OSMANIA PAPERS IN LINGUISTICS

Volume 7, 8 1981-82

DEPARTMENT OF LINGUISTICS
OSMANIA UNIVERSITY
HYDERABAD-500 007 (A. P.)
INDIA

COMMITTEE ON PUBLICATIONS

Editors

B. LAKSHMI BAI
B. RAMAKRISHNA REDDY

Osmania Papers in Linguistics (OPiL) is an annual journal for publishing research articles by the staff, students and visiting faculty of the Department of Linguistics, Osmania University. Articles may occasionally be invited from scholars outside Osmania on special topics. Articles will be in English. The views expressed in *OPiL* are exclusively those of the authors.

This publication is supported by funds from the University Grants Commission and is supplied to institutions, societies and Departments of Linguistics in exchange for similar publications. Individuals may order copies from the Editor at a nominal price of Rs. 10.00 or $ 2.00 each (excluding postage.)

All matters relating to payments, exchange, and change of address should be addressed to the Editor, *OPiL*, Department of Linguistics, Osmania University. Hyderabad-500 007, India.

OPiL 7, 8. 1-21 (1981–82)

CASE RELATIONS, PERSPECTIVE, AND PATIENT CENTRALITY[1]

STANLEY STAROSTA

Department of Linguistics, University of Hawaii

1.0. INTRODUCTION

The lexicase grammatical framework came into existence at the University of Hawaii in 1970. As indicated by its name, it is a lexicalist approach to case grammar. Not indicated by the name is the fact that it is localist in its approach to case, dependency in its orientation to syntax, conservative in respect to the question of grammatical power (and thus adamant in its rejection of transformations as legitimate descriptive devices), and fanatic in its adherence to the requirements of formality and explicitness which constitute the defining characteristics of generative grammar. (See Starosta 1979b for an exhaustive listing of the papers and dissertations written in this framework to that date.)

As a version of case grammar, lexicase recognizes that part of the speaker's knowledge of the grammatical properties of the sentences in his or her language includes a set of semantically contentful case relations which obtain between the head of a construction (the head N of a noun phrase as well as the head V of a sentence) and its nominal attributes. As a consequence, the model assumes that it is not enough to mark a verb (or noun) for the purely categorial environment in which it is allowed to occur, as was done in Chomskyan 'standard theory' transformational grammar, e.g.

(1) *put*

$$\left\{ \begin{array}{l} +\mathrm{V} \\ \underline{\quad} \; +\mathrm{NP}\frown\mathrm{PP} \end{array} \right\}$$

In addition to this kind of categorial environment feature (and ultimately instead of it), verbs (and nouns as well) must be provided with an environtment stated in terms of case relations.

1. This paper is based on lectures given at Chulalongkorn University, Osmania University, and the Central Institute of Indian Languages.

Fillmore's approach to case grammar represented case relations as nodes in a tree and the environment for the lexical insertion of a verb such as *put* was stated in terms of these case relation nodes in the form of a 'case frame', e.g.

(2) *put*

$$\left\{ \begin{array}{l} +\mathrm{V} \\ \underline{\quad\quad} + \mathrm{Agent,\ Object,\ Location} \end{array} \right\}$$

Although the incorporation of case relations into the syntactic framework was an important and necessary step[2], the way in which this was done had an important theoretical drawback: it lost the information that all prepositional phrases are constructions of the same type, and it introduced greater power and indeterminacy into the model, in that it increased the number of possible structural descriptions which could be assigned to a given string of words without providing a relatively non-arbitrary means for choosing between them. In the years since the beginning of Fillmorean case grammar in the late sixties, this trend toward increased power continued and accelerated, to the point where later case articles by Fillmore can be shown to share the assumptions and procedures of generative semantics thereby forfeiting any claim to empirical content.

2.0. Case Relations and Perspective

Lexicase is an attempt to retain the insights of case grammar without sliding into the empirical bankruptcy which befell its Fillmorean antecedent. The general strategy employed to this end is a strict adherence to the requirements of formality and explicitness and the ruthless rejection of all redundant power-consuming machinery (see Starosta 1979a).

As has been repeatedly pointed out by various critics of Fillmorean case grammar, one of its chief weaknesses is the absence of any relatively objective means of establishing a finite and defensible set of case relations. They just seem to keep coming, and no one seems to know how to decide when enough is enough. The reason for this failing, it seems to me, is the 'silent movie' approach that has always been used in this framework to do case analyses of sentences. In this approach, a set of intuitively believable situationally defined case relations is assumed *a priori*.

2. I will not attempt to justify that statement here. This has been amply demonstrated in the case grammar literature, and independent confirmation is provided by the 'functional relations' which have recently appeared within the Standard Theory tradition and some of its offshoots (cf. Bresnan 1978: 23-36, 48-50, Brame 1978: 25-42). These relations can be seen as a primitive system of case relations.

To assign case relations to any sentence of any language, then, we simply imagine a silent movie enactment of the event (or state) depicted by the sentence, decide which of the performers satisfies which one of the previously assumed *a priori* semantic definitions for the case relations, and assign that case relations to the corresponding actant (nominal constituent) in the sentence accordingly, regardless of the way in which the actant is grammatically coded, and in fact even regardless of what language the sentence belongs to.

If two grammatically distinct sentences correspond to the same silent movie representation, then they are assumed in Fillmorean case grammar to share an underlying representation[3], and the corresponding actants in the two sentences will have the same case relation. One of the sentences will then be taken as corresponding more or less directly to an underlying representation, and the other will be derived from the same representation by a transformational process which is assumed not to alter the original underlying case relations. This principle of analysis could be characterized in terms of the motto, " Once a case relation, always a case relation." It has the consequence that sentences such as (3) and (4), for example (cf. Fillmore 1971:49), will have their corresponding actants assigned identical case relations:

(3) John hit his cane against the fence.
AGT PAT GOAL

(4) John hit the fence with his cane.
AGT GOAL PAT

The surface discrepancies exhibited by the grammatical marking of for example *fence* are regarded as superficial, and can be reconciled by means of transformations, be they ever so distant. As in the case of generative semantics and similar frameworks, this emphasis on situational ('logical') criteria at the expense of grammatical ones in the establishment of an inventory of case relations not only makes it hard to decide how many case relations there should be, but also contributes tremendously to the power of the associated metatheory. A given situation may be encodable in terms of widely differing grammatical structures, and very powerful rules such as 'clause conflation' (Fillmore 1971:49) are often required to derive both from a single common abstract structure.

3. Essentially the same procedure is of course also adopted in generative semantics and other semantically based grammatical frameworks such as categorial grammar and Montague grammar.

Those readers who subscribe to the proposition that 'a stronger theory makes a weaker claim' will recognize this added power as a serious metatheoretical problem. To cope with it, lexicase adopts a strategy exactly the opposite of the usual S.O.P. (Subject, Object, Predicate) in transformational grammar. Instead of assuming with Frege that "grammar is the handmaiden of semantics", it has put the whip in the other hand and placed the primary burden of identifying case relations on grammatical criteria, correspondingly decreasing the weight of purely situational evidence. In this paper, I will illustrate this procedure by giving the currently hypothesized set of lexicase case relations and presenting some of the grammatical (as opposed to 'logical' – situational) evidence for postulating this particular limited set.

The case relations I assume to be needed in a universal grammar are the following:

PAT[5]	Patient	the perceived central participant in a state or event (obligatory with all verbs; formerly 'Object' or 'Theme')
AGT	Agent	the perceived external instigator or initiator of an event or state
INS	Instrument	the perceived immediate instigator of an event or state
LOC	Locus	the perceived location, source, or goal of the Patient (formerly 'inner Locative')
PLC	Place	the perceived abstract or concrete spatial setting of the action or state (formerly 'outer Locative')
COR	Correspondent	the entity perceived as being in correspondence with the Patient (formerly 'Dative' or 'Experiencer')
REF	Reference	the perceived external frame of reference or standard for the state or action (formerly 'Benefactive')
MNS	Means	the abstract path by way of which an external influence impinges on the situation (formerly 'Manner')

NCR	Increment	the extent to which a Patient is affected by an external influence
TIM	Time	the temporal setting of a state or event

The semantic definitions given after each CR are secondary rather than criterial. The existence and inventory of case relations is established first on the basis of syntactic criteria, and the semantic definitions are then induced by comparing the instances of a given syntactically defined case relation, say, AGT, and noting what semantic features are shared by the various instances of that CR.

Defining case relations in the way suggested above has as one consequence the fact that the subjects of pairs of sentences such as the following are given identical case relations:

(6) a. John smiled.
PAT
b. The ice cube shattered.
PAT
c. Max rolled to the bottom of the hill.
PAT LOC
d. The rock rolled to the bottom of the hill.
PAT LOC
e. Sue accidentally fell out of bed.
PAT LOC
f. Sue deliberately fell out of bed.
PAT LOC

These pairs are identical in syntactic structure, and this fact is accounted for by the assignment of identical case relations. Since the semantic differences, if any, can be traced to semantic differences in the component lexical items, especially the verbs, there is no need to use case relations to replicate this same information.

The fact that lexicase does not require the case relations of corresponding actants in related pairs of sentences to be the same has made it possible to resolve several paradoxes that troubled earlier studies. For example, Huddleston (1970) noted that what I have called the 'once a case, always a case' strategy could not be applied in a non-arbitrary way to sentences with symmetric predicates, as illustrated by the pairs of examples below:

(7) a. The post office is to the left of the bank.

b. The bank is to the right of the post office.

(8) a. John is similar to Peter.

b. Peter is similar to John.

(9) a. John fought with the orangutan.

b. The orangutan fought with John.

c. John and the orangutan fought (with each other).

Since each of these pairs of sentences describes the same situation (it cannot be the case for any possible world that one is true and the other is false) , the same NP should have the same CR in both sentences by the usual ' logical ' criteria. But which CR is that to be? If we start off looking only at (8a), we might propose that *bank* is LOC and *post office* is PAT, and then maintain these mappings for the second member of the pair, e.g.

(10) a. The post office is to the left of the bank.
PAT LOC

b. The bank is to the right of the post office.
LOC PAT

whereas if we started off with (7b), we would come out with exactly the opposite analysis:

(11) a. The bank is to the right of the post office.
PAT LOC

b. The post office is to the left of the bank.
LOC PAT

In either instance, it is mechanically possible in a powerful transformational framework to ignore surface evidence and take one of the structures as reflecting the deep structure and derive the other from it. However, there is no non-arbitrary way to decide which of the structures is the basic one and which the derived one (and no jusification for considering both to be structurally ambiguous).

The lexicase approach resolves this paradox by taking the grammatical evidence seriously, and assigning CR's accordingly:

(12) a. The post office is to the left of the bank.
PAT LOC

b. The bank is to the right of the post office.
PAT LOC

That is, although the two sentences are logically equivalent, they are not linguistically equivalent. (12a) and (12b) represent two different ' perspectives ' (Fillmore 1977:76) of the same situation. In (12a), the post office is viewed as the perceptual center of the statement, and its location is established with respect to that of the bank. In (12b), the converse is true. The other sets of examples can be analyzed analogously:

(13) a. John is similar to Peter.
PAT COR

b. Peter is similar to John.
PAT COR

(14) a. John fought with the orangutan.
PAT LOC

b. The orangutan fought with John.
PAT LOC

c. John and the orangutan fought (with each other).
LOC LOC

(Notice that the former Comitative case is here considered a type of (inner) Locus, since Locus and 'Comitative' are in complementary distribution and since extra-linguistic selectional features like animacy are not considered valid in themselves as criteria for establishing a lexicase analysis.)

(13) and (14) again represent different perspectives of identical situations. In (13a), John is being described by comparing him with Peter, and in (13b), the converse is true. In (14a), John is fighting, and his adversary is the orangutan; in (14b), the orangutan is viewed as the fighter, and John as the animate inner locus of the action; and in (14c), both the orangutan and John are fighting, with *each other* available to indicate that the combat is reciprocal rather than comradely. All of the examples are separately derived rather than being related by transformation, and the perceived relatedness among them is viewed as an indirect consequence of the overlap among their semantic extensions rather than some shared underlying 'logical' (situational) representation.

Note that this approach to case analysis does not affect the way that a verb is subcategorized in the lexicon. In each case, the verb has only one 'case frame', but now the case frame is viewed not as being derived directly from external reality, but rather as a language-internal template imposing a particular perspective on external situatuons, a template which may be matchable with a given situation in more than one way. Each verb can be seen as setting a scene, with each scene providing for a limited number of standardized roles chosen from a limited set and obeying the convention that (for the leading roles at least), only one instance of each role can be present in a given scene (the 'one per Sent constraint'; cf. Starosta 1978). Casting then involves matching the right actor (external referent) with the right part (case relation) in the right play. In principle, any actor could play any role, but the audience will be understandably surprised if it finds Nancy Kwan playing Othello or an inanimate noun playing Agent.

Given the grammar-oriented procedure advocated here, it becomes possible to state certain universal grammatical generalizations that were not possible under the situational approach, e.g.

(15) Patient is obligatory with every verb.

(16) Six case relations can be grouped into three 'inner-outer' pairs, with one member of each pair referring specifically to the referent of the Patient case relation and the other member referring to the situation referred to by the sentence as a whole.

(17) An Agent must always act on a Patient, never in isolation.

(18) Patient always takes precedence over Locus as a candidate for subjecthood, therefore,.

(19) The subject of an intransitive sentence is always a Patient.

(20) An accusative language is one in which AGT always takes precendence over PAT as the case relation of the subject, and

(21) An ergative language is a language in which the subject of every verb is a Patient.

(22) All verbs follow the 'One per Sent constraint': except for instances of successive inclusion or contiguity, no case relation can appear more than once per clause. This entails that

(23) Only when a process of lexical derivation such as morphological causativization introduces a new case relation into the case frame of a verb that already has an instance of that case relation will the old case relation be completely displaced (see Starosta 1978). That is,

(24) Exceptional behavior such as 'extended demotion' or 'blocking' in causativization (Comrie 1974-75, 1976) will occur only in the causativization of agentive sentences as defined by the assumptions above (cf. Starosta 1978), and

(25) An AGT 'demoted' by causativization or passivization can no longer be an AGT.

3.0. Agency and Abstract Predication

These generalizations and definitions all have empirical content. They stand or fall depending on how successful they are in explaining regular patterns and capturing generalizations. For example, the lexicase 'one per Sent' constraint requires that (with the exception of coreferential LOC and TIM actants) no case relation occurs more than once in a given clause. This assumption is taken from Fillmore's case framework, but has far more empirical significance in lexicase, since it is not possible in this framework to evade the constraint by creating multiple deep structure clauses to harbor violators as has been done in Fillmorean analyses.

Thus it would be possible in a Fillmorean grammar to consider both *John* and *pigs* in (26a) to be Agents by creating a higher generative-semantic-style clause as in (b) to contain one of the agents:

(26) a. John fed the pigs.
AGT AGT

b. John caused [the pigs ate something]
AGT AGT PAT

Similarly, a single actant such as *John* or *Bill* in (27a) might be assigned more than one case relation in a similar way, e.g. as in (27b):

(27) a. John sold the pigs to
AGT/Source/Goal PAT
Bill
AGT/Goal/Source

b. John caused [[Money goes from John to Bill] and
AGT PAT Source Goal

Bill caused[Pigs go from Bill to John]]
AGT PAT Source Goal

In a lexicase analysis, however, the one per Sent constraint allows the assignment of only one case relation per actant, and it must be the one consistent with the overt grammatical marking, e.g.

(28) John fed the pigs.
AGT PAT

(29) John sold the pigs to Bill.
AGT PAT LOC

It thus makes an empirical claim, and one that seems to be borne out completely: in a sentence such as (28) or (29) only one actant will have agentive properties. Any general statements that can be made about overt grammatical properties of Agents will apply only to the subjects of such sentences, not to the direct objects (*pigs* in 28 and 29). *Pigs* and *Bill* in these sentences have none of the coding, control or even semantic properties (cf. Keenan 1976) of Agents (unless one is talking to logicians rather than native speakers), and any attempt to include situational 'underlying Agents' in such general grammatical statements will force their abandonment.

4.0. The Inner-outer Contrast Among Case Relations

4.1. Patient

The assumption that the Patient is the fundamental and pivotal obligatory case relation for every verb (except for grammatically non-centered verbs, such as meteorological or existential verbs in certain languages) is new to Fillmorean case grammar, but has long been partially or wholly accepted in other case grammar frameworks, cf. Gruber's 'Theme' (Gruber 1965–1967), Halliday's 'affected' (in action clauses at least, Halliday 1970: 157), and John Anderson's *abs* (absolutive, Anderson 1971). As indicated by the semantic characterization above, the meaning common to the various readings of this case relation turns out to be quite vague, with the particular specific shades of meaning (i.e. 'entity affected' or 'entity brought into existence') depending on the semantic class of the individual verb, as it is with Object in Fillmorean case grammars (cf. Fillmore

1968:25). Nonetheless, the assumption of an obligatory case role that appears with every verb has proved itself to be an extremely productive and useful one (cf. for example its value in accounting for morphological causative constructions as described in Starosta 1978), and this is the most important justification for any theoretical construct.

Based on the semantic classes with which Patient can occur, three basic sub-interpretations of Patient can be distinguished (cf. Gruber 1965, 1967; Jackendoff 1972:29-34):

(30) a. the entity which is affected by the action of an action verb such as *make*, *break*, or *observe* (see below).

b. the entity which is located or which moves, with verbs of motion or location such as *send*, *fall*, *keep*, and *stay*.

c. the entity which is in a particular state, or whose state is changing, with stative and inchoative verbs such as *hard* and *retain* or (transitive or intransitive) *harden*.

Again based on semantic verb classes, the interpretations of 'affected' Patients can be subdivided into three subtypes (cf. Kullavanijaya 1974:194-210):

(31) a. Surface-affected, e.g. the direct object of *read* or the subject of *breathe*.

b. Non-reversible change of state, e.g. the object of *cook* or the subject of *decay*.

c. Factitive, the entity which comes into existence as a result of the action of the verb, e.g. the direct object *of create* or the subject of appear.

As Kullavanijaya noted for Thai transitive verbs, the grammatical behavior of all of the objects of affect verbs is identical (e.g. their passivizability), and this can be accounted for by assigning their direct objects the same case relation, Patient. Any semantic differences can be traced to the semantic subclass of the verb (cf. DeGuzman 1978:182-7), so that it would be uneconomical and redundant to attribute these differences to distinct

case relations such as 'Factive' which just happen to occur in complementary distribution according to verb class, and thereby lose the explanation otherwise available to account for the identical grammatical behvior.

4.2. Inner and outer case relations

Case grammarians (including the covert ones such as Chomsky) have recognized for a long time that locative actants come in two varieties, 'inner' and 'outer', and they have proposed various syntactic and semantic criteria for distinguishing the two types. One of the advantages of the 'obligatory Patient' assumption is that it allows us to characterize this distinction in a simple and general way, and to recognize its presence elsewhere in the case inventory. Briefly, an 'inner' case relation is one which characterizes an entity as having an intimate relationship to the patient, and an 'outer' case relation is one which has the entire clause in its semantic scope.

4.2.1. Locus and Place

The clearest example of the inner-outer distinction is the difference between Locus ('inner locatives') and Place ('outer locatives'). These two case relations are very similar in their casemarking and semantic properties, but as has often been pointed out in the literature, they differ grammatically as well as in certain other semantic characteristics. In a lexicase grammar, Locus is characterized as the case relation of the entity viewed as the concrete or abstract location of the (obligatory) Patient, and Place as the external setting of the action or state as a whole. The rest of the commonly recognized semantic properties and operational definitions of these two case relations follow from this one. For example, one often used guideline for recognizing inner locatives is direction: any locative marked for source, goal, or path is an inner locative. This is natural in view of our definition, for the source, goal, or path is the source, goal, or path of the Patient of a motion verb. With non-motion verbs, the direction criterion does not apply,but the lexicase definition still does: in the following three examples, *pot* is the Locus ('inner locative') and *kitchen* is the Place ('outer locative') case relation because *pot* gives the specific location of the Patient (in this case the affected entity with a transitive change of state verb) and *kitchen* gives the general setting for the action as a whole:

(32) Brunhilda cooked the potatoes in a pot in the kitchen.
AGT PAT LOC PLC

(33) In the kitchen, Brunhilda cooked the potatoes in a pot.
PLC AGT PAT LOC

(34) *In a pot, Brunhilda cooked the potatoes in the kitchen.
LOC AGT PAT PLC

In the analyses of the above examples, the different syntactic potentials of the two actants correlate neatly with the different semantic readings assigned by the semantic characterizations of the Place and Locus relations.

4.2.2. Correspondent and Reference

Another consequence of adopting the obligatory Patient hypothesis is the recognition of another inner-outer pair of case relations, Correspondent (formerly 'Dative' or 'Experiencer') and Reference (formerly 'Benefactive') [4]. The Correspondent (COR) is defined as that case relation which labels the entity viewed as being in correspondence with the Patient, that is, it is an inner case relation defined in terms of the intimacy of its connection with the obligatorily present Patient, as opposed to the Reference case relation, the entity viewed as the external target or evaluative frame of reference for the state or action as a whole.

A legitimate question has been raised by Ayo Bamgbose (personal communication) as to whether lexicase really needs to make a distinction between Correspondent and Agent at all. That is, if our criteria are primarily grammatical rather than situational, what grammatical evidence is there for distinguishing the subject of (35) from the subject of (36) in terms of case relation?

(35) John has bats in the belfry.
COR

(36) John catches bats in the belfry.
AGT

4. It is of course irritating to keep changing case relation labels, but the old ones were inappropriate and misleading as designations of the grammatically established case relations being considered here: 'Dative' properly refers to a case inflection category, not a case relation, and 'Experiencer' has been customarily defined partly in terms of animacy, which is not a linguistic criterion from the lexicase viewpoint. The term 'Experiencer' is also too narrow, in that Correspondent is also used in this framework to refer to 'possessors' (in a very broad sense), not just to undergoers of a psychological experience. 'Benefactive' is appropriate for some instances of the Reference case relation but not for others, so a broader designation has been chosen. This one too has its problems: it sounds too much like 'referent'. Watch this space for further name changes.

One part of the answer to this question comes from morphological causative constructions: verbs such as *have* and *catch* behave differently when causativized in languages such as French and Sre (see Starosta 1978). For example, although the following French sentences look grammatically identical, their causative counterparts behave differently:

(37) Jean voit la lettre.
COR PAT
'John sees the boy'.

(38) Jean mange les gâteaux.
AGT PAT
'John eats the cakes'.

(39) J'ai fait voir cette lettre à Jean.
AGT PAT COR
'I made John see the boy'.

(40) Je ferai manger les gâteaux { à Jean / COR / par Jean / MNS }
AGT PAT

If causativization adds an AGT to a verb's case frame, then the causer will take over the subject slot in an accusative language. With *voir* 'see' (37), the old COR subject assumes its normal marking, Dative. In (38), an AGT is already present, so the old AGT can only remain in the sentence at all by being reinterpreted as MNS or COR, and being marked accordingly with Dative or Prolative, to use the traditional localistic terms.

Other criteria include the different behaviour under passivization noted by Fillmore and others. In both cases it is possible that this difference should again be attributed to semantic class differences in the verb rather than different case relations of the subjects per se. I consider the question still open, but I will proceed in this paper under the assumption that such a distinction is justified.

The grammatical and semantic differences between the (inner) Correspondent and the (outer) Reference case relation can be illustrated by the following example, assuming again that Patient is obligatory:

(41) Mary has an apple in her basket for you in the hall.
COR PAT LOC REF PLC

Assuming that Mary is correctly identified as COR rather than AGT here, we can see why COR and REF must be respectively differentiated from LOC and PLC, and how these two pairs of case relations exhibit parallel behavior in terms of the inner-outer distinction. Once again, the (obligatory) Patient, *apple*, is the focus of the inner CR's. Thus *Mary* is the entity viewed as in correspondence with the Patient (she is in possession of it), and *basket* is the immediate locus of the apple, not of the situation as a whole. Similarly, the hall is where the possession of the apple obtains, and *you* is the external reference point of the possession seen as a whole gestalt. As usual, the inner case relations are located closer to the patient than the outer ones, and the outer CR's can occur more freely in initial position than the inner ones.

The difference between LOC and PLC on the one hand and COR and REF on the other is hard to characterize, although there seems to be a strong tendency for LOC and PLC to refer to physical locations, especially ones which may not have clearly characterizable boundaries, whereas COR and REF seem to be bounded individuals or entities, especially animate entities. This suggests that we might want to treat them as alternants of one another differentiated only by grammatically irrelevant semantic features. Two arguments can be raised against this suggestion, however:

(1) If this were so, they should be in complementary distribution,since the One per Sent constraint would not allow two instances of the same case relation to cooccur in a single clause. However, as shown by example (41) they do cooccur; and

(2) although One per Sent can be violated if there is a relation of successive inclusion or part-whole between the actants bearing the same CR in a single clause, this does not apply to example (41): *Mary* is not part of *basket* or vice versa, and *you* and *hall* seem to locate the act of possession with respect to two completely independent frames of reference.

4.2.3. Agent and Instrument

By assuming that Patient is obligatory with every verb, we find that the ' inner '-' outer ' distinction created by the obligatory Patient hypothesis can be found to hold between Locus and

Place and Correspondent and Reference, but even between Agent and Instrument. Both are semantically similar in that they refer to a dynamic or kinetic entity of some sort, but in Fillmorean case grammar they have been traditionally distinguished arbitrarily in terms of selectional features such as animacy, a procedure which leads to various unmotivated analyses and paradoxes. In the lexicase framework, however, language-external situational considerations ('selectional restrictions') play no role in the definitions of case relations. Instead, the two CR's are distinguished in terms of their relation to the obligatory Patient: the Instrument is assigned to that external influence which is viewed as more immediately impinging on the Patient, and the Agent is the actant referring to the entity viewed as the ultimate source of the action as a whole. One result of this approach is that sentences such as the following may have to be given ambiguous analyses:

(42) a. The storm destroyed the tree house.
AGT PAT

b. The storm destroyed the tree house.
INS PAT

corresponding to two possible perspectives, according to which the storm is viewed as either the ultimate (AGT) or the immediate (INS) effector of the destruction. This ambiguity is then resolved if both an Agent and an Instrument are present, since Agent outranks Instrument in the Subject Choice Hierarchy:

(43) a. The storm destroyed the tree house with a powerful
AGT PAT
gust of wind.
INS

This provides a non-arbitrary solution to the old 'Force' problem, and allows an appropriate case frame for verbs which allow only one or the other CR as subject, e.g.

(44) a. [+[+INS],-[+AGT] ([+—IO] in Fillmorean notation)
erode
occupy (location)

b. [+([+INS]), +[+AGT] ([+—A (I) O] in Fillmorean notation)
kiss
forgive
rescue
punch
boil
drop

thus accounting for the ungrammaticality of sentences such as:

(45) a. *Bill's lips kissed Mary.

b. *The letter forgave Tom.

c. *The life preserver rescued the survivors.

d. *Biff's fist punched Percy in the nose.

e. *Intense heat boiled the water.

f. *John's hand dropped the hot iron(?).

which all contain verbs which allow only Agent subjects, or

(46) a. *Constant dripping eroded the stone with water.

b. *Dunottar Castle occupies the craggy headland with its crumbling battlements.

As in Fillmorean case grammar, selectional restrictions are stated with respect to case relations rather than subject, object, etc., and it is possible to find examples of situational illformedness traceable to this source [5]. The oddness of (47d) for example is considered a matter of a violation of an expectation of animate Agents and inanimate Instruments with the verb *explain*, rather than a violation of the case frame as such:

(47) a. John explained the facts.
AGT PAT

b. An ingenious hypothesis explained the facts.
INS PAT

c. John explained the facts with an ingenious hypo-
AGT PAT INS
thesis.

5. Lexicase adopts McCawley's position (McCawley 1968: 267), attributed to Fillmore, that selectional features are best considered presuppositions. For us, they will typically be presuppostions imposed by verbs on lexical items holding particular case relationships.

d. (?) An ingenious hypothesis explained the facts
AGT PAT
with a new Proto-Austronesian laryngeal.
INS

Since there are no transformations allowed in this framework, the verbs *explain* in the examples above are considered separate though related lexical items, an analysis which is confirmed by other grammatical properties the two words do not share. For example, the agentive verb *explain* is lexically [+intentional], though the non-agentive one is not:

(48) a. John carefully explained the facts.
AGT PAT

b. (?) An ingenious hypothesis carefully explained
INS
the facts.
PAT

and the agentive verb allows indirect objects while the instrumental-subject counterpart doesn't:

(49) a. John explained the facts to Hugo.
AGT PAT LOC

b. *An ingenious hypothesis explained the facts to
INS PAT
Hugo.
LOC

In the framework being proposed here, since semantic features of lexical items are irrelevant to the determination of case relations, AGT and INS might both be animate or inanimate with a given verb, and in fact they can even be situationally partly coterminus, as in:

(50) John kicked Fido with his left foot.
AGT PAT INS

This is a situational matter, and not of any interest for the grammatical analysis of this example, although much ink has been spilled over such examples of 'inalienable possession' in the Fillmorean framework. In a lexicase grammar, the 'perspective' imposed by the case relations seems to place the external referents in different perceptual dimensions, so that in an example such as:

(51) Bill stabbed himself with a screw driver.
AGT PAT INS

Bill and himself are treated as two separate and independent entitities, a focal Patient and an external AGT which can act on it.

Finally, a recent addition to the inventory of inner case relations should be introduced. 'Increment' (NCR) was originally conjured up in response to a challenge by Barry Blake to explain how 'Dative Movement' in a lexicase framework could possibly be a derivational process that involves a 'recentralization' of a case relation. Inspired by the Mannheimer beer we were drinking, I proposed a new 'Increm nt' case relation.

(52) a. John gave the book to Mary.
AGT PAT COR

b. John gave Mary the book.
AGT PAT NCR

This does not in retrospect seem to be a purely ad hoc expedient,since NCR can also be adduced to expalin the properties of other bare non-subject NP's that don't act like accusative Patients, e.g.

(53) a. I'd walk a furlong for a dromedary.
PAT NCR REF

b. They named their son Alvin.
AGT PAT NCR

c. The genie made Sinbad a ham sandwich (both
AGT PAT NCR
readings).

At this point in time, there seems to be no clear candidate for an outer CR to pair with Increment, though durational time may somehow be connected.

5.0. Conclusion

By rejecting the use of external situations alone to analyze sentences, and by requiring grammatical justifiation to establish case relations, we adopt the position that distinct sentences describing the same external situation may assign different case

relations to actants referring to the same entity. Similarly, although intuitively we may claim that a number of entities qualifyas 'agents' in a given situation, linguistically our internalized grammars force us to choose only one of them to represent as a grammatical Agent with any given (agentive) verb. These different possible choices represent different perspectives on a single situation, and the various different perspectives are each associated with a particular verb class and its characteristic case frame. The verb thus acts as a perceptual filter which imposes its own linguistically determined structure on unstructured external reality.

REFERENCES

BRESNAN, JOAN. 1978. A realistic transformational grammar. In *Linguistic theory and psychological reality*, ed. by M. Halle, J. Bresnan, and G.A. Miller. 1-59. Cambridge: MIT press.

BRAME, MICHAEL. 1978.*Base generated syntax*. Seattle: Noit Amrofer.

COMRIE, BERNARD. 1974-5. Causatives and universal grammar. *Transactions of the Philological Society* 1–32.

———. 1976. The syntax of causative constructions: cross-language similarities and divergences. In *Syntax and semantics* 6: *the grammar of causative constructions*, ed. by M. Shibatani, 261–312. New York: Academic Press.

COOK, WALTER. 1974. Case grammar and generative semantics. *Languages and linguistics working papers* 8.1–28. Washington, D.C.: Georgetown University Press.

DEGUZMAN, VIDEA P. 1978. Syntactic derivation of Tagalog verbs. (*Oceanic Linguistics Special Publications* no. 16) Honolulu: University Press of Hawaii.

FILLMORE, CHARLES J. 1968. The case for case. In *Universals in linguistic theory*, ed. by Emmon Bach and Robert T. Harms, 1–90. New York: Holt, Rinehart and Winston.

———. 1971. Some problems for case grammar. In *Linguistics: developments of the sixties—viewpoints of the seventies*, ed. by Richard J. O'Brien, 35–56. Washington: Georgetown University School of Languages and Linguistics.

———. 1977. The case for case reopened. In *Syntax and semantics* 8: *grammatical relations*, ed. by Peter Cole and Jerrold M. Sadock, 59–82. New York: Academic Press.

GRUBER, JEFFREY S. 1965. *Studies in lexical relations.* Ph.D. dissertation, Massachusetts Institute of Technology.

———. 1967. Look and see. *Language* 43.937–47.

HUDDLESTON, RODNEY. 1970. Some remarks on case grammar. *Linguistic Inquiry* 1:4.501–510.

JACKENDOFF, RAY S. 1972. *Semantic interpretation in generative grammar.* Cambridge: MIT Press.

KEENAN, EDWARD L. 1976. Towards a universal definition of 'subject'. In *Subject and topic*, ed. by Charles N. Li, 303–34. New York: Academic Press.

KULLAVANIJAYA, PRANEE. 1974. *Transitive verbs in Thai.* Ph.D. dissertation, University of Hawaii.

MCCAWLEY, JAMES D. 1968. Concerning the base component of a transformational grammar. *Foundations of Language* 4:3.243–269.

STAROSTA, STANLEY. 1978. The one per Sent solution. In *Valence, semantic case and grammatical relations* (Studies in Language Companion Series, Volume 1, ed. by Werner Abraham, 459–576. Amsterdam: John Benjamins.

———. 1979a. The end of Phrase Structure as we know it. *University of Hawaii Working Papers in Linguistics* 11:1.59–75.

———. 1979b. Lexicase references. *University of Hawaii Working Papers in Linguistics* 11:3.79–85.

OPiL 7 & 8. 23 – 36 (1981–82)

INTERFERENCE OF SECOND LANGUAGE WITH THE FIRST IN A COORDINATE BILINGUAL CHILD

CHERVELA NIRMALA

This paper is based on a Telugu-Hindi bilingual child's data on language mixing from 3;') years., that is from the time the child was first exposed to the second language, Hindi. The child's linguistic abilities-—phonological, morphological and syntactic at the time she was first exposed to the second language are briefly cited to give a clear picture of the extent of interference of the second language with the first language at different levels. Based on the evidence available, the traditional concept of dominant language in a language contact situation is ' questioned'. The process of a child becoming a bilingual with simultaneous exposure to both the languages and exposure to the second language after a fair mastery over the first is compared, and similarities and differences are pointed out.

INTRODUCTION

The form of bilingualism which is considered in this study involves the child's exposure to the second language after a fair mastery over the first. The subject of this study is Madhuri, a female child. Her mother tongue is Telugu, a South Dravidian language. She was exposed to Hindi, an Indo-Aryan language, at 3;2, when her parents moved to a Hindi speaking area. This paper deals mainly with the interference of the second language with the child's first language which resulted in intense language mixing. The term language mixing refers to similar phenomena discribed by Weinreich (1963) as linguistic interference. That is, ' the instances of deviation from the norms of either language which occur in the speech of bilinguals as a result of their familiarity with more than one language ' (Weinreich 1963:1). Based on the data on interference of the second language with the child's first language at different levels and the child's ability to handle both the languages in question, an attempt is made to define the dominant language of the child. Also, the stages involved in a child's becoming a bilingual by exposure to a second language compared with children who are exposed to two languages simultaneously, that is coordinate vs. compound bilingual children are stated, and the similarities and differences are pointed out.

Methodology

One female child Madhuri, the sole subject of this study, was observed from the time she was one year old. The child stayed at Poona, a Marathi speaking area in Maharastra state, from the time of her birth untill she was 3;0. At 3;2 her parents moved to a colony in Delhi suburb (Hindi speaking area) and stayed there till the child was 5 years old. From Delhi they moved to Balharsha, a Marathi speaking area in Maharastra State. Thus besides Telugu, which is her native tongue, she was exposed to Marathi at a very early age, and then to Hindi. Though Balharsha is in Maharastra and the local language is Marathi, the child stays in a Company colony away from the city where the common language is Hindi. Thus the child was exposed to Hindi continuously from the age of 3;2 to 6;6 which is her present age. The child's language was observed by her mother from the age of 1;0 and checked occassionally by me (that is twice in a year when the child visited us at Hyderabad). Until 3;0 years the child used to mix Marathi words while speaking Telugu as shown in the examples below. Marathi (M) words and Telugu (T) words are marked in the following sentences.

	T	M	T
(1)	naaku	khooklaa	wastunnadi
	me to	cough	coming
	'I am getting cough.'		
	T	M	T
(2)	manam	bhuur	weldaam
	we (incl.)	outing	go. fut.
	'We will go for an outing.'		

She had several such sentences with lexical items from Marathi, but the interference of Marathi never penetrated into her Telugu beyond the lexical level. Therefore it can be said that the child was monolingual till she was 3;0.

At 3;2, i.e. from the time her parents moved to Delhi, Madhuri (and her six year old elder brother who spoke Marathi very fluently) started acquiring Hindi mostly from the peer group.

Within six months they could speak Hindi quite fluently. The children's parents spoke only Telugu at home and insisted that the children also speak in Telugu. Thus the child started speaking in Telugu to her parents but used Hindi with her brother and friends. Though English was her medium of instruction from 3;6 when she had joined the nursery school, her teachers and peer group used Hindi with her more than English. Therefore English interference in her speech is negligible. She used a few English words like *glass*, *train*, etc. which are naturalized lexical items in Indian languages.

It is exactly at the point when the child started acquiring the second language, viz. Hindi, that language mixing started showing up in her speech. In the initial stages she spoke mainly Telugu mixed with a small number of items of Hindi. But gradually she started mastering Hindi, the influence of Telugu in her Hindi becoming negligible. But mixing of Hindi in her Telugu speech increased gradually and spread to morphological and syntactic levels also.

The data presented in this study are collected from the time the child was exposed to Hindi. The influence of Hindi on her Telugu was closely observed and noted down by her mother regularly. But the interference of Telugu with Hindi at this stage could not be studied because the child felt offended if her parents tried to speak to her in Hindi. Her conversations with her brother and friends were, however, totally in Hindi. She acquired the Hindi accent also so perfectly that she can be mistaken for a native speaker of Hindi. Gradually the interference of Hindi became so strong that there was a partial loss of her Telugu speech. Though she could comprehend Telugu, she could speak only Hindi-mixed Telugu. The data presented herein represent this stage of intensive language mixing.

Linguistic Repertoire at 3;2

To give a clear picture of the extent of interference of the second language with the first language the phonological, morphological and syntactic abilities of the child at the time of her exposure to the second language are given briefly.

Phonology. The child could comprehend and produce all vowels and consonants except trill and retroflex consonants. She substituted [l] for [r] and non-retroflex counterparts [t, d, n, l], were substituted for retroflex consonants [T, D, N, L].

Morphology. The child started using both noun and verb inflections in her speech though the use of case postpositions was not well established. She could handle singular-plural contrast and tense distinction correctly in the majority of her usages.

Syntax. The child had three and four word sentences in her speech and could use many types of simple sentences. Though she attempted coordination and subordination at this stage, she could use coordination with relative ease than some of the subordinate type constructions like concessives and conditionals. Relativization and indirect reporting were not mastered by the child yet. The concept of negation was quite fairly established and she could use negative counterparts of all types of affirmative sentences present in her speech. At this stage she could speak Telugu quite fluently. All her monologues while talking to herself in play situations or while standing before a mirror, were in Telugu.

Language Mixing

Mixing of Hindi with Telugu was noticed for the first time 15 days after the child moved to Delhi. A few examples are given below:

	T	T	H	T
(3)	ammaa	nannu	uuppar	kuucopeTTu
	Mummy	me	above	to sit. caus.

'Mummy, make me sit up there.'

Similar sentences were more frequently used with several nouns like *khaanaa* 'food', *paanii* 'water', etc. while speaking Telugu. At this stage she used a complete lexical item of Hindi in Telugu sentences consisting of three or four words as shown above in example (3). But from 3;6, she started speaking Hindi more fluently and preferred to speak it with her elder brother and friends and also while playing alone. She started using more than one Hindi word in her Telugu sentences as given in example (4):

	T	T	H	H
(4)	maa	in Tloo	bahut	saare
	(our excl.)	house in	many	all

H+T	H+T	T
meenDakluu	kiiDaalu	vostunnay
frogs	insects	come (hab.)

