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SYLLABIC STRUCTURE CONDITIONING IN MORPHOPHONOLOGY

C. RAMARAO

We find certain cases of unnatural-looking syllabic structure conditioning in natural languages. Such cases from Telugu, Konda and Kui are examined in detail and shown that the unnatural-looking syllabic structure condition is either the only or better alternative. Languages employ this type of synchronic conditioning in order to adjust their systems against historical disturbances. It is also proposed that the procession or recession of a sound change selects a set of items that belong to a particular syllabic quantity as its domain.

Though it resists precise characterization, the syllable has been acknowledged as a linguistic reality. Traditional as well as modern grammarians have recognised the part played by quantitative and qualitative syllabic structures in the morphophonemic alternations of a language. It has been long known that certain morphophonemic rules like deletion and addition of segments, and certain suprasegmental variations require syllabic structure conditioning. Most of these alternations appear natural because they are amenable to linguistic reasoning. However, certain alternations do not look that natural because no direct connection could be shown between the conditioning factor and the alternations. It has been the practice of recent phonologists of generative tradition to resort to abstract underlying representations to avoid unnatural syllabic structure conditioning. I do not think that the underlying representation is a cure-all-drug for linguistic maladies. Transference of awkwardness and imposition of naturalness are equivalent to the suppression of truth. I would like to examine such cases of morphophonemic alternations which are quite regular if formulated in terms of syllabic structure.

I. Telugu plural case :

In Telugu plural nouns are formed by suffixing the plural morpheme which has two major alternants with the shape of *lu* ~ *ḷu*, where the difference is retroflexion and nonretroflexion of the suffixal lateral consonant. Linguists generally take *lu*, the non-retroflexed form, as the basic allomorph and derive the other form by a set of rules. *lu* is a good candidate for the basic allomorphic treatment because it occurs with majority of the sets of nouns in unconditioned environments. The retroflexed shape occurs with the nouns that result in a final retroflex

consonant after the loss of morpheme ending vowel by a vowel deletion rule. The following examples illustrate the point :

1. (a) kooṭu 'coat'
kooṭu + lu → kooṭlu → kooṭlu
(b) koodi 'fowl, chicken'
koodi + lu → kood+lu → kooḷḷu

In (b) there is mutual assimilation between retroflexion and lateralization. These assimilations are not confined to plural formation alone.

kooṭa 'fort' + loo 'in' → kooṭ -loo 'in the fort'
oḍi 'lap' + loo 'in' → oḷḷoo 'in the lap'

Since retroflexion (so is lateralization) is a general process of the language it is reasonable to derive the retroflexed morpheme by a rule.

However, there is a set of nouns which resists this formulation, as illustrated below:

2. (a)	Noun + Plural		
	kaalu	+ lu → kaaḷ-ḷu	'legs'
	pagalu	+ lu → pagaḷ-ḷu	'days'
	kooḍalu	+ lu → kooḍaḷ-ḷu	'daughters-in-law'
(b)	nemali	+ lu → nemaḷ-ḷu	'peacocks'
	koḍavali	+ lu → koḍavaḷ-ḷu	'sickles'
	naagali	+ lu → naagaḷ-ḷu	'ploughs'
	goḍḍali	+ lu → goḍḍaḷ-ḷu	'axes'
(c)	uli	+ lu → ulu-lu, ul-lu	'chisels'
	puli	+ lu → pulu-lu, pul-lu	'tigers'
	nalli	+ lu → nallu-lu	'bedbugs'
	cilli	+ lu → cillu-lu	'holes'

In (c) we see an additional process of vowel harmony where the root-final high front vowel assimilates to the suffixal high back vowel. After assimilation this vowel may be dropped in fast speech if it is preceded by a non-geminate consonant. This is a general sandhi rule that operates everywhere. This rule is different from the vowel deletion rule mentioned earlier. (The detailed discussion of this difference is not very relevant

for the point under consideration). In the sets 2 (a) and (b) neither the suffixal *l* nor the *l* of the root is retroflexed but the resulting form has a geminate retroflexed consonant. This sourceless retroflexion process operates if a noun ends in *u* irrespective of syllabic structure. It also operates on an i-ending noun if the noun has an *l* in the penultimate position and it has more than two syllables as in 2 (a) and (b).

This process is resisted in 2 (c), because the nouns have only two syllables. A simple way to predict this process is to formulate a rule which says that the prefinal segment *l* of the *i*-ending roots is retoflexed if the noun is longer than two syllables. If this rule is properly formulated, it has no exceptions. The only objection to this rule is the lack of phonetic justification for the effect of retroflexion with no source in the environment. The only condititoning factor is syllabic length. A generative temptation would be to provide a source in the environment; since we have a retroflex plural alternant, it can be made the source for retroflexion of the root consonant. The derivation could be illustrated as follows:

3. kaalu–ḷu	nemali–ḷu	Basic representation
kaal –ḷu	nemal –ḷu	Vowel deletion
kaaḷ –ḷu	nemaḷ –ḷu	Assimilation

The basic and derived allomorphs of the plural morphemes are reversed here. A natural retroflexion process and the dropping of syllabic structure condition are the gains of this reversal. This analysis requires a de-retroflexion process of ḷ in intervocalic position. This also has historical support because that is what happened in the history of Telugu and some closely related languages. But even this solution does not avoid syllabic structure (SS) conditioning.

The vowel dropping rule should be constrained by syllabic structure to prevent retroflexion in the cases of 2 (c).

4. nemali–ḷu	uli –ḷu	Basic representation
nemal –ḷu	ulu–ḷu	Vowel deletion/harmony
	ulu-lu	Intervocalic deretroflexion

nemaḷ-ḷu	——	Retroflexion
nemaḷḷu	ululu	Final forms
——	ul-lu	Sandhi form

As can be seen the derivation has no problems except that vowel deletion has to be constrained by the syllabic structure. However, the question remains why should a vowel be constrained from deletion in a morphophonemic rule when it is allowed in sandhi in the forms of the same syllabic structure. Besides, should we consider the predictability of the retroflexion on the basis of syllabic structure as just an irrelevant fact? A straight forward solution is to recognise the syllabic length as conditioning the retroflexion. A more compelling case can be seen in the same language.

II. Telugu verb case :

In Telugu, verb roots take various suffixes of tense-mode-aspect, some of them begin with consonant and some with a vowel. The following suffixes are of interest to us :

5. (a) taa ∞ ṭaa		non-Past
tee ∞ ṭee		Conditional
tuu ∞ ṭuu		Participial
(b) an-ṭaa-ḍu		'he says';
an-ṭee		'if one says'
an-ṭuu		'while saying'
(c) maan-taa-ḍu		'he stops'
maaṇ-tee		'if he stops',
maan-tuu		'while stopping'

If we examine the forms illustrated in (b) and (c), we can observe that (C)V*n*-roots select retroflex consonant and (C)$\overline{\text{V}}$*n*-roots select non-retroflex consonant—CV*n*-roots in the language are only the following: *an* 'say', *kan* 'to give birth', *kon* 'to buy', *tin* 'to eat', *win* 'to hear'. The *ṭ* (retroflex) forms occur only with a handful of roots whereas the *t* (non-retroflex) forms occur unconditionally with all the roots. The obvious candidate for the basic representation would be the *t* shapes with non-retroflex dental consonant *t*. The retroflex variant can be derived by a rule. The obvious conditioning factor is the

canonical structure CV*n*–. Again the question arises as to the source for the retroflexion. If we reverse the status of the basic and non-basic status of the allomorphs, we can show the source for the retroflexion in the root. This requires selecting *ṭ*–beginning allomorph as basic and derive the retroflexion of the root final nasal *ṇ* by general assimilation rule. Even this rule has to be constrained only to the shapes of CV*n* to avoid ungrammatical forms like **maaṇṭaadu* etc. SS conditioning cannot be avoided in any case. The only choice is whether SS conditioning should be utilized to constrain a general rule by selecting a marked allomorph or to formulate a limited rule by selecting an unmarked allomorph. Either of the choices cannot avoid SS conditioning.

A third alternative can be proposed which requires a slight modification in the underlying representation Why not put in the retroflexion in the root ending nasal consonant in just those roots which select retroflex suffix alternants? In other words, we are introducing a diacritic feature in the basic representation of the root in order to predict the retroflexion in the suffix. It requires a rule to predict the process :

$$ṇ + ṭ \rightarrow ṇ + ṭ$$

This is nothing but a synchronic resurrection of a burried diachronic process that once operated in the related Dravidian languages But even this resurrected rule has to be constrained from operating on voiced dental consonants. The following derivational picture would make the point clear :

aṉ–tee; aṉ–daa–m	poposed abstract representation.
aṉ–ṭee; *aṉ–ḍaam	progressive retroflexion
'if one says; let us say'	

The operation of the progressive retroflex assimilation rule gives an ungrammatical form, if it is allowed to operate on the voiced dental stop. I do not see how we can constrain it without making an arbitrary condition that it should not operate on voiced dental consonant. There is no phonological or phonetic justification for such a constraint because it is unreasonable to assume that voicing resists retroflexion.

We can see in both these cases how the attempts to avoid SS condition lead to problematic abstract representations and arbitrary constraints which are otherwise quite general processes.

In the above cases we thought of some alternatives, because retroflexion is a feature that can be diacritically introduced in the basic representation which assimilates neighbouring non-retroflex dental and lateral consonants. In some alternatives it is merely a choice between marked and unmarked allomorphs. There are certain other processes in Telugu which do not allow such alternatives. SS condition is not only the obvious way but the only way.

III. Telugu imperative case :

A majority of Telugu verb roots do not show any alternation in the final consonant except in a few sets. A vowel *u* or *i* is added depending on the root final consonant. The alternation varies depending on the syllabic length of the roots. The derivation makes the point clear.

6	PERFECTIVE PARTICIPLE	DURATIONAL PARTICIPLE	IMPERATIVE	
(a)	pilic–i	pilus–tuu	piluw(u)	'call'
	kaalic–i	kaalus–tuu	kaaluw(u)	'burn,shoot'
(b)	daac–i	daas–tuu	daay(i)	'hide'
	tuuc–i	tuus–tuu	tuuy(i)	'weigh'
(c)	aḍig–i	aḍug–u–tuu	aḍugu	'ask'
	waag–i	wag–u–tuu	waagu	'chatter'

In 6 (c) the root final consonant does not change. In both 6(a)and (b),root final consonant is *s* before *t*, an automatic variant because *c* + *t* sequence does not occur in the language. In imperative forms, 6 (a) and (b) differ in the final consonant, i.e. monosyllabic roots have *y* and diasyllabic roots have *w*. The rule has to take the syllabic structure into account and I do not see how it can be avoided. I do not see why the root final *c* should choose *y* in monosyllabic roots and *w* in diasyllabic roots. No apparent phonetic justification could be given.

IV. Telugu vowel harmony case :

Vowel harmony is a process in Telugu that operates extensively in phonemic and phonetic levels. The process has different operations depending upon the grammatical categories In verbs, whether we introduce it in the basic representation or insert it by a rule, a vowel occurs between the root final and suffix initial consonants This vowel undergoes harmonic change based on the features of the suffixal vowel. The following derivations illustrate the vocalic changes :

7.	I DURATIONAL	II CONDITIONAL	III NON-PAST 3 M. SG.	
(a)	aḍug-u-tuu	aḍigi-tee	aḍug-u-taaḍu	'ask'
	waag-u-tuu	waag-i-tee	waag-u-taaḍu	'chatter'
	pogud-u-tuu	pogiḍ-i-tee	pogud-u-taaḍu	'praise'
(b)	paaḍ-u-tuu	paaḍ-i-tee	paaḍ-a-taaḍu	'sing'
	naan-u-tuu	naan-i-tee	naan-a-taaḍu	'get soaked'
	teel-u-tuu	teel-i-tee	teel-a-taaḍu	'float'
	naa-ṭ-u-tuu	naaṭ-i-tee	naaṭ-a-taaḍu	'sow'

In case we consider the vowel between the root and the suffix as inserted by a rule, it should be done before the operation of the vowel harmony rule, because the inserted vowel is *u* in non-harmonic cases, as in the column III of 7(a).This *u* is affected by the suffixal vowel throughout in column II but only in certain cases in column III and these cases have to be characterised by syllabic structure. The inserted *u* assimilates to suffixal *a* only in the monosyllabic roots with a long vowel ending in coronal consonants This extension of vowel harmony apparently is an innovation in modern Telugu because no recorded evidence is attested for this type of change in old Telugu. This harmony which is confined to column III of 7(b) is extended everywhere including to column III of 7(a) in some dialects of Nellore and Rayalaseema.

In all the above examples we notice that either innovation or recession of a sound change is involved. Though it is quite

evident. I would like to remind that the synchronic system is the result of diachronic processes. The linguistic mechanisms of change constantly disturb as well as repair the system of language. This dialectical process sometimes produces natural looking alternations by retaining original conditions of change but some other times it effects alternations with unnatural looking conditions, when the early sound changes are levelled by analogy. The Telugu cases also suggest that either procession or recession of a sound change may operate not lexically as suggested by Chen and Wang (1975) but also on particular canonical shapes of phonological form-classes. When such a process completes its operation in a form-class it results in SS conditioning.

I would like to cite a couple of examples from other Dravidian languages for similar conditioning.

V. Koṇda imperative case:

In Koṇda *du* is an imperative plural suffix which has *ṛu* and *ḍu* as other variants. Krishnamurti (1969) has very good reasons to consider *du* as the basic allomorph which need not be elaborated here. Certain morphophonemic changes would affect the root final consonants as well as the suffix initial consonant as illustrated in the following derivational chart.

8.	nil 'stand'	man 'stay'	
	nil-du	man-du	Basic Representation
	nin-du	—	Nasalization
	nin-ṛu	man-ṛu	Trilling

However, the above mentioned rules operate only if the root vowel is short. For example *deel* + *du* is only *deeldu* with no change. Again, no reasonable abstract underlying representation could be proposed for either nasalization or for trilling. SS condition is the only normal way of characterising these processes and this also could be the result of historical changes that set their feet on syllabic steps.

VI. Kui epenthesis and assimilation:

In Kui, according to Winfield, there are four inflectional classes in the verbs. In the first conjugation verb roots end in a

consonant; when the past tense suffix *-t-* is added, a high front vowel is inserted between the root and the suffix. Obviously this epenthesis is to protect the shapes of root and suffix from possible assimilations.

