhāṣāvēṭṭala sammēḷanānni prāraṅbhaṅ cēstāru.*
   'The V.C. of Osmania University will inaugurate the All-India Linguists Conference on Tuesday.'

This tense is also used in expressing a potential danger, warning and prediction:

20. *debbalu tiṅṭāvu ēmanukuṅṭunnāvō!*
   'I do not know what you think, but you are sure to get beatings.'

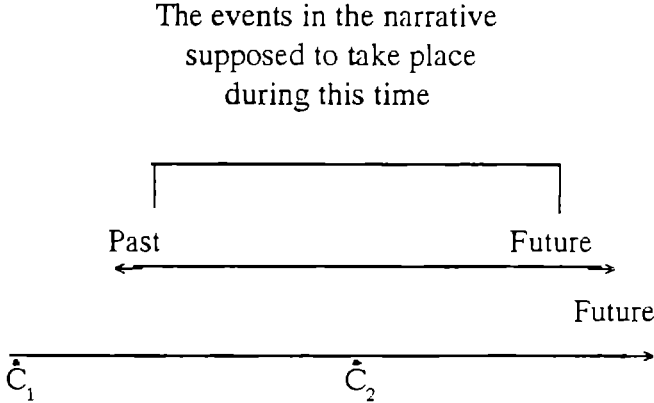21. *ī vēḷappuḍu vīdhilōkeḷḷaku, pōkiri pillalu allaripeḍatāru.*
   'At this hour of the time don't go into the street, or loafers will tease you.'

22. *paḍatānu, niccena gaṭṭigā paṭṭukō.*
   'Hold the ladder firmly, I may fall.'

A creative writer, sometimes, sets the plot of his story in the time future to writing (=coding) time, i.e. from

a vantage point in the future, he stretches his imagination backwards or forwards as required by the situation. This can be better explained with the help of the following diagram:

The events in the narrative
supposed to take place
during this time

Past   Future

Future

$\overset{\bullet}{C_1}$ $\overset{\bullet}{C_2}$

Here, C_1 represents the actual time of the narrative and C_2 represents a vantage point in the future. The propositions of all the events in the narrative supposed to take place prior to C_2 and later to C_1 employ all the TSLFs which are relevant for the past time expression. Following example is taken from such a writing in Telugu:

> 23. *di. 16-3-2053 na rātri 8-45 nimuṣālaku hindī vārtalu ayyākā dēśapradhāna mantri ti.vi. lō prasaṅgincāru. (*from a story *'kūturu puṭṭālaʃ'* by Palakura Sitalata; published in *Andhra Sachitra Vāra Patrika*: 3-2-84).
> 'On 16-3-2053 at 8.45 p.m., after the Hindi news bulletin, the Prime Minister spoke on TV.'

The event in (23) is assumed or imagined to take place in the future but depicted in such a way as if it had already happened.

Sometimes, the future tense is also used to summarise the story so far in a narrative or fiction writing when it appears in instalments or parts (in a popular magazine or on the radio) :

24. ... *r ā m ā naṅdaṅ p ā ṭikēḷḷa śakuṅtalanu vivāhaṅ cēsukuṅṭ ā ḍu* ... *śyāmala, n i raja ā iṅṭi nuṅci vellipōt ā ru. śyāmala kumārte sarōjaṭōp ā ṭug ā vāru simlā cērukuṅṭ ā ru. akkaḍa śy ā mala ṭana b ā lya snēhiṭur ā lu kamalanu kalusukuṅṭuṅdi* ... [from *jarigiṅa kāṭha* 'the story so far' of a serial novel *svayaṅ siddha* by Arikepudi (Koduri) Kausalya Devi, published in *Vanita* (March, 1985)]

'... **Ramanandam** marries a twenty five year old Shakuntala ... Shyamala and Niraja go away from that house. Along with Saroja, the daughter of Shyamala, they reach Simla. There, Shyamala meets her childhood friend, Kamala ...'

The use of the future tense in the above example does not imply that these events are happening now, or that they will actually happen in future. This is simply a device, making a change from the past tense in which the *jarigina katha* 'the story so far' is normally described. See the following example where past tense is used for the same purpose:

25. *nayana iṅṭilōṅci p ā ripōyiṅdi. ā menu koṅdaru duṅḍagulu veṅbadiṅc ā ru ati kaṣṭaṅ m i da āme railekkiṅdi. railu peṭṭelō oka musalidi nayanaku ā sar ā ayiṅdi.* [from *jarigina katha* 'the story so far' of the earlier instalments of the serial *pilupu*

nikōsame by Mannem Sharada; published in
Andhra Jyoti Sachitra Vara Patrika: 23-8-85]
'Nayana ran away from the house. Some black-
guards followed her. With a great effort she got
into the train. An old woman, in the compart-
ment of the train, became her prop.'

This tense is also used in referring to the later part of
a book, article, lecture etc.:

26. *ī rōju ナ ā upanyāsaṅ civaralō moghalu
sāmrājya patanāniki gala kāraṇālani
parisī listānu.*

'At the end of my lecture today I shall examine
the reasons for the downfall of the Moghul em-
pire.'

This tense is usual when we are retelling or briefing
or narrating a story to others. The following example is
from the summary of a Telugu novel entitled *nikem kavali*
by Kodavatiganti Kutumba Rao:

27. ... *kāmaṅtō kastūrini sprusiṅcutāḍu. ... āmenu
vivāhamāḍālani nirṇayiṅcukuṅṭāḍu. aṅduku
āme, "..." aṅṭuṅdi.* [from *Andhra Jyoti Sachitra
Vara Patrika*: 17-8-84]
'... he touches her lustfully .... he decides to marry
her. For that she says, "..."'

The following excerpt is taken from a Hindi feature
film (i.e. *Paar*) review appeared in a Telugu daily:

28. ... *krūratvaṅ, nirdaya, amā nuṣatvaṅ tappa marō
mānava guṇaṅ lēni bhūsvā mi koḍuku skūlu
ṭī carnu hatyacēstā ḍu. paigā dā nni oka rōḍḍu
pramā daṅgā nirūpistā ḍu. dī nni sahiṅcalēṇi
harijanulu adē paddhatilō bhūsvāmi koḍukunu
hatyacēsi pagatīrcukuṅṭā ru ... [Udayam:*
19-8-85]
'... the landlord's son, who has no other human
quality except cruelty, mercilessness and inhu-
manness, murders the school teacher. Besides,
he proves it as a road accident. The Harijans,
who are unable to tolerate this, take revenge by
murdering the landlord's son in the same manner
...'

This tense may be used to report a statement of an
author from his book or that of a character therein as in the
following:

29. *karma phalā nni ā śiṅcakuṅḍā vidhigā kā rya
s ā dhana cēyuvā ḍē parama puruṣuḍu ani
bhagavatgī talō kruṣṇuḍu arjununitō ceptā ḍu.*
'In the Bhagavat Gita, Krishna says to Arjuna
that the one who does his duty without being
attached to the fruits of activity is a supreme
man.'

Sometimes, this tense is also used to assess the char-
acters in a story:

30. *viśvanā thavā ri kathā nā yikalu kaṣṭā latō
pōrā ḍutā ru. vā ribratukulu vā rē bratukaḍā niki
prayatnistā ru. eppudu evari sahā yā nnī
arthiṅcaru.*

'Viswanatha's heroines fight the hardships. They try to live on their own. They never ask for anybody's help.'

Further, this tense may be used in giving information about a physical state of things or persons in absence:

31. *rāvugāri ammāyilu poḍuggā uṇṭāru.*
'Mr. Rao's daughters are very tall.'

32. *tājmahal cālā bāguṇṭundi.*
'The Tajmahal is very beautiful.'

This tense is also used in giving information regarding road directions etc. to a stranger:

33. *tinnagā vellaṇḍi. sandhya ṭākīs vastundi. dāni daggara unna dukāṇāllō mīku kāvalsinavannī dorukutāyi.*
'Go straight. You find Sandhya Talkies. In the shops nearby you get anything that you want.'

Sometimes, while reporting an event that took place more than once in a similar manner prior to the reporting time, this tense is used. Look at the following excerpt of a headline news item from a Telugu daily:

34. *koṇḍaru mārning vāk ki bayaludērutāru. pārkulōki pravēśistāru. oka bāmbu haṭāttugā pēlutundi. akkaḍunnavāru tunātunakalaipōtaru. bāmbu vāsanā, cāvu vāsanā vyāpistundi. ī rakaṅgā dilli ī lōnu, parisara prāntālalōnū iravai nālugu gaṇṭala vyavadhilō 80 maṇḍiki paigā amāyakulu canipōyāru.* [*Udayam* : 12-5-85]

'Some people start for a morning walk. They en-
ter into the park. Suddenly a bomb blasts. The
people there are torn into pieces. The odour oi
the bomb and death spreads. In this manner, ii
Delhi and other surrounding places more than 80
innocent people died in a twenty four hours time.'

The past tense form of the verb die *('canipōvu')* in (34)
signals that the other verbs, though they are used in the
future tense form, are actually referring to an event which
occurred several times in a succession or simultaneously
in different places during a period of time in the past.

In its restrinctive usage, the future tense is employed
in seeking some information by questioning as shown in
(35) below:

35. *– ī bhōjanaṅ eṅta maṅdiki saripōtuṅdi?*
    – bahuśā padimaṅdiki.
    '– For how many people this food is sufficient?'
    '– May be for ten.'

The following sentences with future tense verbs in
them signal repeated, customary, and habitual events. All
these propositions are made based on the past experience
or knowlege of the speaker or writer. Consider the follow-
ing examples:

36. *rāju kabaḍḍi āḍatāḍu.*
    'Raju plays kabaddi.'

37. *rāmayya ganilō panicēstāḍu.*
    'Ramaiah works in the mine.'

38. *bhāratīyulu chāṅdasulu. aṅdukē prati dāniki
    ēḍustāru.*

'Indians are a sentimental people. That's why they weep for everything.'

39. *rāṇi guḍiki taracū veltuṅdi.*
'Rani often goes to the temple.'

Sentence (36) would mean either Raju can or know how to play kabaddi, or he does habitually play. The proposition in (37) suggests that Ramaiah is employed in a mine for a particular span of his life. The proposition in (38) points out that the people of India are grouped by a common trait.

The future tense, as in (39), is often associated with adverbials such as : *appuḍappuḍu* 'occassionally', *pratirōju* 'everyday', *vārānikōsāri* 'once in a week' etc. In such cases, the adverbials limit the duration of the action, so indicating a contrast with some other period. At the same time, they reinforce the notion of repetition and indicate nearly how many times an event is repeated.

This tense is appropriate for expressing general or eternal truths. The following statements are true for all time:

40. *himālaya pārvatālu ellappuḍu maṅcutō kappabaḍi uṅṭāyi.*
'The Himalayas are always covered with snow.'

41. *samudrapu nīru uppagā uṅṭuṅdi.*
'The sea water is salty.'

2. Infinitive + past progressive tense of *pō* tends to indicate a future signification. Here is an example with this form:

42. *idi nājī vitanlō adbhutamaina rōju kābōtundi.*
'This is going to be the most wonderful day of
my life.'

This form denotes not only a future event but also an
intention when the subject is human:

43. *nēnu vāḷḷaku ceppabōtunnānu.*
'I'am going to tell them.'

This form is also used in a wider range of contexts,
wherever the proposition made is about a future event re-
sulting from the present state of affairs. Consider these
examples:

44. *aṭu cūḍu. varṣan paḍabōtundi.*
'Look there! It's going to rain.'

45. *ī ceṭṭu pūtaku rābōtundi.*
'This tree is going to blosom.'

In each of the above sentences the state of affairs giving
rise to the future event are taken for granted. The proposi-
tion in (44) is made when one sees dark clouds in the sky.
In (45), the proposition is possible on two counts: it is the
age of tree or the season that is responsible for its blos-
soming.

The proposition made by this form generally indi-
cates the immediate future wherever the context does not
provide a future time reference, or a future time adverbial
is not present. cf. (46) with (47):

46. *ēn cēyabōtunnāvu?*
'What are you going to do?'

47. *mīru tarvā ti nātakanlō natincabōtunnārā?*
'Are you going to act in the next play?'

This form not only indicates a premeditated action, as mentioned earlier, but also expresses a plan:

48. *ippudē calānu konukkoccānu. byānkulō parīksa fīju kattabōtunnānu.*
'I've just bought the challan form and I'm going to remit the examination fee in the bank.'

3. The past progressive tense when used with a future time adverbial, refers to a forth coming event resulting or contextually realised from a present plan, programme or arrangement:

49. *rēpu ēmi cēstunnāru?*
'What are you doing tomorrow?'

50. *rāstrapati jñāni jailsing ī nela 14na (ādivāran) nagarāniki vastunnāru. [Udayam :* 13-7-85]
'The President, Jnani Jail Singh, is coming to the city on 14th (Sunday) of this month.'

Like the **infinitive + past progressive tense of *pō*** form, this tense (particularly when it is not associated with a time adverbial) generally refers to the immediate future, e.g.

51. *nēnu kūda mītō vastunnānu.*
'I'm also coming with you.'

Narayana Rao (mimeo) points out that the past progressive tense may be alternatively used with a prospec-

tive verb form (infinitive + past progressive tense of *pō*). He illustrates this point with the following two examples:

> *nēnu rēpu veḷḷipōtunn ā nu.*
> 'I am leaving tomorrow.'

> *nēnu rēpu veḷḷipōbōtunn ā nu.*
> 'I am going to leave tomorrow.'

The present writer agrees, to some extent, with the above opinion as long as these are used for the future reference. But, when they are used in the past propositions, they cease to function as alternatives [see examples (85) and (86)].

4. The future progressive tense expresses an ongoing action at a time in future. The future time adverbial must be provided either intersententially or intrasententially:

> 52.*tvaragā vaccēyaṅḍi. nēnu mīkosaṅ*
> *nīrikṣistuṅṭānu.*
> 'Come soon. I will be waiting for you.'

> 53. *rēpī samayāniki mā parīkṣa jarugutuṅṭundi.*
> 'Our examination will be taking place tomorrow by this time.'

This tense can also be used to denote an action or event which habitually or repeatedly took place in the past and likely to continue in the future.[2] Look at the example below:

> 54. *nēnu rōjū vyāyāmaṅ cēstuṅṭānu.*
> 'I do physical exercise daily.'

5. Infinitive + future tense of *pō* is used to denote generally, the immediate future, i.e. just after coding time:

55. *vīru ippuḍu 'yuddhamū śānti' anē viṣayaṅpai māṭlādabōtāru kāvuna mīraṅtā niśśabdaṅgā uṅḍālani kōrukuṅṭunnānu.*
'He is about to talk on the topic 'War and Peace', therefore, I request you all to be silent.'

It is also not abnormal to use this form in expressing repeated, customary and habitual actions. The proposition in this case takes only animate subject(s):

56. *atanu pratirōjū pēkāṭa ādabōtāḍu.*
'Everyday he goes to play cards.'

6. Infinitive + future progressive tense of *pō* indicates a future event. Compare (57) and (58):

57. *rēpipāṭiki atanu parīkṣa rāyabōtuṅṭāḍu.*
'Tomorrow by this time he will be going to write the examination.'

58. *rēpu atanu parīkṣa rāyabōtunnāḍu.*
'Tomorrow he's going to write the examination.'

