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Papers

The manuscripts of articles should be submitted in *triplicate* typed double space with wide margins. Language data should be underlined with meaning in inverted commas. The system of footnoting and listing of bibliography will be those adopted in *Language*. The article if theoretically important will be treated as in *Current Anthropology* and published with comments and replies. Fifty offprints will be issued free of cost to the authors. Classical papers which are out of print will also be republished, if there is demand.

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THE TERM 'TAMIL'

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Utrecht

To speculate on the etymology of the name of a language is probably the most hazardous sort of etymologizing. Most often it is impossible to obtain a truly satisfactory result. However, it is always tempting. When it comes to the word *tamiḻ* (Eng. Tamil. Fr. tamoul, Germ. Tamil etc.), the name denoting the Dravidian language *par excellence* spoken in South India and elsewhere by the Tamils, the search for etymology becomes provocatively dangerous since the term is charged with potentially highly explosive emotions.[1] However, this is precisely the reason why one should, level-headedly and in a cool and detached manner, investigate the matter.

1. The standard dictionary of the Tamil language, the *Tamil Lexicon* (Vol. III, University of Madras, 1928, p. 1756) lists the following meanings of the word *tamiḻ* (adding, "perh. *tamil*, cf. *dramiḍa*"): 1. Sweetness, melodiousness; 2. Refined quality; 3. Tamil language being divided into *iyaṟ-ṟamiḻ*, *icai-t-tamiḻ*, *nāṭaka-t-tamiḻ*; 4. Tamil literature, Tamil work; 5. The Tamils; 6. The Tamil country. In this enumeration, TL misses a very significant comparatively early sense of the term *tamil*, viz. love-matter (*Paripāṭal* 9.25). I use here

[1] For relevant literature concerning this and similar problems cf. Eugene F. Irschick, *Politics and Social Conflict in South India; the Non-Brahman Movement and Tamil Separatism, 1916-1929*, Univ. of California Press, 1969; Robert L. Hardgrave, *The Dravidian Movement*, Bombay, 1965; R. E. Asher, 'Dravidian Separateness; Invention or Reality', *South Asian Review*, Vol 6, 1 (1972) 33-42. In this short paper I abstain from any discussion of the connection between the term *tamiḻ* and the Aryan words *drăviḍa-*, *damiḷa-*, *damila-*, *daviḍa-* found in various textual and inscriptional sources. This is a problem *sui generis*. Let me only stress that I am convinced that the Aryan words are ultimately borrowings from an underlying Dravidian form, and not *vice versa*, as believed by Caldwell.

the term 'love-matter' in its technical sense, i.e. in its established use of indigenous Tamil rhetoric; in this sense it also appears in the colophon of *Kuṟiñcippāṭṭu* which tells us that the poem was composed by Kapilar to instruct the Aryan king Pirakatattaṉ in the content of love-matter (= *tamiḻ*, i. e. *aka-p-poruḷ*).[2]

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It is obvious that the enumeration in the *Tamil Lexicon* does not pertain to a single chronological level, or one single sociolinguistic and cultural usage; neither does it follow the actual semantic development of the term in time. Let us therefore investigate first the chronology of the occurrence of the term *tamiḻ* in Tamil texts.

2. The earliest attested textual occurrence of the term is very probably in the first book of *Tolkāppiyam*, the earliest Tamil work available to us (perhaps as early as the 1st Cent. B. C.), *Eḻuttatikāram* 386 which says: *tamiḻ eṉ kiḻavi-y um atuṉ-ōr-aṟṟē* "the word *tamiḻ* is also like that" (i.e. just like the other words ending in *-ḻ*, the word tamiḻ is followed by the empty morph *-akku* or a consonant when followed by an obstruent).[3] Here, phrase *tamiḻ eṉ kiḻavi* "the word *tamiḻ*" gives us no clue either to the meaning or to the etymology of *tamiḻ*. In *Tolk. Col.* 398.3 (392.3), we find the expression *centamiḻ nilattu* "of the territory of refined Tamiḻ", and in 400.2 (394.1) we encounter *centamiḻ cērnta paṉṉiru nilattiṉum* "and of the twelve regions adjoining [the territory of] refined Tamil". Obviously, the term *tamiḻ* refers here to the *language* in its refined, standard (ized), literary (?) style.

The Specfic Preface *(ciṟappuppāyiram) to Tolkāppiyam* (which is definitely later than the text-but how much later we are unable to say) mentions *tamiḻ kūṟu nal-l-ulakam* "the beautiful world [where] Tamil is spoken", and again alludes to *centamiḻ.....nilam* "the territory..... of refined Tamil".

3. In the so-called Sangam literature the bulk of which may be somewhat later (first few centuries of the Christian era) than the kernel of *Tolkāppiyam*. we come across at least fourteen references to *tamiḻ*[4]. These occurrences are found in the texts of *Puṟanāṉūṟu, Akanāṉūṟu; Patiṟṟuppattu* and *Ciṟupāṇāṟṟuppaṭai.*

[2]Tam. *kapilar āriya-v-aracaṉ pirakattaṉai-t tamiḻ aṟivittarkup pāṭiyatu.*

[3]*E.g. tamiḻk kavi* or *tamiḻak kavi.*

[4]This is not including the references in *Paripāṭal, Cilappatikāram* and *Maṇimēkaḷai* which are to be considered slightly later works.

The term is found in these earliest textual references in the following meanings :

1. the Tamil language : e.g. *Puṟam* 50.10, 58.13.
2. the Tamil country : e.g. *Puṟam* 51.5.
3. the Tamil warriors/army . *Puṟ*. 19.2, *Patiṟ*. 63.9.
4. the literature : *Ciṟup.* 66.

This last reference, although not explicitely to literature (it could also refer to the language), is important in that it reveals "the anxiety and authenticity of/for the establishment of a powerful centre (Sangam) for Tamil learning."[5]

In later classical texts *(Paripāṭal, Maṇimēkalai* and *Cilappatikāram*), she usage of the term *tamiḻ* increases, and new meanings appear : thus we have "the Tamils" (in Cil. 23.63 or 27.5), "the Tamil kings" (*ib.* 26.185), "the Tamil country" (*tamiḻ nāṭu, ib.* 25.165), "the Tamil land" (*ib.* 3.38). The term *tamiḻ-akam* "Tamil land" seems to be *the most ancient term* used to designate Tamil territory, for it also occurs as early as *Puṟam* 168.18 and *Patiṟṟuppattu Patikam* 2.5. Another important early term is *tamiḻ-k-kiḻavar* (*Puṟ*. 35.3) referring apparently to "Tamil chieftains".

A very interesting use of the term *tamiḻ* occurs with the word *kūttu*; this is found in personal names of Sangam Tamil poets; thus *Puṟam* 334 is ascribed in the colophon to Maturait Tamiḻkkūttaṉār, *Akam* 164 to Maturait Tamiḻkkūttaṉ Nākaṉ Tēvaṉār, and *Akam* 256 and 354 to Maturait Tamiḻkkūttaṉār Kaṭuvaṉ Maḷḷaṉār. The term *kūttu* refers to dance, and *tamiḻkkūttu* may refer to a specific variety of dance indigenous to Tamiḻakam, The poet's names are derived either from their profession, or their belonging to a professional community or occupational group specializing in the *tamiḻkkūttu.*[6]

With the medieval texts like *Peruṅkatai* and *Cīvakacintāmaṇi*, the word *tamiḻ* which in its earliest meaning signifies the language, the land, and the people, acquires a few subtle and sophisticated, derived or metaphoric meanings. Already in *Cilappatikāram* 37.8, by implication, we come across an expert who knows 'the totality of *tamiḻ*' (*tamiḻ muḻut/u aṟinta*) ; the commentator tells us that what is

[5]N. Sanjeevi, *op cit*. 9.

[6]*Piṅkalanikaṇṭu* 5.101 explains *tamiḻkkūttar* simply as *vāyilōr* 'dancers'; however. the etymology of this term is <*vāyil* + *-ōr*, 'door-keepers', or 'messengers, mediators'.

meant here is the *mu-t-tamiḻ* - the threefold Tamil of *iyal*, i. e. Tamil of natural speech; the language as spoken; the language of spoken/recited/read literature; of *icai*, i. e. Tamil set to music; the language as sung; the language of song; of *nāṭakam*, i. e. Tamil as enacted; Tamil as mimesis, dramatic Tamil. In the medieval texts, the term Tamil is used not infrequently for clandestine/spontaneous/informal love (= *kaḷavu*), for lovers' union for sweetness.

Finally, in the medieval lexicon *Piṅkalanikaṇṭu* (850–900 A. D.) we read (10.580): *iṉimaiyu (m) nīrmaiyun tamiḻeṉal ākum* "Tamil signifies sweetness and coolness"[7]. The semantic shifts are obvious; the meanings of 'sweetness' etc. are clearly later and derived. However, we must not forget that the identification of *tamiḻ*, or, rather, the typical Tamil way of life with the concept of spontaneous, informal love (= *kaḷavu*) is as ancient as the later classical age (*Paripāṭal*, and the colophon to *Kuṟiñcippāṭṭu*, referred to above).

Where does the meaning of 'sweetness' possibly derive from? *Tolk. Porul.* 539.1 mentions *iḻum eṉ moḻi*. This is usually interpreted as 'sweet words'[8]. However, judging from the current meanings of the root *iḻ*-occurring elsewhere,[9] I would rather translate *iḻum eṉ moḻi* as 'resounding, sonorous, resonant speech'. The meaning of 'sweetness' for *tamiḻ* would seem to me to be a semantic specification, particularly based on the extension of the meaning of *tamiḻ* to anything pleasant, not on any concrete etymology like that mentioned in *TL* p. 353 *iḻ-um-eṉal*.

4. Let us look now at the comparative evidence. Under DEDR 3080 we find Ta. *tamiṟ* the Tamil language, the Tamils, the Tamil country; *tamiṟaṉ* a Tamilian. Ma. *tamiṟ* Tamil language. To. *tobīḷ* id. Ka. *tamiṟa, tambaṟa* id. Tu. *tamuḷu, tamuḷu, tambuḷu* Tamil. We see that the occurrence of the item is limited strictly to South

[7] I.e. most pleasant qualities; we must remember that 'coolness' in the Tamil conceptual world is always connected with feelings of soothing, refreshing calm and composure.

[8] Thus it is also understood by S. V. Subramanian, *op. cit.* p 11 where he writes, "Il" stands as the root of 'Iḻum' meaning sweetness, as in Iḻumeṉ moḻi (1491) of Tolkappiyam; and as an onomatopoeic expression denoting sound, sweet pleasant agreeable sound, both vocal and instrumental.

[9] E g. *Puṟam* 3 3 where it denotes rather the drone of a drum *(muraca miḻumeṉa muḻaṅkā)*.

Dravidian plus Tuḷu. Among these forms, the Tamil form seems to be the one which we may reconstruct as the protoform **tam-iṟ* whereas the rest are apparently either borrowings from pre-Tamil or Old Tamil, or specific developments from the pre-Tamil / Proto-South Dravidian word.

In Toda, the replacement of **a* by *o* is one of the regular developments, cf. e.g. Ta. *kaṇ*: To. *koṇ* 'eye', Ta. *tampaṭṭam* 'small drum' : To. *tomk/tobk waḍ-* 'to beat drum'; Ta. *tappu* 'to err, etc.' : To. *top-* 'to fail to come, etc.'. The *-b-* in To. may be explicable on the ground of the Toda item being a borrowing and further development of proto-Kannaḍa or Ka. *tambaṛa* rather than Ta. *tamiṟ*, cf. DEDR 3082 Ta. *tampaṭṭam*: Ka. *tambaṭa*: To. *tobk*, Ko. *tabaṭk*.

The Kannaḍa, Tuḷu (and early Toda) **-mb-* <-**mb-* where **-b-* is either a development of an ancient proto-form **tampiṟ*, or an innovation. As there is no comparative or historical evidence anywhere for anything like **tampiṟ-a*, but rather solid evidence for a reconstruction **tam-iṟ*, it is better to treat the Kannaḍa and Tuḷu (and Toda) *-b-* as an innovation, as an intrusive homorganic obstruent. The phenomenon of epenthesis (the intrusion of a sound which has no etymological "justification") is a frequent enough phenomenon (cf. Anglo-Saxon *brēmel*> English *bram-b-el*, post-Latin *cam'ra*> French *cham-b-re*). Even in South-Dravidian, we may possibly indicate a few analogies : DEDR 1742 **kumiṟ* : Ta. *kumiṟ*: Ma. *kumpiḷ*, Ka. *kumbuḍi*, Koa. *kumbīḷi* '*Gmelina arborea*'; 2677 **cum-* Ta. **cuma->cuma-*: Ka. *simbi*, *simbe*, Tu. *tumbu*, *sumbu* etc. 'to bear, carry; burden, etc.'

If we accept that the Proto-Tamil form was **tamiṟ*, a number of possible etymologies suggest themselves.

a) First, there is the *Tamil Lexicon* suggestion that the word is perhaps connected with *tami* 'solitude; loneliness; inequality destitution'. Even if we would stretch the meaning to include 'solitariness, uniqueness', this derivation is morphophonemically, structurally most improbable since there is no evidence for any formative suffix **-ṟ* appended to a disyllabic stem like *tami-*; in fact, a derivational morph **-ṟ* does not at all, to my knowledge, occur as such in Dravidian.

b) If, in complete agreement with the regular pattern of Dravidian derivation, we interpret the form as root CVC- plus derivational suffix-VC, i.e. **tam-iṟ*, two possible explanations offer themselves.

1. First, we may take **tam-* and **iṟ-* as two root morphemes, two lexemes which represent at the same time regular sememes, and the resulting word is a *compound* meaning (?) "their - sweet sound" or "our own - sweet sound". This is the solution suggested e. g. by S. V. Subramanian.

2. Or, we may take **tam-* as a root morpheme, a lexeme, and **-iṟ* as part of the derivational apparatus, as a bound formative suffix. This is the suggestion I would certainly prefer.

There are several reasons against the first interpretation. Compounds of the sort as suggested above are rare in Dravidian.[10] Very rarely if at all we come across a compound formed by 'pronoun + substantive/verb'; the cases which can be quoted as such are of a very specific kind (forming paradigmatic classes of very limited number of semantically very specific groups), and their formation is not yet quite clear. In contrast the regular form of a Dravidian word is 'root lexeme ± derivational suffix', which fits perfectly the analysis of **tam-* + *-iṟ*.

Second, the meaning of 'our sweet sound' (or some similar meaning) does not fit very well with the fact that Tamil was known as *aravam*, and the Tamils as *aravar*, which is connected apparently with DEDR 313 Ta. *aruvā*, Te, *aṟavamu*, Ka. *arava* etc. In Tamil, *aravam* means 'a sound which is not sonorous; soundlessness; bustle, howl, hum, confused noise' (cf. Skt. *a-rava* 'noiseless'). Folk-etymology connects the designation *aravam* 'Tamil' with this word for 'soundlessness, non-sonorous sound, bustle etc.'. There is a popular saying which compares the sound of Tamil to the noise of pebbles rattling in a pot, or in a mountain brook-certainly an unjust and ungenerous description, but also definitely at odds with the description of Tamil as "their sweet sound".

Most importantly, whereas there is no certain evidence for a formative suffix **-ṟ*,[11] or for a compound with a root **iṟ-*, there is overwhelming evidence in Dravidian lexicon for a highly productive,

[10] Although of course we have such not unfrequent formations as *kaṇ* 'eye' + *nīr* 'water' → *kaṇṇīr* 'tear' (i.e subst. + subst. → compound). But **tam* 'their/our (own)' + *iḻ* 'sweet sound' → *tamiḻ* 'Tamil' is not quite the same, either morphologically or semantically.

[11] We come, rarely, across apparent cases of a suffix **-ṟ*, e g. DEDR 268 Ta. *avi* be boiled, *aviyal* boiling, *avai* to cook, boil < **av-*: *aviṟ* boiled rice; but even in such cases - as the derivation *av-ai* shows almost beyond doubt, we should interpret *aviṟ* as ** av-* + **-iṟ*, and not as ** avi-ṟ*.

regular derivational suffix **-iṟ*. Moreover, there is an underlying – albeit vague – semantic value which can be ascribed to this derivational morpheme.

5. Apart from *tamiḻ* <**tam-iṟ*, I have found at least 18–20 items formed with the suffix **-iṟ* appended to monosyllabic nominal or nominal or verbal root-lexemes: DEDR 167 *amiṟ* be immersed, plunged; sink; 14 *aviṟ* (<**ak-iṟ*) become loose, united; 268 *aviṟ* (<**av-iṯ*) boiled rice; 270 *av-iṟ* (<**av-/ak-*) single grain of boiled rice; 466 *imiṟ* to sound, hum; 2489 *imiṟ* (<**cim-/cik-*) to sprout shoot forth; 2542 *imiṟ* (<**cim-*) to restrain, fasten, tie; 636 *umiṟ* (<**um-/uk-*) to spit, gargle, emit, vomit; 1335 *kaviṟ* (<**kav-/kam-*) be capsized, turned bottom upwards, etc.; 1742 *kumiṟ* coomb teak; 1743 *kumiṟ* knob, stud; 2106 *kumiṟ* be spherical, conical. *kumiṟi* bubble, etc. (prob. (<**kom-*); 2542 *cimiṟ* to bind, entrap; 2923 *nekiṟ* become loose, slip off as bangles; blossom, etc.; 3200 *tekiṟ* (<**tik-*) be manifest, shine; 267 *naviṟ* (<**avi-*) to extinguish; 4618 *makiṟ* to rejoice, exult; joy; toddy; 4893 *mukiṟ* to bud, put forth buds, appear, etc.; 4894 *mukiṟ* bubble. The list, which is certainly not complete, shows beyond doubt how productive the derivational suffix **-iṟ* (which may be reconstructed as Proto-Dravidian) has been. Since **ta-miṟ* is, in terms of Dravidian morphemic structure, impossible, and **ta-miṟ* almost equally impossibe, the only alternative solution is **tam-*, a root-morpheme, followed by the highly productive derivational suffix **-iṟ*. Although I realize that in what follows I am on very slippery ground, I would still dare to suggest that there may be a vague underlying semantic value attached to **-iṟ*; it is found in most cases forming *verbs* which express a *process* somehow connected with the change of state or a quality, usually 'loosening, opening' (or its very antonym!), or verbs indicating emitting a sound. Cf. 14 become loose, untied; 2489 to sprout, shoot forth; 1335 be capsized; 2923 become loose, slip off; blossom; 3200 be manifest, shine; 4618 to rejoice, exult; 4893 to bud, appear (and the antonyms 2542 to fasten, tie, 2542 to bind, entrap); cf. further 466 to sound, hum, 636 to gargle, spit.

What represents the first part, **tam-*?

Two possible explanations suggest themselves to me. The first is the 'easy' one: *tam-* is indeed connected with the oblique form of the pronoun of the 3.p.p.l. reflexive **tām* 'they (themselves)' (which is etymologically also connected with *tam-i* 'solitude, loneliness'), and the underlying meaning of *tamiṟ* would then be 'their *iṟ* could be taken simply as a bound formative suffix and/or refer, at the same time, to ['something which unfolds, opens with a sound, and is]

theirs'. This interpretation is very close to the opinion of S. V. Subramanian. The meaning of **tam-* in *tamiṛ* refers – if interpreted in this way – rather "to a more general reflexive usage" as suggested indeed in the quoted article by Subramanian; hence **tam-* 'self' (i. e. 'ourselves, yourselfs themselves'); in this case, *tam-iṛ* could be understood rather like "one's self-*iṛ*" with the possible connotation of "unfolding sound" as suggested above.

I wish, however to point out that there is a very frequent alternation of *-m-/-v-/-k-* in the final consonant of Dravidian roots in general, including those words formed with the suffix **-iṛ*. This alternation is in agreement with some general rules of Dravidian phonology.[12] In many cases, on the strength of comparative evidence we can point to the velar obstruent **-k-* as the original sound. Thus it appears that DEDR 14 *aviṛ* <**ak-iṛ*, 2489 *imiṛ* <**iviṛ* <**cik-iṛ*, 636 *umiṛ* <**uviṛ* <**uk-iṛ*, etc. Analogically, we could possibly presume a development of *tamiḻ* <*iam-iṛ* <**tav-iṛ* <***tak-iṛ* where ***tak-*is connected with DEDR 3005 Ta. *taku* to be fit, appropriate, proper, worthy, adequate, excellent (cf. Te. *tagu, tavu*), and the underlying meaning of *tamiṛ* 'the Tamil (language)' <**tak-iṛ* would then be "the appropriate (exceilent, adequate, proper) – *iṛ*" where **-iṛ*, although a bound formative morpheme, could possibly have a vague semantic connection with 'sound'; hence *tamiṛ* <**takiṛ* 'Tamil' would 'mean' "the excellent [resounding] process", i. e. "the proper [process of] speaking". This 'meaning' of Tamil would fit better with the general manner in which many ethnic communities designate their language, viz. as being the one speech that is 'fit, proper, excellent' in contrast to the speech of foreigners which is either unintelligible blabber – cf. the Greek term *β'αδβαδοʃ*, Skt. *barbara-* or no speech at all, cf. the Proto-Slavonic **nĕmbcb* (<*nĕmc* 'dumb').[13]

[12]For the *-m-/-v-* alternation cf. K. Zvelebil, *Comparative Dravidian Phonology*, Mouton, 1970, 1.27.2, and for *-m-*<**-v-*<**-k-*, cf. *ib.* 1.273, p. 127.

[13]Just like many communities designate themselves and *only* themselves as "people *(par excellence)*, people (as such), men", cf. Toda *o.ḻa.m* 'men, people Todas'; *hoṛo*, pl. *hoṛoko* 'man; Munda; *khoi-khoin* 'genuine people, people as such; Hottentots'; *in(n)uit* 'people; Eskimos', in contrast to the 'barbarians' who are 'non-people', cf. Skt. *mleccha-* 'a foreigner, barbarian, non-Āryan stammerer'. The primitive Slavonic **nĕmc* 'dumb' is the basis of many Slav-language designations of the Germans who are considered 'dumb', cf. Old Russian *nĕmbcb*, *nĕmbcin* 'German; any foreigner', Czech *němec* 'German', Polish *niemiec* 'German', even Middle Greek Νε*μ*ίτ§ol, pl. 'Germans'

This meaning of *tamiṟ* as the 'correct, excellent, appropriate sound' would, to my mind, be more 'appropriate' than the meaning of "their (own) sound".

In conclusion, then, we may suggest that the tentative etymology of the name of the Tamil language is to be derived as **tam-iṟ* <**tav-iṟ* <***tak-iṟ* where the second part is the productive formative suffix **iṟ*, and the first part is connected with Ta. *taku-* 'be fit, proper, excellent'. The deep underlying meaning of Tamil is, thus, "the proper process (of speaking".[14]

Hungarian *német* 'German' etc. cf. an excellent recent paper of D. B. Kapp, 'Der Stammesname "Toda": eine neue Etymologie', *Zeitschrift für vergleichende Sprachforschung*, 97. Band, 1. Heft, 1984, 154-65.

[14]I owe it to the memory of my esteemed friend and colleague, Mayilai Ciṉi. Vēṅkaṭacāmi (1900-1980) to mention in this place his views on the identity of the meaning of the words 'tamiḻ' and 'akam', i.e. 'love'. In the body of the preceding paper, I noticed that the term *tamiḻ* has been used in the meaning of 'love' / 'love-matter' (in rhetoric) since rather early times. In what follows I wish to exemplify and detail this point by making use of the data offered mostly by M. S. Venkataswamy in a Tamil paper published in 1973 ('Tamil-Akam, *Journal of Tamil Studies*, 3, Sept. 1973, 1-31). As mentioned above, the word *tamiḻ* in the meaning of 'love-matter' of literature is most probably used as such in the colophon to *Kuṟiñcippāṭṭu* (ca. 150-200 A. D.); V. R. R. Dikshitar in his *Studies in Tamil Literature and History* (London, 1930) is, however, of the opinion that Kapilar composed his poem to teach the Aryan king in question Tamil (i e. the language). It is interesting that "the Aryan king Yāḷp Piramatattaṉ" composed a Tamil love-poem *(Kuṟuntokai* 184) Whether he is identical with Kapilar's Pirakatattaṉ or not, is not clear; but according to Venkataswamy, the attribute Yāḷ in his name refers to the Gandharvas *(Yāḷōr)*, *ergo* to "Gāndharva love", i.e. *kaḷavu*, i.e. *tamiḻ*.

According to *Paripāṭal* 9.14, *kātal* 'love' is to be preferred to *kāmam* 'lust', and spontaneous love is paraphrased as *tamiḻ* in the text 9:25-6. Māṟaṉ Poṟaiyaṉār composed his *Aintiṇai aimpatu* in the 5th - 6th Cen. A. D. In this, little work's Preface, *centamiḻ* designates its matter, i.e. 'love' in the five *tiṇai's*. The famous commentary on *Iṟaiyaṉār's Akapporuḷ* by Nakkīrar (8th Cen. A. D) is quite explicit: it says that the book, the subject of which is *akapporuḷ* (love-matter) deals with *tamiḻ* as its subject-matter. In Māṇikkavācakar's *Tirukkōvaiyār* (10th Cent), *tīn tamiḻ* also designates the 'topic of love'. The grand epic *Cīvakacintāmaṇi*, in its *Patumaiyār* book 163, uses the term *teṇtamiḻ* as referring to *akapporuḷ* (cf. U. V Swaminatha Iyer's edition, Madras, 1969, p 675). The grammar *Tamilneṟi viḷakkam* (9th Cen. or later), of which we have only a fragment (ed. by U. V. Swaminatha Iyer in 1937), states explicitely that the manner of love as practiced in the five *tiṇai's (aṉpiṉ aintiṇai)* equals *tamiḻ neṟi*, i e. *the* Tamil way (of life), *the* Tamil 'method' (of love). Taking into consideration all these data particularly within their context and structural relationships, I believe we cannot (as S. V. Subramanian or M. Sini. Venkataswamy would have it) write a simple equation of *tamiḻ* = love *(kātal, aṉpu)*, but *tamiḻ* = a culture-specific manner of love-relationship (i.e. the spontaneous love of *kaḷavu)*, particularly as reflected in literature and as typical theme of classical Tamil poetry.

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LANGUAGE LIFE TABLES : SOME THEORETICAL CONSIDERATIONS ON LANGUAGE PRESERVATION OR LOSS

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Abstract :

This study makes a preliminary attempt on computing methods on the life expectancy of specific languages or variables or specific groups in the linguistic set up by the utilisation of life tables. After making some assumptions on the nature and measure of language preservation or loss on regional, communal and familial (generational) bases, the nature and magnitude of language loss or preservation are measured. Parameters are selected with the subparameters and are presented in the matrix form. This matrix is intended to be used in specific cases. Basic concepts of computation of life table and life expectancy are given and the life table concept is used to compute the life expectancy of two languages viz., Naga language, Ao in Kohima district on regional basis utilising the data of Mitra (1964) and Sindhi in India on age group basis with migration time departure as 30 years involved in the process of language loss for a set of sociocultural items utilising the data of Daswani and Parchani (1978) in a recall test.

(Key words): language life*, language life table*, language life expectancy*, corrected life expectancy*, reference year*, cohort, variable matrix, vector matrix, dying languages*, survival measures*)

(* new terms coined in this work)

1.0. Introduction.

Theoretical studies on measures of language use in terms of density of communication and language diversity in intragroup relations (Greenberg, 1956) and intergroup relations and bilingualism

(Lieberson, 1964; 1972) have been done, the insights of which were used to measure language distance and language loss.

Languages have been undergoing changes, some due to internal pressures (articulatory and auditory) and some due to external pressures (extralinguistic): The earlier contact situations have been qualified as one of stable bilingualism or multilingualism especially in rural areas. The development of villages into towns and cities has accelerated the velocity of language change* resulting in the deflection of normal language use and subsequent loss either on variable level or complete language level. The shift involves a shorter duration of time than it was in the past. Numerous studies have appeared on the these aspects but with a different approach from the present one. Some typical examples are Nomoto (1975), Subramoniam (1977a, b), Daswani & Parchani (1978), Hill (1978), Pandit (1972, 1978), Gal (1979), Pattanayak (1981), Prabhoo (1981, 1982), Bayer (1983), Sreedhar (1982, 1983), Khubchandani (1983) etc.

When is a language said to be preserved in its full ? When can a language be accused of deflection in normal language use ? What measures can be taken to evaluate the extent of language preservation or loss ? The computation of language life tables and life expectancy can go a long way in solving these problems.

1.1. Some basic assumptions of lauguage preservation or loss

The following assumptions draw attention towards the nature and magnitude of language preservation or loss :

1. If an infection (interference - linguistic or extralinguistic) affects the life of a language, as an indicator of decay or deformation, the nature of the spread of the infection conditions the life span of the particular language.

2. If an infection affects the life of a language due to linguistic factors like auditory (reinforced infection of foreign elements on the ear drum) or articulatory (mispronouncing or by way of economy of articulation), it will affect condition of the life span of the language.

3. If an infection affects the language due to factors of contact between communities, contact between communities being of an extralinguistic nature, decrease in length of life span of the related language will be gradual.

4. If an infection is caused by extralinguistic and linguistic factors without significant fluctuation (temporally) of the infected

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* Prabhoo (1981) — In terns of language standardisation.

language (and hence the speaker) it is called one of stable bilingualism or multilingualism (especially on solidarity level) and decrease in the life span will involve a longer duration of time.

5. If an infection affects the older generation first, the decrease in length of life span will involve a longer duration of time for a total language loss.

6. If an infection affects all the generations mildly (at a lower frequency or rate) and more or less in an equal measure, the decrease in length of life span will involve a longer duration of time interval.

7. If an infection affects all the generations, in a more or less decreasing and in uniform measure from older to younger, the decrease in length of life span when considered at a particular time (the time point with reference to the youngest generation level) will indicate gradual and evolutionary type of decrease of length of life span reflecting significant generational level trends.

8. If an infection affects all the generations in a fairly well accounted equal measure or frequency, the decrease in length of life span will involve a relatively shorter interval of time.

9. If an infection affects the younger generation (first) due to some strong ecological factors such as urbanisation and education, the decrease in length of life span of the ancestral language will involve a very short duration of time interval.

1.1. Measurement of language preservation or loss: Attribution of some criteria.

The following criteria may be given in assessing language preservation or loss, based on size and structure of the society.

1.1.1. Size of the population or community

Populations may be divided as majority types and minority types. A population or community can be said to retain its language if it retains its language within the maximum limits of available environments. For example in the case of majority language like Malayalam, if it is retained by all communities as native speakers in all domains (inner and outer home domains) by all generations in Kerala, then it is a case of language preservation in its full. On the other hand in the case of the minority language like Konkani in Kerala, which at present does not have a common script that can be used by all members of the community or resources that can be used in all domains for the preservation of Konkani, the maximum amount

of language preservation can be expected only in cases where the language is used in the home and community domains by all generations which may also be said as a case of preservation.

1.2. Structure of the Population

Structure of the population relates to the dominance of subject population as a minority or a majority. Other units of structure are dealt within the section of variable matrix.

1.2.3. Segmentation of the population for the measurement of language preservation or loss

Populations can be regionally divided (where census data can be used) or generation wise; divided (where family or community data can be used) for the computation of life expectancy and predictable language loss during the course of time.

1.3 Variable matrix for the computation of life table in preservation or loss of languages: The overall pattern

The variables (linguistic or extralinguistic) with their attributing numbers specifically indicating language loss in lower index numbers are helpful in the measurement. The values are given as follows:

Generation – A	:	(1) <20, (2) 20-39, (3) 40-59 (4) $\geqslant 60$
Sex category–B	:	(1) male (2) female
Education – C	:	(1) professional, (2) college, (3) upper primary, (4) lower primary, (5) no formal education.
Occupation – D	:	(1) Professional, (2) teaching, (3) clerical, (4) skilled labour, (5) manual labour.
Income – E (class)	:	(1) upper, (2) upper middle, (3) middle, (4) lower middle, (5) lower.
Caste – F	:	(1) scheduled castes, (2) backward communities, (3) nonbrahmin communities, (4) Brahmin (5) tribes.
Urbanisation – G	:	(1) cosmopolitan cities, (2) corporation, (3) towns, (4) villages
Area – H	:	(1) border, (2) central
Group – I	:	(1) dispersed over the area, (2) concentrated
Religion – J	:	(1) Christian, (2) Hindu, (3) Muslim (4) Animism
Schools – K	:	(medium of instruction) (1) national and international language, (2) regional and international language, (3) international language, (4) national language (5) regional language.

Style - L : (1) formal, (2) informal

Interlocuters - M : (1) strangers, (2) servants, (3) friends, (4) spouse, (5) sibs, (6) filials, (7) parents.