9. aag 'to bear fruit'
   aag + t → aag-i-t
   eeg 'be open'
   eeg + t → eeg-i-t

However, there are nine *-g-* ending roots recorded by Winfield which do not take the epenthetic vowel but allow progressive assimilation. For example,

10. geg + t → geg-d (geg 'believe')
    nog + t → nog-d (nog 'wash')
    peg + t → peg-d (peg 'collect')

Though there are three exceptions to this operation, we can still formulate a progressive assimilation rule confining it to *-g-* ending monosyllabic roots with a short vowel. A thorough examination of Winfield's grammar suggests that the progressive assimilation rule is a Kui innovation and it is conditioned by syllabic structure. Notice here that the progressive assimilation does not have a single case outside of this stated syllabic structure, though it refrains from operating in a couple of forms within this cannonical shape. This strongly suggests that the procession of a sound change is confined, at least in some cases to a single canonical shape at a time.

I know that the cases from three languages are not sufficient to make any tall claims about the origin of SS conditioning. However, these examined cases of Telugu, Koṇḍa and Kui have employed SS conditioning in their synchronic rules and the sources can easily be traced to diachronic processes. As suggested above, if SS condition results from the procession and recession of sound changes, I do not see why SS conditioning cannot be considered a natural conditioning factor for morphophonemic rules.

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THE REFLEXES OF *NP IN KOTA-TODA

P. S. SUBRAHMANYAM

ANNAMALAI UNIVERSITY

The proto-Dravidian nasal plus homorganic plosive (*NP) sequence has double reflexes in Kota and Toda- one with a nasal and the other without it. This paper argues that the set of reflexes with no nasal is a native innovation of Kota and Toda whereas the set with a nasal is a consequence of borrowing from Badaga and Tamil. The loss of nasal in *NP sequences in these two languages provides further evidence to classify them as a sub-subgroup of the South Dravidian branch.

1. In the table of correspondences in the *DED* (pp. xii-xiii), double reflexes were given for Kota in regard to five of the six reconstructed sequences of nasal plus homorganic plosive (*NP). In all those cases, one of the reflexes shows the loss of the nasal while the other one retains it; in the case of the palatal *ñc, only one reflex, that is, the one with the retention of the nasal was given. For all the six sequences, Toda shows reflexes with the loss of the nasal, but there are two different reflexes each for the velar and the dental sequences. The reconstructed NP sequences and their reflexes in Kota and Toda are reproduced below:

	Kota	Toda
*nk	g. ŋg	g, x
*ñc	ñj	z
*ṇṭ	ḍ, ṇḍ	ḍ
*nt	d, nd	d, θ
*mp	b, mb	b
*nt	d, nd	d

In this paper, an attempt is made to account for the double reflexes in the two languages. The present paper summarizes the conclusions arrived at on the subject in my forthcoming book, *Dravidian Comparative Phonology.*

2. Regarding the double reflexes in Kota, it can be stated that there are no phonological conditioning factors for the different developments except in the case of the alveolar sequence. In

the case of the non alveolar sequences, both types of reflexes occur in one and the same environment as can be seen from the examples given below.

A

1. Ko. nuŋg– 'to gulp down without chewing'. To. nug– 'to gulp down': Ta. nuŋku. (3064)
2. Ko. tuug- 'to hang'. To. tuux-: Ta. tuuŋku. (2777a)
3. Ko. pog- 'to boil over', poŋg- 'to increase (intr.) magically in number'. To. pïg- : Ta. poŋku (3658)
4. Ko. aŋgaaḍy 'shop, bazaar'. To. ogody: Ta. aŋkaaṭi. Ka. aŋgaḍi. (37)
5. Ko. ceŋgl 'corner of a clock or peace of cloth'. To. tergy: Ka. seŗa (ŋ) gu. (2298).
6. Ko. ceŋg- 'to grieve': Ta. ceŋku. (745)
7. Ko. kaŋgaac 'wonderful sight': Ta. kaṇkaaṭci (colloquial kaṇkaacci). (1209)
8. Ko. mag-, maŋg- '(light) becomes less': Ta. maŋku. (3880)
9. Ko. tigḷ 'moon',tiŋgḷ 'month'. To. tïgïḷ 'moon', tiiḶ 'month': Ta. tiŋgaḷ 'moon, month'. (2626)
10. Ko. toŋg- 'to hang (intr.)': Ta. toŋku. (2863)
11. Ko. korg 'black monkey': Ta. kuraŋgu. (1473)
12. Ko. poḷŋg-'to be on intimate terms with': Ta. puḷaŋku,(3296)
13. Ko. vaag- 'to make (pot) bulge (in throwing it on the wheel)': Ta. vaaŋku 'to bend'. (4371)

B

14. Ko. maṇḍ 'head'. To maḍ: Ta. maṇṭai. (3811)
15. Ko. piḍ '*pudendum muliebre*'. To pïḍy: Ta puṇṭai. (3509)
16. Ko. aaṛ 'year'. To oor: Ta. yaaṇṭu. (4230)
17. Ko. taḍ, taṇḍ 'stem of plant, trunk of tree': Ta. Ma. taṇṭu. (2484)
18. Ko. meḍ 'dullness (of knife)': Ka. moṇṭu, moṇḍe (4199)
19. Ko. aṇḍy 'pot'. To. aḍy: Ta. aṇṭai. Ka. aṇḍe. (1.0)

20. Ko. goṇḍ 'knob, head of pin' koṇḍ 'knot of hair': Ta. koṇṭai. Ka. koṇḍe, goṇḍe, goṇḍe. (1733)
21. Ko. tuṇḍ 'piece'. To. tuḍ: Ta. Ma. tuṇṭam. Ka. tuṇḍu.(2712)
22. Ko. gaṇḍ 'male'.To.koḍṇ'Badaga husband':Ka. gaṇḍu.(986)
23. Ko. ka-ḍ-. To. ko-ḍ-<*kaṇ-ṭ-, past stem of *kaṇ-/*kaaṇ- 'to see'. (1209)
24. Ko.To. u-ḍ-<*uṇ-ṭ-, past stem of *uṇ-'to eat or drink'. (526)

C

25. Ko. To. mad 'medicine': Ta. maruntu. (3863)
26. Ko. vid aaḷ 'guest': Ta. viruntu. (4442)
27. Ko. va-d-. To. po-d<*va-nt-, past stem of *vaar-/*varu- 'to come'. (4311)
28. Ko. av-d-<*akaḷ-nt-, past stem of *akaḷ 'to dig'. (12)
29. Ko. tondarv 'trouble': Ta. tontaruvu. (2887)
30. Ko. pandiigm 'race': Ta pantayam. (3239)
31. Ko. ond- 'to be united'<Ka. ondu<*ont (834d)

D

32. Ko. kob'branch, horn of an animal', kombn (<Ta.kompaṉ) 'boastful man', fem. komby. To. kub 'horn blown by Kota musicians': Ta. kompu. (1759)
33. Ko. To. narb 'nerve': Ta. narampu. (1093)
34. Ko. namb- 'to believe'. To. nob-: Ta. nampu. (2975)
35. Ko. paab 'snake'. To. poob: Ta. paampu. (3361)
36. Ko. am(b) 'arrow'. To. ob : Ta. ampu (150)
37. Ko. embat 'eighty': Ka. embattu. (670)

E

38. Ko. od 'one'. To. wid; Ta. oṉṟu. (834d)
39. Ko. muund 'three'. To. muud: Ta. muuṉṟu. (4147)
40. Ko. paj 'pig'. To. pody (<Old Ka. pandi): Ta. paṉṟi.(3326)
41. Ko. toor- 'to be visible' 'come to mind'. To twiir-: Ta toonṟu. Ka. toor. (2942)

42. Ko. ti-d. To. ti̱-d- <*tiṉ-t-, past stem of *tiṉ-'to eat'.(2670a)
43. Ko. iin-d. To. ii̱-d-. <*iiṉ-t-, past stem of *iiṉ- 'to bear young'. (473)
44. Ko. naan-d-. To. noo-d-<*naaṉ-t-, past stem of *naaṉ- 'to be soaked'. (3006)
45. Ko. mand 'burning place for dry funeral, Toda village'. To. mod 'village with dairy': Ta. maṉṟu 'hall of assembly'. (3913)
46. Ko. ni̱-nd-.To.ni̱-d- <*ni-ṉ-t,past stemof*nil-'tostand'.(3043)

F

47. Ko. anj- 'to fear'. To. oz̤-: Ta. Ma. añcu. (51)
48. Ta. noz̤ 'poison'.: Ta. nañcu. (2955)
49. Ko. nanj 'heart'. To. ni̱:z Ta. Ma. neñcu. (3097)

3. From the examples given in the above section, it is clear that in Kota the two types of reflexes, i.e. one with the nasal and the other without it, are not phonologically conditioned except in the case of the alveolar sequence. In the latter case, the nasal is retained after a long vowel but it is lost after a short vowel, i.e.

$$*\underline{n}^{t} \quad > \quad \begin{matrix} nd \,/\, V{:}- \\ \underline{d} \,/\, V- \end{matrix}$$

This conditioning is somewhat peculiar because in languages that lose the nasal in *NP sequences (for example, Kannada), it is lost only in environments other than after the word-initial short vowel. But this conditioning in Kota is well supported by the data. However, there are a few cases where nd appears after a short vowel (examples 45 and 46) and d appears after a long vowel[1]. Borrowing is ruled out in the case of examples 45 and 46 because neither Kannada nor modern Tamil possesses ṉṟ; we may perhaps cosider the influence of either one of these as reasonable for the retention of the nasal in these cases. Ko. *toor-* (example 41) is a clear loan from Badaga.

As has already been pointed out, the nasal in the case of the palatal sequence is never lost in Kota.

In the case of the velar, the retroflex, the dental and the labial sequences, complementary distribution between the two types of reflexes is ruled out and, therefore, one of them has to be considered as the native development and the other as belonging to borrowings. Since no language other than Kota-Toda shows the loss of the nasal in *NP after the initial short vowel, it is reasonable to take the reflex without the nasal as the native development. All words that show the reflex with the nasal will have to be considered as borrowings, mostly from Badaga but also rarely from Tamil. Several other points support this conclusion.

First of all, the secondary stems (i.e.,the past stems in origin) of verbs which are decidedly native forms show the loss of the nasal (see examples 23,24,27, 28 and 42). Secondly, certain words which can be considered as native because of the fact that they have undergone the process, 'fronting of a back vowel before **ay*' show the loss of the nasal in them (see examples 15 and 18; Emeneau, 1969). On the other hand, certain words that fail to show the change mentioned above and therefore are identifiable as loans retain the nasal, as is to be expected (see example 20)[2]. Incidentally, these loans indicate the relative chronology of the rules involved; it is as follows:

(1) Fronting of the back vowel before *-e (<*-ay)
(2) *NP > B
(3) *-e > ϕ

Thirdly, as shown above, there are other indications (linguistic or cultural) in the case of some words with the retention of the nasal that point to their loanword nature. In *aṇḍy* (example 19), final *y* or **-ay* indicates that it is a loan from Badaga. *aŋgaaḍy* (example 4) and *embat* (example 37) are words of higher culture. In examples 29 and 30 (also 37) the unusual presence of the vowel of the second syllable indicates their loanword nature. The doublets in some instances but not in all wiht and without the nasal rule out free variation within the native element.

4. Regarding the Toda reflexes *g* and *x*, both <**ŋk*, it can be said that *g* is the regular reflex after a word-initial short vowel

(see examples 1 and 3); there is no occurrence of *x* (as the reflex of **ŋk*) in this environment. After an initial long vowel and after the reconstructed second vowel, both *x* and g occur without there being any possibility for phonological conditioning. The only possibility is to consider the peculiar development *x* as the normal Toda reflex and to consider words with *g* in these positions as loans. In some such words with *g*, there are other indications to show that they are loans (note that in example 9, ˀ instead of ɻ indicates that *tlgīl* is a loan).

50. To. öðx- 'to scream (peacock or diviner)': Ta. eeŋku. (746)
51. To. toog- 'to support (burden)':Ta. taaŋku. Ka.taagu.(2573)
52. To. paag- 'to fall': Ta. vaaŋku 'to bend'. Ka. baagu. (4371; the absence of the change *aa>oo also indicates that the Toda word is a loan.)
53. To. waɾx- 'to sleep': Ta. uɾaŋku. (606)
54. To. kwarg 'monkey': Ta. kuraŋku. (1473)
55. To· pöl̤x- 'to dawn': Ta. viḷaŋku 'to shine'. (4524)
56. To. twŏlg ɪ̂d- '(ball) bounces, (river) goes over rocks': Ta. tuḷaŋku 'to move, shake'. Ka. tuḷaku (2762; ḷ instead of ɻ indicates that the Toda word is a loan.)
57. To.wɪ̂θx-'(horns of fighting buffaloes) slip apart': Ta. otuŋku 'to step aside, retreat'. (821b)
58. To. wɪ̈dg- 'to be crushed': Ta. oṭuŋku 'to be restrained'. Ka. uḍugu. (804; ḍ instead of ṛ also indicates that the Toda word is a loan.)

The above paired instancesare enough to prove that the Toda words with *g* after a long vowel or after a reconstructed second vowel are loans.