'Several frogs and insects are coming into our house.'

It could be noticed in example (4) that the child used three Telugu words and four Hindi words retaining the basic coordinating pattern of Telugu, i.e. lengthening the final vowel of the first noun. Gradually the number of such sentences increased with the child's tendency to replace nouns, adjectives and adverbs and locatives of Telugu with Hindi equivalents while speaking Telugu. She was not conscious of this change in her speech because she accepted such sentences spoken to her by her parents or brother in order to tease her. As noted in example (4) the influence of Hindi on Telugu penetrated to the morphological level also. As a result she started choosing a root or stem of the word from Hindi and added Telugu inflectional suffixes to it. Verbs were most susceptible to this process of admixture but there were a few cases of nouns also being affected by this. For instance, she used the Hindi noun *kitaab* 'book' with Telugu plural suffix - *lu* as in example (5):

	T	H+T	H+T
(5)	naa	kitaabulu	bhiigpoynaay
	my	books	soaked

'My books got wet.'

Practically all verb roots at this stage were taken from Hindi and inflectional suffixes were added from Telugu. A few such verbs are given by way of illustration. First the sentence in which the verb is used is given and then the analysis of the mixed verb is given separately for clarity:

	T	H	H+T
(6)	naa	paaw	dukkutunnay
	my	legs	paining

'My legs are paining.'

H.dukh +T. tu +unnay

pain pres.prog. 3.neut. pl.

	T	H	E	H+T
(7)	naaku	nayaa	pencil	milindi
	to me	new	pencil	got

'I got a new pencil.'

H. mil +Te. in -di

to get past. 3rd neut. sg.

	H	H	H+T
(8)	sabkoo	khaana	bantoondi
	to all	food	prepared

'Food is being prepared for all.'

H.ban+Te.too+un+di.

make pres. prog. 3rd neut. sg.

There are also instances where the child chose the main verb from Hindi and the auxiliary verb and the inflexional suffixes from Telugu. Some such usages are given below:

	T	H	H+T
(9)	naa	baaTil	phooDpooyindi
	my	bottle	broken away

' My bottle broke.'

H. PhooD+Te. poo -in -di
break go past 3rd neut.

	H	H+T
(10)	paanw	phisalpootoondi

leg is slipping

' My leg is slipping.'

Hi.phisal+Te. poo -t- oon -di

slip go pres. prog. 3rd neut. sg.

She could maintain this pattern of Hindi and Telugu mixture quite consistently from 4;0 to 6;0. This process was quite productive in her speech and she could use practically all verbs with different tenses in different types of sentences as shown below:

Past-interrogative:

	T	H+T
(11)	nuvvu	deekhaavaa

you (sg.) seen. int.

' Have you seen? '

H. dekh+ Te. aa + waa

see past. inter.

Non-declerative:

	T	H+T
(12)	waaDu	deekhtaaDu

he see. n.p.

' He will see '

H.dekh+Te. t- aaDu

see fut. 3rd. masc. sg.

Pres. prog. declerative:

	T	H+T
(13)	neenu	deekhtunnaanu
	I	see pres. prog.

'I am watching.'

H. deekh +Te. t +unnaa +nu

see pres. prog. 1st. p. sg.

Besides the admixture of nouns and verbs at the morphemic level, she could use certain categories of words of both Telugu and Hindi while speaking Telugu. For instance she had Telugu coordination types (lengthening the final vowel and use of *kuuDa* 'also')in her speech by the time she was exposed to Hindi. But after acquiring Hindi she started using the Hindi coordinator *bhii* 'also' as in (14):

	T	H	H	H
(14)	naaku	bhii	khaanaa	lagaau
	me to	also	food	give

'Give food for me also.'

The interference of Hindi with her Telugu syntax is very interesting. Here she displayed two main patterns: (a) Using several Hindi words in a sentence retaining the Telugu sentence structure and (b) Using the Hindi sentence pattern with admixture of Hindi and Telugu words.

Some examples of both the types of sentences are given below. The context in which the child used the sentence in question is given for better understanding.

(a) Telugu syntactic pattern with Hindi lexical items:

Context: Madhuri asked her father to get a big doll with rolling eyes from Delhi. But twice he failed to bring the doll when he went to Delhi. Her father told her *ii saari testaanu* 'I will bring it next time'. The child lost faith in her father's promise and shouedt angrily as follows:

	H+T	H+T	T	H+T
(16)	laataanu	laataanu	anTaaru	laaru
	bring fut.	bring fut.	say hab.	bring not.

'(You) always say you will bring it but (you) won't bring it.'

This sentence is based on the pattern of a Te. sentence like (16a)

(16a)	testaanu	testaanu	anTaaru	teeru
	bring n-p.	bring n-p.	say hab.	bring not

'You say you will bring it but you never bring it.'

The equivalent Hindi sentence is as follows:

(16b.)	aap	kahte	hain	ki	laaunga laaunga
	you(sg.)	say	that		bring fut. bring fut.
	leekin	laate	nahin		
	but	bring not			

'You always say that you will bring it but you never bring it.'

We can say that the child has followed the Telugu syntactic pattern based on the clue that she omitted the conjunct *leekin* which is obligatory in Hindi while its Telugu counterpart is optional.

Hindi syntactic pattern with Telugu lexical items:

In this type a Hindi syntactic pattern is borrowed and Telugu lexical items are used. This is strikingly evident from the child's use of negative sentences after 4;6. As mentioned earlier the child used the negative patterns of Telugu with *-a-* suffix in verbs such as *cepp-a-du,* '(she) won't tell' *ceyy-a-du* 'she won't do' *raa-du* 'come not.' But after she acquired certain amount

of control over Hindi she started again (she used them once earlier, while acquiring Telugu negative) using negatives at the end of the verb based on the Hindi model. A few examples are given below.

Context: Mother asked the child to draw a picture of a monkey to divert her attention from the neighbour's doll. But the child showed her disinterest in drawing by saying (17):

	T	T	T
(17)	naaku	vastundi	leedu
	me to	to get	not

'I don't know (how to draw).'

in the place of the Telugu negative sentence used by her earlier,

(18)	naaku	raadu
	me to	come not

'I don't know (how to draw).'

Similarly she used sentence (19) given below quite consistently.

Context: The child asked me to tell a story and I told her that her mother would tell her a nice story. Then she said, (19):

(19)	mammy mummy	ceptundi tell	leedu not	nuvvee you (emph.)	ceppu tell

'Mummy won't tell, you tell (me).'

instead of the adult Telugu equivalent given in (20):

(20)	amma	ceppadu	nuvvee	ceppu
	Mummy	tell not	you emph.	tell

'Mummy won't tell, you tell (me)'

Sentences (17) and (19) are based on the Hindi negative sentences (21) and (22) given below:

(21) mujhee aataa nahiⁿ

me to come not

'I don't know, how to do it.'

(22) mummy booltii nahiⁿ

mummy tell not

'Mummy won't tell (me).'

There were several sentences in her speech representing both the syntactic types. Initially it was difficult even for the parents to understand the child's admixture but gradually they also adopted her mixed vocabulary and used it whith her when they wanted to please her.

When the child started mixing the morphemes from both the languages she was unaware of the difference between her speech and others in the family. But gradually she became conscious of it, but continued in her own way. Only when she visited Hyderabad where the family members spoke only Telugu at home, and where she was made fun of for her admixture, that within a few weeks she started using Telugu without any Hindi mixture. But once she returned back to her place where Hindi is used predominantly she switched back to her mixed Telugu. This could be related to her exposure to the language in question. Her retention of Telugu in spite of Hindi invasion could be attributed to her parent's insistence that she should speak Telugu at home.

Gradually from 6;0 onwards she started sorting out the mixed vocabulary patterns. The first thing she stopped doing was mixing morphemes of Hindi and Telugu within a word. Slowly conjuctions etc. were avoided from mixing. Now at 6;6, she can speak both the languages quite fluently but still she prefers to talk in Hindi and easily switches over to Hindi whenever there is any difficulty in expressing herself in Telugu.

Discussion

Based on the data of this study on interference an attempt is made to figure out the dominant language for the child among the two languages, viz. Telugu and Hindi.

Weinreich (1963) points out that there are several criteria by which a language might be characterized as dominant in the adults speech in a language contact situation. They are— relative proficiency, order of learning, mode of use, usefulness in communication, emotional involvement, function in social advancement, literary, and cultural values (Weinreich 1963:80). Some of these criteria like relative proficiency, order of learning, usefulness in communication, etc. are applicable to child bilinguals also. Besides these, the language used in the child's surroundings and by the peer group for every day transactions and reinforcement of the language, contributes to decide the language dominance in children.

Discussing the grammatical interference of languages in contact situation Weinreich (1963:29) pointed out that this issue is currently among the most debated questions of general linguistics. Many linguists of repute have questioned the possibility of grammatical, at least morphological influence altogether. Meillet pointed out that the grammatical systems of two languages . . . . 'are impenetrable to each other'. This was echoed by Sapir, 'Nowhere do we find any but superficial morphological interinfluencings.' With equal vigor the opposite view has been defended by Schuchardt: 'Even closely knit structures like inflectional endings, are not secure against invasion by foreign material.' (cf Weinreich 1963:29). Examining the interference types in language contact situations, he pointed out that where transfer of morphomes is involved it is convenient to speak of the source language (dominant) and recipient language.

For Madhuri, according to the criteria defined by Weinreich Hindi becomes the dominant language. But if we consider the criteria of transfer of grammatical morphemes, Telugu becomes the dominant language since the child retained the inflectional endings of Telugu and chose the root or stem from Hindi as illustrated in the data. But even after 3 years of exposure to Hindi the child still mixed Hindi while speaking Telugu and switched over to Hindi whenever she had difficulty in expressing herself in Telugu. She used Hindi while playing alone, talking aloud, and all her monologues were in Hindi. This suggests that the child uses Hindi even for thinking. Based on the above facts it could be suggested that though acquired after Telugu and in spite of the fact that she retains the basic grammatical patterns of Telugu, Hindi is the dominant language for the child.

On the basis of our data the interference of the second language with the first in the process of a monolingual child becoming bilingual could be divided into the following stages:

1. Use of uninflected lexical items of the second language while speaking the first.

2. Heavy grammatical mixing while speaking the first language due to the interference of the second language (mastered well by the child), which is the dominant language in the child's surroundings.

3. Use of lexical items of either languages or mixed vocabulary to represent grammatical rules and syntactic patterns of both the languages while speaking the first language.

4. The child's ability to keep one language distinct from the other and maintaining fluency in both without the interference of one upon the other.

Several researchers like Volterra and Taeschener (1978) Lindholm and Padilla (1978) have worked on compound bilingual children. Volterra and Taeschener (1978) noted three stages in the process of a child becoming a bilingual.

They are:

(1) The child has only one lexical system which includes words from both languages.

(2) The child distinguishes two different lexicons but applies the same syntactic rules to both languages.

(3) The child has two linguistic codes differentiated both in lexicon and syntax, but each language is exclusively associated with the person using that language, only at the end of this stage, when the tendency to categorize people in terms of their language decreases, can one say that a child is truly bilingual (Volterra and Taeschener 1978:311).

It could be observed from both types, that language mixing is not the same for coordinate and compound bilingual children. For compound bilingual children language mixing is found in both the languages to which the children are exposed to. But for a child learning a second language after a fair mastery over the first (coordinate bilingual) language, mixing is not mutual. The dominant language (Hindi in the case under study) interfered at all levels with the child's first language (Telugu) and

the unconscious effort of the child to retain the first language resulted in language mixing only when the child spoke Telugu. But the interference of Telugu with Hindi while speaking Hindi was negligible since the child used very few lexical items of Telugu in the initial stages of her exposure to Hindi. But she acquired Hindi within a few months and mastered its intonations as well. She never mixed Telugu while speaking Hindi. She could easily pass off as a native speaker of Hindi. But during this period the interference of Hindi with Telugu gradually increased and penetrated to all levels starting from the lexical level as illustrated by the data of this study. Besides language dominance, the use of mixed language alone while attempting to speak Telugu could be due to the following reasons. The main purpose of speech is to communicate. The child would not have been able to communicate if she mixed Telugu with Hindi while talking with her peer group and other neighbours who had absolutely no knowledge of Telugu. But she could communicate in a mixed language with her parents who had working knowledge of Hindi. They responded to her mixed language though it proved to be difficult for them initially. Not only this, they used the mixed language whenever they wanted to please the child. Lack of reinforcement might have also contributed for the continuation of mixed language for a considerably long period by her. Except at home the child hardly had any exposure to Telugu. But whenever she visited Hyderabad (Telugu speaking area) she used to stop using the mixed language within a week's time and started speaking perfect Telugu. But once she was back in Delhi she would speak Hindi-mixed-Telugu at home. As mentioned earlier she started sorting out Telugu and Hindi from 6;0 on while speaking Telugu. By 6;6 she became a perfect bilingual and could switch over from one language to the other without using mixed language.

The data of this study clearly indicates that there are basic differences in the way children exposed simultaneously to two languages and those to one language after the other, become bilinguals.

REFERENCES

LINDHOLM, K.G., AND A.M. PADILLA. 1978. Language mixing in bilingual children. *J. Child Lang.* 5. 327-335.

VOLTERRA, V. AND T. TAESCHENER. 1978. The acquisition and development of language by bilingual children. *J. Child Lang.* 5. 311-326.

WEINREICH, URIEL. 1963. *Languages in contact.* Mouton: The Hague. (Published originally in 1953 by The Linguistic Circle of New York).

OPiL 7&8, 37–46 (1981 – 82)

ARTICULATORY AUTOMATIZATION OF VELAR PLOSIVES

D. VASANTA

This paper describes a single case study in which an attempt has been made to verify the assumption that auditory masking can estimate articulatory automatization of phonemes effectively and thus helps clinicians make better dismissal decisions in articulation therapy. In a "repeat after me" articulation test, a five year old normal hearing male child was found to misarticulate voiceless and voiced unaspirated velar plosives /ka/ and /ga/. He often substituted voiceless unaspirated dental plosive in place of plosives. Assimilation analysis revealed that the child assimilates phonemes /da/ and /ga/ next to a nasal phoneme. Syllable coalescence, whereby an earlier phoneme is dropped altogether was also noticed in his speech. Phonemes /ka/ and /ga/ were chosen as targets. Ear training and phonetic placement methods were used in training these phonemes. As soon as he gave a criterion response of ninety percent correct, he was discharged from therapy. A follow-up after five to six months later however, revealed that the new phonemes he acquired were not stabilized well and that he continued to substitute /ta/ or /da/ for both the velar plosives. A list of key words was made and training continued using the same methods until he gave criterion response for target phonemes in all the contexts. At this point, auditory masking (75dB of white noise) was given binaurally through earphones of an audiometor (Arphi, MK-IV), while he practised uttering the phonemes. After he reached criterion response under auditory masking condition, he was discharged from therapy for the second time. A second follow-up was made eight months later. His articulation was assessed in syllable, word, sentence contexts and in spontaneous speech in a "repeat after me" articulation test. His responses were tape recorded using a tape recorder (Philips N. 2213). He could utter the target phonemes /ka/and/ga/ correctly in all the contexts, in quiet as well as under auditory masking conditions. There was no syllable coalescence or assimilation involving phonemes /ka/ and /ga/. The results were found to be consistent with those of some earlier studies, Manning et al, 1977.

Clinical implications of the use of auditory masking in articulation therapy are pointed out and suggestions made for replication of this study with more number of subjects.

INTRODUCTION

Wright *et al* (1969) describe the process of articulatory learning as being composed of two distinct steps – an

initial process of acquiring the correct articulatory pattern followed by a process of automatizing the newly acquired articulatory pattern. When he is learning to use the phonemes of his native language, a young child not only engages in self-hearing but also models his utterances with those of others around him. In other words, he relies more on his auditory feedback to control and monitor his speech. However, later, as he grows up and reaches the age of seven years, most of the sounds become stabilized and automatic. There is no need for him to exercise a conscious control over his speech. But, he then begings to monitor the manner of his speech production through proprioceptive feedback; though control and monitoring of the content of speech still requires both auditory and proprioceptive feedbacks (Mysak, 1976).

Van Riper (1971) considered the concept of motor stability in articulation therapy. He suggested that once the articulation pattern has become stabilized, an individual is able to correctly produce that pattern even if his auditory feedback is disrupted. He emphasized the need for terminal therapy with misarticulation cases, which according to him should include teaching the use of new sounds by feel and touch by administering masking noise in their ears. Auditory masking prevents the client from engaging in self-hearing, but at the same time it places emphasis on proprioceptive control. This assumption has never been tested until recently.

For some unknown reasons, this procedure is not in vogue in most speech clinics in our country. Besides their limitations in estimating articulatory automatization, traditional procedures may be criticized for not giving importance to follow-up. To date, there has been no study, in which auditory masking was used to estimate articulatory automatization of Telugu speaking misarticulation cases. A glance at the findings of recent research in this area undertaken by speech scientists in the West, only highlights and confirms the urgent need for further investigations.

Results of previous studies

Manning *et al* (1976) studied seventy one elementary school children who received articulation therapy and were about to be discharged. The McDonald deep test of articulation was administered in quiet as well as in the presence of 86 dB white noise presented binaurally through earphones. Follow-up after three to four months later revealed that majority of children who performed well under masking noise (at least 90% correct

scores) continued to perform well and those who performed poorly (less than 90%correct scores) continued to do poorly. Use of masking noise as criterion for dismissal proved to be more accurate estimate of children's future performance. When this procedure was used, 94% of the children were correctly dismissed as against 77% under traditional procedures.

In order to control the type and severity of misarticulations, most of their subsequent studies had subjects with /sa/ or /ra/ misarticulations. Using similar experimental design as that of Manning *et al* (1976) Campbell, Manning, Robertson and Disalvo corroborated the above mentioned findings. Manning and his associates (1977) further explored the nature of articulatory acquisition and automatization of phonemes through a series of investigations. Children belonging to 1st to 4th grades having misarticulation of /sa/ or /ra/ phonemes served as subjects, masking noise ranged from 70 to 86 dB. It was either wide band noise or narrow band noise or competing speech. Auditory masking was administered to either right or left or both ears of subjects, who were classified as high acquisition group and low acquisition group. The findings of Manning *et al* (1977) are summarised below:

(i) Children who are in the process of acquiring the correct production of a misarticulated phoneme are also in the process of developing automatization of correct production. In other words, articulatory acquisition and automatization of correct articulation are related in a predictable manner.

(ii) The factors of sound pressure level, type of masking noise and subject grade are not critical to the success of overall procedure.

(iii) Phoneme /ra/ is less susceptible to disruption by masking noise than phoneme /sa/.

(iv) Auditory masking in right ear is more disruptive than that in the left ear.

These results prompted Manning *et al* (1977) to recommend a level of approximately 75 – 85 dB as ideal, if not essential and that it would be better to administer masking noise in either right or both ears of the subject. Since the type of masker (noise or speech) was found not to influence the results significantly, Manning *et al* felt that the choice may be determined according

to the availability of the particular type. The differential effects of masking on /sa/ and /ra/was thought to be due to differential therapy required for these two phonemes. Also, children with /ra/ misarticulation are enrolled in therapy for longer periods than those with /sa/ phoneme misarticulation. In any case, it would be interesting to see if the differential effects of masking exists for phonemes other than /ra/ and /sa/. Manning suggested a number of problem areas which await further research. For instance, mildly misarticulating children were thought to perform differently from severely misarticulating counterparts in a number of auditory/speech reception tasks. Studying the nature of phoneme acquisition versus phoneme automatization in children with phonetic misarticulations as against those having phonemic misarticulations is another area he suggested. Very young children with developmental misarticulations provide an interesting population for testing, contends Manning. Studies of this kind have a lot to contribute to our understanding of auditory feedback mechanisms in general and their development aspects in normal hearing children.

The present study, though limited in its scope (being a single case study) attempts to examine the effects of auditory masking on the articulation of velar plosives.

METHOD

Subjects: A single male child served as subject in this study. He was five years old at the time of registration. His hearing was found to be normal in a pure tone screening test on Arphi audiometer (DSO 1964). Case history revealed that his milestones were normal and that he did not have any significant medical history. He spoke Telangana dialect of Telugu. But his vocabulary consisted of several Urdu words. Nonverbal psychological tests revealed that he has average intelligence. He was in kindergarten in a normal school.

Procedure: Traditional method of articulation evaluation (position analysis) has been modified to include procedures of substitution analysis, assimilation analysis and context sensitive analysis, suggested by Lund and Duchman (1978). It was a "repeatafter me" test mainly. Occassionally pictures were used to elicit responses. The following misarticulations were noticed in the child's speech.

Substitution: /*ta*/for/*ka*/ in all positions of the word as in words like *kaaalu* 'leg', *aakulu* 'leaves' and *akka* 'sister'. He said *ta,luaaatulu* and *atta* respectively. He substituted both/ta/and .../ca/for /ga/; for instance the word *gaai* meaning cow in Urdu, was

uttered as *taay; poogulu* ' earsteads ' as *poodulu; eenugu,* ' elephant ' as *eenudu.* Phoneme /ra/ was substituted by /la/. Examples of his misoorticulation of /ra/ phoneme are; *laayi/raayi* 'stone'; *elupu/erupu* ' red ' and *tuula/kuura* ' curry '. He also substituted na/Na/ca/ and /sa/ for /Sa/. The words *Su* ' shoe ', *wiSamu* ' poison ', and *miSanu* ' machine ' were uttered as *cuus, wisamu* and *misanu.* The aspirated, /bha/ was unaspirated in words like *bhaaSa* ' language '. Phoneme /Na/ occured only in medial position of words in Telugu. It was replaced by /na/ in child's speech in words like *viiNa.*

Assimilations: Phoneme /ga/ got assimilated to nasal in medial position after a nasal as in words like *bongaram* ' top ' uttered as *bonnalam* /ka/in *okati* ' one woman ' became/ta/, resulting in *otati.* Similarly, for monkey he said *tooti/kooti ; bannar / bandar* ; and *tattela* for *kattera* ' scissors '. His speech sample was recorded using a tape recorder (Philips, N-2213). For evaluation of articulation in spontaneous/conversational speech, the child was asked to sing nursery rhymes. The misarticulations described so far were present in most clusters also. He exhibited syallable coalescence while uttering some of the clusters and some polysyllabic words. Specifically, he dropped the error phoneme altogether in utterances like *murgi* ' hen ', *cakram* ' wheel '. His responses were *muddi* and *cattam* respectively. Words like *maraNam* ' death ' were uttered as *mannam,* which appears to be a result of coalescence of phoneme /ra/ and assimillation of phoneme /Na/ into a nasal.

REASONS FOR CHOOSING /KA/ AND /GA/ AS TARGET PHONEMES

1. They are more visible than most other error phonemes in his speech and as such they are modifiable by phonetic placement method.

2. They seem to appear earlier than phonemes like /ta/,/la/ and /sa/ in the speech-language development of normal children.

3. More picturable words are available for depicting words belonging to these two phonemes than the other phonemes.

Training: The target phonemes were taught to the child using two methods mainly;

1. Phonetic placement method – using tongue depressor, mirror, diagrams and models illustrating the target as well as error phonemes.

2. Ear training–teaching him to discriminate error from the targets under amplification.

The experiment may be devided into three phases: In phase–1, child's articulation was assessed thoroughly and target phonemes were taught, one at a time using methods described above. Therapy was concluded when the child gave a criterion response of 90% or more correct in all the contexts. In phase–2 the newly acquired phoneme was stablized using auditory masking procedure. In phase–3, child's articulation was assessed once again in quiet and under auditory masking to evaluate the level of articulatory automatization.

In every session fifteen minutes were devoted for ear training for which the twenty seven channel selective auditory filter amplifier (SAFA) was used. This unit is a product of Institute of Experimental Phonetics and Speech Pathology, Belgrade, Yugoslavia. The filters are set in such a way that the input speech is amplified by 50 dB. Slightly more amplification was given in the frequency range 1000Hzs to 2500Hzs, the area in which the 2nd formant lies for the velar stop consonants of Telugu (Kostic, Mitter and Krishnamurti, 1977). Therapy began with two syllable words, three and four syllabile words were added later. Target phonemes were in word initial position first, word final later and word medial last. The therapist uttered a series of words, deliberately making the error phoneme to occur occassionally. The child was asked to tap the table every time he detects the error phoneme in therapist's speech. His non-verbal responses were noted at once on a recording sheet, designed for this purpose. Individual responses were totalled at the end of the session. The output of selective filter was fed to the child's ears through a pair of earphones.

The latter part of every therapy session was spent giving word drills. Articulatory contacts required for uttering voiceless and voiced velar stops were explained through diagrams, models and using tongue depressor. Training continued until the child gave 90% correct responses for target phonemes in all the contexts.

Correct responses were initially reinforced using tangible reinforcer on a continuous schedule. Later, coloured crayons and stickers were delivered on a fixed ration schedule of FR-9. A verbal punishment " wrong " and a mark " x " followed an incorrect response. After modelling the correct response, the child was made to practice repeating it in different positions of the words and in sentences.

The features voicing and aspiration were taught to the child using a set of vibrators (products of Institute of Experimental Phonetics and Speech Pathology, Belgrade, Yugoslavia) in the following manner: The therapist uttered the voiceless phoneme first, followed by its voiced counterpart in word context into a microphone in front of her. The microphone was connected to an amplifier and a low pass filter. The filter cuts off frequencies above 500 Hzs. The amplified filtered speech was then passed through a series of vibrating membranes fixed inside wooden boxes. The child placed his palms and fingers on two of these boxes while he watched the therapist utter the words. Soon, he could learn to differentiate and produce voiced and voiceless as well as aspirated and unaspirated phonemes. The vibratory cue appears to be magnitude of vibration.

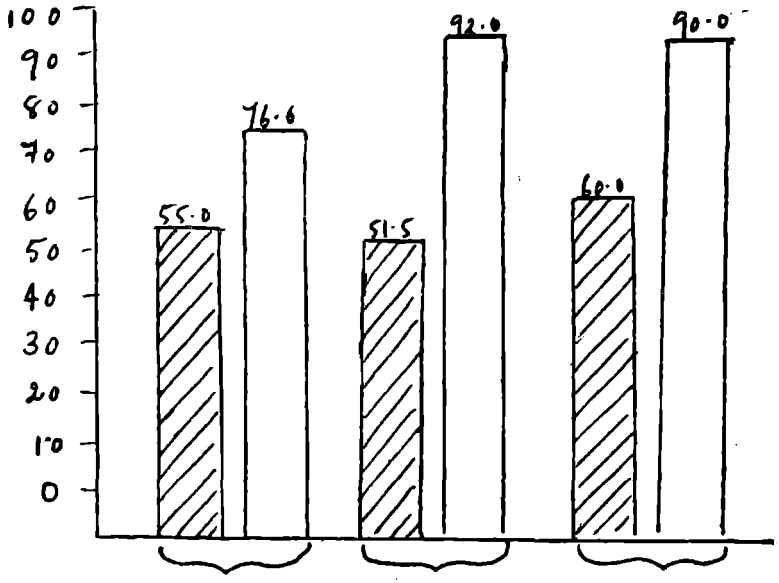
The procedure used in training the child to pronounce /ga/ were essentially the same as that for / ka/, described above. The child could generalise the trained responses to several untrained stimuli and could give criterion response of 90% or more correct within six sessions. Twelve sentences of 7 to 8 words in length, in which /ga/ occurred several times were prepared. The child was made to practise uttering these sentences.

Therapy was concluded at the end of 27 half an hour sessions. This marked the end of condition I.

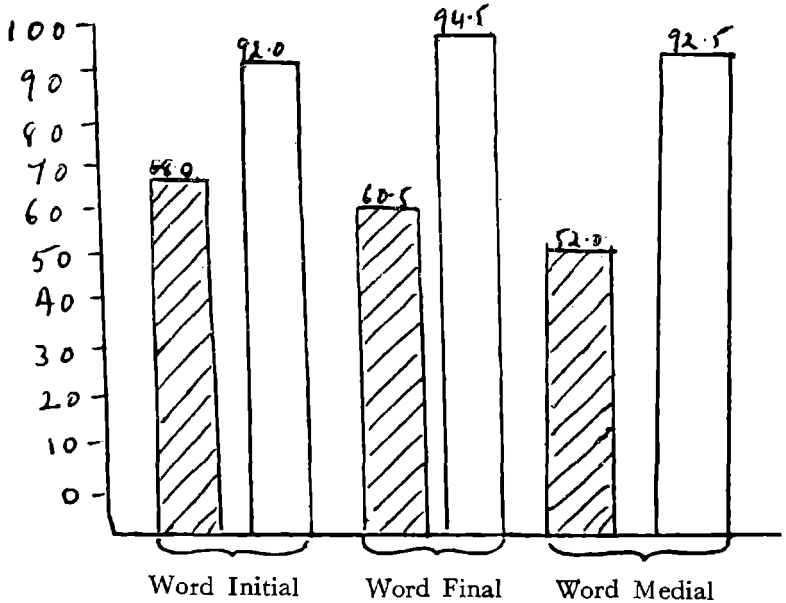
Results in condition I.

The individual scores were converted into percentages and mean was calculated for percentage scores across the 27 sessions. The bar diagram in Fig-1 displays the scores obtained by the subject during the training of phoneme /ka/ and that in Fig-2 displays scores on phoneme /ga/. The striped bar represents auditory discrimination task and the plain bar, the articulation task.

Fig-I and Fig-2 clearly show that the scores in auditory discrimination task are poorer than those in articulation task and that the over all performance in learning phoneme /ga/ was better than that for /ka/. The experimenter is tempted to interpret the former result to mean that the two tasks are not highly correllated and therefore, training in auditory discrimination of correct and error phonemes is not necessary in articulation therapy. The better scores for /ga/ might be due to mere learning and generalisation. After the subject exhibited criterion response in producing /ka/ and /ga/ phonemes in sentences and in spontaneons speech in 3 consecutive sessions, he was discharged from therapy. Parents were asked to bring the child back, for follow up after 5–6 months.



Fig–1 Mean Correct Scores – Phoneme / ka /.



Fig–2 Mean Correct Scores - Phoneme / ga /.

CONDITION II.

The follow up evaluation (repeat after me articulation test), six months after the first evaluation, revealed that the newly acquired /ka/ and /ga/ were not stabilized. The child could say these phonemes correctly in isolation, but not in some positions of words and in sentences. This time only substitutions were noticed. He substituted /ta/ for /ka/ and /da/ for /ga/ consistently. Frequency of syllable coalescence and assimilations was reduced, however.

A list of key words was prepared and word drill was given using phonetic placement method. Ear training was not used this time. Within a week, he started giving criterion response of 90% correct for both the phonemes in all the contexts. At this point, auditory masking (75 dB SPL of white noise) was given binaurally through the head phones of an auditometer (Arphi, MK-IV). He was made to practise uttering the target phonemes in words, and sentences and say nursery rhymes. Though there was a slight fall in performance initially, the child could learn to monitor his production under masking noise. His responses in articulation of target phonemes in various contexts and under masking noise condition were tape recorded using Philips cassette tape recorder (N-2213). After criterion response was reached, he was discharged for the second time.

CONDITION III.

The subject was called back after a period of eight months from the date of 2nd dismissal. His articulation of target phonemes in various contexts was evaluated using the same " repeat after me " articulation test in quiet as well as under 75 dB SPL white noise. 90-100% correct responses were obtained in both the conditions in the very first session. Target phoneme was produced correctly and consistently in sentences and in nursery rhymes. Parents of the subject also reported that he does not substitute /ta/ and /da/ for target phonemes any more. Words like *cakram* were uttered as *cakkam* and not as *cattam.* Syllable coalescence was not noticed as far as these two phonemes are concerned. There were no differential effects of masking on these two phonemes. Comparison of results across the three conditions revealed that the target phonemes appear to have got stabilized because of the use of auditory masking in condition II. The dismissal decision based on the auditory masking procedure was more reliable than that based on traditional procedure. This result is in agreement with the results of a series of experiments conducted by Manning and his associates, (1976), as reported earlier. There were no differential efforts of masking

on these two phonemes, may be because the therapeutic procedures used to train these phonemes were essentially same unlike in the case of /ra/ and /sa/ reported by Manning *et al* (1977).

Conclusion

Auditory masking appears to be useful in assessing articulatory automatization of phonemes. Since the procedure is simple and not very time-consuming, this study should be replicated using more number of subjects having different types of misarticulations, belonging to different age groups.

REFERENCES

Daniloff, R.G. 1973. Normal aspects of articulation process. In F.D. Minifie, T.J. Hixon and F. Williams (eds). *Normal aspects of speech and language.* New Jersey: Prentice Hall.

Kostic, D., A. Mitter and Bh. Krishnamurti. 1977. *A short outline of Telugu phonetics.* Calcutta: Indian Statistical Institute.

Lund, N.L., and J. R. Duchman. 1978. Phonological analysis, a multifaceted approach. *Brit. J. Dis. Commun.* 13 (2). 119–26.

Manning, W., N. Keappock, and S. Stick. 1976. The use of auditory masking to estimate automatization of correct articulatory production. *J. Speech. Hear. Dis.*, 41. 143–49.

Manning, W.H. 1977. Using auditory masking, to assist in making dismissal decisions in articulation therapy. *Nebraska Speech and Hearing Association. J.* 15(2). 3—6.

Manning, W.H., M.L. Wittstruck, R.R. Loyd, and T.F. Campbell. 1977. Automatization of correct production at two levels of articulatory acquisition. *J. Speech. Hear. Res.* 42 (3).

Mysak, E.D. 1976. *Pathologies of speech systems.* Baltimore: Williams and Wilkins.

Van Riper, C. 1978. *Speech correction: principles and methods.* (6th Ed,). New Jersey: Printice Hall.

Wright, V.,R. Shelton, and W. Arndt. 1969. A task for evaluation of articulation change; Imitative talk scores compared with scores from more spontaneous tasks. *J. Speech. Hear, Res.* 12. 875–84.

OPiL 7 & 8, 47–63 (1981-82)

A SURVEY OF TELUGU DIALECT VOCABULARY USED IN NATIVE OCCUPATIONS

BH. KRISHNAMURTI

1. INTRODUCTION

1.1. According to the 1971 Census, Telugu is spoken by 44.70 million people occupying the second place among the major Indian languages in terms of population.* Telugu is a member of the Dravidian family of languages. There are inscriptions in Telugu from the 6th century onwards and literature of a high order from the 11th century.

The Andhra Pradesh Sahitya Akademi (The State Academy of Letters) constituted in 1957– a year after the formation of the linguistic states in India — decided to bring out a series of dictionaries of vocabularies used in native occupations in Telugu with the following objectives and rationale :

(1) The known dictionaries of Telugu are based on published literature which are mainly translations of Sanskrit epics and puraaNas. These works contain a negligible component of the vast vocabulary used in native occupations like agriculture, weaving, sculpture, architecture and house building, fisheries and boat construction, carpentry, blacksmithy, goldsmithy, and a host of small arts and crafts like pottery, basket-making doll-making, banglemaking, etc. This is true of all other major Indian languages. With progressive industrialization, these occupations will gradually vansih and so would the enormous vocabulary associated with them. A systematic methodology should be evolved to collect and record such vocabulary with regional and social variation.

(2) Since most of the occupations are pursued by non-migrant sedantary populations, who are mostly illiterate, such vocabulary should reflect dialect boundaries which have developed over a long period of time. The regional dialects of Telugu

*Paper presented to the Working Group X at the 13th International Congress of Linguistics, Tokyo, Japan, August 29—September 4, 1982. Theme of the Working Group : Sociolinguistic Surveys in Asia.

can thus be discovered and correlated with the political and cultural history of those regions. Very little dialect work of this kind was carried out for Telugu, or for any other Indian language, for that matter. We could also expect how the speech of the illiterate masses differs from educated standard language speakers—at least in phonology and lexis.

(3) The data, besides being of interest to sociologists and anthropologists — will hold insighs into the mechanisms of how illiterate people invent terms for concepts, old as well as new. An understanding of these mechanisms will be of use to planners of language development — particularly those interested in coining terms for scientific and technical concepts.

1.2. I was invited to draw up a plan for the preparation of these dictionaries. The project was approved by the Executive Committee of the Academy — of which I was also a member. Work commenced in 1958, first on a dialect dictionary of the terms used in Agriculture. During the past twenty-five years, four volumes have come out : Vol. I Agriculture (Krishnamurti 1962, reprinted 1974), Vol. II Handloom (Krishnamurti 1971), Vol. IV House construction and Architecture (Radha krishna 1968), Vol. V Pottery (Reddy, G. N. 1976) ; Vol. III Fishing and Boat construction will be ready soon, and Vol. VI Carpentry is in press. The Akademi has undertaken five more volumes to be finished in the next ten years — which will then cover the vocabulary used in most of the native occupations. The purpose of this paper is to briefly describe the methodology adopted in the preparation of these volumes and to assess to what extent the original objectives have been accomplished by their preparation.

1.3. I could not find useful models for the preparation of dictionaries of occupational vocabularies. The survey of English dialects planned by Dieth and Orton as early as 1946 was based on a systematic questionnaire. Their first publication setting out the details of their methodology came out in 1962, the year in which our first volume was published. The " ultimate aim of the Dialect Survey .. is the compilation of a linguistic atlas of England " (Orton 1962 : 14), based on genuine vernacular of the farming class. The 1322 " virtual questions " in the questionnaire cover only a few apsects of the farm and the farming, selected in terms of their utility for a linguistic study (p. 15). Thus the objective and the scope of the Survey of English Dialects differ from our series which has greater emphasis on collection of words of native occupations with the

'dialectal' aspect less systematically focussed. Kurath's dialectological work in the United States was undertaken by trained phoneticians with focus on phonic variation (Kurath and McDavid, Jr. 1961).

By the same token, our project also differs from the methodology adopted in the collection of Scottish Dialects (McIntosh 1961). Many occupational words are found in several of the volumes of the *Transactions of the Yorkshire Dialect Society*, founded in 1897 (see particularly Vol. XI 1964 : 27-32 on fishing vocabulary), but they are collected from a few isolated villages. In the lexicographic work undertaken by us, criteria had to be evolved to select some variants against others from the standpoint of lexicography.

I saw Sir George A. Grierson's *Bihar Peasant Life* (2nd edn. 1926) after the publication of the first volume. Grierson calls his work 'a catalogue of the names used by the Bihar peasant for the things surrounding him in his daily life, — yet, in order to relieve the dryness which such a mere list would possess, the writer has attempted to give a description, more or less complete, of that life and of its character and incidents.' Grierson says that in "its general system and arrangement", it "is closely modelled on Mr. Crooke's *Materials for a Rural and Agricultural Glossary of the North-Western Provinces and Oudh* (Allahabad 1879)". Grierson's book is based on actual field-work by district officials whereas Crooke's was "to some extent a compilation from existing dictionaries". Grierson used translations of Crooke's entries to supplement his own collection. Grierson's book has 14 thematic Divisions — each with (Introd. pp. 1, 2) several subdivisions ; each subdivision has 2 to 33 chapters. For instance, Subdivision VI : "Appliances used in the conveyance of goods or passengers" has seven chapters as follows : Chap. 1. the country cart ; 2. the large complete country cart ; 3. the light country cart ; 4. the bullock carriage; 5. the peny carriage ; 6. the country boat ; and 7. the litter" (pp. 27-46). It is part of Division I Implements and Appliances used in agriculture and rural manufacture.

Words are cited both in Devanagari script and in Roman in a narrative style. There are 1500 numbered sections in the whole book, a number of line-drawings, and an alphabetical index at the end. Most divisions deal with agriculture but the other occupations are covered in Subdivision 9 (of Div. I) : Tools and appliances used by country artisans.

Variant forms are given with dialect labels like :

"9. The sole in which the share is fixed—

In west Bihar, it is **Tor** टोर or **Tora** टोरा
In East Bihar, it is **naas** नास or **naasaa** नासा".
(p. 2 of text)

Following the model of Grierson's work, Dr. Ambaprasad Suman (1961) published a narrative collection of agricultural terms called *krSak-jiivan sambandhii— brajbhaaSaa s'abdaavalii* in 1961 which was published by the Allahabad Hindustani Akademi in two big volumes. It has 15 *prakaraNs.*

The Telugu Dialect Dictionaries were not influenced by either one of these since the former was not known to me and the latter was not published when work on the project started in 1958. Similar attempts have been reported on Bengali earlier— these came to our notice recently. In any case there has not been available a work of lexicographic type to set a model for the series undertaken by us. Consequently, a methodology had to be evolved originally keeping the broad objectives of the project in view.