Context - N : (1) outside home, (2) home.

Community - O : (1) minor, (2) major

Motive - P : (1) gain, (2) prestige, (3) need, (4) subconscious

This matrix will be multiplied to a row vector matrix for language preservation or loss as shown below :

Language -*L (1) loss, (2) preservation

As first degree of abstraction if all the variables with all their select variants are included for *L-2, ie., preservation, then it can be concluded that the specific language is preserved. The other side of the phenomenon relates complete loss. Intervariable or intervariant fluctuations indicate partial loss and hence partial preservation also. Thus language situations when expressed in functions of the variables under condition, the change or rate of loss is expressed as follows :

$ds/dt = f(A, B, \ldots\ldots\ldots P)$ in the above set up.

The matrix as a whole can be represented by the letter α (alpha) and *L by β (beta)

$$\alpha \begin{vmatrix} A_1 & A_2 & A_3 & A_4 & A_0 & A_0 & A_0 \\ B_1 & B_2 & B_0 & B_0 & B_0 & B_0 & B_0 \\ C_1 & C_2 & C_3 & C_4 & C_5 & C_0 & C_0 \\ D_1 & D_2 & D_3 & D_4 & D_5 & D_0 & D_0 \\ E_1 & E_2 & E_3 & E_4 & E_5 & E_0 & E_0 \\ F_1 & F_2 & F_3 & F_4 & F_5 & F_0 & F_0 \\ G_1 & G_2 & G_3 & G_4 & G_0 & G_0 & G_0 \\ H_1 & H_2 & H_0 & H_0 & H_0 & H_0 & H_0 \\ I_1 & I_2 & I_0 & I_0 & I_0 & I_0 & I_0 \\ J_1 & J_2 & J_3 & J_4 & J_0 & J_0 & J_0 \\ K_1 & K_2 & K_3 & K_4 & K_5 & K_0 & K_0 \\ L_1 & L_2 & L_0 & L_0 & L_0 & L_0 & L_0 \\ M_1 & M_2 & M_3 & M_4 & M_5 & M_6 & M_7 \\ N_1 & N_2 & N_0 & N_0 & N_0 & N_0 & N_0 \\ O_1 & O_2 & O_0 & O_0 & O_0 & O_0 & O_0 \\ P_1 & P_2 & P_3 & P_4 & P_0 & P_0 & P_0 \end{vmatrix} \times \beta [{}^*L_1 \; {}^*L_2]$$

This α matrix when multiplied with the β matrix gives the situation of language loss or preservation (a variable marked with '0' subscript indicates absence of variants).

1.4. Some basic concepts of life table :

The basic assumption of population ecology is that in an unlimited, constant and favourable environment, the number of individuals of a given species will increase exponentially (Poole, 1974 p.7). Thus the assumed population in an unlimited favourable environment is given as :

$N_t = N_o e^{rt}$ where N_t is the number of individuals in the population at time 't'. N_o is the population size at some time arbitrarily set at 't' in years and 'r' the rate of change or increase of population in the given interval. The rate of change of individuals as time changes can be expressed in the functional notation as $dN/dt=rN$. Further let 'l_x' be the number of individuals at given time and 'l_{x+1}' the number of individuals at the next point of time. Then the number of individuals dying at each interval of time for example, is given as $d_x = l_x - l_{x+1}$. If 'L_x' is the average number of individuals dying at a certain interval, then the life expectancy of the particular species is given as:

$e_x = T_x / l_x$ where 'T_x' is the sum of 'L_x' for the point 'x' in time to the last. Using these concepts life expectancy of a species can be calculated. This method can be used for measuring the preservation or loss of languages.

1.5. Language life tables :

Life table has been defined as '... a scheme for expressing the form of mortality in terms of probabilities ..... a population model ..... a cohort or a group of people born at the same time, close to migration and followed through successive stages until they die' (Keyfitz, 1968 : 3/Misra, 1982; 147). Life tables are of two types, viz; the cross sectional or time specific and longitudinal or generational. The concepts of life tables are used in related cases of Actuarial science (Insurance), in Zoology and also in Demography. This concept can also be used in language mortality studies with required modifications, living on the tongues of the people.

1.5.1. Life tables and the population :

Populations which exhibit a decrease in size in a series of time intervals are called stable populations and are the typical samples for the preparation of life tables. Populations which exhibit a fluctuating

tendency with occasional decrease and increase before a steady fall in strength constitute unstable populations.

The method of computing life table is tested in two cases viz; for Ao, a Naga language in Kohima district based on the census data (Mitra, 1964) from 1911 to 1961 and Indian Sindhi (Daswani & Parchani, 1978) based on age groups for select variable of recall test. The Ao case presents an unstable population and the Sindhi presents a stable population for the computation of language life tables.

1.5.2. **The computation of life table for Ao in Kohima district: Measure of life expectancy and predictability on language loss:**

The following table gives distributian of three Naga languages, viz, Ao, Sema and Konyak from 1911-1961 (excluding the figure in 1941 for the three languages and also the 1911 figure for Konyak) which indicates a steady fall in the number speaking the languages in recent decades in Kohima district.

Year	*Languages and Population of speakers under each language*		
	Ao	*Sema*	*Konyak*
1911	16684	19009	—
1921	16999	19667	3731
1931	18347	21086	5251
1941	—	—	—
1951	2692	18550	4103
1961	322	8168	5

Source: Mitra, 1964: p CLVII

1.5.2.1. **Ao population for 1941: The method of interpolation**

For computation of life table only the Ao data is taken into consideration. The 1941 population is computed by the application of the method of interpolation given in Gupta (1979: 510-514) which is used for population frequencies with equal intervals. Y_x or the population of 1941 is the figure to be interpolated. For the computation of Y_x the binomial expansion method is used.

Let $\Delta = E-1$. Where 'E' represents the next higher step. ie., $E\ Y_o = Y_1$, $E\ Y_3 = Y_4$ etc.

This can be represented as powers of 'E' as $E^n\ Y_6 = Y_{n+6}$ etc.

$\Delta Y_o = Y_1 - Y_o$ where Δ is the algebraic differences of the entries.

$\Delta Y_o = EY_o - Y_o = (E-1)\ Y_o$

$\therefore \Delta = E-1$ (Proved)

The binomial expansion method suggests that if we are given 'n' entries we will assume that the n^{th} order difference is zero (represents difference between two subsequent entries).

Thus $\triangle^n Y_o = 0 \quad \therefore (E-1)^n Y_o = 0$

ie., $E^n Y_o - nE^{n-1} Y_o + n(n-1) E^{n-2} Y_o - \ldots\ldots Y_o = 0$

ie., $Y_n - nY_{n-1} + \frac{n(n-1)}{2!} Y_{n-2} - \ldots\ldots = 0$

ie., $Y_n - nY_{n-1} + \frac{n(n-1)}{2!} Y_{n-2} - \ldots\ldots = 0$

Applying this formula the 1941 census for Ao is computed as follows:

Since the census figures involve six periods it can be assumed

$Y_o = 0$, ie $(E-1)^5 Y_o = 0$

Representing the figures in multiples of hundred and rounding up we have the figures as:

$Y_o = 167,\ Y_1 = 170,\ Y_2 = 183,\ Y_3 = ?,\ Y_4 = 27,\ Y_5 = 3.$

Using the above formula we have the 1941 population computed as

$$3Y_5 - 5 \times 27 + \frac{5 \times 4}{2} \times Y_3 - \frac{5 \times 4 \times 3}{3 \times 2 \times 1} \times 183 + \frac{5 \times 4 \times 3 \times 2}{4 \times 3 \times 2 \times 1} \times 170 - \frac{5 \times 4 \times 3 \times 2 \times 1}{5 \times 4 \times 3 \times 2 \times 1} \times 167 = 0$$

Simplifying we get

$10\ Y_3 - 1279 = 0, \quad 10\ Y_3 = 1279$

$Y_3 = \frac{1279 \times 100}{10} = 12790 = 1941$ Ao population in Kohima district

The following is a life table for a cohort of Ao speakers (of fluctuating frequency in early decades and then a decrease) for six decades in Kohima district in Nagaland.

Year	I_x	L_x	T_x	$e_x = e^x$ x (n x T. I)
1911	16684	16842	59493	210 years
1921	16999	17673	42651	150 ,,
1931	18347	15569	24978	78 ,,
1941	12790	7741	9409	42 ,,
1951	2692	1507	1668	36 ,,
1961	322	161	161	30 ,,

The life expectancy in each interval is computed by the formula

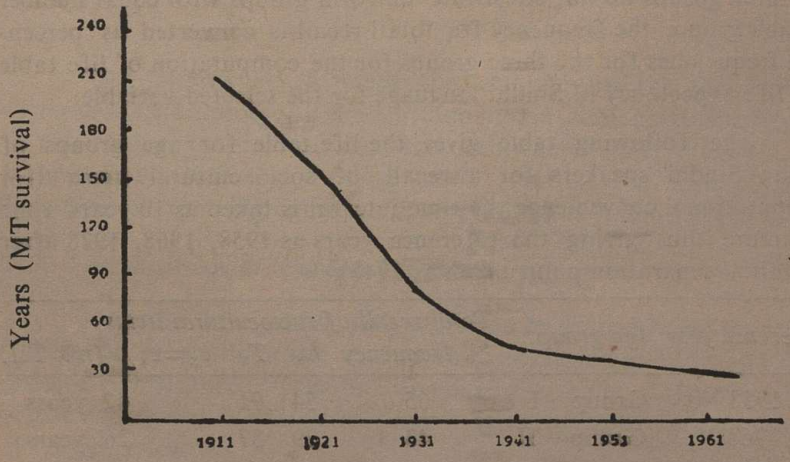
$$e_x = T_x \times T.I \text{ (time interval)}$$

$$\text{corrected } e_x = e_x \times (n \times T.I.)$$

The computation of life evpectancy indicates a very short life span. According to the 1951 expectancy, the language should have become extinct by 1957, which is not the case. Hence it is not clear whether this method is suited for the particular situation or a correction can be applied by multiplying the total class intervals (n x T.I) which gives a fairly well predictable lapse of time involved in loss.

The total time interval which is segmented into six units must be utilised to get a better figure. Multiplying by six we get the life expectancy of the six subsequent intervals as 210 years, 150 years, 78 years, 42 years, 36 years and 30 years. Thus the Ao language which has survived till 1951 is expected become extinct only by about 1991 in the continued environments of 1961. (Vide graph 1.5.1.1.)

1.5.1.1. **Survivership curve for mothertongue identity among the Ao speakers in Kohima district in Nagaland for six decades**



1.5.2. **The computation of life table for Indian Sindhi on the basis of age groups:**

Language loss on generational basis can be measured by utilising the life table concept. The data for this test is taken from Daswani and Parchani (1978: 58) whose study on Sindhi immigrants from Sind to India indicated a loss of their identity after a separation

of 30 years from the ancestral land. The loss is explicated taking a number of linguistic variables showing loss of Sindhi in an increasing measure by age levels from older to the younger group (50 and above, 35–50 and 16-35) with a sample of total 100 informants - 37, 30 and 33 in each group respectively. The informants of the last group were either born in India or were children at the time of migration. Their recall ability of sociocultural items is a reflection of decreased length of life span of Indian Sindhi of the particular variable. The following table gives the frequency of the socio- cultural items among Sindhi speakers in India by recall test in three age groups.
Recall test of Socio-cultural items :

Group / Socio-cultural items (frequency)	*Recall of items* *None*	*Partial*	*Total*
Group - I	1	12	24
Group - II	6	11	13
Group - III	17	11	5

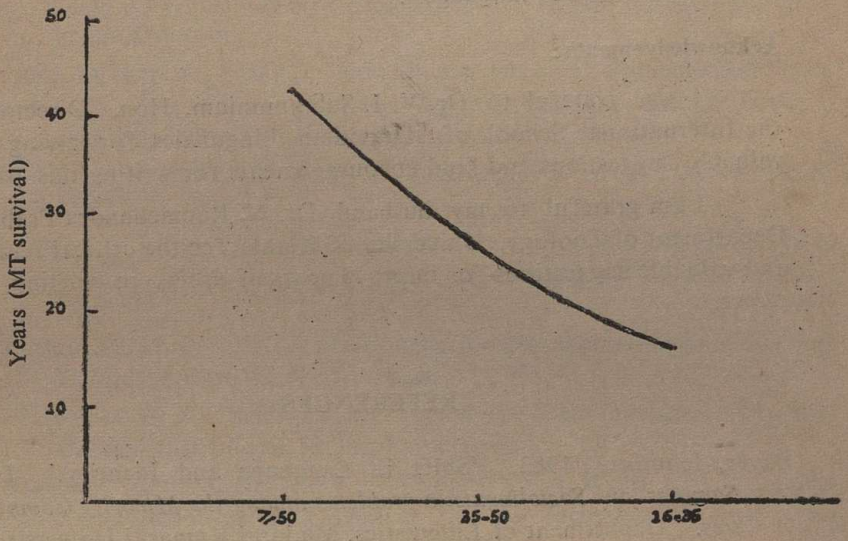
The life table is computed for the total recall category only. Since the three groups do not constitute uniform groups with equal number in each group, the frequency for totall recall is converted as percentage frequencies for the three groups for the computation of life table and life expectancy of Sindhi language for the selected variable.

The following table gives the life table for age groups of Indian Sindhi speakers for a recall of socio-cultural items (for computational convenience the time interval is taken as 10 years' time departure thus giving the reference years as 1958, 1968, 1978 after the initial separation point taken as 1948).

Reference year/Age group		*Total recall of socioculturai items* *% frequency*	L_x	T_x	$e_x = e_x' \times (n \times T.I)$
1958	Group - I	65	54	91	42 years
1968	Group - II	43	29	37	26 years
1978	Group - III	15	8	8	16 years

Total recall of sociocultural items will survive for 42 years among group - I, for 26 years among group - II and only for 16 years among group - III if the environments are continued for the time limit of the given years for the specific groups, ie among group - III after 16 years there will not be a single person who will be able to claim a totall recall of sociocultural items which are properly selected.
(Vide graph 1.5.2.1.)

1.5.2.1. **Survivership curve for recall of sociocultural items among the Indian Sindhi speakers of three age groups**



Age groups

This preliminary attempt throws light on the fact that the methods of life tables utilised for human and zoological species can be extended in the case of languages also where loss is noticed. It is to be seen whether this method holds good in the case of other languages by applying appropriate corrections as is done in this study.

1.6. Applications of language life tables

Utilising life tables, languages can be graded based on census figures or other linguistic studies on preservation and loss and their relative significance. Thus the life tables gives a visual representation of life expectancy of languages and a better insight into the measure of language loss.

The following aspects may be measured in terms of language life tables if numerical figures are available to check :

(1) that scheduled languages have a higher index of life expectancy;

(2) huge territorial concentration of languages (intrinsic increase) increases the life span of the concerned languages;

(3) total decrease in tribal languages, in line with the loss of tribal culture.

If 'rare species' like tribal languages have to be retained what measures can be taken? It is yet to be seen that how the computation of life tables can be of help in taking appropriate survival measures in the case of 'dying languages'.

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INDIAN LOAN-WORDS OF MEDIEVAL PERIOD IN ENGLISH

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From the early Middle Ages words of Indian origin travelled thousands of miles, and passing from nation to nation reached Europe. Into all European these Indian loan-words representing names of different Indian goods such as gem-stones, herbs, spices, perfumes, articles of food, rare kind of timber, silk and cotton fabrics, dyes, exotic birds and animals have penetrated mainly through mediation of Latin and Greek. The etymology of these words reflects the history of cultural and trade contacts between India and other countries and follows the trade routes linking the Roman empire with India.

India began trading with other countries at a very early period, first with neighbouring Iran and, at the time of Harappan civilisation, with Central Asia. Later the Indians engaged in overseas trade with Arabia and Africa and consolidated links with countries bordering the Mediterranean, including Egypt. After Alexander the Great's campaign Greeks acquainted themselves at first hand with India, its peoples and traditions. During the Kushana period contacts between India and Rome developed and consolidated (Antonova, 1979: 175). Roman empire and later its successor Byzantine played an important role as a trade intermediary between west and east.

Judging by ancient Latin and Greek sources the import from India was constant and fairly considerable. Some of these goods retained their Indian names: these word entered all European languages and became quite naturalised. Only special investigation can reveal Indian origin of such words as *emerald, sapphire, beryl, opal, sugar. rice, ginger, pepper, sandal, musk, camphor* etc. Ali these words came to Europe through Latin and Greek, many of them

having already passed through other Eastern languages-Arabic, Persian or Hebrew.

India has always been famous for its mineral wealth, and from ancient times Indian gem-stones such as sapphire, emerald diamond, ruby, beryl, opal, pearl, amethyst jacinth, topaz and many others were imported to Europe. Some of them have names of Indian origin. Among them are five most popular gem-stones-sapphire, emerald, beryl, opal and pearl (Old English meregrota).

The names of the two most beautiful and valuable precious stones sapphire and emerald, are from their etymons, Sanskrit *sanipriya* and *marakata*, as these words belong to the oldest Indian loan-words in European languages. Sapphire is a precious variety of corundum (its red variety is called ruby); the word *courndum*, by the way, is also of Indian origin (Tamil, *kurundam* from Sanskrit *kuruvinda* "a ruby").

Sanskirt *sanyprya* means "dear of Saturn" (sanis - the planet Saturn) (Klein 1966-67, 1383; Partridge, 1977, 583). The antiquity of this Indian loan-word is proved by the fact that the word got into classical languages (Greek *sappheiros* and Latin *sapphirus* through Semitic media. (cf. Hebrew *sappir*). The word was borrowed in the Middle English period (fourteenth century) from French *saphir*.

English *emerald* was borrowed at the beginning of the fourteenth century form old French *emeraude, esmeralde, esmeragde*, itself from Latin *smaragdus* (cf. English *smaragd* adopted directly from Latin in the thirteenth century, which is an etymological doublet of *emerald*), Vulgar Latin *smaraldus*. The source of all European forms is Greek *smaragdos, maragdos*, apparently from India. (cf. Prakrit *magarada*, Sanskrit *marakata* "emerald") Partridge, 1977, 181; Skeat, 1936, 163). Persian *zumurrud* (whence Turkish *zumrud*, whence Russian izumrud) is also borrowed from Sanskrit.

The origin of the word *beryl* is Sanskrit *vaidurya*. Parkrit *veluriya*, which probably derives from the names of the city Velur (now called Belur) (Klein, 1966-67, 166; Yule, 1979, 89). The word was borrowed into Middle English in the thirteenth century from old French *beryl* from Latin *beryllus*. The source of all these froms is Greek *berullos*.

Brilliant, a diamond cut in a many-faceted form is ultimately of the same origin; it derives from Latin *beryllare* "to shine like a beryl" (O. E. D., 1961, 1104; Klein, 1966-1967, 200). All famous ancient dimonds were extracted from the mines of Gulkonda in India.

Opal was one of the most valued gem-stones of ancient times first brought from India. Sanskrit *upala* meaning "a stone", especially "a precious stone". borrowed into Greek and via Latin *opalus*, has penetrated into all the European languages. In English the word *opal* is to be found from the fourteenth century.

The medieval European names for pearl (like Old English *meregrota*, Old French *margarita*) are adopted from Latin *margarita* "pearl", itself from Greek *margarites*, elliptical for *margarites lithos* (stone) from from *margaron* "pearl". The source of the Greek word is Sankrit *manjarl* "a pearl" (Klein, 1966-1967, 938; Partridge, 1977, 381; Serjeantson, 1935, 54) Persian *mervarid* and Arabic *marjan* are probably borrowed from Greek, In English the word *meregrota* was adopted in tenth century with etymologising perversion : Latin *margarita* was altered into Old English *meregreot, meregrota* through the influence of Old English *mere* "sea lake" and *greot, grota* "*grit gravel*" (O. E. D., 1961, 159; Serjeantson, 1935, 272).

It was already mentioned above that perfumes, spices and some food products were among the most important items of export from India. Pepper, ginger, spikenard, musk, camphora, sandal, ugar, rice and some other products of vegetable origin formed staple articles of Greek and Roman commerce. Herbs and spices were widely used in ancient and medieval times mainly because there were no adequate means of storing food and storng flavourings were needed to mask staleness.

One of the earliest spices known to mankind was pepper. Pepper was a favourite ingredient of ancient and medieval cookery; three kinds of pepper, all imported from India, were known to the ancients: black pepper, white pepper and long pepper *(piper nigrum, piper album* and *piper longum)*. The Latin name of this pungent aromatic condiment, *piper*, was borrowed into Germanic languages as early as the fourth century, the source of the Latin form is Greek *peperi* and the etymon is Sanskrit *pippali* "peppercorn" and *pippala* "a berry". The word belongs to the earliest loan-words of Eastern origin in the English *origin* in the English Language.

The use of ginger as a spice and medicine has also been known from a remote period. Earliest mentions of ginger is to be found in a tenth century English Leechbook. Latin *zingibery* adopted by Old English was borrowed from Greek *zingiberis* itself from Pali *singivera*, Sanskrit *sringavera* which usually is connected with *sringa* "a horn", an allusion to the hornlike shape of the root but more probably deriving from Malayalam *inchi-ver* from *inchi* "root"

(Yule, 1979, 374). In Middle English the same word was readopted through Old French *gingebre, gengibre* to become English *ginger.*

The homeland of rice, the staple food in Asia, is most probably Southern India (Yule, 1979, 763). This creal became known in Greek after Alexander the Great's campaign. The source of all European names of this cereal is Greek *oruza*, which comes through East Indian Sanskrit *vrihi* (Buck. 1949, 519; Klein, 1966-1967, 1346). English has borrowed the word in the thirteenth century from Old French *ris*, itself from Italian *riso.*

The companions of Alexander the Great's acquainted Greeks with one more important product of Indian origin, sugar. They told of the Indian cane which produced "honey without bees". The Indian name of this product appears in Greek and Latin transcription in the first century A. D. (Greek *sakhar, sakkharon,* Latin *saccharon, saccharum)* but the article was then a rare and exotic product used only for medical purpose, the usual sweetening agent being honey (Buck, 1949, 384).

The Greek form of the word (whence Latin *saccharon* and Russian *Sakhar*) comes through Pali *sakkhara* from Sanskrit *sarkara* "gravel, grit", thence "crystallised sugar". The Latin form is represented in English *saccharine* "of the nature of sugar" (adj.) and in chemical term *saccharin, saccharine* "an intensely sweet white crystalline solid".

It is probable that English *sugar* came not through Latin and Greek, but from Arabic *sukkar*, which yielded Portuguese *assucar*, Spanish *azucar* (the initial 'a' in Spanish and Portuguese represents the Arabic article al-), Italian *zucchero, succhero,* Old French *sucre, sucere* (whence Middle English *sucere*), French *sucre.*

Arabic *sukkar* as well as Turkish *sheker* was borrowed through the mediation of Persian *shakar* from Pali *sakkhara* from Sanskrit *sarkara.* It was by the Arabs that the cultivation of the sugarcane was introduced into Egypt, Sicily and Andalusia and it was after the crusaders that sugar became the common sweetening in place of the older honey (Buck, 1949. 384). Persian intervention illustrates the fact that sugar was first refined in Persia (Yule, 1979, 862; Partridge, 1977, 679; O. E. D., 1961, IX, 7). In the English language the word is known from the thirteenth century.

English *saccharine* and *sugar*, originating from the same Indian word, but transmitted into English through different languages, have one more etymological doublet of later period, *jaggery,*

"a coarse dark sugar made from palm-sap", coming from the same Sanskrit *sarkara* – through Portuguese (Yule, 1979, 446).

But this is not the whole of the story of the Indian sugar yet. The word candy entered English approximately at the same time and by the same route as *sugar*. Candy is elliptical for sugar candy, from Medieval French *sucre candi*, itself from Italian *zucchero candi*, where the second element represents Arabic *candi* "crystallised, candied" from Arabic *qand* "cane sugar" from Sanskrit *khanda* "broken sugar" which is probably of Dravidian origin (Klein, 1966 – 67, 231; Partridge, 1977, 75).

India also supplied Mediterranean countries with perfumes incense, such as nard, musk, camphor and others. Nard, a famous ancient perfume and a costly ointment prepared from it is often mentioned in the Bible. The origin of the word is Sanskrit *nalada*, the spikenard plant of India of the family Valerianacese, from which Greek *nardos* (via Semitic whence the change of l into r, cf. Hebrew *nerd*) was borrowed (Patridge, 1977, 650; Yule, 1979, 618).

Ancient Palestine imported a lot of Indian goods especially spices, perfumes, gemstones and rare kinds of timber; some of these Indian products became known in Europe under their Semitic names, e. g. *cassia*, *sesame*, *aloe*, others retained their native Indian names, but semitic mediation changed them phonetically, e. g. *sapphire*, *nard*. The source of the borrowing from Hebrew was usually Old Testament translated from Hebrew into Greek and thence into Latin and other European Languages.

The word *nard* belongs to the earliest Latin loan-words in English and appears in the tenth century West Saxon version of the four Gospels (Serjeantson, 1935, 37). Modern English *spikenard* is a partial translation of Medieval Latin *spica nardi* "spike of nard", (an allusion to the mode of growth), adopted in the fourteenth century.

Cinnamon, the aromatic bark of a lauraceous tree of Ceylon, used as a spice is another Eastern word which found its way into European languages through the mediation of Hebrew. The source of English cinnamon (adopted in the fourteenth century) is Latin *cinnamomum* (probably via Early French *cinnamone*) from Greek *kinnamon*, which took it from Hebrew *qinnamon*, the latter is considered to be of Malayan origin (Skeat, 1936, 91; Partridge, 1977, 99). Cinnamon (or cassia) used in culinary, as a medicine and as an ingredient of some perfumes was the staple of export from India to the Roman empire.

Musk, an odoriferous substance secreated in a gland by the musk deer, was much valued for its powerful and enduring odour and from ancient times was used as a perfume and in medicine. Later the name was applied to substances of similar odour secreted by other animals (like musk ox and muskrat of India, Australian musk duck etc.) and plants. Middle English *musc, musk* was adopted in the fourteenth century from Old French *musc* from Latin *muscus*, itself from Greek *moskhas, moskos*, which was borrowed through Persian *mushk* "*musk*" from Sanskrit *muska*.

The same Indian word is represented in English *nutmeg*, an aromatic seed obtained from the fruit of an evergreen tree Myristica fragans and other species of Myristicaeae. Middle English *notemuge* adopted in the fourteenth century is a partial translation of Old French *nois muguette* or *muge* (Middle English note "nut" for Old French nois "nut" and *muge* from Old French muguette). The Old French word derives from Old Provence *noz muscada*, the second element being fem. of *muscat* "smelling like musk".

It is not commonly known that nutmeg and mace are the product of one plant. The dried outer covering of the nutmeg constitutes the mace of commerce. The name of this spice was borrowed into English in the fourteenth century from French *macis* which was apprehended as a plural and the new singular *mace* was formed from it.

French *macis* is from Medieval Latin *macis*, a scribal error for Latin *macir*, the rind of an Indian root, from Greek *maker* "vox Indica", which is considered by W. Skeat and H. Yule to be eastern origin (Skeat, 1936, 307 ; Yule, 1979, 529).

The word *malabathrum* meaning an aromatic leaf of various species of Cinnamomum and a fragrant ointment prepared from it, was introduced into English rather late and through the written language. Latin *malabathrum* (whence the English word) is borrowed from Greek *malabathron* itself from Sanskrit *Tamala-pattra* "leaf of the tamala tree". This leaf is still used in India as a medicine and aromatic, in English *pharmacopaia* it was known as *Folium Indicum* (Yule, 1979, 543 ; Klein, 1966-67, II, 926).

Another classical export from India was camphor, a solid essential oil, got from the camphor laurel (a species of cinnamon-tree) and other lauraceous trees, having a bitter aromatic taste and a strong characteristic smell. From ancient times camphor was used in medicine and in religious ceremonies. It was first mentioned in the sixth century A. D. by the Greek medical writer Aetius.

The source of all European words for camphor is Arabic *kafur* from Sanskrit *kappura* assimilated from earlier *karpura*, probably of Malayan origin (Skeat, 1936, 73; Yule, 1979, 151). The word was adopted into Middle English at the beginning of the fourteenth century from French camphre from Medieval Latin *camphora*. Down to the XIX century the usual form was *camphire*; the Modern English *camphor* is confirmed to be Latin (O. E. D., 1961, II, 55).

English *sanders, sandle, sandal* (wood) can all be ultimatily traced back to Sanskrit *candana* "Sandalwood", lit, "wood for burning incense". *Sandalwood* is a fragrant wood obtained from several species of Santalum. It is mentioned along the main articles of export from Ceylon by a Greek trader and seafarer Cosmas Indicopleustes in 545 A. D. Red sandalwood or red sanders has been long applied to inodorus dye-wood of Pterocarpus Santalina, much used in the medieval cookery for colouring sauces etc. (Yule, 1979, 790).

Sandal (with explanatory wood added) is a direct borrowing from Medieval Latin *sandalum*, whence also Old French *sandal*. The word was first mentioned as a fragrant ointment in 1400. Sanders, sandal were borrowed approximately at the same time from Old French *sandal, sandle*.

Late Latin *santalum, sandalum* and Greek *santalon* are from Arabic *sandal* and that from Sanskrit *candana*, which is related to *candrah* "shining, glowing" and cognate with Latin *candere* "to shine, glow" (Klein, 1966-67, II, 1380).

Sanskrit candrah has a compound *candra-raga* "having the brightness of the moon". This word was transmitted into middle English through Greek *sandarake* and Latin *sandaraca* in the fourteenth century. Modern English *sandarac, sandarach* means the resin of the Moroccan sandarach-tree powdered to form pounce and used in making varnish; in mineralogy, realgar or red arsenic sulphide (O. E. D., IX, 1961, 89).

It seems, that the red sandalwood of India was imported into ancient Palestine too, cf. *algum* and *almug* of the Bible, precious wood said to have been brought from Ophir (considered to be some part of India), alongwith gold and precious stones; it was used in the formation of pillars for the temple at Jerusalem and for the King's house, as well as for harps and psalteries (I King, X; 11, 12, Chron. II-8).

Algum and an erroneous from *almug* are transliterations of Hebrew *algummin* and *almuggin* which found their way into English through the Bible.

The Hebrew word is supposed to be from Sanskrit *valgu-ka* "sandalwood", where *-ka* is a suffix (Skeat, 1936, II).

Among important articles of export from India were natural dyes, such as indigo or anil, carmine, faffron and already mentioned above sandal and sandarac.

Indigo is a blue dye obtained from indigo-plant, including several species of Indigofera. It has been employed in India for many thousand of years and exported to the far off countries from the remote ages. The Egyptian mummy-cloths were dyed with indigo (Yule, 1979, 437).

The source of the word is Greek *indikon*, lit. "the Indian (dye)", neut. of *indikos* "Indian", whence Latin *indicum* which becomes Spanish *indico* with a variant *indigo*; from this form French and Middle English *indigo* are borrowed.

Indeas "Indians" (fr. Latin indi) are mentioned in Old English poem "Widsith" of the seventh century. The name of the country India (from Latin India) and the river Indus are to be found in the "World History" by Orosius translated into Old English by King Alfred in the nineth century.

Greek *India* (whence Latin India) is a derivative of *Indos* "the river Indus" which derives from Old Persian *Hindu* from Sanskrit *sindhu* "a river", Sindhu "the river Indus" (Klein, 1966-67, 787; Partridge, 1977, 308).

Other English words connected with Sanskrit *sindhu* are chemical terms *indium* and *indole*, *sandia* "water-melon" (from Arabic (*batti*' hah) Sindiya, lit. "(the melon coming from Sind)", *sendal*, *sindon*, *Hindu* (with different derivatives) and *tamarind* (from Arabic tamr *Hindi* "Indian date",) etc.

Sindon, a fine thin fabric of linen, later cotton, is from Greek *sindon* "(linen) of Sind", because it was brought from India. The Greek form, derived from Sanskrit *Sindhu*, was transmitted into English through Latin in late Middle Ages.

English *cendal*, a rich thin silken stuff used in the Middle Ages, was borrowed from Eary French *cendal* in the fourteenth century. The french *cendal* comes from the same Latin *sindon*, but with a different suffix (-al) (Skeat, 1936, 474; Partridge, 1977, 308).

Exotic animals and birds were often brought to the courts of the Roman emperors. Classical writers tell of the Indian lions that

were sent to Rome for display. Indian tigers were brought before the emperor Claudius. Indian parrots proved especially popular with the Roman public (Antonova, 1679, 136). A number of eastern animal-names were borrowed into European languages in early Middle Ages and the majority of these words came through written languages.