5. Emeneau (1967:383) has pointed out that, in Toda, **nt* > *d* immediately after a vowel of the first syllable (chiefly short vowels but also *mii-d* > **mii-nt-*, past stem of *mii-* 'to bathe', *DED* 3995), but > θ (intervocalically, this has a voiced allophone) elsewhere. This is best illustrated by the secondary stems of Toda, e.g. *po-d* < **va-nt-* (example 27), *pö-d-* < **ve-nt-*, past stem of *veẹ-* 'to be hot' (*DED* 4540) but *naɾ-θ-* < **nata-nt-*, past stem of

**naṭa* 'to walk' (*DED* 2957) and *ī-θ-* < **iru-nt-*, past stem of **iru* 'to be' (*DED* 407).

6. It is a well established fact that Kota and Toda constitute a sub-subgroup within the South Dravidian. The loss of the nasal in*NP sequences can now be taken as one more innovation that is exclusively shared by these two languages in addition to those that are already known (Subrahmanyam, 1971:517). This change must have started in the Proto Kota-Toda period first in the velar, the retroflex, the dental and the labial sequences. Toda extended it to the palatal and the alveolar sequences. Kota too extended it to the alveolar sequence that occurs after a short vowel; the palatal sequence in this language remains unaffected. On the basis of the conclusions arrived at in this paper, the *DED* table of correspondences for Kota and Toda can be modified as follows (parentheses enclose reflexes in loans) :

	Kota	Toda
*nk	g (ŋg)	V̆$_1$] g, x (g)
*ñc	ñj	z
*ṇṭ	ḍ (ṇḍ)	ḍ
*nt	d (nd)	V̆$_1$] d, θ
*mp	b (mb)	b
*n̲t	V] d, d̲	d̲

NOTES

1. There are many verbs like those in examples 43 and 44, whose secondary stems show n̲d after a long vowel but there are only three verbs with secondary stems showing the loss of the nasal after a long vowel. They are: *aan-*(*aad*) '(mouth) opens, open (mouth)', which can be connected with Ta. *akul* (*akaṉṟ-*) 'to spread' (*DED* 9), *buun-*(*buud-*) 'fail because forestalled' and *buun-/buuv-*(*bund-*) 'hair becomes white'. Although the last two have no known etymologies, we can suppose that in all the three **n̲t* was originally occurring after the second vowel which was short. The Kota verb list is given in Emeneau (1967: 400–408).

2. However, one word identified as a loan by Emeneau (1969:29), i.e. *tod* 'throat' (Ta. *toṇṭai*, *DED* 2879), shows the loss of the nasal. It must have entered Kota before the operation of **nt*>d but after the operation of the fronting rule,

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TELANGANA TELUGU VERB STRUCTURE AND MORPHOLOGY

BRUCE R. PRAY
University of California, U.S.A.

1. Introduction

The study of Telugu dialects has recently been undertaken in a systematic way by the Telugu Akabemi, an organization which has already published a study of Karimnagar Telugu, a dialect of the Telangana region.[1] Such studies will undoubtedly clarify and refine existing notions of dialect boundaries and will furnish much valuable information about social and geographical variation.

In carrying out any broad-scale dialect survey, however, it is impossible to analyze every dialect with the same degree of thoroughness because of the necessity to interview many informants from each area and the need to have a more or less uniform questionnaire to facilitate comparison and interpretation of the data.

This paper represents a different approach to dialect studies, an approach which complements and extends the dialect-survey method. I have been primarily concerned with collecting detailed linguistic data for one dialect of Telugu, and for one particular variety of that dialect. These data tend to reflect my interest in syntax, but I have tried to provide an explanation for relevant phonological problems when they arise.

The language studied here is a variety of Telangana Telugu. More precisely, it is the language spoken by my chief informant

who was born and raised in the town of Bhongir about thirty miles from the city of Hyderabad, Andhra Pradesh [2]. In this paper I have discussed several phonological, and morphological topics all of which have some relevance to an understanding of Telangana Telugu and to problems in Telugu dialectology. The advantage of studying a single dialect in depth is that it reveals unexpected and often important linguistic facts which might otherwise be missed in a more superficial dialect study, for example the alternate *le* of the locative postposition *la* (Section 4.2).

My primary purpose in presenting the data in this paper is to make available information about an important Telugu dialect in a form which encourages and facilitates comparison with other dialects. A second purpose is to suggest alternate analyses for certain grammatical categories and structures in Telugu. These suggestions are only tentative and in some cases may represent only terminological differences, but they seem to me to have some justification.

My interest in Telangana Telugu was originally sparked by a study of Dakhini Urdu as spoken in the city of Hyderabad. Since Dakhini Urdu has been spoken in this area since the 16th century, it is only natural that it exhibits marked Dravidian traits which reflect the influence of the Telugu spoken in this part of Andhra Pradesh. Similarly, Telugu spoken in the areas in which there are large numbers of Dakhini Urdu speakers can be expected to show some influence from Dakhini Urdu as well. Since there is little information available on the Telugu of this area, I found it necessary to begin this study of Telangana Telugu to provide essential background information for my study of Dakhini Urdu.[3]

2. The structure of the finite verb

The basic finite verb consists of these components:

verb stem + aspect / tense + person

Each of these components will be discussed in the following sections, after which paradigms will be given to illustate the range of finite verb forms which occur in Telangana Telugu.

2.1 person

In third person plural forms, human and non-human referents are always distinguished. In the third person singular, two types of agreement occur. In one case, a single suffix serves for both human and non-human referents; the same form also marks the non-human plural.[4]. The other type of distinction in the third person singular is characteristic of Dravidian. One form agrees with a noun or pronoun denoting a male human; the other form refers to a female human or any non-human referent.

As convenient abbreviations, let *m* stand for male human, *f* for female human and *n* for the category non- huuman. Therefore, human may be symbolzed as *mf* and the non-male (non-masculine) category may be represented as *fn*.

It should not be overlooked that the first and second person pronouns almost always have human referents, the only exceptions being when animals are addressed or when inanimate objects are personified. It may be assumed that all instances of first and second person forms referring to non-human nouns are examples of personification, or at least imputed rationality. As a working principle we may say that the first and second person forms are by definition [+human] and therefore need not be specifically marked for gender.

The suffixes which show person, gender and number agreement may be classified into three sets in terms of the preceding segment: (1) following a consonant, (2) following a vowel other then *i*, (3) following the definite past stffix *-ti/-i*.

	(1) C—	(2) V—	(3) ti/i—
1 sg	—an	—nu ~ —n	—n
1 pl	—am	—m	—mi
2 sg	—av	—v	—vi
2 pl 3 pl mf	—aru	—ru	—ri
3 sg m	—aḍu	—ḍu	—en
3 sg fn	—adi	—du	—en
3 pl n	—ay	—v	—en

A final nasal consonant *n* is shown for certain suffixes, although in Telangana Telugu the only nasal consonant which occurs freely before word boundary and pause is *n*. Furthermore, these suffixes occur without this *n* except when a vowel follows. In order to explain these and a number of other cases where *V* alternates with *Vn*, it is necessary to posit a final *n* in certain forms and provide the following rule which deletes the nasal when not followed directly by a vowel.[5]

(1) $n \rightarrow \phi \; / \; V - \neq$

Before closely bound elements such as the quotative participle *ani* and the clausal particles *aa*, *oo* and *e*, the nasal consonant is retained. For example, *ceesta* 'I will do it' shows the first person suffix *an* with the nasal deleted. Compare this with the same verb form before the quotative *ani* in *ceestan ani* 'I will do it, having said'. An example of the first person suffix *an* following the perfective marker *in* is *ceppina* 'I said.' Before the quotative this form is *ceppinn ani* 'I said, having said,' the latter form being derived form *ceppinan ani* by deletion of the vowel of the personal suffix *an*.

The first person suffix *nu* occurs after long vowels while *n* occurs after short vowels. For example:

leenu	'I am not, I was not'
poonu	'I will not go'
tina	'I will not eat'
ceppa	'I will not tell'

The final vowel of the suffix *nu* may be deleted before pause in informal speech, thereby yielding forms with *n* remaining before pause. For example :

neen boon	'I will not go'
neen raan	'I will not come'

Rule 1 which deletes a final *n* must therefore precede the rule which deletes the high back vowel in the environment $\bar{V}n - \#$.

The great similarities between the sets of personal endings and their close resemblance to the forms of the personal pro-

nouns suggest that a unified statement of the forms of the pronominal elements would provide a more economical analysis. For example, the basic form of the first person plural suffix could be posited as *mV* where V is already marked as a high vowel. If the preceding vowel is front, then the suffix is *mi*; if not then it is *mu*. A general rule then deletes *u* after nasals and the consonant *v* yielding the actual ending *m* or *am*. A reanalysis of the pronominal suffixes and personal pronouns is needed, but this is a problem of analysis for all dialects of Telugu and not just for the Telangana Telugu.

To facilitate comparison of the TTe forms with those of other Telugu dialects, verb forms will often be displayed in a paradigmatic arrangement.[6] The number of items in a pardigm, as well as the endings themselves, are sufficient to enable the reader to identify the individual forms without the necessity of labeling each form in the paradigm.

Paradigms with eight forms are to be interpreted as :

1st person sg	1st person pl
2nd person sg	2nd person pl
3rd person sg m	3rd person pl mf
3rd person sg fn	3rd person pl n

Paradigms with six members show no distinction between human and non-human in the third person singular.

1st person sg	1st person pl
2nd person sg	2nd person pl
{ 3rd person sg mfn { 3rd person pl n }	3rd person pl mf

2.2 Tense

The decision whether a verbal form is to be interpreted as primarily aspectual or temporal is not always an easy one to make and often the borderline between the two is not well defined. In several studies of Telugu grammar, tense terminology is used almost exclusively. The analysis within which I am working assumes both tense and aspect, aspect being indicated by verbal suffixes and tense by forms of the copula *uṇḍ* 'to be'. Three

tenses are distinguished by the copula, two of which have corresponding negative tenses.

The tenses of the verb *uṇḍ* 'to be' are displayed in the usual paradigms. Non-future means only past-present; likewise non-past is a convenient way to express present-future.

2.2.1 Tense auxiliaries

Non-past

unṭa	unṭam
unṭav	unṭaru
unṭaḍu	unṭaru
unṭadi	unṭay

Non-future

unna	unnam
unnav	unnaru ∞ unru
unnaḍu ∞ uṇḍu	unnaru ∞ unru
unnadi ∞ undi	unnay

Definite past

unṭi	unṭimi
unṭivi	unṭiri
uṇḍe	uṇḍri

Non-future negative

leenu	leem
leev	leeru
leedu	leeru
leedu	leev

Definite past negative

leekunṭi	leekunṭimi
leekunṭivi	leekunṭiri
leekuṇḍe	leekuṇḍiri

2.2.2 Past definite

For verbs other than *uṇḍ* 'to be' the definite past is the only tense which may occur independently of aspect. The person suffix *en* marks the third person singular [± human] as well as

non-human plural. The tense suffix is *ti* before the first and second person endings and *i* before the third person suffixes. The terminations are therefore:

–tin	–timi
–tivi	–tiri
–en	–iri

The forms of the definite past for the verb *unḍ* 'to be' as given in the preceding section are the result of the usual phonological rules applying to the sequence *nḍ+t* which becomes *nṭ*; the optional deletion of the high front vowel *i* in the sequence *–nḍiri* yields *-ndri*.[8]

The difinite past forms of the verb *unḍ* 'to be' are freely used, both independently and with aspectual forms of the main verb. With other verbs, however, the past definite forms which are not aspectual have a very specialized meaning which may be paraphrased as 'to have already done something', its use often implying regret or resignation to the consequences of the act. In this meaning, it is frequently accompanied by the adverb *appaṭike* 'by then however'. For example:

(2) appaṭike neem booti 'But by then I had already gone (and couldn't do anything about it)'

(3) appaṭike vaaḍ jeese 'But by then he had already done it (and it was too late to tell him not to, etc.)'

(4) vaal zaduvukunnoll aairi 'They had already become educated (before we had a chance, etc.)'

2.3 Aspect

For the present, I am assuming that two aspects are marked in the Telugu verb: perfective and imperfective. The imperfective has both positive and negative forms which are indicated by different suffixes. Furthermore, the form of the aspectual markers depends on whether they occur directly before a personal suffix or before the auxiliary (copula) *unḍ* 'to be'. These forms may be displayed as follows:

aspect	*+personal suffixes*	*+auxiliary verb*
perfective	in	in ∞ i
imperfective :		
positive	t	ta
negative	a	aka

The meaning of the imperfective forms depends on whether or not they are followed by a tense auxiliary. With a tense auxiliary (copula) the imperfective suffixes refer to an action in progress at the time indicated by the auxiliary. Thus, with the non-future *unnam* 'we are/we were' and the definite past *untimi* 'we were/we had been', we have these progressive froms:

(5a) ceestunnam 'We are doing/we were doing'
(5b) ceestuntimi 'We were doing/we used to do'

When there is no overt tense marker, the non-completion of an action (i e. imperfective) refers to an act which will take place, either for the first time or which has taken place and is likely to do so again. The first case is interpreted as a simple future and the second is one way of looking at what are often called habitual or general tenses. In TTe as well as standard Telugu, both are represented by a single form; for example, *ceestadu* 'he will do' or 'he does'. The temporal reference for such verbs is actually provided by the time of the speech act itself. This somewhat more abstract meaning of the aspectual form 'imperfective' makes it easier to reconcile the progressive, future and habitual meanings of the suffix *-t (a)* than to try to assign tense meaning directly to this suffix.

A similar line of reasoning applies to the aspectual interpretation of verb forms which are often referred to as past tense, past non-finite, etc. The suffixual forms *in, i* and *ina* are all assumed to be variants of a single perfective suffix which indicates a completed act, prior to some time reference, implicit or explicit. For example, the verb form ending in *i* is a non-finite verb, indicating an event prior or as background to the main verb. Thus, in sentence (6) the time refernce of *tini/dini* 'having eaten' is past, but in (7) it is future.

(6) vaaḍ dini iiḍik occiṇḍu 'He ate and came here.'
(7) vaaḍ dini iiḍik ostaḍu 'He will eat and come here'.

Similarly, the adjectival form of the perfective suffix refers only to the fact that an action is completed and says nothing about time. In conjunction with *appuḍu* 'at that time' the perfective adjective *ceesina* forms the phrase *ceesn appuḍu* which may have any tense reference: 'when he had done it, when he has done it, when he will have done it, etc.'

When the perfective verb form itself is the main verb, the time of the speech act defines the temporal frame of reference within which a perfective verb almost necessarily is considered to refer to a past event, since completed actions at the time of speech are naturally interpreted as past time.

2.4 Non-negative verbal paradigms

The aspectual and tense forms may be combined as follows:

verb stem { imperfective { non-future / non-past / definite past } / (perfective) (definite past) } person

The resulting forms may be displayed in the following paradigms.