2. Methodology

2.1. The first volume was on the terms used in Agriculture. A prequestionnaire was prepared based on a survey of ten or fifteen villages near Visakhapatnam, the headquarters of the project. This consists of broad themes and items which carry names ; e.g. Soils (a) different types depending on physical properties like colour, ingradients, degree of fertility — black, red, clayey, saline, etc. (b) names given after the type of cultivation : dry, wet, garden-type, terrace, etc. (c) names given after proprietory or Revenue classification — self - owned, tenancy, etc. (Krishnamurti 1962 : 100). A total of 121 villages — nearly 30 to 40 miles apart were selected ; fieldworkers, mostly postgraduate students studying Telugu language and literature, were trained in clementary phonetics, and sent to collect words. The general instructions given to them include the following : (1) Only one or two informants in the age group of 50—70 should be selected with good memory and enunciation. They should have been resident in the village for at least two or three generations and should not have had formal education ; (2) Recording should be made in traditional Telugu orthography with additional symbols added for new phonemes like / æ / and / f/ ; (3) A brief biodata of the speakers (informants)

should be attached to the report ; (4) The word to be elicited should not be suggested to the informants ; (5) Meanings should be written in a descriptive way accompanied by suggestive line drawings where necessary.

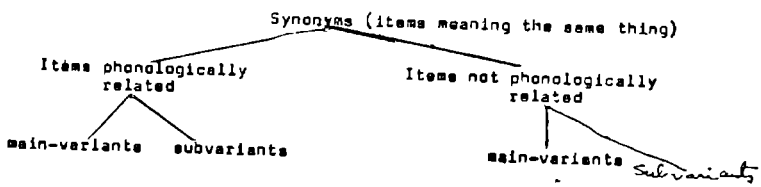
The itinerary of the fieldworkers was decided in advance and the faircopied field reports had to be mailed to the headquarters before leaving each centre.

The survey was interrupted after covering one-fourth of the total number of the centres and the questionnaires were elaborated on the basis of the collected vocabulary which was indexed by the fieldworkers at the headquarters. The remaining survey yielded richer vocabulary based on an expended topical analysis running into twenty sections as follows : (1) Soils ; (2) Types of land tenure and participants in agriculture; (3) Preparing field for cultivation; (4) Irrigation sources ; (5) Water-lifting instruments ; (6) Weather, seasons and times ; (7) Implements for ploughing; (8) Ploughing ; (9) Levelling the field and irrigation ; (10) Seeds, broadcasting, and transplantation ; (11) Growth of crop ; (12) Weeding ; (13) Harvesting ; (14) Means of transportation and conveyance ; (15) Manure and implements used in manuring ; (16) Plant diseases ; (17) Crops ; (18) Cattle and cattle diseases ; (19) Ceremonies, festivals and beliefs ; and (20) Miscellaneous items.

2.2. Fieldwork was completed in a year and indexing took another year. Two indexes were prepared : (1) a gloss-based index in which, forms having the same meaning from different centres were brought together in the order — form, place (in terms of assigned numbers), and meaning, For instance, the different forms used for the plough from all the 121 Centres were listed with place numbers arranged serially followed by their meaning, as recorded in the field. A second index was prepared out of this in which each different form was listed on a separate slip, followed by the centre – numbers and meanings " In other words a form – based index was prepared out of the original meaning – based index " (Krishnamurti 1962: 105). The second index, for instance, has the following variants for the ' plough ' *naagali, naagela, naageeli, naageelu, naangali, maDaka* — written on six slips, each carrying the place numbers and, of course, the meaning " a wooden instrument used for ploughing ".

The Andhra Pradesh is traditionally divided into three zones which had different socio-political history, viz. The coastal districts (called *koostaa* in Telugu), *telangaaNaa* (part of the erstwhile Nizam's Dominions), and *Raayulasiima.* (The first and the last were part of the Old Madras Presidency before the formation of the linguistic states in 1956. In assigning numbers, we decided to use prefixes like Te(langaana) 1-42; Koo (staa) 1-51 ; Raa(yalasiima) 1-28 to give a broad indication of the areas where a given entry occurs to a general reader, instead of giving numbers 1-121 for the entire state. It was later discovered that *Raa.* and *Te.* did constitute different regional dialects supported by political and cultural history.

2.3. The entries so collected had to be organized in such a way that their inter-relations are established. Criteria for choosing the master entry and a procedure for cross-referencing had to be stated. The meanings had to be formulated descriptively supported by drawings where necessary. The following general principles were adopted. All those that refer to the same thing are treated as synonyms which are classified as follows :



All items which are phonologically related have slight phonetic differences and are, by definition, derivable historically from a single protoform ; e.g. *naagali, naageeli, naageelu, naangali* 'plough' ; the item not phonologically related to this set is *maDaka* which carries the same meaning. All phonologically related items were not given the same status. They are divided into 'marked variants' that are given as entries and the 'unmarked variants' are noted as deviant articulations (*uccaaraNa bheeda*) of respective marked variants (*ruupaantara*). Criteria for this dichotomy are set up as follows :

(1) **Standard vs. non-standard.**

Variants which carry phonological features of the standard variety are given as 'entries' and non-standard forms are given as 'deviant' ones (called *uccaaraNa bheeda* 'phonetic variants') (see 3.3).

(2) **Common vs. restricted.**

A variant recorded in one or two centres as opposed to another, recorded uniformly in a much larger number of places — is given as 'a restricted' variant of the latter ; e.g. *isaka* 'sand' (common variant), *iska* 'id.' (restricted variant). It is possible that the restricted one could sometimes be due to an error in recording also.

(3) **Regionally marked vs. regionally unmarked.**

A variant which provides an isogloss is treated as an entry as opposed to a few unpatterned ones which could be idiosyncratic variants of the above. The latter are given as 'deviant phonetic realizations'.

(4) **Variation in root syllable vs. non-root syllable.**

Variations affecting the segments in the root syllable (C)VC) tend to be historically older than variations affecting those in non-root syllables. The root syllable always happens to be the first syllable of a word in the Dravidian languages. By applying this criterion the variants meaning 'sand' can be set up as follows :

i : *isaka*, isike, iseka, iska

u : *usike*, useka, uske

Here i/u alternate in the first syllable ; a/i/e/θ in the second syllable ; a/e in the third. The forms are divided into two sets on the basis of the alternation in the first syllable. This is also reflected in their regional distribution. The italicised item is taken as the entry for each set on the basis of principle (2) above and the rest are listed as 'deviant pronunciations' and were listed after the respective entries but not cited as separate entries.

(5) **Historically significant.**

Even lone items, if they are found to be archaic or otherwise historically significant, they are given as entries. This principle

supercedes all others. Thus, *neeru* 'a tender plant for transplantation' occuring in Te. 22 is a lone form whereas *naaru* is the more widely distributed variant. Historically they are both traceable to *ñaaRu (*DED* 2380). The *aa/ee* alternation is due to their being a *ñ preceding them which merged with the reflexes of **n* later ; similarly, only two places (*Koo.* 50, 51) attest *naangali* 'plough' whereas all other variants have lost the nasal in *ng*. The reconstructed form **naankeel* has a nasal (see *DED* 2365).

2.4 Arrangement and cross referencing. After editing, 13 major divisions were set up on the basis of content by redistributing the twenty sections of the 'elicitation scheme'. Some divisions have subdivisions as in Grierson. Within each division / subdivision, entries are alphabetized and presented in a dictionary form ; serially numbered drawings are printed at the end of each division with parts of implements, etc. indicated by numbers keyed to the figure number.

An alphabetical index of all entries and subentries occurs at the end of the volume with page references. From Volume II onwards, we decided to have all entries alphabetized in the main body of the dictionary but to give a topically arranged word-index at the end. All drawings occur at the end of the volume from Volume II onwards.

Once the group of 'synonyms' are separated into three sets as stated in 2.3 above, a master entry was determined on the basis of its widest occurrence or its use in the standard variety also. This entry is followed by a list of its 'restricted variants' (*uccaaraNabheedas*), if any ; following these are the complete list of main variants (*ruupaantaras*) ; the phonologically unrelated synonyms (*paryaayapadas*) follow—all in an alphabetical order. All this information is part of the 'lemma'. A descriptive definition of the word follows in modern Telugu ; where necessary, a reference to a numbered drawing is made. The last part of the entry is the listing of the place-numbers where the word was recorded, given in parentheses.

For each set of 'main phonological variants', the widely used one is chosen as the major entry and the other variants are given here, followed by meaning, reference to drawing, and area, as in the master entry. Following the entry of each of the other main variants, only a reference to the major variant is made, followed by a reference to area of use. The reader is asked to refer to the major phonological variant for other information.

For instance, the group of words meaning ' a pulley of an irrigation well over which a skin bucket is drawn by bullocks by means of a heavy rope ' (Fig. 2 **ka** to **ta**, pp. 46-8). Entries are found in the dictionary as follows (alphabetized) : u. =subvariant; ruu. = main variant ; paryaa. = synonym not phonologically related ; cuu. = see.

(1) *kappi* ruu. *kappisii ;* paryaa. cuu. *biLLa.* Meaning, ref. to drawing (area).

(2) *kappisii* u. *kapsii ;* cuu. *kappi* (area).

(3) *gaare* paryaa. cuu. *biLLa.* Meaning, ref. to drawing, (area).

(4) *giraka* u. *girka, girke* ; cuu. *gilaka* (area).

(5) *gilaka* ruu. *giraka, giire* ; paryaa. cuu. *biLLa.* Meaning, ref. to drawing (area).

(6) *giire* cuu. *gilaka* (area).

(7) *cakram* paryaa. cuu. *biLLa.* Meaning, ref. to drawing (area).

(8) *baNDi* paryaa. cuu. *biLLa.* Meaning, ref. to drawing (area).

(9) *biLLa* u. *billa ;* paryaa. *kappi, kappisii gaare, giraka, gilaka, giire, cakram, baNDi.* Meaning, ref. to drawing (area).

Item (9) is the ' master entry ' where all synonyms are listed (except subvariants), and full information on meaning, reference to drawing and area of use of this entry occur. Of the remaining, there are two phonologically related sets, viz. (1, 2) and (4, 5, 6) ; of the set (1, 2), (1) is given as the 'major entry ' in which the form of (2) is cited, and the reader is asked to refer to (9) for other synonyms. Major entries carry the rest of the information as found under the master entry. For the set (4, 5, 6), (5) is given as the major entry as is the case with (1). Under (2) only a cross-reference to (1) is made, and under (4) and (6), a cross-reference to (5) is made, of course, followed by information on the areas where they are used. The remaining, viz. (3), (7) and (8) have no phonologically related forms. Under their entries, the reader is asked to refer to the master-entry (9) for a list of other synonyms ; meaning, reference to drawing, and area follow.

The rationale for evolving this procedure is given by the editor of Vol. I as follows (Krishnamurti 1962 : 104–5) : "(1) On the basis of popularity of usage and widest geographical spread, one entry is to be selected from each group of synonyms as the 'master entry' under which a complete list of the other regional forms is given in the alphabetical order. In the above group, *biLLa* is picked up as the master entry by virtue of its widest spread and popularity in the whole group. Only a cross-reference to this is given under items 1, 3, 5, 7 and 8, without having to repeat the complete list of synonyms. (2) Again, from each set of phonologically related variants (1-2, 4-5-6), that form which appears less localised in usage is chosen as the leading variant under which the remaining variants are listed followed by a cross-reference to the master entry. Under each of the localised variants only a cross-reference to the leading variant is given, see 2, 4, 6. (3) Each entry printed in block letters in the dictionary is immediately followed by *u.* subvariant(s), if any ; following this comes one of the abbreviations *cuu.*, *ruu.*, *paryaa.*, or *paryaa. cuu.* according as the entry in question is a localised variant, a leading variant, a master entry or an isolated (not phonologically related) synonym of the master entry, respectively.

The advantages of this system are obvious, viz. economising space, indicating the most popular word in a group of synonyms for use in standard writings, and a simplified procedure of showing cross-reference among items all of which are related in meaning and some of which are also related in form."

The principles followed in giving grammatical information and definitions to words are discussed in Introduction to Volume I. For plants, botanical names of Latin origin have been given.

2.5. The above methodology was generally followed with slight modification in Vols. II, IV and V also.

3. Results

3. 1. It is necessary to evaluate to what extent the original objectives (see 1. 1) of the survey have been fulfilled. The four volumes which have been published contain nearly 30,000 entries most of which are not found in any other published dictionaries (Radhakrishna 1981: 7). The contribution of these volumes to Telugu lexicography is undeniably recognized. A number of words used in classical texts have now clear definitions along with their area of usage. Thus the first objective of this project is remarkably fulfilled.

3. 2. On the basis of the vocabulary collected, it has become possible to set up phonological and lexical isoglosses of items used throughout the state and it was discovered that there are four clearly marked regional dialects in Telugu : (1) North (the nine districts of TelangaaNaa), (2) South (the four districts of Raayalasiima plus Nellore and Prakasam districts), (3) East (three districts — Sriikakulam, Vijayanagaram, and Visakhapatnam), (4) Central (four districts — East and West Godavari, Krishna and Guntur). Word-atlases attached to the introductory parts of Vols. I, II and IV support the above conclusion. These dialects have been correlated with the political and cultural history of the four areas (see Krishnamurti 1962 : Intro. 115-20).

It is interesting to note that the Central area is the least 'marked' of the four regional dialects. Isoglosses binding the other three regions overlap into this area, but there are no lexical and / or phonological items exlusively confined to this area. Modern standard Telugu is based on the educated speech of this area. Both in terms of fertility of land, education, and economic viability, the Central area is more advanced than the others.

3. 3. Although the survey was not originally meant to be sociolinguistic, the material reflects how the speech of farmers and artisans characteristically differs from cultivated standard language of educated classes. The following observations have been made.

(1) Since the informants are drawn from various castes—both touchable and untouchable—it was noticed that language variation is not caste - based as is popularly proposed in works on Indian languages by foreign scholars (Krishnamurti 1979 : 684-5). Educational level and contact with urban population, exposure to the language of mass media is more crucial in the formation of standard speech habits than caste.

(2) The speech of uneducated carries certain phonological features which contrast with those of educated speakers. These are found to be common throughout the State. A few are cited below (also see Krishnamurti 1978: 40-43) :

	Educated		**Uneducated**
(1)	Unaspirated-aspirated stops contrast		Only unaspirated stops occur
	C : C*h*	—→	C

(2) *h* is retained —→ *h* is lost

-h- —→ ϕ

V*h*V —→ $V \left\{ \begin{matrix} y \\ w \end{matrix} \right\} V$

(3) Alveolar and retroflex laterals and nasals contrast —→ Alveolars and retroflexes are replaced by

n : *N*, *l* : *L* —→ *n*, *i*

(4) Three sibilants contrast —→ Only the alveolar sibilant occurs

s : *s'* : *S* —→ *s*

(5) Initial *w* occurs before unrounded vowels (In Telugu *w* is not phonemic before rounded vowels) —→ *w* is lost before unrounded vowels

w [*i*, *e*, *EE* —→ ϕ [*i*, *e*, *EE*

(6) Affricate *c*, č (allophones) contrast with *s*, *s* —→ Affricates become sibiliants when single

c, č —→ *s*

Besides these, there are regional variations between educated and uneducated speech, e.g. In the Eastern dialect, word-initial l- of educated speech is generally replaced by *n-* in uneducated speech, e.g. (educ.) *leedu* ' it is not ' (uned.) *needu* ' id.'.

Educated and semi-educated farmers acquire the phonemic contrasts characteristic of educated speakers. Therefore, in deciding the form of the entries in the dictionary, this criterion has been adopted (see 2. 3). If, at a future date, most farmers get some education, the present phonological differences tend to get levelled in the direction of educated speech. The lexical material collected for the dictionary has provided enough raw material to inspire further research in sociolinguistics. The relationship between different spoken and written varieties of Telugu has been diagrammatically shown in Krishnamurti 1978 : 41. The diagram generally reflects the dialect profile of major Indian languages (see Fig. 1).

Since the fieldworkers were not trained phoneticians, differences in sounds in recorded field notes would be significant only to the extent that they are contrastive and are clearly perceived by native speakers of Telugu. The Telugu orthography used by the fieldworkers is adequate in this respect. Diacritics for / *EE* / and / f / are used by fieldworkers since symbols for these are not available in Telugu orthography.

In the lengthy introductions contributed by the editors to each of the volumes, there is a listing of the pattern of phonemic alternations observed dialectally in the data with examples. High frequency alternations include d/j, D/d, k/g, D/N/n, r/l, g/w, w/m, c/t, *EE* / aa, i/e, u/o, etc. Many examples illustrate general phonological processes like assimilation, anaptyxis, metathesis, syllable contraction, loss of unaccented vowels, hyperstandardization, folk etymology and so forth (krishnamurti 1962 : 107-112).

3. 4. A study of the vocabulary collected and published will enable us to make the following observations on mechanisms of naming, pattern of borrowing, rules of compound formation adopted by non-literate masses.

Vol. I Agriculture (Krishnamurti 1962) :

(1) Most words are native ; borrowed items from Sanskrit or Prakrit are minimal, as compared to standard language in which there is a high percentage of borrowed unassimilated loanwords (*tatsamas*) from Sanskrit. There are loanwords in border areas from the major neighbouring language, viz. Kannada, Marathi, Tamil, and Oriya. Certain revenue administrative terms come from Hindustani as also names of some recently introduced vegetables like *goobi* ' cabbage ' (< H. *goobhii*). Loanwords from English like *TomaaToo* are extremely few (see Krishnamurti 1962: 112-16).

(2) A large number of expressions are nominal compounds formed with native components. At the time of the fieldwork 25 years ago, tractors were hardly used. The terms for tools, processes, and names of crops have developed within the indigenous culture. ' Pickaxe ' was a new item which was nativized as *pikaasi, pikaasipaara, pikkaasi ;* an alternate form with native components was innovated in some areas as *irudalaguddali* ' two-headed *guddali*' ; *guddali* is a native tool for digging with a one-sided broad blade. Plant diseases are

named after the physical properties of the disease, the names of disease causing insects, or the visible effects that a disease has on the plant, or the part of the plant damaged by the insect, etc. Some examples :

aggi (*tegulu*) 'lit. fire disease'. The plant dries up totally. This refers to a class of plant diseases.

aakumuData 'lit. leaf shrinkage'. A disease caused by Aphis.

iTike tegulu 'lit. brick disease'. Affects rice, chillies ; the stem and leaves become reddish like brick.

kaNupu tegulu 'lit. node disease'. A disease that effects the nodes of sugarcane, etc.

calla tegulu 'lit. buttermilk disease'. The leaves get white spots due to mildew.

gongaLi purugu 'lit. rug insect'. Hairy caterpillar.

Many names have as their first constituent a colour term. Almost every plant disease has a distinct name. Similarly there are several hundreds of names for crops — different kinds of paddy, millets, cereals, and for cattle diseases. For instance, *ucca kallu* 'lit. urine stone' for 'kidney stone' in cattle.

(3) When compared to the other occupations, agriculture is the most conservative and pre-industrial and this is reflected in the vocabulary which hardly has any borrowings from English.

Vol. II Handloom (Krishnamurti 1971) :

(4) There are nearly two hundred borrowed words mostly in colour terms, cotton carding, names of designs, embroidery work, dyeing, etc. Since cotton carding is done by muslims, the 'carding instrument' is called *kamaanu* derived from Urdu ; a native Telugu name is innovated as *duud(i)eekupalaka* 'lit. cotton-carding plank'.

There are several major caste-communities engaged in weaving — Padmasaali, Devaangu, Togata, Kurama, Muslims, and Harijans. The use of certain terms run along caste-community lines, e.g. *sareddu*

'an x shaped wooden stand to which the warp is fastened' (Harijans), *saraaTa, sariTeddu* (Togata), *uuDte* (others) (Krishnamurti 1971: 30-1).

(5) A linguistic analysis of nominal compounds formed with native words is given in Volume II (Krishnamurti 1971: 28-9). For instance, if the constituents of a two-word compound (XY) are designated as X and Y the following relationships occur : (1) X = directional term ; Y = Part of tool, *aDugupaTTe* 'bottom piece of wood', *aDDakaTTe* 'cross-piece', etc. (2) X is contained in Y (a container), e.g. *kaaramtoTTi* 'a caustic soda-tub', *unnigampa* 'wool basket' ; (3) Y made of X, e.g. *inapagoTTam* 'iron tube' ; (4) Y marked with X, *hamsa*[1] *peeTu*[2] 'border[2] marked with the print of swans[1]' ; (5) Y, the colour of X, e.g. *cilakapacca* 'parrot green', *wanga*[1] *panDu*[2] *rangu*[3] 'colour[3] of egg plant[1] fruit[2]' ; (6) Y (object) from X (place name), e.g. *gadwaala ciire* 'a saree from Gadwal', and so forth. Some sixteen such relations have been identified and illustrated.

Vol. IV House-building (B. Radhakrishna 1969) :

(6) This volume has more innovations and borrowings from other languages particularly from English reflecting the process of modernization in design, materials, and building techniques. " ... in this profession communication flows in both directions — high to low and low to high (engineers, supervisors, maistris, labour, and vice versa) along the social scale." This is reflected in the vocabulary also. A total 126 centres were covered by the survey. A number of English loanwords have been assimilated to the native phonological structure of Telugu ; e.g. hook > *ukku*, arch *aarci* > *ganeeTu*, basement > *beesumaTTam*, brush > *burusu*, mosaic > *mujaaki*, etc. (Radhakrishna 1968 : 13).

Vol. V Pottery (G. N. Reddy 1976) :

(7) In addition to native compounds, there is a large class of mixed compounds with English or Urdu constituents, e.g. *pampu kuujaa* (< E. pump + Urdu *kuuzaa*), *keTli kuujaa* (< E. kettle + *kuujaa*), *baayilar poyyi* (< E. boiler + Te. *poyyi* 'furnace'), etc.

(8) " Potmaking is basic to Dravidian and Telugu culture. This is reflected in the existence of at least fifty basic words for different kinds of containers made of earth.

> These names reflect a taxonomy based on form and function of the containers. These distinctions of form, such as big / small, deep / shallow, tall / short, wide/ narrow (of mouth, body and base), combined with functional distinctions, such as cooking, serving, storing, and conveying — define the wide variety of expressions, which have developed as names of containersused in the day-to-day life of the common man. Most of the basic words have cognates in the other Dravidian languages indicating that the names of the objects go back to Proto-Dravidian language and culture. With the Progressive replacement of earthen utensils by their metal counterparts, most of the words for earthenware have gone out of use particularly in the middle and upper class speech. ...The poor people still use earthenware extensively, but it is only a matter of time before most of the words used in this craft become obsolete with culture change" (Krishnamurti in his foreword to this Volume, p. iii).

4. Conclusion

4. 1. Though not intended to be primarily a sociolinguistic survey, the project of preparing dialect dictionaries of words used in native occupations has brought out a large body of material to plan a finer-grained sociolinguistic work in Telugu. Anthropologists and social historians can utilize the material for reconstructing, in a more systematic way, the pre-industrial culture patterns and culture areas of the Telugu speakers and trace the degrees of social and cultural change as reflected in the expressions used by common people.

4. 2. The methodology adopted in the preparation of these volumes combine a dialect approach with lexicography, with emphasis on recording words and their region of usage before they become extinct with progressive mechanization and industrialization of the country.

This methodology is now being employed to prepare similar works for the other major Indian languages.

REFERENCES

Chambers, J.K. and Peter Trudgill. 1980. *Dialectology.* Cambridge: Cambridge University Press.

Grierson, Sir George A. 1926 (2nd edn.). *Bihar Peasant Life* (being a discursive catalogue of the surroundings of the people of that province.). Patna: Superintendent, Government Printing, Bihar and Orissa.

KIRSHNAMURTI, BH. (ed.). 1962. *maaNDalika vrittipadakoos'am-I-* (*A Telugu dialect Dictionary of Occupational Vocabularies*, Vol. I: Agriculture). Hyderabad: A.P. Sahitya Akademi (2nd edn. 1974).

————. (ed.). 1971. *maaNDalika vrittipadakoosam-II* (*A Telugu dialect Dictionary of Occupational Vocabularies, Vol. II:* Handloom). Hyderabad: A.P. Sahitya Akademi.

. 1978. Language planning and development: the case of Telugu. In *Contributions to Asian Studies* (ed. by Clarence Maloney), 11.37-56. Leiden: E. J. Brill.

————. 1979. Problems of language standardization in India. In *Language and Society* (ed. by William Mc Cormack and Stephen A. Wurm), 673-92. The Hague: Mouton.

KURATH, HANS and RAVEN I. MCDAVID, JR. 1961. *The Pronunciation of English in the Atlantic States.* Ann Arbor: The University of Michigan Press.

MCINTOSH, ANGUS. 1961. *An Introduction to a Survey of Scottish Dialects.* Edinburgh: University of Edinburgh.

ORTON, HAROLD. 1962. *Survey of English Dialects: Introduction.* Leeds: Univ. of Leeds (J. J. Arnold).

RADHAKRISHNA, B. (ed.). 1968. *maaNDalika vrittipadakoos'am-IV* (*A Telugu Dictionary of Occupational Vocabularies*, Vol. IV: House construction and Architecture). Hyderabad: A.P. Sahitya Akadmi.

————. 1981. 'Methodological contributions of Telugu dialect dictionaries'. Mss. pp. 20 (Special paper presented at the XI All India Conference of Dravidian Linguists. Hyderabad: Osmania University).

REDDY, G.N. (ed.). 1976. *maaNDalika vrittipadakoos'am-V* (*A Telugu Dialect Dictionary of Occupational Vocabularies*, Vol. V: Pottery). Hyderabad: A.P. Sahitya Akademi.

SUMAN, AMBAPRASAD. 1961. *krSak-jiivan sambandhii - brajbhaa-Saas'abdaavalii.* Parts I & II. Allahabad: Hindustani Akademi.

Transactions of the Yorkshire Dialect Society, part LXIV, volume XI. 1964.

OPiL 7 & 8, 65–90 (1981–82)

TELUGU PERSONAL REFERENCE: A SOCIO-LINGUISTIC STUDY

P.C. NARASIMHAREDDI

Sri Venkateswara University

[A micro-level study of personal reference in a Telugu village shows a three tier system of (a) kinship terms (b) pronouns and pronominal suffixes and (c) personal names. Both kinship and pronominal forms help maintain elaborate system of bio-social differentiation. Prevalance of Muslim personal names among lower caste Hindus indicates co-existence of different cultures at the rural level. Extensive use of nicknames among the lower strata points to their inferior social status in village life.]

The present paper deals with personal reference in rural Telugu speech. This is a micro-level study of the sociolinguistic data collected in a trilingual village called Penchukalapadu in Gadwal Taluk of Mahabubnagar District, situated at Andhra-Karnataka border in Andhra Pradesh.

1.0 The population of the village is heterogeneous in its caste composition and comprises of twenty endogamous castes which can be arranged into the following cluster-groups in terms of their religious faith, mutual functional pollution, prohibition or association in sharing food and drink, and participation in marriage and other ceremonies:

Group A: 1. jangam 2. balija—gaanDla 3. aTukari

Group B: 1. baapana (brahmin), 2. kamsaali—vaDla 3. neese

Group C: 1. kaapu (reDDi)

Group D: 1. turuka (muslim)

Group E: 1. kuruva—telugu—musTi 2. kummari—vaDDe

3. booya (including dommari) 4. caakali—mangali.

Group F: 1. maala 2. maadiga

Group A belongs to the Saiva sect of Hindu religion whereas Groups B and C belong to the Vaishnava sect. Group D is Islamic in faith. Male personal names of these cluster groups indicate their exclusive religious affiliations. Groups E and F (except a subcaste of *maala* called *daasari* which is Vaishnavite) are pantheistic. A few castes are attached to the traditional division of labour such as *caakali* (washerman), *kaapu* (cultivator), *kummari* (potter), *kuruva* (shepherd), *mangali* (barber), *maadiga* (cobbler), *neese* (weaver), *telugu* (fisherman/fruit or flower seller), *vaDDe* (mason), and *vaDla*-(carpenter/blacksmith).

1.1. The bulk of the population (80.5%) belongs to Telugu speaking castes (*gaanDla* in Group A, *kamsaali* and *vaDla* in Group B and cluster groups of C, E and F). *jangam, balija* and *aTukari* of Group A, and *baapana* and *neese* of Group B belong to Kannada speaking castes, which together form 11% of the total population. The lone Urdu speaking group of *turukas* form a solid number of 8.5%.

1.2. Caste hierarchy among the population can be noticed in the naming pattern by the presence or absence of status or caste markers, personal name suffixes, nick names, and referential suffixes indicating sex.

1.3. *aTukaris* and *maadigas* worship Goddesses like *cauDamma* and *karremma* respectively and name their children after the deities. Lower castes worship *cauDamma* along with *gookaramayya* (a tomb (Muslim) erected in memory of the person-designate), and name their children, both male and female, after these deities. Lower castes also adopt muslim names. A lone Christian name is found in *maadigas* of Group F. However, the adoption of Muslim or Christian names has not led to any change in their religious affiliation.

1.4. Certain specialized terms of livelihood falling into the general area of trade and habitual activity of a family or caste group assume the role of identifying reference like specific family or caste names. These are placed before the personal names in reference such as *angaTi* (retail shop), *gaajula* (bangles), *aakula, tamala paakula* (betel leaves), *istaraakula* (leaf-platter), *kallu* (toddy), *ulligaDDala* or *ulli* (onions), *girni* (flour-mill), *jangiTi* (community cattle grazing), *vaakiTi* (door decoration), *mooTa* (leather bucket to draw water from a well to irrigate land), and *bangaaru* (gold) etc.

1.5. Designation referring to the present or past official status or profession of a person acts as a form of identifying reference like *sarpanc* (president of the village council), *paTwaari* (village accountant), *paTeel* (village head, Munsiff), *talaari* (village attendant), *Tappaa* (postal), *hakim* (native doctor), *nambar* (member of village council) and *mulla* (slaughterman), etc.

1.6. *kaapus* and *baapanas* have the privilege of annexing *reDDi* and *rao* respectively as their personal name suffixes, which denote their caste identity. This privilege is not accorded to any other caste in the village except the Muslim religious group which has special forms of its own like *saab* or *ali* (male), *bii* or *beegam* (female).

1.7. Only *aTukari*, *balija*, *booya* and *maadiga* castes display family names–*inTi peeru* lit. 'house-name', denoting common descent. The term used to denote common descent of nuclear families identified by their *inTi peeru* 'family name' or clan (*gootram*) is *saTTam*.

aTukari: bangaaru, boDugu, cintimi, eeNe, gumma, gunDimi, katti, konDimi, and poseeTi.

balija: aakula, angaTi, and gaajula.

booya: doDla, guvvala, jangiTi, jollu, koorla, meekala, pullaari, rolli, uDumula, and ulli.

maadiga: borusu and mooTa.

Family names of *balija* caste seem to belong to their respective forms of trade in the past (1.4). They are also usually referred to as *saukaari* 'a wealthy person'. *saukaari* is a respectful term usually reserved for higher caste persons belonging to *balija*, *aTukari* and *gaanDla* castes and a lone muslim religious group called *turuka*. It can also be used as a title along with one's personal name designating social status.

2.0. The matrix of personal reference is elaborate and can be explored only through some heuristic methods of identification. Personal reference consists of every identifiable feature, socio-cultural, physical and psychological, of a person. The basic functional features of identification were delineated for the purpose of the present framework of description. These features may belong to both generic and specific types.

The generic type includes the following: 1. Surnames of clan (*saTTam*) or family 2. Caste or occupation 3. Immovable property 4. Native place or place of earlier residence 5. Kinship or associative reference 6. Religion or language 7. Office or social position 8. Place of dwelling or street, etc. The specific type, on the other hand, includes formal personal names and nicknames, which may be acquired later and may even replace the former especially in lower caste groups. Documents invariably contain specific personal names, including nicknames if any, along with elaborate generic references especially to a male parent and husband. Specific names may include caste marker (1.6) and gender marker which may denote age and social position. A nickname does not take caste marker but it may take caste reference.

2.1. Generic names precede specific names. There may be more than one generic reference which may be followed by a specific name. Except for relational forms of kinship or associative reference, all other generic names take gender suffixes (proforms and kin terms denote gender and act as specific names in specialized contexts). Proforms and kin terms also denote deferential relationship between the speaker and the person referred to along with gender.

The following forms (kin terms in sets 1 and 2 and proforms in set 3) are affixed to the generic names:

1. (a) *taata* (grand father): *jangam taata*
   avva (grand mother) *jangam avva*

   (b) *ayya* (father): *jangam ayya, baapanayya, koomTayya* (a higher caste not found in the village), *daasarayya* (a sub-caste of low ranking *maalas*)

ayya can also be used for certain profession like *karNamayya* (village-accountant), *saaleyya* (teacher), etc.

amma (mother) : *jangamamma, baapanamma, reDDemma*

Besides the person's name, *amma* can also be added to other forms like *daNemma* (*dhaNi*, 'master' lit. 'wealthy person'), *saukaaremma* (*saukaari* 'wealthy person'), *Tiicaramma* (female teacher), *narsamma* (female nurse). Forms in (1a) and (1b) cannot be used for castes other than those listed above.

2. *aayappa* (*appa* ' father '), *aayanna* (*anna* ' elder brother ') and *aayamma* (*amma* ' mother ') follow a generic name to act as a reference and are used mostly by persons of the opposite sex. Structurally these forms consist of the deictic form *aa* that (remote) followed by a kin term.

3. (a) *atani* ' he ' *avDa* ' she '

(b) *vooDu* (*vaaDu*) ' he ', *-di* (*adi*) ' she ', it '.

Category (b) denotes the lowest social ranking.

2.11. Kinship or associative reference includes both generic and specific names along with relational terms of axis like *koDuku* ' son ', *biDDa* ' daughter ', *aalu* or *penDlaamu* ' wife ' *talli* ' mother ', *alluDu* ' son-in-law ', *kooDaalu* ' daughter-in-law ', etc. For example,

1. a. gaajula sennamma koDuku bassaNNa
family name mother's name son male personal name

b. baliJa maantappa koDuku bassaNNa
caste father's name son male personal name

2. a. katti raacaNNa biDDa naagamma
family name father's name daughter female personal name

3. katti raacaNNa penDlaamu iramma
family husband's name wife female personal name

4. koorla ellugaani talli maaremma
family son's name mother female personal name

5. kallu anmanna alluDu maldakallu
occupation father-in-law's name son-in-law's name personal name

6. gaanakunTa tikkamma kooDaalu gookarakka
landed property mother-in-law's name daughter-in-law female personal name

2.12. Relative age of the sibling and the colour, size, physical or mental state of the person can be used for associative reference:

1.	vaDla	pedd(a)	iirappa
	caste/occupation	' elder	male personal name
2.	vaDla	sinn(a)	iirappa
	caste/occupation	younger	male personal name
2.	sintimi	erra	bassaNNa
	family name	red	male personal name
3.	buDDa	saayanna	
	short	male personal name	
4.	tikka	bassaNNa	
	mad	male personal name	

2.13. The following examples illustrate possible contrasts of generic names and nickname prefixes:

(a) jangiTi raamaDu (jangiDi—family name)

(b) telugu raamaDu (telugu—a caste name)

(c) guramoombaayi raamaDu (gurramoombayi—landed property)

(d) maddur (i) ramaDu (madduuru—a place of earlier residence)

(e) bangaaru jambaNNa koDuku raamaNNa (kinship relation)

(f) talaar(i) raamaDu (talaari—' village attendant')

(g) natti raamaDu (natti—nickname used as prefix)

(h) turka kaasim saav (turka ' muslim religion or language')

2.14. Generic names can be used for specific reference as in 2.1—(1) also for Muslims, e.g. *turka saayibu* (Muslim male), *turka buuvamma* (Muslim female).

2.15. Proform suffixes like - *(v) ooDu* < *(v) aaDu)* he,-*(a)di* 'she, it', etc. are used along with generic names of lower castes, but cannot be used for higher castes except in utter contempt. E.g, *vooDu* (male reference): *maadigooDu* (lower caste), *baapanooDu* (higher caste — with contempt), *(a)di* (female reference): *maaladi* (lower caste), *aTkardi* (higher caste — with contempt).

Certain kinship terms are used after generic names to denigrate a person morally and socially by demoralizing the alter (when female) or alter's female parent, e.g. *koDuku* 'son' *kuuturu* 'daughter', *saviti* 'co-wife' *lanja* 'a concubine' *munDa* (lit. a shaven head) 'widow'. *kacca* 'a mean fellow' is also used along with a generic name for this purpose.

Kinship terms are used in reference as ritual kin-specification to extend intimacy, as personal name suffixes to denote gender distinction, attitudinal marking, social stratification and also in pronominal reference as given in 2.1-(2) (See for detail, Narasimhareddi 1977: 54-57).

2.2. Specific names indicate a person's assumed religious affiliation, sect or form of the deity worshipped, sociocultural beliefs, and the social position denoted by referential suffixes of gender, kinship appelation and status or caste markers.

1. Personal names ending in *-u* (*maldakallu*—Male person) *-i* (*gookaari*—Male person) and *-a* (Male: *basavaraaja*, Female: *padma*) can be used without any suffix at the end in reference.

2. Male personal names ending in *-u* (*ellubaDu*), *-i* (*anjiligaaDu*) *-e* (*cauDegaaDu*) and a consonant (*pakiirgaaDu*, *kaasim gaaDu*, *jangil gaaDu*, and *jaan gaaDu*) take the suffix - *gaaDu* besides kin terms. These consonants are either nasals (m,n) or liquids (l,r) and the forms belong to non-native origin. It may be noted that most of the *-i* ending forms also fall into this category. *-u* ending forms which change to *-i* in oblique construction also take *-gaaDu* (*maldakanTigaaDu*). The form - *gaaDu* is used for higher caste groups to denigrate them.

3. *-a* ending forms denoting male persons take *-Du* (*iiraDu*). It is interesting to note that these forms when they are changed to an ending in *-i*, are followed by *-gaaDu* and are used to denigrate a person.

4. Kinship terms have many other functions besides alter's gender marking. Though the stratification is applicable to both the alter and the speaker, at times is explicit only with regard to the alter. However attitude of the speaker is indistinguishable in this context. *-ayya*, *-appa* and *-anna* for males and *-amma* and *-akka* for females serve as deferential forms of descending degree of status in terms of age and social position. *-aNNa* and *-avva* serve as mother tongue identifying markers for Kannada speaking male and female alters respectively. The retroflex ending nominal stems of Kannada speakers' names take *-appa* instead of *-amma*, probably to avoid another retroflex in the initial syllable of the suffix, e.g. *kaaLappa* but not *kaaLaNNa*. Likewise *canDappa*, *SaraNappa*, *kisTappa*, *gunDappa*, *aDivappa*, and *gaDDeppa*. However, they may take *-gaaDu* in denigration which contains a retroflex.

5. *-di* is suffixed to female personal names to denigrate the person. It is not added to *-a* ending forms unless they are nicknames.

6. *-saab* (often pronounced as *-saav*) is a respect marker and is added after Hindu names. It denotes religious identity when suffixed to male Muslim name. When used along with official designation it denotes formal respect and social differentiation e.g., *amiin saav*, *paTeel saav*, etc. Designations of lower order may also get this in ridicule, e.g. *talaar(i) saav*.

For those low caste Hindus who have adopted Muslim names, the above suffix is added to their personal names in joking relationship or in ridicule, e.g. *gookaar saav*, *pakiir saav*, *kaasim saav*, *jangil saav*, *bazaar saav*, and *savaar saav*. I is added to certain nicknames for the same purpose, e.g. *puujaar(i) saav* ' worshipper *milTry saav* ' military man '.

-gaaru, a marker of respect, is used very rarely for non-natives especially those belonging to coastal Andhra. It is also used in certain very formal contexts while referring to higher officials and dignitories.