The word *pandher, panther* occurs only once in a fragment of the Old English verse Bestiary of the tenth century and now here in the prose. This solitary instance in Old English is regarded as a foreign word (O. E. D., 1961, VII, 430).

The word was readopted in Middle English through French from Latin *panthera* from Greek *panthar* which is from Sanskrit *pundarikas* "tiger", lit. "the yellowish (animal)" (Klein, 1966–67, 1121; Serjeantson, 1935, 54; Skeat, 1936, 369).

The words *panther* and *leopard* refer to the same beast, Felis pardus, a large spotted animals of the cat kind, but down to modern times panther was supposed to be a larger kind of leopard and was believed by ancient and medieval authors to be a different species, a belief encouraged by there being two Latin names *panthera* and *pardus* (O. E. D., 1961, VII, 430).

Ape, the English name, down to the sixteenth century, for animals of the monkey tribe, and now applied only to the tailless species, belongs to the earliest eastern loan-words in Germanic languages. It is first mentioned in the Epinal Gloss in 700 A. D. The early adoption of the word is proved by its wide diffusion in the Germanic language, cf. Old English *apa*, Old Icelandic *api*, Old Saxon *apo*, Old High German *affo*.

The origin of the word is Sanskrit *kapi–*, *kapila–*, "*ape*" lit. "brownish, reddish", from "smoke-coloured", whence Greek *kepos*, *kebos*, Egyptian *qephi*. Hebrew *gafi*, *gef*, from one of these forms the Germanic word was borrowed (Buck, 1949, 188; Lokotsch, 1927, 85; Partridge, 1977, 20).

Thus brief investigation shows that India maintained close trade and cultural links with the western world from the remote ages. These contacts are displayed by numerous loan-words of Indian origin in the European languages.

Indian loan-words of Medieval period entered English indirectly, through mediation of other languages. These early Indian borrowings usually followed the trade routes and denoted articles of trade - minerals, spices, perfumes, medicines, food products, natural

dyes, textiles etc. In the English language the words of Indian origin are to be found from the earliest written records and at least one word, *pepper*, was borrowed on the continent before the Anglo-Saxon invasion of Britain. The Old English period (upto eleventh century) the following words of Indian origin penetrated into English: Old English *meregrota* (margarite "a pearl" is archaic), *pepper*, *ginger*, *nard*, *India*, *panther* and *ape* (all but the last one through the Latin transmission).

The majority of the Indian loan-words of Middle English period were borrowed in the thirteenth and fourteenth centuries. In this period eastern loan-words were transmitted not only through Latin but through its descendant Old French too. Latin served as intermediary in the adoption of the following words of the Middle English period: *opal*, *smaragd*, *malabathrum*, *sandarac* and *sindon*; most of them were borrowed through the written language (so called "learned" words). Such loan-words as *sapphire*, *emerald*, *beryl*, *rice*, *sugar*, *candy*. *nutmeg*, *musk*, *sandal*, *sanders* and *cendal* penetrated into Middle English through French mediation.

Several words of the Indian origin were adopted twice – from Latin in the Old English period and later from French; for instance, Old English *gingifer*, *gingiber*, "*ginger*" (from Latin gingiber) and Middle English *pandher*, *panther* from Latin *panthera* and Middle English *panther* from Old French *panther*, Old English *meregrota* "pearl" (from Latin margarita) and Middle English margarite "a pearl" from Old French *margarite*.

All these words coming into English from Latin (and its descendant French) were previously adopted from Greek, which borrowed them either directly from Sanskrit or through mediation of other eastern languages – Hebrew, Persian or Arabic. Thus, *sapphire*, *hard*, *cinnamon* and *algum* passed through Hebrew, *rice* and *musk* – through Persian, *camphor* and *sugar* – through Arabic.[1]

The majority of these early Indian loan-words have been completely naturalized in English and do not reveal their origin without close etymological investigation.

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[1] The loan-words of Indian origin which were borrowed into European languages directly from Arabic or Persian are not dealt within this paper.

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CASTE AND VARIATION IN LANGUAGE FORM AND LANGUAGE USE*

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LINGUISTS looking for explanation for variation in language turn to historical, regional, social and stylistic factors. A society is stratified on different parameters and the Indian society is noted for its stratification based on caste. It is, therefore, natural to expect some correlation between linguistic variation and caste differences and the linguists have tried to establish this correlation. In most studies, the linguists have taken castes as given and tried to find linguistic features associated with them rather than approaching the question from the language end. There are only a few studies in Tamil like Shanmugam Pillai's (1965), which isolate the linguistic variables and correlate them with the castes which use them. But these studies also methodologically start from the caste end in that they identify castes, collect samples of their speech and sift out the linguistic variables shared by more than one caste. The crucial aspect of these studies, however, is that the linguistic variables are shown to be shared by more than one caste and they are not interested in showing one to one correlation between linguistic variables and individual castes.

The studies which start from the caste end, generally, are interested in defining caste dialects. They are inspired and influenced by dialectology and descriptive linguistics, more so by the latter than the former. They do not map a cluster of linguistic variables with social groups and define a social group, as dialectology would map linguistic variables with geographical areas and define a dialect region. Rather, they are deseriptions of the speech of a caste based on data

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collected from a representative member of that caste or, at the most, a few members selected for their representativeness of the caste. Many such linguistic descriptions of the dialects of castes may then be compared and the distinguishing linguistic features of a caste which are not shared by other castes may be identified and caste dialect may be defined in terms of these features.

This is a static approach to the study of language variation and it ignores the dynamics of speech. Any variation found within a caste dialect either between members or in the same member in different situations is kept aside to be explained as failing outside the norm due to influence of other dialects, education, economic status etc. This approach assumes the existence of homogenous caste dialects and proceed with their description with purified or abstracted data. Many questions could be raised about this approach. (Pattanayak 1975 and its commentators).

Even if we leave aside the difficulties of anthropologists and sociologists in defining caste and distinguishing between caste and subcaste, there is a large number of castes in most linguistic communities. Caste dialect descriptivists, I do not think, believe that there are as many casts dialects. If they believe it, the question how many caste dialects are there in a language will be tautological. Many studies, particnlarly in Tamil (see Srinivasaverma, 1977, Shanmugam Pillai 1983 for references), speak of a trichotomous classification of variation into Brahmin dialect, Non-Brahmin dialect and Harijan dialect. These names are not names of caste ; Brahmin is not a caste, but a varna ; non-Brahmin is a classificatory name with perhaps no universally definable cultural attributes. Harijan is a cluster of castes. Some dialect descriptivists include dialects based on religious differences such as Muslim dialect, Christian dialect etc. under caste dialects. It is obvious from the above that the linguists use the term caste in caste dialect rather loosely and not in any precisely defined manner.

Leaving aside the imprecise use of the notion of caste, one could ask about the notion of dialect when a set of distinctive linguistic features get the status of a dialect. The question is when two speech forms are considered to be separate dialects. This question is similar to the question when two speech forms are considered to be the dialects of the same language and when they are considered to be separate languages. It is likely that even a small social group-sub and subsub divisions of a caste – may have some distinctive features, particularly at the lexical level. But one is not going to go to the

absurd extreme of saying that even a single difference will constitute a distinct dialect. If one does it, caste dialects do not have a linguistic basis but only a social basis. There is no precise answer to this question, but this is an important question for a static analysis, which classifies the reality into discrete catagories.

The studies on caste dialects in Tamil seem to take that caste, as a parameter, is dependent on region excepr perhaps for the Brahmin. That is, there are regions with distinctive linguistic features which are shared by most of the castes or the dominant castes of the region and each caste or cluster of castes in the region has additional distinctive features. The additional distinctive features may or may not be shared by the same caste across regions. If they are shared, there will be a caste dialect.

To establish a caste dialect (in the imprecise sense mentioned above) with caste as an independent variable, one should show that the dialect has linguistic features which are shared by all the members of that caste irrespective of the region they belong, the religion they follow, the status they have attained etc. and only by them. By this criterion, only the Brahmins may be said to have a caste dialect, as far as Tamil is concerned. By this rigid criterion there may not be even a regional dialect because all castes in a region may not shase all the features. For example, the use of /d/ and /ɸ/ to mark present tense in weak and strong verbs respectively, which is said to be a feature of the dialect of the Tirunelveli region, may not be shared by the Brahmin of that region. Therefore, the criterion may be weakened to say that a linguistic feature must be shared by a predominant section of the population. The notion of a predominance may be defined by numerical strength. The dialect, then, is a quantitatively or statistically defined notion. When applied to caste dialect it would mean that the majority speakers of the caste share a feature. If a caste is spread over non-contiguous regions, the dialect of that caste will be defined by the features found in the region where the majority of the castes live. For example, the Nadar dialect will be defined by the features found in the southern region and not in the western region.

Unless the criterion is quantitatively qualified, the notions of caste dialect and regional dialect will be in conflict. If, by definition, for a regional dialect to exist, all the castes in the region must share features, there cannot be a caste dialect; if, for a caste dialect; a caste across regions must share features, there cannot be a regional dialect.

The criterion has to be quantitative for another reason also. Factors like education and economic status may cause the speakers to give up the home dialect and use the standard dialect in all domains including home. Thus a section of the members of a caste may not have the features attributed to the caste dialect.

This is actually the problem of the static approach to the study of variation and the solution lies in a dynamic approach, which will be based not on the linguistic characteristics of an individual but on the characteristics of interaction between individuals, and of interaction between the individuals and the situation. These characteristics will include the choice of linguistic form at all levels made by the speakers from the reportoire of speech variations they control.

So far we discussed the notion of caste on the basis of observed data. There is another dimension to this question which is based on perceptual data. In spite of the difficulties in defining the caste dialects discussed above, the speakers of a language are able to identify a caste by linguistic features. The perceive certain linguistic differences as indicative of a caste and on their basis identify the caste of a speaker. These linguistic features are called stereotypes (Labov 1966). For example, the use of -ṉḍu in reflexive conjugation, uuṭṭu as a possessive marker taken to be linguistic markers for Brahmin and Nattukottai Chettiyar respectively. These markers or stereotypes are not necessarily used by all and only the caste to which they are attributed. The speakers perceive them to be so. This gives another approach to the definition of caste dialects which can be defined by perceived sterotypes and not by actual behaviour. This approach gives a crucial role to speakers linguistic evaluation in the study of variation. It is not based on quantitative analysis of the features found in a dialect.

An important aspect of caste in India is the ranking of castes in a hierarchy and caste ranking has been discussed extensively in the anthropological and sociological literature. The linguists could ask whether the linguistic variation provides any evidence for caste ranking. There are no linguistic criteria to rank the linguistic differences. The speakers, however, evaluate and rank some of the linguistic features on a scale of prestige on the basis of the social status of the speakers. Thus the rating of linguistic features is derived from the social ranking of the speakers. For example, the use of aviya for third person plural in Tamil has low prestige compared with avuha, avaa and avanga because it is used by low castes. Though the linguistic features derive their prestige from the social status of the speakers, people use them conversely to estimate the

caste rank of the speakers. This estimation is not through the identification of the particular caste of the speaker and placing it in the caste hierarchy, but by directly placing him in a hierarchy with the general division of high and low. It may, however, be noted that the ranking of linguistic features does not always derive from the traditional ranking of castes. For example, the linguistic features that mark the Brahmin dialect are not considered prestigious now in Tamil. This reflects the present social attitude towards the Brahmins, even though their rank is high ritually. Another problem to establish direct correlation between linguistic differences and caste ranking is that certain categories of speakers like the educated, economically advanced in a caste give up their caste stereotypes and acquire the standard features. Then the estimation made through linguistic features is of class and not caste. A speaker is identified as belonging to low class rather than to a low caste. The speakers of the same caste may belong to low class or high class by their linguistic behaviour. Thus the evaluation and ranking of linguistic differences seem to reflect more and more class hierarchy rather than caste hierarchy.

Another aspect of linguistic differences is their functions from the point of view of interaction between castes. The question is whether the differences are maintained as markers of identity for different castes when interaction between them increases or whether the differences get eliminated or minimised. Some linguists (Pandit 1979, Gumperz 1969) have taken the former position and others the latter position. It may be true that the stereotypes are maintained while other differences may be minimised through the natural process of convergence. The maintenance of caste identity seems to be the traditional function of linguistic differences and perhaps they play that role even now to a greater degree in rural areas than in urban areas. In villages, the caste identity is maintained in public places also through various means of appearance and behaviour including speech behaviour. But in towns it is concealed in the public domain through various means including the dropping of linguistic differences. The regional or the general standard dialect is used there which drops the caste marking stereotypes. The speaker of the standard dialect exhibits his class membership rather than caste membership. The linguistic differences are used now to maintain class distinction particularly in urban areas.

The linguistic manifestation of caste differences in the statistical sense mentioned above is available in rural areas not only through the use of language forms which are different for different castes but also

through choice from among multiple forms which are common to all castes. In other words, when referentially same meaning could be expressed in more than one way, the choice of a particular way indicates the caste, particularly the relation between castes and thus caste ranking. A study of language use thus can be used to understand caste ranking. (Levinson 1982). An obvious example is the use of honorific and non-honorific forms. Levinson, in his extensive study of the subject, shows that the pattern of use of the honorific and non-honorific forms in terms of givers and receivers of these forms indicate caste ranking. He sets up three categories of honorific usage. They are categorical T – usage, categorical V – usage and relative T–V usage, where T stands for the use of non-honorific forms and V for honorific forms. Categorical T - usage is if caste A gives categorical T to caste B, then every member of A uses T to every member of B irrespective of age, sex or any other attribute, Relative age T/V usage is if caste A gives relative age T/V to caste B, then every member of A uses to every member of B who is younger and V to every member of B who is older. The ranking of castes by the honorific usage shows that the castes which give categorical T receive categorical V are high castes, and that the castes which give categorical V and receive categorical T are low castes. The castes which use relative T/V are also largely high castes. This ranking by the honorific usage correlates with the ranking established by non-linguistic behavioral patterns like transaction of food and services between castes.

This is an instance of dynamic approach to the study of variation in language and its correlation with caste. The same approach may be used for the study of variation of forms which are referentially or grammatically the same like the different deictic forms angiṭṭu, andale, anda (a) ṇḍe, andapakkam 'there, that side'. Like language, the speech of a caste is not homogeneous. There is variation in the speech and it is manifested in different interactional situations. It may vary in different degrees from the use of standard forms to the use of dialect forms. A study of this variation in relation to its use in a given interaction will give the dynamics of linguistic variation and the dynamics of caste or class relationship.

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VOWEL SHIFT IN TAMIL DIGLOSSIA

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Ferguson (1959) defines diglossia in his classic paper as follows:

'Diglossia is a relatively stable language situation in which in addition to the primary dialects of the language ... there is a very divergent highly codified superposed variety the vehicle of a large and respected body of written literature...which is learned by formal education and is used for most written and formal spoken purpose but is not used by any sector of the community for ordinary conversation.

—Ferguson (1959-236)

Ferguson refers to this superposed variety as H-variety (H) and all the 'primary dialects' as the low variety (L). Tamil language- one of the major Dravidian languages spoken in India- is considered to be a diglossic language [Ferguson (1959); De Silva (1976); Schiffman (1979)]. In Tamil, a high variety of speech from is used in formal occasions such as in political platforms, public meetings, news casts, etc. The ability to use the high variety of Tamil is associated with social superiority and intimacy with Tamil heritage (De Silva, 1976). The low variety is used in informal situations and includes all dialectal forms found across areal and social parameters.

Annamalai (1976) and Vasantha Kumari (1976) have argued well to establish the existence of a spoken variety of Tamil which is a superposed variety of all dialectal forms. This superposed variety, called Standard Spoken Tamil (hereafter, SST) is not a speech of any particular region, caste or religion (Vasantha Kumari, 1975), but it is a speech (form) obtained by eliminating all the stigmatized sterotyped or marked features of the home dialect (Annamalai,1975). I assume that SST can be functionally substituted in all situations where the usage of a dialectal form is appropriate. There is no doubt that this SST is found among all speakers of Tamil transcending geographical and social division and furthermore a great deal of

homogeneity can be found in its usage among all Tamil speakers. Thus, SST having a uniform system can replace dialectal forms belonging to areal and geographical divisions in all their linguistic usages and further the SST having the same linguistic functions as that of the dialectal varieties is mutually exclusive in its usage with respect to the H- variety. Within the H-variety of Tamil, there are different registers of speech forms such as Archaic style, Pandit style, Modern style, etc. The variations found among these different 'styles' are more in the phonology than in syntax. However, the 'modern style' is found among all speakers in almost all functions of H-variety and I assume that it is the one often considered to be the superposed variety of Tamil (H) in diglossic situations. When this superposed variety (H) is considered in the diglossic study, there is good reason to consider also the superposed variety of I-form i. e., the SST on par with it. It is true that a superposed variety of L may be available in all diglossic languages, but if found, as in the case of Tamil, it is rather preferred for the diglossic situation to refer to the two superposed varieties and to the cleavage in their linguistic functions as mutually exclusive in their usage. The reason for considering superposed varieties of H - and L to be the level which is referred to by diglossia will better be justified when one attempts to formulate a grammar for a diglossic language.

No speaker of a diglossic language who does not control both varieties of speech form can claim to know the language 'completely'. It is not surprising when uneducated speakers who don't control the H-variety claim that they do not 'know the language' and 'openly declare their ignorance of the high usage and confers to the incorrectness and inelegance of their linguistic use' (De Silva, 1976). Similarly, any foreigner who learns only the literary variety experiences the inability to carry on a conversation in informal situation and finds himself miserable for not able to understand the 'spoken language'. However, it is true that uneducated speakers do understand a certain amount of the H-variety since they encounter it in their day to day life in political meetings and in historical movies and in other public places where H-variety is used. Similarly, a person who knows only the H-variety does comprehend to some extent the low variety also. But their performance i. e., their ability to actually use the language, is generally poor in the variety in which they do not have mastery. If a grammar, theoretically speaking, is based on a uniform linguistic system available among all speakers of a language, then in that case, for a language which is diglossic, a uniform linguistic system can be seen only in the H-variety. Any grammar formulated on this uniform linguistic system will be a grammar of the H-variety of the language

and not of the language in 'total'. But, with the L-variety speech form of Tamil where one finds a superposed L-variety – SST – a relatively more uniform linguistic system across all dialectual variations, it is possible to formulate a grammar of the L-variety which is uniform in its linguistic system and also in its usage across areal and social parameters.*

If diglossia is assumed to refer to the existence of the two superposed varieties of Tamil, namely the H-variety and the L-variety, then it is possible to formulate a grammar of Tamil based on the uniformity pertaining among the two varieties and this grammar will be then the most appropriate one representing the native speaker's knowledge of the language in 'total'. But, on the other hand, if diglossia refers to a high variety against all other 'primary dialects'. then any grammar attempted will be based on a uniform system pertaining to the H-variety and one of the 'primary dialects' in which case, the grammar will be of the dialect of the language spoken in a particular area of society from where the linguistic data are observed. Thus, if the level of diglossia is assumed to refer to the dichotomy of the H-variety against all primary dialects, one will fail in his attempt to formulate a linguistic abstraction needed for a theoretical investigation of the language.

Since a homogeneous speech system is needed as a pre-requiste for the analysis of a language, the diglossic situation existing particularly in Tamil needs to be restated as referring to the superposed varieties of H and L forms where both varities have mutually exclusive occurrences regarding their usages. This diglossic situation set on these superposed varieties with mutually exclusive functions cannot be treated as a probiem of dialectal variations or bilingualism or stylistic variations, which in turn disallows any argument for treating diglossia as a problem of 'performance'. De Silva (1976) analyses vividly the unique characteristics of diglossia and argues convincingly for the need to differentiate diglossia from all the above variations. It is worth while reiteratihg briefly his line of argument as follows:

'Dialects are recognized on social and geographical parameter while the use of high variety (I include SST also) is not restricted to any one geographical area or any one social class..... In bilingualism the speaker has a fair degree of freedom of choice between language 1

*One can also formulate a grammar of a particular variety i. e.. to say a grammar of a dialect of an area or a caste and not a grammar of the L-variety.

and language 2..... But, the selection of one variety (H) over the other (L) in diglossia is socially determined..... The style diversity is a characteristic of any dialect irrespective of whether the linguistic community is diglossic or not ; where the community is diglossic, the H-variety (also the SST) is shared by all irrespective of their dialectal difference and functions'.

Stewart (2962), Fishman (1967), De silva (1976), Schiffman (1979) and others have argued convincingly for the unique characteristics of the diglossic situations against all other linguistic variations.

Assuming that a grammar of a language purports to be a description of an ideal speaker–lister's knowledge of the language, it is more sensible to aim at a grammar which will be the description of both varieties. A grammar which concentrates on any one variety of speech form will not represent the speakers's knowledge of the language in 'total', because knowledge of one variety does not ascertain the competence in the other variety, not to speak of his performance ability which will be totally poor. Thus assuming diglossia to refer to uniform speech varieties of H and L, one can argue for a grammar which must represent the knowledge of a speaker which includes both varities. Eliminating one variety or the other (in a grammar) does not truely account for the 'total knowledge' of a speaker in that language. Thus arguing for a grammar to represent both varieties of a given language, any grammar based on this assumption for a diglossic language such as Tamil will be a description of the ideal speaker-listner's intrinsic competence which is the manifestation of a uniform system of linguistic repertoire consisting of both varieties.

Among the two varieties of speech, a great amount of independent rules are necessary for the phonetic realization of the varieties as speech sounds. The phonological component of a grammar states the rules defining the speakers's tacit knowledge of the phonetic structure of speech sounds (Katz, 1974). In a diglossic language the phonetic interpretive rules have a set of uniform rules applicable to both varieties, but those rules alone do not lead one to comprehend (to speak) any one variety. An independent set of rules are necessary for both varieties. I assume that assigning two independent sets of rules of phonetic interpretation is not possible because such an assumption can not be justified by any reason of learner's ability in generalizing and abstracting a linguistic system. It is hard to believe a learner apparently keeping apart two systems which are functionally similar. It is more convincing to assume set of rules which are part of the phonological component and when this set of

rules are delineated, they help one to derive one variety from the other. William Bright (1970) suggests that the H-variety is more complex in grammar and phonology and if the underlying structure were taken to be similar to this complex structure, then the low variety could be derived from it by simple deletion rules. If the H-variety is considered to be the competence of a speaker, then what is the reason for one's performance ability to fail when it is directly linked with his competence as expected in formal situations where the use of the high variety is needed. On the other hand, if SST is assumed to be basic from which the H-variety is derived, then what follows is that a set of 'conversion rules' which are learned in formal education by native speakers to convert the low variety into H-variety. Any such 'conversion' allowing the derivation of H-variety from the SST forms does not give any interesting generalization and it seems to be not feasible to account for all the phonological differences observed between the two varieties (Schiffman, 1978). The phonological component of a grammar of a diglossic language is assumed to have rules for the phonetic interpretations of speech sounds of SST in which a set of phonetic interpretive rules when delineated from the inventory of rules available in the phonological component generates the H-variety. Then what is learned by formal education is the mechanism to delineate the set of rules which are 'converting' the H-variety into SST forms. Theoretically speaking, uneducated speakers when they are not exposed to the H-variety, do not control the mechanism of delineating those 'conversion rules'. Because of the social prestige involved with the H-variety and the strong belief of every speaker that it is the low variety that is derived from the high variety, there seems to be a psychological motivation for assuming the H-variety to be the basic one. It is also not surprising when uneducated speakers with their little exposure to the H-variety try to attain their tacit knowledge of the H-variety by delineating the 'conversion rules' which they have. The characteristic nature of the set of 'conversion rules' need to be discussed in the sense of what sort of 'convertion rules' form part of the competence of a speaker.

Zvelebil (1963) in his analysis of 'the vowels of colloquial Tamil' conclude that Standard Colloquial Tamil (SST) has eleven vowel phonemes :

i	e	æ	a	o	u
i:	e:		a:	o:	u:

If length is treated as a suprasegmental feature, then the number of vowel phonemes in SST can be reduced to six with a

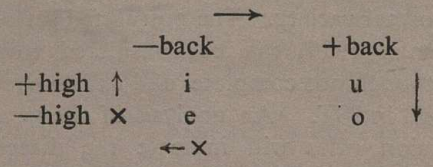
suprasegmental phoneme /ː/. The phoneme /æ/ will not be found in H-variety where the usage of foreign loan words are totally minimized. An attempt is also made by all speakers to avoid foreign words in SST also, in that case the phonemic inventory other than 'æ' is uniform for both varieties. Analysis of some dialects does not show the presence of 'æ' [Karunakaran (1971); Kamatchinathan (1969); Agesthialingon (1976)].

Some of the general characteristics of Tamil speech form can be found in both varieties of Tamil such as the presence of /y/ before initial front vowels, as in /etu/ 'which' being pronounced as [ye δω]. One can hear in SST the allopnonic variations of a vowel phoneme as found and conditioned in the phonemic analysis. This is not true in the case of consonants because the voiceless stops are pronounced as their voiced counterparts in intervocalic position and after nasal in all speech forms of Tamil irrespective of the varieties to which the speech form belongs. That is to say, in the H-variety one hears a vowel phoneme rather than its allophone, which would have been the case with reference to the consonants. For example, the form /viiTu/ 'house' will be pronounced as [viiDu] in H-variety and as [viiDω] in SST. Note that the consonant phoneme /T/ being pronounced in both varieties as /D/, which is an allophone of the consonant phoneme /T/ occuring here in inter-vocalic positions (in other cases, it may occur after nasals). Among the vowel phonemes, a great amount of vowel change is noted between H-variety and SST. A set of 'conversion rules' are postulated by Schiffman (1979) to account for the phonemic changes found in SST. This set of conversion rules are those which are identified by educated speakers through formal education by which they learn the mechanism of delineating them from those found in the phonological component of a grammar and which the uneducated speakers attempt to delineate them from their experience of being exposed to the formal variety. The postulated set of conversion rules given by Schiffman (1979) can be considered to be a fairly good representation, though not complete and exhaustive of all the phonemic changes found in SST. An analysis of the general characteristic of these conversion rules will indicate the direction in which the phonemic changes occur and the rules which form part of the competence. Most rules pertaining to vowels are within word boundaries and are thus internal phonemic changes. Within a word, the linear direction of the application of the conversion rules need to be discussed. Consider the H-variety form /kuRantai/ 'child'. The chage of the phoneme /u/⇒/o/ will not take place unless the phoneme /a/ in the second syllable is changed to /ʌ/ which in turn will not take

place unless the last syllable /ai/ is changed to /e/ as: /kuRantai /⇒/ kuRant e /⇒/ kuRʌnt e /⇒/ koRʌnt e/. The presence of all these intermediate stages which are found in different dialects indicate the linear direction of the application of the conversion rules within a ward as from right to left. No dialect has recorded the existence of forms such as */koRntai/ or as */koRʌntai /or as */kuRʌntai/. These facts confirm that the linear direction of applicability of the conversion rules is right to left and further suggests that there is no simultaneous application of the conversion rules within a word.

There are various forms in SST where the phoneme /i/ is changed to /e/. Similarly, the H-variety forms having /u/ are found to have changed to /o/ in SST. This phonemic change is effected under certain conditions in SST (Schiffman, 1979). But, there is no example which indicates the change of phoneme either as */e/⇒/i/ or as */i/⇒/u/. So, the above facts lead one to postulate that the conversion rules have the characteristic feature of lowering the vowels and not raising. In other words, vowels tend to change to '—high' feature rather than to '+high' feature on the vertical plane of the vowel chart, when SST forms are derived from the H-variety.

On the horizontal level, vowel changes are found to occur in the conversion rules as /i/⇒/u/ and as e/⇒/o/, but no example show a vowel change in the direction of being opposite in nature as */u/⇒/i/ or as /o/⇒/e/. This fact leads us to state that no back vowels are fronted though they are unrounded to their corresponding allophones, i. e., /u/ does not change to /i/ under any circumstances, but in some cases it is found as /u/⇒/i/. Thus, it can be postulated with regard to the conversion rules that vowels tend to change to '+back' feature rather than to '—back' feature on the horizontal level of the chart. Thus the direction of changes as found in the conversion rules among the vowels /i, e, u, o/ can be diagramically represented as follows :



Thus the conversion rules tend to change the vowels to '—high' or '+back' rather than in the direction of '+high' or '—back'. But, between these two types of feature changes, the change of the feature '± high' based on the vertical plane seems to be primary over than of the one ('± back' feature) on the horizontal plane. Consider the high variety from /miLakaay/ 'red pepper'. We have dialectal words as /meLakka/ and /moLakaa/ and /moLakka/, but not */muLakka/;

thereby indicating the process of the phonemic change taking place as /i/⇒/e/ and then as /e/⇒/o/ and not as */i/⇒/u/ and then */u/⇒/o/. There is a possibility of considering the change directly as */i/⇒/o/. Note that if any change is found in the language as /i/⇒/o/, there must be forms indicating the intermediatory changes as shown earlier. Thus the direction of vowel change has to be analysed diachronicaly as /i/⇒/e/⇒/o/.

As seen earlier, among the various speech forms of Tamil there is a basic dichotomy of H-variety and a 'L' variety which includes SST and all 'primary' dialects. The difference between SST and other dialectal varieties (i.e., 'primary dialects' which are called substandard dialects) can be established based on the nature of the application of these conversion rales. The forms such as /moLakka/ (derived from miLakaay/ 'red pepper'), /pora/ (derived from /pira/ 'to be born'), /puTi/ (derived from /piTi/ 'to hold') are considered to be substandard forms (i. e., belonging to 'primary dialects'). But forms such as /keLampu/ (derived from /kiLampu/ 'to start'), /meLakka/ (derived from /miLakkaay/ 'red peper'), /meti/ (derived from /miti/ 'to stamp') are considered to be non-dialectal forms in the sense that these forms can be accepted with no hesitation as SST forms. If we note the direction in which the vowel changes that had taken place in these forms, we can observe that when the phoneme /i/⇒/u/, the forms are considered to be sub-standard; and when the change is /i/⇒/e/, then the forms are considered as SST forms, thus indicating that any change pertaining to vowels on horizontal level (of the phonemic chart) establishes the forms belonging to sub-standard variety; while any change taking place on the vertical plane, establishes the forms to be of SST. In other words, vowel changes affecting 'high' feature are the characteristic nature of SST; while those affecting 'back' feature of the vowels represent the forms beloging to sub-standard variety. The competence of a speaker i. e., the grammar of a diglossic language such as Tamil has phonetic rules called 'conversion rules' in the phonological component pertaining to 'high' feature only.

In conclusion, one can postulate the direction and the characteristic nature of the vowel changes that are taking place in the process of converting H-variety into SST variety and into other 'primary dialects'.

1. Allophonic variations of vowel phonemes are found only in H-variety whereas allophonic variations of consonants are found in H-variety as well as in all L-variety forms including SST.
2. The 'conversion rules' that are applicable within a word do not apply simultaneously.

3. Within a word, the 'conversion rules' apply in the linear direction of right to left (i. e., from the end of a word) in the process of converting H-variety to all other L-variety forms including SST.
4. Vowels tend to lose their '+high' feature rather than have it added in the process of conversion of H-variety into L-variety.
5. Vowels tend to add '+back' feature rather than to become '—back' in the process of conversion from H-variety into any sub-standard L-variety forms.
6. Vowels changes affecting the 'high' feature is a characteristic nature of SST, while changes affecting 'back' features is the characteristic nature of all L-variety forms other than SST.
7. Vowel changes found to have occured across the vowel chart as /i/⇒/o/ are not direct changes; but have occured through intermediate stages of /i/⇒/e/ and then /e/⇒/o/. Such type of vowel changes are diachronic in nature.

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Collophon:

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THE INFLECTIONAL SUFFIXES OF MALAYALAM REGULAR VERBS

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1. The Structure of Verbs in Malayalam

The structure of verbs in Malayalam is fairly simple. A verbal stem in Malayalam may contain one or more morphemes. If a stem consists of only one morpheme, that morpheme will necessarily be the root of the verb. Besides the root morpheme, a stem may have derivational morphemes such as transitive marker, causative marker, verbal extension, and negative marker, which are added to the root morpheme to derive the verbal stem ("the conjugational base" as it is called by Wickremasinghe and Menon), to which the inflexional suffixes are added. All these suffixal morphemes are annexed or agglutinated to the root in a fairly simple manner. Auxiliary verbs are often used after the main verb to express the categories of aspect and modality. Though a sentence may have several verbs occurring in a sequence, only one of them can be a finite verb, while all the others will be non-finite. The right-most verb[1] in the sentence is the finite verb, while all the preceding ones, if any, must be nonfinite. The phonological shape of some of these nonfinite verbs may be identical to that of their finite counterparts. But the position of occurrence of the finite verb makes it unambiguously finite in the sentence. Owing to this agglutinative[2] structure of the verbal forms in Malayalam, a verb phrase (VP) in Malayalam may be defined as

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[1]It can be either a main verb or an auxiliary verb.