Imperfective 'I will tell/I tell'

cepta	ceptam
ceptav	ceptaru
ceptaḍu	ceptaru
ceptaḍi	ceptay

Imperfective non-future 'I am/was telling'

ceptunna	ceptunnam
ceptunnav	ceptunru
ceptuṇḍu	ceptunru
ceptundi	ceptunnay

Imperfective non-past 'I keep on telling/I will be telling'

ceptuṇṭa	ceptuṇṭam
ceptuṇṭav	ceptuṇṭaru

ceptuṇṭaḍu	ceptuṇṭaru
ceptuṇṭadi	ceptuṇṭay

Imperfective definite past 'I was telling/I used to tell'

ceptuṇṭi	ceptuṇṭimi
ceptuṇṭivi	ceptuṇṭiri
ceptuṇḍe	ceptuṇḍri

Perfective 'I told'

ceppina	ceppinam
ceppinav	ceppinru
ceppiṇḍu	ceppinru
ceppindi	ceppinay

Perfective definite past 'I had told'

ceppiṇṭi	ceppiṇṭimi
ceppiṇṭivi	ceppiṇṭiri
ceppiṇḍe	ceppiṇḍri

Definite past 'I had already told'

cepti	ceptimi
ceptivi	ceptiri
ceppe	ceppiri

2.5 Negation

Corresponding to the positive imperfective suffix *-t* is a negative imperfective *-a*. This suffix has a zero alternant after verb stems ending in a long vowel. For example :

ceestadi 'she will do, she does'
ceeyadu 'she will not do, she does not do'
maaṭlaaḍtam 'we will talk, we talk'
maaṭlaaḍam 'we will not talk, we do not talk'

The negative of the non-future tense auxiliary *unn* (*uṇḍ*) is the suppletive stem *lee*, the forms for which are given in the preceding paradigms. Like *unn*, the corresponding negative verb *lee* refers to both present and past time.

A negative past definite is formed by the negative *leeka* plus the past definite of *uṇḍ*, the paradigms for which are also given in full above.

The formation of negative forms is a further evidence for the necessity of distinguishing the auxiliary or copula *unn* from the full verb *und* 'to be, remain'. The negative of *unn* is *lee* while the negative of *und* is the regular formation *unda*. The corresponding forms for the first person plural are:

unn—	unnam	'we are/we were'
	leem	'we are not/we were not'
und—	untam	'we will be/we are'
	undam	'we will not be/we are not'

When a tense auxiliary does occur, its negative form replaces the corresponding positive auxiliary. There does not appear to be a negative corresponding to the imperfective non-past, although the expected form **ceptundadu* 'he does not keep on telling/he will not be telling' seems logically possible on the basis of the existing negative verb *undadu* 'he will not be'.

In the imperfective non-future verb forms, such as *ceptunnam* 'we are/were telling', it is open to question whether the imperfective suffix is *-t-* or *-ta-*. However, the negative forms *cepta-leem* 'we are not/were not telling', etc. clearly show that the imperfective suffix before the negative auxiliary is *-ta-*. Therefore, it is posited that this suffix is *-ta-* before any form of the auxiliary (copula).

The negative element *a* and the first vowel of the negative suffix *aka* do not seem to be subject to deletion in TTe as might be expected of a short vowel in that position.

tinadu 'he will not eat'	*tindu
tinaka mundu 'before eating'	*tinka mundu

Compare the negative suffix *-a* in these forms with the infinitive ending *-a* in the following.

suudadu 'he will not see'	*suuddu
suudaleedu > suul leedu 'he did not see'	

The second form is the infinitive *suuda* 'seeing' followed by *leedu* which forms the usual negative past in TTe and standard Telugu. The final *-a* is deleted and the resulting cluster *dl* becomes *ll*.

In standard Telugu the corresponding negative forms are subject to vowel deletion. Compare standard Telugu *vinḍu* 'he does not listen' with the TTe form *inaḍu*. Similarly, compare the standard Telugu for *paḍḍu* with deleted *-a-* to the TTe verbs *paḍāḍu* 'he does not fall' or *suuḍoḍu* 'he does not/will not see'.[9] This apparent non-deletability of the negative element *-a-* in TTe poses an interesting problem for any general rule of vowel deletion.

2.6 Negative verbal paradigms

Imperfective negative 'I will not, tell/I do not tell'

ceppa	ceppam
ceppav	cepparu
ceppaḍu	cepparu
ceppadu	ceppav

Imperfective non-future negative 'I am not/was not telling'

ceptaleenu	ceptaleem
ceptaleev	ceptaleeru
ceptaleeḍu	ceptaleeru
ceptaleedu	ceptaleev

Imperfective definite past negative 'I was not/had not been telling'

ceptaleekunṭi	ceptaleekunṭimi
ceptaleekunṭivi	ceptaleekunṭiri
ceptaleekunḍe	ceptaleekunḍri

3. Non-finite verbal forms

Some of the non-finite and other verbal forms which do not directly take personal endings are discussed in this section.

3.1 The imperfective participle

The imperfective suffix also forms non-finite verbal forms. One of these is to be analyzed as the negative imperfective suffix - *aka* plus *unṭa*, the imperfective participle of *und* 'to be'. The literal meaning of such forms is 'not doing' which is equivalent to the English 'without'. For example, *ceppakunṭa* 'without telling', *raakunṭa* 'without coming'.

(8) ii pan jeeyakuṇṭa vooku 'Don't go without doing this work'.

There is also a construction consisting of a verb stem plus the verb *kon* followed by the imperfective suffix. For example, *ceeskuṇṭa* 'doing', *raaskuṇṭa* 'writing'. Such forms may occur as adverbial participles 'while doing' or they may occur in construction with verbs such as *poo* 'to go' in which case they may be translated as 'to go on doing, to keep doing'.[10] Examples of both types follow.

(9) pan jeeskuṇṭa paaṭal vaaḍtadi 'While working, she sings songs'.

(10) vaaḍ raaskuṇṭa vootaḍu 'He will keep on writing'.

(11) nuv zaduvukuṇṭa voo 'Keep on studying'.

3.2 The conditional

The conditional suffix in TTe is *-te* and the conditional form of *uṇḍ* 'to be' is *uṇṭe*, both as a main verb and as an auxiliary. The following forms of the conditional have been noted for TTe.

	positive	*negative*
imperfective	-te	-akuṇṭe
progressive	-tuṇṭe	-tuṇḍakuṇṭe -taleekuṇṭe
perfective	-iṇṭe -iniṇṭe	-akuṇḍyuṇṭe

The perfective negative form is the negative *-aka* followed by the perfective *uṇḍi* plus the conditional of *uṇḍ*. The alternate forms of the positive perfective conditional reflect the same variety of forms which occurs in the perfective past definite as discussed in Section 4.4. Examples of some of these conditional verb forms follow.

(12) nuv zaduvute, paas aaytav 'If you study, you'll pass.

(13) vaaḍ zadiviṇṭe, paas aaytuṇḍe
'If he had studied, he would have passed'.

(14) nuv dinakuṇṭe, jeram ostadi
'If you don't eat, you'll get sick'. Lit. sickness will come.

(15) vaaḍ pan jeestuṇḍakuṇṭe (jeestaleekuṇṭe), mon embaḍi diiskapoodaam.
'If he is not working, let's take him with us'.

3.3 The obligative

This verb form is impersonal, that is, it does not enter into person, number or gender agreement with its subject. The obligative marker has two shapes: finite and non-finite. The non-finite form occurs before the auxiliary verb *uṇḍ*.

finite form :	-aale ∞ -aaln-.
non-finite form :	-avalsi

The finite form has the alternate shape *-aaln-* before the quotative *ani* and the clausal particles *-aa* and *-oo*.[11]

(16a) vaaḍ voovaale 'He should go.'
(16b) vaank eeḍik voovaaln-an undi 'Where does he want to go ?'
(17a) vaaḍ jeyyaale 'He should do it.'
(17b) neen vaanki een jeyyaaln-oo jeppina 'I told him what to do.'
(18a) neen zuuḍaale 'I should see it.'
(18b) neen zuuḍaaln-aa 'Should I see (it) ?'

A single base form can be posited for the finite alternate of this suffix, *-aalen*. As with all forms with a final *n*, the nasal consonant is deleted except when followed by the quotative or clausal particles. When these do occur, the medial *-e-* is deleted. For instance, *ceppaalen + aa→ ceppaalnaa* 'must one tell ?'.

The non-finite form of this suffix occurs before both the non-future and the definite past forms of *uṇḍ*. These may be illustrated with the verb stem *cepp* 'to tell'.[12]

ceppavalsy undi	'One must tell, should tell'
ceppavalsy uṇḍe	'One should have told'
ceppavalsi leedu	'One should not tell'
ceppavalsi leekuṇḍe	'One should not have told'

These forms do not agree in person, gender or number with their surface subject. They are impersonal and the verb shows third person *fn* singular forms of the auxiliary *unn/und*. It is also possible to identify the obligative termination *aalen* as a third person singular form showing the suffix-*en* which also occurs in the definite past.

In TTe the definite past auxiliary may optionally agree with the surface subject of the sentence in which it occurs, but only when these are first and second person. This option yields the following alternate forms for the obligative definite past.

neen jeppavalsy unḍe neen jeppavalsy unṭi	'I should have told (it)'
meen jeppavalsy unḍe meen jeppavalsy unṭimi	'We should have told (it)'
nuv jeppavalsy unḍe nuv jeppavalsy unṭivi	'You should have told (it)'
miir jeppavalsy unḍe miir jeppavalsy unṭiri	'You should have told (it)'

Since there is no distinction between human and non-human in the verb form *unḍe*, the sentence *vaaḍ jeppavalsy unḍe* 'He should have told (it)' could be interpreted as either impersonal or as an instance of agreement between the subject *vaaḍu* 'he' and the verb *unḍe*. However, the corresponding plural form with such agreement is unacceptable : **vaal jeppavalsy undri*. The correct form is *vaal jeppavalsy unḍe* 'They should have told (it)'. This is the reason for the restriction that the auxiliary may show personal forms only in agreement with first and second peson subjects.

Parallel to the obligative ending in *-aalen*, there is another construction with approximately the same meaning which is formed from the imperfective participle in *-ee* (*eṭ*) plus the pronominal element *di* which forms a verbal noun. This verbal noun, in turn, occurs before the same forms of *und* as does the obligative. This results in four possible forms :

ceppeed undi	'One has to tell'
ceppeed unḍe	'One was supposed to tell'

ceppeedi leedu	'One does not have to tell'
ceppeedi leekuṇḍe	'One was not supposed to tell'

The negative of the obligative is also expressed by *-oddu.*

(19a) nuv aa niil daagoddu
'You shouldn't drink that water.'

(19b) een jeyyaaln-oo nuv naak een jeppoddu.
'Don't tell me what I have to do.'

3.4 Adjectival verb forms

The suffixes which form the imperfective and perfective adjectival verbal forms (participles) are as follows :

	positive	*negative*
imperfective	-e(ṭ)	-ani
auxiliary	uṇḍe(ṭ)	leeni
perfective	-ina	
auxiliary	unna	

The form *unna* has a progreesive meaning.[13] The auxiliaries occur with imperfective and perfective verb forms to produce these additional adjectival terminations :

	positive	*negative*
imperfective	-tuṇḍe (ṭ)	
	-tunna	-taleeni
perfective	-i-uṇḍe(ṭ)	

Adjectival verbal forms also occur primarily as modifiers of nouns, some examples of which are :

(20a) vaaḍ jeese pani mancidi
'The work he does is good.'

(20b) vaaḍ jeestunna pani mancidi
'The work he is doing is good.'

(20c) vaaḍ jeesina pani mancidi gaadu
'The work that he did was not good.'

(20d) neen zuuḍani sinmalu caal unnay
'There are many movies I have not seen.'

Adjectival verbal forms also occur before pseudo-nouns such as *appuḍu* 'at the time of' and *anduku* 'in order to, because of'.

(21a) pan jeestunn appuḍu maaṭlaaḍaḍu
'When he is working, he doesn't talk.'

(21b) baaga zaduvutunn anduku maarkul ostunnay
'Because of studying well I get good grades.'

(21c) pan jeesin anduku paysal iccinru
'For the work done, they gave money.'

(21d) neen vaanni galseṭ anduku vooyna
'I went (in order) to meet him.'

In sentence (21d) the verbal form can also be *galset anduku* showing a dental in the verbal ending *-et* in place of the more usual *-eṭ*. For at least some verb stems, the imperfective adjectival suffix has this dental alternate form *-et* before *anduku*, and perhaps elsewhere.

3.5 Vebal nouns

Verbal adjectives also occur with pronominal bases to form verbal nouns. The nominalizing forms are to be analyzed as the pronoun base *ooḍu* (standard Telugu *vaaḍu*) plus the pronominal elements which occur in nominal equative sentences, that *is*, *ni*, *vi*, *am* and the plural marker *lu*. The third person singular feminine utilizes the full pronoun to form a predicate noun. The resulting pronominal forms are as follows; the corresponding personal pronoun is also shown.

	Pronoun	*Pronominal form*
'I'	neenu	-oonni
'you'	nuvvu	-oonvi
'he'	vaaḍu	-ooḍu
'she'	aame	-aame ∞ -adi
'we'	meemu	-ollam
'you'	miiru	-ollu
'they'	vaallu	

Examples of predicate nouns based on the perfective adjectival form of *saduvu-kon* 'to study' are these :

(22a) vaad baaga zaduvukunnoodu 'He is well-educated.'
(22b) nuv baaga zaduvukunnoonvi 'You are well-educated.'
(22c) meem baaga zaduvukunnollam 'We are well-educated.'

Compare (22c) with the corresponding noun based on the imperfective participle, as shown in (22d).

(22d) meem baaga zaduvukuneṭollam
'We are those who study a lot.'

The noun based on the imperfective adjectival form has two distinct meanings: (1) one who does something habitually and (2) one who used to do something. Thus, from the verb *amm* 'to sell', the form *neen amme ṭoonni* may mean either (1) 'I am a seller' or (2) 'I used to sell'. The negative of these sentences is made with *gaa* 'it is not' which negates all Noun/Noun equative sentences. The negative *gaadu* may be used impersonally for all persons and numbers, or optionally, the negative may agree with the surface subject. This may be illustrated by the follwing sentences which may be translated either 'I am not a seller' or 'I did not used to sell', etc.

'I' neen ammeṭoonni gaanu (gaadu)
'you' nuv ammeṭoonvi gaav (gaadu)
'he' vaaḍ ammeṭoodu gaaḍu (gaadu)
'you' miir ammeṭollu gaaru (gaadu)
'they' vaall ammeṭollu gaaru (gaadu)
'she' aame ammeṭaame gaadu

The perfective adjectival form consisting of the perfective sufflx plus *-unde* (ṭ) forms predicate nouns having the meaning 'supposed to, should have'. These nouns are also used in the conclusion of contrary-to-fact sentences, as are the verbal nouns formed from the imperfective adjectival form. For example:

(23a) naaku yaad unṭe occinḍeṭoonni (occeṭoonni)
'If I had remembered, I would have come.'
(23b) vaaḍ haaydarabaadla puṭṭininṭe urda baaga zadivinḍeṭoodu

'If he had been born in Hyderabad, he would read Urdu well.'