7. Past verbal participle + future tense of *un* ,which was labelled as 'Future Perfect Tense' by Arden (1873), expresses an action perceived to have already been completed prior to a definite point of time in future. In this case a future time adverbial is obligatory since it specifies the point from which the past is visualized:

59. *nīvu tirigoccē sariki āme nikōsan vanṭacēsi unṭundi.*
'By the time you come back she will have cooked for you.'

Venkàteswarlu (1982) is of the opinion that this form has no existence in Telugu. But the examples like (59) above is sufficient to disprove his claim.

8. Infinitive + *(v)* + *āli* construction, when used with a future time adverbial, indicates an obligatory future event:

60. *nēnu rēpu rājāni kalavāli.*
'I have to meet Raja tomorrow.'

It is also used for future predictions:

61. *sāyantrankallā varṣan paḍāli.*
'It should rain by evening.'

9. Infinitive + *(v)* + *ālsi* + *undi,* when used with a future time adverbial, denotes an obligatory future happening and sometimes indicates a predetermined or destined future event or state:

62. *atanu mundu mundu ennō manci panulu cēyālsi undi.*
'He is destined to do many good things in future.'

10. The past tense forms of a couple of verbs indicate immediate future event. The following example is extracted from Venkateswarlu (1982: p. 552):

idigō, vaccā. (= ippuḍē vastānu)
'Look! 'I'll come right now.'

The verb *caccu* 'die' when used in the past tense form with the first person human subject, as given in (63) below, expresses a future event visualised spontaneously (whether it is accomplished in an immediate future or not):

63. *abbā! casti.*[3]
    'Alas! I'm gone (= I've died.).'

The Present

The present time can be notionally devided into instantaneous present and extended present. The former indicates an event simultaneous with the coding time. It may be expressed diagrammatically thus:

Instantaneous Present

Past	•	Future

C

The latter shows no limitation on the extension of the state into past and future time. That is, it indicates the present time extending into the time preceding and following the coding time. This may be shown as follows :

Extended Present

Past	(. . . . .)	Future

C

In the first case it is a point of time, NOW, and in the second case it is a period of time, NOW. However, this distinction is only conceptual and does not affect the verb forms. Hence, It should not be associated with the non-progressive and progressive aspects respectively.

In Telugu, the present state or event is expressed by:

1. The past progressive tense
2. The past tense of *un*
3. The future tense of *un*
4. The future progressive tense.

1. The past progressive tense is used to denote an activity taking place now (i.e. coding time). Observe the following examples:

> 64. *atanu ceppindi niku ceptunn ā nu.*
> 'I'm telling you what he said.'

> 65. *manaṅ ippuḍu ekkaḍiki veltunn ā mu n ā nn ā ?*
> 'Where are we going now, dad?'

In (64) and (65), the events are occurring simultaneously with the coding time, that is **now**. In fact they started earlier than coding time and may continue to occur in the future also. Take for instance (64): when someone is passing on a message, may stop for a while and remind the listener of what he is doing by uttering (64). (65) may be used by a child asking his father when they are in a running car.

The past progressive tense, when used to denote the present, also adds an additional meaning of limited duration. This is true whether it proposes an instantaneous or extended present as the division shown above. Consider these examples:

> 66. *aṭu cūḍaṅḍi, v ā ḍu sigareṭṭu t ā gutunn ā ḍu.*
> 'Look there! he is smoking a cigarette.'

> 67. *v ā ḍ ī madhya sigareṭlu b ā g ā tagutunn ā ḍu.*
> 'He is smoking a lot of cigarettes these days.'

The sentence (66) indicates an ongoing action of limited duration, which itsel is in the instantaneous present time. On the other hand, (67) indicates an action occurring frequently these days in extended present time. Here, again the action is of limited duration.

How extended is the extended present? This depends on the individual propositions made for the present time. Each situation has its own limitation by the law of nature pertaining to time span. So, it is with the help of time and frequency adverbials, one can visualise the extended present time.

2. The past tense of *un* in Telugu, when used to denote present time, doesn't express present activity. For that as shown above only past progressive tense is employed. The propositions intended for present state will take this as shown below:

68. *atanu iṅkā̄ akkaḍē unnā̄ḍu.*
    'He is still there.'

69. *prastutaṅ prati 1000 maṅdi puruṣulaku 970 maṅdi strīlu unnā̄ru. ī paristhiti ilāgē konasāgitē prati 1000 maṅdi puruṣulaku 100 maṅdi strīlu uṅtā̄ru.*
    'At present, there are 970 women for every 1000 men. If this trend continues, there will be 100 women for every 1000 men.'

The present state of the proposition in (68) is realised contextually. At the same time, the proposition made in (69) is true for present time denoted by the adverbial *prastutaṅ*. Further, this proposition is about instantaneous present time.

3. The future tense of *un* also indicates the present state which is not within the immediate proximity of the codifier and listener(s) at the time of coding. For example, see (70):

70. *– jānaki ekkaḍa?*

     – bahuśā, vaṅṭiṅṭlo uṅṭuṅdi.

     '– Where is Janaki?'

     ' – Probably, she is in the kitchen.'

4. The future progressive tense is used to express the acitvity or event which is taking place or in progress at the time of coding. In these cases, again like the proposition in (70), the activity or event will not take place within the proximity of the codifier and listener(s). This proposition also presupposes the earlier experience or knowledge on the part of the codifier, e.g.

71. *– vāḍu ippuḍu ēṅ cēstuṅṭāḍu?*

     – hōmvark cēstuṅṭāḍu.

     '– What will he be doing now?'

     '– He will be doing his homework now.'

The future and future progressive tense, as shown in (70) and (71), also express events which are taking place during the extended present time.

The Past

The time which precedes the coding time is assumed to be past. In this case, the event can be traced at a definite point or during a definite period of time on the unending past scale. Observe the following diagrams:

Past

←——————————————————————————————
                                                                    Ċ

event at a time

    Past   .
←——————————————————————————————————————
                                                                    Ċ

event during a period

         .   . . .
    Past   ⌈   ⌉
←——
                                                                    Ċ
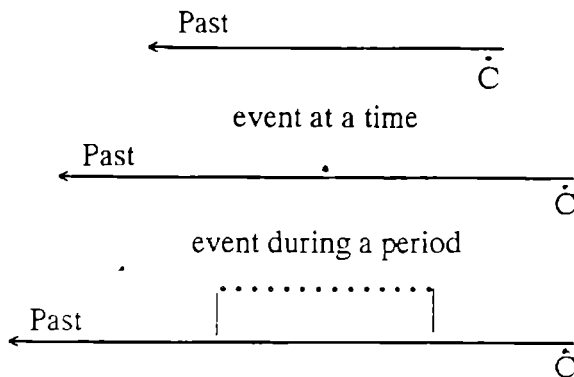
Telugu employs the following devices to refer to something which occurred in the past:

1. The past tense
2. The past progressive tense
3. Infinitive + past progressive tense of *pō*
4. Infinitive + past tense of *pō*
5. Future relative verbal participle + pronoun
6. Future verb stem + progressive suffix + future relative verbal participle of *un* + pronoun.
7. Past verbal participle + past tense of *un*
8. Past verbal participle + future tense of *un*
9. Infinitive + *(v)* + *ā li*
10. Infinitive + *(v)* + *ā isi* + *uṅdi.*

1. The past tense, in Telugu, expresses on one-time completed past event:

> 72. *vinōd atani vaipu pariśilanag ā cusāḍu.*
>   'Vinod looked at him searchingly.'

This may be identified either by a past time adver-

bial in the sentence as given in (73):

73. *mēmu pōyina vēsavilō ūṭiki vellāmu.*
    'We went to Ooty last summer.'

or may be implied by the context, as shown in the
following:

74. – *selavallō eñ cēs ā vu?*

    – *c ā l ā pustak ā lu cadivānu.*

    '– What did you do in the vacation?'

    '– I read a lot of books.'

The propositions made in (73) and (74) above are
those of a definite past time orientation, i.e. the time
of an event was pin-pointed by a specific time adverbial.
Sometimes, the past reference is made in association with
a non-specific time adverbial of duration. Compare (75)
with (76) below:

75. *nēnu mūḍēṅdlu kar ā ṭe nērcukunn ā nu.*
    'I learned karate for three years.'

76. *nēnu 1981 nuṅḍi 1983 varaku kar ā ṭe*
    nērcukunn ā nu.
    'I learned karate from 1981 to 1983.'

The habitual or frequentative events that occurred
over a limited period of time in the past can also be ex-
pressed by the past tense, e.g.

77. *ā rōjullō rōjuku n ā lugu gaṅṭalasēpu cadivānu.*
    'In those days I read four hours a day.'

2. The past progressive tense, in Telugu, is used to express an activity in process in the past. This activity is of limited duration, but its exact limits are not specified, viz:

Past continuous activity

. . . .
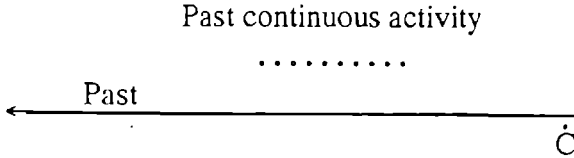
←_____ Past _____
 ̇
C

If this tense is used without a time adverbial, the proposition may indicate gradual development:

78. *pakṣulu gūḷḷu cērukuṅṭunnāyi.*
'The birds were coming back to their nests.'

Sometimes, the activity which is in process, indicated by the past continuous, may not be fulfilled.

Consider the following:

79. *atanu parīkṣa rāstunnāḍu. unnaṭṭuṅḍi ataniki guṅḍepōṭu rāvadaṅṭō parīkṣa rāyaḍaṅ mānālsi vaccindi.*
'He was writing the exam. But he was to stop writing the examination due to sudden heart attack.'

This tense in colligation with a point of time in the past indicates an activity still in process, i.e. began before that time and probably continued after it. Observe the following diagram and the examples:

activity in process

. . . .

←_ Past _____|_____|_____
 ̇
point of time   C
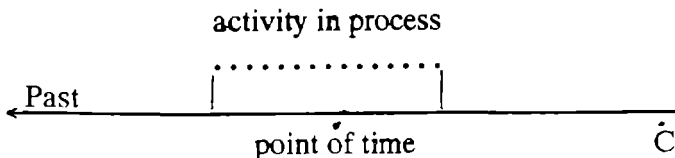
80. *atanu udayaṅ ēḍugaṅṭalaku vyāyāmaṅ cēstunnāḍu.*
'At seven in the morning he was doing physical exercise.'

81. *nēnu akkaḍiki veḷḷēsariki atanu vyāyāmaṅ cēstunnāḍu.*
'When I went there he was doing physical exercise.'

(80) implies that the *vyāyāmaṅ* had started before seven in the morning or the time that I went there, as in (81), and that it continued after that time.

It also indicates **the future in the past** as shown by the following example:

82. *ā rōju nēnu veḷḷēsariki atanu baṭṭalu sardukuṅṭunnāḍu.*
– enduku?
– adē rōju sāyaṅtraṅ atanu bonbāyi veltunnāḍu - andukani.
'– That day when I went there he was packing his dresses.'
'– Why?'
'– He was going to Bombay same evening – that is why.'

This can be presented more clearly with the help of a diagram:

Past   *sardukuṅtunnāḍu*   *veltunnāḍu*
            (. . . . .)   (. . . . .)
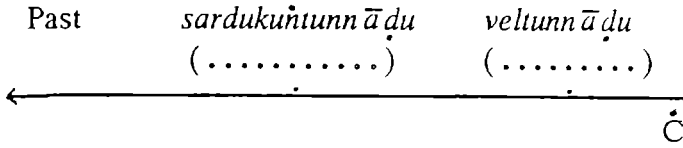
Sometimes, the past progressive tense is used in the place of a past tense (for the past propositions). Observe (83) below:

83. *narēṣ   sarasana   rādha   tolisārigā kathānāyikagā naṭistunnadi. suṭiṅgu bhāgaṅ pūrtayina ī citraṅlō iṅkā satyanārāyaṇa, allurāmaliṅgayya, sudhākar, annapūrṇa, ramāprabha taditarulu mukhya pātralni pōṣistunnāru.* [from a film report published in *Andhra Jyoti Sachitra Vara Patrika*: 17-8-84].

'For the first time Radha is acting as a heroine by the side of Naresh. In this movie, whose shooting part was over, along with others. Satyanarayana, Allu Ramalingaiah, Sudhakar, Annapurna, Rama Prabha are also playing in the leading roles. '

In this case, the shooting part of the film was already over by the time of its reporting. So, most normal choice is the past tense rather the past continuous tense. See (84) below:

84.*narēṣ sarasana rādha tolisārigā kathānāyikagā naṭiṅcindi. sūṭiṅgu bhāgaṅ pūrtayina ī citraṅlō iṅkā satyanārāyaṇa, allurāmaliṅgayya, sudhākar, annapūrṇa, ramāprabha taditarulu mukhya pātralni poṣiṅcāru.*

'For the first time Radha acted as a heroine by
the side of Naresh. In this movie, whose shoot-
ing part was over, along with others,
Satyanarayana, Allu Ramalingaiah, Sudhakar,
Annapurna, Rama Prabha also played in the
leading roles.'

3. Infinitive + past progressive tense of *pō* with a
past time adverbial, expresses unfulfilled plans in the past:

85.*ārōju ēṅ jāriṅgindō telusā ? atanu
bassekkabōtunnāḍu. ī lōga kālujāri kiṅda
baddāḍu.*

'Do you know what happened that day? He was
going to get into the bus. But by then his leg
slipped and fall down.'

Here, the activity in fact was in progress and hindered by
some unprecedented cause.

This form refers to a pre-programmed event in the
past which was not fulfilled, and latter in sequence to an-
other fulfilled event in the past. That is, it refers future in
the past:

86. *vā llu adē r ōju s ā yantran ā sṭrē liyā
vellabō tunnāru, kāni aṅtakannā muṅdē agni
pramādaṅlō aṅtā caccipōyā ru.*

'They were going to go to Australia that evening,
but before that all of them died in the fire acci-
dent.'

See also the following diagram in connection with
the above example:

unprecedented	pre-programmed
event fulfilled	event unfulfilled
.	. . . .
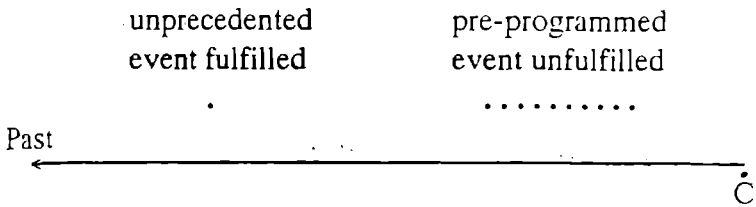
Past
$$\longleftarrow\rule{6cm}{0.4pt}$$
Ċ

4. Infinitive + past tense of $p\bar{o}$ with a past time adverbial, indicates the non-beginning of the event in the past:

87. $r\,\bar{a}\,tri$ $atanu$ $\underset{.}{t}\,\bar{e}\,bul$ $daggara$ $k\,\bar{u}\,rconi$
$caduvab\bar{o}\,y$ $\bar{a}\,\underset{.}{d}u,\,ad\bar{e}$ $samay\bar{a}$ $niki\,lai\underset{.}{t}lu$
$\bar{a}\,ri\,p\bar{o}y\,\bar{a}\,yi.$
'At night sitting near the table he was about to read, at the same time the lights went off.'