[2]Caldwell uses the term "agglutinative" for languages "in which grammatical relations are expressed by affixes or suffixes added to the root or compounded with it" (Caldwell, 1856, p. 144). According to Lyons, "An agglutinating language is one in which words are typically composed of a sequence of morphs with each morph representing one morpheme" (Lyons, 1968, p. 188).

a word having a [+finite] suffix, occurring by itself or in combination with other preceding structures which may consist of one or more verbals with [−finite] suffixes and/or one or more nominals that are governed by the verbal (s) in the phrase, all of these together forming the predication of the sentence in which the nonfinite verbs along with their nominals form embedded constructions. Each of the verbal forms in the verb phrase closes with an inflectional suffix which is potentially word-final.[8]

2. The Inflectional Morphemes of Malayalam Verbs

Fig. 1 (see p. 54) gives a labelled representation of the inflectional suffixes used in present-day Malayalam. Illustrative examples are also given for two representative verbs chosen from the two classes. The verbal stem /Vut/ [u : t−] 'blow' represents class 1, and verbal stem /cej/ [tʃej] 'do' represents class 2. The inflectional morphemes as seen in the tree representation (Fig. 1) are all bound morphemes. The auxiliaries in Malayalam (e. g. [uɳɖə] 'is') which are often used to express the categories which in other languages are expressed by the subjunctive mood forms or by the perfect and progressive aspect forms, are not treated as inflectional suffixes, though in the writing system they are often tagged on to the graphic representation of the main verbs. As these auxiliaries consist of a root and possible suffixes, they deserve to be treated as separate verbal forms and not just inflectional suffixes. Furthermore, many of these auxiliaries have homophonous, but semantically different verbal forms that can occur as the main verb of a sentence, as the verb *do* does in English. So most of those numerous verbal inflectional forms listed in works such as David W. McAlpin's *The Malayalam Verb Phrase in a Generative Matrical Framework* (see McAlpin, 1972, pp. 381–88) can be shown to be combinations of main and auxiliary verbs together forming verbal sequences in which the right-most verb performs the function of the finite verb in each sequence that is dominated by a VP node.

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[8] "Broadly speaking inflectional forms or alternations ... are those which uniquely determine and restrict the grammatical functioning of the resultant word form, whereas derivational formations produce a form substantially the same for grammatical purposes as a root form or as a simpler or more basic underlying form .." (Robins, 1964, p. 25)

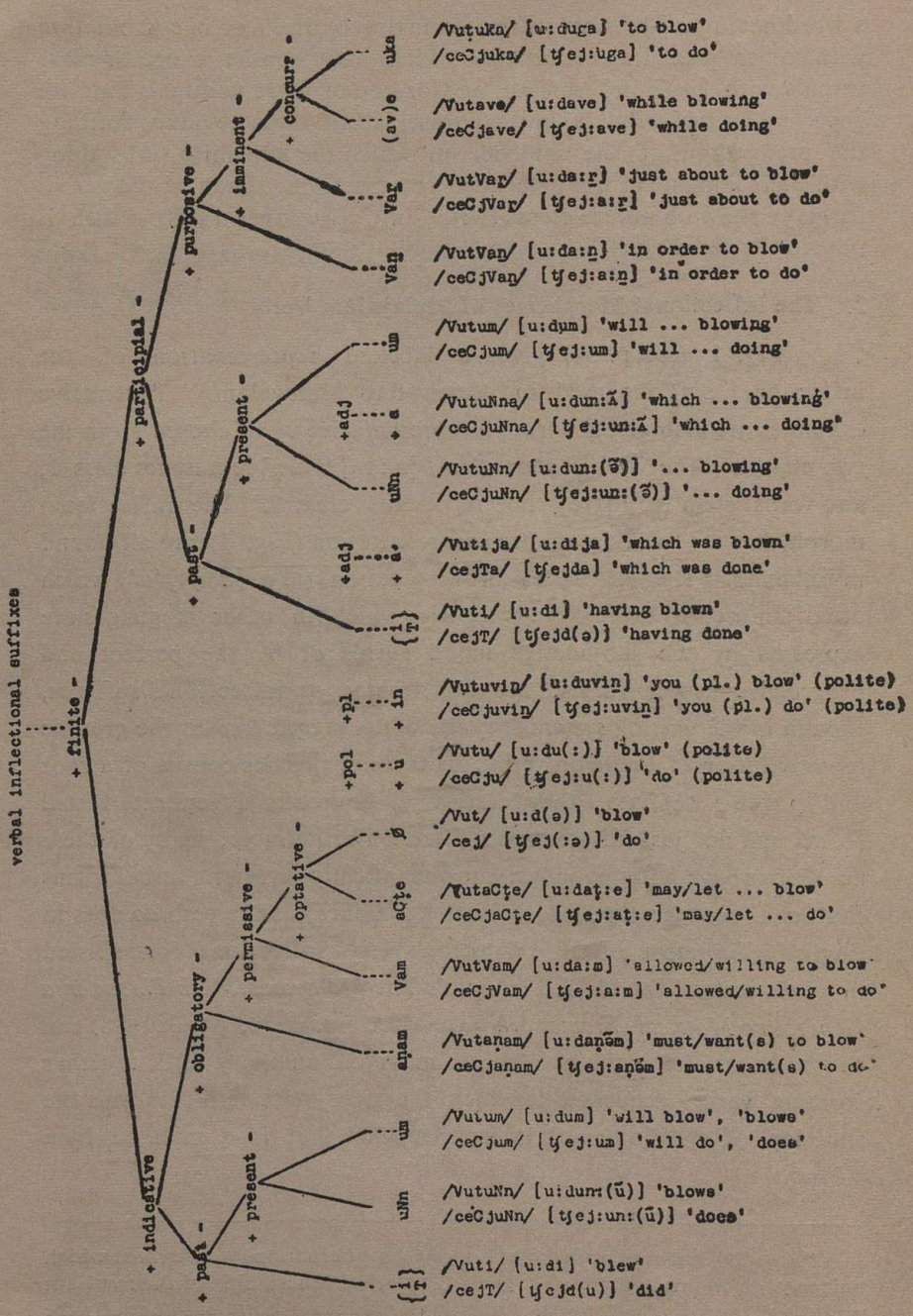

Fig. A diagrammatic representation of the verbal inflectional suffixes.

3. Some Remarks on the Grammatical Feature[4] Analysis of the verbal Inflectional Suffixes

In the analysis presented in this study the labels used are in most cases fairly close to the terminology already established by writers on Malayalam grammar :

[+ finite] = any finite suffix which when added to a verbal stem occurring in the right-most verbal position makes the verb function as the finite verb of the sentence.

[— finite] = any nonfinite verbal suffix added to verbal stems which normally precede the finite verb in the Verb Phrase.

[+ finite, — indicative] = imperativc suffix. Ø Vut + Ø [u:də] 'blow'
cej + Ø [tʃej (:ə)] 'do'

[+ finite, — indicative, + polite] = polite imperative suffix: u Vut+u [u:du(:)] 'Please blow'
cej+u[tʃej:u] 'Please do'

[+ finite, — indicative, + polite, + plural] = imperative plural suffix occurring after the polite imperative suffix. In some dialects it occurs after the nonpolite as well as the polite imperative suffix (see Prabodhachandran Nayar, 1972, p. 156).
in as in Vut + u + in [u:duvin] 'You (pl.) please blow'
cej + u + in [tʃej:uvin] 'You (pl.) please do'

[+ optative] = Optative suffix (+ fin, — ind, + opt): —aCṭe
Vut + aCṭe [u:daṭ:e] 'may (he) blow'
cej + aCṭe [tʃej:aṭ:e] 'may (he) do'

[+ permissive] = Permissive suffix (+ fin, —ind, + permiss): -Vam
Vut + Vam [u:da:m] 'willing to blow', 'permitted to blow'
cej + Vam [tʃej:a:m] 'willing to do', 'permitted to do'

[+ obligatory] Obligatory suffix (+ fin, — ind, + oblig): aṇam
Vut + aṇam [u:daṇãm] 'must below'

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[4]The grammatical features introduced in this section show the need for the use of mixed categories in grammar. It is not possible to write a satisfactory grammar for a language without introducing such mixed categories, i. e. phonological, syntactic and sociolinguistic.

[+ finite, + past] = Finite Past Tense suffix:
—i Vut + i [u:di] class 1 'blew'
—T cej + T [tʃejd (ə)] class 2 'did'

[+ finite, — past] = Finite nonpast tense suffix (i. e. + present or — present)

[+ finite, — past, + present] = Finite Present Tense suffix:
—uNn Vut + uNn [u:dun: (ũ)] 'blows'
cej + uNn [tʃej:un: (ũ)] 'does'

NB. The Present Tense morpheme in Malayalam has a morphologically conditioned[5] variant /uṉ/ [uṉ(ẽ)] which in the type of Malayalam that is investigated in the present study occurs only after an auxiliary verb root. For a discussion of this varient see 11.1.

[+ finite, — past, — present] = Finite Future Tense suffix:
— um Vut + um [u:dum] 'will blow'
cej + um [tʃej:um] 'will do'

[+participial] = (Verbal) Participle (— fin, + part)

[+participial, +past] = Past (Verbal) Participle
[+participial, —past, +present] = Present (Verbal) Prrticiple
[+participial, —past, —present] = Future (Verbal) Participle

} The underlying forms of these participles have the same phonological shape as their corresponding finite forms.

[+participial, +adjective] Participial Adjective :[6]
—a / [+ part, X past, Y pres] + [—]
—Ø / [+ part, X past, X pres] + [—]
Vut + i + a [u:dija], cej + T + a [tʃejda]
'which was blown' 'which was done'
Vut + uNn + a [u:dun:ā] cej + uNn + a [tʃej:un:ã]
'which is blowing' 'which someone) is doing'
Vut + um + Ø [u:dum] cej + um Ø [tʃej:um[
'which will blow' 'which (someone) will do'

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[5]A morphologically cohditioned variant is one whose selection depends on information stored in the verb itself, i. e. among the features contained in its entry in the lexicon.

[6]A participial adjectival participle traditionally called a "Relative Participle'.

$\begin{bmatrix}-\text{finite}\\-\text{participial}\end{bmatrix}$ = Infinitive: —uka, Vut + uka [u:duga] 'to blow'
cej + uka [tʃej:uga] 'to do',

[+ purposive] = Purposive Infinitive (—fin, —Part, +purp): —Vaṉ
Vut + Vaṉ [u:da:n], cej + Vaṉ [tʃej:a:n]
'with a view to blowing', 'with a view to doing'
(in order to ...)

[concurrential] = Concurrential Infinitive: (av)e,
kVel + Ck + e [ke:lk:e] 'in the audience of, while hearing'
Vut + ave and cej + ave are rare

[+ imminent] = Imminent / habitual Infinitive: —Vaṟ,
Vut + Vaṟ [u:da:ṟ] 'is/was ... about to blow'
cej + Vaṟ [tʃej:a:ṟ] 'is/was ... about to do'

N.B. For its habitual usage see the discussion that follows. The conditional marker (suffix) that occurs after the simple infinitive as in /Vut + uka + il/ /Vutukil/ [u:dugil] 'if happens to blow' can be analyzed as a linking morpheme which is used in embedded constructions.

A finite verb (i.e. a verbal stem having a finite suffix), which is specified [+ indicative] is in the indicative mood. It takes tense suffixes. There are three tenses, viz. Past, Present, and Future. These can be specified with the positive and negative values of two tense features: PAST and PRESENT. The past tense is marked $\begin{bmatrix}+\text{past}\\-\text{present}\end{bmatrix}$ or just [+ past], the present tense $\begin{bmatrix}-\text{past}\\+\text{present}\end{bmatrix}$ and the future $\begin{bmatrix}-\text{past}\\-\text{present}\end{bmatrix}$. This future tense in most of its occurrences conveys the meaning of an aoristic or indeterminate future. The verbal participles are also marked for tense as they take the tense suffixes. But they are nonfinite verbs marked [— finite], and so they can be distinguished from their finite counterparts by their feature specifications. However, in their phonological shape, they are found to be identical to their finite counterparts. This fact had been observed by Caldwell as is evident from his statement that "in Malayalam the preterite verbal participle constitutes by itself the preterite tense, without the addition of any pronominal signs" (Caldwell, 1856, p. 394). It will be seen in the present analysis that the other verbal participles also are similar in their phonological

[7]The capital letters X and Y are variables over + and —.

shape to their corresponding finite verbs. Hence, the distinction between a verbal participle and its finite counterpart will be seen to be only that of their respective positions of occurrence in the verb phrase. This positional variation may cause some phonetic differences in the phonological shape of these formatives. But they can be shown to be environmental variations which are predictable by rules. Also because of other reasons such as the ones listed below, the verbal participles are distinguished from their homophonous finite counterparts :

(i) The verbal participles are nonfinal in their occurrencc in the syntactic structures of Malayalam utterances.

(ii) Though the past ('preterite') verbal participle is identical in phonological shape to the finite past, it is not semantically past. For example, in the following sentences the past verbal participle is used to denote future actions :

1.	/avan̲	Voṭi	varum/	[avan̲ õ:ḍi varum]	
	he	having run	will come	(i. e. He will come running.)	
2.	/avan̲	naṭaNn	Varum/	[avan̲ naḍan:ə̃	varum]
	he	having walked	will come	(i. e. He will come walking.)	
3.	/kiCṭu	nVaḷe	eṛuti	tVirCkum/	[kiṭ:u na:ḷe eṛudi ti:r̲k:um]
	Kittu	tomorrow	having written	will complete	(i. e. Kittu will finish writing tomorrow.)

(iii) A phonological word (or orthographic word) representing two or more grammatical words is not uncommon in natural languages. For example, in English the phonological word /kʌt/ (or the orthographical word *cut*) represents three different grammatical words; 'the present tense of *cut*', 'the past tense of *cut*', and the 'past participle of *cut*' (see Lyons, 1968, p. 196). In Malayalam a phonoiogical word such as /Vuti/ or /cejT/ can, therefore, be seen as representing two grammatical words each:

Phonological Word	**Grammatical Word**	
1. /Vuti/	1a. /Vuti/	past tense form of /Vut/
	1b. /Vuti/	past verbal participle form of /Vut/
2. /cejT/	2a. /cejT/	past tense form of /cej/
	2b. /cejT/	past verbal participle form of /cej/

(iv) The recognition of the verbal participles as grammatical forms distinct from the finite tense suffixes keeps the analysis fairly close to the traditional analysis of Malayalam verbal suffixes. The present analysis avoids deviating from the traditional analysis wherever it is found to be satisfactory and economical.

For a detailed discussion of the phonological similarities and phonetic differences between the verbal participle and the finite tense markers see 10 below.

In the present analysis the "Relative Participles" of traditional descriptions turn out to be the verbal participles with an adjectival marker /—a/ suffixed to them for past and present. But the future "Relative Participle" does not have this adjectival marker as an overt suffix. This significant absence of the marker is taken care of by positing a ϕ alternant for the adjectival suffix /—a/.

4 The Citation form of the Verb

Following traditional practice, the Malayalam Lexicon as well as grammar books on the Malayalam language give the simple infinitive form as the citation form of the verb. This infinitive form is the composed of the verbal stem ("the conjugational base") and the infinitive suffix /—uka/. However, in the present study the non-derived stem (i.e. the verbal root + the verbal extension, if any) alone is entered in the lexical list in Lexicon I which lists the lexical formatives of the set of Malayalam verbs studied for the present analysis. The nonderived stems listed in Lexicon I will be referred to as the Verbal Bases to distinguish them from the Verbal Stems which may consist of derivational suffixes as well. The term verbal base as used in this study means either the verbal root itself, if it is capable of occurring as a verbal stem by itself, or the minimal stem that is composed of the verbal root and the Verbal Extension. This analysis of the verbal base into root + Verbal Extension is modelled on Wagner's analysis of the Old English verbal stems (see Wagner, 1959, p. 216). The infinitive forms, as well as all the other verbal forms, can be derived by rules from the verbal bases (i.e. the lexical formatives) listed in Lexicon I and from the inflectional and derivational morphemes (i.e. the grammatical formatives) listed in Lexicon II of the present study.

5. Finite Vs. Nonfinite

The verbal forms in Malayalam can be classified into two major categories viz. FINITE and NONFINITE. The label used for a finite verb in Malayalam is *muttuvina* /muCṯuviṉa/ which means a *vina* /viṉa/ (i. e. a verb) that is independent, or which can occur by itself in a

sentence. The NONFINITE verb is likewise called *pattuvina* /paCṯuviṉa/, meaning a verb that depends on another. The two may be described as non-dependent (finite) and dependent (nonfinite) verbs. In a nondeviant sentence in Malayalam the finite verb always follows the nonfinite ones and tends to occur at the right-most position of the utterance. If an utterance has only one verb that verb will be a finite one. If there are two or more verbs in a sentence, only the right-most verb will be finite, while the rest of them will be nonfinite. The following sentences show how finite and nonfinite verbs are arranged in the verbal sequences of Malayalam utterances:

1. /kiCṭu matil + il cVaṭ + i kajaṭ + i/
   [kiṭ:u mãdilil ʧa:ɖi kajaṟi]
   [− finite] [+ fin]

   Kittu on the wall having jumped climbed
   'Kittu, having jumped, climbed the wall.'

2. /kiCṭu matil + il kajaṟ + i cVaṭ + i/
   [kiṭu: mãdil il kajaṟi ʧa:ɖi]
   [−fin] [+ fin]

   Kittu on the wall having climbed jumped
   'Kittu, having climbed the wall, jumped.'

3. /kiCṭu Voṭ + i cel+N + T kuti + Ck + T ɔVaṭ+i/
   [kiṭ:u o:ɖi ʧen:ə̃ kudit:ʃə ʧa:ɖi]
   [−fin] [−fin] [−fin] [+ fin]
   Kittu having run having reached having leaped jumped

   'Kittu went running and then leaping jumped.'

4. /kiCṭu caCki + e cel + N + T kaɳ + T/
   [kiṭ:u ʧak:ije + ʧen:ə̃ kaɳɖu]
   [— fin] [+ fin]
   Kittu Chakki (acc.) having gone to saw

   'Kittu went and saw Chakki.'

5. /kiCṭu caCki + e kaɳ + T cel + N + T/
   [kiṭ:u ʧak:ije + kaɳɖə ʧen:ũ]
   [— fin] [+ fin]

   Kittu Chakki (acc.) having seen went to
   'Kittu, having seen Chakki, went to (her).'

6. /kiCʈu caCki + e kaɳ + T piʈi + Ck + T
[kiʈ:u tʃak:ije kaɳɖə piɖit:ʃu]
+
[— fin] [+ fin]
Kittu Chakki (acc.) having seen caught
Kittu found out Chakki.

7. /kiCʈu caCki + e kVaɳ[8] + Vaɳ Voʈ + i cel + N + T
oḷi + Ck + T nil + Ck + N + T
[kiʈ:u tʃak:ije ka:ɳã:n o:ɖi tʃen: õḷit:ʃu nin:ũ]
[—fin] [—fin] [—fin] [—fin] [+fin]
Kittu Chakki (acc.) to see running went to hiding stood
Kittu, in order to see Chakki, went running and stood hidden.

6. The Imperative

In present-day Malayalam, the verbal stem (i.e. "the conjugational base") without any overt marker is used as the imperative (+ finite, −indicative) in nonpolite (−polite, i.e. without an additional colouring of politeness) styles of speech. So, the imperative marker may be represented with a zero morpheme (i.e. ∅). This seems to be the case with most of the Dravidian languages. Caldwell in his *Comparative grammar of the Dravidian or South-Indian family of languages* makes the following statement: "The Dravidian languages differ from the Sanskrit and Greek, and accord with the languages of the Scythian group, in generally using the crude root of the verb, without any addition, as the imperative of the second person singular. This is a general rule, and the few apparent exceptions that exist are to be regarded either as corruptions, or as euphonic or honorific forms of the imperative" (Caldwell, 1856, p. 145). Again, on page 351 of the same book he writes: "The crude theme of the verb, or the shortest form which the root assumes, and which is capable of being used also as the theme of a noun, is used in the Dravidian languages, as in most others, as the second person singular of the imperative; and the ideas of number and person and of the conveyance of a command, which are included in that part of speech, are not expressed by the addition of any particles, but are generally left to be inferred from the context alone." However, in 'polite' (+ polite)[9] styles of speech Malayalam makes use of /-u/ as an imperative marker. For example, compare:

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[8]/kaɳ/ and /kVaɳ/ are alternant forms subject to a selectional restriction that is imposed on them by the grammatical formative that is suffixed to them,

[9]Overtly marked for politeness.

/Vut/ [u:də]	'blow' (imp., − polite)
/Vut + u/ [u:du (:)]	'blow' (imp. + polite)
/paṟa/ [paṟa]	'say' (imp., − polite)
/paṟa + u/ [paṟaju (:)]	'say' (imp., + polite)

The suffix {−u} is common for both singular and plural. However, in all descriptions of Malayalam one invariably finds an imperative plural suffix -uviṉ. This is a relic of the past that survives in certain styles of written Malayalam and also in "hypercorrect" speech. It also survives in the jargon used in advertisement, especially in the cinema and in the theatre. Forms like

/varuviṉ/	'You (pl.) please come'
/kVaṇuviṉ/	'You (pl.) please see'

are stylistically marked expressions. Some writers on Malayalam have taken the nonbasic enunciative vowel occurring after imperative verb forms ending in a consonantal sound as an imperative marker. But a consideration of forms such as /paṟa/ 'say' ending in a non-consonantal sound will show that the nonpolite imperative marker is Ø. and not [ə] or [u]. For example, compare :

/paṟa/ [paṟa]	'say' (imp. nonpolite)
/paṟa + u/ [paṟaju (:)]	'say' (imp. polite)
/Vot/ [o:ɖə]	'run' (imp. familiar)
/Voṭ + u/ [o:ɖu (.)]	'run' (imp. formal)

Prabodhachandran Nayar gives /VutVu/, meaning 'blow', as imperative singular, and /Vutiṉ/ as imperative plural (see Prabodhachandran Nayar, 1972, p. 151). In /Vutiṉ/ it appears that /−iṉ/ is the post-imperative plural suffix, and Ø is the imperative marker. The imperative marker /Vu/ of /VutVu/ is perhaps not generated in the imperative plural form /Vutiṉ/ which exists in his dialect. This seems to be an obvious confusion arising from the failure to distinguish between the polite imperative which in his dialect is /VutVu/ and the nonpolite one which can phonologically be represented as /Vut + Ø/ which he perhaps uses only with the plural suffix {−iṉ}. Though most of the writers on Malayalam grammar have just ignored, or failed to make the distinction between these two stylistically varying imperative suffixes, Subrahmanyam in his *Dravidian verb morphology* does recognize the distinction: "In modern Malayalam the imperative is common to both sg. and pl.; it is formed by adding −u or −ə to the verb base. While forms with −ə denote no respect and used [sic.] only in talking to inferiors, those with −u denote

some respect" (P. S. Subrahmanyam, 1971, p. 461). The –ə he mentions is the enunciative vowel which occurs after stems ending in consonantal sounds as is evident from his examples cited below:

p ō v – u / p ō v – ə 'Go!'
t i n n – u / t i n n – ə 'Eat!'
k ā ṇ – u / k ā ṇ – ə 'See!' (op. cit.)

Therefore, the following suffixes are recognized in the present study as the imperative markers of the type of Malayalam described here.

ϕ imperative marker as in /Voṭ + ϕ [o:ḍə] 'run'

{–u} polite imperative marker (i. e. $\begin{vmatrix} + \text{ fin} \\ - \text{ ind} \\ + \text{ pol} \end{vmatrix}$) as in /Voṭ + u/ [o:ḍu (.)] 'run' (polite)

{–in̲} post imperative plural marker as in /ooṭ + u + in̲/ [o:ḍuvin̲] 'You (pl.) please run' (polite; lit.)

The /v/ that occurs between the polite imperative marker /u/ and thes post-imperative plural marker /–in̲/ is the linking approximant /v/ a in

Voṭ + u + in̲ → Voṭuvin̲ [o:ḍuvin̲] 'You (pl.) please run' (in overtly polite style)

6.1 Rules for generating the imperative suffixes

The following phonological matrix insertion rules are proposed for generating the imperative suffixes in present-day standard Malayalam :

PMIR 1 $\begin{bmatrix} + \text{ fin} \\ - \text{ ind} \end{bmatrix} \rightarrow \emptyset$ / [Vst][10] + [———]

PMIR 2 $\begin{bmatrix} + \text{ fin} \\ - \text{ ind} \\ + \text{ pol} \end{bmatrix} \rightarrow$ u / [Vst] + [———]

PMIR 3 [+ pl] → in̲ / [Vst] + $\begin{bmatrix} + \text{ fin} \\ - \text{ ind} \end{bmatrix}$ + [———]

It may be noted that the plural suffix is generated after the imperative marker only in certain styles of speech.

N. B: In the above rules, and also in all the following rules, the underlying representations of the grammatical formatives are given in an informal alphabetic notation representing the feature matrices the letters stand for. This is done with a view to simplifying the formalization of the rules which otherwise can look more complicated and cumbersome.

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[10]Vat is used as an abbreviation for Verb stem.

6.2. A few other ways of expressing commands and requests

The sort of notion commonly associated with the imperative forms is conveyed by some other means also in Malayalam. For example, Prabodhachandran Nayar mentions two forms, one ending in – Valum as in

/tVaNkaḷ vaNnValum/ [ta:ṅgaḷvan:ã:lum]
'You (honorific) please come'.

and the other ending in –Vo as in

/nVi varuNneNkil vaNnVo/ [nī:varuṅ:ẽṉgil van:õ]
'If you are coming, you may come.'

The second of these two forms (i.e. the one ending in –Vo he describes as 'not polite'. Both these forms when broken up into their component elements show the following morphemic structure:

(a) /vaNnValum/ = /var + N + T + Valum/[11]
(b) /vaNnVo/ = /var + N + T + Vo/

As the structure is parallel to the usual Verbal participle + Auxiliary construction as in

var + N + T

[van:ə]	/kVaṉum/	[ka:ṉũm]	'may have come'
	/iruNn/	[irun:ũ]	'had come'
(cf.	/Valum/	[a:lum]	'may it please (you) to come')

in which the form that precedes the auxiliary already has an inflectional morpheme, it seems more economical to treat the form /Valum/ as an auxiliary conveying the meaning of a very polite request.[12]

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[11]This /Valum/ is semantically different from the homophonous form /Valum/ which occurs as a combination of /Val + um/ in utterances such as: /tVaNkaḷ vaNnValum ñVaṉ at ceCjukajiCla/ 'Even if you come, I will not do it.' (cf. /tVaṅkal vaNnVal ñVaṉ at ceCjukajiCla/ 'If you come, I will not do it.')

[12]The Malayalam Lexicon treats /Valum/ along with the imperative suffixes under the label *niyoogikam* / nijVoJikam/ nijVoJikam/ [nijo:dʒigam] meaning 'imperative'.

L. V. Ramaswami Aiyar gives a different interpretation: "The concessive with the ending –āl–um, standing by itself, does duty in Mal. for a kind of Polite imperative for the second person. It is a contraction of constructions like നിങ്ങൾ പോയാലും നന്ന് n'iṅṅaḷ pōyālum n' a n' n' u 'it would be well if you were to go' implying a polite wish, from which n' an'n'u 'it would be well' has been dropped" (Ramaswami Aiyar, 1936, p. 91).

This treatment of /Valum/ as an auxiliary is further supported by the structure of /var + N + T + Vo/ which is a shortened ("weak") form of /var+N+T + + koḷ + u/ i.e. /vaNn koCḷ+u/ [van:ə̄koḷ:u(.)] which in some dialects is realized as [van:õ:ḷu(:)] or even [van:õ:]. Very often these varying surface realizations are used by the same speaker as stylistic variants. So, the /Vo/ may be treated as a stylistic or dialectal variant of the auxiliary /koCḷu/.

Yet another way of expressing a request in Malayalam is to use the simple infinitive as in

/niNn̂aḷ Vutuka/ 'You (pl) blow'

This usage also conveys some idea of politeness. However, when one wants to be very polite, as for example, when talking to one's social superiors, the choice falls on the form consiting of the Verbal participle + auxiliary as in /cejtValum/ 'may it please (you) to do.'

7. The Optative

The suffix /-aCṭe/ is used after verb stems to express "wish", "desire" and such other feelings which can be subsumed under the label OPTATIVE. The verb stem followed by this suffix can occur sentencefinally as a finite verb in sentences like

/dejvam niNn̲e an̲ugraxiCkaCṭe/ [dejvəm nin̲:ẽjan̲ũgraxik:aṭ:e]
God you (acc.) bless let it be 'May God bless you!'
/avan̲ VutaCṭe/ [avan̲ ũ:daṭ:e]
he blow let 'Let him blow.' 'May he blow!'

It may be pointed out here that an optative verb form can occur with a subject nominal phrase that is First, Second or Third person, whereas the Imperative form of the verb can occur only with Second person nominals either actually present in the structure or implied in it (i.e. present in the underlying form). For example,

{ ñVan̲ / nVi / avan̲ / avaḷ / avar / . / . / . } varaCṭe

are all possible sentences in Malayalam. But, the imperatives

/varØ/ [va:] 'come' (nonpolite)[13]

/varu/ [varu] 'come' (polite)

can occur only with Second person subjects. Furthermore, the plural suffix cannot occur after the optative suffix. Among the verbal forms, only the imperative can take the plural suffix /-in/. But, as has been already stated, this usage is now almost obsolete or stylistically marked.

7.1 Rule for generating the optative suffix

The following rule is proposed for generating the optative suffix.

PMIR 4 [+ opt][14] → aCṭe / [Vst] + [——]

8. The Obligatory Suffix[15]

Forms like /Vutaṇam/ 'must blow / is obliged to blow'

/ceCjaṇam/ 'must do/am (is, are) obliged to do'

are traditionally labelled as obligatory mood *(vidhaayakam* [vidha: jagam]). As the obligatory suffix along with the verb stem can form a finite verb in Malayalam, this suffix may be represented with the feature $\begin{bmatrix} + \text{ finite} \\ + \text{ oblig} \end{bmatrix}$ or merely as [+ oblig].

8.1 Rule for generating the obligatory suffix

PMIR 5 generates the obligatory suffix after verbal stems.

PMIR 5 [+ oblig] → aṇam / [Vst] + [———]

N. B. The verbal form consisting of a verbal stem and an Obligatory marker may be preceded by a subject nominal to which either a nominative case marker or a dative case marker is added. Depending on the choice of this case marker, the meaning that is conveyed by the Obligatory suffix varies. After a nominative subject the [+ oblig] suffix of the verb conveys

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[13] ar → [a:] / + + [+ cons] [———] + $\begin{bmatrix} + \text{ fin} \\ - \text{ ind} \\ - \text{ pol} \end{bmatrix}$

Also compare /tar ϕ / [ta:] 'give' and /tar + u/ [taru] 'please give'.

[14] Since [+ opt] is [+ fin, — ind] as well, the optative may be represented merely as [+ opt].

[15] Historically, the obligatory suffix /aṇam/ is derived from the modal auxiliary verb /vVeṇam/ [ve:ṇãm] 'is necessary'. Rajaraja Varma's discussion of the derivation of 'aṇam' may be summarized as follows:

vVeṇam > Veṇam > eṇam > aṇam (see Rajaraja Varma, 1895, p. 222). Forms such as /ceCja vVeṇam/ [tʃej:ʌ ve:ṇãm] and /ceCjVeṇam/ [tʃej:e:ṇãm] are still in current use in the poetic language.

the meaning of external obligation; whereas after a nominal with a dative case marker, the meaning that is conveyed by the [+ oblig] suffix is normally that of internal obligation. For example, compare :

/ avaḷ pVokaṇam /	(The obligation is external)
[avaḷ poːgaṇãm]	
she must go	(We want that she should go. It is our or someone's wish that she must go.)
/ avaḷCk pVokaṇam /	(The obligation or desire or necessity is from within herself.)
[avaḷkːə poːgaṇãm]	
she wants to go	

9. The Permissive Suffix[16]

The suffix /—Vam/ added to a verbal stem conveys the idea of permission which may be internal or external depending on the case suffix of the nominal that precedes the verb under the NP node. These slightly varying, but syntactically conditioned meanings are subsumed under the term Permissive which is used here in the metalanguage or grammatical sense of the term.

9.1 Rule for generating the permissive suffix

The following rule generates the Permissive suffix after verbal stems :

PMIR 6 [+ permiss] → Vam / [Vst] + [——]

After a First person Subject NP in the nominative case, the permission is internal (i.e. from within the speaker — a sort of willingness) as in

ñVaṉ VutVam 'I shall blow'. (I am willing to do it.)