4 Problems of phonology

In the preceding discussion, a number of phonological questions have already been touched on. In this section I wish to examine in greater detail several other interesting phonological problems which have arisen in the course of the analysis of TTe verb structure. This discussion will be kept on a fairly informal and non-rigorous level as my primary purpose is to point out the existence of these problems and to suggest directions in which their solution may lie.

4.1 Voicing of initial consonants of verb stems

The initial voiceless consonant of verb stems is voiced whenever the verb does not occur after pause or open juncture. The tendency to voice initial consonants, which is characteristic of Telugu in general, seems to have become completely generalized in TTe.[14] The correspondences are as follows :

k / g	konna	neen gonna	'I bought'
t / d	tinadu	aame dinadu	'She won't eat'
c / j	ceesina	neen jeesina	'I did it'
s / z	suustam	meen zuustam	'We'll see'
p / v (b)	pootaḍu	vaaḍ vootaḍu	'He'll go'
	poota	neem boota	'I'll go'

There are only two minor problems in connection with this initial voicing. One arises from the fact that *p* has two reflexes, *v* as the general form and *b* when preceded by a nasal consonant. The type of contrast to be explained can be seen in the two verb stems *paaḍ* 'to sing' and *vaaḍ* 'to use'

neem baaḍta	'I will sing'
neen vaaḍta	'I will use'
vaaḍ vaaḍtaḍu	'he will sing'
vaaḍ vaaḍtaḍu	'he will use'

This can be incorporated by breaking up the voicing rule for *p* into two parts. The rule applying to all initial voiceless consonants of verb stems applies to *p* only when this consonant

is preceded by a voiced nasal. In other cases *p* becomes the voiced bilabial *v*. In other words, all initial [–voice] segments become [+ voice], but if that segment is bilabial it is marked as a stop only when a voiced nasal precedes. The assimilation of *n* to *m* is of the usual type.

A second question is whether this initial voicing applies to words derived from verb stems. It seems that nouns morphologically related to verb stems do not undergo voicing. For example, *paaḍ* 'to sing', *neem baaḍa* 'I do not sing', *paaṭa* 'song', but **naa baaṭa* 'my song'.

Even though structurally nouns, such participially derived forms as *saduvukunnollu* 'well-educated people' do show voicing as in *vaal zaduvukunnollu* 'they are well-educated people'.

However, the noun *saduvu* 'studying, education' which is homophonous with the verb stem *saduvu* 'to read, study' does not show initial voicing, as in:

(24) daanki saduvu gaavaale 'Education is needed for that.'

This suggests that rules deriving nouns and other forms from verb stems must mention whether or not this voicing feature is retained in the derived form.

4.2 The perfective suffix

The perfective suffix has three primary forms: (a) *-in*, (b) *-n* and (c) *-ny*.[15]

(a) The most general form is *-in*:

cepp-	'tell'	ceppinam	'we told'
cees-	'do'	ceesina	'I did'

(b) After verb stems which end in *n* preceded by a short vowel, the perfective suffix is *-n*:

tin-	'eat'	tinnam	'we ate'
in-	'hear'	innav	'you heard'
kon-	'buy'	konna	'I bought'
an-	'say'	annam	'we said'

(c) After stems ending in a retroflex consonant and preceding a vowel, the perfective suffix is *-ny*:

kaṭṭ-	'build'	kaṭnyam	'we built'
koṭṭ-	'hit'	koṭnyam	'we hit'
tiṭṭ-	'scold'	tiṭnyam	'we scolded'
paṭṭ-	'catch'	paṭnyam	'we caught'
peṭṭ-	'put'	peṭnyam	'we put'
muṭṭ-	'touch,	muṭnyam	'we touched'
paaḍ-	'sing'	paannyam	'we sang'
kuuḍ-	'join'	kuunnyam	'we joined'
maaṭlaaḍ-	'talk'	maaṭlaannyam	'we talked'
poguḍ-	'praise'	poginnyam	'we praised'
onḍ-	'cook'	onnyam	'we cooked'
enḍ-	'dry'	ennyay	'they dried'

All of these variations of the form of the perfective suffix can be described in terms of a set of phonological rules operating on a single base form *-in*. These rules, as developed here, are in some cases special cases of much more general phonological rules, but these more limited statements are adequate to explain this data.

Rule 1: $V \rightarrow \phi / Vn—nV$

This is one of many vowel deletion rules which short vowels are subject to. It states that the perfective suffix loses its initial vowel after verb stems ending in a vowel plus *n*. These are the stems in set (b) above. For example, *tin+in+am* becomes *tinnam* 'we ate'.

Rule 2: $V \rightarrow \phi / Vn—CV$

This rule deletes the vowel *a* from the pronominal endings *aḍu, adi* and *aru*. If rhe other pronominal endings as displayed in Section 2.1 had been given in the more traditional form *anu, amu, avu, ayi*, then the consonant C in this rule would have to be specified as being a stop or flap to prevent vowel deletion before these endings.[16]

With the perfective suffix we then have these verb forms :

ceppinaḍu	→	ceppiṇḍu	'he told'
ceppinadi	→	ceppindi	'she told'
ceppinaru	→	ceppinru	'they told'

As was mentioned in Section 2.5 the negative verb forms do not seem to be subject to this vowel deletion, for example, *tinaḍu* 'he does not eat'. It is not clear to me just how such cases can be excluded from the operation of Rule 2 in any non-adhoc fashion.

Rule 3 : $C_1C_1 \rightarrow C_1 / -C_2$

This is a very general rule of degemination, whereby a geminate consonant cluster is replaced by the corresponding single consonant when that cluster comes to occur before another consonant. For instance, the perfective of *ankon-* 'think' is *ankun+in+aḍu* which by Rule 1 becomes *ankunn+aḍu*. In some cases an extended form of Rule 2 applies yielding *ankunnḍu*, to which Rule 3 then converts into the actually occurring form *ankunḍu* 'he thought'.

Rule 4 : in → ni / C —V

This is an important rule of metathesis involving the vowel *i*. It states that the sequence *in* when preceded by a retroflex consonant C and followed by a vowel becomes *ni*. (See Section 4.3 for further evidence of metathesis in TTe.)

Rule 5 : i → y / CC —V

This rule is of general application in external sandhi as well. The high vowel *i* is replaced by the glide *y* when preceded by a geminate or other consonant cluster and followed by a vowel.

We are now in a position to explain the form of the perfective suffix in the first set of verbs in set (c). For example, from the stem *muṭṭ-* we have the perfective form *muṭṭin+am* which fulfills the conditions of Rule 4 and so becomes *muṭṭniam* to which Rule 5 applies giving *muṭṭnyam*. Rule 3 then simplifies the geminate yielding the actual form *muṭnyam* 'we touched'.

As an example of external sandhi consider *katti undi* 'there is a knife' which becomes *katty undi* by Rule 5. This sandhi differs from that formulated by Kelley (1963) according to whose rule the form should be *katt undi*. In both TTe and the type of language described by Kelley there is a fronting of the vowel *u* but TTe still preserves a definite glide in place of the original vowel. It is because of such sandhi that I have decided to write the perfective suffix as *ny*, rather than set up a separate palatal nasal consonant ñ.

Rule 6 : ḍ → C′ / —C′ where C′ is *n* or *l*

This is a specific instance of consonant assimilation, ḍ+*n* becoming *nn* and ḍ+*l* becoming *ll*. It is the application of this rule which generates the other two groups of forms in set (c) above. Typical derivations follow :

paaḍ- paaḍ+in+am → paaḍniam → paaḍnyam → paannyam 'we sang'

onḍ- onḍ+in+a → onḍnia → ondnya → onnnya → onnya 'I cooked'

It should be noted that the rule deleting medial *a* (Rule 2) must apply before the metathesis rule (Rule 4) in order to prevent the palatalized forms from occurring before the personal endings *aḍu, adi* and *aru*. With this ordering, the paradigm for *paaḍ-* 'sing' is as follows :

paannya	paannyam
paannyav	paaḍinru
paaḍindu	paaḍinru
paaḍindi	

The ordering of Rules 2 and 4 is evidently subject to dialect variation as some speakers have the palatalized form throughout the paradigm, that is, for them metathesis precedes vowel deletion. For such speakers, the paradigm of *onḍ-* 'cook' looks like this.

onnya	onnyam
onnyav	onnyaru
onnyaḍu	onnyaru
onnyaḍi	

4.3 Evidence for metathesis

The perfective suffix *in* has been analyzed as being subject to metathesis when preceded by a retroflex consonant and followed by a vowel. This analysis is supported by other instances which may be explained on the basis of metathesis of *iC* to *Ci*.

(a) In TTe the locative postposition is *-la* except after a very limited set of nouns whose oblique stems end in *aṇṭ* or *-oṇṭ*; with such nouns, the locative postposition is *-le*.

pustakam	pustakamla	'in the book'
cevu	cevla	'in (my) ear'
illu	iṇṭla	'in the house'
kannu	kaṇṭle	'in (my) eye'
mannu	maṇṭle	'in the dirt'
ollu	oṇṭle	'in the body'

This difference also shows up in external sandhi, for example, before *undi* 'it is'.

(25a)	naa cevl undi	'It's in may ear.'
(25b)	maa iṇṭl undi	'It's in our house.'
(26a)	maṇṭly undi	'It's in the dirt.'
(26b)	naa kaṇṭly undi	'It's in my eye.'

It is possible to offer an explanation in terms of metathesis for the variant *-le*. The oblique stem of such nouns ends in *-i*, so that underlying *kaṇṭle* 'in (one's) eye' is *kaṇṭi+la* which by metathesis becomes *kaṇṭlia* and finally *kaṇṭle*.

The vowel *e* as the result of the coalescence of *i+a* is fairly common in TTe sandhi. For example, *puli aṇṭe* 'if one says tiger' becomes *pul eṇṭe* under normal sandhi.

It might be argued that these forms in *-le* were actually the locative *-la* plus the emphatic particle *e*. That this is *not* the case can be seen by comparing the non-emphatic and emphatic forms below.

	non-emphatic	*emphatic*
'in an ear'	cevla	cevlane
'in a house'	iṇṭla	iṇṭlane
'in an eye'	kaṇṭle	kaṇṭlene

'in the dirt'	maṇṭle	maṇṭlene
'in the body'	oṇṭle	oṇṭlene

(b) Another instance of what may be explained as metathesis arises from sandhi between the respectful imperative form *-uṇḍri* and the vocative particle *ra*. The forms are :

	imperative	*plus vocative* ra
'come !'	raaṇḍri	raaṇḍrya
'sit down !'	kuusoonḍri	kuusoonḍrya
'eat !'	tinuṇḍri	tinuṇḍrya

The second form in each pair may be analyzed as the polite imperative ending *-uṇḍri+ra* which is subject to metathesis. Take, for example, the form *tinuṇḍri+ra* which by Rules 4 and 5 becomes *tinuṇḍrria* → *tinuṇḍrya* by the ordinary process of degemination.

(c) Of less direct relevance, but still of interest, is the well-known metathesis of *r* and *l* in TTe, that is *rl* → *lr*. For example :

	singular	*plural*
'car'	kaaru	kaarlu ∞ kaalru
'pond'	ceruvu	cerlu ∞ celru
'buffalo'	barre	barlu ∞ balru

Since *r* functions in many ways like a retroflex consonant, it seems that in TTe metathesis always involves retroflex consonants. The conditions under which metathesis occurs are still not completely clear, but there is enough evidence to show it is an active phonological process in TTe. It certainly merits further study.

4.4 The perfective definite past

The perfective aspectual form of a verb may be followed by the definite past of *uṇḍ* 'be'. This construction is similar to the verbal constructions in the standard language formed by the perfective (in other descriptions, past non-finite) followed by either the present/past or the present/future form of the copula *unna*. Illustrations as given by Lisker (1963 : 140) are :

(27a) vaaḍ inṭik eḷḷi unṭaaḍu 'He has probably gone home.'

(27b) vaaḍ inṭik eḷḷi unnaaḍu 'He has gone home.'

In TTe, however, the definite past forms of *unḍ* are the only finite verb forms which may follow the perfective (past non-finite). One paradigm has been given in Section 2.4. The perfective definite past for the stem *cees* 'do' is as follows :

ceesyunṭi	ceesyunṭimi
eeesyunṭivi	ceesyunṭiri
ceesyunḍe	ceesyuṇḍri

Although the past perfective in TTe is clearly to be analyzed as verb stem + perfective suffix + definite past of *unḍ*, there are a nnmber of variant forms which raise some interesting problems.

The shape of the perfective suffix is *-i* or *-in*. However, the sequence *ceppi+unḍe* becomes *ceppinḍe* 'he had told', instead of the expected **ceppyunḍe* or **ceppunḍe*. Likewise, the verb *taag-* 'drink' forms the perfective past definite *taaginḍe* 'he drank', instead of **taagunḍe*.

In other words, the actual forms appear to be contrary to a very general rule of vowel deletion, in which the first of two vowels is deleted if the first vowel is short, that is,

(28) $\breve{V}_1 + V_2 \rightarrow V_2$

Examples of this almost universal rule for Telugu are:

(29a) pani undi → pan undi 'There is work.'

(29b) vaaḍu inṭiki occinḍu → vaaḍ inṭik occinḍu 'He came home.'

For a further contrast, consider *ceppinḍe* 'he told' as opposed to *ceppy occinḍu* 'Having told, he came'. In the latter example, the non-finite form shows the expected sandhi $i \rightarrow y$ before a vowel when following a geminate (Rule 5).