This form is also used with a different connotation for a past event:

88. $par\,\bar{i}\,k\underset{.}{s}a\,r\bar{a}yab\,\bar{o}\,y\,\bar{a}\,\underset{.}{d}u.$

'He went to write the examination.'

5. Future relative verbal participle + pronoun expresses past custom, habit, repeated action, or state which contrasts with the present:

89. $atanu\,g\bar{e}\,y\bar{a}lu\,r\,\bar{a}\,s\,\bar{e}\,v\bar{a}\underset{.}{d}u,\,ippu\underset{.}{d}u$
$navalalu\,r\,\bar{a}\,stunn\,\bar{a}\,\underset{.}{d}u.$

'He used to write poems/compositions, now he is writing novels.'

This also denotes a past state or habit that continues to exist, but in a changed form:

90. $atanu\,ippa\underset{.}{t}ikann\,\bar{a}$ $ekkuvag\bar{a}$ $t\bar{a}\,g\bar{e}\,v\bar{a}\underset{.}{d}u.$
'He used to drink heavily than he does now.'

This can be used even when we are not making a contrast between past and present, in this case we are casually mentioning someone's customary habit or routine during an unspecified or specified period of past time, as illustrated in (91) and (92):

91. *āme rōju itaku vellẹdi.*
'Daily she ued to go for a swim.'

92. *1980 lō atanu rōjuku padi gaṅṭalu visrānti īisukunēvāḍu.*
'In 1980 he used to take rest ten hours a day.'

6. Future verb stem + progressive suffix + future relative verbal participle of *un* + pronoun makes the similar proposition (i.e. indicating past habitual or frequentative events) as expressed in (77) and (92). But the only difference it shows is the durational aspect of the event:

93. *atanu pratirōju konnigaṅṭalasēpu vyāyāmaṅ cēstuṅdēvāḍu.*
'Everyday he used to do physical exercise for few hours.'

This form is not used with the verbs indicating a state. Hence, the following expression is unacceptable semantically in Telugu:

94. **āme cālā aṅdaṅgā uṅṭuṅdēdi.*
'She used to be very beautiful.'

7. Past verbal participle + past tense of *un*, though very rare in usage, can express past. Arden (1873) and

Venkateswarlu (1982) treat this form as a separate tense. The former uses the label 'Perfect or Pluperfect Tense' and latter, *samāpta vartamānakālaṅ* (=present perfect tense):

> 95. *mēmu akkaḍiki vellēppaṭikē āhutulantā vacci unnāru.*
> 'The invitees had already come when we reached there.'

> 96. *iṅtavaraku mīkennō mārlu ceppi unnānu.*
> 'So far I have told you several times.'

These can be alternatively said with the help of a past tense as shown below:

> 97. *iṅtavaraku mīkennō mārlu ceppānu.*
> 'So far I have told you several times.'

But the expression which uses the **past verbal prarticiple + past tense of** *un* is more emphatic in nature than the one which uses the past tense.

8. Past verbal participle + future tense of *un,* which was labelled as 'Future Perfect Tense' by Arden (1873), can be used by someone who makes a guess or confirms the possibility of an event in the past:

> 98. *atanu ninna ī sarikē guṅṭūru ceri uṅṭāḍu.*
> 'Yesterday by this time he might have reached Guntur.'

9. Infinitive + *(v)* **+** *āli* in association with a past time adverbial, refers a past time event, which was planned ear lier. Sometimes indicates a past time unfulfilled obligatory actions :

99. *atanu lekkaprakāraṅ ninna rāvāli*

'As plan he had to come yesterday.'

10. **Infinitive + *(V)* + *ālsi* + *uṅdi*** indicates past un-fulfilled events or refers the events which are destined to take place at a future point of time in the past :

100. *ninnanē carcaku anumatiṅcālsi vuṅdi*, (Udayam: 15-9-85)

'You should have allowed for a discussion yesterday'.

101. *atanu peddavāḍai rākṣasulni saṅhariṅcalsi uṅdi*.

'He was destined to kill the demons when he attains the adulthood.'

Notes

*   An abridged and modified version of chapter IV of Author's MPhil dissertation, Osmania University. In transcription, *ṅ* stands for *anusvāra*.

1. Following Widdowson (1973:112-13), (14) may be described as a text by 'cohesion' and (15) as a text by 'coherence'.

2. This does not include the propositions about 'all-time' truths, which are only expressed by the future tense (see examples (40) and (41)].

3. This form is a variant of *caccānu*

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M.Phil. Dissertation Abstract

AN ACOUSTIC ANALYSIS
OF URDU VOWELS

Mohd.Ansari ■

The M.Phil thesis titled "an Acoustic Analysis of Urdu
Vowels" deals with the acoustic features of Urdu vowels in
terms of their quality and quantity (i.e.duration), as measured
from the spectrograms. The measurement of formant frequen-
cies of vowels in hertz and duration in milli seconds is
provided and discussed in detail. The first chapter presents an
introduction to the language and its dialects, scope and aim of
the study. It also discusses the data and instrumental technique
used (i.e.Sound Spectrograph).

The Second chapter presents the phonological sketch of
Urdu speech sounds and gives a picture of Phoneme-graph-
eme relations.

The third chapter deals with the duration of Urdu vowels
occurring in constrasts in different positions and context.
Various factors studied include the topics such as effect of
consonant voicing, place of articulation, manner of articula-
tion, stress and nasalization etc. This chapter forms one of the
core areas of thesis.

The Fourth chapter studies the measurement of formant
frequencies of vowels and their acoustic discription.

The last chapter summarises the findings of the study. Thus
·this thesis contributes not only towards the understanding of
the differences among Urdu vowels but also corresponding
differences in other languages.

tan Of TELUGU AS SPECIAL ANAPHORIC PRONOUN (SAP) ▮

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The term 'pronoun' originally belongs to Latin language. Later it came into English through French language. The original meaning of this term is same as we are using it today in English and Telugu languages i.e. 'word used instead of a noun'. Pronoun is a subset of noun and it is commonly used to indicate two functions (Bhat 1978 : 6).

1. Pragmatic or deictic use, for referring to individuals which are directly involved in the speech act itself (i.e. speaker addressee and referent).

2. Anaphoric use, for referring to individuals, things, events that have been otherwise mentioned in the sentence itself. If anyone observed the following two examples, they can understand the above mentioned two types clearly.

1. *rādha rājuto nīgurinci ceppindi*
   'Radha told Raju about you'.

2. *rādha tanagurinci rājutō ceppukonnadi.*
   'Radha told Raju about herself.

In sentence (1) *nī* 'you(r)' is used pragmatically where the identity has to be obtained from the speech act context itself. Here it refers to one of the speech act

participants namely, the addressee. In (2) the pronoun *tan* 'her' is used as an anaphoric of the noun *rādha* which is mentioned in the same clause itself.

Ist and IInd person pronouns *(nēnu, mēmu, manamu, nīvu–mīru)* are used pragmatically only, whereas the reflexive, and relative pronouns of English are used anaphorically. But third person pronouns which are demonstratives in Telugu are used for both pragmatically as well as anaphorically there by giving rise to referential ambiguity.

3. *rāju baḍinunci vaccetappuḍu ataḍu ēdustunnāḍu.*
   'While Raju was coming from the School he was crying'.

4. *sīta āme pustakānni balla mīda peṭṭindi*
   'Sita kept her book on the table'.

The third person pronouns *ataḍu* and *āme* of above sentences can refer either to subjects (Rāju and Sīta) of the sentence or to other than subjects whose identity is to be determined from the speech act context (i.e. either anaphorically or pragmatically). These third person pronouns will be ambiguious even when they have reference exclusively to anaphoric pronouns as in (5).

5. *rāmu sūryam tō atani pustakānni balla mīda peṭṭa mannāḍu.*
   'Ramu told Suryam to keep his book on the table'.

Here *atani* 'his' is a definite anaphoric pronoun. But it can refer either to the subject or to the object noun (i.e. *rāmu* or *Sūryam*). The referential scope of the pronoun is not restricted to a particular noun. This type of ambiguity can be termed as intra-anaphoric.

In Telugu the so-called reflexive pronouns *tanu* (sg) *tamu* (pl) are used to disambiguate such ambigious sentences, as *tanu* refers only to an immediately preceding noun in a sentence.

6. *rāmu tana pustakānni ballamīda peṭṭamani rājuku iccindu*
   'Ramu gave his book to Raju to keep it on the table'.

7. *sīta tana kalānni rādhaku iccindi.*
   'Sita gave her pen to Radha'.

Here the *tan* pronoun refers to subjects of the above sentences. It is due to the fact that when the pronoun *tan* is used immediately after a noun, it refers to the preceding noun only. In some contexts the *tan* also gives referential ambiguity.

It may be observed here that the *tan* pronoun in Telugu appears only with reference to the third person pronouns. And it doesn't denote the first and second person pronouns at all. If we combine first and second person pronouns with *tan* for referential purposes, the resulting constructions are un-acceptable.

8. * *nēnu tanaku vaṇḍukonnānu*
   'I for him cooked self'.

9. * *nīvu tanaku vaṇḍukonnāvu*
   'You for him cooked–self'.

From these examples it can be seen that *tan* pronoun refers to third person pronouns only, but not to all the nouns in reflexive meaning as in Hindi *āp* and English

self. In Telugu *tan* represents the identity of preceding nounphrase only. But it does not indicate reflexivization. Even after the occurrence of *tan* pronoun in sentence we do not get the reflexive meaning. But after adding the auxiliary verb *kon* to main transtive verbs the sentence will change into reflexive.

10. *rādha tanaku vanṭa cēsindi*
    'Radha cooked a meal for her'.

11. *rādha tana tandriki vanṭa cēsindi*
    'Radha cooked a meal for her father'.

These two sentences have the same structure except that they differ in their object NP's. In (10) the object noun shows identity with the subject of the sentence, whereas in (11) the object and the subject are different referential entities. Here (10) is unacceptable due to the fact that in Telugu when there is coreference between subject and object NPs the auxiliary verb *kon* should be suffixed to the main verb. (11) is not at all a reflexive construction as the subject and object nouns are referentially different. The only possible way to convert (10) into reflexive is to add the auxillary *kon* to the main verb as below.

12. *rādha tanaku vanṭa cēsukonnadi*
    'Radha cooked for herself'.

After suffixing the *kon* to the main verb, it is easy to differentiate the reflexive sentence (12) from a non-reflexive sentence like (10). Lastly the pronoun *tan* also can optionally be deleted from the sentence without affecting its meaning.

13. *rādha vanṭa cēsukonnadi*
    'Radha cooked for herself'.

It is clear that even without the so-called reflexive pronoun *tan*, we can get the reflexive meaning as expressed in the above sentence.

In Telugu *tan* is not obligatory in surface structure of a reflexive sentence, but auxiliary verb *kon* is obligatory in such a sentence. So it is treated as a reflexive marker in Telugu. Now we will compare it with the English reflexivizer, to show the different processes involved in two languages.

In English we can find sentences which have undergone the reflexive transformation.

14. He shaved himself.

One can assume that the above sentence with a reflexive pronoun is to be derived from a deep structure which contains a non-reflexive pronoun or form as in

15. He shave he

Only when the object NP is identical with the subject NP, the reflexive transformation changes the object NP into a reflexive pronoun. For the present purposes let us use the following structural description.

16. NP   —   Aux —   Verb —   PP   —   NP
    1   2   3   4   5

When the 1= 5, the reflexive transformation takes place or applies to that sentence.

On meeting this matching condition, the morphophon-
amic rules of English convert the forms like he + reflexive
to himself, I + reflexive myself, they + reflexive them-
selves and so on. Here the condition of identity is compul-
sory for the structure to undergo the reflexive transforma-
tion as in all other languages.

Even Didayi, a munda language has this same condi-
tion to undergo the reflexive transformation.

17. *m æ m æha bagoyge*
     he himself killed
     'He killed himself'.

18. *m æ m æha korta kvarge*
     he himself beard shaved
     'He shaved beard himself'

19. *nain nainha ndoyge*
     I myself cooked
     'I cooked for myself'.

Here the marker *–ha* works as *–self* of English lan-
guage. This marker occur with all pronouns (like self) and
refers the preceding noun or pronoun in the sentence. If
the subject and object nouns are not coreferential and re-
flexive transformation doesn't apply to that sentence at all,
and the marker *–ha* will not affix to the object pronoun.

In Telugu when this identity condition is met, the
auxiliary verb *kon* is suffixed to the main verb as a sort of
agreement marker. But the second NP of English and Didayi
takes the suffix *self* and *ha* respectively to indicate the co-
reference between subject and object NPs of the clause. It

goes without saying that in Telugu also the two NPs (sub-
ject & object) of sentence are required to be identical in
order to undergo the reflexive transformation.

20. *rādha vaṇta cēsukonnadi*
      'Radha cooked for herself'.

     The above (surface structure of) reflexive sentence is
derived after applying the reflexive transformation. The
deep structure of (20) can be postulated as in (20 a).

20 a. *rādha rādha kōsam vanṭa cēsindi*
       Radha cooked for Radha

     In Telugu when the two NPs (third persons) are iden-
tical/coreferential, the tanization transformation
(pronominalization) applies, whereas pronominalization
transformation applies elsewhere. Here the tanization trans-
formation converts (20) into (20 b).

*20 b. *rādha tana kōsam vanṭa cēsindi*
        'Radha cooked meal for her'

     When the pronoun *tan* occurs in the sentence the
refelexive transformation converts the verb into reflexive
by adding auxiliary *kon* as

20 c. *rādha tana kōsam vanṭa cēsukonnadi*
       'Radha cooked food for herself'.

     Lastly even the pronominal deletion rule deletes the
tan and resultant sentence is

20 d. *rādha vanṭa cēsukonnadi*
       'Radha cooked food for herself'.

The verb with *kon* auxiliary will give reflexive meaning, even without the pronoun *tan*. As Telugu has the subjectival or verbal agreement system, the *kon* form will be added to verb as agreement to get reflexive meaning. The verbal agreement itself gives the full details of the subjects of the sentence.

The other Dravidian languages like Tamil also have a similar process. According to Kumaraswami Raja (1972) and Padmanabha Pillai (1981), Tamil *tan* doesn't denote the reflexivization, but the occurrence of *tan* in a sentence is treated as a result of a transformation called tanization. And they argued that insertion of auxiliary *kol* in the main verb gives the reflexive meaning.

According to Bhat (1978 : 52-80) *tan* of Kannada doesn't give the reflexive meaning, but he treated it as a special anaphoric pronoun which refers to a particular nounphrase. So he names it as a special anaphoric pronoun (SAP) and pointed out that Kannada too has a verbal process to denote the reflexive meaning.

From the above discussion it can be said that as in consonance with its sister languages like Tamil and Kannada, *tan* of Telugu also doesn't denote the process of reflexivization, but it is used to indicate the antecedent noun only when both the NPs are identical. At the same time it is used to disambiguiate the sentences which are referentially ambiguous by the use of the third person pronouns as in (3) to (7). This *tan* refers to a particular noun which we want to specify. In Telugu, also we can treat *tan* as a special anaphoric pronoun (SAP) as Bhat treated it in Kannada. Let us observe another example with illustrations for a clear understanding.

21. *rākēš̌ poḍucukon [n(ā)] ḍu*
     Rakesh stabbed himself.

One can assume the following deep structure to above surface structure.