7. *-(v) ali/elli* (male marker) and *-bi* (female marker) are common personal name suffixes among Muslims. *saab* and *miyaa* can be used both as suffixes and individual address forms. *saab* is a term of respect. *miyaa* is used to show intimacy or informality.

kaapu (*-reDDi*), *baapana*(*-rao*), *koomaTi* (*-SeTTi*), and *lambaaDi* (*-naayak*) denote their caste, social group or tribe by their respective titles affixed to their names at the end. Except for *baapanas*,

who are not referred to solely by their respective titles, all others may be referred to by their caste titles. However *koomaTis* and *lambaaDis* are not natives of the village and belong to neighbouring villages or tribal settlements *taanDvas* and have regular contact with natives by way of mutual exchange of services.

8. In *aTukari* caste, a new appelation *-kumaar* is being introduced in recent decades especially through formal registration in official records, e.g. *bassaNNa* is changed to *basaveeswar kumaar, saraNappa* to *sravaNa kumaar* and *moonappa* to *muni kumaar*, etc. Notice that in this exercise the real intention seems to be the modernization of the original name rather than the introduction of the marker of caste or group distinction. Even in *balija* caste a similar tendency is observed. *pompaNNa* was changed to *pompaapati* (Lord of Hampi) after a person entered a government job in Karnataka state.

To denigrate a person of higher caste group *-gaaDu* is suffied to a male personal name after the gender or caste marker, e.g. *subbaNNa gaaDu* (a male personal name of *aTukari* caste), *tirumal rao gaaDu* (a male personal name of *baapana* caste). *akka* is added to the stem of female personal name in the place of *amma* to denigrate higher caste woman folk, e.g. *bangaar kisTakka* instead of usual *bangaar kisTamma* (a female personal name of *aTukari* caste).

9. Personal names are also differentiated by the use of prefixal elements which are part of the name stem especially in Kannada speaking higher castes like *jangam (raam(a) lingayya), baapana (seetu ramarao), balija cen(na) bassappa, sid(dha) raamaNNa, cen(na) bassamma, sid(dha) raamamma, bas(ava) lingappa, jam(bu) lingappa*), and *aTukari (dur bassappa, kar bassappa*) castes. A similar tendency is noticed even in Telugu speaking *kaapus (reDDis*), e.g. *venkaT raam reDDi.*

In lower castes this differentiation is made more by nickname prefixes referring to the physical traits, e.g. *panDla biimaDu* 'raised teeth', *kunTi biimaDu* 'lame', *naDDi biimaDu* 'backward bending', *SevTi biimaDu* 'deaf', *natti biimaDu* 'stammering', etc.

2.3. Spouses are not referred to overtly by their personal names. Proforms like *atani* 'he' or *avDa* 'she' may be used by the persons belonging to the opposite sex to refer to their spouses. They may be preceded by a genitive plural pronoun *maa* ('our') like *mayaatani*, lit. 'our he' *mayavDa* lit. 'our she'

or *ma mogaatani* lit. ' our-male-he ', *mayaaDavaDa* lit. ' our-female -she ' referring to one's husband and wife respectively. *nayaalu* (' my wife '), *namoguDu* ' my husband ' are also used in reference. Notice that when referring to one's spouse indirectly, only plural genitive form is used.

Peculiarly, spouses are also referred to by their caste or service names and age before their masters. However, the age reference may be used with others to avoid direct reference to one's spouse:

By caste or occupation *mi inTi maadigooDu* ' your household service man of *madiga* caste ', *mi (inTi) saakaldi* ' your household washer woman '.

By household service: *mi gaasagaaDu* ' servant of your maintenance ', *mi kasvuuDse tooDu* ' your sweeper man of refuse ', and *mi kasvuuDe tavDa* ' your sweeper woman of refuse '.

By age: *ma muslooDu/ma musildi* ' our old man ', *ma muslavDa / ma musildi* ' our old woman '.

2.31. Status or respect forms are used with or without the occurrence of personal or caste name: *dora/dhora* ' lord ' *gauDu* ' chieftain, head of the village ', *saukaari* ' wealthy person ', and *gauDsaani* ' wife of a chieftain or village head ' are used along with personal occupational and caste names, e.g. *sattereDDi* dora, *narsireDDi gauDu, aTkar gauDu, peeTagauDu* ' street chieftain ', *balija saukaari, subbaNNa saukaari, uligaDDala saukaari* (referring to a trader of onions), and *bassamma gauDsaani*, etc.

2.32. *ayya* (persons belonging to *jangam, baapana* and *koomaTi* castes), *swaami* (persons belonging to *jangam* and *baapana* castes only), *dhaNi* (' master '), *daNemma* (' wife of one's master '), are used individually in general reference.

2.33. Specific references also include nicknames which in the course of time may gradually replace the personal names. Most of the nicknames are short-lived unless the distinction is increasingly made difficult by the extensive use of certain personal names within the same generic group. Nickname is a second name acquired by a person in addition to one's formally given first name. It is a name which the person himself (or herself) does not approve (*nick* ' to deny). Often it is given in contempt, ridicule, or sportive familiarity.

2.40. Personal reference takes in addition to a personal name a kinship term when the hearer (especially children of either sex or in intimate reference) and the person referred to are close relatives. Hearer's kinship is maintained in reference when the hearer happens to be a child or a female person.

Relatives are usually referred to by their kin term either with or without their personal name, i.e. *timmareDDi anna* or *anna*. This may be extended to ritual kins in intimate reference.

2.41. Children within the family are generally referred to by their pet names, or short names, e.g. *bhagavantareDDi* as *bavan(tu) srinivasareDDi* as *siinu, Sivnuvaasu(lu)*, or *siinugaaDu*, and *prabhaakarareDDi* as *prabu, prabulu, prabugaaDu*, etc.

It may be noted that in affectionate reference prefixal elements like nickname prefixes as in **2.12-8** and **4, 2.13** (g) or nominal prefixes as in 2.**2-9** are not used for differentiation. But the differentiation may be maintained in terms of relative age of the siblings, e.g. *pedda narsimlu, sinna narsimlu*, and *naDipi narsimlu*.

2.50. Apart from surnames and relational axes in reference, personal names consist of the following four structural elements in that order:

(a)	(b)	(c)	(d)
Prefixals (nick name prefixes or nominal prefixes)	Personal name or nick name	Caste/suffix or second element consisting of a kin suffix or prominal form.	Status marker, kinship reference or respect marker

Personal reference may be composed entirely of nicknames and nickname prefixes as in *erra* (a) *buDDa* (b) *oDu* (c), or one of the nickname elements as in *kunTi* (a) *biimaDu* (b) and *buDDigaaDu* (c).

3.1. *turuka*, a name given to the Muslim community and their language may be considered as a nickname since it is not being used within that endogamous group. Muslims always refer to their own community as 'musalmaan' and their language as 'Urdu'.

All the lower castes collectively are called *yaatare-laapollu* 'the people who while away their time', a nickname given by the higher caste groups in contempt. The form *yallaapu* generally refers to *booya* caste, which seems to be a conglomeration of sub-castes. *booya* and *dommari*, though often differentiated (1.0 Group E.3) are generally considered as one caste group in all sociocultural aspects. *dommaris* generally claim themselves as belonging to *booya* caste, though the latter always deny it. *dakkala*, a caste non-existent in the village is a handy term of reproach to be used against the *maadigas*, the lowest caste group in the village.

3.2. Nicknames are generally feature-identifying references in terms of colour, size, relative age of siblings, physical form or deformity, ability or lack of it, characteristic behaviour, dietary habits and in some cases just for fun to tease a person.

-vooDu is added to the form of identifying feature when it refers to physical or mental condition or form. *-gaaDu* is added in the case of other features for males. *-di* is suffixed in all the contexts for females. All these forms are considered socially low.

Nicknames are generally adopted by lower caste groups. Hence the use of *-ayya*, *-appa*, etc. as gender indicating suffixes also denotes ridicule or joking. *-anna* and *-amma* are normally used to denote male and female referents. *-atani* 'he' and *-avDa* 'she' are also suffixed but with a tinge of ridicule. *-akka*, a female personal name suffix has low social connotation. *-di* is used for females to show contempt. The following are some of the main categories of nicknames found in the village.

3.21. COLOUR: karrevooDu—karremma (karre 'black'), yarravooDu-yarramma (yarra 'red', and kaakooDu (kaaki 'crow').

3.22. SIZE: dubbooDu — dubbamma (dubba 'fat'), buDDigaaDu, buDDavooDu — buDDamma (buDDa 'short'), poTTigaaDu — poTTemma (poTTi 'short in hight').

3.23. RELATIVE AGE OF THE SIBLINGS: peddigaaDu/peddavooDu-peddamma (pedda 'big, elder'), sinnigaaDu/sinnavooDu-sinnamma (sinna 'small, younger'), naDipooDu -naDipemma (naDipi 'middle'), sanTenna-sanTemma (sannu 'breast') 'an infant at the breast'.

3.24. PHYSICAL FORM: guDlavooDu - guDlamma (gudlu 'eye balls'), poTTalooDu - poTTalamma (poTTa 'belly'), panDlavooDu (panDlu 'teeth'), muddugaaDu (muddu 'a kiss') 'a charming fellow'

3.24. DEFORMITY: kunTooDu-KunTemma (kunTi 'lame'), mukkiDooDu-mukkiDemma (mukkiDi 'noseless'), torrooDu-torremma (torri 'toothless'), guunooDu-guunemma (guuni , a hump, a cripple'), naDDooDu-naDDemma (naDDi 'bending backwards'), guDDooDu-guDDemma (guDDi 'blind'), soTTavooDu (soTTa 'deformed'), doDDigaaDu-doDDemma (doDDi ('bandy legged'), booDemma (booDi 'bald') (specially used for womanfolk), kadda kanDlavDa (kadda kanDlu 'eyes of black eagle').

3.25. DISEASE: tonnooDu (tonni 'leucoderma'), gajjooDu (gajj 'cutaneous eruption or itch'), naTTalooDu, naTTalamma (naTTa 'diseased'), vaalamooDu (vaalam 'an appendage especially grown around the neck').

3.26. ABILITY OR SKILL: DeyvaarigaaDu 'driver', 'a skilled fellow', milTrigaaDu 'military man', teguvaarigaaDu (teguvaari 'a courageous person').

3.26. INABILITY: sevTooDu—sevTemma (seviTi 'deaf'), muukooDu/muukaDu (muuki 'mute'), nattooDu—nattemma, (natti 'stammering, stuttering), roDDavooDu (roDDa 'left handed').

3.27. BEHAVIOUR: monDemma (monDi 'obstinate'), tikkavooDu - tikkamma (tikka 'madness'), nangooDu (nanga 'to speak with a twang or snuffle, through nose'), rillavooDu (rillu 'a cricket, bookworm'), rollooDu (rollu 'to bewail'), puujaarigaaDu (puujaari 'an officiating priest of a temple'), konDekka (konDi 'sting of a scorpion'), kootooDu (kooti 'monkey'), nakkavooDu (nakka 'jackal'), aaDittalooDu/aaDangulooDu ('a girlish fop'), bellamaaTani (bellam 'jaggery') 'a person of sugarcoated words', meekalanna (meeka 'goat'), dayyamooDu (dayyam 'evil spirit'), gurramooDu (gurram 'horse').

3.28. DIETARY HABITS: tunakal (a) saTTi (one who eats a potful of cooked meat), muuDroTTelagooDu (' one who eats three loaves of bread '), muuDsiisalgaaDu (' one who drinks (habitually) three bottles of toddy '), loTTooDu (' one who drinks or steals a potful of toddy), ooTalgaaDu (' one who habitually eats in a hotel '), bokkooDu (' one who habitually eats greedily with mouthul of eatables ').

3.29. FUN TERMS: iigelapuligaaDu (' a spider ', literally a ' fly-tiger '), baappurigaaDu (baapure 'well done' an interjection), iitamullugaaDu (iitamullu 'thorn of a toddy tree'), muppurigaaDu (muppuri ' three fold, triple, a species of sparus '), koonaDu (koona ' dell, glade '), kommoDu (kommu ' horn of an animal, a blowing instrument), sekimukigaaDu (sekimuki raayi ' a flint '), Taakar singu (a nickname acquired by a person of booya caste having fierce moustaches)

Nicknaming can also be adopted for functional distinction or referents, e.g. *karre/yarra bassaNNa*, *yarra buDDooDu* (3.21) *dubba/buDDa timmanna* (3.22); *ped (da)/cin(na) taayappa* (3.23);, *julpaalasin timmappa* (*julpaalu* ' locks of hair left just above and in front of the ears '), *guuda timmanna* (*guuda* ' a prolapse of the uterus or anus '), *kunTi naDDi biimaDu* (3.24), *gajji raamaDu/ raamakka*, *kantapunDu/tippaDu* (' one who has an ulcer on the temples of his head ') (3.25), *milTri tippaDu*, *sevTi biimaDu/ natti raamaDu* (3.26), *tikka timmappa/bassaNNa*, *uDumula rangaDu* (*uDumu* ' the iguana ') (3.27), etc.

4.0. Naming is a formal exercise performed by the parents of a child in the first few days of its birth preferably on the ninth day. Naming practice closely follows certain indicators like place or religious worship, memorabilia, faith and fashion.

4.1. PLACE OF WORSHIP : maldakanTigaaDu—malDa(kunTi)amma (maladakallu), paagunTagaaDu — paagunTamma (paagunTa), hampaNNa—(h)ampamma (hampi), pompaNNa—pompamma (as above), gaDDeppa — gaDDemma (naaragaDDa), tirumarao-tirumalamma (tirumaloo), sugurappa — sugaNNa — suugamma (deevasugur)

4.2. DEITY: Names of deities in and around the village are used to name the children. Usually one of the children is named after the family deity or deity of annual worship.

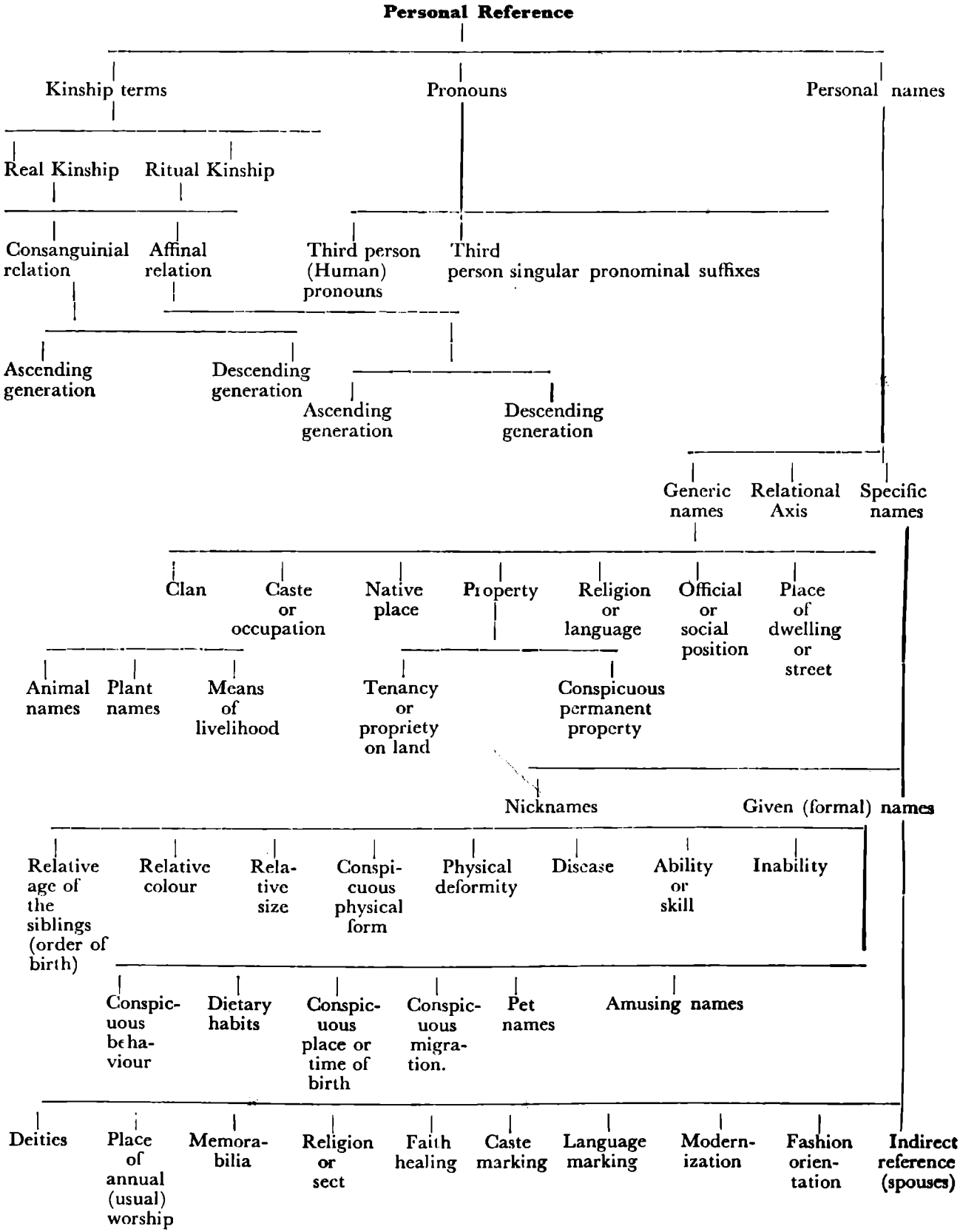


Chart A. Personal reference. A Micro level structure of Telugu Personal Names.

FEMALE DEITIES: cauDappa-cauDamma, karranna-karramma, jammaDu - jamulamma, maareppa - maarekka, yallappa - yellamma, taayappa - taayamma, sunkanna - sunkulamma, lasmanna - lasmakka, uliganna-uligamma, gangappa-gangamma.

MALE DEITIES: gookaranna - gookarakka, bassaNNa-bassamma, naaganna - naagamma, jangilappa - jangilamma, timmappa - timmama, hanumanna - anumakka, narsappa, narsamma, huseenappa - useenamma, benakappa - benakamma, amrappa - amramma, ayyappa - ayyama.

4.3. MEMORABILIA: Names of the deceased elders in the family (usually grand parents) are preferred for one's first child or for the first born child after the death of its grand parents. Modernization of names has introduced a feature of retaining either the first or some other significant syllable(s) of grand parents' names, e.g. *bassamma-basanta kumari*, *hanmi reddi-hanumanta reDDi*, etc.

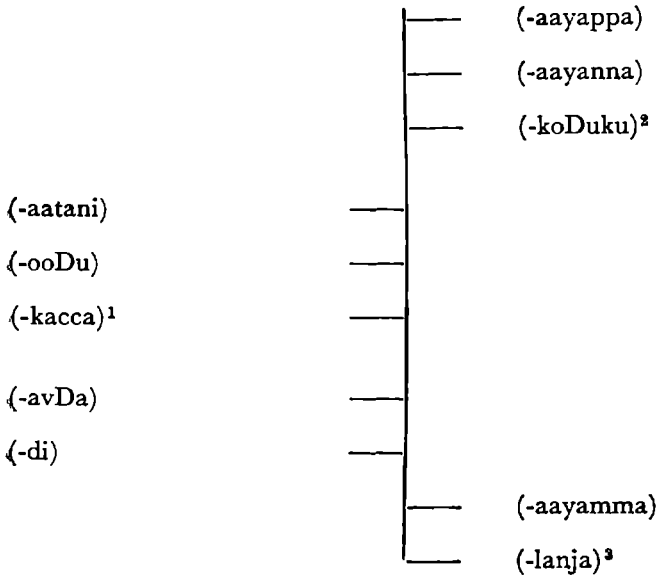
4.4. FAITH-HEALING : Certain beliefs are prevalent in the village about the survival of the child which include placing the new born child on a mound, in a street, forest, used leaf-platter and near the back-door. Eg., tippanna-tippamma (tippa-aheap in a mound), bazaramma-bazarakka (bazaar 'street'), aDivigaaDu - aDivakka (aDivi 'forest'), pullanna - pullamma (puli or pulla ('stick of a broom') diDDenna-diDDemma (diDDi -'back door'),

4.5. FASHION : Names may be preferred after a fashion in vogue. These given names may be modernized, alternatively used or even totally replaced by the nicknames at a later period of one's life time and may survive even after the mortal death of a person.

CONCLUSIONS

5.0. Telugu personal reference has a three tier system consisting of (a) kinship terms, (b) pronouns or pronominal suffixes and (c) personal names including generic names and nicknames. Chart A and table 1-7 gieven below illustrate the different components of personal reference.

MALE



FEMALE

TABLE 1:—Pronominal (left) and Kinship (right) forms attached to generic names and nicknames.

1. Derogatory form used for either sex.

2,3. Kinship forms (male and female) used in derogation.

4. Pronominal form (male) used in derogation with generic name.

5. Derogatory pronominal form (female).

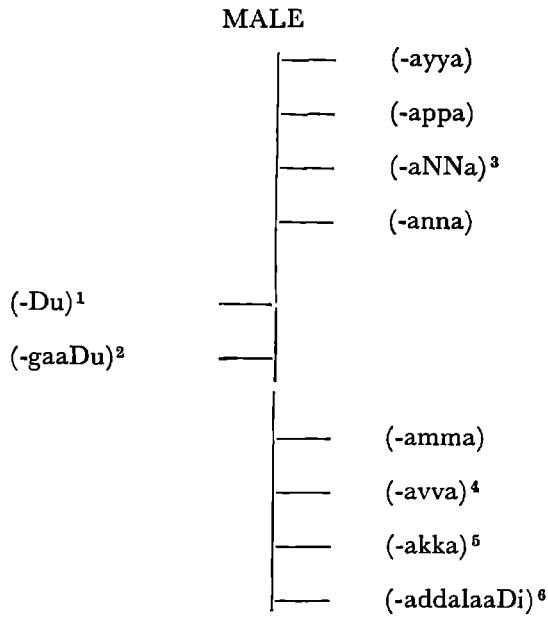


TABLE 2:—Pronominal derivational (left) and kinship (right) form attached to specific personal names and nicknames.

1. Pronominal form used for lower caste names.

2. Derivational form used in derogation with names that take *-Du* (in lower caste) and kinship forms denoting sex.

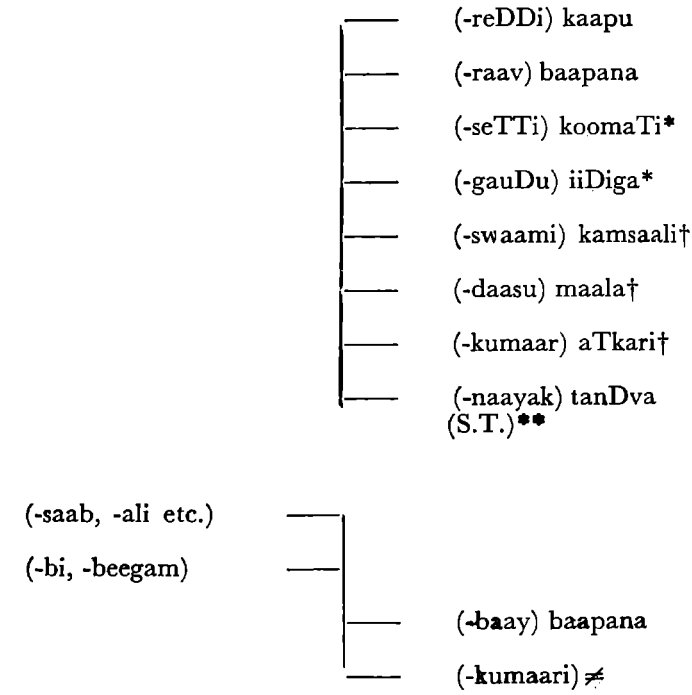
3. Kinship form attached to kannada mother tongue group (male).

4. Kinship form attached to Kannada mother tongue groupe (female) rarely used and now almost extinct.

5. Derogatory kinship form (female).

6. Derogatory form consisting of kinship form (*akka-*) plural marker (*-l*) and derivational form (*aaDi*) used in contempt (female).

MALE



FEMALE

TABLE 3:—Forms denoting religion (left), caste, tribe and fashion orientation (right).

* Castes found in neighbouring villages.

** Tribe of neighbouring settlement.

† Restricted use among respective castes.

≠ Newly introduced appellations of fashion orientation.

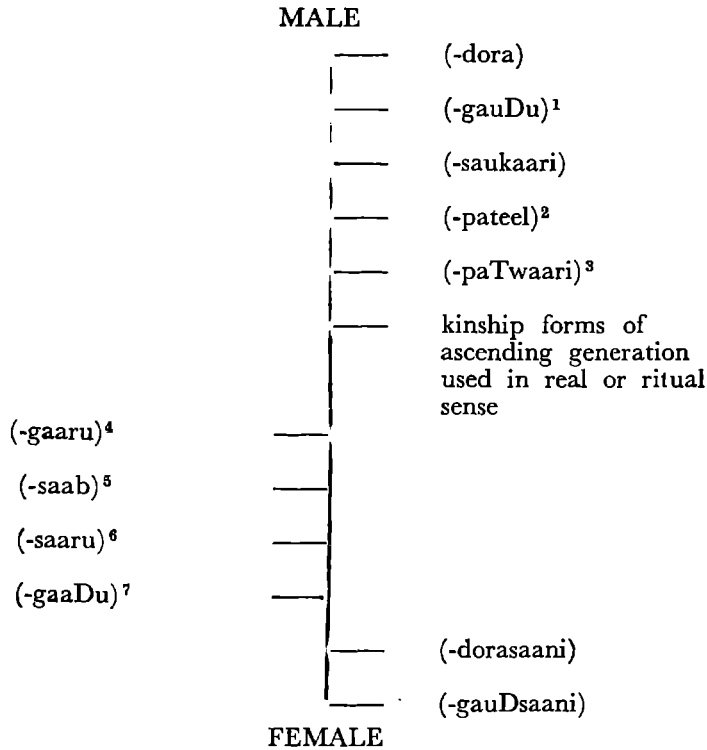


TABLE 4:—Forms of office, markers of status (right), respect and derogation (left).

1. Form of office and a marker of status.

2,3. Forms of office.

4. Common formal respect form generally not used for natives.

5. Respect form which can occur with official designations but not with status forms including *-gauDu.*

6. Formal respect forms used for English educated officials.

7. Derogatory form which can occur with official designations but not with status forms including *-gauDu.*

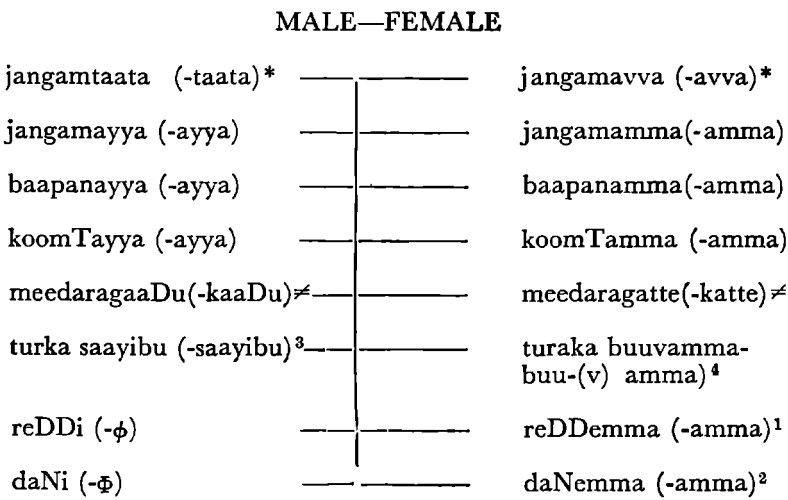


TABLE 5:—Forms of kinship, derivation, religion and status in exclusive reference.

1. Wife of *reDDi* (male *kaapu*) or any female member of that family.

2. Wife of *daNi* (' master ') and does not refer to any other female member of that family.

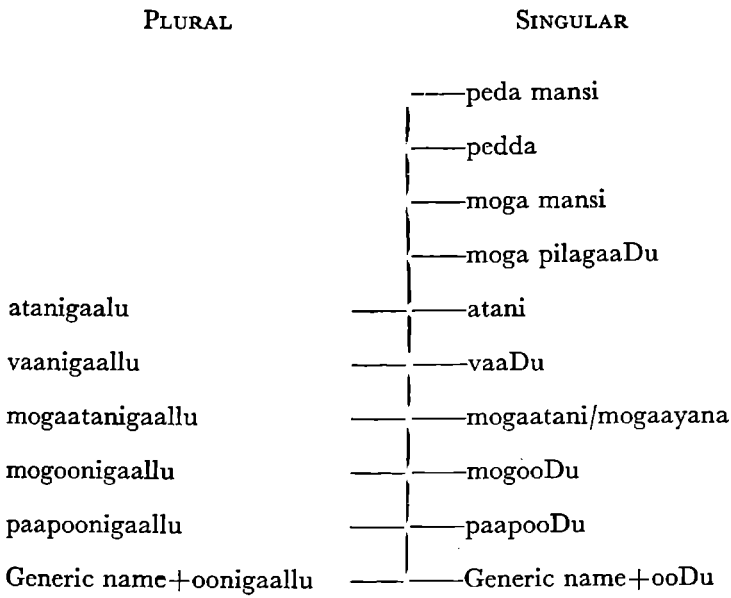
3. Religious appellation (Urdu) denoting male *turka.*

4. Religious appelation (Urdu) denoting female *turka* consisting of female kinship form of Telugu *-amma.*

* Forms of extreme social reverence towards the caste.

≠ Derivational forms used for such Scheduled Tribes.

MALE



FEMALE

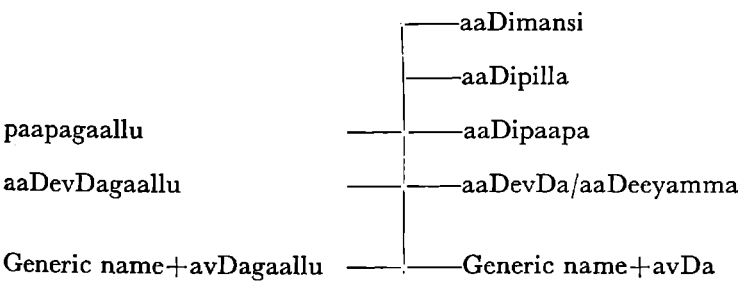


TABLE 6:– Nominal and pronominal singular forms in exclusive reference and their plural derivational forms (*kaallu* is a plural of *-kaaDu*, a derivational form).

	MALE	
dora	——|——	
swaami	——|——jangam, baapana	
ayya	——|——jangam, baapana, koomaTi	
gauDu	——|——kaapu, aTkari, village headman	
saukaari	——|——aTkari, balija, gaanDla, turka	
daNi	——|——master	
saaru	——|——teacher, official	
saayibu	——|——turka	
ooju[1]	——|——kurva	
	FEMALE	
dorasaani[2]	——|——	
gauDsaani[3]	——|——wife of village headman	
deNemma	——|——wife of a master	
buuvamma	——|——(female) turka	

TABLE 7:—Office, status. respect, kinship and religious forms used in exclusive reference.

1. jocular reference, 2,3. Referreing to wives of those higher in social hierarchy or status with respect.

5.1. ORDER AND ALTERNATION: Elaboration of personal reference shows the following order of elements: Generic reference (GR), Relational axis (RA) and Specific reference (SR). Any one or both of the first two or first and last elements may be absent in reference. They are used only when the distinction is demanded by the speech situation.

a. GENERIC REFERENCE: GR includes (1) clan, (2) caste or occupation, (3) native place, (4) property, (5) religion or language (6) office or social position, (7) place of dwelling or street. The persons may be referred to entirely by their generic reference with proper

kinship and pronominal suffixes. The above categories are mutually exclusive in occurrence. The suffixes attached to the generic elements in exclusive reference and nicknames are given in Table 1.

b. RELATIONAL AXIS: RA includes personal name of the relative especially parent or sibling or spouse, the relational kin terms and the personal name of the referent. The personal name of the relative and the referent display the same nature and order of elements including nicknames as they both are specific names in essence.

c. SPECIFIC REFERENCE: SR consists mainly of personal names or nickname elements along with suffixal and prefixal elements. Suffixal elements are obligatory. The prefixal elements are not only optional but may include even more than one element in a fixed order.

(i) PREFIXES: Personal name prefixes are of two types (a) nickname prefixes and (b) nominal prefixes. Of these the former denotes elements like relative age, colour, size or any identifying feature of the referent. The nickname element denoting relative age always preceds that denoting relative colour and any one of these elements may precede any other identifying feature of the referent. These nickname prefixes are followed by nominal prefixes which are part of the personal name elements. Nominal prefixes are usually limited to one.

(ii) SUFFIXES: Personal name suffixes are also of two types. Those that are part of the personal name indicating sex, caste, religion/language and attitude of the speaker and others that are annexed to the personal name after the former suffixes. The former are obligatory whereas the latter are optional and also limited in application. All obligatory suffixes denote sex. The suffixes that are related to kinship and pronominal forms also display attitudinal marking. These obligatory forms are suffixed to the nominal element and are mutually exclusive.

The forms that are attached to specific personal names and nicknames are given in Table 2. Forms denoting caste, tribe, and religion are given in Table 3. Forms denoting office and markers of status, respect and derogation are given in Table 4. Personal reference by way of caste, religion and status is given

in Table 5. Personal reference by way of nominal, pronominal and genric forms is given in Table 6. General reference by way of status forms and respect forms is given in Table 7.

5.2. NICKNAMES: Extensive use of nicknames among lower castes is indicative of their inferior and often humiliating status in the village life. It may be noticed that nicknames include animal names. They generally point at the conspicuous physical or mental state of a person and frequently relpace the given names. Besides nicknames, these persons may also get nickname prefixes to differentiate them from others. Nickname reference is so extensive and regular in rural reference that very often even the family members, including the referent, forget the real given name. Nicknaming is almost nonexistent among upper castes and even if they are used at any given moment to refer to a particular person they are short lived and are buried in oblivion soon. In other words, they are bound by the context and the speaker and not by the referent as is the case with lower castes.

5.3. GENERIC NAMES: The sole use of genric names in reference (with appropriate suffixes) without a following specific name indicates speakers contempt towards the referent of that group. Hence sole generic reference not only identifies a person as a member of a group but also singles out his group from the rest of the village community as a contemptuous lot.

Though mostly obscure, genric names denoting clan can be traced to either animal names or plant names, or means of livelihood. This is particularly significant since rural life is still said to be preserving vestiges of past socio-cultural organization and beliefs.

(a) Animal names and plant names: cint-imi (cinta nakka 'the night heron'), gunD-imi (gunDangi/gunDagi 'the white faced black ape, a water foul/hen'), konD-imi- (gonDi 'a wretch, the bone eater, the hyena').

(b) eeNe (eeNi/eeNamu 'A gazelle or black antelope').

(c) katti (katti piTTa 'a cuckoo called Hierococcyx varius).

(d) gumma (gummaDi 'a gourd, a pumpkin').

The clan names given above are found in *aTukari* caste.

(e) jangiTi (jangiDi/jangili 'A head of cattle/animaal a head man or leader. People belonging to this clan also worship a Hindu-Muslim deity called *jangili saav*).

(f) doDla (doDDi 'a yard, a back yard, a stable').
(g) koorla (koram puvvu 'the coral flower').
(h) ulli (ulli gaDDa 'onion')

These clan names are found in *booya* caste.

Nickname prefixes like *nakka-* 'a jackal', (*nakka timmanna*), *piTTa-* 'a small bird', (*piTTa savaarigaaDu*), *kaaki* 'a crow' (*kaaki naagaDu*), *kooti-*' a monkey', (*kooti anmaDu*), *meekala-* 'goat's' (*meekala lasmanna*), *guvvala-* 'dove's or pigeon's', (*guvvala sennanna*), *kooLLa-* 'a fowl', (*kooLLa naagaDu*), *uDumula-* 'the iguana', (*uDumula rangaDu, kokki-* 'the bandicoot', (*kokki maldakan TigaaDu*).

5.4. Kinship and pronominal suffixes: Elaborate system of bio-social differentiation (sex, age, social- position, and attitude of the speaker) is maintained through suffixation of kinship and pronominal forms. (See tables and also Narasimhareddi, 1977, 54-57).

Ritual kinship, a parallel social kinship not based on either consanguinial or affinal relationship is prevalent among different caste groups. This is observed even in specific personal reference along with the name. It acts as a relational marker after the personal name, e.g. *subbaNNanna-subaNNaa* 'a male personal name' (*anna* 'elder brother'). A person belonging to caste A can refer to a person belonging to caste B as *subbaNNanna* 'elder brother *subbaNNa*'. (Details of this parallel system are discussed in Narsimhareddi 1977, 51-52).

Use of social identifying suffixes pertaining to caste, tribe religion, and language (see Tables), along with the personal name, is obligatory in some cases as they also differentiate sex. That is sex differentiation is one of the primary features of Telugu personal reference. Notice that suffixes which denote caste and tribe also refer to the male sex of the referent. There are very few male personal names which are not marked for sex, e.g. *basavaraaja.*

5.5. Use of village names (4.1) and names of local deities (4.2) forms another feature of rural personal reference. Memorabilia (4.3) and faith healing (4.4) practices of naming are some more devices that induce recurring pattern of personal names. Village names may occur both as surnames denoting place of origin and personal names indicating places of worship

of one's home-deity. Village names when used as surnames and in specific reference contain forms given in Table 1. On the other hand, when they are used as personal reference, they contain kinship and prominal suffixes as given in Table 2. A curious personal name *bombay gaaDu* ' Bombay-fellow ' occurs in *maala* caste which denotes a person born to his eloped parents (father belongs to the *maala* caste and the mother belongs to the relatively higher caste *caakali*) in Bombay.

5.6. Use of status and respect markers and prevalence of Muslim personal names amongst lower caste Hindus are indicators of societal hierarchy and co-existence of differing cultures at the rural level. Teknonymous usage referring to one's spouse (as reported in section 2.3) by way of caste, occupation and household service, forms another feature of personal reference besides using the offspring as an intermediate reference:

Female speaker: (referring to her spouse) *anjiligaani* (son's name) *tanDri* ' father ' ' father of *anjiligaaDu* '.

Male speaker: (referring to his spouse) *karrogaani* (son's nickname) *talli* ' mother ' ' mother of *karrevooDu* '.

Modernization of names as discussed in section 2.2-8 is a rare phenomenon restricted to educated and socially mobile sections of upper castes.

A micro level approach as envisaged in this study (also in Narasimhareddi 1977, 1982) aims at understanding the speech community at the rural level taking village as a unit of socio-linguistic inquiry. The conclusions drawn from this study are essentially ethnographic in nature. They need not necessarily represent other systems at work in Telugu spoken elswhere.

REFERENCE

NARSIMHAREDDI, P.C. 1977. Telugu kinship terminology: A Propositional perspective Osmania Paper in Linguistics, 3-33-63.

ACKNOWLEDGEMENT

This paper is a slightly revised and enlarged version of the sections 1 and 2 of the paper entitled ' Socio-linguistics of Telugu Address System ' presented at the *Third International Conference on South Asian Languages and Linguistics* held during January 13-16, 1982 at the Central Institute of Indian Languages 'Mysore (India).

OPiL 7 & 8, 91-115 (1981—82)

RESTRICTIVE RELATIVE CLAUSE IN TAMIL

K. MAHALINGAM

An attempt is made to differentiate the Restrictive Relative Clause (RRC) from Non-Restrictive Relative Clause (NRRC) in Tamil. Arguments are made for identifying identifying and distinguishing the RRC from NRRC both structurally and functionally. Further four criteria are proposed to find out whether or not a particular relative clause construction is restrictive.

INTRODUCTION

On the basis of structural clues available from a number of unrelated languages (See papers by Perlmutter, Karlson, McCawley, Masica, and Keenan, in Peranteau 1972), Peranteau classifies relative clauses into the following three main types:

(1) Relative Pronominal type.
(2) Relative Correlative Pronominal type.
(3) Relative Participial type.

Research done on different Dravidian languages (Abraham 1978, Agesthialingom 1977, 1978, Annamalai 1968, Kothandaraman 1969, Lakshmi Bai 1983, Mahalingam 1983, Nadkarni 1970, Ramarao 1968 and Usharani 1980) show clearly that atleast the major Dravidian languages have relative participial and relative correlative pronominal constructions. In addition to the above two types, a third one namely the affixial, has also been recognized by some (Annamalai 1968, Lakshmi Bai 1983, Mahalingam 1983).