But, a preceding dative case nominal makes the verb mean an external permission granted to the person signified by the nominal in the dative case, or ability on the part of that person :

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[16]The permissive suffix also is thought to be derived from a modal auxiliary verb. A. R. Rajaraja Varma describes it as a shortened form of /Vakum/ [aːgum] (see Rajaraja Varma, 1895, p. 223). But /Vakum/ [aːgum] means 'will become', whereas /VakVam/ [aːgaːm] is semantically related to the suffix /Vam/ [aːm], so forms like /VutVam/ and /ceCjVam/ may be amalgamated forms of /Vutuka VakVam/ and /ceCjuka VakVam/ as the semantic identity of these forms seems to vouch for.

/niNn̂aɻCk pVokVam/ [nīn̂:ãɻk:ə po:ga:m]
to you (pl) go (permitted) 'You can go'. (i.e. I give you permission to go.)

/en̲iCk it poCkVam/ [en̲ĩk : idə pok:a:m]
to me this life (is possible) 'I can lift it' (Either, I have the ability to do it, or I am allowed by regulations to do it).

10. The Past Tense Marker

The Past tense (Preterite) is represented by the matrix $\begin{bmatrix} + \text{ fin} \\ + \text{ past} \end{bmatrix}$. Since the regular verbs in Malayalam have the same tense markers for both finite and nonfinite (i.e. participial) occurrences, it is not necessary to specify the feature [finite] in the matrix. So, the Past tense marker can be specified as [+ past]. Likewise, Present tense marker may be specified as $\begin{bmatrix} - \text{ past} \\ + \text{ pres} \end{bmatrix}$, and then $\begin{bmatrix} - \text{ past} \\ - \text{ pres} \end{bmatrix}$ will represent the Future tense which in most cases is "an indeterminate, aoristic future" (Caldwell, 1856, p. 407).

10.1 **Rule for generating the past markers**

The following rule will generate the Past marker after verbal stems :

$$\text{PMIR 7} \quad [+ \text{ past}] \rightarrow \left\{ \begin{matrix} [\text{ i }] \text{ / } [\text{Vst 1}] \\ [\text{T }] \text{ / } [\text{Vst 2}[\end{matrix} \right\} + \begin{bmatrix} — \end{bmatrix}$$

PMIR 7 and the euphonic nasal insertion rule will generate the underlying forms of the reqular verbs in Malayalam. It will be seen later that the class II verbs whose stems are represented in the rule as [Vst 2] take an enunciative vowel after the tense suffix in certain definable environments, as this suffix happens to be a $\begin{bmatrix} + \text{ consonantal} \\ + \text{ coronal} \end{bmatrix}$ sound. For example, compare:

++ cej + T ++ [tʃejdu] (stem + PAST) 'did'
++ cej + T ++ tVir + N + T ++ [tʃejdə ti : rn : ũ]
'finished doing' (stem + PAST + Aux.)
++ cej + T ++ iCla ++ [tʃejd il : a] stem + PAST + aux.)
having done is not 'has not done/did not do'

Owing to an environmentally determined phonetic distinction that is heard in the various realizations of the enunciative vowel that

occur after the consonantal PAST marker, all writers on Malayalam, even linguistically oriented analysts, while describing the PAST suffix, have drawn a distinction between the finite PAST marker and the nonfinite PAST marker on the basis of the phonetic distinction between final [ə] and [u[. According to their analysis the PAST "adverbial" or Verbal Participle in Malayalam is distinguished from the PAST tense (finite) form by a difference in the final vowel of the verbal form. Among these writers, Wickremasinghe and Menon describe the Past Verbal Participle as being formed form the PAST tense by changing the final high round back vowel /u/ into a central neutral vowel [ə]. "The former [17] is formed by changing the final ഉ u of the past tense into ◌് à; where the past tense is formed in ഇ i, the participle and the verb in the past tense are the same in form.

Thus:—

kaḷaññu lost kaḷàññà having lost.

ōṭi, ran or having ran [sic.]

"(see Wickremasinghe and Menon, 1927, p. 83).

Rajaraja Varma in his scholarly treatment of Malayalam grammar which is rightly named *Keralapaniniyam*[18] [ke:raḷapa:ṇi̱ṉi̱:jəm], makes a similar distinction on page 206 (see A. R. Rajaraja Varma, 1895, ed. by K. Raghavan Pillai and K. M. Daniel, 1974). McAlpin also agrees with this analysis as is evident from his statement: "In addition to all of these finite verbs and verbals, there are several nonfinite verb forms. The most common of these is the *adverbal* or incomplete verb. It indicates any nonfinal verb in a simple sentence.[19] It may have aspect markers but no other endings. Formally it is identical with the simple past except that those past forms having final /—u/ have /—ə/ which is dropped if a vowel follows. All of the verb particles in a verb except the last one before the endings are formally adverbals (koṇṭ, aay, iṭṭ, etc.). Semantically, the time reference of the adverbal must precede or co-occur with that of the final verb endings. If verb actions occur in a sequence, their verb forms must be in that sequence. The adverbal of /cey/ is

ceytə 'having done' "(see McAlpin, 1973, p. 379).

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[17]referring to "Past Adverbial affirmative participle" mentioned in heir preceding parag aph.

[18]The Paaṇineeyan grammar of Kerala.

[19]The nonfinal verb need not always be adverbal (i.e. adverbal participle). It can be one of the infinitives or a "Relative participle" as well.

However, in the present study no distinction needs to be made between the PAST marker of a finite verb and that of a nonfinite verb whose distinguishing characteristic is admitted to be that of its nonfinal occurrence (see McAlpin's statement above where he uses the term adverbal for "any nonfinal verb in a simple sentence"). This not only simplifies the analysis, so adding to the economy criterion, but adds to its explanatory potential, as it accounts for the non-occurrence of the final [u] of the PAST tense suffixes in certain definable environments, as of course this [u] happens to be a nonbasic enunciative vowel in the language. The present analysis has been prompted by the following reasons:

(i) The nonconsonantal element that occurs after the consonantal PAST marker in eertain definable environments is a nonbasic enunciative vowel that can be derived by rules. For example; compare the basic vowel /u/ in /kiCṭu/ [kiṭ:u] with the nonbasic final vowel in /toṭ + T/ > /toCṭ/ [toṭ:(u)] 'touched'.

kiCṭu + kVaṇum	> kiCṭu kVaṇum	'Kittu will see'.
kiCṭu + iCla	> kiCṭuviCla	'Kittu is not (there)'.
toCṭ [u] + kVaṇum	> toCṭukVaṇum	'may have touched'
toCṭ [u] + iCla	> toCṭiCla	'did not touch'

(ii) The distinction that is made between the PAST marker in a finite verb and the PAST marker in a nonfinite verb applies only to Class II stems. The Class I stems have the same marker (i.e. /-i/) for both finite and nonfinite verbs.

(iii) In the present analysis the underlying form of the consonantal PAST marker that occurs after Class II stems turns out to be consistently /T/ whether the position of occurrence of the stem. is final or nonfinal (i.e. finite or nonfinite (i.e. finite or nonfinite) This does agree with the observations made by writers like Caldwell, Rajaraja Varma, Andronov. Subrahmanyam and others if their statements are to be viwed in the light of the present analysis.

About the PAST tense marker in Malayalam Caldwell makes the following significant statement: "..... but in Malayalam the preterite verbal participle constitutes by itself the preterite tense" (Caldwell, 1856, p. 394). Then he accounts for the phonetic difference between the back, high vowel of the finite PAST and the neutral vowel heard after most[20] of the occurrences of the nonfinite (nonfinal) consonantal PAST thus : " I conceive that 'naṭannu', the

[20]We say 'most' beause of reasons given below in (v).

finite verb, is an abnormal form: it should have been 'naṭanna'[21], and thus identical with the past verbal participle. But after the pronominal terminations were laid aside, it appears to have been felt that something was necessary to distinguish the past participle which is a continuative, from the past tense of the verb, which is a final; and from this feeling the merely enunciative half sound of the 'a' of 'naṭanna' was emphasized, and thus gradually transformed into 'u', which, though merely an enunciative in Tamil, has a more distinctive position in Malayalam. Whilst this change was going on, the enunciative 'a' of the past participle remained unchanged, inasmuch as it was a continuative word, and not a seat of emphasis" (Caldwell, 1856, p. 400).

Rajaraja Varma seems to agree with Caldwell in considering the past verbal participle as being identical to the past tense form. He says that if a sentence is made to end in a verbal participle, that verbal participle then becomes a finite verb (Rajaraja Varma, [1895], 1974, p. 205). He considers the finite past form as being a stressed 'strong' form of the nonfinite past. He says that if verbal participle is stressed (or 'strengthened'), it becomes a finite predicate; but if it is not stressed ('strengthened'), it remains a verbal participle: (A. R. Rajaraja Varma, 1974, p. 205).

Andronov considers the verbal participle as being past tense followed by a zero morpheme, which in effect is identical to Caldwell's statement that the verbal participle is in itself the past tense: "In Tamil, Malayalam and Toda the verbal participle has the zero formant following the past tense formant; the Tamil and Malayalam forms ending in a consonant take the euphonic vowel -u̇..." (Andronov, 1970, p. 121).

Subrahmanyam's statement also agrees with the analysis presented in this study. He says: "The past stem itself functions as the past adverb[22] with the addition of the enunciative vowel u when it ends in a consonant. In some dialects of spoken Malayalam, the enunciative vowel is u (phonetically unrounded ɨ) in the finite form and ə in the adverb.

v a–n n u	'having come'
c e y–t u	'having done'
k a ṉ–ṭ u	'having seen' (P. S. Subrahmanyam, 1971, p. 114).

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[21]Caldwell uses 'a' for [ə].

[22]i.e. 'past verbal participle'

This dialectal variation in the realizations of the enunciative vowel is testified by Panikkar's analysis of the verbal participle in his *Description of the Eranad Dialect of Malayalam*. In his analysis the verbal participle is –u which is realized as Ø after nonconsonantal past marker /–i/ and as –u "after all other past tense markers" (see G. K. Panikkar, 1973, pp. 102–103).

(iv) When the adjectival marker /-a/ is suffixed to the verbal participle form to derive the Relative participle, the enunciative vowel of the consonantal past marker is not generated. This gives support to the idea that the /T/ is in itself the past marker, while the [u[or [ə] after it is only an enunciative vowel. For example, compare:

cej + PAST	/cej + T/ [tʃejdu]	'did'
cej + PAST + adj	/cej + T + a/ [tʃejda]	'which was done'
cej + PAST + iCla	/cej + T + iCla/ [tʃejdil:a	'didn't do'

N. B. /iCla/ is one of the auxiliary verbs and so /cejt/ in /cejtiCla/ is nonfinal in the verbal sequence, and hence nonfinite.

(v) In spoken Malayalam the [u] variant of the enunciative vowel does occur after nonfinite past markers in certain environments:

++ kaṇ + T ++ muCṭ + i ++		
[kaṇḍumũṭ:i]		
saw	met	'encountered'

(vi) In written representations too one can find past verbal participle forms with a final [u] variant of the enunciative vowel. For example, on page 12 of the Appendix to the *Malayalam Lexicon* the finite past and the nonfinite (verbal participle) past are both given as [araṇḍu], which shows that they are homophonous forms. So also, in Rajaraja Varma's Malayalam grammar, in the examples given on page 206 for illustrating the distinction between the finite past and the past verbal participle, the distinction is not taken care of by the orthographic representation.

(vii) Both the [ə] and the [u] variants of the enunciative vowel are found to occur after the finite past as well as the nonfinite (verbal participle) past. This has led to statements such as the one made by Velayudhan in *IJDL* Vol. II, 1, (1973), page 51 where he says: "But the finite forms with u could be seen as freely varying with ĭ and the participial forms with ĭ varying with u in their respective contexts both in colloquial and literary styles, standard and nonstandard" (see Marr and Kothandaraman *et al.*, 1973, p. 51).

(viii) As the supposed surface distinction between the finite past and the nonfinite past exists only for class II verbs, and as the class I verbs do function unambiguously without making such a distinction, it seems very unlikely that the distinction has been necessitated by the need for distinguishing the two in spoken forms. The only distinction that is relevant seems to be the position of occurrence of the forms in the syntactic structure of the sentence.

For reasons such as the ones listed above, the underlying forms of the two past markers are here considered to be /i/ and /T/, the former occurring after class I stems, and the latter after class II stems. It is also assumed in the present analysis that the phonological shape of the past marker is not affected by the value that is assigned for the grammatical feature [finite]. That is to say, the phonological shape of the past tense marker is the same whether the verb is finite or non-finite. However, the phonetic realizations are subject to certain definable, environmentally conditioned variations.

11. The Nonpast Tense Suffixes

The nonpast tense suffixes in Malayalam may be specified a
[+ present] i.e. Present tense

and $\begin{bmatrix} -\text{past} \\ -\text{present} \end{bmatrix}$ i.e. Future tense

The future tense marker (i.e. −past, −present) is /−um/. It normally expresses an indeterminate aoristic future. For example, the sentence

paʃu pul tiNn̲ + um/
[paʃu pul:ə tin̲:ũm]
the cow grass eat + FUT 'The cow eats grass.'

means that it is the nature of the cow to eat grass. It has been so, and it will be so in future also. In English this idea is expressed by the "Simple Present tense" as in "The cow eats grass".

Many scholars think that originally the future marker was the only nonpast tense marker that existed in Malayalam as well as in "The cow eats grass".

Many scholars think that originally the future marker was the only nonpast tense marker that existed in Malayalam as well as in other Dravidian languages and that the present tense form used in these languages at present is of a fairly recent origin (see Rajaraja Varma, 1895 (1974), pp. 214-215). So also, Subrahmanyam thinks "that in the proto-stage there was only one tense, which may called [sic.] non-past, for expressing both the present and the future

meaning and that the emergence of the present tense as a distinct category in the individual languages is a later development" (P. S. Subrahmanyam, 1971, p. 239).

11.1 The present tense suffix

The present tense suffix used with regular verbs in standard Malayalam is /-uNn/ which in the pre-pausal and pre-consonantal positions is realized as -unnu with an enunciative vowel. For example, compare the following sentences:

1. /kiCṭu Voṭ + uNn/
   [kiṭ:u o:ḍun:u] 'Kittu is running.'
2. /kiCṭu Voṭ + uNn + iCla/
   [kiṭ:u o:ḍun:il:a] 'Kittu is not running.'

So the underlying form of the present tense suffix seems to be /-uNn/ for all regular verbs in Malayalam. However, there is another present tense suffix which occurs in the model auxiliary verb form /uṇ/. It occurs with most verbs instead of /uNn/ in certain non-standard dialects. Owing to its non standard usage (except in the model auxiliary /Va/) it used to be passed over by writers on Malayalam grammar. However, Leelavathy mentions it when she says: "There are two forms for the present tense in modern Malayalam one of which the linguists seem to have systematically ignored:- They are the much discussed 'unnu' type and the generally unnoticed uṇu type. It is the uṇu type that we see in the verb aaṇu (meaning 'is'); the other type for the same verbal root is aakunnu" (Leelavathy, 1972, p. 377). Since /uṇ/ occurs only with one particular root, it is better (i.e. more economical) to store this information in the lexicon than to express it in the form of a rule. In that case the following rule can be proposed for generating the present tense marker in Malayalam.

PMIR 8 [+ present] → uNn / [Vst] + [——]

11.2 The future tense suffix

The future tenses suffix is /-um/. It has a variant /u/ which is phonetically realized as [u] or [u:], being in the word-final position. This variant of /um/ is syntactically conditioned in the sentence, as it occurs only when a 'restrictive' marker precedes this verb within the same sentence as in

/avan̲ + Ve	pVok + u/	
[avan̲ẽ:	po:gu (:)]	
he only	go will	'Only he will go.'

/avan̲	mVatram+Ve	pVok✦u/	
[avan̲	mã:trəmẽ:	po:gu(:)]	
he	alone only	go will	'Only he alone will go.'

The use of the 'restrictive' and the consequent use of this restricted future tense marker can be approached either as a phonological or syntactic problem. Though syntactic treatment would seem advisable, the problem can be attacked with the formulation of an alternative[28] to the following rule, which is proposed for generating the future tense marker in Malayalam.

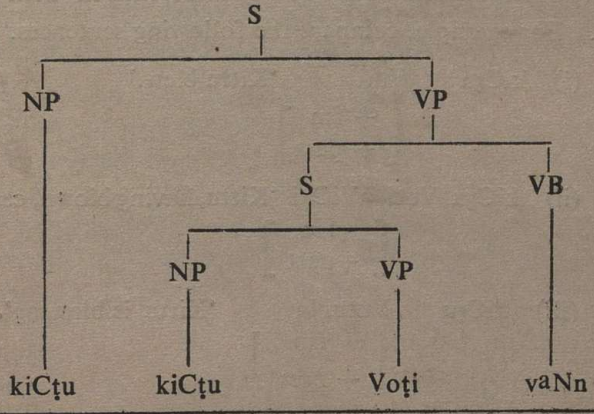
$$\text{PMIR 9} \quad \begin{bmatrix} -\text{ past} \\ -\text{ present} \end{bmatrix} \longrightarrow \text{um} / [\text{Vst}] + [---]$$

12. Participial Forms

The nonfinite verbal forms that occur with tense suffixes are labelled participles. These nonfinite verbal forms seem to be derived from verbs of embedded sentences. For example, the participle in the following sentence appears to be an embedded finite form:

	kiCṭu	Voṭi	vaNn	[kit:uvo:ɖivan:ũ] 'Kittu having run came/ Kittu came running'
i.e.	kiCṭu	Voṭi	kiCṭu	vaNn
	Kittu	ran	Kittu	came

The two constituent sentences, after the application of the "equi-NP deletion" rule (which in this instance deletes one of the occurrences of KiCṭu), merge into a single sentence by a process of embedding as shown in the following labelled bracketing.



[28] Alternative PMIR 9 $\begin{bmatrix} -\text{ past} \\ -\text{ present} \end{bmatrix} \rightarrow$

$$\left\{ \begin{array}{l} \text{um} / [\text{Vst}] + [\text{———}] \\ \text{u} / \left[\ldots [+\text{restr}] \ldots [\text{Vst}] + [\text{———}] \ldots \right]_{S_1 \qquad\qquad\qquad\qquad S_1} \end{array} \right\}$$

As the verbs in Malayalam can occur in a sequence without co-ordinate conjunctions or linking elements, all the tense bearing verbal forms that precede the final one in a sentence seem to depend in some way on the final finite verb. These dependent verbs have been known as *eccam* [et:ʃəm] ('that which is not completed') in the native grammatical terminology. Caldwell describes these participles in Dravidian thus: "In the Dravidian languages, though nouns and pronouns are united by means of conjunctions, finite verbs are never so united. In every sentence there is but one finite verb, which is the last word in the sentence, and the seat of Government; and all the verbs which express subordinate actions or circumstances, whether antecedent or contemporaneous, assume an indeterminate, continuative character, as verbal participles or gerundials, without the need of conjunctions or copulatives of any kind; so that the sense (and in Tamil the time also) waits in suspense for the authoritative decision of the final governing verb. Hence those participles might properly be called continuative gerundials. Tamil grammarians class them, with infinitives and subjunctives, as 'vinei echam' verb *defects* or *verbal complements*, i.e., words which require a verb to complete the sense" (Caldwell, 1856, p. 385). In Malayalam these participles have nonfinite tense suffixes which are phonologically identical to the finite ones. However, they are grammatically and also semantically different from their corresponding finite tense markers. The difference between the finite and nonfinite tense markers is positionally determined, and not by any difference in their phonological shape. For example, compare the following sentences.

(i) kiCṭu Vuti 'Kittu blew.'

$$\begin{bmatrix} +\text{fin} \\ +\text{past} \end{bmatrix}$$

(ii) kiCṭu Vuti nViCki 'Kittu, having blown, caused to move.'

$$\begin{bmatrix} -\text{fin} \\ +\text{past} \end{bmatrix}$$

(iii) kiCṭu VutuNn 'Kittu is blowing'.

$$\begin{bmatrix} +\text{fin} \\ +\text{pres} \end{bmatrix}$$

(iv) kiCṭu VutuNn uNṭ 'Kittu IS blowing.'
(He does blow.)

$$\begin{bmatrix} -\text{fin} \\ +\text{pras} \end{bmatrix}$$

(v) kiCṭu Vutum 'Kittu will blow'.

$$\begin{bmatrix} +\text{ fin} \\ -\text{ past} \\ -\text{ pres} \end{bmatrix}$$

(vi) kiCṭu Vutum VajiriCkum 'Kittu would perhaps be blowing.'

$$\begin{bmatrix} -\text{ fin} \\ -\text{ past} \\ -\text{ pres} \end{bmatrix}$$

The past verbal participle usually expresses a subordinate action which is antecedent in point of time to the principal action expressed by the finite verb, whereas the present verbal participle expresses a subordinate action which is contemporaneous with the one that is denoted by the finite uerb; and likewise the future verbal participle expresses an action that has a future time reference which is found to be modified in attitude by the meaning of the auxiliary that follows the participle.

The rules for generating the verbal participle markers (i.e. the nonfinite tense markers) are identical to the rules already given for generating the tense markers after the finite verb stems. The only difference between the finite tenses and the nonfinite (i.e. +part) tenses is that which is signalled by their position of occurrence in the sentence structures. For example, [Vst] + $\begin{bmatrix} +\text{ fin} \\ +\text{ past} \end{bmatrix}$ will occur as the right-most verb in the sentence, whereas [Vst] + $\begin{bmatrix} -\text{ fin} \\ +\text{ past} \end{bmatrix}$ will have a [+ finite] verb following it in the same sentence.

13. The Adjectival Participle ("The Relative Participle")

The adjectival participle, usually called the relative participle. is "a participle which is invariably followed by a noun, and preceded by the words or phrases that depend upon the relative" (Caldwell, 1856, p. 412). Malayalam grammarians label it *¦peer eccam* [pe:ret:ʃãm], meaning 'noun-defect' or 'noun-complement' (see Gundert, 1851, p. 88 and Rajaraja Varma, 1895, p. 204). It has been so labelled, because it "requires the complement of a noun to complete its signification". However, the term adjectival participle is preferred in this study, not only because "it is a verb as well as an adjective" (Caldwell, 1856, p. 413), but because its morphemic structure appears to be of the following pattern :

Verbal stem	+ Tense	+ Adjectival marker	
cej	+ T	+ a	[tʃejda]
Vut	+ i	+ a	[u:dija]

So, the participle that has traditionally been labelled the "relative participle" appears to be a combination of Tense + Adjectival marker occurring after a verb stem in a nonfinite position. Hence the following rule will generate the forms that are generally described as the "relative participle".

$$\text{PMIR } 10\,[+\text{ adj}] \rightarrow \left\{ \begin{array}{l} \text{a / [Vst]} + \left[\begin{array}{l} \text{X past} \\ \text{Y present} \end{array} \right] \\ \text{Ø / [Vst]} + \left[\begin{array}{l} \text{X past} \\ \text{X present} \end{array} \right] \end{array} \right\} + [\text{---}]$$

The zero suffix in the rule is needed in order to generate the future adjectival participle as in

varum	kValam	[varum ka:ləm]
coming	season	'days to come'
vajkum	nVeram	[vajgun:ẽ:ram]
will get late	time	'in the evening'
Vutum	nVeram	[u:dum nẽ:ram] / [u:dun:ẽ:ram]
which will blow	time	'(at the) time when (someone) will blow'

14. The Infinitives

The nonfinite (i.e. -finite) verbal suffixes that are not specified for tense, and henee having an indeterminate time reference, are here labelled infinitives. For Gundert the "modern form" of the Malayalam infinitive is the form that ends in -uka or -ka. His list of examples (see Gundert, 1851, p. 92) contains words such as

koCḷ-uka,	koḷ-ka	'to contain, to fit'
aṟi-j-uka,	aṟi-ka	'to know'
vViṛ-uka,	vViṛ-ka	'to fall'

Subrahmanyam also calls these forms infinitives in his statement that "The forms with the suffix -uka are used as infinitives and also as polite imperatives".

var-uka	'(Please) come!'
paṟay-uka	'(please) tell!'
kēḷ-kk-uka	'(Please) ask/hear!'

"(see P. S. Subrahmanyam, 1971, p. 425).

Caldwell mentions two types of Malyalam infinitives. One has the suffix -vân (i. e. /vVaṉ/) and the other 'ka' or 'kka' which

according to him is a verbal "that is identical with the Tamil infinitive; e.g., 'ellâwarum kêḷkka', Mal., (Tam. 'ellârun kêṭka',) *in the audience of all* is literally *so as that all should hear,* or, *whilst all were hearing*" (Caldwell, 1856, p. 428). These two infinitive suffixes are heard in present-day Malayalam as

(i) /Vaṉ/ as in VutVaṉ 'to blow, in order to blow'
ceCjVaṉ 'to do/in order to do'

(ii) /e/ as in kVeḷCke 'in the audience of'

Prabodhachandran Nayar calls (i) i.e. the infinitive ending in /Vaṉ/, "purposive infinitive" and gives the illustrative example:

appu paaṭṭu keeḷkkaan pooji
Appu song to hear went
'Appu went to hear the song'

But (ii) i.e. the infinitive ending in /e/ is for him a verbal participle. He illustrates its use with the following example:

avan amma keeḷkke paṟaññu
1 2 3 4

He said so that (the) mother may hear. (see Prabodhachandran Nayar, 1972, p. 40)

His gloss fails to capture the subtle distinction that a speaker of Malayalam makes between the "purposive infinitive" and the infinitive ending in /e/ which Prabodhachandran Nayar calls a verbal participle. Following Caldwell's gloss for the same form already cited above, one might translate Prabodhachandran Nayar's illustrative sentence cited above as 'He said in the audience of the mother', or 'He said whilst the mother was hearing'. This will perhaps make the distinction between the two infinitives clearer as in the sentences:

1. avaṉ aNma kVeḷCkVaṉ paraNñ 'He said in order that the mother should hear it.'
[avaṉãm:ʌke:ḷk:a:n paṟaañ:ũ]

2. avaṉ aNma keeḷke paṟaNñ 'He said in the hearing of the mother.'[24]
[avaṉãm:ʌke:ḷk:ɛ paṟaañ:ũ]

[24]This usage is restricted to a very limited number of verbs.

The infinitive in sentence 2, i.e. infinitive ending in /e/, is obviously a shortened form of /ave/ which by certain phonological processes has undergone the following changes :[5]

ave > a > e

The appendix to the *Malayalam Lexicon* lists both these forms in the illustrative paradigms given for each verb class. However, in the present study only the modern colloquial form /e/ needs to be considered. It is labelled here CONCURRENTIAL, while the /Van̲/ form is likewise specified as PURPOSIVE. The /e/ form is not considered a "verbal participle" here because, unlike the other "verbal participles" this form contains no segment that can be called a tense marker, and therefore, it does qualify to be called an infinitive as it fits in well with the definition given above for an infinitive in Malayalam. For example, compare

avan̲	aNma	kVeḷCke	paṟaNñ ([u])	'He said in the hearing of the mother i.e. while she was listening.'
avan̲	aNma	kVeḷCke	paṟajum	'He will say in the hearing of the mother, i.e. while she will be listening.'
avan̲	aNma	kVeḷCke	paṟajuNn ([u])	'He is saying in the hearing of the mother, i.e. while she is listening.'

In all these three sentences the time reference of /kVeḷCke/ is decided by the tense of the finite verb that follows it.

Besides the above three types of infinitives, there is a fourth one which none of these writers have mentioned. McAlpin lists it among his paradigms and labels it "proactive": "This proactive indicates action that is on the point of happening and translates into English as 'to be about to' "(see McAlpin, 1973, p. 357). This infinitive suffix has the phonological form /Vaṟ/, and it is used as a nonfinite suffix to stems preceding the auxiliary verbs /Vak/ 'to

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[5]The change of /ave/ to /a/ which in present-day Malayalam is pronounced as [e] is historically attested by the existence of the forms ending in *a* in old texts cited by L. V. Ramaswami Aiyar who lists such forms under the label "simultaneity" (see Ramaswami Aiyar, 1936, p. 77). It is interesting to note that "Forms like *irikkavē n'ōkkavē*, etc., are used in literature even today" (Ramaswami Aiyar, 1936, p. 78).

become' and /uNṭ/ 'is (there)' or its negative /iCla/ 'is not (there)' as in the following sentences:

1. JVoli tVirVaṟ Vaji
   work to finish is (almost) (about to finish) 'The work is about to be completed'.
2. maṇi raNṭ VakVaṟ Vaji
   time two about to become has become 'The time is getting on to two o'clock'.
3. avaṉ paCḷijil pVokVaṟ uNṭ [ə]
   he in the church to go (as a habit) is 'He goes to church' (He is in the habit of going to church.)
4. avaṉ vViCṭil pVokVar iCla
   he home in go (as a habit) 'He does not go home.' (He is not in the habit of going home.)

There is a semantic difference between the above two types of occurrences of the infinitive ending in /Vaṟ/. Before the auxiliary /Vak/ it conveys the idea of imminence, whereas before /uNṭ/ or /iCla/ the meaning conveyed is that of a habit or recurrence. This distinction is to be taken care of in the syntactic component of the grammar. Nevertheless, for phonological purposes the label given to this infinitive suffix is IMMINENT. The semantic feature [+ habitual] can be derived form the feature [+ imminent] by a context sensitive rule such as

$$[+\text{ imminent}] \rightarrow [+\text{ habitual}] / [\text{Vst}] + [\text{———}] + \left\{ \begin{matrix} \text{u!} \\ \text{iCla} \end{matrix} \right\} + \text{Tense}$$

So, the present analysis accounts for four infinitive suffixes in Malayalam which are specified as

1. $\left[\begin{matrix} - \text{ fin} \\ + \text{ purp} \end{matrix} \right]$ /-Van/ as in VutVaṉ 'in order to blow'
   ceCjVaṉ 'in order to do'
2. $\left[\begin{matrix} - \text{ fin} \\ + \text{ imminent} \end{matrix} \right]$ /-Vaṟ/ as in VutVaṟ 'to be about to blow'
   ceCjVaṟ 'to be about to do'
3. $\left[\begin{matrix} - \text{ fin} \\ + \text{ concurr} \end{matrix} \right]$ /e/ as in kVeḷCke 'in the hearing of'

4. $\left|\begin{array}{l} -\text{ fin} \\ -\text{ part} \\ -\text{ purp} \\ -\text{ immi} \\ -\text{ concurr} \end{array}\right|$[26] / -(u)ka / as in Vutuka 'to blow' ceCjuka 'to do'

The /-uka/ type infinitive has a conditional form with the suffixal morpheme /il/. But this suffix may better be treated as one of the subordinating conjunctions or as a link morpheme along with /Val/ which occurs after the past verbal participle as in /VutijVal/ 'if... blown' or /cejtVal/ 'if ... done'.

14.1 Rules for generating the infinitives

The following rules are proposed for generating the infinitives in Malayalam.

PMIR 11 $\left[\begin{array}{l} -\text{ fin} \\ +\text{ purp} \end{array}\right] \rightarrow$ Van / [Vst] + [———]

PMIR 12 $\left[\begin{array}{l} -\text{ fin} \\ +\text{ immi} \end{array}\right] \rightarrow$ Var / [Vst] + [———]

PMIR 12 $\left[\begin{array}{l} -\text{ fin} \\ +\text{ concurr} \end{array}\right] \rightarrow$ e / [Vst] + [———]

PMIR 14 $\left|\begin{array}{l} -\text{ fin} \\ -\text{ part} \\ -\text{ purp} \\ -\text{ immi} \\ -\text{ concurr} \end{array}\right| \rightarrow$ uka / [Vst] + [———]

15. Rules for Generating the Verbal froms in Malayalam

The following rules summarize the phonological matrix insertion rules proposed in this study:

1. Verb $\rightarrow$ Vst + $\left\{\begin{array}{l} [+\text{ fin}] \\ [-\text{ fin}] \end{array}\right\}$

2. $[+\text{ fin}] \rightarrow \left\{\begin{array}{l} \left[\begin{array}{l} +\text{ fin} \\ -\text{ ind} \end{array}\right] \\ [+\text{ opt}] \\ [+\text{ oblig}] \\ [+\text{ permiss}] \\ [+\text{ past}] \\ [+\text{ pres}] \\ \left[\begin{array}{l} -\text{ past} \\ -\text{ pres} \end{array}\right] \end{array}\right\}$

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[26]This can conveniently be represented as [— fin] with a convention that a suffix specified merely as [— fin] (without any other specification) will be taken to be a simple infinitive.