21 a. *rākēš̌ rākēš̌nu poḍisin(a)ḍu.*
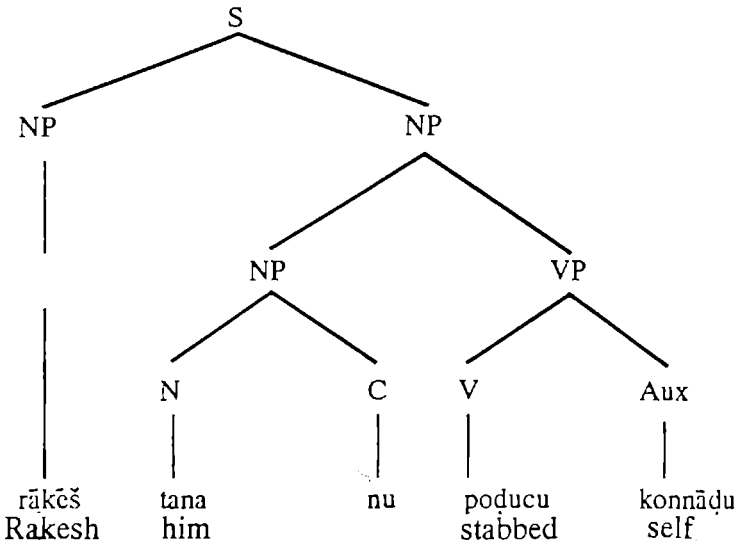   'Rakesh stabbed Rakesh'

The phrase marker of this sentence will be as follows.
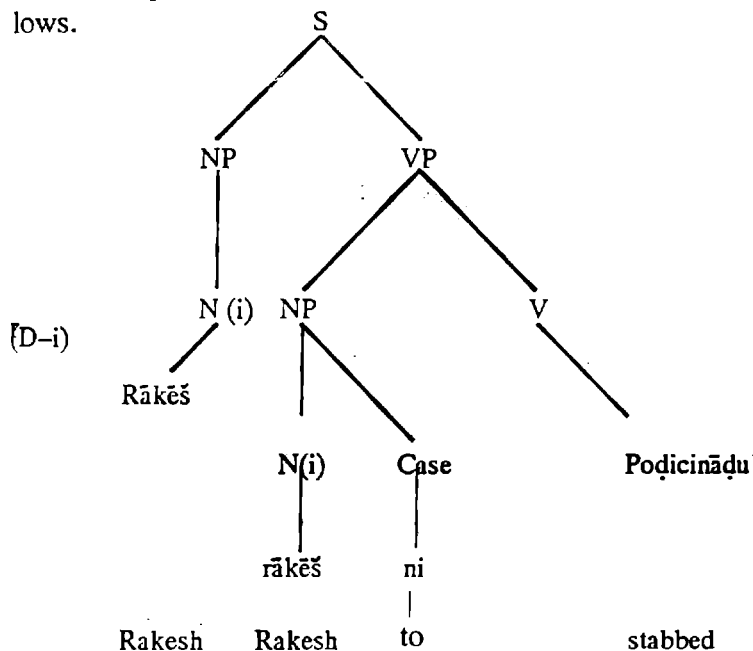
The presence of two identical NPs which command each other, triggers the reflexivization transformation.

In Telugu, this transformation adds the auxiliary verb *kon* to the main verb. And the second NP changes to a pronoun *tan* by the tanization transformation. So the structure of above sentence change to ....

21 (a)*rākēš tananu poḍucukonnāḍu*
'Rakesh stabbed himself'.

```
                         S
           _____
          |                        |
         NP                       NP
          |              _____
          |             |                  |
          |            NP                  VP
          |        _____         _____
          |       |          |       |          |
          |       N          C       V          Aux
          |       |          |       |          |
        rākēš    tana        nu    poḍucu     konnāḍu
        Rakesh   him              stabbed      self
```

Lastly the pronominal deletion rule deletes the *tan*
pronoun without affecting the meaning of the sentence giv-
ing rise to (21)

21.   *rākēš poḍucukonnāḍu*
       'Rakesh stabbed himself'.

It is shown here that the pronoun *tan* is the output of
the tanization transformation, whereas the auxiliary verb

```
           _____
          |                           |
         NP                          VP
          |                      _____
          |                     |          |
          N                     V          Aux
          |                     |          |
        rākēš                poḍucu     konnāḍu
        Rakesh               stabbed    himself
```
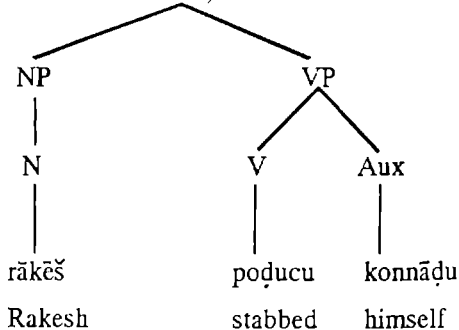
kon is the output of the reflexivization transformation. Most probably both the transformations will apply in the same environments and tanization is a feeding rule for the reflexivization rule. If the tanization doesn't apply to the sentence the eflexivization rule also doesn't apply to that sentence. Tanization is a type of pronominalization only. In English the reflexivization process is treated as pronominal because of the inflection of pronoun, adding 'Self' to all Ist and IInd, and IIIrd person pronouns i.e. him changing to himself, her to herself etc. But we didn't find any verbal inflection. In Telugu reflexivization, we find the verbal inflection, i.e. by adding *kon* auxiliary. So the process was treated as a verbal (device). Suppose we accept *tan* as a reflexive marker, like English *'self'* or Didayi *'ha'* (which occur with every pronoun Ist, IInd, IIIrd) it doesn't denote all the pronouns with acceptable meaning. The occurrence of *tan* with first and second person pronouns, renders the constructions unacceptable.

22 a. *nēnu nannu tiṭṭukonnānu*
       'I scolded myself'

 * b. *nēnu tananu tiṭṭukonnānu*
       'I him scolded self'.

23 a. *nīvu ninnu tiṭṭukonnāvu*
       'You scolded yourself'.

 * b. *nīvu tananu tiṭṭukonnāvu*
       'You him scolded self'.

The sentences with *tan* pronoun are ungrammatical, because *tan* never refers to first and second person pronouns. But the accusative form of the subject pronoun is used to refer the subject noun (optionally). If we observe

the sentences with third person subjects even there also the
pronoun *tan* is not obligatory to get reflexive meaning.

24. *vāṇṇi vāḍu tiṭṭukonnāḍu*
    'He scolded himself'.

25. *āmenu āme tiṭṭukonnadi*
    'She scolded herself'.

26. *dāndi adi korukonnadi*
    'It bit itself'.

27. *vāḷḷanu vāḷḷu tiṭṭukonnāru*
    'They scolded themselves'.

These sentences are reflexives though there is no *tan*
pronoun in the sentence, but the accusative forms of the
subject pronouns are options. This shows that the pronoun
tan is not necessary concomitant of reflexivization.

It is well known that the reflexivization in Tamil is
expressed by the auxiliary verb *koḷ* (Padmanabha Pillai
1981 : 70–74)

28. *avan aṭittukontān*
    'He beat himself'

When *koḷ* occurs after the transitive verbs, it shows
that the agent and the patient are one and the same person.
Here we can express clearly by setting up the deep struc-
ture as follows :

28 a. *avan avanai aṭi + past*
      'He him beat'.

When the subject NP, and object NP are identical the reflexive transformation adds the *kol* to the main verb of the sentence.

28 b. *avan avanai aṭi–koḷ + past*
'He him beat self'

Other transformations like agreement and verbal participialization take place and finally give the sentence –

28 c. *avan avanai aṭittukkonṭān*
'He beat himself'.

Finally the equi–NP deletion rule applies and deletes the second NP from the sentence without affecting the meaing of the sentence.

28 d. *avan aṭittukkonṭān*
'He beat himself'.

In Kannada the auxiliary verb *koḷ* 'to take' or 'to seize' is added to denote the reflexivization (Bhat 1978 : 15).

29. *rāni apaghatakka avazannē dūrikonḍālu*
Rani accident for her only blamed self
'Rani blamed herself for the accident'.

As it was discussed above, most of the Dravidian languages denote the reflexive meaning through the mechanism of adding auxiliary verbs only. The reflexives in Telugu occur in/with different tense and moods, as can be seen from the following examples.

30. *vāḍukō (imp)*
   use for yourself.

31. *vāḍukonnāḍu (past)*
   'used for himself'.

32. *vāḍukonṭāḍu (future)*
   'will use for himself'.

33. *vāḍukonṭunnāḍu (present conti)*
   'using for himself'.

This auxiliary *kon* occurs in the negative construc-
tions also. The negative forms of the above examples are
as follows :

30 a. *vāḍukō vaddu*
   'Don't use for yourself'.

31 a. *vāḍukonalēdu*
   'Didn't use   for himself'.

32 a. *vāḍukonaḍu/vāḍukōḍu*
   'Will not use for himself'.

33 a. *vāḍukonaḍam lēdu*
   'Not using for himself'.

Reflexive forms frequently denote that the action is
performed for the benefit of the subject or that it is per-
formed by the free will and choice of the agent. The re-
flexive verbs give two types of readings i.e. (1) benefac-
tive (ii) sequential. The following examples show the dis-
tinction.

34. *vāḍu illu kaṭṭukonnāḍu (benefactive)*
     'He constructed a house for himself'.

35. *vāḍu bhāryaku cīralu konukkoni vaccāḍu*
     'He bought sarees for his wife and came' (sequential)

In the above examples the auxiliary *kon* gives different meanings. In (34) the house was constructed by others like contractor or mason, but it is constructed for the benefit of thé subject (noun). Here the *kon* was added to indicate the benefactive meaning. In (35) the *kon* was used to benefit the person referred to by the object NP *(bhārya)* through the activity of the subject *(vāḍu)*. Here object enjoys the benefit of subject's action *cīralu konaḍam* 'buying sarees'. Became of two verbs occurring one after another. the *kon* form became obligatory in such situation. If *kon* is deleted the two verbs become unrelated. This type of *kon* usage can be termed as sequential.

Reflexivization always occurs within the simple sentence. In Telugu it is manifested mainly in the verb phrase through the auxiliary *kon*. The *tan* pronoun was termed as reflexive pronoun by the earlier grammarians (Arden, Caldwell etc) because they were influenced by the Indo–European language structures and adopted that system into Telugu description also. But some recent studies Bhat (1978) Kumaraswami Raja (1972) etc.   who originally belong to Dravidian group of languages,treated that *tan* as an special anaphoric pronoun and at the same time they accept *kon* or *kol* as the reflexive marker. The *tan* occurs even in a sentence where no reflexivization is involved in order to disambiguate the referential identity of nouns in the sentence.

36.*rangaḍu atani/vāḍi bhāryatō sinimāku pōyinḍu/veḷḷaeḍu*
    'Ranga went to film with his wife'.

There are two readings for above sentence, the pro-
noun *vāḍu* 'he' can refer either to Ranga (subject) or some
other person whose identity can be obtained from the speech
act context. Similarly the pronoun *āme* in (37) also given
rise to ambiguity.

37. *sīta āme cellenu pilisindi*
     'Sita called her sister'.

In such contexts the pronoun *tan* only can
disambiguiate the reference of nouns i.e. it refers only to
the subject of the sentence but not to anybody.

38. *rangaḍu tana bhāryatō sinimāku pōyinḍu*
     'Ranga went to film with his (own) wife'.

Like that

39. *sīta tana cellenu pilisindi*
     'Sita called her (own) sister'.

Now there is no any possibility of ambiguity. The
reflexivization process in Telugu occurs only when the
two identical NPs are involved in an action of a sentence.
This rule operates only within a sentence. The *tan* pronoun
occur even in embedded sentences provided that the sub-
ject NPs of the two sentences are identical.

It is obvious from the above discussion that no
tanization takes place without reference to subject-known-
or unknown of a full sentence. This tanization process is
also a kind of pronominalization. But the difference be-

tween them lies in the fact that the tanization is necessarily an intra-sentential process, whereas pronominalization is an extra-sentential process. So we can call the *tan* as intra-sentential anaphoric pronoun and others *ataḍu* 'he' *āme* 'she' are extra sentential anaphoric pronouns. Tanization is not an obligatory in all reflexive sentences, but it is optional. The tanization and reflexivization are two different processes in Telugu, tanization is manifested only in nounphrase, whereas reflexivization is found in verb phrase. But in English and Didayi both pronominalization and reflexivization are manifested in noun phrase only.

In Telugu we get reflexive meaning by adding *ko* to the existing imperative form. The subject of the imperative is 'you', the second person pronoun only. The *tan* pronouns never denote or refer to a second person at all. So imperative gives reflexive meaning by adding *ko* to the verb.

40. *koṭṭu*   —   'beat'.

41. *koṭṭukō*   —   'beat your-
    self'.

The (41) is the reflexive form of (40). The negative forms of the above sentences will be as follows.

42. *koṭṭavaddu*   —   'don't beat'.

43. *koṭṭukōvaddu*   —   'don't beat yourself

On similar lines the transitive sentence change to reflexive by the addition of *kon* to its verb.

44. *vāḍu debba tagilincinḍu (tr)*
    'He hurted (somebody)

45. *vāḍu debba tagilincukonnāḍu (reflex)*
    'He hurt himself.

The negative forms also shows similar structure with negative marker *lē*.

46. *vāḍu debba tagilincalēdu*
    'He didn't hurt' (any body).

47. *vāḍu debba tagilincukōlēdu*
    'He did not hurt himself'.

There is no *tan* pronoun in these sentences but still they are all reflexive sentences. So we can say that *tan* does not indicate the reflexive meaning of sentences, but it is a kind of special anaphoric pronoun, which occur as intra-sentential anaphoric and it refers to third person pronouns only.

The English reflexive marker *self* occurs with all pronouns in the object position but never in the subject position. If they occur in subject position the sentence will be ungrammatical.

48. John cooked for himself.

But not

49. *Himself cooked for John

50. Sita scolded herself

51. *Herself scolded sita

But the *tan* of Telugu occur in the initial position as a third person pronoun. And this *tan* doesn't show any gender distinction.

52. *rangaḍu tanakōsam baṭṭalu konukkonnāḍu*
    'Ranga bought clothes for himself'.

and also

53. *tanakōsam (ani) rangaḍu baṭṭalu konukkonnāḍu*
    'Ranga bought clothes for himself'.

These examples show that the *tan* of Telugu is one of the third person pronouns which occurs in the initial position. We can find *tan* in subject position of compound sentence as well.

54. *tanu kūḍā fasṭu rāvālani gīta kaṣṭapaḍi cadavutundi*
    'Gita is studying hard as she also wants to stand first'.

From the foregoing discussion, we can conclude that *tan* of Telugu acts as a third person pronoun which refers to a noun in a particular context (i.e. when the two NPs are in referential identity) but not a reflexivizer exclusively.