Some verb stems show an alternation between *u* and *i* in these forms.

ceesyunṭi	∞	ceesinṭi	'I did'
occyunḍe	∞	occinḍe	'he came'

This variation is also observable in stems ending in *n*, *n*d and *y*.

tinunḍe	∞	tininḍe	'he ate'
inunṭi	∞	ininṭi	'I heard'
poyyunṭi	∞	poyinṭi	'I went'

All other verb stems occur only with the front vowel *i*.

amminḍe	'he sold'
navvinḍri	'they laughed'
paaḍinṭi	'I sang'
ankoninṭimi	'we thought'

The problem is to account for this occurrence of *i* instead of the expected *u* of the stem *un*ḍ. Note that this variation between *i* and *u* is confined to the perfective past definite. When the past definite occurs with the imperfective verbal form, the auxiliary *un*ḍ retains its vowel :

ceesta	+ unḍe	→	ceestunḍe	'he used to do'
paaḍta	+ unṭi	→	paaḍtunṭi	'I used to sing'

Before attempting at least a partial explanation of this phenomenon, we have to consider still another variant of the past perfect. Instead of the perfective suffix *i* there occurs the form *in*. This yields two distinct paradigms which may be illustrated with the stem *cepp*- 'to tell' :

perfective : *-i*

ceppinṭi	ceppinṭimi
ceppinṭivi	ceppinṭiri
ceppinḍe	ceppinḍri

perfective : *-in*

ceppininṭi	ceppininṭimi
ceppininṭivi	ceppininṭiri
ceppininḍe	ceppininḍri

Following *-in*, the forms with *u* also occur for some verbs, for example, *ceesinunṭi* ∞ *ceesininṭi* 'I did'.

A tentative explanation follows from the observation that the stem vowel *u* of *unḍ* in all these forms is both preceded and followed by syllables containing the high front vowel *i*. Even the suffix *e* is analyzed as a tense marker *i* followed by the ending *e*, *unḍi* + *e* → *unḍe*.

My hypothesis is that the stem vowel itself of *unḍ* is fronted to *i* when the vowel of the preceding and following syllables is *i*. Thus,

ceppi + unṭi → ceppi + inṭi → ceppinṭi 'I told'
ceppin + unḍi + e → ceppin + inḍi + e → ceppininḍe 'he told'

The vowel *u* is preserved mostly after palatals, suggesting a rule which deletes the vowel *i* after a palatal consonant.

(30) i → θ / palatal C—V

If this rule applies before the fronting of the stem vowel of *unḍ*, then we get for the stem *cees-* the verb *ceesǔnḍe* 'he did'. If we accept the interpretation of *sy* for *š*, then rule (30) could be modified to replace *i* by *y*, giving the alternate form *ceesyunḍe*. If this rule does not apply, or applies after the fronting rule, then *unḍ* will become *inḍ* yielding the alternate form *ceesinḍe* 'he did'.

The variation shown by stems ending in a short vowel plus *n* are also of interest.

tin-	'eat'	tininṭi	'I ate'
		tinunṭi	'I ate'
		*tinininṭi	
kon-	'buy'	koninṭi	'I bought'
		*konunṭi	
		*koninininṭi	
taag-	'drink'	taaginṭi	'I drank'
		*taagunṭi	
		taaginininṭi	'I drank'

The stems having the shape *CVn* such as *tin* 'eat' and *kon* 'buy' do not occur with the longer form of the perfective suffix *-in*. This may perhaps be related to the fact that they form the perfective finite forms with *-n* : *tinna* 'I ate', *konna* 'I bought'.

However, *tinunṭi* 'I ate' does occur but *konunṭi* 'I bought' is usually rejected. Recalling the fact that *u* is retained primarily after palatals and that the perfective suffix is *ny* in certain conditions, I might hazard a guess that in the stems *tin-* and *in-*, the nasal consonant may be treated as a palatal nasal consonant : *tini unṭi* → *tiny unṭi* → *tinunṭī* 'I ate'.

The brief phonological discussion in this section raises more problems than it answers. But it does demonstrate that a more detailed phonological analysis begins to reveal interesting relationships between seemingly unrelated phenomena. as for instance, the proposed role of metathesis in the variants *in / ny* of the perfective suffix and *la / le* of the locative postposition.

This kind of phonological analysis is also necessary if Telugu dialects are to be compared not only on the basis of individual, isolated forms, but in terms of differing phonological rules and rule orderings. A minor example in this section is the difference between the two variant TTe verb forms *onḍindi* and *onnyadi* 'she cooked', a difference which is the result of differences in the relative ordering of the metathesis and vowel deletion rules.

NOTES

1. This is the first publication in the *Telugu Dialect Bulletin Series* and is edited by Radhakrishna (1971). Three other dialect studies in the same format have come out recently.

2. This speaker has been educated through standard Telugu and English but by preference he speaks only his local form of Telangana Telugu, even with speakers of the standard language. This study was carried out under a Fulbright-Hays Faculty Research Fellowship in Hyderabad during 1971 and 1972.

3. I have written two other papers reporting tentative results of my continuing study of Dakhini Urdu and Telangana Telugu. These are "Evidence of Convergence of Dakhini Urdu and Telugu" and "Quoting saying in Dakhini Urdu".

4. This type of agreement occurs with what are called the aorist and potential by Lisker (1963 : 300–302). See also Arden (1937 : 137) for his description of the indefinite tense and the second form of the past. The latter is what I have called the definite past.

5. Other examples with forms which are not verbal are :

'word'	maaṭa	maaṭan-ee		'word itself'
'thief'	doṅga	doṅgan-aa		'is it the thief ?'
'there'	aaḍa	aaḍan-ee	> aannee	'there itself'

This and the following phonological statements are given in a very informal notation. These could, of course, be converted into a more elegant feature notation, but this would add little to the understanding of the type of phonological data being discussed. In a full-fledged study of Telugu phonology, a more rigorous notation would be necessary.

6. TTe is an abbreviation for Telangana Telugu.

7. For example, see Arden (1937) and Lisker (1963) which contain much valuable information about Telugu grammar.

8. These terminations are the past tense endings of the literary language, forms which are not used in standard colloquial Telugu. This is one of several indications that TTe preserves some features of the literary language which do not occur in standard colloquial Telugu. I have given these forms the name 'definite past' as to avoid confusion with what are called 'past' forms in other descriptions, but which I consider 'perfective'.

9. See Lisker (1963 : 264–7) for examples of the deleted negative element in standard Telugu.

10. TTe always seems to require the compound verb *kon / kun* in such constructions, which is not the case in standard Telugu.

11. Compare these forms with the literary termination-*avvaalenu.*

12. Since *s* and *c* are palatal before the high and mid front vowels *i* and *e*, and the glide *y*, I have not written them *š* and *č* in that position. There is some evidence that *i* > *y* after CC—, so that the sequence *CCyV* is a permissable one in TTe (Section 4.2). This is the reason for my transcription of these forms as *-avalsy undi* instead of *-avalš undi.*

13. The non-future auxiliary is historically the perfective of *und*: *und+in* > *unn.* An interesting comparison may be made with Hindi-Urdu progressive verb forms which also involve the perfective (past) of the verb *rah* 'be, remain'.

H-U	ham jaa rahaa haiN	
TTe	meem boot- unn- am	'We are going'

14. The complex rules governing the operation of Sandhi in the literary language are given in detail in Chapter XIX of Arden (1937).

15. A fourth alternate ḍ occurs with the stems :

paḍ-	'fall'	paḍḍ-
ceḍ-	'spoil'	ceḍḍ

16. Krishnamurti (1971) has proposed similar rules for deriving the Karimnagar verb forms from more general underlying base forms.

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ON THE FORMATION OF ERGATIVITY IN INDO-ARYAN AND DARDIC

BORIS ZAKHARYIN
Moscow State University, USSR

An evolution of the previous studies of ergativity in Indo – Aryan and Dardic (I A D) demands two things to be done simultaneously: new facts to broaden the entire perspective and a new theory to deepen the research level. The present paper aims at attaining these goals within the framework of contensive typological approach of the Soviet models. The source of ergativity in IAD is attributed to Sino–Tibetan contact within the South Asian linguistic area.

0,0. The problems of interrelations between the ergative and the nominative sentence structures in Iranian, Indo-Aryan and, less persistently, in Dardic were in different times a point of attention of various linguists. It is enough to mention, in this connection, the works by Bloch (1934), Chatterji (1970), Matthews (1953), Régamey (1954), Pireyko (1968), Elizarenkova (1961) and Edelman (1966). All these previous publications have some common features. Those are: (1) the attention is mostly drawn towards surface-syntactical (more rarely, morphological) manifestations of ergativity in individual languages or dialects; (2) almost all the scholars accept the theory of the historical formation of ergativity on the basis of nominativity: the starting point for this process is considered to be the late MIA when in perfect-aorist tense series the ancient inflectional verb forms were ousted by periphrastic constructions with the transitive past participles of the so-called passive meaning (that is, of object agreement); (3) the attempts fail to mark the central and the peripheral spheres of ergativity, to differentiate between the two and to state the relative chronology of the phenomena; (4) no one tried to approach the problem on systemic grounds, that is, taking into account the concept of the South Asia linguistic area and the language contacts inside it; (5) the deep-structure level is absent in the research works mentioned, and the contensive

typology method is nowhere applied. This is mostly due to the fact that it has not been formed yet when the research projects on ergativity were undertaken.

0. 1. The above - stated general characteristics bring us to the natural conclusion that any progress in the studies of Indo-Aryan and Dardic (IAD) ergativity demands two things to be done simultaneously : new facts to broaden the whole picture and new theory to deepen the research level. These two targets are, to some extent, pursued here. Only IAD facts are to be discussed, but the Iranian material would not be included. The main aim here would be not the detailed description of the manifestations of ergativity at all the levels in different languages but the most general contensive - typological analysis of the universal and specific phenomena of ergativity in regard to the problem of formation and development of this feature in IAD.

0. 2. It should be marked from the very start that the term typology here presupposes only the contensive (meaning oriented) implications; same is also true of such concepts as subject, predicate etc. The theoretical basis of the contensive- typological approach towards languages in the USSR was worked out by I.I. Meschanipov, S.D. Kacnelson and, especially, by Klymov (1973, 1976a and 1976b). The principles laid down by them are generally accepted in this paper.

As to the formal (or structural, or morphological) typology, IAD languages can be divided into two broad and clearly established types : that of the synthetic inflected languages and the analytic inflected languages. The criteria of the differentiation may be, for example, those suggested by Greenberg in his text-typology (1963). In the languages of the first type the synthesis index exceeds 2; the Dardic Kashmiri and Shina belong to this type. In the second type languages (primarily represented by the non-eastern IA) the synthesis index is less than 2. All the IAD languages are also marked by a high agglutination index : in Shina it exceeds 0.4, in other languages it is less but in general rather high (about 0.3). The further differentiation is possible among the languages of the second type: Panjabi and Hindi are minimally synthetic; Marathi and Gujarati are, on the other hand, characterized by the most high synthesis index; all the rest non - eastern languages occupy the position in

between the two extremes. The Nepali facts can be interpreted differently – it depends on how the complex verb-forms are treated: as periphrastic combinations of two or more word-forms, or as one polymorphemic word-from;but in any case the agglutination index in Nepali is rather high and comparable with that of Shina (about 0.4). The literary Singalese in accordance with the synthesis and agglutination indexes can be placed in one group with Marathi aud Gujarati.

So the formal-typological classification of the IAD languages does not coincide with the two main genetic classificatins of New Indo-Aryan (NIA) suggested by G.A.Grierson and by S.K.Chatterji. The general delusion concerning the last two is in that they are traditionally looked upon by the indologists as typological classifications though they are definitely not: they are genetically oriented, surface structure bounded, "atomistic" (in the sence of R.Jakobson), based on rather ad hoc criteria. Much better is the typological classification suggested recently by G.A. Zograf (1976) who showed a kind of correlation between the traditional genetic scheme and morphological typology. According to Zograf only two groups of NIA languages, eastern (Bengali, Oriya, Assamese and dialects of Bihar) and non-eastern (all the rest), can be established. Further differentiation inside the non-eastern group is also possible : a distinction between the Central (Panjabi-Hindi) subgroup and the western (the remaining languages of the noneastern) subgroup. The subgrouping process can be extended further on, and inside the western subgroup there will be three separate subsubgroups: the two polar ones, Marathi-Gujarati on the one hand and Sindhi-Lahnda on the other, and the intermediate one represented by literary Marwari and non-standard dialects of Rajasthan. Following Zograf (1976: 42-44) we should include eastern Hindi, Nepali and also colloquial Singalese into the eastern group. The literary Singalese and Gipsy share certain common features with the western subgroup. The status of the Pahari dialects is not quite clear. Zograf is right in stating that structurally they are close to the dialects of Rajasthan. (1976 : 321), but this very feature compells us to place them together with the other members of the Intermediate subsubgroup of western subgroup. The other possible

solution may be to give the Pahari dialects a status intermediate between NIA and Dardic. As for Dardic, it was clearly shown in my article on the quantitative typology of the Kashmiri language that both, genetically and morphologico – typologically, it is separate from the NIA (Zakharyin, 1974).

On the basis of the phonological typology, as was shown by Elizarenkova, inside NIA the only division that can be provided is the one between eastern (Magadhian) and non-eastern types (1974 : 281). If,on the other hand, we take into consideration the main grammatical categories of gender, case and person, we will clearly see that our above - suggested three-fold subgrouping (Eastern-Central-Western) is quite sound. The category of gender does not exist (or is superfluous) in the eastern group of NIA; in non-eastern languages the categroy of gender is either three-partite (in Marathi-Gujarati subsubgroup) or two-partite (in the rest of the languages). In relation to the category of case the languages of the Central subgroup stand apart in that only they have the binary ease - systems ; as for the Eastern group and Western subgroup languages. the case systems are of more complex than binary order. Eastern group and Western subgroup come together also on the basis of their relation towards the category of person: in Perfect-Aorist tense series verb-forms only inside these languages the person distinctions can be manifested directly through person-number inflections (postfixes) combined with the rest of the verb. In the languaees of the Central subgroup the person distinctions in the time series mentioned can be expressed only through the conjugation forms of copula.

It is clear from these preliminary remarks that in the sphere of morpho - typological characterization of the IAD languages the progress is still too slow, and the consolidated description is still rather far from being achieved. It is so not only due to the numerous information-gaps which really do exist (for example only few of the languages of SouthAsia were indexed properly in accordance with Greenberg's quantitative typology)' but also due to the fact that no criteria-selection model has been worked out. And, it seems the progress will remain too slow; the criteria selected ad hoc, and the classifications suggested arbitrary till the time the linguists agree that the criteria-selection-

model mentioned can be constructed only beyond morphological boundaries but n t inside them. Taking for granted the well-known fact that among the languages of the world there do exist some that have no morphology (Vietnamese for example), but naturally there does not exist a single one without syntax and semantics, we are to reconsider our approach towards typhology: the morphotypology can only provide us with the knowledge of the unique facts and features concerning languages, the universals should be sought somewhere else, and namely inside the syntax-semantics oriented contensive-typology frames.