3. $\begin{bmatrix} + \text{ fin} \\ - \text{ ind} \end{bmatrix} \rightarrow \left\{ \begin{bmatrix} + \text{ fin} \\ - \text{ ind} \\ - \text{ pol} \end{bmatrix}, \begin{bmatrix} + \text{ fin} \\ - \text{ ind} \\ + \text{ pol} \end{bmatrix} \right\}$

4. $\begin{bmatrix} + \text{ fin} \\ - \text{ ind} \\ - \text{ pol} \end{bmatrix} \rightarrow$ ø / [Vst] + [——]

5. $\begin{bmatrix} + \text{ fin} \\ - \text{ ind} \\ + \text{ pol} \end{bmatrix} \rightarrow$ u / [Vst] + [——]

6. [+ pl] → iṉ / $\begin{bmatrix} + \text{ fin} \\ - \text{ ind} \end{bmatrix}$ + [——]

7. [+ opt] → aCṭe / [Vst] + [——]

8. [+ oblig] → aṇam / [Vst[+ [——]

9. [+permiss] → Vam / [Vst] + [——]

10. [+ past [→ $\left\{ \begin{matrix} \text{i / [Vst 1]} \\ \text{T / [Vst 2]} \end{matrix} \right\}$ + [——]

11. [+present] → uNn / [Vst] + [——[

12. $\begin{bmatrix} - \text{ past} \\ - \text{ pres} \end{bmatrix} \rightarrow$ um / [Vst] + [——]

13. [— fin] → $\left\{ \begin{bmatrix} - \text{ fin} \\ + \text{ prrt} \end{bmatrix}, \begin{bmatrix} - \text{ fin} \\ - \text{ part} \end{bmatrix} \right\}$

14. $\begin{bmatrix} - \text{ fin} \\ + \text{ part} \end{bmatrix} \rightarrow \left\{ \begin{matrix} [+ \text{ past}] \\ [+ \text{ pres}] \\ \begin{bmatrix} - \text{ past} \\ - \text{ pres} \end{bmatrix} \end{matrix} \right\}$

15. [+ adj] → $\left\{ \begin{matrix} \text{a / [Vst]} + \begin{bmatrix} \text{X past} \\ \text{Y present} \end{bmatrix} \\ \text{Ø / [Vst]} + \begin{bmatrix} \text{X past} \\ \text{X present} \end{bmatrix} \end{matrix} \right\}$ +[———]

16. $\begin{bmatrix} -\text{fin} \\ -\text{part} \end{bmatrix} \rightarrow \left\{ \begin{bmatrix} -\text{fin} \\ +\text{purp} \end{bmatrix}, \begin{bmatrix} -\text{fin} \\ +\text{immi} \end{bmatrix}, \begin{bmatrix} -\text{fin} \\ +\text{eoncurr} \end{bmatrix}, \begin{bmatrix} -\text{fin} \\ -\text{part} \\ -\text{purp} \\ -\text{immi} \\ -\text{concurr} \end{bmatrix} \right\}$

17. $\begin{bmatrix} -\text{fin} \\ +\text{purp} \end{bmatrix} \rightarrow \text{Va}\underline{\text{n}} / [\text{Vst}] + [\text{———}]$

18. $\begin{bmatrix} -\text{fin} \\ +\text{immi} \end{bmatrix} \rightarrow \text{Va}\underline{\text{r}} / [\text{Vst}] + [\text{———}]$

19. $\begin{bmatrix} -\text{fin} \\ +\text{concurr} \end{bmatrix} \rightarrow \text{e} / [\text{Vst}] + [\text{———}]$

20. $\begin{bmatrix} -\text{fin} \\ -\text{part} \\ -\text{purp} \\ -\text{immi} \\ -\text{concurr} \end{bmatrix} \rightarrow \text{uka} / [\text{Vst}] + [\text{———}]$

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A PRACTICAL APPROACH TO MACHINE TRANSLATION SYSTEM (RUSSIAN TO TAMIL)

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1.0 **Synopsis**

It is a practical attempt of developing a machine translation system for Russian to Tamil called Tamil University Machine Translation System (TUMTS). It adopts an intermediate language based methodology by which the syntax of the input Russian text is transformed to an intermediate language pattern before effecting translation. After transforming the input text to an intermediate syntax, sentences are split into words and the words are analysed morphologically. Using a bilingual dictionary, the word to word translation is effected as a table look up procedure. The various linguistic attributes such as tenses, case endings, adverbs, adjectives, nouns, pronouns etc., are with the help of specific markers. After the translation, the generation of verbal phrase takes place. The sentence so generated in Tamil is restructured to produce a syntactically acceptable sentence. With the help of the Tamil output facility in the computer the end user is provided with a Tamil output.

Keywords: TUMTS, MT, *makara, santi,* meta language, Intermediate language, linguistic attributes. Interlingua.

Abbreviations:

MT - Machine Translation, TUMTS - Tamil Universlty Machine Translation System, SYSTRAN - System Translation, CULT - Chinese University Language Translator, GETA - Group D'Etudes Pour La Traduction Automatique.

1.1 **Introduction**

The tremendous development in the field of science and technology has created a new situation, wherein the progress of

human civilisation crucially depends on the dissemination of information. The development of a human society is based on a language and its literature. Dissemination of information from one language to another is carried out through a process called translation. Thus the translation plays a vital role for making available large amount of information from one language to the other. In the electronic era the handling of information, its necessity, speed with which the information is made available and the cost of information acquirement are all considered to be the vital issues.

The process of translation can be defined as follows: It is an art of handling and manipulating the lexical power of linguistic elements of a language. Hence it can be called as an intellectual exercise involving the expertise of a language and its grammar. Normally it is expectcd that a good human translator possesess mastery over the source and target languages. He should combine sensitivity with intelligence, creativity with good organization and inventiveness with discipline.

Generally the process of translation can be classified as follows:

1. Human Translation – HT
2. Machine Aided Human Translation - MAHT
3. Human Aided Machine Translation - HAMT
   (System such as LOGOS, TITUS)
4. Machine Translation - MT

The mochine translation system for Russian to Tamil being discussed in this paper is a Human Aided Machine Translation System (HAMT). As for as the speed and low cost of translation is concerned the human aided machine translation is very much useful in certain areas. There are certain technical areas where the word to word translation from one language to other is more than sufficient to convey its basic meaning. Human aided machine translation is more adoptable for translating technical papers, equipment manuals laboratory procedures, scientific articles, military records and weather reports etc.

1.2 History of Machine Translation System

Before proceeding to explain the technical aspect of Russian to Tamil machine translation system, it will be appropriate to give a brief account of the history of machine translation. Referring to the early history of MT systems from 1954, one comes across a number of operational systems developed for various languages world over. One could discern two kinds of trends in the research

programmes of MT. One reason is that the increased demand for information acquirement and the need of information dissemination in the restricted areas. This caused the scientific community to think of developing the machine oriented translation process. Another reason is for viewing it as an interesting source of study and research in the language.

In view of the above reasons computer has become an effective tool to provide translations at low cost with a high speed in some of the restricted fields.

Looking back the earlier history of machine translation systems, reports on the fall and rise of the MT research world over are rvailable. It will be a useful guide for the researchers of the present day. Some of the successful MT systems such as GETA, SYSTRAN, CULT, TITUS, LOGOS are worth mentioning here.

1. 3 Russian to Tamil Machine Translation System

A natural language is hierarchically oriented with lessons or texts at a higher level and strings, signatures and symbols at lower levels. A translation process is essentially making correspondence between a source and a target language. A language competance provides a facility by which it is possible to analyse and study a language into a number of steps called learning process. In the preliminary survey conducted before the initiation of this project, some of the interesting factors concerning the Russian language were identified. They are,

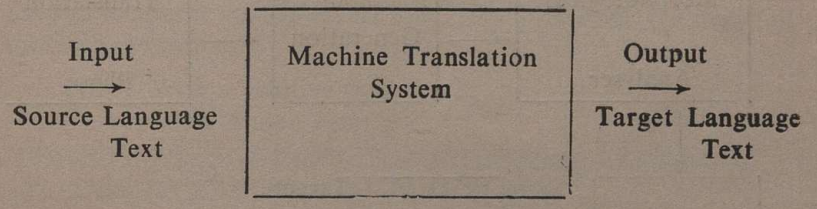
i) Russian is considered to be a highly inflectional language.

ii) Word order is relatively free in both Tamil and Russian.

iii) It is believed that the transfer rules which convert the surface syntactic structure of the source language into the surface syntactic structure of the target language may be less when Russian is selected instead of other European languages.

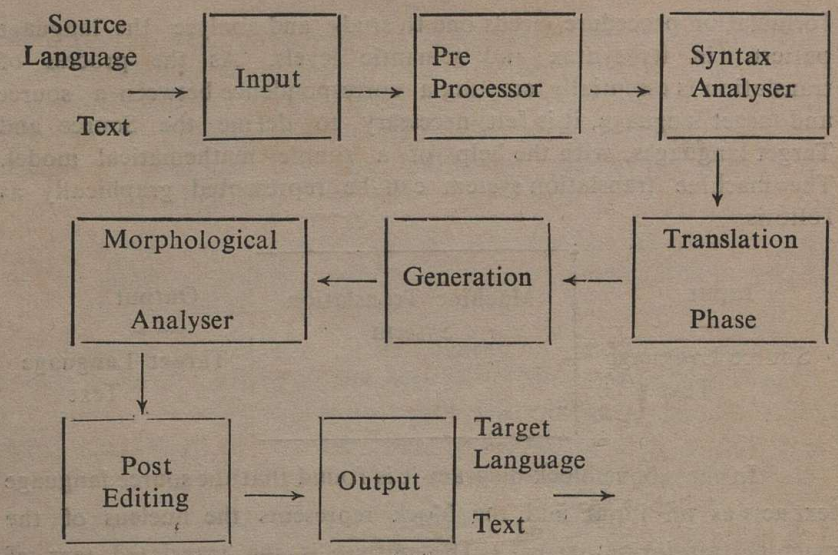
Translation is not a simple process of getting word to word equivalents. On the other hand it is an art in the sense that it combines creativity and the power to analyse the structure of both source and target languages. Problems concerning the syntax, semantics and the contextual usage of words will have to be tackled in a more effective way during the process of translation. But when the translation is done with the aid of a computer, the approach to solve the problem of translation is entirely new. A suitable formalisation of both source and target language is to be devised. The

formulation procedure needs one to study and analyse the language pattern in its syntax and semantic levels. As the process of translation is essentially creating a correspondence between a source and target language, it is felt necessary to define the Source and Target languages, with the help of a simple mathematical model. The machine translation system can be represented graphically as follows.



In the above block diagram it is found that the source language text acts as an input and the block represents the nucleus of the machine translation system. The output is the translated text of the target language. The main activities of the translation system are scanning, parsing, analysis and validation of input text, transfer, generation and translation on the source language text with the help various tables and linguistic attributes. Thus, the major components of the machine translation system are bilingual dictionary, Source and Target languages, set of rules for solving problems concerned with syntax and semantics, and the rules to resolve some of the semantic ambiguities while translation is being automatized.

Generally, based on the methodology, the machine translation system is classified into two groups. The first one is an *intermediate language* based machine translation and the other one is an *interlingua* method of machine translation. The first method is adopted for systems involving source and target languages of different groups with different syntax, whereas the interlingua method is helpful in machine translation of source and target languages belonging to same group with certain similiarity in their syntax and semantics. The Russian to Tamil machine translation adopts the intermediate language based translation procedure. The intermediate or a meta language is one whose syntax interfaces the structure of source and target languages for the effective machine translation. The functional organisation of a Russian to Tamil machine translation system is represented by the following block diagram.



A page of the transliterated Russian Input text and the translated output text in Tamil are enclosed in the appendix - A.

The operation of the entire system could be explained by defining the activity of different subsystems as follows.

1. 3. 1 **Input System**

The input system helps in feeding and storing the Russian text in the computer. The Russian alphabets are not of Roman and hence transliteration of the Russian text using Roman alphabet is necessary. Pre-editing is carried out to mark the grammatical categories during this process. A table containing the grammatical markers is referred to the computer. The text can be fed to the computer one sentence at a time or a number of paragraphs. Interactive editing facility of the already stored text is also available.

1. 3. 2 **Pre-Processor System**

For each of the lexical item in any of the natural language, it is found that a number of the grammatical attributes are existing. The grammatical attributes such as verb, noun, tense, adverb, adjective, animate or inanimate are to be notified by suitable markers, for analysing it by the computer. As already specified, this system is based on an intermediate language methodology and so the syntax form of the input text should be converted to a reference structure of an intermediate language before the actual translation process. The main objectives of the translation are scanning, splitting of input text into words, recognizing syntactic attributes, analysing the lexical item and transforming the structure of original input text into a

meta language structure etc. The pre-processor system consists of a scanner, parser and a lexical analyser. The scanner performs the job of scanning the input text and splitting it into individual words using the space between the words as the delimiter and the parser recognises the lexical elements and their attributes with the help of an attached marker. The function of a lexical analyser is to analyse and validate the lexical item for its grammatical attributes. The function of the pre-processor system can be well explained with the help of the following example.

Ex: With a genitive case,
Input Source Text:

RAZMERAOO<MASSAOO<PLOTNOSTJOO<VENERAOG
*∂BLIZKJUTZ ZEMN*TIPOO PLANETAXA*

Pre-Processed text:
(Meta language-1)

VENERAOG ∂BLIZKJUTZ RAZMERAOO MASSAOO
*PLOTNOSTJOO ZEMN*TIPOO PLANETAXA*

Thus the pre-processor while restructuring the input text to the syntax of the meta language, locates the verb always as the second unit in the sentence.

1.3.3 **Language Data Base**

In a machine translation system the dictionary plays a vital role and the efficiency of the system depends on the method of organization of the dictionary. In the Russian to Tamil MT System a bilingual dictionary is provided with a set of algorithmic rules and definitions for interpretation, transformation, analysis and translation. Besides this major data base there are minor data bases such as identifier table, inflexion table and verbal suffix tables for providing grammatical information during the translation process. The dictionary is a product based one with a suitable schema for easy access of data during translation. The language data bases facilitate word to word translation, grammatical identification, validation of lexical elements, providing equivalent case endings etc.

1.3.4 **Translation Phase**

The heart of the MT system involves a translator and a generator. The main functions of a translator are scanning, parsing, lexical analysis, processing of verbal and nonverbal phrases, segmenting word into stem, inflexion, suffix etc., and carrying out morphological analysis, resolving some of the semantic ambiguities, word to word translation etc.

The function of the translator can be explained as follows. The pre-processed text is available with delimiters for identifying the sentence, paragraphs with a number of units in a sentence. The input of a translator is the pre-processed text and hence the scanner and parser locates each word at a time and identifies each of the phrases. For example if a sentence preceeds with a "#" sign then the syntax analyser recognizes it as a nonverbal sentence. Otherwise the verbal sentence is passed on for further processing to the verb phrase analyser. The difference between the verbal and nonverbal sentence processing is that the verbal sentence is analysed for validation, transfer and generation of equivalent verbal phrase in Tamil. If there is an adverb preceeding a verb with a delimiter of "*" in between then it will be isolated and the equivalent in target language is chosen from the dictionary.

1.3.5 **Verb Phrase Analyser**

The grammatical attributes of each of the elements are identified by the lexical analyser with the aid of an attached marker. A verb phrase in Russian is morphologically analysed after splitting it into stem, tense marker, voice marker and suffixes. The equivalents in Tamil are obtained from the bilingual dictionary by the matching process and the output in the intermediate form is transferred to the generation phase of the system.

Ex: Let us take a verbal phrase in Russian as,

*OHOROSHO*VIDIAT6*

In the above phrase the marker 'O' denotes the verb phrase and so, before processing the verb the adverb 'HOROSHO' should be eliminated from the phrase with the help of a delimiter "*" and its equivalents in Tamil is searched in the dictionary. Then the verb VIDIAT6* is split into stem 'VIDI' aad suffix AT6 and a passive voice marker '*'. It is analysed morphologically and their equivalents are obtained using the word to word translation procedure, identifier and suffix tables. Thus after analysis and translation the above phrase will be as follows.

HOROSHO ⟶ *NANRAAKA* ; *VIDI* ⟶ *PAAR* (see)
AT6 ⟶ *KINRANA*

Similarly the nonverb phrase is also analysed and the identifier "*" is used to identify the adjective and noun and the case endings and plurals are identified by their respective markers. The stem of the noun is used to search for the target language equivalents from the dictionary. If there is any spelling error in the input text, the system interactively queries the user for correcting the spelling in 'on-line' mode. The following

example will show as to how a non verb phrase is analysed and translated.

Ex:

PLANETAXO ODELIAT6 DVAOO GROPPAXK*
KOOL KAL PIRI KINRANA KKAPPATU IRANTU VAKAI KAL AAKA

(Planets) (divide) (Two) (Group)

1. 3. 6 **Generation Phase**

The generation phase carries out the process of generating words, phrases and sentences in the target language. During this process the generation module refers the source and target language syntax and structural transformation rules etc. In the above translation phase of the system, the input source language text is translated. Besides this, the equivalents for the identifiers, inflexions and case endings are also generated using the major and minor data bases. The text translated in this process is in the intermediate language and so the sentence will not have a proper syntax of a target language. The translated string phrases are concatenated using syntax rules of the target language. Thus the semantically acceptable phrases of a target language are generated by the generation phase. This can be explained by referring to the previous example as,

Ex:

Pre edited Input Text:

PLANETAXO ODELIAT6* DVAOO GRUPPAXK

Generated Text:

KOOLKAL PIRIKKAPPATUKINRANA IRANTU VAKAIKALAAKA

(planets) (are divided) (two) (groups)

1. 3. 7 **Structural Transfer**

The main task of the translation and generation phases are to provide word to word translation of the input Russian text. The translated output will be in the from of an intermediate language called Meta Language-2 only. Hence the phrases of the Meta Language-2 should have to be suitably relocated to form syntactically correct sentences in Tamil. The surface theory of the target language should be adopted for this structural transformation. Hence after structural transfer the output will be,

Ex: *KOOLKAL IRANTU VAKAIKALAAKA*
PIRIKKAPPATUKINRANA

(The planets are divided into two groups)

1. 3. 8 **Post Editing and Output**

Because of the grammatical peculiarities of Tamil language such as inflexions and 'Santhi' the translated output text will not

be very close to the natural language text. Hence it necessitates post editing of the output text. In the present system post editing is done for Tamil words with 'makara' ending only. As the bilingual dictionary contains only the transliterated Tamil equivalents of a Russian word the translated output will be available in Roman form. A Tamil word processor system has been developed for transforming the Romanised Tamil text into the natural form of Tamil text. Thus using the Tamil text generation facility the direct output in Tamil is made available.

Ex:

CUURIYA MANTALATTIL ONPATU KOOLKAL

(There are nine planets in the solar system.)

Using the logical ANDing of case ending i. e. IL and the singular marker (0) i. e. true, the post editing is done by the computer and the resultant output will be as follows.

CUURIYA MANTALATTIL ONPATU KOOLKAL

(There are nine planets in the solar system)

Conclusion

Even compound sentences with 22 units in a sentence are translated using this system. This is achieved by converting the complex sentences into simple sentences and carrying out the above defined translation process.

The present system is designed to solve only certain gramma tical attributes of the Russian language text. To design and develop a translation system for processing all the grammatical pattern of a Russian language text, one needs to program the computer more exhaustively. It is planned to take up this problem in the second phase of this project. As per the recent report it is found that by 1990 almost 80 percent of the technical translations world over will be done by a computer. It emphasises the need to develop suitable systems for translation of technical and scientific information from one language to another. The information explosion has necessitated the information acquirement in various fields and so the machine oriented translation will play a vital role in the future society. With the advent of low cost micro computers having advanced facilities, it is possible to program for the natural input of all the Indian languages. We hope that the fifth generation computers with artificial intelligence and thinking machines with natural language understanding capability will aid in a tremendous way for the machine translation of the future.

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ON THE DRAVIDIAN VERB VĒḶ

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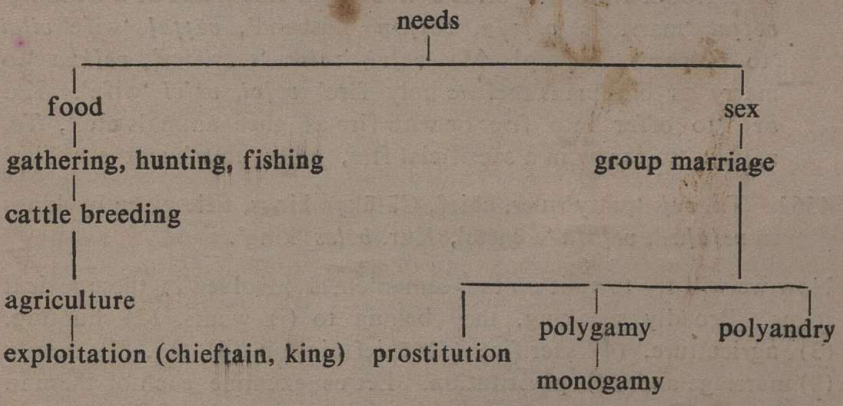
The basic needs of any people can be summarised as satisfaction of appetite. There are basically two kinds of appetites; one for food and another for sex. Irrespective of the society being civilised or uncivilised, these appetites are to be satisfied. For the first, the human, till he started to produce something, had to gather it from his environment. The men of the stone age lived in groups and gathered food which they enjoyed in common. When they succeeded in making weapons, hunting (and fishing) was the best sources of collecting food. The weapons, bow and arrow, and spear were developed and used in hunting. During the period called the Chalcolithic metals like copper and iron were brought to use and the efficiency of the weapons increased. The food gatherers always have to depend more on nature than those who are engaged in farming or raising animals. This dependence or helplessness of the primitive man made him conceive a god and make presents or sacrifices to him. When cattle breeding became the main occupation, hunting supplemented, it. The dog was domesticated and it helped man in hunting and guarding the cattle.

Upto this time the second appetite, sex, was satisfied in the same way as the first. As food was shared by all members of the group, the women were shared by the males of the clan, for sex. The offsprings, when they developed an appetite for sex, however, were not allowed to satisfy their sex with women of the same clan due to the problem of incest. So women of other clans were hunted for, as in the case of food, in early periods. Nevertheless, care was taken not to absorb a woman of kindred into the clan for sex. When human groups realised the fundamentals of agriculture, it revolutionalised their life. As long as they were food gatherers, hunters or cattle breeders, they could lead a nomadic life. But when they started farming, humans were forced to stay in the farm. The

property that a man cultivated, was HIS and the women who lived with him were HIS wives. Thus we can see that the concepts of private property and family go together.

The inception of private property and family gave rise to the institution of marriage. Polygamy was not uncommon as more women in the family meant more people to work. Polyandry also was available. But when civilisation attained higher levels, marriage became monogamous. After the beginning of private property and slavery, wealth got accumulated with certain classes. The primitive communal society was no more extant and behind the accumulation of wealth there was exploitation. The class of the wealthy did not do manual labour, for they could purchase food and women.

The implication of food and sex in the primitive communal, pastoral and agricultural societies is represented in the following chart.



The Dravidian verb *vēḷ* has relevance to almost all of the stages of social evolution mentioned above. The final /ḷ/ has /ṉ/, /ṭ/ and /ḷ/ as alternants. Relevant extracts from Dravidian Etymological Dictionary are given below.

4532. *veḷḷ-āṭṭi* 'maidservant, concubine' Ma. *veḷḷāṭṭi* 'id., slave girl, midwife' Te. *vellāṭakatte* 'harlot'

4533. Ta. *veḷḷāḷaṉ*, *vēḷāḷaṉ* 'man of the *Veḷḷaḷa* caste' *veḷḷāṇmai* 'cultivation' Ma. *veḷḷāḷar* 'Tamil Sudras' *veḷḷāyma* 'agriculture.'

4547. Ta. *vēṭṭam*, *vēṭṭai* 'hunting, chase, murder', *vēṭṭu* 'occupation of hunting' *vēṭu* 'hunting, hunter' *vēṭaṉ*. *vēṭṭuvaṉ* 'hunter, fowler' *vēṭṭam vēṭṭai-y-āṭu* 'to hunt', Ma. *vēṭṭa* 'hunting, chase', *vēṭaṉ* 'hunter fowler' *Ko.ve.ṭ* 'hunting' Ka. *bēṭe* 'hunting', the chase, animals pursued by sportsmen' *bēṭiga* 'huntsman' *bēṇṭe* 'hunting, chase *bēḍave* 'fowler' Te. *vēṭa* 'hunting, the chase' Kol. *ve.ṭ,a.ḍ* 'id.' Nk. *vēṭa* 'hunting'.

4548. Ta. *vēṇṭu* 'wanted, to want, desire, beg, entreat, request, necessary' *vēṇṭum, vēṇum* 'it will be necessary, indispensable', *vēṇṭiya* 'indispensable', *vēḷ* 'to desire, love, n. Kāma, desire', *vēṭṭam, vēṭṭal* 'thing desired, desire', Ma. *vēṇam, vēṇṭum* 'it must, ought, is desired' *vēṇ* 'necessary, '*vēṇṭa* 'useful' *vēṇṭuka* 'being necessary, friendship' *vēḷi, vēḷvi* 'rutting' *vēḷca* 'love, affection' Ke. *ve.ko* 'it is wanted', To. *pe.ku* 'id.' Ka. *bēku* 'id.' *bēḍa* 'it is not wanted', *bēṭa bēṇṭa* 'longings, sexual passion' Kod. *bo.ḍ* 'to beg' *bo.ṇḍa* 'it is not wanted', Tu. *bēḍuni* 'to beg, ask, wish, desire', Te. *vēḍu* 'to pray', Kol. *ve.l* 'to ask' Pa. *verka* 'pleasure, wish' *velt* 'to ask a question'.

4560. Ta. *vēḷam* 'elephant' Ma. *vēḷam* 'id'.

4561. Ta. *vēḷ* 'to offer sacrifice, marry, n. marriage.', *vēḷvi* 'sacrifice, marriage' *vēḷvu* 'sacrifice, presents of food from the bridegroom's to the bride's house and vice versa at a wedding' *vēṭṭal* 'marriage' *vēṭṭān, vēṭṭōn* 'husband', *vēṭṭāḷ* 'wife' *viḷai* 'to perform worship' Ma. *vēḷvi, vēḷvi* 'sacrifice', *vēḷkka* 'to marry as brahmans before holy fire' *vēḷvi, vēḷvi* 'wife'. Ka. *bēḷ* 'to offer into fire or with fire as ghee animals etc.', Te. *vēḷucu* 'to throw in a sacrificial fire, offer up a burnt sacrifice'

4562. Ta. *vēḷ* 'petty ruler, chief, Cālūkya kings, title given by kings to *vēḷāḷas*', *vēḷāḷa* 'a caste', Kur. *bēlas* 'king'.

Now we will try to split up the semantemas involved in these lexical items. Broadly speaking, they belong to (i) wants, (2) hunting, (3) agriculture, (4) sacrifice (5) chieftainship (6) sex, (7) family (8) marriage and (9) prostitution. Let us examine each of these in detail.

1. Wants

L. necessarius, Skt. *avaśyaka* both mean anything indispensable. Eng. *want* is a necessity. Though variants of *vēṇ* in modern Darvidian languages denote a want in general, it originally meant a desire for food and sex. Ta. *vēṇṭu, vēṇṭum, vēṇum, vēṇṭiya, veṭṭam, vēṭṭal*, Ma. *vēṇam, vēṇṭum, vēṇ, vēṇṭa, vēṇṭuka*, Ko. *ve.ko*, Ka. *bēku*, Tu. *bēḍuni*, Ka. *bo.ḍ* Te. vēḍu, Ko. ve.l, Pa. velt (DED 4548) etc. denote the meaning of want.

2. Hunting

Food as such is not denoted by any of the different forms of the verb *vēḷ* Ta. *tiṉ* 'to eat' etc. (DED 2670), bear similarity to Ta. *tiṉai* 'millet' etc. (DED 2671), which, research has proved to have been one of the earliest item Dravidians started cultivating. Food

gathering by plucking is the easiest and hence the earliest method of earning livelihood. But the verb *vēḷ* does not give any hint to this. Traces of this stage can be found in the languages of many civilised communities. Skt. āhāra 'food' is derived from *ā* + √*hṛ* 'to bring, fetch', *sam* + *ā* + √*hṛ* 'to collect' etc. This refers to a period, probably, when the Aryans earned their livelihood by plucking. L. *legere* (Gk. *log-ō*) 'put together, collect' can be applied to plucking or gathering of fruits also. Ar. √*qṭf* 'to pluck', *qiṭf* picked fruit', *qiṭāf* 'gathering, harvest' etc.

Hunting might have started with fowls as well as small animals such as hares. The weapons developed in hunting were *vil* 'bow' (DED 4449) and *ampu* 'arrow' (**eympu* √*ey* 'to shoot' DED 691), and *vēl* 'a spear' (DED 4555). Fowlers and fishermen might have used *valai* 'net' (DED 4326). The phonemic similarities in *vil*, *vēl* and *valai* are interesting.

The words used to denote hunting are: Ta. *vēṭṭam*, *vēṭṭai*, *vēṭṭu*, *vēṭu*, Ma. *vēṭṭa*, Ko. *ve.ṭ*, To. *pe.ṭ*, Ka. *bēṭe*, Tu. *bēṇṭe*, Te. *vēṭa* Kol. *ve.ṭ.a.ḍ*, Nk. *vēṭa*. The words ; *vēṭaṉ*, *vēṭṭuvaṉ*, Ma. *vēṭaṉ* Ka. *bēṭiga*, Tu. *bēḍave* denote a hunter or a fowler. (DED 4547). There is no single verbal form to denote the action of hunting. Ta. *vēṭṭai-y-āṭu* (DED 4547). In Malayalam *ṉāy-āṭu* also is used. This form might have come into use after dog was domesticated and used for hunting. Cf. Eng. √*hunt* 'pursue wild animals or game, chase' Teut., O. E., G. *hund* 'hound'. For the Aryans hunting was *mṛgayā* 'derived from Skt. *mṛga* 'wild animal, deer'. The Arabs had only small games and they used traps. Ar. *ṣayada* 'to hunt, to catch in a trap'. For them fish was more sumptuous and both a hunter and fisher is denoted by the word *ṣayyād*.

3. Cattle Breeding

The next stage of raising food is that of cattle breeding, L. *peccuaria pastio* 'stock farming', L. *pascere* 'to pasture, to feed'. Gk. *paste*' 'meal', L. *pastor* 'shepherd, one who guards and tends sheep' are words related to the men who tend the animals than to the animals themselves. Ar. *raʿiya* 'herd, flock' (also parish, subject'), *rāʿin* 'shepherd' are derived from the verb *raʿā* 'to graze, to tend, to protect'. Skt. *gōpāla* 'one who tends the cows', and *ajapāla* 'shepherd', on the contrary are words derived from *gō* and *aja*, the names of the animals that are tended. In Ta. and Ma. *āyaṉ* 'cowherd' (DED 283) *iṭai* 'herds men caste' (DED 382) are the words used to denote the herdsmen. This semanteme has nothing to do with the verb *vēḷ*

4. Agriculture

Agriculture has revolutionalised the social conditions of humans. In Indo-European and Semitic languages farming and people engaged in farming are related to ploughing or planting. Cf. L. *agricola* 'tiller of the fields' < L. *ager*, Gk. *agros* 'arable or pastoral field', L. *agricultor* 'agriculturist', L. *arator* 'tiller' √*ārare* 'to till'; Skt. √*kṛṣ* 'to plough, make furrows, draw, drag, pull' *kṛṣaka* 'a ploughman, plough share, an ox'. G. *ackerbau* 'farmer, lit. one who cultivates the field', Ar. *fallāḥ* 'farmer' *falāḥ* 'prosperity' derived from the verb *falaḥa* 'to plough, till', Ar. *zarā'at* 'agriculture' zarā' 'planter, farmer' √ *zara'a* 'to sow, plant'. But the following Drn. forms connected with agriculture are derived from √*vēḷ*.

Ta. *veḷḷāṇmai*, Ma. *veḷḷāyma* (DED 4533) Also cf. Ta. *viḷ* 'to blossom' (DED 4459) Ma. *viḷambu* 'to serve food' (DED 4461) Ma. *viḷākam* 'garden' (DED 4462)

5. Exploitation

After the accumulation of wealth, suzerainty came into existence and a class of exploiters were defended by them. In Latin, the word for a ruler, *rex* derived from *regere* 'to guide' also denotes a usurper, a despot, and even a rich man. In German *könig* 'ruler' is related to *kön* 'race'. Arabic *sulṭān* 'ruler' is derived from the verb *salaṭa* 'to give power or mastery, to set up as overlord'. Skt. *rājan* 'king' is from √*rāj* 'to rule, govern', but *bhartā* 'protector' also is there, which is derived from √*bhṛ* 'to fill, maintain, protect', In denoting a king in Drn. *kōṉ* (DED 1810) is common in most of the languages. But words derived from √*vēḷ* are also in use. Ta. *vēḷ*, Kur. *bēlas* (DED 4562).