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DEVELOPMENT OF WORD INITIAL RETROFLEXES IN MODERN DRAVIDIAN LANGUAGES*

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Abstract: *The treatment of retroflexes in Dravidian hitherto has not received serious attention from the Dravidian Scholars. Passing statements on the retroflexes appearing in word initial position, from the works of various scholars were brought together and discussed. It was found that these formulations accounting for word initial retroflexion in Dravidian are incomplete and isolated. The present study examines the data available in DEDR and various other sources. Five different phonological phenomena are identified: Metathesis, Metathesis and Cluster Simplification, Assimilation, Nasal induced retroflexion, and onomatopoeia. Evidence from recent studies in articulatory-acoustic phonetic features was provided to account for the nasal induced retroflexion.*

1.0   Introduction

Proto-Dravidian did not have retroflex consonants in word initial position (cf. Caldwell, 1856, 2nd edn. 1875, reprinted 1976 : 144; Subbayya, 1990).However, Dravidian Etymological Dictionary [Burrow and Emeneau, Revised edn. 1984=DEDR (First published 1961)] lists 57 entries (DEDR entry nos. 2938–2994) grouped under the etyma beginning with retroflex consonants.besides a large

number of etyma in various languages originally begin-
ning with a vowel or a non-retroflex consonant that have
cognates beginning with retroflex consonants. The devel-
opment of word initial retroflexes in the latter type of etyma
is explained by Krishnamurti (1961:51) in the following
lines: 'From a comparative study of Dravidian vocabular-
ies, one observes that the retroflex consonants (t, n, l, l)
and the liquids of the alveolar series (r, r, l) do not occur
initially in common Dravidian etyma. But in Pre-Kui-
Telugu certain phonetic changes took place (in the pre-
historic) period, resulting in a shift of these consonants to
the initial position ....'.Krishnamurti (1961 : 53) also men-
tions that 'd seems to have arisen from *t before a
preconsonantal nasal of the retroflex series'. Later, Zvelebil
(1970:102) in a slightly modified version expresses his
view that '*t does not occur word initially in Dr. However,
there is a number of items in many Dr. languages where t
or d occur in onlaut. This may be explained either as the
result of developments from *t before a pre-consonantal
nasal of the retroflex series (in Te. Pa. Kui, Kur. and Malt.),
or as the result of metathesis (e.g. Te Kon. Kui, Kuwi,
Kol.) or as occurrences in onomatopoetic words (e.g. in
Ta.); or finally, borrowings from non-Dr. languages'. On
the consideration of the foregoing observations, the devel-
opment of word initial retroflexion in modern Dravidian
languages may be summarized in the following schema :

1. $t > t / -Vn\ (t)$
2.   VCV > C$\bar{V}$ Where C = t, d, n, l, z
3.   Onomatopoeic expressions
4.   Loanwords

However, a substantial number of words remain
unexplained by the above schema. There are about 235

etymological groups in DEDR (form approximately 5% of the total DEDR entries) which contain at least one cognate with an initial retroflex consonant. Of these, only 78 instances of word initial retroflexion are due to metathesis. whereas another 30 instances of word initial retroflexion may be due to the assimilation of the word initial dental *t (or its reflex *d*) to a following preconsonantal nasal. There are about ten instances of word initial retroflexion that are accounted for by onomatopoeic phenomenon. Words of unsettled etymological history with areal connections of more than one language family (indo-Aryan and Dravidian, Munda and Dravidian, and Indo-Aryan, Dravidian, and Munda) cannot be more than a dozen. This leaves out about another one hundred etymological groups containing one or more cognates exhibiting word initial retroflexes which need to be accounted for. Parji has word initial retroflexes *t* and *d* which correspond to Proto-Dravidian *t. Burrow and Bhattacharya have observed this fact as early as 1954 and resolved that 'When the first syllable of a word terminates in cerebral *t (tt)* or *d*, an initial dental is by attraction, cerebralized in all three dialects, e.g. *todu* 'rope', *tod* 'to touch' (Ka. *todu*), *titta* 'straight' etc'. (1954 : 4). Also. Burrow and Bhattacharya (1963 : 240) mention that 'as in most of the Dravidian languages of this area an initial dental (in Kuvi) is usually assimilated to a follow-ing cerebral'. Similar explanation may be extended to account for the word initial retroflexes which correspond to Proto-Dravidian *t in about seventy etymological groups represented by the following Dravidian languages viz., Ku., Kw., Go., Kon., Pe., Mand., Kol., Nk., Ga., Kur., Malt. This leaves out yet about sixty word groups which must have derived word initial retroflexion through other means.

2.0 On the development of retroflexes in Indo-Aryan

On the Indian linguistic scene, the spread of retroflexes or cerebrals have attracted a great deal of attention from various scholars for over a century (cf. Fortunatov, 1881; Wackernagel, 1896; Turner, 1924; Chatterjee, 1926; Zvelebil and Svarny, 1955; Emeneau, 1956; Master, 1960; Kuiper, 1967; Burrow, 1971; Schwarzchild, 1973; Deshpande, 1978; and Hock, 1975). Retroflex plosives did not occur in Early or Proto-Old Indo-Aryan or Pre-Vedic Indo-Aryan or Ur-Rgvedic (cf. Deshpande, 1978), though they did occur sparingly in Rgvedic, and increasingly in the later stages of early and classical Sanskrit.

A number of scholars in the field have considered the origin and spread of retroflexes in Old Indo-Aryan as due to spontaneous development (Bailey, 1952-68; Burrow, 1971; Hock, 1979), while a second group of scholars have contemplated that they are the result of extraneous reasons like the influence of Dravidian (Emeneau, 1956; Kuiper, 1967). A third group (Turner, 1924) proposed for the presence of both the factors viz., internal cause for impromptu phonological developments and an external influence for the spread and diffusion.

What is interesting and relevant for the present purpose is not the origin of retroflex consonants in Old Indo-Aryan but their distribution. According to Schwarzchild (1973 : 482) '... in Sanskrit, apart from a few exceptional cases, retroflex plosives do not occur initially except in a few borrowed words. These words are attested mainly in late texts and particularly in lexicographical works; some have clearly come into Sanskrit via Middle Indo-Aryan'.

However, the situation changes gradually towards the later stage of Middle Indo-Aryan and particularly in Apabhramsa which reveal the continual influx of words with initial retroflexes. By the way, among a number of words in early and classical Sanskrit, identified by Burrow (1945, 1946) as having Dravidian origin, there is not a single word beginning with an initial retroflex plosive.

3.0   Retroflexes in common Dravidian

Unlike in Old Indo-Aryan, the reconstructed Proto-Dravidian phonemic inventory has the following set of retroflex consonants viz., $*t$, $*l$, $*n$, and $*z$. However, recall that none of the consonants belonging to retroflex (and alveolar) series occur in word initial position in the reconstructed Proto-Dravidian. As in the case of Old Indo-Aryan, Dravidian too acquired word initial retroflexes comparatively recently. Particularly, Telugu provides inscriptional evidence for historical development of word initial retroflexion in a considerable number of cases (the phenomenon is a shared innovation among SCDr. languages) indicating that this change started only from the early centuries of the Christian era.

4.0   Retroflexes in Munda Languages

The reconstructed phonemic (consonant) inventory of the third important language family of India i.e., Munda consists of a lone retroflex consonant – *d among thirteen others.

p	t	[ ]	(c)	k
b	[ ]	d	j	g
m	n	[ ]	n̄	ṅ
	r			
	l			

According to Zide (1964 : 414) the distribution of *t and *ḍ is asymmetric and it is preserved in most of the modem languages. However, considering the distribution of the dental and retroflex plosives in the present Munda languages, it is unlikely that in the early stages of Munda there were retroflex consonants as separate phonemes (see, Kuiper, 1965; Schwarzchild, 1973). Furthermore, according to Bhattacharya (1975:84), 'The retroflex sounds do not occur uniformly in Munda. The variation between the dental and the retroflex series is so frequent in it that it is very difficult to understand the pattern of change ... It is therefore quite possible that the retroflex sounds, ... are not radical in Munda and also in AA.'

5.0   On the consideration of the facts presented in **2.0**, **3.0**, and **4.0**, one can reach the conclusion that there has not been a considerable amount of borrowing of words with initial retroflexes either from Indo-Aryan or from Munda languages into Dravidian. Now it must be assumed that a greater part of these words if not the entire stock with initial retroflexes to have developed in Dravidian indigenously, and only in certain cases we must look for an entirely different source which remains to be discovered.

5.1. A Survey of Dravidian development of word initial retroflexion

I have attempted to organize various cognates with word initial retroflexion occurring in about 220 entries into different categories. I propose to examine each of these categories according to a particular linguistic change and trace their development to Proto-Dravidian.

5.2 Metathesis

The following entries from DEDR have words in modern Dravidian languages, with initial retroflex consonants, corresponding to Proto-Dravidian root syllable type VC-V, where the middle consonant is fronted to word initial position through the the operation of apical displacement rule (Krishnamurti, 1978:1):

DEDR No. Language(s), Source :

63   Tu., Te., Kon., Ku., Kol., ḍ–; Nk. dh– < *aṭ–aṅk–

77   Te., Kon., Ku., Kw. ḍ– < *aṭ–

79   Te., Kw. ḍ–; Ku. ṛ– < *aṭ–

83   Ku. ḍ– < *aṭ–ay

86   Te. ḍ– < *aṭ–ay

88   Kor. (T), Ku. ḍ– < *aṭ–ay–kkāy

109 Te. ḍ– < *aẓ–appi

276 Kon., Kw. ṛ– < *aẓ–i

277 Te. ḍ– < *aẓ–

282 Ku., Kw., Pe., Mand. ṛ– < *aẓ–

295 Ku. ḍ– < *aḷ–ac–

297 Kw., Pe., Mand. r– < *aḷ–

305 Kw., Mand. ṛ– < *al–

319 Ku. ṛ– < *aṛ–ac

432 Ir. d– < *it–appu

435 Te. ḍ– < *iṭ

437 Ka. (Hav.), Tu., Kor., Te. ḍ– < *iṭ–arkku

443 Ka., Te. ḍ– (>Kon. ṛ–) < *iṭ–i

444 Ku. ḍ– < *iṭ–

447   Te (>Kol.), Kw. ḍ– < *iṭ–ay

449   Te., Go., Nk. ḍ– < *iṭ–am

452   Go. ḍ– < *iẓ–ip–

453   Ku., Kw., Pe. ḍ– < *iṭ–

495   Kw. d–: < ḍākaangi < *il–ay–

502   Te. (<Go.), Kon., Kol., Nk. ḍ– < *iẓ–ik–

504   ‘ Ku., Kw. ḍ– <*ṛi – <**iẓ–

505   Pe. ṛ– < * iẓ–ic–

508   Te d/ḍ– < *iẓ–a

513   Go. ḍ/ṛ/r–, Kw. ṛ/r– < *il–ay

524   Ku. ṛ–?< *iṭ–uku

591   Ku. ḍ, Kw., Mand. ṛ– < *il–ay

686   Te. d–(<*ḍ), Ku., Kw., Pe., Mand ṛ– < *uẓ–

688   Te. d–(<*ḍ), Kon., Ku., Kw., Pe., Mand ṛ– < *uẓ–u

689   Te. d–(<*ḍ), Kon. ḍ, Kw. ṛ– < *uẓ–u

692   Te. d–(<*ḍ), Go., Kol., (<Te.), Pa. (<Te.) ḍ– < *uẓ–up–

694   Te. d–(<*ḍ), Go., Kon., Kol. (<Te.), Ga. (<Te.)ḍ– < *uẓ–uppi

695   Ku. ḍ– < *uẓ–

698   Kw. ṛ– < uṛ–ay < *ul–ay

718   Ku. ṛ/r– ?< *uṛ–um

757   Ku., Kw., Mand. ṛ– < *uṛ– < *uẓ–

837   Ku. ḍ– ḍimbu < eḍimbu < *elimpu

851   Go., Ku., Kw., Mand. ḍ– < *eẓ–

910   Te. ḍ– < *eẓ–

954   Te., Ku. ḍ– < *oṭ–unk/ump–

1012 Pe., Mand. ṛ– < *oẓ–ucc–

1041 Ku. ḍ– < *ōṭ–u

5.3 Metathesis and cluster simplification

The following entries have words beginning with ret-roflex consonants in modern Dravidian languages. These words correspond to Proto-Dravidian root syllable type $C_1V_1C_2-V_2$; where C_2 is fronted to word initial position through the operation of apical displacement rule and a subsequent cluster simplification rule (Krishnamurti, 1978:1–3) : However, in the cognates given under 2402, 2404, 2583, 2584, 2613, 2698, and 2900, corresponding to PDr. cVt, cVz, cVl – and except for the corresponding forms in Koṇḍa (and sparingly in Kui, e.g. 2402), the word initial r–/ḍ– must have derived through metathesis without the need for cluster simplification. Except for Koṇḍa all other languages viz. Te., Go., Ku., Kw., Pe., and Mand. have evidently been effected by the operation of *c/s > ø before the operation of apical displacement rule.

DEDR No. Language(s), Source :

1527   Ka., Te., Go., Kon., Kw., Pa. ḍ– < *kiṭ–ika

1651   Kw. ḍ– < *kḍoka < *kuṭ–akka

2054   Ka., Tu., Te., Kw. ḍ– < *kdonk < *koṭ–ank

2402   Kon., Kw., Pe. Mand. ṛ– < *aṛ–/sṛa– < *caḷ

2404   Pe. ṛ– < haṛ– < *caẓ/*caḷ–

2583   Kon., Pe. ṛ– < *iṛ– <*ciḷ–

2584   Kw. ṛ– < *iṛ– < *ciẓ–

2613   Ku. ḍ– < *iḍ– < *ciṭ–

2698   Te. ḍ– < *uẓal < *cuẓ–al

2900   Mand. ṛ– <* (c) uẓ–

2903   Ku. ḍ <*ñarampu

2942   Pe., Mand. ḍ– < *anṭ–

2974   Kw., Kol. ḍ– < *iṭap–

3122   Go. ḍ– <r, Ku., Kw., Pe. ṛ– < *taẓ–

3585   Kw. d– < *nḍa– < *naṭ–

3621   Ku. d– < *nḍang < *naḷ–ank

3679   Ku., Kw., Pe., Mand. ṛ < *nṛī – < *nīẓ–

3692   Ku. ḍ < *nḍr– < *nīḷ–

3714   Kon., Ku., Kw., Pe., Mand ṛ–< *nṛu–< *nuẓ–

4183   Kw. ṛ– < *vṛī– < *piẓ

4847   Kon, ṭ– < mṭrekī *miṭ–ar–kāy .

4866   Kon., Pe. ṛ– < mṛing < *miẓ–unk

5153   Pe., Mand., Ku., Kw. ṛ– < ?V̄nḍ < *yāṇṭu

5302   Kon., Pe., Kw. ṛ– < *vaḷ –

5306   Pe., Mand., Kw. ṛ– < *vaḷ–

5312   Pe., Mand. ṛ– < *vaḷi

5393   Kon. ṛ– < vṛ– < *viṭ–

5432   Pe., Kw. ṛ– < vṛ– <*viḷ–

5481   Kon. ṛ– < vṛē– < *venṭ–

5495   Ku. ṛ–/ḍ– (Kw. ṛ–) < *vṛe < *veḷ–

5496   Pe., Mand., Kw. ṛ– < *vṛinj < *veḷ–inc

5499   Pe., Mand. ṛ– < *vṛen (g) < *veḷ–ink

5.4 Assimilation

In the following entries, modern Dravidian languages
have words beginning with initial retroflex consonants
which correspond to Proto-Dravidian non-retroflex plosives
at word initial position of the root syllable type $C_1V_1C_2$–
V_2. In all these instances the word medial consonant C_2 is
a retroflex consonant (ṭ, ẓ, ḷ, and ṇ),   and the word initial
non-retroflex plosive C_1 (= k, c, t) has developed retrof-

lexion by assimilation to the following consonant. Most items in this set begin with a dental plosive which readily assimilates to the following retroflex segment. Only in three cognate groups i.e., 2658, 2698, and 2716 word initial retroflex plosive corresponds to Proto-Dravidian *c–. Etymologically, there is evidence to show that even in these items *c– alternates with *t– (cf. 2658 Tu. cūṭi 'aim', tūṇḍ 'point at'; 2698 To. tūḷy 'to move in a circle', Ka. tozal 'to move round', tuẓi/suẓi 'to turn round/go round' Tu. tulipuni/sulipuni 'to shake, agitate to turn in a lathe'; 2716 Ka. doṇe 'a small natural pond in rocks, a hole', Te.(B.) dona 'a pool on a hill'. Therefore, the presence of t alternants in these have fecilitated the assimilation. The third set consisting of five cognate groups present the most interesting aspect of assimilation which is unheard of elsewhere in Dravidian. Here the word initial retroflex ḍ corresponds to Proto-Dravidian *k–. Word initial ḍ in these instances are developed through an intermediary g (<*k) when it is immediately followed by an apical segment r.