1.0. According to Klymov "at the deep syntax level such a typology should be treated as ergative sentence typology in which a subject of a transitive action is represented differently than the subject of an intransitive action, and the object of the former one - in the same way as the subject of the latter one" (1973:48). The ergative sentence structure in languages can be represented by three morphological types: verbal, mixed and nominal. In general, diachronically languages do develop from active towards nominative state inside the ergative typology, that means evolution from verbal to nominal via mixed stage (1973:204-258; 165-167). Cases of the formation of true eragativity inside the frames of nominativity are unknown; that means that if they are found, as it happens in Indo-Iranian, the only explanation possible for them is the one based on language contacts theory (Klymov, 1973:200). The above stated formulations by Klymov are considered to be the only basic ones for any research on the problem of ergativity in Indo-Aryan and Dardic.

1.1. Other approaches to IAD ergativity prove to be too shallow and inadequate. For example, surface ergativity in NIA was studied by Elizarenkova (1974) but a set of features which came out as a result of this study and characterized by the author as necessary and sufficient for any NIA, in reality proves to be not so effective as it was desired by him. On the one hand some new facts cannot be treated properly under the frames of the suggested scheme, on the other hand the latter one is to be reconsidered in accordance with the latest achievements in theory (and namely with Klymov's works). In brief, the surface-syntactic

conditions of the sentence ergativity in NIA formulated by Elizarenkova are as follow: (1) in Perfect - Aorist tense patterns the subject of the transitive predicate should be marked by a case inflection different from that of Nominative; (2) there should be a contrast between an Ergative case form and an Instrumental or any other Oblique case form of a subject; (3) no independent Accusative marking the direct object should exist in the system; (4) there is a necessity for an existence of a transitive verb which is not passive in the Perfect-Aorist tense series and, subsequently there is a demand for an independent passive voice inside a system; (5) the predicate (transtive) of a sentence in the mentioned time series must have an object concord and to provide this a category of the grammatical gender is obiligatory in the language. For NIA the conditions (2) and (5) are considered as optional but in any case there remains a demand for an existence of the grammatical category of gender (Elizarenkova. 1974: 117 - 123). According to Elizarenkova the Singalese and Nepali are devoid of even the ergative - like constructions of the sentences, all the other NIA languages of non-Eastern group do have this or that type of an ergative sentence structure.

1.2. As was recently shown by Khokhlova (1974: 85-86) Elizarenkova's conditions (1) and (4) do not work in literary Rajasthani (Marwari). There in the Perfect-Aorist tense series the subject of the transitive predicate can be marked by the Absolute (Nominative) case inflections in text though in the system itself an opposition oetween the Ergative and Absolute cases is being kept. Besides in this language a transitive perfective Participle used as an Aorist tense form can have passive meaning and object concord, real passive is not used in the Aorist -Perfect tense series. For example, for the English sentence 'a boy killed (struck) a mare' a Rajasthani equivalent would be not only (regular) *cHokRe* (Ergative) *gHoRii marii* but also *cHokRo* (Nominative) *gHoRii marii* and an equivalent for an English 'a boy was killed (struck)' is *cHokRo maaryo.*

The condition (3) is not at all significant for IAD: there are languages (Hindi for example) where independent and inflectional Accusative is absent in both Ergative and Nominative types of sentence constructions (in deep structure, however, the Objective

case is always somehow manifested at surface level independently of the sentence construction types). The same absence of independent Accusative can also be a characteristic of a purely nominative typology which has no ergativity at all, this takes place, for example, in Assamese. Besides in such a language of ergative typology as for example Dardic Shina the rudimentary independent Accusative also exists and is regularly used with the transitive verbs of damage: compare Shina *mas tue zamēgas* 'I struck You' with *mas tu rēgas* 'I told you'. It means that the conditioh (3) has no diagnostic force and cannot be adopted as an evidence of either ergative or nominative language type. So all the three obligatory conditions - (1), (3) and (4), as can easily be seen, are non-universal.

1.3. In literary Singalese when the predicate of the sentence is represented by the perfect tense of a transitive verb there is a free choice between the ergative and the nominative constructions of the sentence, besides the latter one can be represented by both active and passive transforms. That means that the conditions (1), (2) and (4) are fulfilled: there exists an opposition of the ergative and the nominative case-forms of the subject, and there exists an independent passive voice with its own case-marking of the subject, but the condition (3) does not hold as there exists an independent Accusative. For example: *maa ovun maraa āta* ; *maa visin ovun marunu labaa āta* ; *maa visin ovun mara āta* all the three constructions meaning 'I killed them' are synonyms, the first one is active nominative, the second passive nominative, the third one is ergative and is statistically more preferable than the other two. But that only means that even from the purely surface-structure positions, the ergativity in literary Singalese does exist, and the Singalese language must be qualified as a language of ergative typology.

1.4. The Nepali constructions with transitive verb forms and the name of the subject formed by the post position *le* (of the type: *maanisaharuu le ma laaii samaaie* 'the people caught me') can be treated as non-ergative only from the positions of the surface syntax fixed on the idea of the obligatory verb-object concord. Things would be treated just in the opposite way if we approach the problem on contensive typology grounds (see 1.0.):

Nepali (literary) is a language of ergative typology. According to Korolev (1965: 128 - 129) the colloquial Nepali differs from the literary one in obligatorily using the *le*-formed names of the subjects in any transitive predicate sentence type (but not only with the Aorist-Perfect tense series as in literary Nepali), it is desirable to conclude that Nepali (colloquial at least) is a language of consistent ergativity of nominal type, where object concord is absent.

2. 0. After supplying some new information and broadening the description of ergativity in NIA given by Elizarenkova we may now try to deepen it and to present a consolidated picture of Indo–Dardic ergativity on contensive typology foundations. In this respect the studied data may be classified as follows:

i) The most consistent ergativity is marked in Dardic Shina (with all its dialects) where irrespective of modal, tense, aspect and other characteristics of the transitive verb (usually but not necessarily occupying a predicate position in a sentence) the name of the subject always has a specific *– s –* marker of the Ergative case; the names of the subject of an intransitive predicate and of the object of the transitive one are in almost all the contexts (the exceptions are verbs of damage, see 1. 2.) marked identically by the unmarked Absolute case–forms.

ii) The less consistent ergativity but of very near to Shina type is found in Nepali - the final conclusions are possible only after the colloquial Nepali is studied and systematized properly. In any case as the genetic as well as the morpho - typological specifications of the Pahari languages in general are rather uncertain, the Nepali facts can for the time being be safely excluded from the description of NIA ergativity.

iii) Dardic Kashmiri is the language of the nominative typology but with consistent though restricted ergativity. The Kashmiri ergativity is comparable with that of Shina but it is manifested only in the Aorist – Perfect tenses of the transitive verb predicate. In all the other contexts the subject of any predicate and the object of the transitive one are formed

identically: by unmarked Absolute case-endings. As in Shina with the verbs of damage, nouns occupying the position of the animate object have obligatorily to be marked not by Absolute but by the so-called Oblique-I (of Adresate - Goal semantics) case-forms which functionally play the role of the secondary Accusative: *tam' wuc'h cuur* (Absolute case) 'He saw a thief', but *tam' moor cuuras* (Oblique-I case) 'He killed (struck) a thief'. Sometimes the names of the object are marked in this way also in case of other transitive verbs but this should obviously be classified as the evident cases of hyperurduization, the product of the six centuries of contacts with politically and culturally dominant Urdu: the educated Kashmirians unanimously reciect the constructions of the type *m'a wuc'h cuuras* (instead of *cuur*) for 'I saw a thief' or classify them as "bad Kashmiri".

iv) All the rest NIA (i.e. non-eastern) languages are those of nominative typology with restricted and inconsistent ergativity, or better, ergativoidness. When moving from the West to the East the NIA ergativoidness is diminishing gradually and comes to its end at the area of Eastern Hindi: the western subdialects of Avadhi still have the feature but the eastern subdialects as well as the East Magadhian NIA languages belong to the pure nominative type languages.

The ergativity (ergativoidness) in non-eastern NIA is manifested in two ways:

i) In transitive verb sentences the name of the direct object usually is formed by the case inflections different from those which form the name of the subject in intransitive verb sentences. The identical inflections are possible only under the following conditions: the name occupying the position of the direct object should not be marked by the grammatical features of [+anthropoidness] and or [+definiteness] (i.e. approaching the problem in terms of word-classes and subclasses) this name must not be a pronoun, a personal name of an anthropoid or a common name of a definite state. In case these conditions are fulfilled the above stated rule of non-identity of cases operates. In case they are not fulfilled

statistically that takes place more often) the pronouns, personal names and definite common names occupying the position of the object are to be formed by (different in different NIA languages) synthetic or analytic case forms of Adresate-Goal semantics; it should be stressed that the "independent" surface structure Accusative is everywhere absent (the literary Singalese seems to be the only exception). Typical for the whole of non-eastern NIA is, for example, situation in Hindi: *usne ghar* (*ghoṛaa*, *akhbaar*) *dekhaa* 'He saw a house (a horse, a newspaper)' but *usne mujhko* (*raamko*) *us laṛkeko*,) *dekhaa* 'He saw me (Ram, that boy)'.

In this respect the NIA surface syntax is relevant for an opposition between the so-called object construction (with gender number concord in verb and an unmarked object name) and neutral construction (with the fixed form of the verb and the object name marked by some postposition of Adresate-Goal semantics). A variation of the neutral construction is the so called objectless construction (with the fixed form of the transitive verb and the object name missing). And a variation of the object construction is the so-called obligatory object construction (when gender-number concord of the verb with any type of the object name is obligatory). Objectless and object constructions are typical for the whole of non-eastern NIA. There is no neutral construction in Gujarati and Rajasthani, and there the obligatory object construction is used instead. All four types of the constructions exist in Marathi and that is why Marathi can be viewed as a standard ergativoid NIA language. It should be stressed, however, that though on surface syntactic level the above mentioned (described by Elizarenkova 1967: 119–123) constructions of different types do play an important role, they actually have no connections with the phenomena of ergativity proper analysed on contensive-typological foundations.

ii) The restricted character of the ergativity is seen in non-eastern NIA also and that too only in certain Aspect-Tense verb forms (perfective), there exists a difference in case inflections of the subject of the transitive and that of the intransitive verbs. Namely those are such Aspect-Tense bound predicate forms at

least one component of which is represented by the historic Past Participle (of transitive verbs); in all the other, non-perfective, verb-forms despite the transitive - intransitive character of the verb in VP, the subject of the sentence can be formed only by the unmarked Absolute case.

iii) Besides in each NIA language the e do exist lexico-semantic limitations of different types. For example in the above mentioned Hindi, not all the semantically and grammatically transitive verbs being the nucleus of the perfective VPs do necessarily imply an ergative sentence type: some of them permit free variation between the ergative and the nominative sentence constructions (for 'I understood it'both *maiNne yah samjhaa* and *maiN yah samjhaa* are possible), and some do allow only nominative constructions (for 'I brought the letter' only *maiN citthii laayaa* is possible but not *maiN ne citthii laayii*). The intransitive verbs of certain semantic types entail an ergative construction in proper contexts (*maiN ne chiiNkaa* for 'I sneezed' but not *maiN chiiNkaa*) but when combined with modifiers (intensifiers) they behave differently according to the valency of the modifying verb (*maiNne chiiNk diyaa* but *maiN chiiNk paraa* for 'I sneezed') etc-. The selective limitations of such types do stress the unstable and restricted character of the NIA ergativity.

We may conclude by saying that in the non-eastern NIA languages there exist strong limitations on the first contensive-typological condition of ergativity; and as for the seeond condition (see 1.0.), it is not fulfilled anywhere.

2.1. Some protocolic evidences of the historic ergativoidness of Indo-Aryan and of the Kashmiri ergativity can be found only for the modern phase of the historical language development (in late Apabhramsha/Avahattha texts), though it is clear that the true formation of the ergativity must have started much earlier, as early perhaps as, at least, the beginning of the New Era. There actually exist no reliable proofs of historical ergativity in eastern NIA: few isolated examples of Old Bengali passive constructions cited by Chatterji (1970) in no case point at the existence of any former ergativity there. Typologically analogous

situation is also seen in Iranian where the majority of the South-Western languages as well as certain North-Western languages do not present any reliable evidences of the former ergativity (Pireyko, 1968 : 33). But a diachronic feature makes it possible for us to come to the conclusion that the centre from where the secondary ergativity was irradiating should be sought somewhere in the very middle of the Indo-Dardo-Iranic language continuum and namely in that one of the now existing languages and dialects which is/are the most heavily bound with the ergativity features; the only two suggestions in this respcet can be two genetically closely related languages of Eastern Dardic or Dardic - proper subgroup (Edelman, 1966) and Shina and Kashmiri.

As the regressive historical movement from nominativity to ergativity is, according to Klymov (see 1.0), impossible as there can be suggested only two explanations for the appearance of this phenomena of the secondary ergativity. One is Klymov's view (1976a : 160,200) that this Indo-Dardo-Iranian secondary ergativity was formed inside the nominativity due to the contact of genetically different languages, namely, because of the influence of the languages of Proto-Burushaski type. The other explanation is a hypothesis that the nominative typology of the ancient Indo-Iranian standardized languages might have been in contrast with the active typology of the colloquial dialects. This last suggestion however doubtful it may seem, finds some evidence in Singalese data : the literary Singalese being a language of nominative typology shows also certain traces of the remnant ergativoidness (see 1.3.); the colloquial Singalese being also in general a language of nominative typology has numerous survivals of the active typology stage and no traces of ergativity. The possible explanation for these Singalese data may be suggested on the basis of language contacts theory : an opposition of literary and colloquial Singalese can be viewed as an approximative reflection of the diachronic opposition between the ergative language of the Aryan ruling elite (the descendants of the legendary prince Vijaya and company who are thought to have arrived at Lanka in the 5th century B.C.) and the active typology language of the rest, non-Aryan (Proto-Veddoid-?), population of Lanka. The mutual adjustment process which is typical for language

contacts situation might have led on one side to the rapid transformation of the ergativity (probably secondary already) into the nominativity with the rudimentary ergativoidness in the language of the Aryans (literary Singalese), and on the other side, to the imposed or immitative nominativity of the previously active colloquial language of non-Aryan (or mixed) population (colloquial Singalese) The parallel to such a development exists in the Munda languages where inside the active typology the secondary nominativity developed under the pressure of the dominating Indo-Arvan languages in rather a short period of time. Klymov rightly classified the Munda as"nominative languages with perceptible features of active typology" (1976a : 132). It is also likely that the language situation analogous to that in ancient Lanka might have existed a few centuries before Prince Vijaya and his companions reached Ceylon in Westrn India (where from Vijay's expedition started): the ergative languages of the conquerors who had come from the North or North-West were contacting with the nominative (but with numerous remnant features of the active typology) languages of the native population of Western India, the linguistic consequences of this are manifested in the ergativoidness of the non-eastern NIA languages. At least there is nothing odd in a hypothesis suggesting a possibility of a typological split between different varieties - standardized and a colloquial one, of one and the same language.