6. Sacrifice

Latin *scrifice* is derived by the combination of two words, L. *sacra* 'sacred' + L. *facio* 'to make'. Thus sacrifice originally meant 'to make holy'. It is a share of the food gathered, offered to the unknown. Ar. *qurbāṉ* 'sacrifice' Ar. √*qarraba* 'to bring near', Ar. *taqqdimā* 'present, sacrifice, oblation' Ar. √*qadama* 'advance, go before'. Skt. *iṣṭi* 'sacrifice' √*iṣ* 'to wish, desire', Skt. *ā*+*hṛ* 'to bring near, to perform a (sacrifice'), Skt. *upa*+*hṛ* 'to present', Skt. *upahāra* 'a present'. Among these ancient people, sacrifice was something they willingly offered as a present to their unseen protectors. It is part of their want for the Dravidians, the *vēḷ*. Cf. Ta. *vēḷ*, *vēḷvi*, *vēḷvu*, Ma. *vēḷvi*, *vēlvi*, Ka. *bēḷ*, Te. *vēḷucu* (DED 4561).

7. Sexnal Desire

Sexual and other desires can be denoted by the same words in many languages. Cf. L. *cupido* 'longing, lust, desire', L. *libide* 'carnal desire', Ar. *muny* 'wish, desire', Ar. *minan* 'semen', √*many* 'to ejaculate, to desire, to masturbate', Skt. *kāma* 'desire, wish, sexual desire' etc. Sexual desire is represented in some of the Drn. languages with forms derived from *vēḷ* Ta. *vēḷ*, Ma. *vēḷi, vēḷvi' vēḷca*, Ka. *bēṇṭa*, Pa. *verka* (DED 4548) are examples. The elephant is supposed to have strong sexual feelings at the time of the rutting. In Ta. and Ma. an elelphant is called *vēḷam* (DED 4560) This may be compared with Ma. *vēḷi, veḷvi*, 'rutting'.

8. Marriage

When we examine the words pertaining to marriage we may find that in some languages each word may denote a seperate stage in the development of matrimonial ethics. L. *matrimonium* 'that which belongs to a mother, wedlock' L. *nuptae* 'the state of nupta; married woman' L. *connubium* 'having a common cover, marriage' L. *nubere* 'cover' Eng. *marriage* L. *mas - maris* 'husband'. The word *husband* has come into use only after the institution of marriage and private property had come into existence. It is a combination of two words *hus* 'house' and *bonda* 'freeholder', Likewise *wife* originally meant an ignorant rustic woman; cf. *housewife*. At the beginning of agricultural societies women were considered as mere working hands. In Ma. agricultural women labourers are termed *peṇṇāḷ*, even now.

In Arabic *nikāḥ* 'marriage' √*nakaḥa* 'to marry a woman' Ar. √'arasa 'to marry' *'urus* 'bridegroom', *'urs* 'marriage', *rawajā* 'wife' √*rawaja* 'to pair, couple'. The latter one denotes a stage when family had come into existence. In Skt. *vivāha* 'marriage' √*vah* 'to carry' perhaps points to a time when a woman from another clan was carried off for marriage. Then there is the word *pariṇaya* 'marriage' √*nī* 'to lead' and *pāṇigrahaṇa* 'marriage, lit. the holding of the hand' These evidently are more civilised forms of marriage. The word *mithuna* denotes a couple, and *dampati* 'the husband and wife'. *Pati or bhartā* denotes a protector, the husband, and *patni* or *bhāryā* 'the one who is protected, the wife'. Drn. words derived from the verb *vēḷ* do not make any distinction among the different stages of sexual union as in group marriage, polygamy, polyandry or monogamy. The concerned words are: Ta. *vēḷ*, Ma. *vēḷkka* to denote the act of marrying (DED 4561). Ta. *vēṭṭam, vēṭṭōṉ*, denotes a 'husband' and Ma. *vēḷi, vēḷvi* and Ta. *vēṭṭaḷ* denote a wife (ibid).

9. Prostitution

Prostitution had been encouraged by the exploiters who had accumulated wealth and were able to pay for the pleasure they got from adultery. The word prostitution is derived from L. *prostare* 'to stand forth openly, to sell ones body'. The term *concubine* (L. *cubare* 'to lie') 'one who lies with' in the early period could be applied to any woman doing coitus. But when the institution of marriage came into force, to lie with any body *(concubare)* was adultery. G. *Dirne* can be a 'a girl, lass, prostitute or a call girl'. Eng. *whore* 'adulteress' can be compared with L. *carus* 'dear, high priced'. In Arabic there are many substantives to refer to an adulteress, but none of these forms is related to money.

Ar. *mūmis* 'adulteress' √wamasa 'to polish, to smooth, to rub off'. The semanteme might have developed from the maidservants being used as concubines. Ar. *'āharā* 'prostitute' √*'ahara* 'to commit adultery'. A brothel is termed a house of indecency in Arabic (*bait-ud-divārat*).

In Skt. there are words that relate a prostitute to money. Skt. *paṇyāṃgnā* 'prostitute, lit. a saleable damsel' Skt. √*paṇ* 'to deal in, purchase' Skt. *gaṇikā* 'prostitute, lit. bought for a large sum' Skt. √*gaṇ* 'to count'. *Vēśya* meant inhabitant in Ṛgvēda. (√viś 'to enter' nir+viś 'to marry') but the feminine form *vēśyā* meant a prostitute in *Mānava dharmaśāstra*. The Brāhmaṇas use the term *vēśasthā* to denote a courtesan. It originally meant a female inhabitant.

When morality reached higher levels, premarital and extra-marital relations were considered to be unchaste. (Cf. Ar. *Da'ara* 'unchaste', *da'ir* 'immorality') Premarital relation is termed fornication. (L. *fornix* 'brothel'). Seduction (L. *seducere* 'lead astray') is sexual relations outside marriage. Eng. *wench* 'prostitute' is derived from OE. *wencel* 'an innocent girl'. This change may be owing to the fact that innocent girls were seduced and made prostitutes. In Sanskrit, a woman going in search of her lover is called *abbisārikā abhi + sṛ* 'to go to'. Skt. *vyabhicāriṇī* means 'an unchaste wife, an adultcress *vi + abi + ear* 'to go astry, to have immeral traffic.' In Drn. the forms of *vēḷ* used to denote harlotry aıe Ta. Ma. *veḷḷ-āṭṭi*, *veḷḷāṭakatte* (DED 4532). The same word has another meaning, 'the maldservant'. It seems that maidservants were also used as concubines. But prostitution did not end there. Ma. *vēḷam* is used in the 13th century to mean 'a colony of prostitutes'.

Conclusions

1. The Drn. people are known for their simplicity. The various contexts in which the derivatives of the single verb *vēḷ* can be used reflects the same feature of the Dravidians.
2. Though *vēṇ* came into use to denote the want of food and sex, it expanded to a larger extend in relation to the development of culture. Now it denotes any want.
3. The fact that a derivative form of *vēḷ* denotes sacrifice or present, another want, it may be concluded that religion started to play a role in the society while the Dravidians were still food gatherers.
4. The form *vēḷ* or a variant there of does not denote plucking or cattle-breeding for food.
5. Hunting for animals and birds as well as fishing were popular among the Dravidians as means of satisfying their desire for food.
6. The use of *vēḷ* is connection with agriculture is common among the people of Tamilnadu and Kerala only.
7. Sexual desire and marital union in all levels (group marriage, polygamy, polyandry, monogamy etc.) were, it seems, the same as represented with *vēḷ*, to the Dravidians.
8. In Ta. and Ma. *veḷḷ-āṭṭi* means both a 'concubine and a 'maid-servant'. But in Te. *vellāṭakatte* means a harlot only. In Kerala and and Tamilnadu the practice of using maidservants as concubines was in vcgue, whereas, in Andhra going to brothels for prostitution was more popular.

List of Abbreviations

Ar.	:	Arabic
Eng.	:	English
G.	:	German
Gk.	:	Greek
Ka.	:	Kannada
Ko.	:	Kota
Ked.	:	Koḍagu
Kol.	:	Kolami
Kur.	:	Kurukh
L.	:	Latin
Ma.	:	Malayalam
Nk.	:	Naiki

OE.	:	Old English
Pa.	:	Parji
Skt.	:	Sanskrit
Ta.	:	Tamil
Te.	:	Telugu
Teut.	:	Teutonic
To.	:	Toda
Tu.	:	Tulu

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RELATIVE CLAUSE CONSTRUCTIONS IN TAMIL: A FUNCTIONAL APPROACH

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1. Introduction

Among the major syntactic processes possible in natural languages, relativization is one of the basic productive mechanisms. On the basis of the structural propertise of relative clause constructions in many of the world languages, Peranteau, Levi, and Phares (1972) conclude that they can be classified into three types. They are; (1) Relative pronominal type; (2) Relative correlative pronominal type; and (3) Relative participial type. From the works of a number of scholars, who have worked on different aspects of relativization in Tamil (Agesthialingam, 1977; 1978; Annamalai, 1969; Kothandaraman, 1969, Lakshmi Bai, 1983; Mahalingam, 1983) and in other Dravidian languages (Abraham, 1978; Andrewskutty, 1975; Nadkarni, 1970; Rama Rao, 1968), it is clear that, at least, the major Dravidian languages have the following two types: (1) Relative participial type; and (2) Relative correlative pronominal type. But many of them have also recognized that affixial type is also a relative clause construction (Annamalai, 1969; Lakshmi Bai, 1983; Mahalingam, 1963; Usha Rani, 1980). While the former two types of constructions are used both in spoken and written varieties, the latter is used only in spoken variety.

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2. Scope

It is widely known that these three relative clause constructions participial, correlative and affixial – are structurally distinct not only in Tamil but also in other major Dravidian languages. It is believed that the participial construction is capable of performing all the functions that are expected of a relative clause construction, and thus correlative construction is superfluous in Dravidian. In this paper an attempt is made to: (1) Find out the area where both types of constructions are used in free variation; (2) Measure the pro bability of using one construction as against the other; (3) Show that the correlative construction is not superfluous, and is essential not only in Tamil but in other Dravididan languages as well; (4) Show that the correlative construction is very much needed to express certain psychological attitudes of the speaker in conversational context, which cannot otherwisc be expressed through either of the other two constructions; and (5) Find out how affixial type is different from the other two type of constructions.

3. Structural Distinction

Before attempting to answer the main objectives a short structural description of each of the three types of relative clause constructions is given briefly. The structural descriptions of these constructions have been discussed elaborately elsewhere which show the derivation of relative participles of different tenses[1], the different transformations and constraints involve in the derivation, the use of different kinds of interrogative pronouns as relative pronouns in correlative constructions, etc. (Annamalai, 1969; Arden, 1891; Kothandaraman, 1969; Mahalingam, 1983).

The participial construction can be derived by the application of the participial relative transformation to the underlying structure

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[1]The present and the past relative participles are formed from the third person neuter singular of the corresponding tenses by dropping the final-tu (Arden, 1871) as shown below:

vantatu	vanta
come-p-PNG	come-p-rel. part.
'It came'	'(X) who/which came'
varukiratu	varukire
come-pr-PNG	come-pr-rel. part.
'It comes'	'(X) who/which comes'

The future relative participle is the same as the third person neuter form of the future tense as shown below:

varum	paiyan
come-fu/rel. part	boy

'The boy who will come'

which introduces the following two changes: (1) It deletes the identical noun from the embedded sentence; and (2) It changes the verb of the embedded sentence into a participial form. They are shown as follows:

(1) neettu paiyan vantaan paiyan paṇam koṭuttaan
↓ i ↓ i
Ø vanta

(1a) neettu vanta paiyan paṇam koṭuttaan
yesterday come-p-rel.part. boy money give-p-PNG
'The boy who came yesterday gave money'

The correlative construction is marked by the appropriate form of an interrogative word (which is called relative pronoun in relative clause constructions) immediately to the left of the identical noun in the embedded sentence. It also introduces the definite pronoun of the "definitivizer" (Nadkarni, 1970:57) corresponding to the interrogative pronoun in question immediately to the left of the identical noun in the matrix sentence. Finally, it attaches the enclitic-*oo* at the end of the verb of the embedded sentence. For example.

(2) neettu paiyan vantaan paiyan paṇam koṭuttaan
i i
1 2 3 4 5 6
enta+2 3+oo anta+4

(2a) neettu enta paiyan vantaanoo
yesterday which boy come-p-PNG-cor.m.
anta paiyan paṇam koṭuttaan
that boy money give-p-PNG
which boy came yesterday that boy gave money
'The boy who came yesterday gave money'.

In (2a), *enta* is the interrogative word meaning 'which' and *atna* is the corresponding definite pronoun meaning 'that' which refers to the subject noun phrase mentioned by the interrogative word in the embedded clause. The various interrogative pronouns along with their respective coreferential definite pronouns which occur in correlative constructions are listed below:

evan	...	avan	'who	...	he'
eva!	...	ava!	'who	...	she'
evar/yaar	...	avar/avarka! (hon)	'who	...	he/she'
etu/enta	...	atu/anta	'which	...	that (n.sg.)'
evai	...	avai	'which	...	that (n.pl.)'
enku	...	anku	'where	...	there'

evvaḷavu	...	avvaḷavu	'how much ... that much'
eppuṭi	...	appuṭi	'which way ... that way
			(how) (manner)'

Interrogative forms also reduplicate, e.g. *evanevan*, *vaaryaar* 'whoever', *eppuṭieppuṭi* 'whichever way', etc.

The affixial construction can be derived by making the head noun of the matrix sentence with a suitable pronoun and adding at the end of the constituent sentence a 'tag question suffix which tags on the constitutent sentence with the matrix sentence' (Annamalai, 1969:19). They are shown below :

(3) neettu paiyan vantaan paiyan paṇam koṭuttaan
i i
1 2 3 4 5 6
3+ee avan
(pronoun)

(3a)	neettu	paiyan	vantaanee
	yesterday	boy	come-p-PNG-tag.Quest.
	avan	paṇam	koṭuttaan
	he	money	give-p-PNG

'The boy who came yesterday gave money'

4. Different Aspects of Functions

Before finding out the functional distinction of the three types of relative clause constructions, an attempt is made briefly to explain the term 'function' in linguistics.

The term 'function' is one of the most widely used technical terms in linguistics (Maynard, 1985). It is used in three different senses in the literature (Crystal, 1980). They are: (1) The relationship between a linguistic form and other parts of the linguistic pattern or system in which it is used. In grammar, for example, the noun phrase can 'function' in clause structure as subject, object, complement, etc.; (2) The use made of a linguistic contrast in a system is sometimes referred to as its functional load. In English, for example, the contrast between /p/ and /b/ would be said to have a higher functional load than between /ʃ/ and /z/: the former contrast distinguishes many minimal pairs, whereas the latter contrast distinguishes only a few and (3) The study of language use in social contexts and the individual is also referred to by the term 'function'. For example, language is used to communicate ideas, intentions, emotions, etc.; to express attitudes, and so on. It may also be used to identify specific sociolinguistic situations, such as informality or intimacy, or varieties of language such as science and law; in such

cases, one might talk, for instances, of the 'functions' of scientific language being to express a certain mode of experience in a certain way and so on, I have attempted to find out the last two aspects of functions with respect to relative clause constructions in Tamil.

4.1 Functional Contrast

Many scholars till recently had the impression that participial construction is the predominant pattern in Tamil and other Dravidian languages, and the correlative construction has only marginal effects (Narasimha, 1941; Subrahmanya Sastri, 1934). They also opined that this construction has been borrowed from Indo-Aryan. But later research (Lakshmi Bai, 1983; 1985; Mahalingam, 1983) has proved, on the basis of evidence both from old literary Tamil and tribal languages, that the correlative construction is not borrowed from Indo-Aryan though its functional load is said to be very limited in Dravidian languages. It is very difficult to use the 'functional limitation' of a particular construction as a device to decide the nativity of that construction. Influenced by the earlier scholars, Nadkarni (1970:43) observes that 'the non-participial relative clause *seems to be* (emphasis is mine) superfluous...because the native participial relative clause construction is capable of performing the same functions'. But his doubts about the superfluous nature of the correlative construction is quite obvious from his own words that 'nothing in a language is entirely superfluous, and even this marginal structure has certain uses in the language' (1970:44). But he has not mentioned specifically what those uses are. I have tried to explicate in detail the uses of all the three types of constructions in terms of both the functional load and functions in social contexts and individuals.

5. Experimental Observation

An experiment was conducted to establlsh the objectives mentioned in section 2. A list of seventy three relative clause sentences involving both definite and indefinite head nouns were constructed in English. The embedded sentences are related to the matrix sentences with different case relations such as agent, patient, goal, instrumental, locative, comitative, possessive, source, and dative. Out of the seventy three sentences, twelve consist of definite head nouns and fourteen indefinite head nouns. Fifteen sentences consist of head nouns as agent; seven sentences each consist of head nouns involving locative and patient case relations. Seventeen sentences involve head nouns in dative, and six sentences each involve head nouns in instrumental and possessive. Five sentences

each involve head nouns having goal, comitative, and source relations.

A group of twenty native adult Tamil speakers, who also had a fair knowledge of English, were selected as subjects. They were asked to translate all the English sentences into Tamil. The sentences were presented to them in such a way that no two sentences of the same category followed one another with a view to preventing the possible influence of the previous sentence pattern on the structure of the subsequent one. Under such experimentnl process, it is possible that the structural pattern of a sentence type in a source language might influence the structural pattern of the corresponding type (if any) in the target language. But it can be assumed that such possibilities need not be true.

To find out whether this assumption is true or not of the experimental method, a few Tamil equivalents of the English sentences in question were presented to a different group of twenty subjects having similar educational background asking them to translate these sentences into English. The list of such sentences includes the following three categories: (1) If a single type of relative clause construction was used invariably by all the subjects while translating the English sentences into Tamil, then a few samples of that construction were selected from Tamil for English translation; (2) If, on the other hand, both correlative and participial constructions were employed by any subject for translating the English sentences, then a few samples consisting of both types of constructions were selected for this task; and (3) If any one type of relative clause construction (for example, correlative) was employed for Tamil translation even though the other type (for example, participial) of construction is capable of representing that sentence, then Tamil sentences consisting of both types were selected. Interestingly enough, the patterns of the English sentences that were presented to the former set of subjects for Tamil translation, and the patterns of the English sentences which were translated by the latter set of informants from Tamil sentences are almost same. They are shown in the following section.

6. Results

The most interesting feature of the experiment is the fact that all the twelve sentences with an indefinite head noun were translated uniformly with a correlative construction by all the subjects without any exception. For example, the English sentence (4) given below was translated into Tamil as either (4a), (4b), or (4c) as shown below:

(4) Whoever has self-confidence will survive in crucial situations.

(4a) yaaryaarukku tannampikkai irukkiratoo avarkaḷ ellaam ikkaṭṭaana nilaiyil uyir vaaḻvaarkaḷ.

(4b) yaaryaar tannampikkai per̲r̲u irukkiraarkaḷoo avarkaḷ sikkalaana suuḻnilaikaḷai samaaḷippaarkaḷ.

(4c) yaaryaar tannampikkai vaittu irukkiraarkaḷoo avarkaḷ ikkaṭṭaana nilaiyilum nimirndu nir̲per.

In the above sentences *yaar* 'who' is the interrogative pronoun and *avarkaḷ* 'they' is the corresponding coreferential definite pronoun. Among these three sentences, (4b) was selected as a model and the subjects were asked to translate it into English. The English translations are as follows:

(4b) Whoever has courage will survive in crucial situations.

(4c) Whoever has faith in oneself will manage any difficult situations.

The results of this study thus support the results of a similar experiment which was carried out by Lakshmi Bai with fifteen sentences and forty subjects (twenty Tamil and twenty Telugu speaking subjects) Her experimental analysis like the experiment of this study shows that English sentences with indefinite nouns like 'whoever', 'whatever', and 'whichever' are consistently rendered by a correlative relative clause (Lakshmi Bai, 1983:8).

Unlike the indefinite head nouns, all the sentences involving definite head nouns were not translated with participial construction. When the head noun is definite as well as specified explicitely, it was translated with participial construction.

For example, sentence (5) was translated into Tamil as either as either (5a), or (5b) as shown below:

(5) The book which is lying on the table is mine.

(5a) meesaiyil irukkira anta puttakam ennutaiyadu.

(5b) meesaiyin miidu kiṭakkira puttakam ennutaiyatu.

In sentences (5a) and (5b); ... *irukkira...puttakam*, and ... *kiṭakkira puttakam* are the participial forms of the relative clause *The book which is lying* ... The participial forms *irukkira*, and *kiṭakkira* 'that which is lying' are synonyms used by different subjects. When the head noun is not specified explicitely though definite, the English sentences were translated with correlative construction in Tamil. For example, sentence (6) was translated as (6a), which is a correlative construction, and not as (6b), which is a participial one.

(6) I saw the woman whom I wanted to see.

(6a) naan yearaip paarkkaṇumnnu virumpineenoo anta pompaḷaiyaip paartteen.

(6b) naan paarkkaṇumnnu virumbina pompaḷaiyai paartteen.

Examples of both types of Tamil sentences were presented to the second group of subjects for English translation. The English sentences so translated have the same pattern as shown in (6). Thus, there is a clear cut pattern in the use of the participial and correlative constructions in Tamil. The former is used when the head noun is definite, whereas the latter is used when the head noun is either indefinite or definite but unspecified. The use of the two types of constructions for different purposes is not only a characteristic of adult speech but can also be observed in child language as pointed out by Lakshmi Bai (1983:8) that ... 'the children maintained a elear distinction between participial and correlative relative clauses from as early as when they were three years old.'

It is extremely difficult to assert that either correlative or participial construction is favoured exclusively for translating English sentences involving any case relations. Both the types of constructions were used by all subjects for all case relations. This implies that any one of these two can be used to represent any of these case reations. However, the usage of one type of construction as against the other is not at random. The probability of using correlative construction for dative, goal, and possessive case relations varies from thirty five percent to forty percent, and therefore participial construction varies from sixty percent to sixty five percent. The probabillty of using correlative construction for locative is more or less sixty percent, and that of participial is nearly forty percent. The probability of using correlative construction for instrumental, patient, and comitative varies from sixty five percent to seventy percent. The probability of using correlative and participial construction for source relation is around seventy five percent and twenty five percent respectively.

7. Disscussion

In this section, a brief attempt is made to account for why the head noun is left unspecified in the correlative construction; why it is believed that participial construction is capable of performing all functions that are expected of a relative clause construction; and how the affixial type differs from the other two constructions. Consider the following examples:

(7) yaarooṭa naan uyirukku uyiraaka paḷakineenoo
who-soc I life-dat life-adv.m. move-p-PNG-cor.m.
avan en saṭṭaiyai tiruṭinaan
he I-poss shirt-acc steal-p-PNG

'The person with whom I moved so closely stole my shirts'.

(8) naan yaarai paarkkaṇumnnu pooneenoo
I who-acc see-inf-mod-quo go-p-PNG-cor.m.
avaḷai partteen
she-acc see-p-PNG

'I saw the women whom I wanted to see'.

(9) yaarai periya maṇusannu nenacceenoo
who-acc big man-quo think-p-PNG-cor.m.
avaree ippuṭi apseṭ paṇṇiṭṭaar
he-emp like this upset make-p-PNG

'The person whom I thought to be a learned person is the one who upset me'.

(10) yaar puttiyai maatta veeṇṭumoo avarkaḷ
who mind-acc change need-cor.m. they/he-hon-suf.
puttiyai maatta muṭiyile
mind-acc change able-neg.

'It is not able to change the mind of the person whose mind is to be changed'.

(11) poona maatam etukkaaka naan paṇam anuppineenoo
last month which-dat-adv.m. I money send-p-PNG-cor.n.
atukkaaka avan atai selavu paṇṇule
that-dat-adv.m. he that-acc expense do-neg.

'He did not use the money for the purpose for which I sent it last month.'

The above examples involve the relative correlative pronominal type constructions with the pair *yaar...avan* 'who...he', *yaar...avaḷ*, 'who... she', *yaar...avar* 'who...he', *yaar...avarkaḷ* 'who...he/hon. suf.' and *etu...atu* 'which...that'. The speaker knows the subjects involved in all the sentences about whom/ which he is talking about, and thus has a particular subject in mind, which is obvious from the occurrences of the corresponding definite pronouns in each of the matrix sentences. But he does not want to specify the head noun, or he wants to avoid identifying or specifying it deliberately. He probably does not intend to let the listener know the specific reference of the head noun for personal or social reasons. This reflects the

psychological attitudes af the speaker concerned. Further, a correlative construction is called for by the interlocutors in a conversational context when the speaker does not expect any presupposed knowledge about the head noun on the part of the listener. The participial construction cannot be used to capture such attitudinal and extra-linguistic informations. For example, the participial construction corresponding to (7) is as follows :

(12)	naan	uyirukku uyiraaka	palakina	avan
	I life-dat	life-adv.m.	move-p-rel-part.	he
	en	saṭṭaiyai	tiruṭinaan	
	I-poss	shirt-acc	steal-p-PNG	

'The person with whom I moved so closely stole my shirts'.

In (7), the definite pronoun *avan* 'he' has an antecedent *yaar* 'who' within the sentence, whereas in (12) it does not have any antecedent, and therefore it cannot occur in the place of (7) in the intended sense of the sentence. However, sentence (12) can be used only when the speaker presupposes that the hearer too knows about the subject already. Thus it is clear that correlative constructions cannot be substituted by the corresponding participial ones, and participial constructions cannot perform the functions performed by the correlatives. Therefore, correlative construction is very much essential and needed in Tamil and in other Dravidian languages as well at least to express certain psychological attitudes of speakers.

The participial construction is used normally as a statement to convey the literal meanings and is not constrained by any of the above mentioned psychological aspects. This construction involves less number of transformations than the correlative one. It is more simple, closer to the basic statement type than the correlative construction, and sometimes they are substitutable. This is evident from the following example. The English sentence (13) was translated as (13a), which is a statement type, by some informants; and as (13b), which is a participial type, by some other informants indicating the nature of substitutability and the proximity between these two constructions.

(13) This is the bag in which I kept my purse.

(13a)	enatu	parsai	inta	peṭṭiyiltaan	vaitteen
	I-poss	purse-acc	this	box-loc-emp	put p-PNG
(13b)	ennuṭaiya	parsai	vaitta	peṭṭi	itutaan
	I-poss	purse-acc	put-p-rel. part.	box	this-emp

But the basic statement and correlative types are not substitutable. Probably these might be the reasons for the assumptions of the

earlier scholars that the correlative construction is superfluous, and participial is capable of performing all the functions.

Finally, the affixial type ir different from the other two types. It is used when the speaker presupposes that the hearer knows about the head noun referred to in the relative clause as shown in the following example:

(14) neettu kaṭaiyila vaankuneenee anta peenaavai koṭu
yesterday shop-loc buy-p-PNG-emp that pen-acc give
'Give me the pen that I bought yesterday in the shop'.

In the above example, the speaker assumes that the hearer knows about the head noun *peenaa* 'pen', and thus uses the affixial type. But under such conditions participial construction can also be used as shown below:

(15) neettu kaṭaiyila vaankina anta peenaavai koṭu.
yesterday shop-loc buy-p-rel.part. that pen-acc give

Though both affixial and participial constructions can be used when the speaker assumes that the hearer knows about the head noun referred to in the relative clause, the use of participial construction reveals only the speaker's assumptions and does not assure the shared knowledge of the head noun on the part of the hearer. The affixial clause reveals both. The affixial clause is also used when the speaker (S) wants to remind the hearer (H) of the head noun in question as is evident from the following conversation:

S: anta puttakatta eṭuttukiṭṭu vaa.
'Bring that book'.

H: enta puttakam?
'Which book?

S: neettu koṭutta puttakam.
'The book that I gave yesterday'.

H: neetta? eppa? enakkut teriyaata!
'Yesterday? When? I do not know!'

S: *hooṭṭalukkup poorappa oru pacca kalar puttakam koṭutteenee, ata kuṭu.*

'Give the book which has green colour wraper on it that I gave while going to the hotel yesterday'.

The italicised sentence is an affixial type used as a means of reminding the hearer about the head noun *puttakam* 'book' in the embedded sentence. Both the correlative and participial constructions are excluded in such a context.

8. Conclusion

From the above discussion, it is clear that all the three types of relative clause constructions do perform at least a few constructions can be used when the head noun is related to the matrix sentence with any case relations, but the probability of using correlative construction as against participial one increases from left to right as shown in the following hierarchy :

(dat, goal, poss)	<	loc.	<	(inst, pat, comi)	<	sou
35% to 40% variation		60%		62% to 70% variation		75%

Correlative construction is used when the head noun is indefinite, or when it is definite but unspecified. That is, it is used when the speaker does not presuppose any information about the head noun from the hearer. It cannot be substituted with either of the participial or basic statement types of sentences. It is used to reflect certain psychological attitudes of interlocutors in social interaction. Thus, it is not superfluous as was believed earlier. Thus participial construction is used when the head noun is definite and specific. That is, it is used when the speaker presupposes that the hearer too knows about the head noun referred to in the embedded clause. But its use does not assure that the hearer too knows about the head noun. The affixial type is used when the speaker assumes that the hearer knows about the head noun referred to. It is also used when the speaker wants to remined the hearer of the head noun in question.

Therefore, it is clear that no relative clause construction is superfluous; each one performs at least a few distinctive functions; and are all very much essential and needed in Tamil and other Dravidian languages. Thus, I have brought out the pragmatic aspects of relative clause constructions in detail. Finally, though it is a conjecture, at least from the pragmatic perspective, one can propose that none of the possible different structural manifestations of a single proposition can be superfluous.

ABBREVIATIONS

acc	=	accusative
adv.m	=	adverbial marker
comi	=	comitative
cor.m	=	correlative marker
dat	=	dative

emp	=	emphatic
hon.suf	=	honorific suffix
inde	=	indefinite
inst	=	instrumental
loc	=	locative
mod	=	modal
neg	=	negative
n.sg	=	neuter singular
n.pl.	=	neuter plural
PNG	=	Person Number Gender
p	=	past tense
pat	=	patient
poss	=	possessive
quo	=	quotative
rel. part	=	relative participle
soc	=	sociative
sou	=	source
tag. quest	=	tag question

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ON THE PERSISTENCE OF BORROWED FORMS IN LANGUAGE (A STUDY OF THE ENGLISHIZATION OF ORIYA AT THE LEVEL OF LINGUISTIC ETIQUETTE)*

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The paper relates the Englishization of Oriya at the level of linguistic etiquette to the Westernization of the Oriya speech community. It argues the language change in the given domain is merely a result of language contact; it is a consequence of the wider socio-cultural process of Westernization, more specifically, of the needs of status mobility generated by the colonial encounter. By showing that there are some processes of change that appear in both social institutions and language, the paper attempts to maintain that in some domains at least, language is indeed a social (or socio-cultural) institution.

The relation between language and society is not an obvious and straightforward one which is why controversies exist on this issue. There are scholars who maintain that there is a causal relationship between society and language, and there are others who maintain that there is hardly any significant relationship between the two. Consider the following which represent the point of view of the first group:

> (a) ... a complex of changes in parts of the social system determines a complex of changes in the corresponding parts of

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> the linguistic system. Such a direct approach to the problem of causal relations between society and languages strikes me as a principal thrust and responsibility of the new science of socio-linguistics. (Friedrich, 1979, p. 169).

> (b)"Forms of social organization influence linguistic structure and linguistic usage. This influence operates in a deterministic fashion: Social structure *X* demands linguistic variety *a* ..." (Fowler (et. al.), 1979, p. 194).

Those who do not subscribe to the view that the relationship between society and language is significant, would argue that there is no socio-cultural reason why, say, the Indian languages are relatively free word-order languages and English is not, or why English has more movement rules in the grammar than has the grammar of any Indian language.

All these are indicative of the fact that the relationship between language and culture is neither obvious nor uncontroversial. Probably each of the two points of view mentioned above has some justification. An observation of Levi-Strauss is worth quoting in this context:

> "... I would say that between culture and language there cannot be no correlation at all and there cannot be hundred percent correlation either. Both situations are impossible to conceive. So the conclusion which seems to me most likely is that some kind of correlation exists between certain things on certain levels and our main task is to determine what these things are and what these levels are." (1968, p. 79).