DEDR No. Language(s), Source :

1109   Ku. ḍ– < ḍra– < gr̄a– < *kaṭ–a

1123   Ku., Kw. ḍ– < ḍrālu < gr̄alu <*kaṭ–a–

1148   Ku. ḍ– <ḍr̄a– < *gr̄a– < *kaṭ–a–

1659   Ku. ḍ– <ḍr̄ū– < *gr̄ū– < *kuṭ–u–

1852   Ku., Kw. ḍ– < ḍr̄ōk– < *gr̄ōk < *kurVkk–

2658   Pa. ṭ– < *tuṭi < *cuṭṭi

2698   Ku. ḍ– < *tuṛ–i < *cuẓ–i

2716   Ka. ḍ– < *toṇe > *cuṇ–ai

2943   Kur., Malt. ṭ– < *taṭ–kāy: cf. Bhili (D) ḍoḍ

2946   Go., Pe., ṭ– < *taṇti

2952 Kur., Malt. ṭ– < *taṭ– : cf. Nahali ṭo– (<Kurku)

2956 Kol. ṭ/t, Nk. ṭ/k–, Nk. ṭ/c – < *titVr/kiṭVr

2957 Kur., Malt. ṭ– < *tit–

2962 Ku. ṭ–, Kw. ṭ/d/d– < *tuṇḍ–

2963 Go., Kon., Pe., Pa., Ga. d– : dūṇḍi < tūṇṭi : cf. Ha. dhūṇḍi

2967 Ku., Kw., ṭ– < *tūṭ–

2968 Kur., Malt. ṭ– < *tūṭ–

2969 Ku., Kw. ḍ– < *tunṭV – cf. Ho ṭonṭo, Nahali ḍōnga [<(Kurku)]

2972 Ku. ḍ–; Kw. ṭ– < *teṭ–

2984 Go., Ku., Kw. ṭ–; Mand. ḍ– < *toṭ–

3020 Go., Kon., Ku., Malt. ḍ– < *taṭ–

3031 Go., Kur., ṭ– < *taṭ–

3036 Go., ṭ/t–; Pe. ṭ– < *taṭṭi– : cf. Pkt. taṭṭi

3038 Ku. ḍ– < *taṭṭ–

3040 Kw., Pe., Mand., Kur. ṭ– < *taṭṭV

3044 Go., Pa., Malt. ḍ– < *daḍḍ < *taṭṭV

3048 Go. ḍ/d–, Kon., Kw. (Su.) NK., Pa. ḍ– <*taṇṭa–

3052 Go. ṭ/t–; Pa. ṭ– < *teṇṭ–

3056 Ku. ḍ– < *taṇṭ–

3118 Malt. ṭ– < *taz –

3136 Go., Ku. ṭ– <*taḷḷi/tāḷi

3158 Kon. ḍ– < *tāṇṭ–

3180 Kon. ṭ– < taṛ < &taz

3198 Go., Kon., Kw. ṭ– < tāṇḍi < *tāṇṛi

3218 Pa. (S) ṭ– < *tiṭ–k–

3222 Ku. ṭ/ḍ, Kur. ṭ– < tiṇ–

3258 Kw. ṭ– < *til / tin- imp –

3263 Koṇ., ṭ/t– < *tiṇḍi - < *tin

3273 Pe. ṭ– < t̄iṇṭ–

3296 Go. ṭ/t–; Ku. ṭ– < *tuṭ–i

3297 Koṇ., Ku. ṭ– < *tuṭ–um

3302 Ku. ḍ– <*tuṇṭ–

3304 Go., Koṇ., Kw. ḍ– <*tuṭṭ–

3305 Ku., Kw., Pe., Mand. ṭ– < *tuṇ–

3310 Pa. ṭ– < *tuṇṭ–

3378 Go. ḍ– < *duḍḍ/dud – (*tuṭṭ–/tuṭ–

3395 Nk. (Ch.) ṭ– < tūṭ < *tūḷ–t < *tūḷ–

3402 Kw., Pe., Mand. ṭ– < *tūṭ < *tūṭṭ

3411 Mand., Nk., Malt. ṭ– < *teṭṭ–

3434 Kol. ṭ– < *teḷ

3440 Pa. ṭ– < * taṭṭ

3450 Ga. (Oll.) ṭ– < teṭṭ < * ten–ṭṭ/ teḷ–t

3480 Pa. ṭ– < *toṭṭ

3481 Ku. ṭ– < *toṇd/toṭ–

3485 Go., Koṇ., Kw. ḍ– < *toṭṭ–u

3487 Go. ṭ/t, Pa. ḍ– < *to–ṭimpa

3489 Go. d– < *toṭṭV–

3490 Go., Koṇ., Kw. ṭ– < *teṭṭ–

3491 Go. ḍh–, Ku., Kw., Pa., Kur., Malt. ḍ– < *toṭṭ–/ toṭ–

3499 Go., Pa. ṭ–, Koṇ., Ku. ḍ– < *toṇṭ–

3501 Ka. ḍ–, Koṇ. ṭ– < *toṇṭV

3502 Ka., Tu. ḍ– < *toṇ–

3517 Ku. ḍ– < *doḍu < *tolu

3522 Ku. ḍ– < *toẕ–

3525 Pe., Mand. ṭ– <*toṭ <*toẕ–

3528   Ka. ṭ-, Tu. ṭ/ḍ- Te. ḍ Go. ḍ/ṭ- < *toḷ-

3543   Go. ḍ/ḍh- < *toṭ-

3546   Pa. ṭ- < *toṭṭi-

3547   Pa., Kur. ṭ- < *toṭṭ-

3549   Kon., Ku., Kw., Pe., Pa. ṭ- < *tōṇṭ-/*tōṇṭṭa

3559   Ku. ṭ- < tōḍu < *tōlu

3561   Pe. ṭ- < *tōra < tōḷa

3563   Kon., Pe. ṭ- < * toṇḍ- < *tozaṇt-

3566   Pa. ṭ- < *?toṭ- < toṭṭ-

3739   Pa. ṭ- : tiṭṭ- < *niṭṭ-

5.5   Syllable final nasal induces retroflexion

In the following entries, words beginning with ret-
roflex plosives t and d may correspond to an earlier *t. At
least for certain cognate groups under the entries 2938–
2994, the etymological history is uncertain. The current
and most widely accepted notions of Dravidian phonologi-
cal theory preclude the possibility of reconstructing word
initial retroflexes for common Dravidian. Therefore, cog-
nate groups under the entries 2938 to 2994 in DEDR should
be considered suspicious and therefore needs to be ac-
counted for. A common feature shared by the entries
grouped under this category is the presence of a nasal
consonant (or at least one of the cognates have a nasal) in
the syllable final position. Hence, it is proposed that for
the following items the reconstructed Proto-Dravidian root
syllable begins with a dental plosive and ends with a nasal
consonant as in *tVN – (C(C)V). The reconstructed form
partially conforms to Krishnamurti's observation that 'ḍ
seems to have arisen from *t before a preconsonantal nasal
of the retroflex series'. Though, the –N– in the recon-

structed form is not a nasal of the retroflex series, the data under consideration indicate that there seems to be a correlation between the presence of a nasal and the development of retroflexion. Now the question is how does a dental consonant in the environment of – VN exibit a tendency toward a retroflex articulation and what is its theoretical implication. It is inevitable that vowels in (C_N) are produced with certain amount of nasalization (nose coupling or nasal co-articulation) at least during their final phase of utterance (The degree of nasalization differs from language to language). In such a situation these vowels have slightly backed or centralized and lowered allophones (Van Reenen 1982 : 101). In turn these vowels (with characteristic lowering of Formants) create an environment which favours the articulation of segments with the feature 'flatness' which results in retroflexion. (The feature 'flat' involves downward shifting in the frequency location of formants or spectral energy.) In terms of opposition ḍ is more 'flat' and (also less spread) than d (Fant, 1973 : 138, 186–190).

DEDR No. Language(s), Source :

2940 Ma. ṭ; Ka. ṭ/d– < ?*tan–kVm
2941 Te., Go., Ku., Kw. (Isr.), Pa. ṭ– < *ten–kkV
2958 K., Kon. ḍ– < *tim-pu / tim-ppV
2961 Pe., Mand. ḍ– < *tim–pa (cf. 3266)
2965 Kon., Kw. ḍ– < *tum–u
2966 Go., Kon., Kw., Pe. ḍ-< *tum-ṭa
2980 Ka., Tu. ṭ– < *ton–ka
2981 Te., Nk. ḍ– < *ton–kV
2982 Te., Go., Kw., Kol., Kan., Nk.; Pe. ḍ– < *ton–kV
2983 Go., Nk. ṭ– < *ton–kV

2986   Ka., Te. d/d; Go., Kol., Pa. ḍ– < *tom–ppa/toppa

2990   Ta., Ku., Ga. (oll.) ṭ–; Ka., Te. ḍ/d < *ton–kV–

2991   Kon., Kol. ḍ– < *tom–(p)v

3014   Te. ḍ– < *tan–kV/takk–

3076   Ka. ḍ– < *tam–ppV/tapp–

3153   Ka. ṭ– < *ta–kV

3229   Ku., Pa., Kur. ḍ– < tippa/tin–nV, tim–nV (cf. 3239)

3263   Kw. t– : ṭi̇ni < *tin–v

In the case of 3263 Kw. ti'ni, 'right hand' Emeneau (1987 : 331) believes that it is a case of analogical spread of retroflexion from the borrowed Indo-Aryan word tebri 'left'.

3291   Kw. ḍ– < *tun–cV

3326A   Ga. (P.) ḍ– < *tum–ppa

3328   Ka. ḍ– < * tum–pi

3337   ? Te., Go. ḍ< *tuy–/tun–cu

3376   Pe. d– < *tun–kV–

3408   Ka., Te. ṭ– < *ten–kay

3449   Ka. ṭ– < *ten–kV

3451   Ka., Go., Kon., Pe., Nk. ḍ– < *ten–kku

3452   Te., Go., Kw., Kol., Pa. ṭ– < *ten–(k) kV

3478   Ku. ḍ– Kur. ṭ– < *ton–kV–

3510   Ka., Tu. d/d– < *tom–pi

3532   Te. (dial.) ṭ– : ṭom–bay < *ton–pati < **toḷ–pattu

In the opinion of Krishnamurti (personal communication), at least in certain cognate groups of this category (e.g. 3452), probably the root syllable final nasal was a retroflex one but it got assimilated to the following consonant (Uma Maheshwar Rao, 1987 : 69).

5.6   Onomatopoeic expressions

In the following words the occurrence of word initial retroflexion may be due to onomatopoeic phenomenon. All these words convey sounds as they are perceived by the speakers.

DEDR-No. Language(s), Source :

2944   Ta. ṭ, Ka. ṭ/ḍ/ḍh–, Tu. ṭ/ḍ < *ṭan–

2945   .Ka., Tu. ḍ– < *ṭan–

2947   Ta. ṭ–; Ko., Te. ḍ– < *ṭap–

2949   Ta., Ma., Ko., Ka., Tu., Te., ḍ/ṭ– < *ṭam– cf. Skt. ḍamaru

2951   Go., Kol., Pa., Ga., Kur. ṭ– < *ṭeva– : cf. Halbi, ṭēvasa

According to Bhaskara Rao (1980 : 108) 'tev' is an onomatopoeic expression signifying the cry of a bird known by the name 'tevore' in Koneker Gadaba. Kittel's Kannada dictionary has words tiv̄a 'name of a bird' and ṭiv̄aka, 'sound produced on tambura, a stringed instrument', which may belong to this group.

2954   Go., Pe. ṭ– < *ṭink–

2973   Kur., Malt ṭ– < *ṭep–

3069   Ka., Tu. ḍ– < *ḍab– < *ṭapukk –

5198   Ka., Te. ḷ– < *loḷ/ ḷol

5.7   Residue

The following items form a mixed set, as no patterning can be discerned in the development of word initial retroflexes. Some of these words seem to be borrowings from the neighbouring Indo-Aryan or Munda lan-

guages. Their genetic affinity is uncertain. These words
form part of the common vocabulary shared by the lan-
guages of this region i.e. Central India. In many cases
exact etymological information is lacking. The actual source
of some of these words may be an extinct language. Lan-
guage like Nahali in Central India allude to such a lan-
guage group (cf. Kuiper, 1966).

DEDR No. Language(s), Source :

2938   Ta., Ka., Te. ṭ – < * ṭakk –

2939   Go. ḍ–; Te., Kol. ḍ/d; Nk. ḍh– < ?*ṭakku/ takku

2948   Go., Kon., Kol., Nk. ṭ– < *tap–Vr cf. Skt. tarpara

2950   Go., Ku. ḍ– < *ḍey–

2953   Go., Ku., Kw. ṭ– ?*tikuṇi

2955   Pe., Mand. ḍ– < *ṭirink/ṭrink

2959   Kw., Mand. ṭ– < ?*til–

2960   Pe., Mand. ḍ– <*ḍi–

2961   Pe., Mand. ḍ– : ḍība

2964   Ku. ṭ– < *tūp–

2970   Te., Kon., Nk., Ga. d– < *ḍekka

2971   Go., Kw., Kur. ḍ– < * ti (n) k – < Pkt. ḍev, Or.
        ḍeik

2975   Ku., Kw. ḍ– < ?*ter–

2976   Ka., Te., Go., Ku., Kw., Nk., Nk. ḍ– < *ḍokka

2977   Go., Kon., Ku., Kw., Kol., Pa., Ga. d– < ?*tor-
        kk–

2978   Go. ṭ– < *tokV

2979   Go., Kol. ḍ– < ?*ṭok–ar

2985   Go., Kol. ḍ– < cf. IA *duṇḍubha. Ga. dōṇḍibāmu
        'water snake', (bāmu 'snake') also see Mundari
        dundi water snake, eel', Ho. ḍunḍubing 'water

snake' (bing 'snake').

2987   Go., Kon., Pa. t– < ?*toy–VIV

2988   Te., Go., Ku., Kw., Kol. ḍ– < ?*toll–

2989   Te., Go., Ku., Pa. (S.) ḍ– < ?*ṭokk–/ṭok–

2992   Pe., Mand. ṭ– < *tar–ak

2993   Kw: (T., Isr), Pe. ḍ–ḷ. < *tar–anc–

2994   Pe., mand. ḍ– < *tar–unk?

3000   Ka., Tu. t/ṭ– < *tak–ar

3001   Kw. (Isr.) ṭ– < *tak–ar–

3003   Ka. t/ṭ– < *tar–ak–/tan–kv-

The Kannada alternants taragasi/tagarise and Ka. and Te. tangēdu indicate that the word had tar–/tan–root alternation at an early stage.