From a functional point of view, relative clauses can broadly be classified into the following two types: (1) Restrictive and (2) Non-Restrictive. Restrictive Relative Clause (RRC) is also called 'defining relative clause' (Thomson and Martinet 1980:31) and 'reduced relative clause' (Karlson 1972). Non-

Restrictive Relative Clause (NRRC) is also referred to as 'continuative', 'appositive' (Thomas 1965, Langendoen 1969, Emonds 1979) or 'non-defining' relative clause (Thomson and Martinet 1980).

The aim of the present paper is to present arguments both of a structural and functional nature for distinguishing RRC from NRRC in Tamil.

Restrictive Relative Clause

According to Keenan and Comrie (1977) a restrictive relative clause 'specifies a set of objects (perhaps a one member set) in two steps: a larger set is specified, called the Domain of Relativization, and then restricted to some subset of which a certain sentence, the Restricting sentence, is true. The domain of relativization is expressed in surface by the head **NP**, and the restricting sentence by the Restricting clause, which may look more or less like a surface sentence depending on the language' (63–64).

(1) The girl that John likes is beautiful.

In (1) the domain of relativization is the set of girls and the head NP is *girl*. The restricting sentence is *John likes her* and the restricting clause is *that John likes*. Here *beautiful girl* is none other than John's lover. From the domain of relativization constituted by a set of girls the speaker refers to a particular girl who is the subject of the relativized sentence and who is being loved by John. The speaker does not refer to any other girl in the set. Hence the speaker restricts one girl from the total set by the restricting clause *that John likes*. RRC describes the noun in such a way as to distinguish it from other nouns of the same class and is essential to the clear understanding of the noun (Thomson and Martinet 1980: 31). Consider the following examples:

(2a) The man who told me this refused to give his name.

(3a) The noise that he made woke everybody up.

(4a) The girls whom he praised were delighted.

In the above examples, if one deletes the following relative clauses:

(2b) who told me this

(3b) that he made

(4b) whom he praised

then we are left with the sentences given below:

(2c) The man refused to give his name.

(3c) The noise woke everybody up.

(4c) The girls were delighted.

Sentences (2c – 4c) give no clues about the *man*, *noise*, or *girls* talked about. The defining or restricting information are available in the constituents (2b), (3b) and (4b) and since they are relative clauses they are called restrictive relative clauses.

Non-Restrictive Relative Clause

Non-Restrictive Relative Clause is also a process of modifying a noun. However, it has no property of specifying or delimiting a member of a set. It merely adds to the information about the head noun. According to Ross (1967) a Non-Restrictive Relative Clause can have a truth value vouched for by the speaker and independent of the context in which it is inserted. Wreth (1974) feels that 'the function of non-restrictive relative clause is to add information but relating the matrix proposition to its contexts, by means of expressions of causation/reason, concession, temporal sequence and perhaps others' (43 – 4). Thomson and Martinet (1980) observe that in English 'Non-defining relative clauses are placed after nouns which are definite already. They do not therefore define the noun, but merely add something to it by giving some more information about it. Unlike defining relative clauses, they are not essential in the sentence and can be omitted without causing confusion'. Consider the following examples:

(5a) His new house, which is absolutely enormous, has no running water.

(6a) Krishnamurti, who has recently visited Japan, is the author of Telugu Verbal Bases.

(7a) Copin, whose works are world-famous, composed some of his music here.

In the above examples, if we delete the following relative clauses:

(5b) which is absolutely enormous

(6b) who has recently visited Japan

(7b) whose works are world-famous

we are left with the basic sentences (5c-7c):

(5c) His new house has no running water.

(6c) Krishnamurti is the author of Telugu Verbal Bases.

(7c) Chopin composed some of his music hero.

Sentences (5c—7c) show that the deletion of the embedded sentences does not affect their basic meaning and further that the deleted embedded sentences show that they are not defining or delimiting propositions of the subject of relativization. Rather they add extra information to the matrix sentences. For example, (6b) gives only extra information to the head-noun *Krishnamurti* and the matrix proposition, viz. *Krishnamurti is the author of Telugu Verbal Bases.* Hence the deleted relative clauses (5b—7b) are called non-restrictive relative clauses.

Identification of Restrictive Relative Clause

The RRC can be identified and distinguished from NRRC both structurally and functionally. It is possible to identify a RRC by considering the following issues:

(a) The effect of the embedded proposition on the matrix proposition.

(b) The effect of the deletion of the subject of the embedded proposition on the matrix proposition.

(c) The effect of particles attached to the embedded clause on the matrix proposition.

(d) The function of different kinds of determiners in relation to the headnoun.

Effect of the embedded proposition: The presence of the embedded proposition defines or delimits the headnoun of a relative clause from the rest of the same class of nouns and hence deletion of the embedded proposition leads to the lack of clarity of the basic meaning of the matrix proposition. Consider the following examples:

(8a) naankal toTukira veelaikaLai
we-incl. touch-pr.rel. part. work-pl.-acc.

toTTu ceyya veeru aaTkaL
touch-verb. part. do-inf. different person-pl.
varuvatu illai
come-hab-verb. neg. part.

'Other persons do not come to do the works which we do.'

(9a) enkaL miitu conna uuZal
we-excl. on say-p-rel-part. allegation
kuRRankaL kamiSan pooTTu
blunder-pl.m. commission put-verb. part.
vicaarikkappaTTatu
enquire-p-pass.
'The allegations which were made against us were enquired into by setting up a commission.'

(10a) camuukam cammantappaTTa cintanai
society connection-have-p-pass. thinking

teevaipaTukiratu
need-pr-NGP.
'Thoughts which relate to the society are needed.'

In the above sentences, if the following relative clauses are deleted,

(8b) naankaL toTukira

(9b) enkaL miitu conna

(10b) camuukam cammantappaTTa

we are left with matrix propositions as given below:

(8c) veelaikaLai toTTu ceyya veeru aaTkaL varuvatu illai.

(9c) uuZal kuRRankaL kamiSan pooTTu vicaarikkappaTTatu.

(10c) cintanai teevai paTukiratu.

Sentences (8c-10c) do not indicate specifically what kind of 'works,' 'allegations' and 'thought' one is talking about. it is the information given in the embedded proposition which defines or delimits the type of subjects talked about. Hence the embedded clauses in the above examples are restrictive relative clauses.

Deletion of the subject: The deletion of the embedded proposition alone is not responsible for the non-clarity of the basic meaning of the matrix proposition. The deletion of the subject of the embedded sentence can also result in the lack of clarity. If the subject of the embedded sentence in (8a-10a) is deleted, we are left with the following sentences:

(8d) *toTukira veelaikaLai toTTu ceyya veeru aaTkaL varuvatu illai

'Other persons do not come to do the works which (Φ) do'.

(9d) *miitu conna uuZal kuRRaccaaTTukaL kamiSan pooTTu vicaarikkappaTTatu.

'The allegations which were filed against (ϕ) were equired into by setting up a commission.'

(10d) *cammantappaTTa cintanai teevaipaTukiratu
'Thoughts which relate to the (ϕ) are needed.'

Sentences (8d-10d) are incomplete. It is clear, therefore, that, the subject of the embedded sentence can not be deleted and therefore the embedded clause is a restrictive relative clause since the embedded clause along with its subject defines or delimits the headnoun from the rest of the same class of nouns. In the examples so far discussed, the subject of relativization is

obligatory. But there are also cases where the embedded clause does the restrictive function even when the subject is optionally deleted. But the deletion of the embedded verb results in lack of clarity and insufficiency of the basic meaning. For example,

(11a) vanta nookkattai collu
come-p-rel. part. aim-acc. say
'Tell the purpose for which you came.'

(12a) kuTutta vaarttaiyai kaappaattu
give-p-rel part. word-acc. save
'Keepup the promise that you have made.'

(13a) irukkira paNattai koTu
be-pr-rel. part. money-acc. give
'Give the money that you have.'

In the above examples, the subject of the embedded sentence is deleted, but unlike the previous examples, they still give the basic meaning. If, however, the embedded verbs *vanta* 'some one/thing who/which came,' *koTutta* 'something which was given,' and *irukkira* 'that which is', are deleted, the parts of the sentences thus left over do not convey the intended meaning completely as can be seen from the following examples:

(11b) nookkattai collu
aim-acc. say
'Tell the purpose.'

(12b) vaarttaiyai kaappaattu
word-acc. save
'Keep up the promise.'

(13b) paNattai koTu
money-acc. give
'Give the money.'

Hence the embedded proposition without the subject also does the restrictive function and is a RRC.

The role of the particles: The occurrence of certain particles with the headnoun of a relative clause also serves to restrict it from the rest of the nouns of the same class. The particles which carry out this function on Tamil are *-ee, maTTum, maattiram, varai, taan, maTTuntaan.*

ee. The use of this restrictive particle is mentioned by Tolkaappiyar in the following *suutra:*

> teeRRam vinaavee pirinilai eNNee
> iiRRacai ivvainteekaaramme (Tol. Coll. iTaiyiyal, 9)

P.S. Subrahmanya Sastri translates this Suutra into English as, 'The particle *-ee* denotes the following five, certainity, question, exclusion, number and final expletive syllable' (T.P. Meenakshi Sundaram (ed.) 1979:231). Ilakkuvanor (1963:130) translates this Suutra as, 'The *-ee* serves five purposes which are denoting clearness, interrogativeness, separation, enumeration and being final syllable.

Isreal's (1973:270) translates the same Suutra as

> 'An enclitic signifying emphasis, interrogation, disjunction, conjunction.'

He does not enumerate the fifth function namely *iiRRacai*. The different functions ascribed to *-ee* by different scholars mentioned above is presented in Table I (see p.).

Among the different functions of *-ee* tabulated I will concern myself only with the one related to relative clauses namely restricting the headnoun from the rest. Consider the following example :

(15)

cantooSattai	aNaittukkoLLum
happy-acc.	embrace/enjoy-ref.m-rel. part.
uLLankaLee	cankaTattaiyum
mind-pl.m-rest.part.	trouble-acc.-also.
aNaittukkoLLa	veeNTum
embrace/enjoy-ref.m-inf.	must

'The minds which enjoy happiness are only those which enjoy the troubles also.'

Author	1	2	3	4	5
Tolkappiyar	teeRRam	vinaa	pirinilai	eN	iiRRacai
P.S.S.Sastri	certainity	question	exclusion	number	Final explative syllable
Ilakkuvanor	clearness	interrogativeness	separation	enumeration	Final syllable
Israel	emphasis	interrogation	disjunction	conjuction	—

TABLE 1· Functions of *-ee*.

In the example given above, the *-ee* is attached to the headnoun *uLLankaL* ' minds ' and restricts the ones which already enjoyed some happiness and not the others.

Tolkaappiyar does not mention other restricting elements of Tamil like *taan, maTTum, varai,* and *maattiram.* These elements have many different functions but they also serve to restrict the domain of subjects talked about in a relative clause. If a relative clause has any one of the elements enumerated above it is a restrictive relative clauses, but the converse need not be true.

maTTum: This particle freely varies with *maattiram* and *mitram* as the following example shows:

(16) avanukku (he-dat.) { maTTum / maattiram / mitram } ippa (now) koTu (give)

rest.element

' Now give only to him (and not to others).'

In spoken Tamil all the three forms given above are used. But the form *maattiram* is more frequently used than *maTTum.* The presence of these elements clearly restricts the headnoun from the rest and therefore their presence after the headnoun in a relative clause makes it a restrictive relative clause. Examine the following examples:

(17a) namma (we-poss.) camuukattil (society-loc.) unka (LuTaiya) (you-poss·)
cankam (association) karutukira (think-pr.-rel.part.) kuraipaaTukaLai (fault-pl.m.acc.)
maTTum (rest.ele.) collunka (say-NGP.)

' Please tell us only about those faults of our society which your association recognizes or considers to be the faults.'

(18a) inka (here) peeciya (speak-p-rel·part.) periyavarkaLil (respected person-pl.m.-loc.)

carvaatikaari (sarvatikari) maTTum (rest.ele.) oru (one) aaciriyar (teacher)

'Among those who spoke here only Sarvatikari is a teacher.'

In the above examples if *maTTum* is deleted, we are left with the following sentences:

(17b) namma camuukattil unka cankam karutukira kurai-paaTukaLai collunka

'Please tell us about the faults in our society which your association recognizes.'

(18b) inka peeciya periyavarkaLil carvaatikaari oru aaci-riyar

'Among those who spoke here Sarvatikari is a teach-er.'

Sentences (17b) and (18b) convey assertions or information and there is no indication of restricting or limiting one subject from the rest of the class of the same kind. In sentence (18b), there is no clue as to whether or not *sarvatikari* is the only teacher who spoke in the meeting.

varai: Regarding the suffix *varai*, Arden (1942:215) says 'The suffix *varaikkum* or *varaiyil* from *varai* (a limit) are joined to a relative participle to express time, in the sense of until'. He gives the following example:

(19) avan irantu poona
he die-p-ver.part. go-p-rel.part.

varaikkum atu nammuTaiya peeril iruntatu
rest.ele. that we-poss. name-loc be-p-NGP.

'It was entered in our name, until he died.'

This suffix is used to restrict the time dimension of a given action. It is attached to the relative participle and not to the headnoun of the relative clause The suffix *varai* is used with relative participles for other functions also. Consider the following examples:

(20) niinkaL varum varaiyil naan
you-hon.suf. come-rel.part. until I
iruppeen
be-fu.-NGP.
'I will be here until you come.'

(21) enakku terinta varaikkum niinkaL
I-dat know-p-rel.part. rest.ele. you-hon.suf.

collaratu caritaan
say-pr-verb.part. correct

'What you say is correct as far as I know.'

Notice that while in (20) the suffix *varai* gives the sense of 'until', in (21) it functions as a restrictive suffix. That is, in (21) it specifies the amount of knowledge that the speaker has. Here it has nothing to do with the time dimension. Though Arden recognized the role of *varai* in indicating time span he failed to identify its specifying or delimiting function. This may be due to the fact that the particle in question occurs more commonly in the first sense only. Example (22) below is ambiguous and can be interpreted in either of the two senses of *varaiyilum*

(22) nii peecina varaiyilum pootum
you speak-p-rel.part. rest.element enough
inimee onka vaattiyaar peecinattai
hereafter you-pass. teacher speak-p-verb.part.-acc.
collu
say.

(a) 'Whatever you have said so far is enough (because I have no time). Now tell me about the things which your teacher said'.

(b) 'Whatever you have said is enough. (I have no patience to hear more). Please tell me about what your teacher has said.'

In certain sentences the restricting function of *varaiyilum* is more obvious than the one indicating time. Consider the following

example:

(23) cananka tiruTiyatu pooka aaTu
people steal-p-ver.part. deduce sheep
maaTu meencatu pooka miccam
cow grace-p-ver.part. deduce remaining
irukkuratil kavurumeNTukku
be-pr-ver.part.-loc. government-dat.
kiTaikkira varaikkum laapam
get-pr-rel.part. rest.element. gain

'After deducting the things that are stolen by people, and eaten up by sheep, cows, etc., the things which the government gets are its gain'.

Sentence (23) also has two interpretations. But the interpretation with respect to the restriction of the quantity of the subject talked about gets priority over the other interpretation.

According to Arden (1942), 'for *varaikkum* either *maTTum* or *maTTukkum* may be used' (215). He thus seems to have treated both *maTTum* and *varaikkum* as free variants. While it is true that wherever *varai* occurs it can be replaced by *maTTum* but the converse is not true. For example, note that in (19a) *maTTum* occurs after the relative participle as *varai* does in (19) and there is no difference of meaning between the two sentences in question.

(19a) avan irantu poona maTTum
he die-pt-ver.part go-pt.rel.part rest.
atu nammuTaiya peeril iruntatu.
that we-poss. name-loc. be-p-NGP.

'It was entered in our name until he died.'

As opposed to this, *maTTum* cannot be replaced by *varai* in all its occurrances. This may be due to the fact that *varai* occurs only with a relative participle whereas *maTTum* can occur both with a relative participle and the headnoun of a relative clause. In (17a) and (18a) *maTTum* occurs as a restrictive element and its replacement by *varai(kkum)* produces ungrammatical sentences as shown in (17c) and (18c).

(17c) *namma camuukattil unka cankam
we-poss society-loc. you-poss. association
karutukira kuraipaaTukaLai
think-pr-rel.part. fault-p.m.-acc.
varaikkum collunka
rest. ele. say-PNG.

(18c) *inka peeciya periyavarkaLil
here speak-p-rel-part. respected person-pl.m.-loc.
carvaatikaari varaikkum oru aciriyar
sarvatikari rest.ele. one teacher

taan: According to Arden (1942) the suffix *taan* is 'added to words to give emphasis and may be translated by such words as indeed, only, etc.' (104). But he does not say anything about the role of this particle in a relative clause though he has discussed extensively about many particles in their association with relative clauses. The suffix *taan* when suffixed to the headnoun of a relative clause, is used to restrict the headnoun from the rest of the same class of nouns. Observe the following sentences:

(24) inka naan conna naNpar
here I say-past-rel.part. friend
raamacaami taan enakku ceyti colluvaar
Ramasamy emp. I-dat. news say-hab-NGP.
'Ramasamy whom I mentioned here alone would give the news to me.'

(25) nii kuTikkira kancitaan
you drink-pr-rel.part gruel-rest.ele.
naanum kuTikkireen
I-also drink-pr-NGP.
'I also drink only the gruel which you drink.'

Note that the suffix *taan* is used as an emphatic particle in (24) and as distinct from this, in (25) it functions as a restrictive element as well as an emphatic particle. If the speaker drinks the *same, liquid food* after it has been left over by the person spoken to, there it is emphatic. But it can also be restrictive in the sense that the speaker eats the *same kind* of food as the hearer eats. In certain cases, however, the restrictive meaning stands out clearly as in the following example:

(26) ippa OTAcci irukkiratu

now break-pt.-ver.part. be-pr.-rel.part.-NGP.

cevuttula irukkira cimiNTaittaan

wall-loc. be-pr-rel.part. cement-rest.ele.

muTincaa cevuru atumeela irukkira

possible-cond.m. wall that-on be-pr-ver.part.

kaangriTTu biim ellaattaiyum oTa

concrete beam all break-

'What you have broken now is only the cement which is plastered on the wall. If possible break the wall and the lse 'e concrete beam which is on the wall and every thing else.'

In (26) *taan* is not used for the purpose of emphasis. It is used instead to restrict the action to the breaking of the cement and not other things.

Combination of maTTum and taan. If the combination of *maTTum* and *taan* as *maTTuntaan* is added to the headnoun of a relative clause, *maTTum* functions as an emphatic particle while *taan* restricts the domain of the relativized objects. As distinct from it, when *maTTum* occurs alone, it is used to restrict the domain of the subject relativized as pointed out earlier. Observe the following example:

(27) ippaTi iyalpaaka uLLa aarvam

like this natural-adv.m. be-pr-rel.part interest

yaarukku irukka muTiyum enraal

who-dat. be-pr.inf. can conditional

kiraamattil pirantavanukku

village-loc. born-p-rel.part-PNG-dat.

maTTuntaan irukka muTiyum

emp.-rest.ele. be-inf. possible

'Such a kind of natural interest is possible only in the case of people who have been born in a rural area.'

In the above example *taan* restricts the people born in villages as against people born elsewhere and the suffix *maTTum* puts emphasis on the particular kind of people who were already restricted by *taan*.

Similarly, if *-ee* precedes *taan*, it gives only emphasis to the already restricted headnoun. Examine the following sentence:

(28) nii kuTikkira kanciyeetaan

you drink-pr.-rel.part. gruel-emp.-rest.ele.

naanum kuTikkireen

I-also drink-pr-PNG.

'I also drink the same gruel which you drink.'

In (28) the presence of *-ee* gives emphasis to *kanci* 'liquid food' which is already restricted by *taan* from rest of the class of foods.

Determiners

Nature of determiner: A determiner specifies the noun for distance, quantity or number (Ramarao 1968:78). They can be divided into three broad classes according to their function and the position they occupy in a sentence, namely (1) interrogative, (2) demonstrative, and (3) quantifiers. Demonstratives can further be divided into two subclasses: (1) proximate and

(2) remote. Quantifiers can also be divided into two namely (1) numerals and (2) non-numerals. Numerals can further be classified as ordinals and cardinals. This classification can be represented in the form of a tree diagram as shown in Figure 1.

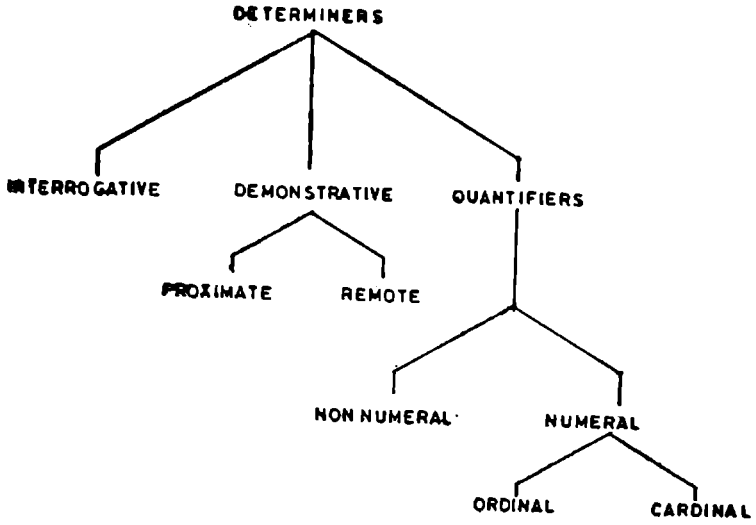


FIGURE .1

Determiners in Tamil can be grouped on the basis of their structural properties thus:

(a) Non-numeral.

ellaam muZuvatum puuraa attanai	' all '
cila	' some, few '
pala	' many '

(b) Ordinal.

mutalaavatu	' first '
reNTaavatu	' second,' etc.

(c) Cardinal.

oNNU (onRu)	'one
reNTu	'two,' etc.

(d) Demonstrative.

inta	'this' (proximate)
anta	'that' (remote)

(e) Interrogative.

enta	'which'
etu	
enna	'what'

Functional Classification: There are selectional restrictions between determiners and relative clauses. Smith (1964) divides English determiners into three classes: (1) Unique, which accept only NRRC, (2) Specified which acept both NRRC and RRC, and (3) Unspecified which accept only RRC. It is possible to have a three-way classification of Ta. determiners also based on the functional clues they provide. *ellaam*, *muZuvatu*, *puuraa*, *attanai*, *cila*, *pala*, *ovvoru*, *enta* are unspecified determiners and *oru*, *inta*, and *anta* are śpecified determiners. Tamil has no determiner which can be called unique. But the unique nouns and proper nouns occur only in NRRC.

UNSPECIFIED DETERMINERS: (a) *ellaam* and its variants. The unspecified determiners *ellaam*, *muZuvatu*, *puuraa*, occur predominantly in spoken language and the remaining three occur in both spoken and written languages. All these determiners indicate the totality of relativized nouns and do not specify any one of the subjects and thus leave the subjects unspecified. Consider the following example:

](29) kaaTTil	uLLa	marankaL	
forest-loc.	be-pr-rel.part.	tree-pl.m.	
{ ellaam / muzuvatum / puuraavum / attanaiyum } all	ippa	arukkuratukku	poovutu
	now	saw-pr.-verb.part.	dat. go.Pr. NGP

'All the trees which are in the forest are now going for saw ing?'

The presence of the determiners in (29) does not specify any particular *maram* 'tree' among the trees which are in the forest. The trees are left unspecified.

(b) **Cila** and **pala:** The determiners *cila* and *pala* are also used in a restrictive relative clause and they leave the relativized noun unspecified. Observe the following example:

(30)	aruccunan	ceyta	cila/pala
	Aruchunan	do-past-rel.part	few or some/many
	kaariyankaL	citambarattukku	piTikkavillai
	things-pl.m.	Chidambaram-dat.	like-neg.

'Chidambaram does not like some or few/many things that Aruchunan did.'

(31)	kuuTTattukku	vanta	cila/pala
	meeting-dat.	come-p-rel.part.	few or some/many
	peer maZai	peytataal	tirumpiviTTaar-kaL
	person rain	rain-past-ver.part.	return-p-PNG.

'Few or some/many people who came to the meeting returned back due to the rain.'

In (30) the determiners *cila, pala* indicate that there are 'a few or many things' that Chidambaram dislikes. But there is no individual specification about the 'things' involved.

ovvoru.

Like *ellaam, ovvoru* also includes each and every subject of the relativized noun, but it also does not specify any particular subject. The difference between *ellaam* 'all' and *ovvoru* 'each and every' is that the former mentions the subject as a totality while the later refers to their individuality but still leaves them unspecified. Examine the following sentences:

(32)	niinka	inime	cantikkira
	you-hon.suf.	hereafter	meet-pr-rel.part.
	ovvoru	toolviyum	oru paaTamtaan
	each and every	failure-conj.	one lesson

'Each and every failure which you are going to face hereafter is a lesson to you.'

(33)	panniircelvam	ceyyira	ovvoru
	Panneerselvam	do-pr-rel.part.	each and every
	kaariyattaiyum	nenaccaa (1)	kasTTamaa(ka)
	thing-conj.	think-cond.m.	difficulty-adv.m.
	irukkutu		
	be-pr-NGP.		

'If I think of each and every think that Panneerselvam has done, it gives me mental pain.'

In the above examples, the determiner focusses on each and every subjects of the domain of relativization namely *toolvi* in (32) and *kaariyam* in (33), but they are not specified.

Numerals: Along with the other determiners, the numerals are also used as unspecified determiners. As was pointed out earlier they can be either ordinal or cardinal.

(a) **Ordinal Numerals**: Ordinals indicate the order which the relativized noun occupies in a set. Observe the following example:

(34)	kuuTTattil	nikkira	mutalaavatu
	crowd-loc.	stand-pr-rel.part.	first
	aaLaik	kuuppiTu	
	man-acc.	call	

'Call the first man who is standing in the crowd.'

It is clear that the relative clause in the above sentence is a restrictive one. The determiner *mutalaavatu* 'first' fails to specify who exactly is the person who should be called.

(b) **Cardinals :** Cardinals are used for counting the objects in question. Consider the following example:

(35) veelainiruttam ceyta pattu

strike do-p-rel-part. ten

toZilaaLikaLai meeneejar Dismis paNNinaar

worker-pl.m.-acc. manager dismiss do-p-NGP.

'The manager dismissed ten workers who undertook the strike.'

It is obvious that in (35) the relative clause is a restrictive one and the cardinal numbers just indicates the number of headnouns. But like *ellaam, cila* and *pala,* they also do not specify any one of the particular nouns.

Interrogative Determiners.

The interrogative pronouns *enta, etu* 'which,' *enna* 'what,' function as interrogative determiners. These interrogative determiners occur in restrictive relative clause as the following example shows:

(36) anta paiyyanooTa ninaivaaka irukkira

that boy-soc. rememberance-adv.m. be-pr-rel.part.

{ enta poRuLum / poruL etuvum } en kaNNula paTakkuuTaatu

I-poss. eye-loc. visible-neg-imp.

whichever things.

'Anything that reminds one of that boy should not be visible to my eyes.'

In the above sentence the determiner is used to refer to the indefiniteness of the relativized headnoun which is thus left unspecified.

Specified determiners: The specified determiners in Tamil are *oru* ' a ,' *inta* ' this,' and *anta* ' that.' They can occur either with restrictive relative clause or with non-restrictive relative clause. When these determiners occur with a restrictive relative clause, they specify one among the subjects already restricted by the relative clause. For example:

(37a) kuRRaccaaTTukku uLLa caaTcikaL

allegation-dat. be-pr-rel.part. witness-pl.m.

' The witnesses did not agree to the allegations.'

In (37a) the headnoun *caaTcikaL* ' witnesses ' is restricted by the relative clause *KuRRaccaTTukku uLLa caaTcikaL*' the witnesses for the allegation ' from the rest of the same class of *caaTcikaL* consisting of say, for example, *tiruTiyatukku uLLa caaTcikaL* ' the witnesses for the theft'. Among the restricted nouns *caaTcikaL* ' witnesses', (37b) and (37c) specify a particular one who does not agree.

Conclusion

From the above analysis, it is clear that the RRC can be distinguished and identified from NRRC in Tamil. Table 2 summarizes the difference between them:

1.	Non-Restrictive	Restrictive
1.	Deletion of relative clause does not affect the basic meaning of the matrix sentence.	Deletion of relative clause affects the basic meaning of the matrix sentence.

2.	Adds extra information about the head.	Defines or restricts the head-noun.
3.	Embedding order is not important.	Embedding order is important.
4.	Constitutes a separate speech act.	Is part of a speech act.
5.	Unique and proper nouns can occur as heads.	Unique and proper nouns generally cannot occur as heads.
6.	Can take specified determiners.	Can take specified determiners.
7.	Cannot take unspecified determiners.	Can take unspecified determiners.

TABLE 2. Differences Between NRC and RRC.

REFERENCES

ABRAHAM, P.T. 1978. Relative clause in Malayalam. Annamalainagar: Annamalai University.

AGESTHIALINGOM, S. 1977. TamiZum moZiyiyalum. *MoZiyiyal* 1.1.1-17.

———. 1978. Tolkaappiyar's concept of Syntax. *Studies in early Dravidian grammars*, ed. by S. Agesthialingom and N. Kumaraswamy Raja. Annamalainagar: Annamalai University.

ANNAMALAI, E. 1968. *Adjectival clause in Tamil.* Unpublished Doctoral dissertation, University of Chicago.

ARDEN, A.H. 1891. *A progressive grammar of Common Tamil* (5th edition revised by A.C. Clayton, 1954). Madras: Christian Literature Society.

COMRIE, B. and KEENAN, E.L. 1977. Nounphrase accessibility and universal grammar. *Linguistic Inquiry* 8.1.63-99.

EMONDS, JOSEPH, 1979. Appositive relatives have no properties. *Linguistic Inquiry* 10.2.211-43.

ILAKKUVANOR, S. 1963. *Tolkaappiyam with Critical Studies.* Madurai: Kural Neri Publishing House.

ISRAEL, M. 1973. *The treatment of morphology in Tolkappiyam.* Madurai: Madurai University.

KARLSON, E. 1972. Relative clause in Finnish. *Chicago which hunt*, ed. by P.M. Peranteau et al. Illinois: Chicago Linguistic Society.

KEENAN, E.L. 1972. Relative clause formation in Malagasy. *Chicago which hunt*, 119-189.

KOTHANDARAMAN, P. 1969. *A contrastive analysis of Tamil and Telugu.* Unpublished Doctoral Dissertation, Annamalai University.

B. LAKSHMI BAI. 1983. Relativization in child language and history. Paper presented at the *National Seminar on Language Variation and Language Change*, Osmania University.

LANGENDOEN, D.T. 1969. *Study of syntax.* New York: Holt, Rinehart and Winston.

MAHALINGAM, K. 1983. Is affixial a relative clause? *Ayuukkoval* 15.2.242-8. Annamalai University.

MASICA, C. 1972. Relative clauses in South Africa. *Chicago which hunt*, 198-204.

MCCAWLEY, J.D. 1972. Japanese relative clause. *Chicago which hunt*, 205-14.

NADKARNI, M.V. 1970. *NP-Embedded structure in Kannada and Konkani*. Doctoral dissertation, University of California.

PERLMUTTER, DAVID. M. 1972. Evidence for shadow pronouns in French relativization. *Chicago which hunt*, 73-105.

PERANTEAU, P.M., J.N., LEVI, and G.L. PHARES. (eds.) 1972. *The Chicago which hunt: papers from the relative clause festival*. Chicago: Chicago Linguistic Society.

RAMARAO, C. 1968. *A transformational study of Telugu nominals*. Doctoral dissertation, Cornell University.

ROSS, J.R. 1967. *Constraints on variables in syntax*. Doctoral dissertation, M.I.T.

SMITH, C.S. 1964. Determiners and relative clauses in a generative grammar of English. *Language* 40.1.37-52.

SUBRAHMANYA SASTRI, P.S. 1934. *History of grammatical theories in Tamil and their relation to the grammatical literature in Sanskrit*. Madras: Journal of Oriental Research.

THOMAS, O. 1965. *Transformational grammar and the teacher of English*. New York: Holt, Rinehart and Winston.

THOMSON, A.J., and A.V. MARTINET. 1980. *A practical English grammar*. Madras: Oxford University Press.

USHA RANI, A. 1980. *Relativization in Telugu*. M. Phil. dissertation, Osmania University.

WRETH, P. 1973. 'Some thoughts on non-restrictive relatives'. Linguistics 142.33-67.

Note

*I am thankful to Dr. B.Lakshmi Bai, my M.Phil. Research supervisor, and Prof. Bh. Krishnamurti for their valuable comments and suggestions.

OPiL 7 & 8, 116—130 (1981—82)

LANGUAGE ATTITUDES OF A LINGUISTIC MINORITY IN A REGIONAL AREA

AMITAV CHOUDHRY

Indian Statistical Institute, Calcutta

A study of language attitudes of Bengalis as a linguistic minority in the twin cities of Hyderabad and Secunderabad was conducted. Though permanently settled Bengalis had a more accommodative attitude towards Telugu, a majority of them did not consider learning of a regional language more important than cultivating the mother tongue. English was preferred to Hindi as a medium of instruction in schools and higher education. While their attitude towards the regional language was partly negative and partly hesitant, their attitude towards English was highly positive on many counts.

Attitude has served as a variable in many socio-linguistic studies. Ferguson defines language attitudes as elicitable 'shoulds' on who speaks, what, when, and how (as quoted in Cooper and Fishman 1974:6). Another approach would be to define language attitudes in terms of their consequences, i.e. those attitudes which influence language behaviour and behaviour towards language. To be more explicit, we may say that attitudes towards a language, a feature of a language, language use, or towards language as a group marker are all examples of language attitudes. The attitudes of a speech community towards a dominant language may be favourable for use in some societal domains but not in others as will be seen later. According to Labov (1970) social attitudes towards language are extremely uniform throughout a speech community. In the present paper I wish to throw light on the language attitudes of the Bengalis as a linguistic minority in Hyderabad and Secunderabad.

Bengalis started trickling into Hyderabad as early as the 1930's. Hyderabad then being a part of the Nizam's State, it was compulsory to know Urdu if one wanted to get into the State

services. So the earlier Bengalis cultivated Urdu to some extent. With the advent of ' Independence ' and the subsequent formation of the Andhra Pradesh, Telugu started creeping up the ladder of linguistic importance, but Urdu being represented by a substantially large proportion of the population was still a popular language, more so because of the multilingual atmosphere; the Bengalis also went along with it. Bengalis migrated to Hyderabad for professional reasons and were well spread out in the twin cities instead of forming isolated pockets or colonies. The number increased steadily due to rapid industrialization and, according to the 1971 Census, they numbered 3,515. Today the figure should be easily 5,000 or even more. Roughly about 50 Bengali families have permanently settled down in the twin cities and some of them have built their own houses. The Bengalis in Hyderabad have a fairly good rapport with the Telugu speaking community, and also with the other speech communities. The local Bengalis can be classified broadly into 3 categories: (1) Permanent settlers, (2) Temporary migrants and (3) Floating population. Persons belonging to the third category are mainly in the Defence services, Central Government services, or on temporary deputation. For the purpose of this study only subjects from the first two categories are taken.

Sample Design

A list of 300 families were pooled and by systematic sampling 100 families were selected from which 100 men and 100 women, mainly couples, were asked to fill up a questionnaire based on the Likert method. In this test a three point scale was used with the following response categories: (1) Agree (A), (2) Disagree (D), and (3) Undecided (U). The subjects ' attitude towards Telugu, Hindi, English and Bengali was tested. Statements were mainly on (a) Communicative choice, (b) Vocational importance (c) Media of instruction in Higher Education and, regarding Bengali, (d) Retention of the mother tongue. Since the focus of the study was language attitude, only relevant statements from the test were chosen. This paper forms only a part of a larger study on language interference and the retention of the mother tongue.

Attitude Towards Telugu

As expected, the attitude of the permanently settled Bengalis towards Telugu was more accommodative than that of the temporary migrants. This fact was disclosed by many subjects

in the former group, while they were filling up the questionnaire. Table I gives us the sum total of the relative proficiency in Telugu of both groups:

Reading	Speaking	Writing	R/S/W
4.5%	45%	4%	2.5%

Table 1. Proficiency in Telugu.

Table 2 shows the permanently settled Bengalis' response to the following two statements:

Statement T_1 — It is important to know the regional language to move about in the twin cities of Hyderabad and Secunderabad.

T_2 — A Bengali in Hyderabad does not find it difficult to communicate with the regional language community.

	A	D	U
T_1	17.5%	76%	6.5%
T_2	92.5%	3%	4.5%

Table 2. Response to statements T_1 and T_2.

In the academic sphere 60% of the children took up Telugu at the primary and secondary level as a language but none at the level of higher education.[2] The rest either opted Sanskrit or Special English at the school level. Coming to the statement T_3, viz. ' establishment of universities with the regional language as the media of instruction should be encouraged', the majority thought it was a discouraging idea.

Table 3 gives us the subjects' response to this statement:

A	D	U
20%	47.5%	32.5%

Table 3. Response to statement T_3.

Among the 20% who agreed with the statement were mainly the permanent settlers who felt that for a vocational opening within the State, knowledge of the regional language was essential and being educated through that language has a sound basis. The need to offer equal opportunities to different Indian languages to develop, a regional language media graduate being an effective tool in rural development for offering professional advice to farmers, etc. and positive identity as an important factor in linguistic inheritance and national integrity were some of the other points in favour of Telugu. While the majority felt that costly technical expertise was needed to upgrade the regional language. Universities becoming isolated pockets with restricted interaction between students and academicians of different regions, chances to go abroad for advanced or higher studies becoming remote, and finally populations migrating for professional reasons finding it difficult to adjust to the lack of uniformity resulting in unequal opportunities in competitive examinations and job opportunities were some of the negative points expressed by the subjects.

Attitude Towards English

The majority of the Bengalis felt that English was an exhaustive language highly developed in every field of modern technological activity and as a language of indisputable international dominance. In their opinion, in the academic field, the highest degree of proficiency in science and technology, the two important carriers of modern civilisation, could be attained through English alone. They even stated that the basic demand in any vocation was a good command over English. With the unemployment factor still being very much in the air, it was unthinkable for them to educate their children through any language other than English. And with a fair degree of inter-state migration the academic relia-

bility of English increased. It was also found that 93.5% of the Bengali children went to English medium schools and colleges. Table 4 below gives a clear picture of the subjects' responses in favour of English:

Statement : E_1=In our country English and not Hindi is the best language as the medium of instruction in schools and for higher education.

E_2=If one is educated through English medium he has a better chance in securing a job compared to any other regional language.

E_3=Text books in English are of a better standard than books in other regional languages.

	% A		% D		%U	
	M	W	M	W	M	W
E_1	98	96	1	2	1	2
E_2	99	98	1	2	—	—
E_3	100	100	—	—	—	—

M=Men W=Women

Table 4. Response to statements E_1, E_2 and E_3.

Attitude Towards Hindi

While some felt that Hindi would bring uniformity in our educational system, avoiding the complexities of a multilingual system, many were of the opinion that even in the next two decades, it would be difficult for Hindi to reach the prolific status of English. Some complained that terminological items translated

from English to Hindi were more difficult to comprehend than English items. They also felt that such terminologies were confusing, especially in text books for professional courses, because some of the translated terms were more Sanskritised in nature. The standard of the text books was comparatively low. Table 5 gives the sum total of their attitude towards Hindi as a language of vocational importance and having academic value:

A	D	U
21.5%	58.5%	20%

Table 5. Attitude towards Hindi.

Attitude Towards Bengali

In the case of a direct statement holding the learning of regional language as more important than cultivating the mother tongue, 44% vehemently disagreed and 41% remained undecided, while 15% agreed with the statement. One reason for the high degree of indecision could be that most of them felt that they had reached the crossroads in language choice. That it was more practical and feasible to know the regional language for possible future advantage was one of the positive points. They did not like the idea that students belonging to linguistic minorities be encouraged to write examinations in their mother tongue.