2.2. The problem of classifying Dakhini which is supposed to be the closest ancestor of literary Hindi, deserves some attention and reconsideration. According to Shamatov (1974:233) "there is no ergativity in classical Dakhini" because in transitive verb sentences in any, perfective or non-perfective-tense, system the name of the subject is obligatorily formed by the Ergative-Dative postposition *ne*, and the gender-number concord in the verb is always with the name of the subject : *mohan ne paan . . . . detii* 'A charming woman suggests a pan.' On contensive typology grounds, as has already been shown with Nepali (see 1.4.), the situation should be evaluated just in the opposite way : the ergativity in classical Dakhini was consistent and unrestricted, in fact that (as well as Nepali, its closest relative) is clearly a language of ergative typology in its nominal stage (see 1.0.), subject or

object orientated concord in verb does matter but only for surface syntax. Shamatov cites numerous examples of the omission of *ne*-postposition in classical Dakhini texts but these cases of ellipsis are in no way proofs of the absence of ergativity) in Dakhini: simply a secondary (developed on the basis of nominativity and late (of nominal stage) ergativity in classical Dakhini was progressively degenerating at the situation of the artificial brake of contacts with the rest of NIA(due to historical fate of the Dakhini bearers) on one hand, and of the intensive contacts with wholly nominative Dravidian languages of Deccan on the other.

The Dakhini data also help to establish the origin of the Ergative postposition *ne* in Hindi. In classical Dakhini of the 18th century the postposition with borh - Ergative and Dative-functions is really *ne* : *huurne aNgustarii diye* 'the celestial nymph gave a ring;' *aos'iqne kyaa karnaa* 'to the fallen in love what is to be done ?' (the examples are by Shamatov). But at an earlier language of the poetry of M. K. Kutubshah (16th century) the other variant of the postposition is also possible,and that is *le* equivalent apparently to the same *le* of Nepali(see 1.4.): according to Namvar Sinh *maiNle saugandh khaayaa huu'NI* took an oath' (1954). It is also to be taken into account that in the non-eastern NIA the Ergative-Instrumental and the Dative-Possessive grammatical meanings are very often expressed by formatives with the initial *n* and that at least some of these formatives were etymologically explained by Bloch as historically coming back to the nominal derivates of the verb root *ni* 'to lead, to take' (1920 205). The etymology of the Ergative postposition *ne* in Hindi, as the above stated facts show, must be of the same or nearly the same kind in spite of all the fantasies created by linguists in this respect (the most inconsistent ones but strange enough the most widespread are those which try to derive Hindi *ne* from Old Indo-Aryan Instrumental inflection *ena* or from the Instrumental case form of the OIA noun *karṇa* 'ear' (Tiwari, Samvat 2026 : 432). The origin of the Nepali-Dakhini *le* may be different, and probably it can be etymologised back to a nominal derivate of the OIA verb root *lag* 'to touch' but not necessarily so as cases of the initial *n* developments in *l* are numerous and

registered on both, the diachronic and the synchronic, levels (for example the OIA *ni* in NIA usually results in *le* or *li* but in Dardic Kashmiri it is *n'*). But though on formal grounds there are some uncertainties concerning the proto-morpheme corresponding with the Dakhini-Nepali *le* or Hindi *ne* (**ni* or **lag* ?), functionally it is quite clear that in both the cases the postpositions derive from the separate meaningful words (and not from inflections of any kind) and that these words more easily entail some Object-Adresate-Goal semantics than the Instrumental one as traditionally was thought.

3. 0. In all the NIA languages there exist a mixed type (see 1.0.) of ergativity (ergativoidness). But taking into account the relative factors – the measure of the advance of each separate NIA language towards the clearly verbal or nominal ergativity, we are able to subgroup these languages on the foundations of contensive typology. In this respect the Central group differs clearly from the rest: only here exists in the sphere of names a postposition with the specific function of ergativity expression(*ne*) and only here even optional person—inflections manifesting the status of the subject or object name are not possible in the verb form as only the fixed form of the verb (equivalent to that of III Person) is allowed. That means that in Hindi-Panjabi group the ergativity is maximally advanced towards the nominal type.

3. 1. The NIA languages of the Western group may on the same grounds be devided into South-Western subgroup (including Marathi, Gujarati and based on Marwari litetary Rajasthani) and North-Western subgroup (with Sindhi, Siraiki and other Lahnda dialects). In the latter the ergativity is of maximally verbal type and minimally nominal : the morphological marking of the ergative subject is provided in the most elementary way through the use of the Oblique case (Klimov, 1975: 186) and even this is optional for personal pronouns, proper names and a large number of common names; but in the sphere of verb where the system of the so-called pronominal enclitics exist and is highly developed in comparison with the other NIA languages (Egorova, 1964: 125-141) the evident traces of the transitive

conjugation (as opposed to an intransitive one) do exist. The South Western subgroup of languages are somewhat intermediate: the verbal features of ergativity there are less evident in Sindhi and Lahnda and at the same time the nominal ergativity in them is also manifested less clearly than in Hindi–Panjabi group. The most specific is the position of the dialects of Rajasthan situated in the very geographical centre of the area; on the contensive typological grounds they can be distributed between all the three main (sub) groups.

4.0 So in linguistic-geographical terms the ergativity inside the Indo-Dardic region can be demonstrated with the help of a certain figure of "eight": Shina-Kashmiri-Nepali-Lahnda-Sindhi-Marathi-Gujarati-Rajasthani-Panjabi-Hindi. The movement along the perimeter of this "eight" implies the gradual diminishing of ergativity and the advance of nominativity. It is remarkable that a simplified variety (with the exception of Nepali where the status of the colloquial Nepali is not quite clear) of that space configuration, namely, Dardic languages. North-Western NIA, South-Western NIA, Central NIA–is an almost complete replica of the ancient peoples migrations routes. One of the early evidences of such migrations, whatever the historical reasons for them may be, is rather well known and is connected with the nomadic tribes of Abhirs who were supposedly, the bearers of the Dardic languages. According to Mahabharata in the 7th-8th centures B.C. the Abhirs were still the inhabitants of the North–West of India: at the beginning of the New Era the Abhir rulers are already at Kathiavar (in Western India); in the 3rd century Malwa and even a part of Bundelkhand are under their dominance. Under Shungas (2nd century B.C.) the Greeco-Baktrians came to India and followed approximately the same route, they must have stimulated the new migrations of the nomadic tribes speaking Dardic from the North-West to the South. In the 5th century the Hunnes–Ephtalites that came from the Northern Central Asiatic regions intrude into the same area; their language might have been that of ergative typology, and they somehow stimulated the Dardic talking Gurjars to intrude into the Southern regions (may be a kind of a military alliance between them and the invaders was organized). The Gurjars after migrating to the Western

India were mixing with the local Aryan tribes (and may be Munda as well), and due to the active role of their descendants a new ethnos of Rajputs appeared there. Later the foundations for the Rajput feudal stateship were laid, and in the 7th-8th centuries the Rajput expansion onto the plains of Northern India started, and the Western half of it (up to Nepal) was conquered by them (Antonova *et al*, 1973).

Linguistically it is important that the described periodic intrusions into the Western India of the peoples from the North who (as for example is evident from the Shina facts) were the bearers of the languages of ergative typology. The result of these processes was the formation and fixing (especially at the period of the Rajputs rule) of the secondary ergativity in non-eastern Indo-Aryan languages that had been nominative originally. At the east devoid of the above mentioned invasions this original nominativity seems not to have ever been broken. The remote active typological past of the Proto-Indoeuropean most probably had left only sporadic traces in Indo-Iranian and for this reason could not directly favour the development of Indo-Aryan ergativity, neither was it directly stimulated by still more remote and highly hypothetic active typology of the Proto-Dravidian (Klymov, 1976b). But indirectly the relics of the Indoeuropean active typology (as for example the "passive meaning" of the transitive perfective participle) were facilitating the formation of the secondary ergativity in Eastern Iranian, Dardic proper and Western Indo – Aryan languages.

It may be possible that Dardic (Proto-Dardic) influence on Indo-Aryan should be attributed to the period even earlier than the Early Middle Indo – Aryan. As was shown by Vacek (1976) who studied the problem of the formation of retroflexed consonants in Indo – Aryan, the retroflexisation of the historic Indo-Iranian palatal and dental sibilants was taking place in the situation of language contacts and was conditioned by the pressure of not only the Dravidian substratum but also of the latest migration wave of Aryans who came from the North-West and occupied a privileged position at the social hierarchy of the Aryan tribes. That presentation of Vacek agrees well with the fact that in the modern South Asia linguistic area

the maximal concentration of the retroflexed consonants can be seen in the North-Western Shina and Burushaski: only these languages of South Asia do have the retroflexed occlusives, affricates, fricatives and sonorants simultaneously. It is likely that the modern Dardic languages of India are the descendants of the languages that were spoken by those very "latest Aryans" who were described linguistically by Vacek. As for the latter ones they may have had some relative connections with the most eastern of the ancient Indo-European dialects, namely, with Sogdian and Tocharish; there can be found some common features in Dardic on one had and in the Pamir languages on the other but much more research work is needed to come to the clear conclusions in this field.

4.1 Now the question arises: what is the origin of the consistent ergativity in Dardic proper and namely in Shina? Is this ergativity an original one, developed on the basis of the former active typology, or as in NIA is it a secondery one, developed on the basis of the early phase of nominativity and as a result of language contacts? The data available is more in favour of the latter decision (Klymov, 1973:160); but in this case the other question is natural: the ancestor of which of the modern languages of the area could have played the decisive role in the formation of the secondary ergativity in Pra-Shina? Klymov is wholly in support of Pra-Burushaski but some facts do not allow to approve this decision. One of the most important ones is a consideration that historically, in lasting contacts with the Indo-Aryan languages, Burushaski has always played a somewhat "passive" role inserting in itself easily the phonological, lexical, syntactic and other features typical of the Indo-Aryan and Dardic; that is why Pra-Burushaski is hardly likely to have played any important role in its contacts with Indo-Iranian. Besides,at least the present day Burushaski is a nominative language with the restricted ergativity manifested, as in Kashmiri, only in perfective tenses. In our opinion it is only natural to view the ergative Tibetan language as a source of the secondary ergativity imposed by it on Shina (Pra-Shina). Some direct evidences for this can also be seen; the Shina Ergative formative-*s* to a great extent reminds us of the Ergative-Instrumental particle (((*g*/*k*) *y*) *i*)*s* existing in

modern Tibetan and the Tibetan dialects of the Himalayas–it may simply be a borrowing from the Tibetan language as the other sign of Shina-Tibetan contacts is also present : the Shina Instrumental postposition looks like *gi*, it is not of Indoeuropean origin and most probably borrowed from Tibetan.

5.0. To conclude, the languages of the Aryan and Dard peoples were of nominative typology, their ergativization (partial) is a secondary process conditioned by contacts with the non-Indo-European (most probably Sino-Tibetan) languages and dialects. Due to long lasted contacts the consistent ergativity was formed in Pra-Shina, perhaps as early as in early MIA (8th-2nd centuries B. C.). The periodical and persistent intrusions of the Dardic speaking tribes into the Western and Central India favoured the formation and advance of the ergativity (tertiary, inconsistent and restricted ergativity) everywhere in non-eastern Indo-Aryan languages. This ergativity is historically doomed and is rapidly diminishing inside NIA, the most nominative in this respect are Hindi and Panjabi belonging to the Central subgroup. Everywhere in the subcontinent, but for Dardic Shina and the colloquial Nepali, the inconsistent ergativity is represented by its mixed variety but some order can be established when taking into account by the presence of either verbal or nominal ergativity features in these languages. The linguo-geographic hierarchy of ergativity can be established in such a way: (1) purely ergative: Tibetan; (2) ergative with the developing nominative: Dardic Shina (and perhaps colloquial Nepali); (3) nominative with consistent but restricted ergativity: Dardic Kashmiri; and (4) nominative with ergativity: non-eastern NIA languages.

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NEWS OF THE DEPARTMENT

Seminar

A National Interdisciplinary Seminar on "Language for Non-formal Education and Adult Literacy" was organized from 26th to 28th February,1979 in collaboration with the Department of Education,Osmania University and the ICSSR,Southern Regional Centre, Hyderabad. It was attended by eminent linguists and educationists from various Universities and Institutions. It was followed by a workshop in Telugu for the preparation of primers to be used in the adult education.

Distinguished Visitors

(i)Professor George Cardona, Professor of Linguistics, University of Pennsylvania, USA delivered a special course of lectures on "Panini's Linguistic Analysis" during the period July 31- August 8, 1979 while he was a visiting Professor in the Department

(ii) Professor Norman H. Zide, University of Chicago, USA delivered a special course of lectures on "India as a linguistic area with special reference to Munda languages" on 13th,16th and 17th of August ,1979 while he was a visiting Professor in the Department,

(iii) Professor Rodney Moag, University of Michigan, USA delivered a special lecture on "Processes of pidginization in Fiji" on the 13th July,1979.

National Lectureship

Professor Bh. Krishnamurti was invited by the University Grants Commission as a National Lecturer in Linguistics during the year 1979-80,

Headship

Professor H. S. Ananthanarayana, Professor of Linguistics took over charge as the Head of the Department in May, 1979 when the University implemented the system of rotation of Headships.

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