3009   Te. (B.) ṭ– < *takk–Vḷi

3075   Ka. ḍ– < *tapp–

3139   Ku. ṭ– < *taḍuri / taluri < *taṟ - alV

3262   Kon. ṭ– < *tiṟṟ–

3340   Ka. d–, Nk. dh– < *tūr–app

3399   Te. ḍ– <?*tūr–

3540   Ku. ḍ– < ?*ṭoc–

3560   Ku. ṭ– < *tōl– cf. Kw. tōla, Br. tōl)

5165   Ku. ṛ– (Kol.r– rāng) ṛānc–

Forms under 5165 may belong to the etymological group 509 *iḷanc/iḷ–ank–.

5180   Kw. ṛ– <*aḷ–Vk

5181   Ku., Kw. ṛ– < *ṛap– *aḷ–ap–

5182   Pe., Mand. ṛ– < *ṛuk–

5183   Kon., Pe. ṛ– < *ṛeto–

5184   Kon., Pe. ṛ– < *ṛo–

5199   Ku., Kw. ḍ– < *lump–

5201   Ku. ḍ– < *lang– cf. Skt. lāngula

6.0   Conclusion

There are about 235 cognate groups involved in retroflexion. The most common mechanism contributing to the development of initial retroflexion is the assimilation of word initial dentals (sparingly velars) to a syllable final retroflex consonant. The next most common source of word initial retroflexion is the combined effect of metathesis and cluster simplication. The source of word initial retroflexion in the case of a considerable number of words listed in 5.5 is not clear yet.

The foregoing survey has shown that there are at least five different types of linguistic changes resulting in the origin of word initial retroflexion in modern Dravidian languages, they are:

1. Metathesis: medial retroflex consonants are fronted in 46 items.

2. Metathesis and Cluster simplication: medial retroflex consonants are fronted resulting in word initial clusters, which are later subjected to cluster simplification resulting in word initial retroflex consonants. It involved 32 items.

3. Assimiliation: word initial non-retroflex consonant is assimilated to a following retroflex consonant. It involved 76 items.

4. Syllable final nasal induces retroflexion of the word

initial dentals in 30 items.

5. Onomatopoeic phenomenon: the origin of retroflexion in a group of words is ascribed to sound imitation. About 9 items are identified.

6. A residual category : includes items exhibiting word initial retroflexes which cannot be explained by any authenticity. They are about 43 such items. It includes words of unknown etymology, probably borrowings and certain cases of sporadic changes.

Notes

This paper has benefitted greatly from the comments by Professor Bh. Krishnamurti, who has read it earlier. However, incorporation of several of his suggestions require a thorough reorgnization of this paper in future.

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SOUND CHANGE IN GONDI:
A CASE FOR LEXICAL DIFFUSION

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Language change has been the cause of several in-
triguing questions and has been the source of a very inter-
esting study in the descipline of linguistics. Quite many
researches have been conducted to explain the variations
caused by sound changes in languages. For that matter,
earliest studies in the "Science of language" were attrib-
uted to 'sound change' resulting in language change. Sound
change, as has been viewed by the earlier linguists, is one
of the principle changes that takes place in a language,
whose directionality is yet to be positively determined.
The way in which a language is spoken, varies over the
years and is a result of sound and structural changes. The
universality of language presupposes the operation of sev-
eral sound changes which has resulted in the present day
distancing of human languages, which however is recon-
structable to a proto-state using the methods of internal
reconstruction. There have been various approaches to study
the sound changes in human languages which can be
summed up as follows:

1. Neogrammarian approach.
2. Structuralist approach.
3. Generativist approach.
4. Lexical diffusionist approach.

The presuppositions of these different approaches can be listed as follows in a nut shell.

Neogrammarian approach :

1. Sound is the basic unit.
2. Sound changes are phonetically gradual.
3. Sound changes are lexically gradual.
4. Changes operate mechanically.
5. Exceptions to the sound change are due to borrowing and analogy.

Structuralist approach :

1. Sound changes are regular.
2. Sound change is due to change in phonemes.
3. Sound changes are gradual.
4. Sound changes are prone to temporal limits and exceptions are due to analogy and borrowing.

Generativists approach :

1. Phonological changes are due to changes in the grammar of the languages.
2. Phonological changes are abrupt.
3. The exceptions, to a change are attributed to 'minus rules' and 'minor rules'.

Luxical diffusionist approach :

1. Sound change is lexically gradual.
2. Sound change is phonetically abrupt.

3. Exceptions, due to the 'leaders' and 'laggers' in the process of sound change, are the result of the speed at which the change operates.

For the present study, a sound change in Gondi is taken up and is analysed employing the lexical diffusionist model. One of the important sound changes of Gondi, which has resulted in the dialect differentiation, is that of proto-Dravidian *l. The reflexes of the pre-Gondi *l in the present day Gondi speech variety are predominantly in r but also in r and l.

The present study is limited to viewing the sound change of the proto-Dravidian lateral retroflex *l, which at the proto-South Central Dravidian stage occurs in all the positions i.e. initially, post vocalically and finally, as a result of apical displacement. In all the languages of this sub-Group (Telugu, Gondi, Konda, Kui, Kuvi, Pengo and Manda) the change in to l, r and r is observed. In Telugu the change is uniformly to l.

In modern Gondi this particular sound change forms as isogloss for the major dialect division which seperates the different varieties of the language spoken.

The lexical items taken for the present study are listed below, which have correspondences of Proto-Dravidian retroflex *l

* lay	'young'
* loc	'to bale out water'
*lon	'house'
*lop	'in, inside'
*len	'to get loose'

*eḷz	'bear'
*veḷ-ci	'bright, light'
*aḷ	'wife'
*kaḷ-v	'threshing floor'
*vaḷ-v	'wind'
*ceḷ -al	'sister'
*por-aḷ	'mother-in-law'
*ṅaḷ-v	'tomorrow'
*kaḷḷu	'toddy'
*uḷḷi	'onion'
*puḷḷa	'sour'
*piḷḷa	'young one of animal'
*kaḷḷe	'thief'

The nature of operation of the sound change of pre-Gondi *ḷ, has to be studied seperately in the various dialects of the Gondi, the area of which extends from Seoni in the North to Adilabad in the West, to Khammam in the South and Bastar in the East. The reflexes in the different positions of the occurrence of pre-Gondi *ḷ, in Adilabad (West) and Seoni (North) are studied as they are relevant to the present analysis.

Given below are the reflexes of the occurrences of pre-Gondi *ḷ in the initial, medial and word final positions in the dialects of Adilabad and Seoni. Given also are the reflexes of the geminate occurances of the pre-Gondi *ḷḷ.

| Pre- Gondi | Adilabad | | SEONI | |
	West	Sirpur	South	North

| Pre- Gondi | Adilabad | | SEONI | |
	West	Sirpur	South	North
Initial				
* *ley* – young	*r*	*l*	*r*	*r*
* *lon* – house	*r*	*l*	*r*	*r*
* *lop* – inside in	*r*	*l*	*r*	*r*
* *loc* – to baleout	*r*	*l*	*r*	*r*
* *len* – to get lose	*r*	*l*	*r*	*r*
Medial				
* *elz* – bear	*r*	*r*	*r*	*r*
* *velci* – light bright	*r*	*r*	*r*	*r*
* *nali* – tommorrow	*r*	*r*	*r*	*r*
* *kala* – threshing floor	*r*	*r*	*r*	*r*
* *vali* – wind	*r*	*r*	*r*	*r*
Final				
* *al* – wife	*r*	*r*	*r*	*r*
* *celal* – sister	*r*	*r*	*r*	*r*
* *poral* – mother-in-law	*r*	*r*	*r*	*r*
Geminate				
* *kallu* – toddy	*ll*	*ll*	*ll*	*ll*
* *ulli* – onion	*ll*	*ll*	*ll*	*ll*
* *pilla* – young one	*ll*	*ll*	*ll*	*ll*
* *kalle* – thief	*ll*	*ll*	*ll*	*ll*
* *pulla* – sour	*ll*	*ll*	*ll*	*ll*

Adilabad: The initial occurence of *$\underset{.}{l}$, whose reflexes are
r and *l*, appears evidently to split the Gondi dialects with
specific geographic boundaries – Western (Adilabad, Yeot-
mal, Betul, Chindwada, and Mandla) and the other areas.
In the Adilabad variety a seeming exception occurs in *riy*–
'the young one' which needs explanations. At this stage,
leaving out the exception, one can postulate sound change
as:

*$\underset{.}{l}$ > *r* / # –

The change in the Sirpur and Aihiri, area in the ini-
tial occurrance is different from what has been postulated.
The retroflexion is dropped and the realisation of Pre-Gondi
*$\underset{.}{l}$, in this area has reflexes in l. Thus we have to formulate
yet another independant change.

*$\underset{.}{l}$ > *l* / # –

These two changes have specific area boundaries and
thus can be said to have operated independently and thus
chronological operation does not have any bearing to the
sound change.

The sound change in the post-vocalic positions
(medial and final) of Pre-Gondi *$\underset{.}{l}$ has reflexes uniformly
in $\underset{.}{r}$. The change can be thus formulated as

$$* \underset{.}{l} > \underset{.}{r} / V - \begin{cases} C \\ v \\ \# \end{cases}$$

but conditioned, tha *C* is not * $\underset{.}{l}$.

The geminate occurences of Pre-Gondi *$\underset{.}{l}$ *l* have had
the sound change of deretroflexgion to *l l*, the occurrence
of which is limited to the post vocalic positions.

$$* \underset{\cdot}{l} \, \underset{\cdot}{l} > l \, l \, / \, V - V$$
$$(- \text{ long})$$

SEONI : In Seoni District, this sound change seperates North Seoni from South Seoni. The change in the initial position is uniform and the reflexes are shown as r, which helps us to postulate the change as

$$* \underset{\cdot}{l} > r \, / \, \# -$$

The word final occurences of pre-Gondi *$\underset{\cdot}{l}$, have also the reflexes in *r*,

$$* \underset{\cdot}{l} > r \, / \, - \#$$

One could formulate a common rule for the sound change for both initial and final occurrences of pre-Gondi *$\underset{\cdot}{l}$ as

$$* \underset{\cdot}{l} > r \, / - \left\{ \begin{array}{l} \# - \\ - \# \end{array} \right.$$

The variation in the nature of the sound change which leads to a dialect demarcation is apparent in the medial position, wherein the speech variety of North Seoni shows reflexes in *r* and the South Seoni variety has *$\underset{\cdot}{r}$*.

The changes thus can be formulized as

1. $* \underset{\cdot}{l} > r \, / \, v -$
2. $* \underset{\cdot}{l} > \underset{\cdot}{r} \, / \, v -$

The geminate occurrences of pre-Gondi *$\underset{\cdot}{l}$ *l* have reflexes in the present day speech variety of Seoni (North & South) in *l l* which can be postulated as

$* \underset{.}{l} \, \underset{.}{l} > l \; l$

On studying the nature of operation of the sound change in different geographical areas and in different positions of occurrences, the following changes are observed.

Initial position :

Adilabad (West) : $* \underset{.}{l} > r \; / \; \# -$

(exception of $riy -$)

Adilabad (Sirpur) : $*\underset{.}{l} > l \; / \; \# -$

Seoni   : $*\underset{.}{l} > r \; / \; \# -$

Post–vocalic position :

Adilabad   : $* \underset{.}{l} > \underset{.}{r} \; / \; v -$

Seoni (North) : $* \underset{.}{l} > r \; / \; v -$

Seoni (South) : $* \underset{.}{l} > \underset{.}{r} \; / \; v -$

Word final position :

Adilabad : $* \underset{.}{l} > \underset{.}{r} \; / -\#$

Seoni: : $* \underset{.}{l} > r \; / -\#$

Geminate occurrence :

Adilabad :

& $* \underset{.}{l} \, \underset{.}{l} > l \; l$

Seoni   :

Looking at these changes one could tabulate the reflexes of the pre-Gondi *l as follows:

	ADILABAD		_SEONI_	
	West	Sirpur	South	North
Initial	ṛ (r)	l	r	r
Medial	ṛ	ṛ	ṛ	r
Final	ṛ	ṛ	r	r

For a better explanation of the sound change and the areal drift, a collapsed sound change of the following type is necessary.

* ḷ > ṛ > r

The geminate occurrences of pre-Gondi * ḷ ḷ which uniformly changes to l l, are the result of deretroflexion.

It can now be explained that the change has had its operations to the fullest in the North Seoni dialect where the reflexes of Pre-Gondi *ḷ are realised as / r / through-out.

The scene in Adilabad region is a bit complicated in the sense that the change in the initial occurrences of pre-Gondi *ḷ have been subjected to two independant changes.

1. *ḷ > ṛ > r   in Adilabad (West)

2. *ḷ > l   in Adilabad (Sirpur)

The change. in Sirpur area in the intial position is complete and thus has no residue, but the change *ḷ > ṛ > r in Adilabad (West) has ceased to operate fully and hence the residue in /ṛiy–/ 'young one', which needs explanation.

In the medial and final occurrences of Pre-Gondi *l
in Adilabad, the change has stopped after the operation of
·the first stage i.e. * l > r and thus has reflexes in /r/.

The drift of the sound change can be claimed as
being North to South. The change, owing to the extent of
its operation, can be stated to have started in the Northern
dialects of Gondi and then spread south-wards. This is
reinforced by the fact that the land of the Gonds, "Gond-
wana" was situated in South Central India of which Seoni
is a part.

The manner of operation of this change can best be
explained using the lexical diffusion approach to sound
change. The 'leaders' to the sound change in Seoni can be
said to be the words with initial and final occurrences of
Pre-Gondi *l, which have reflexes in the present day speech
in /r/. But the medial occurrences in South Seoni are rela-
tively 'laggers' and as a result have not undergone the
change to the full.

Same can be said of the nature of the sound change
in Adilabad. One stricking obvious exception to the change
*l > r > r in the initial position in Adilabad can only be
explained through the operation of the change through lexi-
cal diffusion. The lexical item /riy–/ 'young one' has not
undergone the change to the expected /riy/. This is not due
to borrowing or analogy, as it is very much a native lexical
item and other lexical items meeting the requisites of the
change have been affected completely. Hence, the only
logical explanation is that this particular lexical item did
not undergo the second stage of the change. It may be
recalled here that /riy–/ occurs in lexical items such as
/riyōr/, /riyya/ 'young boy' 'young girl', which refer to

human, whereas all other lexical items which have under-
gone the change refer to non-human.

The lexical diffusion in the operation of a sound
change has three stages in its course.

1. Pre-change stage.
2. Variant stage.
3. Post change stage.

For a sound to change from its original pronuncia-
tion to an innovative pronunciation a stage when both the
forms are in vogue (synchronic variation) is necessary and
an innovative form gains entry into the languages when
the speakers drop the original form and accept the innova-
tive form of pronunciation.

Could it then be said that the 'tapering factor' acted
to halt the sound change to /riy–/ half way through. What-
ever be the reason, the fact remains that the sound change
did peter out after the operations of the change $*l > r$,
which can be the result only of a situation where the
variant forms were not available for the progress of the
change, which is a necessity in the operation of a sound
change in the lexical diffusion approach. Thus the
exception-less, mechanical operation of sound changes can-
not explain this situation. The lexical diffusion theory of
sound change, on the other hand, gives a logical and satis-
factory explanation to the change and its residue.