Social Mobility of Linguistic Minority

What happens when a dominant group blocks the social mobility of members of a subordinate group, partly at least, on the basis of language factors? The minority develops an antagonistic attitude towards the dominant language which in severe cases spreads to the people who speak it. Only when social mobility is not blocked by a dominant elite belonging to a particular language group, upwardly motivated individuals can seek to rise as individuals. This obviously being a delicate question, the Bengalis were very careful in giving their response; about 0% decided to remain neutral (Table 6). The statement put

to them was: 'language restrictions have the effect of killing ambitions and slowing the rate of economic development of a linguistic minority like Bengalis in a regional area'. The response to this is shown in Table 6:

A	D	U
46.5%	3.5%	50%

Table 6. Response to qestion on language restriction.

THE CASE OF THE UNDECIDED

In any study where a three way opinion scale is used, it is always interesting to note as to how many decided to remain undecided or take a neutral stand. The women were 31% more undecided than the men as can be seen in Table 7. This percentage would have been much less, but for the high frequency of undecided responses to 3 statements (Refer Tables 3, 5 and 6).

Male	Female
12.69	13

Table 7. Percentage of the undecided.

Concerning the statement 'establishing Universities with Regional language as the media of instruction should be encouraged,' one may say that the majority could easily have voted either in favour of English or the Regional language if they were more informed, sure, and satisfied about the recent developments in the promotion of the Regional languages and their effective usage at the University level. Some of the following doubts seem to have influenced their neutral stance:

(a) Did the Regional language have a rich literature and vocabulary?

(b) How much of translation work was already done and whether it would enable the students to keep in touch with the latest developments in their own subject all over the world?

(c) Did the Regional language have the capacity to express and interpret general and technical ideas which an under-graduate or post-graduate student would not find any difficulty in comprehending?

(d) Is the Regional language conducive to general mobility?

(e) Are the text books in Regional language of a standard quality?

(f) And finally, whether it would open new vistas for future research, have vocational importance, and monitor latest developments in advancing technology all over the world and act as a symbol of efficiency.

Association Among Responses To Different Items

With a view to examining the extent to which the responses given to various questions were interrelated, we examined the association between responses to a few pairs of questions. To this end we prepared joint frequency distributions of responses to each of several pairs of questions and applied the X^2-test to check whether the responses to the two question items were completely independent or not. In many cases, the null hypothesis of complete independence was rejected by the X^2- test indicating that the responses to the two items were far from random and unrelated. In such cases, the C-coefficient of contingency presented below, would measure the extent of association between the two sets of responses. The following statements were covered:

Statement No.	Statement
11.1	In our country English and not Hindi is the best language as the medium of instruction in school and for higher education.

11.2	Knowledge of English is essential in offering better future prospects in the vocational field.
11.3	Establishing universities with the regional language as the medium of instruction should be encouraged.
11.4	Learning the regional language is more important than cultivating one's mother tongue.
11.10	Text books in English are of a better standard than books in other languages for professional sources.[3]
11.15	You feel concerned about your children since they find it difficult to retain their mother tongue.
11.18a	English is more convenient than Telugu.
11.18b	Hindi is more convenient than Telugu.

The possible responses are:

(a) A—agree
(b) U—Undecided
(c) D—disagree

The joint frequency distributions of the responses are given below:

Tables 8a—8d give joint distributions of responses to selected pairs of question-items.

Responses to 11.2	Responses to 11.1			Total
	A	U	D	
A	194	3		197
U	..	..	3	3
D	..	..	..	..
Total	194	3	3	200

Table 8 a. (11.1 and 11.2)

Responses to 11.3	Responses to 11.1			Total
	A	U	D	
A	38	..	2	40
U	78	3		81
D	78	..	1	79
Total	194	3	3	200

Table 8 b. (11.1 and 11.3)

Responses to 11.15	Responses to 11.4			Total
	A	U	D	
A	19	65	51	135
U	1	9	13	23
D	8	17	17	42
Total	28	91	81	200

Table 8 c (11.4 and 11.15)

Responses to 11.18b	Responses to 11.18a			Total
	A	U	D	
A	182	7	..	189
U	6		1	7
D	1	..	3	4
Total	189	7	4	200

Table 8 d (11.18a and 11.18b)

Before computing the X^2- criterion to test the hypothesis of independence of (i.e. zero association between) the responses to the two question - items, pooling of neighbouring classes had to be resorted to in order to ensure sufficient frequencies. In general, the ' undecided ' category was amalgamated with the ' disagree ' category and the contingency tables reduced to 2 x 2 tables. The sole exception was for the joint distribution of responses to 11.4 and 11.15. For all the 2 x 2 tables, Yate's correction for continuity was applied in computing the value of X^2. The results are summarised in Table 9:

Question-items studied	X^2			$C=\frac{X^2}{N+X^2}$
	value	d.f.	significance	
1	2	3	4	5
11.1 and 11.2	67.54	1	significant at 0.1% level	0.5024
11.1 and 11.3	0.10	1	non-significant	0.0223
11.4 and 11.15	4.64	4	non-significant	0.1507
11.18a and 11.18b	15.51	1	significant at 0.1% level	0.2681

Table 9. Association between responses to selected pairs of question items.

In responding to statement 11.1 many informants felt that at a time when English is to be studied for increasing dictates of life, its importance should not be disputed. They also felt that English is the best medium of instruction for its present utility and future needs. At the same time with reference to Table 4 (E_2), which represents the responses to statement 11.2, we see that out of 200 informants just three disagreed with the statement while the rest agreed with it. The reasons have already been stated in the section on attitude towards English. Therefore it is not surprising that the association between responses to statements 11.1 and 11.2 is high, the C-value being 0.5024.

Comparing Table 3 with Table 4 (E_1) we find the partly negative, partly hesitant attitude towards the regional language in Table 3 whereas in Table 4 (E_1) the responses were highly positive towards English. Therefore it is not surprising that the C-value was found to be almost negligible, i.e. 0.0223, when the association between responses to statements 11.1 and 11.3 were made.

On the other hand, the degree of association between responses to statements 11.4 and 11.15, referring to the attitude towards the regional language and the mother-tongue respectively but with a slight change in focus, was found to be low, the C-value being 0.1507. The minorities who have very few privileges with regard to language choice often find themselves unsure about the future course of events especially when it comes to the multidimensional complexities of India's language policies. Will their children be benefitted by imbibing the regional language? Or will cultivation of the mother tongue apart from helping them to be culturally sound, offer them economic guarantees in future? Thus their responses to both statements reflected their hesitant attitude and also exposed their insecure feeling towards both the regional language and their mother tongue. Further, the degree of association between responses to statements 11.18 and 11.18b was found to be moderate, the C-value being 0.2681. Both statements referred to the better social mobility and linguistic accessibility of English and Hindi over Telugu. 'The value judgements that underlie language attitudes may be moral or aesthetic, or they may rest on a pragmatic appeal to efficiency' (Halliday, McIntosh, Strevens 1964). The above statistical facts are in accordance with Labov's claim that attitudes towards language are extremely uniform throughout a speech community. The study also brings out clearly a linguistic minority's rational iew concerning the dynamism of any successful language.

NOTES

*Paper presented to the National Seminar on "Regional Languages as the Media of Instruction in Higher Education" 5 & 6 March, 1982 Department of Linguistics, Osmania University, Hyderabad.

1. In the Likert Method the task set for the subjects is such as to allow individual differences with respect to the attitude continuum to be expressed. Subjects respond to each item on the basis of the extent to which they are willing to endorse the item. The items are of the multiple choice type with three responses, 'Yes,' '?,' No,' or 5 responses, 'strongly approve' through 'undecided' to 'strongly disapprove.' Each subject responds to every item and his score is the sum of the weights assigned to his response. Stimuli are selected so as to increase the individual differences with respect to the attitude continuum.

2. This information was derived from Schedule 1 (Attitude of Bengali children) used for an earlier survey in the twin cities.

3. Though degree of correlation would have been high if it had to be compared with 11.1, X^2 could not be computed of the absence of negative responses. See Table 4 (E_3).

REFERENCES

COOPER, ROBERT L. and FISHMAN, JOSHUA A. 1974. The study of language attitudes. *International Journal of the Sociology of Language.* The Hague: Mouton.

HALLIDAY, M.A.K., ANGUS MCINTOSH, and PETER STREVENS. 1964. *The Linguistic Sciences and Language Teaching.* London: Longmans.

LABOV, W. 1970. The study of language in its social context. *Language and Social Context,* ed. by Giglioli. London: Penguin.

OPiL 7 & 8, 131 – 154 (1981 – 82)

A KYMOGRAPHIC AND SPECTROGRAPHIC STUDY OF ASPIRATION IN TELUGU

K. NAGAMMA REDDY

The purpose of the present paper is to study, instrumentally, the nature of the release of the plosives (including the affricates) in Telugu, in terms of duration, airflow and acoustic characteristics, and to make a comparison of the aspiration of phonologically aspirated and corresponding unaspirated consonants.

The results reveal that the so called 'voiced aspirate' is always characterised by vocal fold vibrations during the closure and the release (but with low amplitude). When compared with aspirated consonant, the unaspirated consonant shows marked difference in duration, airflow and acoustic structure of the release. Aspirated plosives are much longer than the corresponding unaspirated ones. However, the vowel following the aspirated plosive is reduced in its duration than the same vowel after an unaspirated plosive. The outstanding findings of the unaspirated plosives are the consistently lowest values for the retroflexes than for labials and dentals, and the highest values for the velars. Aspiration of aspirated plosive is characterised by an increase in oral airflow when compared to the open interval of an unaspirated plosive. The duration of aspiration/open interval not only varies according to the point of articularion of a plosive, but also on the position of a plosive in an utterance, the number of syllables in a word and the quality of the following vowel. There is certainly an increase in the duration of an open interval of a bilabial plosive before a close vowel than before an open vowel which agrees well with the universal tendency proposed in the phonetic literature, but there is also an increase in the duration of an open interval of /p/ before /u/) than before /i/ which suggests that the duration of an open interval also varies according to the place of constriction of a vowel. It appears furthermore, that the open interval of a bilabial plosive is longer before rounded vowels than before unrounded ones.*

---

*I wish to dedicate this paper to the memory of my colleague Dr. C. Nirmala.

INTRODUCTION

Among the phonetic features such as voicing, aspiration, duration, nasalization, tenseness (or fortisness), glottalization, and implosion, the Telugu language uses only the first three i.e. voicing, aspiration and duration (length), to distinguish consonants produced at the same supraglottal place of articulation. Thus, for example, plosive and affricate consonants at each of the five places (bilabial, dental, post-alveolar, palatal and velar) are differentiated in both word-initial and word-medial position by the presence or absence of voicing and by the presence or absence of aspiration, and in word-medial position by the difference in length.

In this paper, I shall only deal with, briefly, one of the three phonological features namely, the aspiration of Telugu consonants in terms of voice onset time (VOT) values (i.e. duration), airflow, and acoustic characteristics as seen from both kymograms and spectrograms.[1]

The feature aspiration in Telugu is associated with only stop and affricate consonants which, when followed by aspiration, are treated as aspirated consonants and are symbolised by a stop or affricate plus /h/. Except in this context, where the /h/ is treated as part of the consonant itself in all other places (even when it occurs with other consonants as pre[2] or post consonantal, /h/ is regarded as an independent phoneme[3] (i.e. a glottal fricative). For instance, the consonant sequences such as a nasal

---

1. A preliminary investigation with the instruments has been carried out in the Phonetics Laboratory, Department of Linguistics, Edinburgh University U.K., and I am grateful to the members of the department, particularyly to my supervisors Mrs. E.T. Uldall and Professor R.E. Asher for their encouragement and guidance during my research. A further verification of the spectrographic analysis has been recently made by making use of the facilities available in the Department of Linguistics, Osmania University, Hyderabad.

2. Telugu also has pre-aspiration, in borrowed words, in common with other languages such as Norwegian (Wolter 1965:594), Scots Gaelic (Shuken 1977) and Icelandic (Catford 1977:114). Examples are /antahpuram / 'Palace' / cihnam / 'sign', / asahjam / 'vexing', / aahwaanam / 'invitation', / hrudajam/ 'heart', etc.

3. However, it is characterised by different phonetic features in different consonantal contexts and needs to be studied on its own.

or a trill followed by /h/ (e.g. */simham/* ' 'lion' */arhata/* ' qualification)' are treated in Telugu phonology not as aspirated consonants, but as a sequence of consonant plus /h/.[4]

Aspirated phonemes in Telugu could be treated as marginal phonemes since they vary freely with the unaspirated ones and, in addition, occur only in the borrowed words of certain styles of speech (see Sjoberg, 1962), and have a low functional load (for further details, see Nagamma Reddy, 1981). As Krishnamurti (1957:179) points out, ' if we are analysing the speech of the uneducated classes we have to eliminate all the aspirated stop phonemes from the list since they are all replaced by the corresponding unaspirated ones '. . . . ' even among the educated classes, aspirated and unaspirated stops freely alternate with differences in style, emphasis, tempo, etc '. Thus, there are two types of alternations: (1) the phonologically aspirated consonants being replaced freely by corresponding unaspirated ones and, (2) the phonologically unaspirated stops being pronounced/produced as aspirated consonants when the syllable continuing a stop consonant is stressed or the word in question is emphasised. Aspirated stops also occur in certain numerals like */yaabhai/* ' fifty,' */nalabhai/* ' forty,' etc.

As these variations are not directly relevant for the present paper, we may say that when the loan words are considered, there is a four-way contrast in Telugu at each of the five places of articulation between voiceless unaspirated and aspirated and voiced unaspirated and aspirated plosives and affricates, just as in Indo-Aryan languages. This is shown in Table 1 below.

As seen in Table 1, both voicing and aspiration are significant in Telugu and, therefore, have to be kept separate as against Lisker and Abramson's treatment (1964) wherein voicing and aspiration are combined into one feature (see Fischer – Jørgensen (1968:87). The examples illustrating the contrasts between voiced and voiceless aspirated and corresponding unaspirated stops and affricates in word-initial and word-medial positions

4. The reasons for treating only the stop and/or affricate plus /h/ as unitary phonemes rather than sequences of two phonemes can be found, in detail, in Nagamma Reddy (1981).

	Bilabil	Dental	Post alveolar	Palatal	Velar
Voiceless unaspirated	p	t	T	c	k
Voiceless aspirated	ph	th	Th	ch	kh
Voiced unaspirated	b	d	D	j	g
Voiced aspirated	bh	dh	Dh	jh	gh

Table 1. Plosives and Affricates in Telugu.

can be found in Nagamma Reddy (1981). There are also certain distributional restrictions on the occurrance of aspirated phonemes when compared to the unaspirated ones.[5]

However, we know the term 'aspiration' itself is used both as a phonetic and phonological feature with the same label. Since, I shall be dealing with aspiration of both phonologically aspirated consonants (both voiced and voiceless) and unaspirated consonants,[6] the definition of the term 'aspiration' itself needs some clarification.

In phonetic literature 'aspiration' has been defined with varying degrees of precision. Some writers have referred to its underlying glottal constriction/opening, some to the conocomitant air pressure/airflow changes and some to the resultant auditory acoustic aspects or temporal (i.e. relative timing) aspects. Crystal (1980) describes aspiration as, 'a term in phonetics for the audible breath which may accompany a sound's articulation, as when plosive consonants are released.' This definition does not take account of the use of the term in the wider sense of aspiration, viz. as a phonological term.

Henry Sweet (1906:58) talks of "puff of breath" and an "audible explosion." Jones (1957:138, 152) characterizes it as 'a short breathed sound' or 'a noticeable puff of breath or 'aspiration' (i.e. a slight h), heard after the release of a stop and before the beginning of the vowel.' For Lisker and Abramson (1964) the voice onset time (VOT) is the primary characteristic feature of aspiration, for Kim (1970), aspiration implies 'glottal opening at the time of release of the oral closure of a stop,' for Fant (1960:19) an 'h-like sound produced with greater articulatory opening.' Later studies have shown that glottal stricture definition alone is not sufficient to distinguish between all categories of stops, for example, in Hindi where there are four phonological categories of stops (see Bhatia 1976).

---

5. The distribution of aspirated consonants and their combinatorial restrictions can be seen in Nagamma Reddy, (1980 and 1981).

6. As far as Telugu is concerned, except when used for emphasis, the phonologically unaspirated consonants have been assumed by all scholars to be unaspirated phonetically as well. But in fact, this is not true (cf. summary and conclusion).

Fischer – Jørgensen (1958: 107-108) defines aspiration (in French and Danish) in terms of multiple physiological and acoustic characteristics. But her description of aspiration mainly refers to the voiceless position of the glottis. Ladefoged (1971), following Abercrombie (1967), also defines aspiration as 'a brief period of voicelessness during and immediately after the release of an articulatory stricture.' He, in fact, comments that 'most languages use only a binary opposition, and no language contrasts more than three possibilities.' This means that the 'voiced aspirated' consonant distinguished in languages such as Hindi, Gujarati and Telugu are not considered as belonging to this scale of categories. However, he (1975:122-123) characterised the fourth category of stops, as having 'murmur or breathy voice' (see Pandit, 1957:165-222) which occurs when the vocal cords are only slightly apart, they can still vibrate but at the same time a great deal of air passes through the glottis. Catford's comment in this regard is noteworthy 'the use of the term "voiced aspirated stop" for these sounds has been criticised by Ladefoged (1971) on the grounds that in this usage "one is using neither the term voiced nor the term aspirated in the same way" as in the description of voiceless aspirated stops such as (ph,th,kh). Ladefoged's objection, however, loses much of its validity when one thinks of both voiceless and voiced aspirated sounds as involving delayed onset of *normal* voicing, the fact is that in such sounds as /bh/ there is whispery *voice* rather than voicing during the stop and for a certain period after its release. Just as with voiceless aspirated stops there is thus a delay in the onset of normal voice' (1977:133).

According to Dixit (1979) aspiration can be defined as glottal friction with or without pulsing while the glottis is narrowly or widely open and the supraglottal vocal tract is unobstructed. This definition covers both voiced and voiceless aspiration and appears to be somewhat appropriate for Telugu where there are both voiced and voiceless aspirated consonants. Keeping these definitions in mind, an investigation of aspiration in Telugu is carried out with a view to examining its properties and exploring the possibilities of making some valid generalizations.

Instruments and Data

The instruments used for the investigation of aspiration of Telugu plosives and affricates in the present study are Kymograph and Spectrograph. All kymograms were taken(in Edinburgh University) on a Frokjaer Jensen Electro-Aerometer (type

A/4 508/4) in conjunction with a larynx (throat) microphone connected to a four channel Siemens Oscillomink mingograph running at a paper speed of 20 cm/sec. The four traces made on a kymogram from four channels of the mingograph represent (from top to bottom on the recording paper): (1) Nose trace (N), (2) Mouth trace (M), (3) Larynx trace (L), and (4) Timing trace (T). (For a detailed description of the instrument and the analysis and interpretation of the kymograms, see Nagamma Reddy 1981:175-178). The durational measurements i.e. (VOT) and the information on airflow characteristics of aspiration are obtained from the recordings of this instrument.

Information about the acoustic characteristics of aspirated consonants is provided by spectrography, which has been found particularly useful for an examination of affricates whose acoustic characteristics (i.e. the spectral properties) are not well known to speech researchers.[7]

The spectrograms were made first in Edinburgh University from 'Sound Spectrograph' type 7029-A (and again at Osmania University from type 6061-A), manufactured by the Kay Electronic Company, Pine Brook, New Jersey, U.S.A. A spectrogram gives a display on three dimensions viz., time, frequency and intensity. The time scale is represented on the horizontal axis, the frequency on the vertical axis and the intensity by a gray-black range of marking. Only wide-band spectrograms were made with the frequency range upto 8000 Hz. The details of this instrument, the analysis and interpretation of spectrograms can be seen in Nagamma Reddy (1981:184-190).

Our data consist of all plosive and affricate consonants (shown in Table 1), occurring with different vowels in word initial and medial positions. This study is concerned only with isolated words and is based on an examination of sets of minimal meaningful pairs mostly disyllabic in structure except in the case of aspirated consonants where some of the trisyllabic words were also included. In the rare cases when minimal pairs could not be found, near - minimal pairs were included for the convenience of comparison. Much care has gone into the organisation and classification of the word-lists, because the influence of various factors make it necessary

7. Personal communication from Mrs. E.T. Uldall.

to divide the material up into small groups. Thus, depending on the phonetic problem under study, namely contrasts between voiced and voiceless, aspirated and unaspirated, or the aspiration in relation to place of articulation etc., the lists were made afresh for each experiment.

Each word was pronounced more than twice under the laboratory conditions. In the case of Kymography the words were spoken directly into the mask for the recordings to be made, while for spectrography, the words were recorded first on a professional tape recorder in a sound treated room, then each selected utterance was transferred into the spectrograph for the recording to be made. More than one reading of each word was done at different timings. 'Careful citation' style with normal rate of speaking was used in pronouncing the words under investigation.

The data used for this study consist of a thorough investigation of one speaker through the use of recordings made by BRR. These recordings were checked against the speech of two other speakers, KNR and MT. (All speakers represent the educated speech). The results were found to be similar for all speakers.

Results and Discussion

(A) **Duration and airflow (Kymographic study).** As pointed out earlier, from the point of view of aspiration, plosives in Telugu fall into two contrastive sets depending on whether the amount of aspiration is phonologically significant or not. In order to avoid the confusion between phonemically significant and non-significant aspiration, the term 'aspiration' is used here to refer to phonologically significant aspiration of the 'aspirated consonants' and the term 'open interval' (proposed by Fischer-Jorgensen) for phonologically non-significant aspiration of the 'unaspirated consonants.' It may be pointed out here that the voicing of the voiced plosive ceases gradually towards the end of its closure (i.e. at the time of its release) and the voicing of the following vowel starts shortly after the release, not immediately at the time of release. The voiced plosives are shorter than voiceless plosives in comparable environments. The average difference between voiced and voiceless plosive is about 3 cs, ranging between 2.5 cs and 4 cs (see for details Nagamma Reddy,

1981: 434-440). Tables 2-4 give the measurement of VOT values for all the plosive consonants in Telugu.[8]

(a) **Open interval of unaspirated plosives.**

Plosive type	Number of occurrences	Minimum	Maximum	Average duration
p-	8	2.0	2.5	2.2
t-	8	1.5	2.0	1.8
T-	5	1.0	1.5	1.4
k-	10	3.0	4.0	3.6
b-	8	1.5	2.0	1.8
d-	8	1.0	2.0	1.6
D-	6	0.5	1.5	1.1
g-	10	2.0	3.0	2.5

Table 2. Duration of open interval of word-initial unaspirated plosives in cs in disyllabic words.

8. The affricates have been excluded from the series as it is difficult to separate the period of aspiration from the preceding fricative on a kymogram. But as Fischer-Jorgensen and Hutters point out, it is possible on a spectrogram ' to distinguish the transient noise of the release from a following fricative phase, which in its turn can be distinguished from the aspiration proper, characterised by a more h-like noise....On mingograms this three-way distinction cannot be made, and generally the three phases of transient noise, fricative noise and aspiration are taken as one segment, which is sometimes called "burst" or " open interval" or simply "aspiration" (1981:79). As against their claim that it is possible to distinguish the three features on a spectrogram, it is noticed that they are difficult to separate when super imposed on one another. This often is the cease with the aspirated affricates of Telugu.

All three speakers (KNR, MT and BRR) have generally an abrupt start of the vowel at the release (spike) for retroflex plosives (unaspirated) whereas for other plosives the start of vowel is not abrupt, but gradual. As there appears to be individual speaking rate which influences the start of vowel, this needs to be further investigated for several speakers across the dialects.

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

Nowhere in the data of Telugu plosives does the open interval become progressively longer as the point of articulation shifts farther back in the mouth, as was observed for English by Peterson and Lehiste (1960). The inclusion of retroflex in the series of plosives seems to disallow a simple rule of this nature.

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

Plosive type	Number of occurrences	Minimum	Maximum	Average duration
-p-	14	1.0	4.0	2.2
-t-	12	1.0	2.0	1.6
-T-	18	0	1.0	0.9
-k-	18	2.0	4.0	2.8
pp-	21	1.0	3.0	1.7
-tt-	23	1.0	2.0	1.3
-TT-	25	0.5	1.0	0.7
-kk-	20	2.0	4.0	2.5
-b-	12	2.0	3.0	2.2
-d-	11	1.0	2.0	1.2
-D-	14	0	1.0	0.3
-g-	18	1.0	2.0	1.5
-bb-	22	1.0	3.0	1.4
-dd-	24	1.0	2.0	1.1
-DD-	27	0.5	1.0	0.6
-gg-	19	2.0	3.0	2.1

Table 3. Duration of open interval of intervocalic unaspirated plosives in cs in disyllabic words.

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

If we look at the voiced plosive series in Table 3, we find a difference in the order of open interval, depending on whether the plosives are short or long. Short voiced plosives show b> g> d> D, whereas long viced plosives show gg> bb> dd> DD. The later order is in agreement with that noted for initial voiced and voiceless plosives and for intervocalic short and long voiceless plosives.

If we observe Table 3 more closely, we see that the differences in the open interval of labial and velar are greater in the voiceless set than in the corresponding voiced set. This leads us to conclude that the open interval is definitely longer after the velar if it is voiceless, otherwise (i.e. if voiced) it may vary. Even the voiceless velar plosive which has the longest open interval, never exceeds more than 4 cs. It may be appropriate here to point out that there are further variations in the period of open interval (associated with place of articulation) of each plosive in different vowel contexts. For instance, in the case of bilabial plosives, the period of open interval is longer before rounded vowels than before unrounded vowels. Fischer-Jorgensen and Hutters (1981 :95) state that ' There is a universal tendency for the open interval after stop consonants to be longer before high vowels than before low vowels. This may be explained by the slower escape of air after the release because of the narrower constriction.' This appears to be in agreement to a certain extent with the results of Telugu plosives in which, for instance, /p/ before /u/ has greater open interval than before /a/, but /p/ before /u/ is again somewhat different from /p/ before /i/. This difference in the open interval of /p/ before /i/ and /u/ seem to be greater than the difference found in the open interval of /p/ before /i/ and /a/. There is certainly an increase or decrease in the open interval of a bilabial plosive according to the height of the back vowel in that the open interval of /p/ is greater before /u/ than before /o/ or /a/. But also the other factors such as the place of constriction and/or rounding of a vowel appear to be equally important for the differences in the open interval of a preceeding plosive (bilabial).

(b) **Aspiration of phonemically aspirated plosives** Although for certain speakers, and perhaps for all speakers in certain styles, aspiration of plosive consonants is not distinctive as mentioned earlier there are words in which, in certain styles of pronunciation if aspirated, this aspiration is found to be of noticeably greater duration than is the case with the examples on which Tables 2 and 3 are based. A few examples of aspirated plosives with their duration of aspiration are given in Table 4:

Word-initial position		**Word-medial position**	
Plosive type	**Average duration**	**Plosive type**	**Avearge-duration**
ph–	6.5	–ph–	6.0
Th–	6.0	–Th–	5.0
kh–	8.5	–kh–	8.0
bh–	9.2	–bh–	9.6
dh–	8.2	–dh–	8.6
gh–	8.0	–gh–	7.6

Table 4. Duration of aspiration of phonemically aspirated plosives in cs in disyllabic and trisyllabic words in three readings·

Two points emerge from this table. Firstly, the order of consonants in terms of duration of aspiration is the same in both initial and medial positions. Secondly., there is a difference in the order of aspiration depending on whether the consonants are voiced or voiceless. Thus, the order for voiceless plosives is kh> ph> Th in initial and medial positions. For voiced consonants the order is bh> dh> gh.

It will be seen that for the voiced set there is an increase in duration of aspiration as the point of articulation shifts further forward in the mouth. However, it must be noted that the

retroflex consonant is absent from this set. What is clear is that the Telugu data summarised in Table 4 in no way support a simple statement that 'aspiration may become progressively longer as the point of articulation shifts further back in the mouth' (Lehiste 1970:22).

The /th/ has been excluded from the set as it occurs only in combination with other consonant(s). Minimum and maximum values of aspiration of each plosive is also not given because there were no regular variations associated with any plosive and the number of tokens are not many. In general, they all tend to vary (in terms of aspiration) between a minimum of 4 cs to a maximum of 11 cs. This is true only if the speaker intentionally trys to produce the aspirated consonant with aspiration. The general findings are: in utterance-initial position, phonologically unaspirated voiceless consonants (with the exception of retroflex) typically have a short period of voicelessness between the release of the stop and the start of the following vowel. This period varies in duration depending on (1) the place of articulation of the consonant, and (2) the following vowel. The same set of plosive consonants while occurring as the second element in word-initial clusters also have this period of voicelessness (e.g. in words such as *skuulu* 'school,' *spuunu* 'spoon'). This state of affairs is thus different from what obtains in English.

Corresponding to this period of voicelessness of the voiceless consonants, there is a period of weak voicing with the corresponding voiced unaspirated consonants (with low amplitudes) before the start of the regular voicing of the following vowel.

Word-medial unaspirated consonants show the same tendency as utterance initial consonants. That is to say, voiceless plosives are followed by a short period of voicelessness and voiced plosives by a short period of weak voicing. This period is, in general, shorter than for the same consonant in utterance initial position.

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

interval following voiced and voiceless, it is less than half a centisecond and may therefore not be significant. In English, on the other hand, in initial position the difference is more consistently maintained and the differences are large enough to serve as a cue to distinguish the voiced consonants from the voiceless counterparts.

If we compare German (as reported by Fischer-Jorgensen 1976:162 and 170) with Telugu, we note that in both languages the voiceless consonant is longer than the voiced. However, the factors involved in this difference are not the same for the two languages. In German there is a significant difference in the open interval but not in the closure, whereas in Telugu the consistent difference is in the closure and not in the open interval.

When compared with the phonologically unaspirated consonants, phonologically aspirated ones show marked difference in duration, airflow and acoustic structure. Voiceless aspirated consonants are followed by a longer period of voicelessness before the start of the following vowel than are the corresponding unaspirated consonants. In the case of unaspirated consonants sometimes there may not be any period of voicelessness immediately after the release depending on the type of plosive (e.g. retroflex) and its following vowel context, whereas the aspirated consonants always have some period of release. In addition, the aspirated ones are characterised by a greater rise in oral airflow (on the mouth tracing seen on a kymogram) corresponding to the period of release that follows the closure. There is also a difference in the amount of airflow during the release of an unaspirated and aspirated consonant. The release of an aspirated plosive is characterised by a rise in airflow when compared with the same in an unaspirated one (e.g. *kh* in */kharam/* 'hand' and *k* in */kanTam/* 'voice,' see kgms. 1 and 2). Furthermore, if we compare the aspiration of an aspirated plosive with a fricative we find greater amount of airflow during, aspiration (compare *s* and *h* in */samstha/* 'institute,' kgm.4).

Voiced aspirated plosives are also characterised by a large amount of airflow during the period between the release of the stop and the start of the following vowel. This rise in airflow is combined with periodic vibrations of the vocal folds (with very low amplitude).

The period of aspiration after the release of the closure for voiced aspirated consonants is marked by vocal fold vibration throughout, but with a lower amplitude than during the period of closure (cf. kgm.3).

Ladefoged (1975:126) represents what have been called voiced aspirated plosives by the symbols b͡h, d͡h etc. Ladefoged (1975: 126) maintains that he finds instead of normal voicing, there is a 'murmur' during the period of closure in the case of voiced aspirated plosives and that this murmur 'extends into the adjacent vowel'. Kymograms of Telugu utterances show no difference in the period of vibrations of the vocal folds during the closure for utterance initial unaspirated and aspirated voiced plosives (cf. the larynx tracing for the closure period of the initial plosive in */dhara/* 'price' and */ba:bu/* 'boy (vocative)' (kgms. 3 and 5). A comparison of unaspirated and aspirated voiced plosives in word-medial position does, on the other hand, show some differences, in that unaspirated voiced consonants show a greater amplitude of vocal fold vibration than the corresponding aspirated ones (the larynx tracing for word-medial aspirated plosives is somewhat similar to that for utterance-initial aspirated and unaspirated voiced plosives). Word-medial plosives appear to have a slightly higher amplitude than the corresponding utterance-initial ones and there is also a variation in pitch (shown by the distance between successive striations of vocal fold vibration) in that the word-medial unaspirated voiced consonants have a higher pitch than the consonants in any other position. What emerges from this is that there may not be any justification in talking about 'murmur' rather than voicing in respect of the voiced aspirated plosives of Telugu.

Therefore, with regard to states of the glottis and the use of the term 'voiced aspirate,' one can say the following: All recordings of the aspirated plosives reveal two different (distinct) positions of the vocal folds during the release, vibrating and non-vibrating (shown by larynx trace on a kymogram), immediately after the voiced and/or voiceless closure, respectively. However, these positions held by the vocal folds during the release are quite different from the positions held by them during the closure. Thus there are altogether four different positions (rather than two) held distinctly by the vocal folds during the closure and release of aspirated plosives. For instance, in the case of voiceless aspirated plosive, the closure is indicated by a smooth straight line (which represents voicelessness and a free passage of the air through the vocal folds), whereas in the case of release, the larynx trace is not as smooth as during the closure (or any other voiceless sound, say fricative), but appears disturbed as if some pressure superimposed on the straight curve (see Kgms 1-3). Similarly, in the case of voiced aspirate both the closure and the release are

indicated by a spiky line representing the vocal fold vibrations, but the frequency and amplitude of these vibrations are quite different in the case of release when compared to the closure. The vibrations during the closure are somewhat similar to other voiced sounds (see for details regarding the degree of voicing in voiced sounds, Nagamma Reddy, 1981:400-405) but during the release are quite different which appears to be characterised by a different mode of vocal fold vibrations. This may be, therefore, symbolised by $\widehat{(h)}$, but the plosive need not be symbolised differently by a separate voiced plosive (e.g.b). For phonological convenience, only one symbol ' h ' can be used after a plosive, since the voiceless and voiced are contextually determined by the preceding closure.

Acoustic structure (spectrographic study). On a spectrogram, in general, Telugu fricatives show greater and higher intensity as opposed to aspiration (/h/). Furthermore voiceless friction shows higher intensity than voiced friction. The main difference between voiced friction and aspiration is that the latter consists of formant-like structure combined with friction (cf. voiceless friction in */callu/* ' to sprinkle,' and */jallu/* ' drizzle ' (Spg. 1 and 2) and aspiration in */jaihind/* ' salute ' (spg. 3).

The main difference in the period of a release between a voiceless unaspirated plosive and an aspirated plosive lies in the periods of weak and intense noise following the release. The noise present in the spectrum immediately after release spike for an unaspirated plosive is a weak extension of the spike before the vowel with no fricative (random) noise, whereas in the case of aspirated plosives, there are several vowel-like formants as well as random noise. In other words, unaspirated plosives show a weak burst followed by a period of low amplitude noise concentrated mostly at the lower end of the frequency spectrum, whereas the aspirated plosives show a strong burst followed by a period of intense noise combined with formant-like structure.

Discussing plosive production, Fant (1960) states, " In the noise interval of a stop, assuming an increasing degree of opening, the aspiration must follow friction if both are present ". In Telugu, when there are both unaspirated and aspirated affricates, it is not easy in some cases to separate friction from aspiration (which can be observed for /ch/ and /jh/ even from Kostić *et al*, 1977, p. 137 and 140, spectrograms 34 and 35), though

where the two can be separated, friction does come before aspiration (this being shown by clearer vowel-like formants in the latter part of the friction than the beginning part). The friction that is associated with the aspirated and unaspirated affricate lies in the intensity of noise and its overall structure (cf. spgs. 4–7). The friction associated with an aspirated affricate consists of an intense random noise spread toward the bottom of a spectrogram combined with clear formant-like structure associated with the onset of voicing of the following vowel. This greater intensity of friction is combined with a greater duration for the period between the release and the following vowel. The friction associated with an unaspirated affricate is relatively short with a weak random noise present usually above 2000 Hz and no visible vowellike formants during the friction at least until 2/3 of its duration.

If one compares voiced and voiceless aspirated affricates, the pattern for random noise combined with formant-like structure is similar, though the noise is much stronger in the case of the voiceless one. Even the long affricates /cch/ and /cc/ have similar characteristics of release (friction) but are preceded by considerably long closure (cf. spgs. 8 and 9).

Since the aspiration of an affricate is combined with friction, it is difficult to talk about its duration in comparison with other plosive types which are characterised by a relatively different acoustic structure. The hiss that shows up in the spectrograms of the fricative part of an affricate supports a clear distinction between fortis and lenis articulation: the (s/ś) always show stronger friction than the corresponding (z/ž) of an affricate.

Summary and Conclusion

Except when used for emphasis, the phonologically unaspirated consonants have been otherwise assumed by all scholars to be unaspirated phonetically as well. That is, so far there is no mention of the presence of aspiration in phonologically unaspirated consonants. But in fact, as shown in this paper, all unaspirated plosives (with the exception of retroflex) appear to have a short period of ' aspiration ' (' burst ' or ' open interval ')

between the release of a plosive and the start of the following vowel. The vowel does not start immediately at the release, but slightly after[9].

However, the variation in duration of aspiration/open interval with respect to place of articulation of a plosive is somewhat different for aspirated and unaspirated plosives. In the case of the voiced and voiceless unaspirated plosive series, the velar plosive tends to have a longer open interval than the other plosives, whereas in the case of aspirated plosives, there is a difference depending on whether the set is voiced or voiceless. Among the voiceless aspirated plosive series, the voiceless velar plosive tends to have a longer period of aspiration as in the case of unaspirated series whereas in the voiced aspirated plosive series, the voiced bilabial plosive tends to have a longer duration of aspiration than the others. This may be because /gh/ is less frequent in Telugu than /bh/. But one cannot be sure with this statement, since /bh/ is less frequent than /dh/ (cf. Kostič *et al* (1977:203) and still has a higher value than for /dh/. Therefore, there may be reasons other than frequency such as the articulatory constraint of the speech organs etc.

Even the phonemically aspirated retroflex plosive has a tendency for a shorter period of aspiration than the other plosive types. The relationship between the closure period and the period of aspiration varies a great deal, in that the duration of aspiration of aspirated plosives can be either equal to or shorter or longer than the closure period (Nagamma Reddy, 1981: 434-440). The aspiration of aspirated plosives is considerably longer than the open interval of corresponding unaspirated plosives. Consequently, in general, the aspirated plosives (in terms of closure plus release) tend to be longer than the unaspirated plosives.

---

9. This may be confirmed further by making the observation of some of the spectrograms of Telugu words reproduced by Kostic, Mitter and Krihnamurti, (1977) where for instance, the k in kanDa 'muscle' (p.83, spectrogram 18) shows the period of release for more than 2 centiseconds (or 40 ms) from the release spike to the regular start of the following vowel. Even t appears to have a slight period (p. 74, spectrogram 16). Nevertheless, they point out, "As the English plosive does not have an aspirated pair, it is characterised by a prolonged release or explosion. This is never the case with Telugu plosive k..... The vowel following Telugu unaspirated plosive t has abrupt onset combined with the burst of the consonant" (p. 82 and 74).

The affricates /c/ and /j/, generally, have a longer closure but a shorter open interval. However, this open interval is found to be regularly longer than the open interval of other plosive series. The closure period of an affricate is also consistently shorter than the closure period of plosives. As a result, the duration (closure plus open interval) of an affricate is approximately the same as for a plosive consonant (closure plus its open interval).

In view of the fact that phonologically unaspirated plosive consonants as well as phonologically aspirated ones have a period of voicelessness after the release of the plosive, it might be supposed that the essential difference between the two would lie in the duration of this period of voicelessness. In fact, it appears that the airflow is more important, in the sense that minimum period (4 cs) of aspiration for an aspirated plosive is no greater than the maximum period (4 cs) of an unaspirated one (the period of open interval of unaspirated plosives varies between 0 to 4 cs whereas the period of aspiration of aspirated consonants varies between 4 to 11 cs). Aspirated plosives, however, are characterised by a considerably high airflow (cf. kgms. 1-4).

The velars, in general, are characterised by a shorter release peak (i.e. the lowest level of the height of the peak, shown vertically as a release on kymogram) than the other consonants which might suggest the slower release, hence a longer open interval as opposed to the others which are characterised by a sharp release and short open interval. Dental and retroflex consonants are characterised by a highest peak of the release.

The two kinds of phonemic aspiration after plosive, i.e. the voiced and voiceless, show approximately the same amount of airflow. The aspiration of voiced aspirated plosive is characterised by a lower amplitude of voicing than that for a vowel. If we strictly follow the definition of aspiration by Ladefoged (1971:9,13) we may have to call voiced aspirates either as unaspirated or differently, since its period of release is not voiceless.

Acoustically, the aspiration of phonologically aspirated plosives is characterised by some stronger friction noise superimposed by the F-pattern than the /h/ on its own. The /h/ when it occurs in combination with vowels is characterised by only the vowel-like structure of the formants, whereas in combination (or associated) with consonant(s) the same /h/ is characterised by superimposition of additional noise. Thus, there are atleast

two major types of 'h's here, - one produced with the supraglottal source and the other with the glottal source. The /h/ which contains noise, surely contradicts the simple definition of aspiration as "unvoiced version of the following vowel" (Lehiste, 1970:21-22).

As far as the aspirated affricates are concerned, the aspiration appears to be somewhat difficult to separate from the fricative noise of the fricative part of the affricate (for instance, see spg. 4). Though the fricative noise and the aspiration of the aspirated affricates are superimposed, still the duration of fricative plus /h/ is no way different from the duration of /h/ following the plosive. Therefore, the duration of the aspirated plosive and aspirated affricate is about the same. However, the aspirated plosives are nearly twice as long as the corresponding unaspirated plosives. This might suggest (i.e. if we go by the durational measurement as the cue for discussing the status of each phoneme as single or sequence of two phonemes) the aspirated consonants have to be treated as consisting of two phonemes rather than a single phoneme. Fischer - Jørgensen and Hutters (1981:85) point out that Abramson is more inclined to consider the aspiration as a (voiceless) part of the vowel than a consonant. This appears to be a possible solution as far as Telugu is concerned, since the vowel following the release (aspiration) of an aspirated plosive is noticeably reduced in its duration than when followed by a corresponding unaspirated plosive whether voiced or voiceless and in both word-initial and word-medial positions (compare spgs. 12 and 13, 14 and 15, and 10 and 11). Nevertheless, this would give rise to certain problems in Telugu (NagammaReddy, forth coming). Therefore the phonological aspiration may have to be considered as a separate phoneme rather than a part of the following vowel or a preceding consonant.

The degree of aspiration in Telugu, appears in general not only associated with the place of articulation of a plosive, whether phonologically aspirated or unaspirated as shown above, but also on its position in the utterance, the number of syllables in a word and the nature of the following vowel, etc.

It may be concluded that in agreement with previous findings and the language universals, velar plosive (voiceless) is characterized by the highest VOT value than the other plosives in the series. However, the open interval does not increase with greater distance of the place of articulation of a plosive from front (the

lips) to back of the mouth, as has been claimed by Lisker and Abramson (1967). Rather lower value is found for retroflex than for a dental or bilabial as in the case of Haag's (1979) study, where he finds /t/ with a shorter value than the /p/.

REFERENCES

ABERCROMBIE, D. 1967. *Elements of general phonetics.* Edinburgh: The University Press.

BHATIA, T.K. 1976. On the productive role of the recent theories of aspiration. *Phonetica* Vol. 33, No. 1.

CATFORD, J.C. 1977. *Fundamental problems in phonetics.* Edinburgh: Edinburgh University Press.

CRYSTAL, D. 1980. *A first dictionary of linguistics and phonetics.* London: Audre Deutsch.

DIXIT, R. P. 1979. Aspiration – what is it and how is it produced. *Journal of Acoustic Society of America,* 65. Supplement 1.823.

FANT, G. 1960. *Acoustic theory of speech production.* The Hague: Mouton.

FISCHER-JØRGENSEN, E. 1958. What can the new technics of acoustic phonetics contribute to linguistics? *Proceedings of the VIII International Congress of Linguists.* Oslo.

———— 1968. Voicing, tenseness and aspiration in stop consonants. *Annual Report of the Institute of Phonetics University of Copenhagen* (*ARIPUC*) 3.63-114.

———— 1976. Some data on North German stops and affricates. *ARIPUC* 10.149-199.

FISCHER-JØRGENSEN, E. AND HUTTERS, B. 1981. Unaspirated stop consonants before low vowels, a problem of delimitation-its causes and consequences. *ARIPUC* 15.77-102.

HAAG, W.K. 1979. An articulatory experiment on voice onset time in German stop consonants. *Phonetica* 36.169-181.

JAKOBSON, R, FANT, G. AND HALLE, M. 1952. *Preliminaries to speech analysis: the distinctive features and their correlates.* Acoustics Laboratory, MIT.

JONES, D. 1957. The history and meaning of the term 'phoneme.' Reprinted in Fudge, E.C. (ed) 1973. *Phonology.* Harmondsworth: Penguin Books. 17-34.

KIM, Ch. W. 1970. A theory of aspiration. *Phonetica* 1.107–116.

KOSTIC, D., MITTER, A. AND KRISHNAMURTI, Bh. 1977. *A short outline of Telugu phonetics.* Calcutta: Indian Statistical Institute.

KRISHANAMURTI Bh. 1957. Sandhi in modern colloquial Telugu. *Indian Linguistics* 17.178–188.

LADEFOGED, P. 1971. *Preliminaries to linguistic phonetics.* Chicago: Chicago University Press.

———— 1975. *A course in phonetics.* New York: Harcourt, Brace Jovanovich.

LEHISTE, I. 1960. An acoustic-phonetic study of internal open juncture. *Supplement to Phonetica* 5.

———— 1970. *Suprasegmentals.* Cambridge, Mass,: MIT Press.

LISKER, L. AND ABRAMSON, A.S. 1964. A cross-language study of voicing in initial stops: acoustical measurements. *Word* 20.384–422.

NAGAMMA REDDY, K. 1980. Consonant combinations in Telugu. *Work in Progress.* Linguistics Department, Edinburgh University. 13.79–99.

———— 1981. *Telugu consonants and vowels: an instrumental study.* Ph.D. Thesis, University of Edinburgh.

PANDIT, P.B. 1957. Nasalization, aspiration and murmur in Gujarati. *Indian Linguistics* 17.165-222.

PETERSON, G.E. AND LEHISTE, I. 1960. Duration of syllable nuclei in English. *JASA* 32. 693–703.

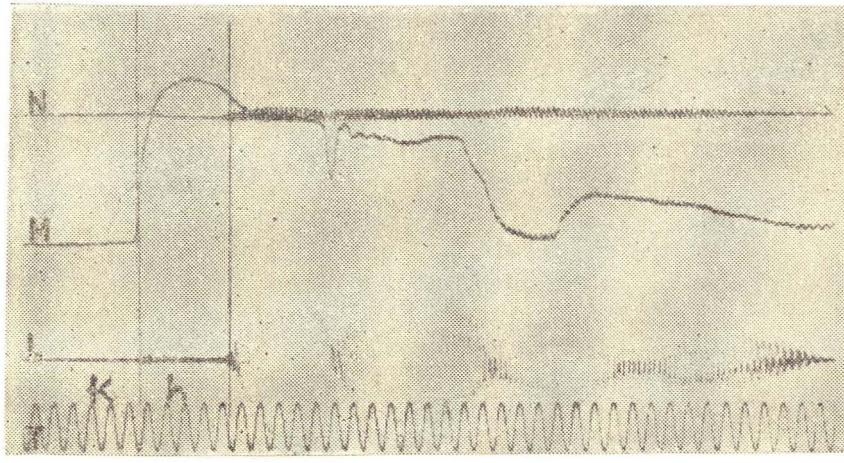
SHUKEN, C. 1979. Aspiration in Scottish Gaelic stop consonants. In Hollien, H and P. (eds). *Current Issues in the Phonetic Sciences*. Amsterdam: John Benjamins B.V. 451-458.

SJOBERG, A.F. 1962. Co-existent phomemic systems in Telugu: A socio-cultural perspective. *Word* 18.269–279.

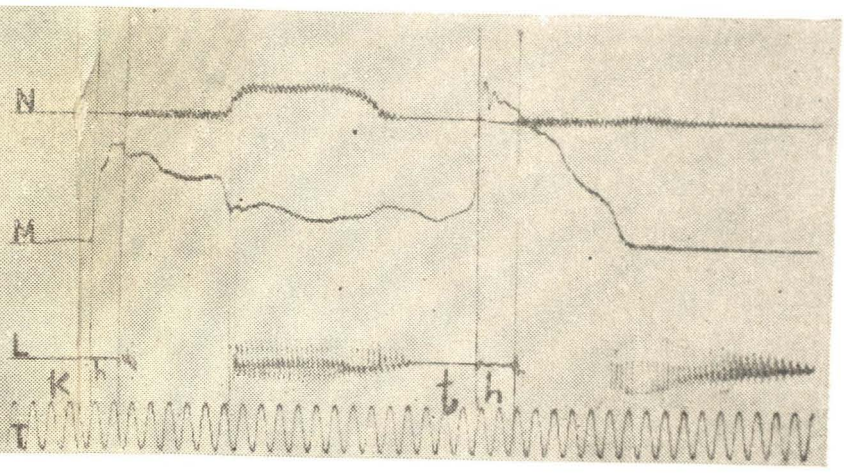
SWEET, H. 1906. *A primer of phonetics*. Oxford: The Clarendon Press.

WOLTER, H. 1965. On preaspirated stops in a Norwegian dialect. *Proceedings of the 5th International Congress of Phonetic Sciences*. New York: S. Krager. 594–597.

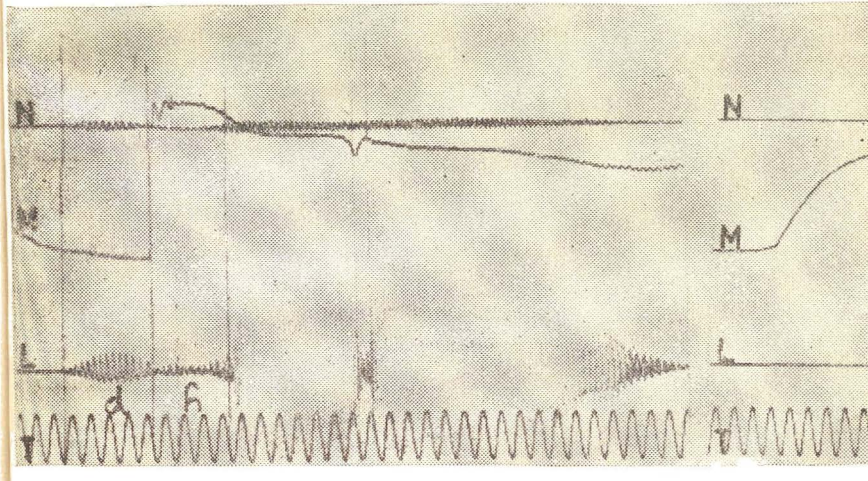
Kymograms of aspirated plosives



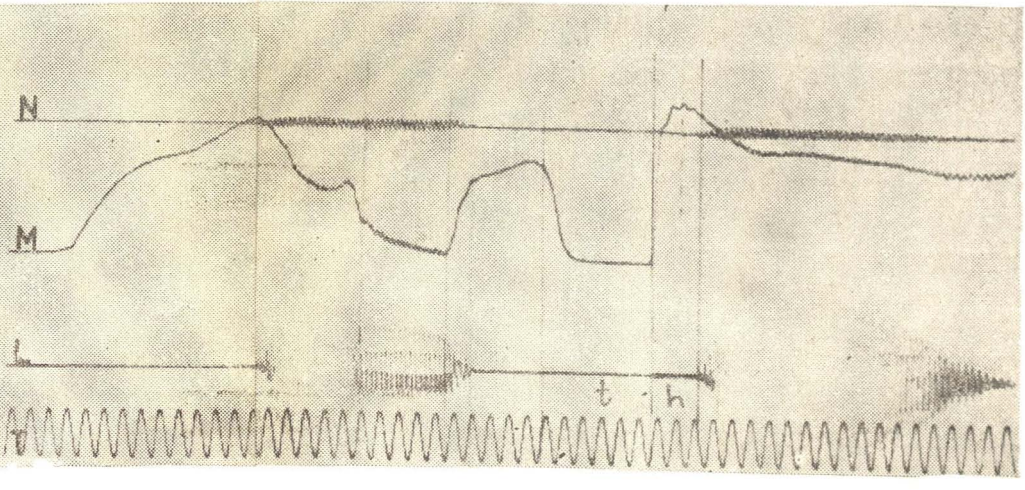
Kgm. 1 kharamu



Kgm. 2 kanTham

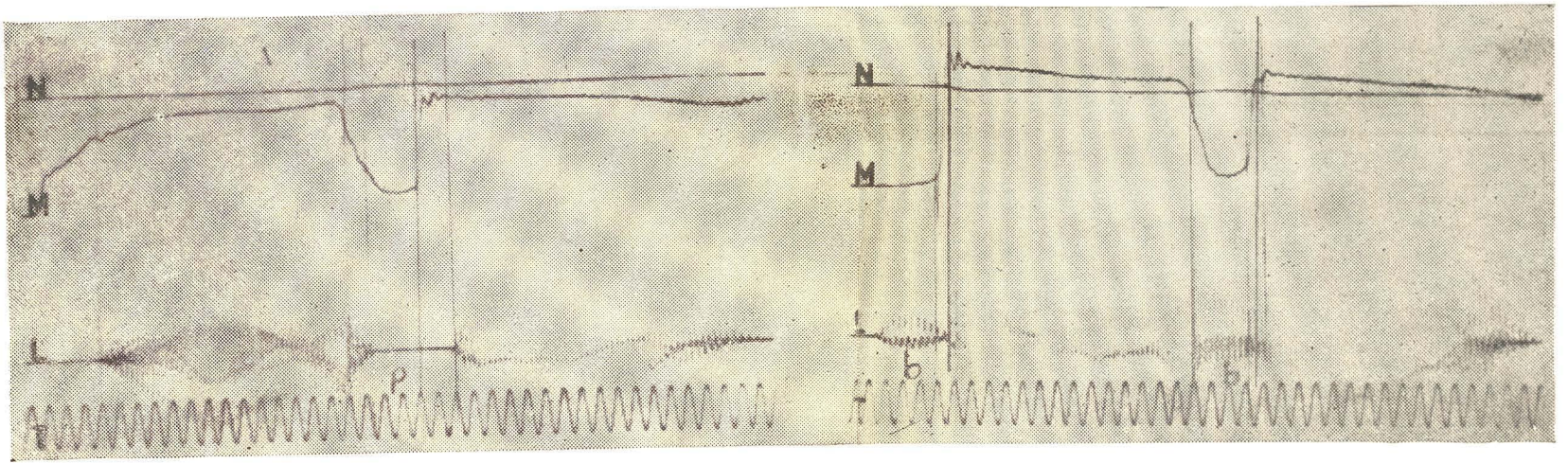


Kgm. 3 dhara



Kgm. 4 samstha

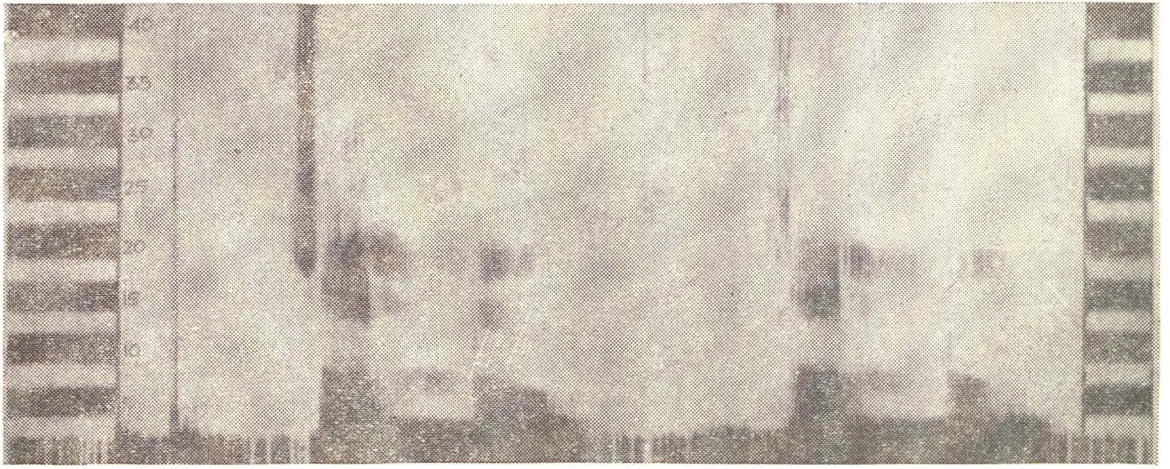
Kymograms of unaspirated bilabial plosives (p/b)



kgm. 5 ba : bu

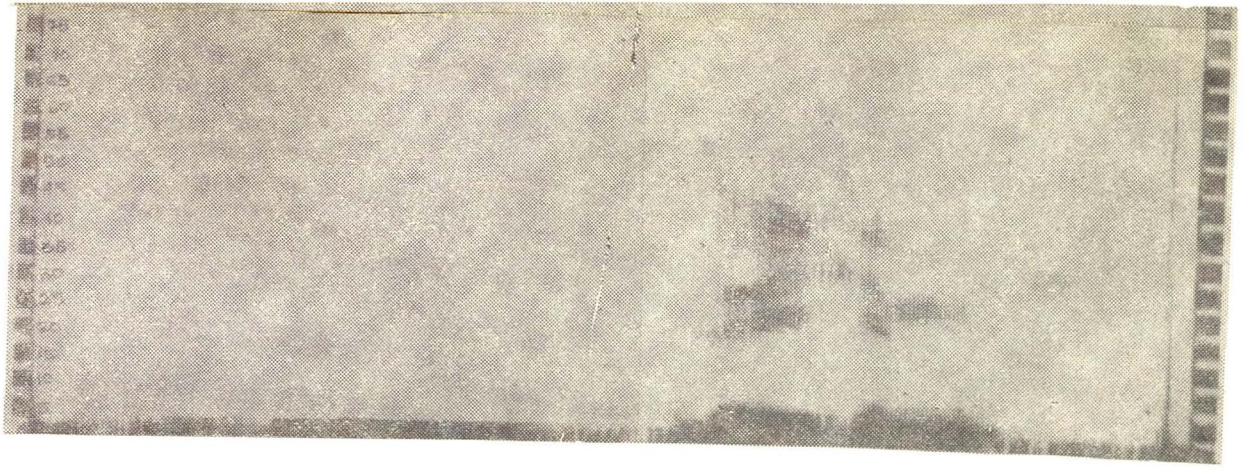
kgm. 6 a : pu

Voiceless and voiced affricate friction and /h/



spg. 1 callu

spg. 2 jallu

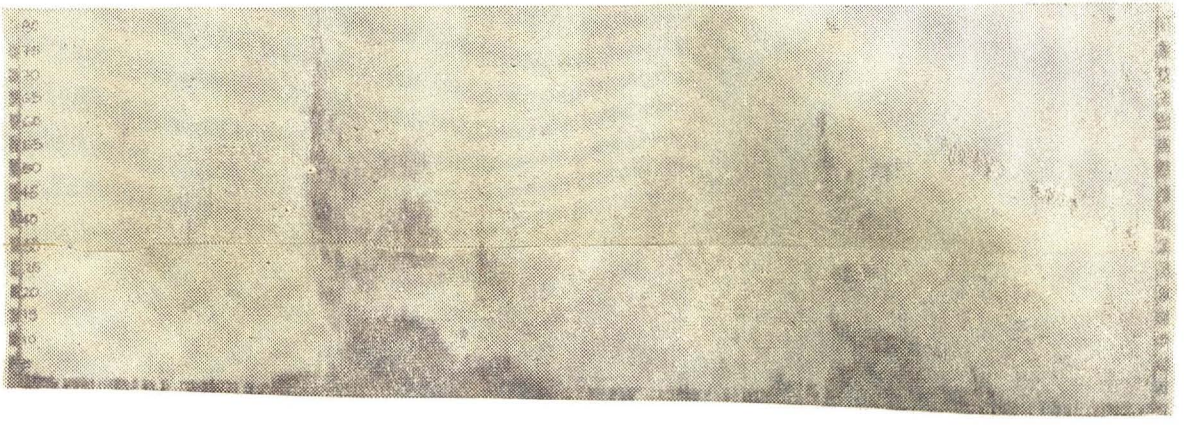


spg. 3 jaihind

Spectrograms of aspirated and unaspirated affricates

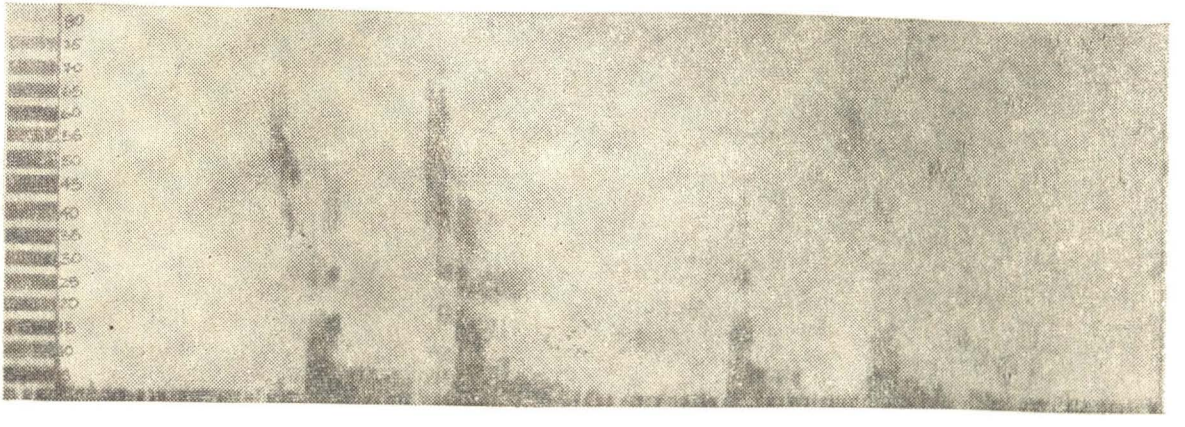
spg. 4 chi :

spg. 5 ci : ma



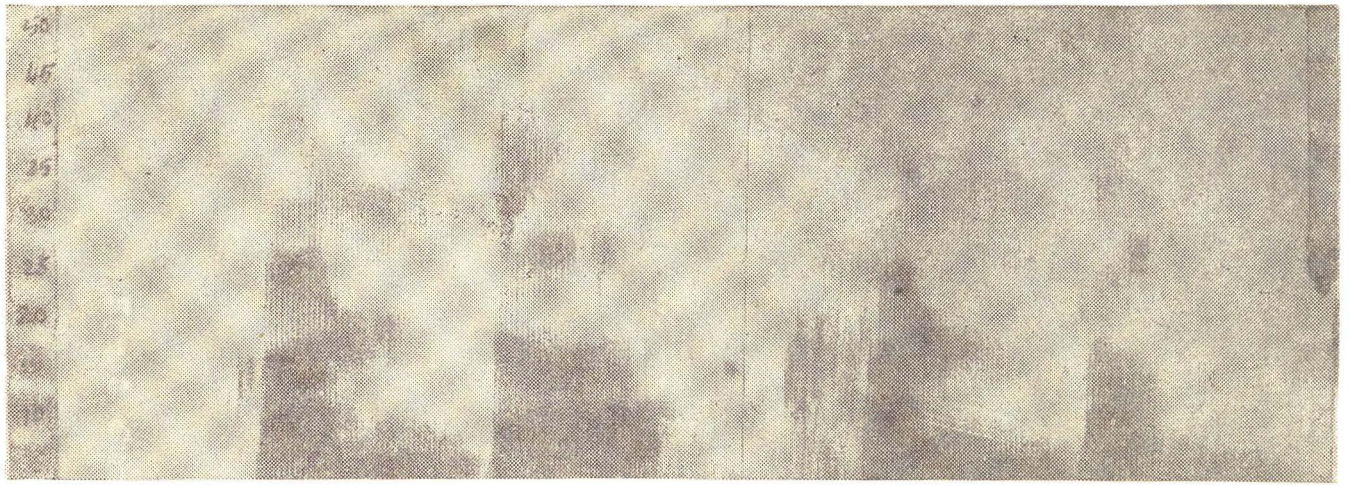
spg. 6 jha : mu

spg. 7 ja : mu



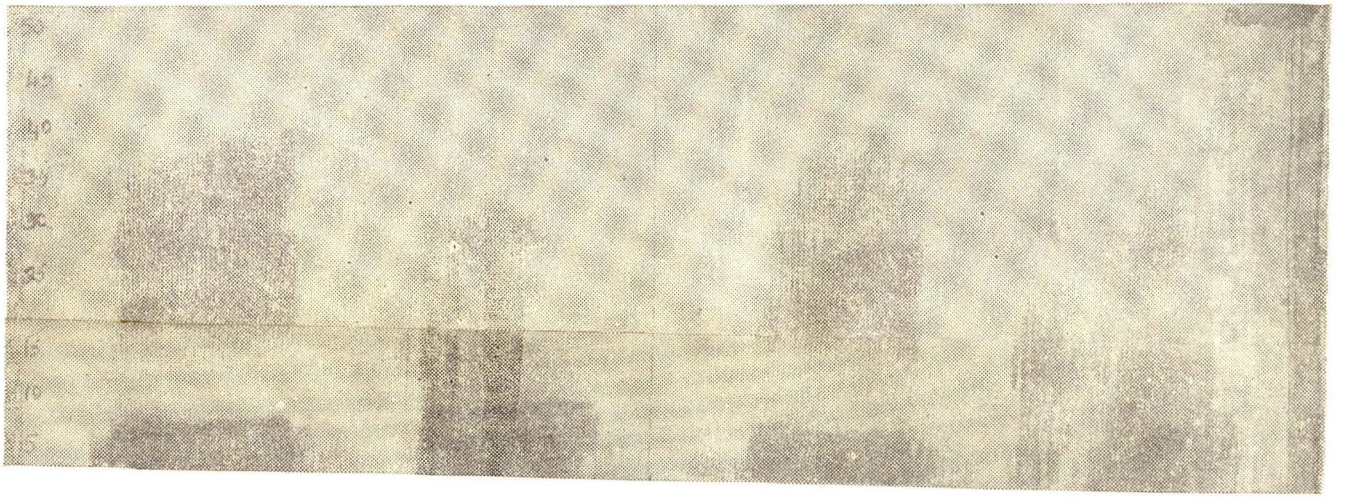
spg. 8 swaccham

spg. 9 accam



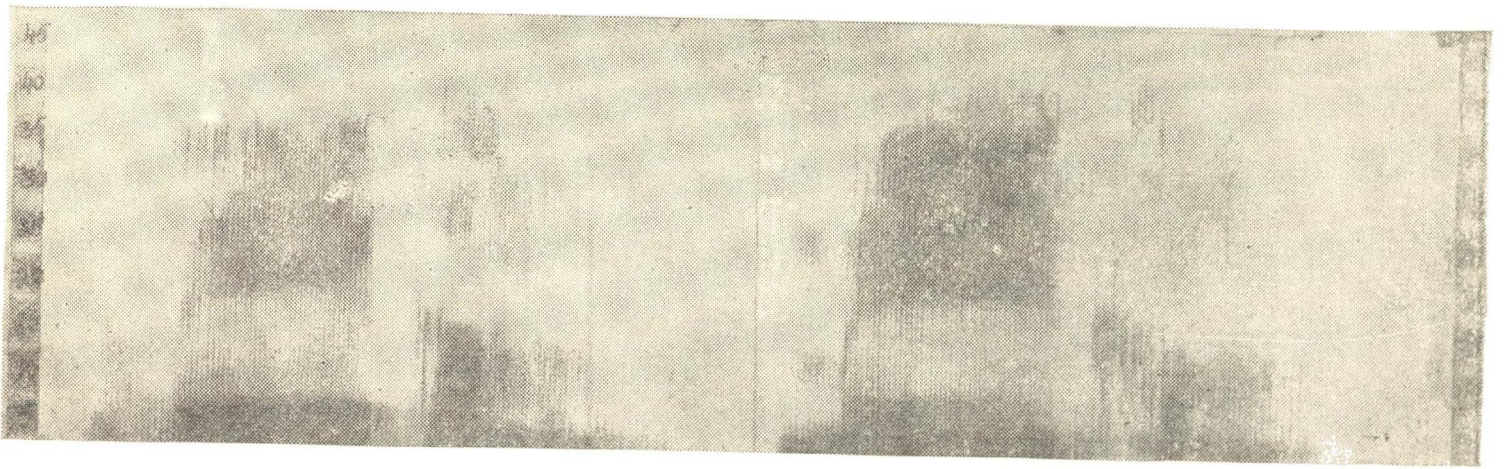
Spg. 10 kanDa 'muscle'

Spg. II khanDam 'continent'



Spg. 12 le : ka 'not having'

Spg. 13 le : kha 'letter'



Spg. 14 we : gam 'speed'

Spg. 15 me : gham 'cloud'

NOTES AND REVIEWS

OPiL 7 & 8, 155—160 (1981—82)

DOES POLITENESS HIERARCHY REFLECT CULTURAL CHANGE?

ARUN KUMAR SHARMA

INTRODUCTION

The Indian subcontinent represents a multilingual and multicultural nation. (The term multicultural is used, not in the sense of culmination of various cultures, but one does find certain cultural differences with regards to language, food habits, dressing etc.). We have many regional languages and also (when closely observed) several sub-cultures. But when one uses the term " Indian culture," it is used to denote that there are several common cultural similarities observed in our nation; and because of such a common culture a linguist, or to be more specific, a socio-linguist finds certain parallel patterns in the use of pronouns in most of the cultivated Indian languages, (I am restricting myself to Indo-Aryan and Dravidian languages).

Politeness or politeness hierarchy is something basic with regards to our culture not necessarily society; because social influences sometimes may not affect the culture of a people. This depends on whether specific social groups try to retain their culture or adopt the social changes to such an extent that such a change becomes a part of the culture. I may be skeptical in saying that a cultural change usually takes place after a certain social change has already crept into the society. For example, the male wear in India has changed from dhoti-kurta or pyjama-kurta to pant and shirt. This, at an earlier stage, was a social change but now it seems to have become a part of our culture. For a social change, to become a cultural change will depend upon the socio-economic status, the outlook in society and the attitude of the individual. These reasons led me to look into the choice of pronouns used by the present younger generation.

When we look at the politeness hierarchy in Indian languages, we find that there are, if not more, at least two pronouns in II and III person singular categories. The present study is only

a pilot survey and therefore I have chosen Hindi, Marathi, Dogri, Punjabi and Telugu (coastal as well as Telangana dialects). The choice of pronouns both in Indo-Aryan and Dravidian seems to reflect the cultural heritage of our nation in different languages.

Language		**II singular**		**III singular**	
		Male	Female	Male	Female
Hindi:					
	polite	aap	aap	ve/vo	ve/vo
	familiar	tum	tum	vo	vo
	intimate & derogative	tu	tu	vo	vo
Dogri:					
	polite	tus	tus	o	o
	familiar	tu	tu	o	o
	intimate & derogative	tu	tu	o	o
Punjabi:					
	polite	tusi	tusi	o/vo	o/vo
	familiar	tun	tun	o/vo	o/vo
	intimate & derogative	tu	tu	o/vo	o/vo
Marathi:					
	polite	tumce	tumce	te	tya
	familiar	tu	tu	teni	teni
	intimate & derogative	tu	tu	teni	teni

Telugu:					
	polite	miiru tamaru	miiru tamaru	aayana vaaru	aaviDa vaaru aame
	familiar	nuvvu	nuvvu	atanu ataDu	aame
	intimate & derogative			vaaDu	adi
Gujarati:					
	polite	tame	tame	emna	emna
	familiar	tu	tu	ena	ena
	intimate	tu	tu		
	derogative	tu	tu		

Conditions for the Choice of the Pronouns

Polite form of the pronoun is the usual choice when the addressee is an elderly person, father, husband, an individual who you meet occasionally, in formal situations, etc.

Familiar form is used for addressing persons of equal social status, of the same age or even younger, close personal and family relations etc.

Intimate and derogative form is used when one claims to have or has close intimacy, when the addressee has a lower social status or to insult someone.

The above conditions seem to be common for the languages investigated. There may be a few more which I may have overlooked but Iwould like for you to observe that the conditions under which the choice of the pronoun is made are in a way reflecting the culture of our nation.

Social Reflection in the Use of Pronouns

Most of us have experienced situations wherein we compliment a child or his/her parents by remarking " how well-mannered your child is? " or " your child is very well-mannered". Such a remark presupposes the idea that the child has a good upbringing.

Let us look at another situation. If a child is not using the correct pronoun, we find the parents feeling a little embarrassed and immediately try to correct the child and give explanations. In such a situation the presupposition is that the upbringing of the child is either by the governess or the parents are not giving enough time to their children to find out what they are learning, or that they care less whether the child uses polite or familiar forms.

In some instances the parents may even go to the extent of saying that their child is showing more intimacy to them and as such not believe in politeness hierarchy. Such an attitude sets a trend of decreasing or not using the polite forms of the pronoun. Where will such trends, which reflect a social change, lead us to? In my opinion, such types of social changes when once become embedded into a specific social group, become cultural changes at a later stage.

Present Trends

One of the typical observations made with regards to the changing trends in the attitude and therefore choice of the pronoun (mainly among the Hindi speakers) is that while addressing father the pronoun *aap* is used but the verbal ending does not show agreement with *aap*. For example,

papa aap bhii khaao. 'Dad, you also eat.'

papa aap kahaan jaa rahe ho? 'Dad, where are you going'?

The above examples show the intimate relationship between the father and the child. These days such instances are frequent in spoken form, in short stories, novels and movies. One small observation to be made here is that in the above examples the grammatical constraints are overridden by the intimacy factor. That is to say, that among the Hindi speakers such a type of sentences is accepted. This is not true of Telugu where the constraints of agreement are quite rigid.

Let us now look at another trend which is showing social change but is definitely affecting the culture too. In our culture the wife always addresses her husband by using the polite form, the vice-versa may be true. In the modern times it has been

observed that the wives have started addressing their husbands in the familiar form. This type of addressing is not new for Telugu speakers because we find it in the lower social-status group the use of familiar form in both directions. But in the higher social group such a change cannot be correlated to the one already found in the Telugu community. The factor is the change in attitude of the fair sex. The attitude is to claim equality with men since they feel that they too are well educated and have a higher social status and they too can be bread earners. Such an attitude seems to be a direct influence of the western culture on our cultures. Such a change is also found in Hindi speaking area and also among the younger Marathi speakers. But it is not true of the Dogri speakers. The Indian culture is still maintained among the Dogri speakers. One observation to be made here is that this change of attitude and use of familiar form to address one's husband is mainly found in the urban areas. Some of the members of the younger generation have even gone a step further in using the names of their husbands while trying to draw their attention to them. This is nowhere to be found in our culture and is definitely a western influence. The statistical account shows a positive trend towards the change of pronouns with regards to the younger generation.

For my study I interviewed fourteen married Indian ladies who were speakers of Telugu, Hindi, Dogri, Gujarati, and Punjabi. The social variables chosen are economic status (rich, middle class, and lower middle class), education and type of marriage (love, love-cum-arranged, and arranged). The average age calculated is 28 years where the oldest is 35 years and youngest is 21 years. The percentage of upper middle class category is the largest coming to 64.3%. As far as education is concerned 64.4% are graduates and 35.6% are postgraduates. When we look at the overall situation with regards to usage of personal pronouns we find that 25% of the informants use *aap* for their husbands, 35% use both *aap* and *tum* depending upon the situation, 70% use exclusively *tum*, 20% use *tu* and about 40% use name of the husband for drawing his attention.

With regards the education as a variable, it is found that 65% of the graduates use only *tum* as compared to 30% of the postgraduates. With regards to economic status 85% of the upper middle class uses *tum* as compared to 65% belonging to rich class.

With regards to type of marriage, 95% of ladies who have had love marriages or love-cum-arranged marriages tend to use *tum* whereas only 50% of the arranged marriage type use *tum*.

The interesting point to note here is that all the postgraduates use familiar forms. Among the love marriage and love-cum-arranged marriages, all the informants use the familiar forms only.

A question can be raised here as to how is politeness hierarchy reflecting the cultural change? It is observed that the younger generation is showing a cultural change mainly with regards to husband and wife relationship but maintain the hierarchy in relationship to the parents especially the father. That is to say, that in one type of the relationship, the hierarchy is being maintained, (for how long, we donot know) whereas in other type the use of the familiar form is showing a cultural change.

Conclusion

The present study indicates trends of change in life pattern which, to me, seems to be a cultural change due to the influence of modernization which in turn is correlated to the Western influence. The cultural change is directly reflected in the use of pronouns by the younger generation whose attitude shows a change in the outlook of life pattern. This change in attitude can be once again attributed to the Western outlook of social relationship and way of life.

OPiL 7 & 8, 161 – 166 (1981 – 82)

POSSESSIVES IN TELUGU

N. K. Durga Devi

Typically, the notion of possession requires two obligatory entities of ' possessor ' and the ' possessed.' Generally, the possessor is an animate and the possessed is either an inanimate or an animate. The possessor may be a human being and the possessed an object or entity. In various grammatical discussions the linguistic counterparts of possession are discussed under such headings as genetive, possessive etc. There are at least three syntactic constructions available in Telugu reflecting the notion of possession. They are:

1. a. kamalaku illu undi ' Kamala has a house.'

   b. illu kamaladi ' The house is Kamala's

   c. kamala illu ' Kamala's house '

Of these, (a) has a finite verb *uNDu* along with the two entities of ' possessor ' and ' possessed.' (b) is a sort of equative sentence expressing ' definiteness ' within the possessive construction, (c) is a nominal phrase indicating possession. Now, the above sentences are taken up one by one for discussion.

Possessive constructions in Telugu do not show a seperate verb as in the English ' have ' or its counterpart in other Indo-European languages. They are mostly expressed by the verb *uNDu* which is a locative-existential as manifested in sentence (1 a). If the phrase structures for the possessives and locative existentials in Telugu are compared, the structural similarities between these two construction types may help understanding their semantic similarities. For Example, the possessive construction with a finite verb in Telugu shows the following phrase structure:

2. Poss. P+Np+Cop.

and locative existential construction is

3. a. Loc. P+Np+V.

peTTeloo pustakaalu unnaayi

'There are books in the box'

b. Np+Loc. P+V.

pustakaalu peTTeloo unnaayi

'The books are in the box.'

Telugu, like other Dravidian languages, allows free word order to a large extent without affecting the central meaning of the grammatical relations of the nominals in a given construction. Possessives in Telugu are broadly, of two groups: (i) those with a finite copula verb and (ii) those without any verb, as is clear from the following illustrations:

5. a. vaaDiki Dabbundi
'He has money.'

b. aameki naluguru pillalu unnaaru
'She has four children.'

c. candram daggara caalaa pustakaalu unnaayi
'Chandram has many books.'

6. a. aameki siggu
'She is shy or she has shyness.'

b. aa geedelu maavi
'Those are our buffaloes.'

c. atani bhaarya
'His wife.'

The 'Possessor' in (5) consists of a post-positional phrase like *vaaDiki, aameki* and *candram daggara* as the initial element of the sentence. The post-positional phrase is composed of a Noun followed by either case markers like *Ki, Ku*, or adv like

daggara, and *ceeta*. The 'Possessed' in (5) are *Dabbu*, *pillalu*, *pustakaalu*. These items are in the nominative case (i.e. with no inflection) and function as subjects of the sentences. The existential verb *uNDu* also functions as a possessive verb in Telugu and shows agreement with the subject. Sentences in (6) show no surface element of *uNDu* i.e. they can be taken as a variety of verbless constructions. Sentence (6c) is a nominal phrase at least on its face value, though it has a source like

6. d. ataniki bhaarya undi
'He has a wife'

In 6(a) the possessor is in dative consisting of a noun and a case marker. There is another variant of (6a) consisting of the existential verb *uNDu* as in (6a').

6. a'. aameku siggu undi
'She has shyness'
or
aameku siggugaa undi
'She is shy.'