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REVIEW ARTICLE

PRIMARY EFFORT AND QUANTITY: AN EXPERIMENTAL VERIFICATION

(by S.R. Savithri, All India Institute of Speech and Hearng. Manasa Gangothri,Mysore-6. Doctoral dissertation submitted to the University of Mysore: 1985)

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The link between ancient Indian and modern western schools of linguistics is said to be closer in phonetics than in grammar (Allen, 1953). The phonetic observations of Indian grammarians have been critically examined in the light of modern linguistic theories (see for eg. Ananthanarayana, 1986; Cardona, 1988; Misra, 1966; Varma, 1961) and their relevance to research in theoretical linguistics in the Indian context has been pointed out recently (Ananthanarayana, 1988). The work under review attempts to verify two phonetic concepts from ancient India, viz., "primary effort" and "quantity", using modern techniques of instrumental phonetics.

The main impetus for this work was reportedly derived from an earlier study by the same author (Savithri, 1979) entitled "Speech and Hearing science in ancient India: A review of Sanskrit literature" which was subsequently published in Savithri (1988). Applications of the knowledge of Sanskrit literature in medical fields like rhinoplasty and the quest for exploration of possible clinical relevance of variables like "quantity" provided further motivation. Most of the earlier critiques of Pāṇinian treatises were undertaken

primarily in the context of describing the grammar of another language. The work under review on the other hand, attempts to explore the possible applications of the phonetic concepts themselves by subjecting them to experimental verifications, and hence merits a critical examination.

At face value, the work is very thorough and is based on over thirty *śikṣās* and *prātiśākhyās*. More than seventy *sutras* were referred to in the text and the original *sūtrās* were quoted at the end, making the main text very readable. The coverage of the western literature pertaining to the subject under study is also quite exhaustive. The instrumental phonetic technique employed was spectrography and the analyses were based on a total of 3370 spectrograms of which, a representative sample was included in one of the appendices to the dissertation. Before reviewing the main work, for the sake of completeness, it is instructive to provide a brief exposition of the terms, "primary effort" and "quantity".

The term "primary effort" which subsumes the categories, internal effort *(ābhyantara prayatna)* and external effort *(bāhya prayatna)* refers to various inspiratory/expiratory forces and articulatory and resonatory processes involved in speech production. The term "quantity" refers to duration of a segment expressed in *"mātrās"* where one *mātrā* equals the time taken for a snap of a finger or an eye blink. The theory of speech production espoused in *Pāṇinīya śikṣā* and subsequent *prātiśākhyās* recognizes, among other things, the following variables as important in the production of speech sounds: degree of tongue height, extent of mouth opening, area of constriction between the articulator and place of articulation (subsumed under the term internal effort) the state of glottis, type and quality of sound source,

amount of air utilized during speech production (subsumed under the term external effort): pitch and duration of the vowels (quantity). Thus, the internal efforts involved in the production of vowels for instance, were described as *asprsta* (no contact) or *vivrta* (mouth open), the external efforts as, *nāda, ghōsa, saṁvāra* and *alpaprāṇa* (voiced sounds produced where in the breath stream is modified at the level of glottis which is in a contracted state and relatively less amount of air is utilized resulting in little or no aspiration). The other external efforts pertaining to pitch/accent of the vowels were described as *udātta* (high pitch or acute accent): *anudātta* (low pitch or grave accent) and *svarita* (high-low pitch or circumflex accent). In contrast, the internal efforts involved in the production of plosives, affricates and nasals *(sparśās)* have been termed as *sprṣṭa* (complete contact) and the external efforts involved in the production of voiceless aspirated stop consonants for instance were described as: *śvāsa, aghōṣa, vivāra* and *mahāprāṇa* (vioceless hissing sound unmodified at the level of glottis which is fully open and relatively large amount of air is utilized resulting in aspiration). Turning to the construct, quantity, consonants in isolation were thought to have a duration eqvivalent to that of $1/2$ *mātrā*; that of individual consonants occuring in gemination as $1/4$ *mātrā*; a short vowel *(hrasva)* has a duration of one *mātrā* whereas, a long vowel *(dīrgha)*, a fricative consonant and a diphthong were said to have a duration of two *mātrās* each. The duration of extra long *(plūta)* or prolated vowels such as those which occur in the final syllable of an utterance were said to have three *mātrās*.

In order to translate these concepts into variables which are amenable for spectrographic analysis, the investigator undertook a thorough review of acoustic phonetic literature from 1930's up until early 80's (mainly

western literature, although data based on one or two Indian language studies were also included). It was established empirically that the duration of one matra should be 85 m. sec. Drawing mainly from **Fant** (1960) and **Potter, Kopp** and **Green** (1947), several hypotheses were formulated and tested. For instance, to test the validity of the construct, "internal effort" as it relates to the tongue height dimension, the following hypothesis was used;

HI: F2 /a/ < F2 /ai/ < F2 /e/ < F2 /i/
similarly,   F2 /au/ < F2 /o/ < F2 /u/

The rationale behind HI is the well established acoustic phonetic fact (**Fant,** 1960) that the second formant of a vowel (F2) decreases as the degree of mouth opening (tongue lowering) and depression of the lower jaw (mandible) increases. The mouth being wide open in the case of/a/ or /au/ as opposed to /i/ or /u/ and hence the F2 of /a/ or /au/ would be higher than the latter sounds.

Based on the relationship between the degree of increase/decrease in constriction area in the front part of the oral cavity in the production of consonants and the first and second formant frequencies of vowels following or preceding those consonants (**Fant,** 1960) three more hypotheses were formulated to test the validity of internal effort. For the purposes of brevity, these hypotheses will not be discusssed in this review.

The hypotheses used to test the validity of "external effort" concerned with the state of the glottis and the amount of air utilized in sound production are:
H2 :   The speech sounds which have the effort *"nāda"*
        should have voice bars on the spectrograms, whereas,

those with *"svāsa"* effort shouls display "gaps" on the spectrograms.

H3: The specch sounds which have the effort *"alpaprāṇa"* should display fewer "fills" (irregular vertical striations which result from frictional modula tion of the airstream) on the spectrogram than those which have an effort *"mahāprāṇa"* . The three main hypotheses used to test the construct "quantity" were:

H4 : The duration of the long vowels should be twice that of short vowels.

H5 : The duration of all stops, affricates and nasals and semivowels should be half a *mātrā*.

H6 : The duration of fricatives should be equal to that of a long vowel or two *mātrās*.

These hypotheses were tested out empirically, using ten subjects (five males and five females) who are proficient speakers of Sanskrit. The subject's task consisted of reading 109 meaningful declarative sentences each of 3- words in length. The words themselves were chosen carefully so that all the test consonants occured in inter - vocalic position (e.g. *aka, āka, akha; ika, uka, ukha* etc) with the exception of /ch/ and /dh/ which also occured in word initial position in Sanskrit. From the original set of forty sentences, 109 final test sentences were generated by changing the word order, which is said to be flexible in this language (but, see Ananthanarayana, 1986) . For each subject, 109 linear, wide-band spectrograms and 228 narrow-band spectrograms were obtained on a sound spectrograph (Voice identification, series 700).A total of 3370 spectograms were made for all ten subjects. The measurements were made only on the first word in each sentence.

The formant frequency measurements and examina- tion of spectrograms for presence/absence of voice bars, gaps

and fills revealed that all the hypotheses pertaining to the internal and external efforts should be accepted. For instance, the following results (in Hertz or HZ) were noted in relation to H1:

$$\begin{bmatrix} F_2 \,/a/ \\ 1298 \end{bmatrix} < \begin{bmatrix} F_2/ai/ \\ 1460 \end{bmatrix} < \begin{bmatrix} Fr \,/e/ \\ 2553.5 \end{bmatrix} < \begin{bmatrix} F_2 \,/i/ \\ 2671.5 \end{bmatrix} \text{and} \begin{bmatrix} F_2 \,/au/ \\ 883 \end{bmatrix} < \begin{bmatrix} F_2 \,/o/ \\ 938.5 \end{bmatrix} < F_2 \,/u/$$

The F2of /u/ was 877.5 Hz, which is not higher than F2of / au/ or /o/ as hypothesized.

Similarly, all the vowels and semivowels exhibited voice bars on their spectrograms, but none of the voiceless consonants did. Both voiceless and voiced unaspirated consonants had fewer fills compared to their aspirated counterparts. With regard to the variable, quantity, only the first hypothesis (see H4 above) was accepted. Hypotheses H5 and H6 had to be rejected because the duration of all sparśās (stops, affricate and nasals) and semivowels was not equal to half a mātrā (42.5 m. sec) , nor was the duration of all fricatives equal to two mātrās (180 m. sec) . Significant durational differences were reportedly noted among sparśās, semivowels and fricatives.

Based on these results, the investigator concluded (on p. 140) that the theories of Sanskrit grammarians with respect to primary effort were valid and so is the theory of relative vowel duration. But, the theories regarding the duration of sparsas, fricatives and semivowels were not found to be valid from the data obtained. The investigator opined that the ancient Indian grammarians' concept of duration is not physical in the same sense as tested in this study.

While the results pertaining to primary effort are stright

forward and need no further comment, her conclusions
pertaining to the variable "quantity" needs further scrutiny.
For a more recent discussion of this investigator's views on
timing in speech (which once again draws on Sanskrit litera-
ture) the reader is referred to Savithri (1989). The differences
in the conceptualization of the term , "quantity" or duration
between the ancient Indian phoneticians and modern day
phoneticians have long been recognized. For instance, Varma
(1961) in his cogent discussion on syllabic quantity com-
mented that the basis for syllabic quantity is phonetic and not
orthographic in that, ancient Indian grammarians referred to
the actual duration of audition of a segment when it is
pronounced and neglected for all practical purposes, the
onglide and partly the contact stage of a plosive consonant.
It was pointed out further that quantity often modifies
syllabic division of words without necessarily effecting a
break in the chain of connected speech.

Even in the western literature, it has been pointed out
(**Lindblom** and **Rapp** , 1973 cited in **Fowler**, 1977) that
measured duration of a given acoustic segment varies as a
function of its location in a syllable, word or phrase such that
segments are shortened by preceding and following
intra-syllabic segments; syllables are shortened by preceding
and following intra-word syllables and stressed words are
shotened by preceding and following stressed words in a
phrase . There has been a great deal of discussion on the
phenomenon of closed syllable vowel shortening (CSVS)
which is said to be consistent with the view that the rhyme of
a syllable is a unit of organization in speech production (see
Maddieson, 1985). More recently, **Fant,Kruckenberg** and
Nord (1991) reported durational reduction as a function of
word class. Specifically, adjectives and nouns were shown to
retain 75% of their isolated reference duration when

followed by verbs, adverbs, pronouns, prepositions, conjunctions down to the extreme of articles which retain only 21% of their isolated mode duration.

The relevance of the above cited research findings to the topic under discussion is that the construct "quantity"which translates as "duration" of speech sounds is meaningful only in relation to the type of syllable (closed/open, stressed/unstressed), grammatical category of the word in which the target syllable occurs, phonetic or pheonological context preceding and following the target syllable and so on. Against this back ground, if we now look at hypotheses H5 and H6 pertaining to the quantity of consonants, they seem too general to permit significant generalizations, for they do not specify the environment in which the target vowel/consonant is going to be measured. Commenting on the procedure used in making durational measurements in this study, the investigator stated on pp. 77-78, " only the vowel sparśā / semivowel / fricative duration in the first syllable of the first word of each sentence was measured ".The vowel duration was defined as the time between the onset and cessation of glottal vibration (i.e. VCV context) . In the case of / ch / and / ḍh / which occured in word initial position, the durational measurement was in CV context.

The result that significant differences were noted among the durations of sparśās as well as fricatives can be attributed to the fact that the syllable structure was not treated as a variable in this study. To eloborate this point, it is pertinent to go over the below mentioned partial list of rules for syllabification of Sanskrit words discussed in Varma (1961):

1. A consonant followed by a vowel, whether the consonant is initial or intervocalic will go with the succeding vowel. Thus, *dāna* = *dā/na; imān* = *i/mān.*

2. For consonantal groups (clusters), the general rule is that the first member of the consonant group will belong to the preceding vowel (e.g. *mukta* gets divided as *muk/ta*) . A more specific rule pertaining to plosive plus [r] is that the first member of a consonant group, if preceded by a vowel is doubled, thus the syllabic division for *"putram "* is *putt/ram* or *put/tram,* but never *pu/tram* (see p. 63 for a detailed discussion).

3. In consonant + semivowel group, the consonant goes with the succeding syllable (e.g. *adhyāvasa* = *a/dhyā/va/sa*), but when a semivowel follows another semivowel as in *"navya",* the syllable division is *nav/vya.*

Even though most of the words in the test sentences were said to be trisyllabic , my own analysis of the first words of the forty sentence listed in Appendix - 3 (on p. A3.6), according to Varma's rules for syllabification mentioned above showed that there are eighteen disyllabic words, twenty one trisyllabic words and one tetra syllabic word. In thirty seven of the forty words, single vowel constituted the first syllable. Among the second syllables containing both consonants and vowels, there are seventeen closed syllables and twenty three open syllables. The durational measurements in the present study were not based on syllable structure, they pertain instead to either VC or CVC segments.

The point to be noted here is that the quantity of "ch" in the word *chātrah* for instance, syllabified as *chāt/rah* (resulting in a closed syllable according to rule 2 above) would be different from that in a word like *chalayati*

syllabified as *cha/la/ya/ti* (as per rule 1 above; *ch* is an open syllable in this case). For the same reason the consonant /j/ in word pairs *"ojati"* and *"ajayyah"* is not comparable because in the first word it occurs in an open syllable, whereas, in the second word, it occurs in a closed syllable. The consonant /d/ in words *"aidamparyam"* and *"audaki"* is likely to have different degrees of quantity because of the difference in number of syllables following the target sound. Similarly, unless all the words in which the target consonant is occuring belong to the same grammatical class, quaninty differences are bound to be present.

The above discussion points clearly that when quantity is treated as an independent variable, the test words have to be matched according to a number of variables like syllable structure, grammatical class etc. It must however be noted that the results of the present study pertaining to durational information are indeed valid, but they refer to CV or VC(V) segments and not syllables in every case. Since much discussion on quantity, both in the ancient phonetic discrpitions and modern day metrics refer to syllable, it would have been interesting to see results of the study discussed in relation to syllabic length segments. Despite the many problems associated with the concept "syllable", this analysis is suggested only as an alternative approach that should be tried out before reaching the conclusion that "quantity" of consonants, in view of the differences in definitions, can not be verified experimentally using modern methods of instrumental phonetics. Such a conclusion may preclude further discussions on clinical utility of these constructs.

Finally, the investigator chose to use the term *"sparśās"* in place of the more commonly used western terms like stops, affricates and nasals, obviously for reasons of economy, and

yet, the other consonant groups were reffered to as fricatives, semivowels etc, This mixing of labels especially in the main hypotheses of the study could have been avoided. Alternatively, reasons for this choice could have been offered sufficiently early in the dissertation to draw reader's attention to this fact.

These comments are in no way intended to undermine the importance of the rich data presented in the thirty five different tables in this dissertation. Several suggestions have been made by the investigator for further study in this area, which have implications for both Linguistics and Speech and Hearing sciences.

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