The structures in (6a) and (6a') can be derived from the same underlying structure of Dative phrase + Np + Cop.V. The former deletes the verbal element whereas the latter retains it. However, these two constructions are not complete paraphrases of each other There is an important semantic distinction between them. (6a) indicates that having shyness is an inherent or permanent quality of the woman under reference whereas (6a') shows that shyness is an accidental or contingent characteristic of the woman. In other words, the semantic notion of inherent vs. contingent state in possessing a quality is manifested in Telugu by the absence or presence of the verb *gaa uNDu* respectively. This semantic distinction is not confined only to the above examples. In the following illustrations, type (a) represent the permanent or inherent quality whereas (b) instances indicate contingent or accidental quality

7 a. lataku garvam
'Lata is proud'

b. lataku garvamgaa undi
'Lata is proud (now)'

8. a. naannaku koopam
'Father is short tempered.'

b. naannaku koopamgga undi
'Father is angry (now)'

It is also noticeable that sentences (6) to (8) refer to certain human qualities or emotions. It suffices our purpose to show that Telugu syntax has the mechanism of distinguishing between permanancy and contingency in regard to possession with the help of a verbal element.

Now let us turn to the construction types like (6b), where the possessed appears as the first element and the possessor as the final element of the construction. In this type of construction 'Possessor' is in focus and provides information regarding the owner. Thus the sentence, *aa geedelu maaVi*, forms an appropriate answer to a question like *aa geedelu evarivi*? 'Whose buffeloas are those?' This shows that the speaker already has definite entities in mind and he is seeking only information concerning their ownership. (6b) has a paraphrase like

9. aa geedelu maa geedelu
'Those buffaloes are our buffaloes'

When (9) undergoes the process of pronominalisation we get constructions like (6b).

These sentences can be derived from an underlying structure consisting of Possessor and Possessed along with a variety of *agu* representing a sentence like

10. aa geedelu maavi agu
'Those buffaloes are ours.'

Though (10) is not an attested construction in Telugu with the verb *agu* we still have its negative and conditional variants like

11 a. aa geedelu maavi kaavu
'Those are not our buffaloes'

b. aa geedelu maavi ayitee
'If those buffaloes are ours'

Which indicate that the absence of verb *agu* in (10) is just accidental, being deleted in the present habitual tense of declaratives. There are constructions with the structure of Prossessive Phrase+ Np+Cop.V., like.

12 a. maaku geedelu unnaayi
'We have buffaloes.'

b. raamayyaku polaalu unnaayi
'Ramayya has lands.'

in which the reference is to indefinite entities like *geedelu* and *polaalu*. When compared to (11a), (6b) has reference to definite possessed entities. In other words, the semantic notion of (+ definiteness) is manifested in Telugu by the change in word order and also the change in the type of 'be' verb.

The third variety of possessives, as in (6c) *atani bhaarya* 'his wife,' and *akka ciiralu*, 'sister's sarees' etc. are a sort of nominal construction derived from underlying structures of the following type:

13. a. ataniki bhaarya undi
'He has a wife'

b. akkaku ciiralu unnaayi
'Sister has sarees'

These base structures undergo certain transformational processes like the deletion of dative case marker, deletion of the existential verb and the process of adnominalization to give us the nominal phrases of Possessive construction type.

Thus, possessive sentences in Telugu, whatever may be their surface syntactic structure are derivable from an underlying structure consisting of Possessor + Possessed + Existential verb *uNDu*. In other words, verb *uNDu* 'be' is clearly the source for both locative and possessive constructions in Telugu and there is no separate verb equivalent to English 'have.'

In recent grammatical literature, one comes across the classification of Possessive into two main divisions i.e. alienable and inalienable. Broadly, alienable refers to the Possessed entities which can be separated from the Possessor and the

inalienable possessives refer to entities which cannot be separated i.e. they are an inherent property of the Possessor. The alienable possessive shows a sort of contingent relation between the Possessor and the Possessed, whereas the inalienable points out the permanent relation between the possessor and the possessed. For example, the ownership of things like pen, book, car and house etc. comes under alienable possession, whereas, body parts, kinship terms, and emotional qualities etc., are examples of inalienable possession.

Telugu manifests the distinction of alienable and inalienable through case forms that appear in construction with the Possessor Np. Observe the following illustrations:

14. a. siita daggara ciiralu unnaayi
'Sita has Sarees'

b. siitaku ciiralu unnaayi
'Sita has sarees.'

15. a. aame vadda pillalu unnaaru
'There are some children near her.'

b. aameku pillalu unnaaru
'She has children.'

The main difference between the instances of (a) and (b) in (14) and (15) is that in (a) the possessor Np has the post-positions *daggara* or *vadda*, whereas the (b) instances have the case marker *ku*. The (a) instances exemplify alienable possessives, in that there is an ambiguity with reference to mere location or temporary ownership. The (b) instances show that the Possessor is the permanent owner of the entities represented by the 'possessed.' It may be concluded that the differences within the Possessive constructions are reflected in Telugu through differences in case marking.

OPiL 7 & 8, 167 – 173 (1981 – 82)

STANDARDIZATION OF LANGUAGES: FACTORS AND PROCESSES

P.N. UDAYASHANKAR

1. INTRODUCTION

India having been colonialized for the past many centuries, most of its languages have borrowed from languages like Sanskrit, Perso-Arabic, English, etc. In a bilingual or multilingual situation, especially, where a language plays a prestigious (or a dominant) role (say, English and Hindi in most parts of India), borrowing either directly or by the process of nativization cannot be checked or totally arrested. To control such processes from disintegrating the basic language structures, these languages have to be modernized and standardized. In the present trend of scientific and industrial developments, sometimes, languages are unable to create or develop parallel terminologies which can cater to such developments. It becomes essential to fill in such gaps created by the developments with indigenous forms, for which, the above processes, namely, modernization and standardization, can be utilized.

1.1. Modernization and Standardization

The processes of modernization and standardization of languages run concurrently, the former paving the way for the latter. By the processes of modernization, those forms which are not available in a language are brought in and the language is thus reinforced with new forms. This is done by borrowing directly into the language the forms not available in that language or by nativizing the borrowed forms according to the nativization rules operating in a particular language.

For the standardization of these forms, equivalent forms may be created in the language utilizing one of the following techniques, namely loan-translation, extension of usage of indigeneous forms, coinages, revival of archaic forms etc., Once these forms gain ground with the speakers by replacing the borrowed or nativized forms, then these forms are said to be standardized in this language. Thus, standardization process involves

two principles, namely, (1) the forms should be indigeneous, and (2) these forms should have a mass acceptability. In a billingual/multilingual set-up, it is very difficult to achieve standardization of forms due to various social and psychological reasons. These two factors run counter to each other. In most cases where socio-political factors favour standardization, the psychological factors resist it. In urban areas, the psychological factors resist standardization. The rural areas being devoid of any such factors (mentioned above) operating as far as language use is concerned, only the semi-urban area seems to favour standardization. Hence this is the area which can be successfully tapped for standardization.

2. The Choice of Site for the Proper Implementation of Standardisation.

For the standardization process to be successful, a right site has to be chosen. Only the semi-urban area seems to suit such an implementation. This is the area in which the local language is given its due importance even though the other languages are not totally ignored. This society is neither a bilingual/multilingual as in the urban areas nor a monolingual society as in the rural areas as far as the utility value of the language is concerned. But they seem to bridge these two societies, and thus stand in-between. Hence, they are in a position to use the local language in a wider sense than those in the urban areas, who go in for language mixing and language borrowing from other languages. Thus indigeneous forms enter into the semiurban societies, get popularised faster, for there are no language prejudices among these speakers.

Another factor that inhibits standardization is the non-availability of proper atmosphere (in socio political, psychological and other similar favourable factors). Such an atmosphere can be created by taking care of the factors governing standardization (as discussed in the following section).

The choice of semi-urban area for standardization can be accounted for on the following counts as well. Any society will have more than one form to express a concept in the process of standardization. Urban areas may have one local form (not necessarily an indigeneous form) and a direct borrowing from some other language, which is considered to be prestigious.

Semi-urban areas may have a local form, and their urban and rural equivalents as well to express a particular concept. The rural areas may have a local form and the urban or semi-urban equivalents, but never both these forms. For instance the form fEEn 'fan' is used by urban Tamil speakars, while the forms fEEn / *kaattaaDi* / *visiri* 'fan' are used by semi-urban Tamil speakers, as against the forms *VaattaaDi* / *Visirin* 'fan' being used by rural Tamil speakers. It can thus be seen that maximum language activity is prevalent in the semi-urban society, for they are in a position to accommodate both the urban and the rural forms, in addition to their own equivalents of these forms. Hence it is the best place to trigger standardization.

3. Factors Governing Standardization

3.1. Language Consciousness

Language consciousness is an important factor which leads to standardization. This would help in inducing among the speakers the necessities of language standardization. Socio-political and psychological factors also help in inducing language awareness.

3.2. Socio-Political Factors Governing Standardization

Socio-political factors have a very important role in the standardization of a language. These factors help create among the speakers the awareness for standardizing a language. Social factors help by promoting the use of indigeneous language-forms in various walks of life. Eventhough political factors help in achieving this, they have another important function to perform. As they have many powers at their disposal, it is easy for them to propagate these forms, even by going to the extent of enacting laws or framing rules and amendments by which the usage of standard forms is made compulsory at various administrative and social levels. Though there may be initial resistance in its implementation, the language consciousness and other factors in course of time would help implementing the usage of these standard forms. Due to many external factors attempt cannot be made in implementing the standard forms on an urban society. But, the semi-urban society can be fruitfully utilized for such an implementation. Once standardization is achieved in one area, its extension to other areas would be automatic, though this process would be time-consuming.

In spite of the Madras Official language Act being promulgated as early as 1956, (under which Tamil has been declared as the official language of the Madras State), until 1963 it did not gain ground (Udayashankar, 1979). But the 'Tamil Revolution' of the early seventies helped in the utilization of Tamil language in every day life including higher education. The World Tamil Conference of 1981 furthered this awareness by extending the usage of Tamil to judiciary also, which hitherto was untouched as far as language usage at the official level is concerned.

A case study of Madurai Tamil reveals interesting facts regarding standardization. Many borrowings in Madurai Tamil have been replaced by indigeneous language forms (*cir apput teeniir*, 'special tea,' *awasara waardu*, emergency ward, *narumanap paal* 'flavoured milk' etc.). Though standardization process has not been fully implemented, the trend in which the borrowed forms are replaced by indigeneous forms, seems to be a first step towards total implementation. In general two principles seem to have operated towards indiginization of Madurai Tamil. (i) replacement of other language forms with indigeneous forms (i.e. standardization) and (ii) nativization of borrowed forms (i.e. modernization). Thus, forms like *kaapi* 'coffee' *kaarDu* 'card' borDu 'board' waarDu 'ward' etc. are retained which are the nativized forms of the respective borrowings. If the second category of forms are not replaced by indigeneous forms, and if these forms are included in the glossaries of the language, then these forms can be considered as standard forms (though they do not fulfil the criterion for standardization).

Historical reasons also favour standardization of languages. Madurai, being the seat of Tamil for the past many centuries, the people here are aware of their language-status and easily accommodate the indigeneous forms, replacing the borrowed forms. Thus, historical reasons and similar factors in other semi-urban areas also can be utilized for language standardization. This in turn would promote the total implementation of standard forms in the other areas of the language belt as well.

3.3. Psychological Factors Governing Standardisation

The urban society, prejudiced by many external factors resists language standardization. But, the semi-urban society

having a balanced approach towards both socio-political and psychological factors is the right place to attempt language standardization. Once standardiztion is achieved in this area then it is easy to extend it to the urban areas. The same psychological factors which inhibit language standardization initially, would later on promote it. The urban society which has a superior status cannot withstand being backward as far as language standardization is concerned and would try to be on par with other speakers. Hence, if standardization is achieved atleast in one area, it would easily catch up with the urban speakers. The rural speakers will achieve standardization by areal spreading and other mechanisms of diffusion. Mass media, (discussed in the following section) help greatly in language standardization both in the rural and urban areas.

4. Processes Involved in Language Standardization

Haugen (1973), suggests a four-way matrix for the implementation of standard forms: (i) selection of the norm, (ii) codification, (iii) elaboration of function, and (iv) acceptance rejection. Fishman (1968) emphasises that the processes of language development are not simple events, but involve repeated elaboration and codification.

A more realistic approach to the process of standardization utilising Haugen's parameters would be the elaboration of his third stage, namely, elaboration of function (which would take care of the fourth stage as well), and by combining the first two stages, namely, selection of forms and codification. Thus, a simple two-way matrix (which does away with the other two stages) can be achieved, namely, (i) selection and (ii) elaboration.

4.1. **Selection of Forms**

If standardization is to be successful, the forms should be selected with great care taking into account the socio-political and the psychological needs of the speakers. The forms chosen should be close to the borrowed or nativized forms, both phonologically and semantically so as to achieve a high degree of efficiency and acceptance. The forms should be selected by trained personnel for proper implementation. For the proper selection of forms the following four general principles of selecting

forms can be adopted (Udayashankar, 1979): (i) criterion of linguistic commonality, (ii) criterion of linguistic adequacy, (iii) criterion of linguistic efficiency, and (iv) criterion of easy adaptability.

Selection of forms on this basis eliminates one stage in the selection process of Haugen, namely, codification and one stage in the implementation process, namely, acceptance/rejection, for the forms selected on the above considerations have minimum chances of rejection. As the acceptability of the forms is tested in this stage itself, the unfamiliar forms can immediately be replaced by more viable forms. Once the process of selection of forms is completed, comes the process of elaboration (i.e. implementation of standard forms).

4.2. **Elaboration**

Elaboration is a very long and tiresome process. First a proper environment should be created for the implementation of standard forms. Such an environment can be created by taking care of the socio-political, psychological and historical factors operating in an area. Also the Government machinary, language agencies, and other forms of mass communication would help in the implementation of standard forms.

Massmedia can help greatly in standardizing a language. Newspapers, radio programmes, and audio-visual aids can be used in popularising the selected (standard) forms, for these forms of communication are easily accessible to a larger mass of language speakers, both in urban as well as rural areas. Especially the advertisements, in the newspapers, radio and TV programmes would be an important source in the propogation of selected forms. The audio-visual aids could be utilised in educating the people about the needs of reinforcing a language with indigeneous (standard) forms, i.e. language consciousness or awareness can be induced into the speakers with such aids.

Thus standardization of language can be achieved by properly coordinating the various factors leading to standardization. The stage of elaboration being a very long process, initially, the equivalent forms to the selected forms (i.e. the borrowed or nativized forms), can be allowed to survive with them, for these

would help in the easy propagation of selected forms to the speakers. Once these selected forms gain ground, the other form can be discontinued from the usage. Thus the selected forms would reach the speakers easily.

5. Conclusion

Thus, standardization is seen to involve many factors and processes for proper implementation. If proper care is taken at each level, and the implementation is carried on in a chosen site, standardization can be easily achieved, even though the process meets out with some initial resistance and is too time-consuming.

BIBLIOGRAPHY

Fishman, J.A. *et al* (ed.) 1968. *Language problems of developing nations* New York: John wiley and sons Inc.

Haugen, E. 1973. *The ecology of language.* Stantord: Stanford University Press.

Karunakaran, K. 1976. Language standardization in Dravidian with reference to Tamil. *Dravidian Linguistics*, 5: 167-86, Annamalainagar: Annamalai University.

Krishnamurti, Bh. 1978. Language planning and development: the case of Telugu. *Contribution to Asian Studies*, 11: 37-56 Laiden: E.J. Brill.

Shanmugam, S.V. 1975. Modernization in Tamil. *Anthropological Linguistics*, 17:2.

Sharma, A.K. 1975. *Indian Government language policy and its implicatiou in Andhra Pradesh.* Unpublished Ph.D. Dissertation. The University of Texas, Austin.

Udayashankar, P. N. 1979. Modernization of Tamil in administration, unpublished M.A. dissertation. Annamalainagar: Annamalai University.

OPiL 7 & 8 (1981—82)

NEWS OF THE DEPARTMENT—1981

Award of Research degrees

The following two scholars were awarded M. Phil degree during 1981:

1. P.N. Udaya Shankar. *Tamilization of Telugu in Salem: a sociolinguistic study of language contact and linguistic convergence.* (Supervisor: Dr. Arun Kumar Sharma).

2. Adib Maleka. *Hindi as a language of mass communication.* (Supervisor: Prof. H.S. Ananthanarayana).

National Seminar

A two-day National Seminar on "Politeness hierarchy in Indian languages" was organised jointly by the Department of Linguistics and the Indian Council of Social Sciences Research, Southern Regional Centre, on February 27-28, 1981. Professor Bh. Krishnamurti was the Director of the Seminar. Professor R.V. Chandrasekhara Rao, Professor of Political Science, University of Hyderabad inaugurated the seminar and Professor G. Ram Reddy, the then Vice-Chancellor of Osmania University presided over the inaugural function. The following were set as the objectives of the seminar: to identify the verbal strategies of politeness available in various Indian languages, to correlate them with sociocultural and psychological variables (such as sex, kinship, caste, religion, education, economic status, attitude etc.), to put these variables in some sort of hierarchy and to find out the politeness strategies shared by different Indian languages. Many scholars from different Indian Universities and Institutes participated in the Seminar. In all, twentysix papers were read identifying the verbal strategies available in thirteen Indian languages. The papers presented in the Seminar will be published by the Department in a separate volume.

Visiting Scholars

(1) Professor Peter Ladefoged, Professor of Phonetics in the Department of Linguistics, University of California at Los Angeles, U.S.A., was a visiting teacher in the Department from January 19 to February 13, 1981. He conducted a four-week Workshop-cum-Seminar on the ' Methods of Research in Phonetics with special reference to Indian Languages'. The course was designed for advanced scholars in Phonetics working in the Departments of Linguistics and Languages in Indian Universities and Research Institutes. About 70 scholars from all over the country attended the Seminar-cum-Workshop.

(2) Professor Stanley Starosta, Professor of Linguistics at the University of Hawaii, Honolulu, U.S.A., who is an expert in Austronesian languages and the formulator of ' lexicase theory ', visited the Department during February-April 1981. He gave a course of lectures on the theory of lexicase for eight weeks which was attended by a large number of scholars.

(3) Professor G.B. Kelley, Professor of Linguistics, Cornell University, U.S.A. was a Visiting Fellow in the Department from 24-2-1981 to 5-3-1981. During the period of his stay he was available for consultation to the students and scholars in the Department.

(4) Professor Hans Henrich Hoch, Professor of Linguistics, University of Illinois, Urbana-Champaign, U.S.A. visited the Department on March 12-13,1981 and delivered two lectures:

(i) Aux-cliticization as a mechanism for word order change, and

(ii) Labovian approach to historical linguistics.

(5) Professor Franklin C. Southworth, Professor of Linguistics, University of Pennsylvania, U.S.A., visited the Department during July 14-17, 1981. He delivered two lectures on " Towards a theory of linguistic convergence."

(6) Professor James D. McCawley, Professor of Linguistics, University of Chicago, U.S.A. visited the Department during July-August 1981 (while he was a visiting Professor at the Central Institute of English and Foreign Languages) and gave the following two lectures:

(i) Beyond Chomsky's approach to language acquisition, and

(ii) Linguistics and the philosophy of science.

(7) Professor David Stampe and Dr. Patricia Donegan, distinguished natural phonologists from the Ohio State University, Columbus U.S.A., were in the Department of Linguistics during August, 1981. They delivered the following two lectures in the Department:

(i) Asegmental phonology and

(ii) Sora and typological history of Austroasiatic.

(8) Professor Frank Palmer, Professor of Linguistics, University of Reading, England, visited the Department on December 9, 1981 and he gave a lecture on "Grammatical relations and case."

DISSERTATION ABSTRACTS

P.N. UDAYA SHANKAR. TAMILIZATION OF TELUGU IN SALEM. (M.PHIL. 1981)

The present work is a study of structural changes affecting Telugu spoken as mother tongue by a minority group in Salem town of Tamil Nadu due to the influence of Tamil which is the dominant language. The violation of rules of Telugu grammar and the adoption of rules of Tamil grammar motivated by several sociolinguistic parameters constitute the prime concern of the dissertation.

The first and introductory chapter deals with the question of linguistic interference and language contact from different angles. It also outlines the methodology used for the study. The second chapter deals with the role of socioilnguistic parameters which promote or check language change in a language contact situation The third chapter delineates the phonological deviations from standard Telugu and tries to account for such a deviation in terms of under differentiation, over differentiation of phonemes, reinterpretation of distinctions and phonic substitutions. The fourth chapter discusses the grammatical interference and readjustments on the pattern of Tamil, like simplification in the gender-number system, introduction of Tamil case suffixes,

loss of human classifier in numerals, etc. The fifth chapter enumerates lexical interference. In the sixth chapter language mixing by Salem Telugu speakers is illustrated. The seventh and final chapter integrates the analysis given in the preceeding chapters. As many as seven graphs which readily explain the relationship between the sociolinguistic parameters and language contact situation, and the questionnaire used for the study are incorporated in the appendix.

ADIB MALEKA HINDI AS A LANGUAGE OF MASS COMMUNICATION
(M. PHIL. 1981)

An attempt is made here to study Hindi as it is employed in different media of mass communication. Besides pointing to its success in disseminating information among the masses, attention is drawn to the major drawbacks and remedies are suggested for the rectification of the same.

After introductory remarks on the important aspects of mass communication, the language policy of India is discussed at length indicating reasons which led the Govt. of India to accept Hindi as the Official language of the country. Discussing data from different mass media it is shown that Hindi as employed in the mass communication has become more sanskritized with the use of difficult Sanskrit words, and hence not easy of comprehension for the masses. To remedy this situation, it is suggested that the variety called Hindustani advocated earlier by Mahatma Gandhi be used since it has incorporated common words from many an Indian language. Finally, the process of modernization with reference to Hindi is emphasized in order to develop it as an effective means of communication in all the domains in which a standard language may be used.

OPiL 7 & 8 (1981—82)

NEWS OF THE DEPARTMENT—1982

Award of Research Degrees ..

Ms.C. Nirmala was awarded Doctor of Philosophy Degree for her work *First language (Telugu) Development in Children: A Short Descriptive Study*, (Supervisor: Prof. Bh. Krishnamurti.)

The following scholars were awarded M.Phil. degrees:

1. G. Uma Maheshwar Rao, *Lexical Diffusion and Sound Change in Progress* (Supervisor Prof. Bh. Krishnamurti).
2. V. Ramachandra Rao, *Phonology of Remo* (Supervisor: Prof. Bh. Krishnamurti).
3. S. Sumathi. *Phonology of SC Dravidian* (Supervisor: Prof. Bh. Krishnamurti).
4. S. Vijayalakshmi. *The Syntax of Be and Become in Telugu* (Supervisor Prof. C. Ramarao).
5. P. Subba Rao. *Avut, A Dravidian Speech: Phonology, Morphology, Texts and vocabulary* (Supervisor: Dr. B. Ramakrishna Reddy).

National Seminar

A two-day National seminar on 'Regional languages as Media of Instruction in Higher Education' was organised on March 19-20, 1982, under the Directorship of Prof. C. Ramarao. The Saminar which was inaugurated by Justice B.P. Jeevan Reddy, and presided over by the then Vice-Chancellor, Professor G. Ram Reddy, had as its objective the following:

(a) to review the effectiveness of the regional languages as media of instruction;

(b) to throw light on some of the crucial aspects of our educational system; and

(c) to guide language and educational planners.

Seventeen papers were presented at the seminar representing Tamil, Malayalam, Kannada, Telugu, Hindi, Punjabi, Bangla, Marathi, English, Gujarati, and Urdu. Dr. Anjani Kumar Sinha, the then Reader in Linguistics, Osmania University, summed up the deliberations of the seminar.

Visiting scholars

(1) Under the Osmania-Illionois Exchange Programme, Professor Braj Kachru and Professor Yamuna Kachru of the Department of Linguistics, University of Illinois, USA, visited the Department for one month during January 1982. They delivered a course of lectures in the area of Areal Linguistics, Hindi Linguistics, Sociolinguistics and Indian English. These lectures were attended by scholars from Osmania, CIEFL, and other Linguistics and Language Institutes in Hyderabad.

(2) Professor P. Bhaskararao, Professor and Head, Department of Linguistics, Deccan College, Poona, spent a month from 5th July to 4th August, 1982 as a Visiting Fellow in the Department. He offered a special course on 'Advanced Phonetics' for a period of four weeks from 7th July, 1982 to 2nd August, 1982 in collaboration with Dr. K. Nagamma Reddy, Lecturer in Linguistics, Osmania University. The course was an intensive one open only to serious minded students who had attended Dr. Peter Ladefoged's intensive course in 1981.

(3) Professor Charles W. Kisseberth, Professor of Linguistics, University of Illionois, USA, and an outstanding theoretician in phonology, visited the Department from October 14 to November 12, 1982. He delivered a course of lectures on 'Non-linear Approaches to Phonology' and also conducted a Workshop which was attended by the students, research scholars and faculty members from the Department as well as from the Central Institute of English and Foreign Languages, Hyderabad.

DISSERTATION ABSTRACTS

CHERVELA NIRMALA, FIRST LANGUAGE (TELUGU) DEVELOPMENT IN CHILDREN : A SHORT DESCRIPTIVE STUDY, (PH.D. 1982)

The study attempts to describe the first language acquisition and development in Telugu children between 1;6-3;0, whose speech samples were collected in six sessions of 60 to 90 minutes duration with an interval of four weeks between sessions.

In the area of phonology it was observed that the emerging phonemes appeared in the medial position in a word before they were used in the initial position. The youngest child's speech was characterized by deletion of initial syllables of adult two syllable words. Medial syllable deletion was typical of a relatively later stage of phonological development and was found to operate in the speech of all the four children of the study. The major phonological processes used by the children were deletion, substitution and assimilation. The following manner of articulation hierarchy in consonantal sounds was observed: nasal > stop > lateral > affricate > fricative > trill / flap. Two significant points of this hierarchy are, unlike the Jakobsonian postulation (1) the affricates emerged before fricatives, and (2) lateral liquids emerged before the affricates.

In the area of inflectional categories, it was observed that the youngest child at 1;6 had in her vocabulary both singular and plural nouns but they were used indiscriminately in both the contexts, and this kind of free variation was noticed till 1;11 in her speech. The evidence for the use of a plural formation rule is available in the older child at 2;1, who showed a number of backformed noun singulars like *paa* and k*aa* for *paalu* ' milk ' and k*aalu* ' leg ' identifying wrongly the *lu* ending of these nouns with the plural marker-*lu*. Increased production of plural nouns with the help of the pluralization rule and over-generalization of the plural rule were observed at still later stages of speech development. As for the development of case inflections, the earliest stage of development was characterized by an absence

of case inflections. The hierarchy of emergence of case inflection in the children's speech was : genitive ⩤ dative ⩤ locative ⩤ accusative ⩥ instrumental ⩥ ablative. Though tense suffixes were used correctly by the three elder children at the morphological level, they could not understand the concept of time as was evident from the lack of agreement between the time adverb and the tense forms used by them. As for Gender-Number-Person inflection, the third person masculine suffix *-di* emerged first followed by the second person singular suffix *-w(u)*. *-ru* emerged next and was used both for second and third parson plural. This was followed by the emergence of third person plural. Though the Gender-Number-Person suffixes emerged in the children's speech in the order given above, no child could use them with correct agreement.

Both holophrastic and telegraphic stages of syntactic development were noticed in the youngest child of the study. Early two word utterances consisted either of subject and verb or object and verb and the position of verb was not fixed. 'Pivot' ' and ' open ' class distinction was not found in the children's speech. The youngest child's speech showed no evidence of complex and compound sentences. Coordinate constructions were first expressed through juxtaposition of conjoined elements. Subordinate clauses emerged in the children's speech around 2;0, and in the initial stages subordinate clauses with perfective and conditional verbs were found to be predominant. Relativization was expressed by two simple sentences of which the second referred to the noun of the first sentence and the two sentences in question were connected with question and attentive words like *cuuDu* ' see,' *kadaa*, *leedu*, ' is it not so'.

In the area of lexical development, over-extension in nouns as well as verbs was widely used. The major bases for such over-extension were (1) perceptual and (2) functional. While over-extension of nouns has been reported by many, the study discusses for the first time over-extension in verb. Semantic development of verbs showed the following four stages: (1) omission of verbs, (2) over-extension of verbs, (3) use of several verbs belonging to one semantic field in free variation, (4) settled use of the appropriate verb in the place of the extended verb. Apart from over-extension and alternation, blending also was one of the strategies used by the children to capture verbs of the adult model.

G. UMA MAHESHWAR RAO. LEXICAL DIFFUSION AND SOUND CHANGE IN PROGRESS : A CASE STUDY OF GONDI DIALECTS (M. PHIL. 1982)

The aim of the present work is to observe whether any sociological factors, such as age and sex, are responsible for the degree of diffusion of the sound change s—ś h—ś ϕ in Gondi dialects. The work consists of three chapters and three Appendices. Chapter I ' Introduction ' describes the Gonds and their language, background of the sound change S—ś h—ś ϕ and the methodology. In Chapter II, different approaches to sound change (Neogrammarian, Structuralist, Generativist and Lexical Diffusionist) are discussed. Chapter III discusses how sociological factors have affected the sound change s—ś h—ś ϕ in Gondi. The conclusions are given at the end of this chapter. At the end of the three chapters, three Appendices are given. In Appendix I, the names of the villages chosen for the survey of the sound change along with number, age and sex of the speakers are given. Appendix II deals with the computation of indices which are statistical measures designed to show the differences and similarities in the distribution of variants (i.e. s—ś h—ś ϕ) with respect to age and sex of a person, geographical location and other relevant factors. In Appendix III, lexical items selected for the study of the sound change are quoted.

Gondi is the most widely spoken language among the non-literary Dravidian languages. It belongs to the South Central Dravidian or South Dravidian II branch of Proto-South Dravidian. It is closely related to other South Central Dravidian languages, viz. Telugu, Koṇḍa, Kui, Kuwi, Pengo and Maṇḍa. Gonds dwell in small groups in and around the hilly tracts and ravines in thick forests of Central India. They inhabit the adjacent areas of four states, viz. Maharashtra, Andhra Pradesh, Madhya Pradesh and Orissa. According to 1971 Census, about 1,891,123 people speak different Gondi dialects, i.e. Raj Gondi Parsi Gondi, Koya, Muria, Maria and Dorli.

The research work was done in the Sirpur taluk of the Adilabad district of Andhra Pradesh. The five villages, viz. Irdandi, Mogaḍḍhagaḍ, Kukuda, Sulugupalli and Yellur, were taken up for study which were situated roughly from south to north of the Sirpur taluk. From each selected village, a minimum of twelve informants of three age groups—above 47 years, 26 to 46 years and 12 to 25 years, were interviewed. About 40% of the

informants were females. Since the word is the ultimate unit of sound change according to lexical diffusionist model, the lexicon is given the utmost importance in the present work. Forty lexical items were selected from DED(S) which show the sound change s-> h-> ϕ. These lexical items denote kinship terms, agricultural and domestic tools, food and vegetables, numerals etc. These items consist of 10 verbs, 1 adverb and 29 nouns.

In Irdandi, the northernmost village of the Sirpur taluk, the operation of s-> h- is in its incipient stage. In this village, a maximum of 5 out of 40 lexical items are found to have been involved in the change s-> h-. The older speakers interviewed showed only 3 lexical items while the younger speakers showed only 5 lexical items in change. In Mogaḍdhagaḍ, the number of lexical items that were involved in the change s-> h- range from 7 in the case of older speakers to 27 in the case of younger speakers. Two villages, Kukuda and Sulugupalli, which are centrally located, show the completeness of the first phase, i.e. s-> h-, ofthe rule s-> h-> ϕ and have just entered into the second phase, i.e. h-> ϕ. On an average 2.5% of the lexical items are involved in the change h-> ϕ in these two villages. It is noticeable that in all the four villages, viz.Irdand, Mogaḍdhagaḍ, Kukud and Sulugupally, the two age groups, i.e. above 47 and 26-46 do not exhibit much difference in the use of the variants. It can be said that in all these villages, the younger speakers in age group 12-25 show a much stronger tendency towards the use of the innovated froms than the middle aged and older speakers. In all these villages, women show a much stronger tendency towards the use of the innovated forms than men. This may be due to the facts that in the Gonḍ society, women have equal status with men, and women do more work than men both at home and outside. In Yellur, the change h-> ϕ is in full swing. Here, as many as 39 lexical items are found to have been involved in the change. In this village, unlike in other villages, middle aged speakers show a marked difference in the use of the innovative variants than the older speakers. It is observed that many middle aged speakers are showing a strong tendency towards the use of the innovated forms unlike the older speakers. This tendency may be due to the influence of Telugu since the village is situated closer to the predominantly Telugu speaking area and most of the villagers are bilinguals, i.e. they speak both Gonḍi and Telugu. It is also found out that in Yellur, men show a much stronger tendency to use the innovative forms than women. Again this tendency may be due to the influence

of Telugu bilingualism, since the Gondmen of the village are reported to frequently visit the bazaars, hotels and the country liquor shops run by Telugu men.

It is evident from the present study that in Sirpur taluk, the diffusion of s- > h- is current in the northern villages (i.e. Irdand and Mogaḍdhagaḍ), while the diffusion of h- > ϕ is current in the southern villages (i.e. Kukuda, Sulugupalli and Yellur). The younger generation has shown a tendency to use more innovative forms than their elders. The middle aged people showed less tendency to use the innovative forms and are closely following the older generation. As the Gonḍ society is less hierarchial than the Hindu society, age has become the crucial factor responsible for the variability of the sound change. Women were found to use more innovative forms than men and may be said to be taking the lead in spreading the innovation. It is observed from the present study that sub-categorizing the words by 'parts of speech' (as verbs and nouns) and by their membership in different semantic domains has no relevance to the diffusion of the sound through the lexicon. It is found that high frequency words are the first ones to be involved in the implementation of the sound change s- > h- > ϕ in the Sirpur taluk of the Adilabad district. Thus, the present study offers counter evidence to Labov's observation that the sizable literature on the aspiration and deletion of /s/ shows no evidence of lexical conditioning and shows that this particular sound change, i.e. the aspiration and deletion of /s/ (s- > h- > ϕ) is lexically conditioned and is gradually diffusing through the relevant lexicon.

V. Ramachandra Rao. The Sound System of Remo, M.Phil 1982

This work is a descriptive analysis of the sound system of the plains dialect of Remo language, spoken in the Khairput Block of Koraput district, Orissa.

The first and the introductory chapter gives the details about the geographical distribution, population and the physical facts of the tribe. The genetic relationship of Munda languages and a brief account of earlier works on the language are given. The second chapter deals with the phonemic inventory, phonemisization of consonant and vowel phonemes and the positiional occurrence of all the phonemes.

The third chapter deals with the consonant clusters and diphthongs. The combinational flexibility-count of each consonant is also estimated. At the end of this chapter, the list of examples for positional occurrence of different clusters is given.

In the fourth chapter, the basic structure of syllable is discussed in detail. The syllable divison is made on the basis of the three universal principles of Pulgram, 1970. In the fifth chapter, a brief introduction to morphology is given. Different morpho-phonemic processes are discussed. At the end, a categorical list of Remo-English vocabulary is added.

S. Sumati. Comparative Phonology of South Central Dravidian Languages (M. Phil. 1982)

The present work aims at the description of the comparative phonology of the South Central Dravidian (SDr.II/SCDr.) languages, viz. Telugu, Gondi, Konḍa, Kui, Kuwi, Pengo and Maṇḍa. The data for the present work have been mainly collected from the two published works, Dravidian Etymological Dictionary (1961) and Dravidian Etymological Dictionary-Supplement (1968), by T. Burrow and M.B. Emeneau. In addition to this, the material is also drawn from Indi discovered recently by B. Ramakrishna Reddy (1979). Some of the cognates in Kuwi and Maṇḍa relating to the corresponding items of DED (S) have been added from Kuwi-English Dictionary (BRR : 1972) and Maṇḍa Vocabulary (BRR : 1979). At the end of the work, an appendix is given in which the entire lexicon along with cognates is presented. The work is based exclusively on the cognates found in the SCDr languages. Cognates found in less than five out of the seven languages are not included for analysis as this might reduce the chances of reconstructing the reliable proto forms and identifying their later developments. Since there are many dialects in Gondi, the proto-Gondi forms are reconstructed and compared with the cognates of other SCDr. languages.

In the introduction of the present work, traditional subgrouping of Dravidian languages and the subgroupings of Dravidian languages proposed by Bh. Krishnamurti and Southworth are discussed. In the main part of the work, proto-South-Central Dravidian (PSCDr.) phonemes are reconstructed from the comparison of SCDr-cognates and tables are given which show how each PSCDr. phoneme is represented in different SCDr. languages. At the end of the work, a consolidated table of high frequency

correspondences is given. On the basis of these correspondences, vowels and consonants of root syllables have been set up for PSCDr. The differences between the correspondences stated in the present work and the correspondences given in DED (1961) are shown in a separate table.

P. Subba Rao. Avut, A Dravidian Speech (Phonology, Morphology, Texts and Vocabulary). M. Phil. 1982

Avut is one of the recently discovered Dravidian dialects, akin to Pengo both in lexicon and grammatical structure. The present dissertation records and reports the data for the first time giving a descriptive account of the phonological and grammatical structure of the language, along with some texts and the vocabulary.

The introductory chapter provides the socio-cultural background of the Avut speaking Kondh tribes inhabiting the Thuamul Rampur and Jubrajpur areas of Kalahandi district, Orissa. After giving an inventory of consonants and vowels, the chapter on phonology deals with the description and distribution of phonemes, syllable structure and consonant combinations. The morphophonemic alternations covering the internal and external Sandhi, along with such rules as assimilation, metathesis, deletion and glide insertion are discussed with illustrations.

The grammar of Avut (consisting mainly of morphology) is described under the categories of noun, pronoun, adjective, numerals, verb, adverb, connectives and interjections. The noun morphology details the rules of plural formation, case marking, and gender-number distinctions with copious examples. The structure of pronoun is discussed under personal, demonstrative, interrogative and reflexive. Apart from the basic adjectives occurring in the attributive position, the predicative adjectives and their subject agreement markers get enough attention. The peculiar numeral structure of vigisemal system of the cardinal numbers along with ordinals and quantifiers is presented with illustrations.

The verb morphology of Avut forms the main body of the grammatical description. The verb roots are classified into simple and complex stems along with the formation rules of

intransitive, transitive and causative. The peculiar features of object incorporation restricted to I and II person, the reflex of plural action and distant action on the verb are discussed in detail. The description of finite verb deals with tense marking, subject agreement, positive and negative constructions. The aspectual distinctions of perfective and progressive, the modality distinctions of imperative, prohibitive, obligative, potential and hortative are analysed with rules and examples. Other areas of verbal piece include participial construction, negative participle, conditional, concessive, relative participle, gerundives and compound verbs.

There is a brief discussion of adverbs, connectives and interjections in Avut. The section entitled miscellaneous deals with such unique features of the language as immediate action particle, emphatic particle, reportative, onomotopoeic expressions, echo words and balancing words. Some five texts of Avut with English translation are given under Part II, while the Avut-English vocabulary is presented under Part III.

S. VIJAYALAKSHMI. ON THE SYNTAX OF THE VERBS BE AND BECOME IN TELUGU M. PHIL.

In many languages the equivalents of 'Be' and 'Become' have many morphological and syntactic peculiarities. This dissertation is concerned with a study of the lexical and non-lexical functions of the verbs uṇḍu and avu in Telugu. In the first chapter a survey of existing literature in the field is given. The second chapter enumerates the different lexical uses of the verb uṇḍu. The third chapter discusses the non-lexical functions of uṇḍu and also throws light on the aspectual structure of Telugu, which has not found a proper place in earlier works. The fourth chapter deals with the lexical uses of the verb avu. In the fifth chapter avu as a syntactic connector is explored. This chapter also discusses the question of the source of the copula in Telugu. The sixth chapter summarises the findings of the investigation.

PUBLICATIONS OF THE DEPARTMENT OF LINGUISTICS

I. **Osmania Papers in Linguistics** (Annual Journal)

CONTENTS OF PREVIOUS VOLUMES

Volume 1, 1975

Volume 2, 1976

Volume 3, 1977

Volume 4, 1978

Volume 5, 1979

OSMANIA PAPERS IN LINGUISTICS

Volume 7 and 8, 1981-82