Taking the clue from Levi-Strauss, we propose that language be viewed as a multidimensional phenomenon and as such we are not surprised that each of the two points of view cited above holds for language. Our perspective on language leads us to suggest that whereas at certain levels and in certain domains language is not governed by society and culture, at others, it is. For example, there seems to be no reason to believe that the "core grammar" of a language in the sense of Chomsky (1977) is influenced by society and culture where there is good reason to believe that a conversational maxim (Grice, 1975) like "be polite" operates only in relation to the values governing inter-personal interaction in given societies and cultures. In order to study the nature of the relationship between culture and language we must choose a domain of language for investigation where this relationship is likely to be most transparent. One such domain is linguistic etiquette.

The paper is divided into two sections. The first shows how Englishization of Oriya can be causally related to Westernization. The second discusses how certain processes of change like accretion and replacement which appear in various forms of social organization also appear in language. Together, these provide support to the claim that language, in certain domains at least, is indeed a social institution.

Before we discuss the main theme of this section, we should like to make some observations regarding the terms "Westernization" and "Englishization". For our present purpose we accept Srinivas's definition of Westernization which is as follows:

> "Westernization is a blanket term for several processes including urbanization, industrialization, and the adoption of the ideology as well as the products of modern science. Individuals and groups may be westernized in any or more senses. Thus one group may take to western dress and dancing while the other may take to scieoce and technology". (1970, pp. 108-109).

In our discussion here we are concerned with only one consequence of the westernization of the Oriya speech community: the status mobility within the community.

Englishization of Oriya refers to the assimilation of some borrowed forms from English and the acceptance of the translation equivalents of the borrowed froms in some cases.

As in the case of Westernization, in the case of Englishization of Oriya too, we are concerned here with only one part of it: Englishization in the domain of linguistic etiguette. We are aware that not all instances of Englishization of Oriya can be related to Westernization. There are forms which came into Oriya from English purely as a result of language contact; these are unlikely to have been borrowed by the recipient language as a result of culture contact. Consider, for instance, an indirect speech construction in Oriya which was borrowed from English. It is exemplified in the following:
rāma kahilā je se e bisaya re kichi jāni nathilaā (Ram said
i *i*
that he did not know anything about this matter). There are several other forms like this which came into existence in Oriya for which no satisfactory account based on the concept of culture contact is available. Therefore in our discussion we will not consider these forms. Even within the domain of linguistic etiquette we will confine ourselves to only a few address, reference, greeting terms, etc. which are as follows :

(a) address terms : *sār, mis, mises, mistar, mādām,* etc.

(b) kinship terms : *ankl, ant, dādi, māmi,* etc.

(c) greeting terms : *hāllo, tātā, bāi bāi, gud marning, gud nāit, gud ibhning,* etc.

(d) reference expressions : *sār, mis, mises: mister, mādām, mem sāheb, tuma/tā stri/mises* (your/his wife), *tuma/tā swāmi/hasband* (your / his husband), etc.

(e) expressions to convey apology: *sari* (sorry), *kshyamā karibe* (excuse me), *kichi mane karibe nāhi* (please do not mind), etc.

(f) forms to express request: *dayākari* (kindly), etc.

These are some of the forms that arose in Oriya as a result of the Englishization of this language. The list is not complete, although a complete list may not contain many more items under any of these categories. But this is not surprising, since languages are generally self-sufficient in this domain as they are at the level of syntax; it is especially true of languages like Oriya which have a history of about a thousand years.

It is well-known that those borrowed forms get assimilated into the recipient language which show high functional efficiency. It is not obvious how the borrowed forms from English mentioned above could have exhibited great functional efficiency since, as mentioned above, languages are generally self-sufficient in this domain. Before coming into contact with English, Oriya had a highly developed and elaborately worked out system of linguistic etiquette, the Oriya speech community being a hierarchically stratified one. The status of a person in relation to the others in the community was and still is well-defined, and so is the way he must behave with the others, both in verbal and non-verbal terms. With an etiquette system so rich and complex, ordinarily one would not expect the borrowed items to evince high functional efficiency. Now, in order to explain the Englishization of Oriya in the given domain, we must either give up the functional efficiency hypothesis or demonstrate that the contact situation generated new needs which could be adequately satisfied by borrowing items from English. We choose the latter alternative. We do not propose that the contact of Oriya with English generated these needs; we rather suggest that it is the Westernization of the Oriya speech community, more specifically, the status mobility within the community that created such needs.

We also maintain that the needs could be duly satisfied by borrowing from English.

Because of the historical perspective of the paper, part of the data have been collected from the written materials. These belong to the period from the second part of the nineteenth century to the early seventies of the twentieth, a period during which the Englishization of Oriya was crystallized. These written materials include novels and short stories, news paper extracts, biographies, autobiographies, and literary criticism.

In order to account for the Englishization of Oriya in the area of linguistic etiquette, it is necessary, first, to describe some of the changes that were brought about in this speech community by Westernization came to this community primarily through the English education which in turn was a result of the British rule. Some of the more significant consequences of Westernization which are of direct relevance to our present purpose are as follows:

(i) rise of the educated middle class: Around 1870, the community saw the rise of the English-educated middle class. The power of the big land lord (the *zamindār*) and the king started declining fast. In general, the kings, and the few Oriya *zamindārs* in the coastal regions – most of them being non-Oriyas-had neither any English education nor any enlightened perspective; they did not know the law and the intricacies of the administrative machinary, and as such were incapable of looking after their own interests (Samantrai, 1964, p. 9). They had to depend on some persons who could manage their affairs, interpret their interests to the British rulers and establish a liason between the colonial administrators and themselves, and they realized that in many respects the best persons to depend on for such purposes would be the English educated Oriyas. By then the educated Oriya middle class had started entering bureaucracy - though at the lower levels-, and new professions such as the law. It is this that gave this class prestige nnd some influence which increased steadily as more and more kings and big landlords started depending on them.

(ii) frequent interaction between the villages and the towns: This was one of the most important happenings during the British rule. The relative isolation of the villages ended, towns came up relatively fast, and the villages came in contact with the towns more frequently than ever before. It was not merely to sell their produce that the villagers now went to the towns: the town was the seat of local administration, and the big city, that of the law court and of

the highest levels of administration. People from the town, though most often it was only the police men and petty officials, came to the village fairly frequently. The villages, especially of the coastal regions directly under the British rule, were no more ruled by the whims and caprices of the *zamindārs;* towards the end of the nineteenth century it was no more easy for the rich village landlord to punisha villager, especially of an upper caste, by excommunicating him. A landlord could be jailed and a king, punished. The deportation of the King of Puri, who was the religious head of the entire group of kings of Orissa, meant clearly that the traditional seats of power were no longer the centres of authority. People were conscious of where the real powers lay. The city interfered with the village and exploited it regularly, but this only shows, among other things, that the island-like isolation of the village had come to an and.

(iii) migration from the village to the towns: Migration from the village to the city had become a noticeable phenomenon by the late nineteenth century. There were three main reasons for this: (1) village-based English educated people went to the city for newly created jobs in the fields of administration, law, etc. (ibid, p. 28), (2) as pressure on the land increased, people who did not have enough land went to the city to work as labourers, and (3) the glamour of the city fascinated the villagers. But most of the villagers who went to the city never really lost touch with their villages. They used to return to the villages at regular intervals, and thus they were, in a sense, carriers of the city culture to the village. It was through them that the city culture filtered down to the masses in the village.

(iv) change in attitude and life-style of the people: This was due, mainly, to the English education though factors such as growth of towns and cities, migration to the urban areas, etc. did play a significant role. Prior to the implementation of the British educational system, general education in Orissa was unsystematic and of poor quality. All that one learnt in the then existing educational system were the alphabet, which enabled one to read the religious texts in Oriya such as *The Bhāgabat*, and some simple arithmetic needed in day-to-day life (ibid, p. 43). Again education was not available to the common people. It was accessible to the high caste people alone. After the British educational system was implemented, for quite some time the common people did not send their children to school because they believed that by doing so they would betray their religion and "lose" their caste. It was only the courageous people belonging to some upper castes that dared send their children to school to learn English (ibid, p. 158). The impact of English

education on the society was too extensive and profound to be dealt with in any detail here; in sum it can be observed that it made the beneficiaries examine the traditional mode of life from a scientific and rational perspective which, among others, resulted in their rejection of many undesirable practices like the *Sati*, extravagant display of wealth in upper caste marriages, etc... Widow marriage was introduced, social get-togethers started being organized, the community's attitude towards women in general and women's education in particular became more considerate and liberal, and the western dress, manners and customs started becoming increasingly popular among the English educated people. English education gradually came to be looked upon as the main source of power, prestige and wealth.

The consequences of Westernization on Oriya in the domain of linguistic etiquette could now be examined. As mentioned earlier, we will confine ourselves to only some areas in this domain such as the address, greeting, reference systems, etc. Some popular forms of address used in Oriya in the pre-Englishization period were *manimā*, *gosāin, sānta, etc., manimā* and *chāmu* were used for the king, *gosāin mahāprabhu, swāmi*, etc. for the religious leaders and the brahmins, and *sānta* and *mahāsaya*, as general terms of address for any social superior. These and similar terms served the purpose well in the traditional Oriya speech community which was predominantly Hindu. The community at that time assigned status to its members on the basis of their caste, age, wealth, place in administrative set up, religious and spiritual attainments, learning and the like. Now Westernization disturbed the value system and the power structure considerably. The administrative set up was no longer the same and one no longer obtained a high position in administration on the strength of one's birth, caste, etc., Non-Hindus, and more importantly relatively low caste Hindus, and converts to Christianity from Hinduism could all occupy positions in the government and because of the positions of power they held, they had to be treated in an appropriately respectful manner, at least in the sphere of their work. There was no problem when the person to be addressed was a Hindu or a Muslim; during the period of the Muslim rule in Oriya had acquired terms like *jahānpanā* to cope with the latter situation. But when the superior in the office was a Christian, whether British or Indian (whether or not through conversion), there indeed was a problem. Terms like *manimā* and *jahānpanā* simply would not do because of their Hindu and Muslim associations, and one would be in doubt as to whether such forms would really please the superiors who were neither Hindu nor Muslims - especially the Britishers, who

knew only English. One might observe that this was the problem of a small section of the population, primarily of the government employees and then of the city dwellers, and was hardly the problem of the rural population. However, no matter how small was the section of the population that faced this problem, it posed a challenge to the language.

Apart from the fact that address terms like *manimā* and *jahānpanā* had religious associations, these were found inadequate also because they sounded very pedantic and false in a number of contexts in the new power set-up. It would have been an odd situation indeed if an assistant in an office addressed the head assistant as *manimā* or the latter addressed his immediate superior as *manimā*, *sānta*, etc. The power relationship between a king or a *zamindār* and their employees in a feudal set-up was highly different from the one obtaining between a superior officer and his subordinates in the new bureaucracy.

To cope with this situation what the language did was what it had done earlier when it needed appropriate terms to address the members of the Muslim ruling class; it borrowed the relevant terms from the ruler's language, which in the present case was English. This strategy had several advantages. For a subordinate, using "sir" to address his superior in the office would be far less embarrassing than using *manimā* or *jahānpanā* because "sir" was rather emotionally neutral to him in comparision with terms such as these. Again, being free from religious associations, it had the advantage of being acceptable to the Oriya speaking community which was predominantly Hindu. Further, the use of "sir", a term of address in the ruler's language, was indicative of the user's desire to identify himself with the rulers' language and culture which, he hoped, would bring him some gain sometime.

The use of "sir" has persisted because it has been found useful. The twentieth century has seen increasing Westernization of the Oriya speech community despite some anti-westernization pressures operating from time to time. In general, in many spheres of public life one finds increasing secularism and among members of various castes and religious groups, increasing interaction. One also finds evidence of considerable degree of democratization of the speech community. In such an environment "sir" has played a very useful role. To address some superior as *Sānta* (master) which has feudal connotations, would mean acknowledging one's very humble position in relation to him. In a society when one directly depended on another for his livelihood as a landless villager used to do on the

village landlord, the social inferior could address his master as *Sānta.* But in the changed circumstances such a situation did not obtain any longer. A more secular, and relatively emotionally neutral term like "sir" could adequately answer the needs of the new circumstances.

It may be observed by way of comment that efforts in the direction of anti-Englishization and re-Tatsamization of Oriya have not succeeded in eliminating "sir", and a number of such borrowed address forms. The attempt to replace "sir" with *mahāsaya* has not succeeded. The latter is Sanskritik, pedantic, and essentially Hindu in its associations, thus emotionally non-neutral. It is too formal. It is true that "sir" is not always used in very formal use of Oriya now, but in informal and semi-formal speech and writing it has no substitute.

We now consider the three address terms used for women which have been borrowed from English *mis, mises, mādām.* We maintain that the explanation that holds for the borrowing of "sir" holds for these terms too.

Prior to the advent of Westernization, woman in the Oriya community had no independent social status at all. Their status was entirely of a derivative nature; it derived from the status of their fathers till they were married and of their husbands after they got married. Women of the upper castes lived a secluded life. As the community disapproved of women's education, most of them remained illiterate. Women of the affluent, upper caste families did not have any gainful occupation. Most did not even do household jobs since they had maid servants to attend to those. In brief, women never realized nor were they ever made to realize that they to had an identity of their own. The society taught them to ignore their identities and be subservient to the wills of their husbands. They were taught to regard their lives as meaningful only if they served their husbands with complete devotion, and to the husbands' complete satisfaction.

The values for the lower caste women were basically the same, though they all worked hard and contributed to the family income. That however did not make any difference whatsoever to their position in their households. In a way they had the worst of both the worlds.

The interaction of the women of the upper castes with men was extremely restricted; it was even more so in affluent families. It was not considered good form for the husband to show concern for his wife in his family circle, and for the wife to do so for her

husband-one of the consequences of the joint family system that was prevalent at that time. Referring to the women of the upper castes in public was considered indecent; such conduct could be expected, if at all, from the lower caste people alone. A man with some status never referred to one's wife or a female relation in public, and it was considered absolutely improper for one to make even polite enquiries about another's female relations.

Westernization changed all these. Women gradually came out of their seclusion though the process was very slow. It probably started with the women's education. If the society, in the early stages at least, did not particularly encourage women's education, it did not frown on it either. The husband-wife relationship showed some change; the wife was no more expected to be as completely subservient to the husband as before. In cities it appeared, in some cases at least, that women had some say even in their marriage. In a few cases some sort of courtship preceded marriage. In short, the community began to realize that women too had identities of their own. As early as in the late nineteenth century, educated people started referring to their female relations on semi-formal occasions in gatherings of friends.

Let us see what kinds of communicative needs these changes generated which made address and reference terms like *mis*, *mises* and *mādām* so useful. Consider first the address terms used in the pre-Westernization period. In the affluent families, the married women, depending on their age, were addressed by the social inferiors, who in conversational situations were mostly the maid servants in their households, by a form consisting of a kinship term and *manimā* / *Sāntāni* (feminine form of *Sānta* "master") such as *mā manimā* ("mother" + *manimā*), *bohu manimā* ("daughter-in-law" + *manimā*), *mā* / *bohu Sāntāni*, etc., or just *Sāntāni*. Forms like *āgyān*. *chāmu* were often used as address terms in such contexts. The unmarried girls were addressed as *jemā manima*; *agyān* and *chamu* were also used for this purpose. Elders and superiors otherwise addressed the youngsters by their first names. Among equals the first name was used. Surnames were never used for the purpose of addressing women.

It has not been adequately recognized that the use of surnames for the purpose constituted a significant step in changing the status of women in the Oriya society. If women did not use any surnames (Mahapatra and Das, 1972. p. 44), it was because they never found it necessary to do so. They did not go to schools, own any property, participate in public life, etc. There were simply no contexts in which the use of their surnames was found necessary.

Once girls started going to school after the implementation of the British system of education, surnames must have been found necessary. Initially the brahmin girls used *devi* as surname whereas the non-brahmins used *dei* or *dāsi* (ibid). Gradually the latter started using *devi* as surname presumably as a result of Sanskritization (Srinivas, 1970). In any case, a system of education which was not grounded in caste distinctions and was not intended to stabilize them would have found the *devi – dāsi* dichotomy both undesirable from one point of view and inadequate from another: "undesirable" because it reinforced the distinctions of caste, and "inadequate" because these were very broad categories and did not make the necessary narrow distinctions. Again, once the society stopped frowning at the mention of the woman in social gatherings, surnames must have been found to be extremely useful as they would easily collocate with *mis*, *mises* etc. as in English and form useful address terms which could be polite, without sounding too intimate and personal.

The English prefixes *mis* and *mises* were found useful for yet another reason. It was those women who had the benefit of English education that first took up jobs like teaching, and started working in hospitals as nurses and doctors, and in most cases these women were Christians whose families had been converted from Hinduism to Christianity a generation or two ago. Their jobs gave them money, and even, to some extent atleast, freedom, and those who achieved success in their professions, also received social recognition and prestige. A good example is that of the illustrious lady Kuntala Kumari Sabat who was a doctor, a social worker and a poet of considerable merit.

The community's attitude towards these women were not, initially at least, quite positive; if any thing, it was even somewhat hostile. It was considered undignified for women to work outside their own households, and that again with men. It was something that only lower caste women were supposed to do. The conservative Hindus in the community looked down upon Christianity; the Hindus in general were contemptuous towards those who had been converted to Christianity or who came from families with a history of conversion.

But no matter what the community felt about the educated working women most of whom were Christians with a background of of conversion, it had to find some way of expressing regard for them in linguistic terms because of the latter's position. Appropriate terms of address were naturally needed. The existing ones such as

mā/bohu mānimā, jemā (manima), chāmu, manimā were all unsuitable as terms of address partly because of their Hindu associations and partly because the community did not wish to accept the low status of the addresser implied by these address terms. Thus terms were needed in the language which would be duly polite and at the same time culturally and thereby emotionally remote so that the upper caste Hindus could use them without feeling a sense of inferiority. The borrowed forms *mis* and *mises* could adequately satisfy this need. These terms had an additional advantage in that most of the educated women themselves wanted to be addressed that way so that they could identify themselves with the new àristocracy built upon the foundation of English education.

Consider the case of *mādām* now. In some contexts *mises* as an address term was felt to be not polite enough. A subordinate such as a peon, a cook or a gardener would find it inadequate for the purpose of direct address while speaking to the wife of his employer. He needed an appropriate address term, but Oriya would not give him any. It was not possible really to use kinship terms like *mā* (mother), *apā*, *nāni* (elder sister), etc. taking into consideration the age of the addressee. The use of such kinship terms as these as general address terms was no more favoured by the community which was due again to westernization. The kind of informality and solidarity relationship these terms express no more existed among people in cities and towns which accomodated the westernized sections of the community. The population in most towns was rather fluid in comparision to that of the villages, and it included a number of migrants from various villages also which explain how most people in urban areas were almost strangers to one another. Turning to the case of the subordinate, we find that Oriya did not equip him properly to deal with his linguistic problem. Thus there was a real gup and this was how the borrowed word *mādām* was pressed into service.

Turning to the reference terms now, we wish to observe that what applies to the address terms, applies to these terms also. However, a comment regarding *mo/tā stri/mises* (my/his wife), and *mo/tā Swami/mister* (my/her husband) may be in order here. Notice that whereas "Mrs." which is the source of the Oriya *mises*, is an honorific prefix in English, *mises* is used as a lexical equivalent of *Stri* (wife).

As mentioned earlier, in the late nineteenth century in was not considered good form on the part of the upper caste male members to refer to each other's wife or any female relations in public, and in

some extreme cases, even in one's own family circles. At that time the most popular, probably the only way, of referring to someone's wife was by saying something like the following: *pilae kemiti achanti*? (how are the children?) or *ghare kemiti achanti*? (how is it at home?). Written materials belonging to the pre-westernized period do not provide any information regarding the ways in which the upper caste women used to refer to each other's husbands. The lower caste women did so by calling them as X or Y's father where X or Y was usually the name of a male child. This is not at all surprising, given the social status of the women at that time and the prevalent value system.

Westernization, as mentioned earlier, changed the status and even the role of the English-educated women in the community, and gave them a sense of identity. Women began to work in institutions such as hospitals, and became somewhat financially independent. It is only to be expected that the restriction on referring to women in public would be considerably relaxed, and this is precisely what happened. Now the language needed a device to satisfy the new linguistic need that arose out of the relaxation of this restriction because the existing ones were inadequate. For instance, *Stri* (wife) was the only commonly used lexical item (*patni* being too formal) that could be used, but it had an association of closeness with the male partner concerned which rendered such a querry as *tuma stri kemiti achanti* (how is your wife?) somewhat unacceptable in formal, polite conversation among people who are not very close to one another. An expression like *Mises* (as in *tuma/tanka mises* (your/his wife)) would be used in at least informal and semi-formal contexts, and being emotionally pale, it would not evoke those associations of closeness that *stri* would. Similarly, *hasband* (husband) had the same advantages as *mises* had.

It has already been mentioned that Westernization of the Oriya speech community consisted of, among others, a change in the attitude of the people. Those who enjoyed the facility of English education, were fascinated by the western values, western modes of perception of the reality, and the western modes of life. Quite often, appreciation of the western values was accompanied by a corresponding disregard for the traditional native values. Fakir Mohan Senapati, known for his realistic potrayal of contemporary life in his works of art, describes in one of his most influential poems *(Mu Hāta Bāhudā* ("I, the one who has returned from the market") how the English-educated members of the community considered it respectable to study Wordsworth, Milton and Homer, and how they

looked down upon a study of the works of Kalidasa and the Oriya poets. Knowledge of English became a social value. In sum, there was an attempt on the part of these people to identify themselves with the English culture. English, however, did not become the home language in the families of these people. One important reason why this did not happen is that at that point of time Oriya was fighting a battle for virtual survival. Attempts were being made by some influential Bengalees to substitute Oriya with Bengali as the medium of instruction at school under the plea that Oriya was not a separate language. This was the situation that gave rise to the "Oriya-movement" the leadership of which was given by the English-educated Oriyas. Details concerning this movement are not of interest to us for our present purpose. What we wish to stress is that the need to identify themselves with the English culture did not result in giving up Oriya as the languae of home on the part of the English-educated Oriyas for whom knowing English had become a social value. Therefore their need for cultural identification with the west had to be fulfilled within Oriya itself, as far as language use was concerned. One consequence of this was the following : the use of the kinship terms, greeting terms, etc., borrowed from English, became popular among the English educated Oriyas.

Besides, in the Oriya culture, greeting, conveying apologies, expressing requests are not merely verbal acts; these must be accompanied by non-verbal actions as well: In fact, the non-verbal aspect is more important than the verbal. Verbalization of the greeting is not necessary if the non-verbal action, that of bowing down to the appropriate degree, touching the feet, or prostrating as the case may be, depending on the status of the person being greeted, is duly performed. But without the non-verbal action, verbalization of the greeting in the form of say, *namaste* or *namaskār* cannot be considered polite behaviour; in certain contexts, it might even be considered insulting. Now status-mobility, which was part of westernization of the Oriya speech community, often gave rise to a situation in which one had to greet a person, who, going by the norms of the traditional Oriya society, was one's social inferior, though he had become superior in one's place of work. In this situation the non-verbal mode of greeting was ruled out, and *namaskar* was considered to be neither adequate nor appropriate because of its religious flavour. Thus the language did not have a means to cope with this situation. The English forms like "hello", "bye", etc. were found to be very useful to deal with such a situation not only because they were emotionally neutral but also because they were not accompanied by

the kind of non-verbal action referred to above that clearly reflects one's social status in relation to be other in a hierarchically organized society. Therefore these forms relation were borrowed by Oriya.

A brief discussion of a few address, reference terms, etc. in Oriya shows that the Englishization of the Oriya address, reference systems, etc. which constitutes part of the system of linguistic etiquette, is due, directly, not to the contact of Oriya with English but to the contact of the Oriya culture with the western culture culture resulting in the westernization of the former. This is by no means unexpected since the Oriya culture was the subordinate one and the western culture, the dominant one in the given culture-contact situation. We have seen how westernization generated specific linguistic needs and how Oriya borrowed forms from English to cope with the situation. We have also seen how the borrowed forms proved to be functionally efficient which was why they were assimilated into Oriya, the recipient language.

II

This section is devoted to showing that certain processes of change like accretion and replacement which characterize change in social institutions also appear in language change. Our main interest here lies in arguing that there are some levels where language can be regarded as a social institution. We have identified the level of linguistic etiquette as one such level. Of the several types of arguments that one might put forth in favour of this point of view, two could be as follows: One could demonstrate that language and some social institutions share a number of features. One might also argue that there are comparable processes that operate in both language-change and change in recognized social institutions. Here we explore the possibilities of the second approach. For the sake of convenience of exposition we here refer only to some relevant generalizations concerning the Indian social institutions.

Regarding the ways changes affect social institutions there appear to be at least two main views put forth by scholars who have studied social change in India. M. N. Srinivas believes that the constituent forms of an institution are replaced by a new set of forms when a change takes place. This is implicit in the following extract:

> The caste system is far from a rigid system in which the position of each component caste is fixed for the time. Movement has always been possible, and especially so in the middle regions of the hierarchy. A low caste was able, in a

> generation or two, to rise to a higher position in the hierarchy by adopting vegetarianism and teetotalism, and by Sanskritizing its ritual and pattern. In short, it took over, as far as possible, the customs, rites and beliefs of the Brahmins..... (Srinivas (1970), p. 42).

Thus "Sanskritization means... the adoption of new customs and habits..." (ibid, p. 48), and this means replacement of the old customs and habits by the new. Mokim Marriott on the other hand maintains that what really happens is the

> ...accretion and transmutation in form without apparent replacement and without rationalization of the accumulated and transformed elements. (1969), p. 196).

It is quite possible that each of these views have some justification. Srinivas is correct in claiming that there occurs a replacement of the constituent forms. Some evidence in support of this can be obtained from Bernard Cohn. In Cohn (1969) he refers to the struggle of some *chamāras* to raise their status on the caste hierarchy, and in this context he mentions a number of changes that they introduced in their community. To cite just one instance, eating of beaf was banned in their caste. This can not surely be interpreted as an instance of accretion or transmutation: this is clearly an example of replacement of an old element. Similarly, on the basis of his analysis of the festival of Cow-Nourisher Worship, Marriott is aleo juitified in asserting that cultural forms do not get lost, that an institution collects more such forms, and that there is a transformation of the newly acquired forms. Thus both types of modification take place in a social institution as a result of change.

The same processes are discernible in language change at certain – not all – linguistic levels. Consider only the address forms in Oriya which belong to the level of linguistic etiquette. We find that (a) there is a loss of forms, (b) the reportoire of the address forms is expanded (c) the borrowed items are modified in some sense, and finally, (d) there is a specialization of use of the address terms consequent upon the expansion of the reportoire. The first is a consequence of the replacement of the sort Srinivas mentions, and the second and the third are instances of accretion and transmutation of form in Marriott's sense, and the last, which is essentially a consequence of the first three, is not an unfamiliar phenomenon in the literature on social change. The traditional Oriya dress of *dhoti* and the upper cloth has not gone out of use among the urban, English – educated population in Orissa who have taken to the

western dress; its use has been specialized, and it is now being used by the members of this group at the time of the performance of religious rites.

The address terms which can be claimed to have been lost to the language are *jemā* and *chāmu* as terms of address for women. The borrowed items did not replace all the native ones; *manimā*, *chāmu*, *gosāin*, *mahāprabhu*, *gosāin mahāprabhu*, *swāmi*, *Mahāshaya* all continue to be used. As examples of transmutation of form, consider *Sār* and *Mis*. One way *sār* is used sometimes by many students is as follows: it is sometimes used as an address term and some sometimes as a response term for a female teacher. This use, of course, has not stabillzed, but since the users are hardly ever corrected, it is quite possible that this use may be eventually accepted. Consider the use of *mis*. Any female teacher at a primary school, irrespective of her marital status, is addressed as *mis*. This not how source term in the donor language is used. Yet another example of transmutation could be the use of *madām* in Oriya. Unlike in English, it is used only for married women in Oriya. The following could be cited as an example of the specialization of use of the address terms. *Manimā*, *chāmu*, and *mahāprabhu* are still used but only as terms meant for gods and religions leaders. *Gosāin*, *mahāprabhu gosāin mahāprabhu*, *swāmi*, etc. are currently being to address *gurus* and other religious leaders. On the ceremonial occasions the presiding priest is still addressed as *gosāin* or *gosāin mahaprabhu*. Thus address terms now belong to two distinct registers: the religious one and the secular one, and the terms mentioned above all belong to the former. This shows that the native Oriya forms did not get lost as a result of borrowing, only the range of their use was narrowed, and their use became specialized Thus we find that language at the level of etiquette is subject to the same kinds of change as a result of culture contact as are many socio-cultural institutions.

To conclude, what the paper has attempted to do is suggest that language be viewed as a multidimensional entity and that at certain levels language could be regarded as a socio-cultural institution. One such level is that of linguistic etiquette. At a level such asthis, we find, as one would expect, that there is a causal relation between society and language, changes in society bringing about changes in language. We also find that there are some processes that characterize both language change and change in social institutions, by no means an unexpected finding, once we adopt the perspective on language suggested in this paper.

TEXTS USED AS SOURCE MATERIALS

Fiction

Das, Manoj, *Manoja Dāsanka Kathā o Kāhāni* (collection of Short Stories) (1971).

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Senapati, Fakirmohan, *Chamāna Āthaguntha* (1902), *Prāyaschita* (1915), *Māmu* (1917), *Galpa Swalpa* (Collection of Short Stories) (1917).

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Auto-Biography

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NOTES AND DISCUSSIONS

DISSERTATIONS IN LINGUISTICS: WAYS AND MEANS FOR ITS FULLER UTILISATION

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The knowledge grows as research is conducted to find out solutions to both theoretical and practical problems. Research generates fundamentally significant new knowledge, by means of a demanding and carefully supervised programme of research developed against background of rigorously formulated propositions. The results of such a high quality of research is termed as thesis or dissertation. This thesis/dissertation is submitted for the partial fulfilment of the post graduate degree, M. Phil., Ph. D., D. Lit., D. Sc., etc.

Uses of Dissertation/Thesis :

The thesis is regarded as concise summary of the limits of knowledge of the field dealt exhaustively. Therefore for further researchers in that area a thesis will be a sign post, convenient starting point. It also provides a tool for evaluating the research done in an area. Davinson (1977) states that creative use of available thesis literature can help to add depth to illuminate the dark corners of wider studies and perhaps provide inspiration to them. Apart from the results of the research, a thesis reflects a wide background of reading, for which, provision is made within the thesis in the form of bibliographic references. A thesis can therefore be not only a contribution to subject knowledge, but also a significant source of subject bibliography.

Purpose of the study :

According to the citation analysis conducted in different areas, the rate of use of thesis has been lesser than that of published forms of literature, such as books and periodicals. Following studies from

the three different disciplines a, b, c will bear testimony to the above statement :

Subject	Total No. of citations	No. of books cited	No. of journals cited	No. of Thesis/ dissertation cited
*a. Agricultural Economics	1,896	624 (32.91%)	917 (48.37%)	50 (2.64%)
b. Phytomorphology	5,533	970 (17.53%)	4363 (78.85%)	94 (1.69%)
c. Indian Linguistics	3.166	2044 (64.54)	782 (24.70)	158 (5%)

The usage of theses and dissertations are normally 5% and below.

1. What are the probable reasons for such a low percentage of usage of thesis/dissertations.
2. Which are the repositories of the theses in Linguistics and allied areas ?
3. What are the bibliographical tools available to a researcher before beginning a thesis ?
4. How to promote greater use of thesis ?

The study has been concentrated on the discipline 'Linguistics'.

The following are the Probable reasons :-

1. Bibliographic control
2. The availability of theses
3. Publication and distribution
4. Quality of the theses.

In the librarianship circles it is conventional wisdom to accord to thesis a high value as repositories of important, new or reappraised knowledge (Davinson 1977). This affects the willingness of some Universities to loan or exchange theses deposited with them which

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*a) "Frequently cited periodicals by Indian Agricultural Economists" by Prakash B. Hadagali. IASLIC Bulletin 28(2), 1983, P. 59-66.

b) "Bibliographical phenomena of Phytomorphology literature by B. S. Maheswarappa. "Annals of Library Science and Documentation" 30 (1), 1983, P. 22-30.

c) "Citation Analysis of the Journal 'Indian Linguistics 1971-1980' " by B. A. Sharada To appear in Indian Linguistics 46 (July) 1985.

may be in flimsily bound typewriters script, eminently susceptible to damage in transit and uncertainity about the copy right status. Availability and bibliographical control are important, as unless it is published, only one or two copies of the thesis is deposited in the library of that particular University to which the thesis is submitted.

As regards the quality of the thesis, Raising and Kilgour (1964) state that 'a prime reason for the lesser use is the increasing tendency for the thesis to be produced as an educational exercise–a flexing of intellectual muscles rather than being designed as a really fundamental contribution to knowledge.'

1. Bibliographic Control:

The apparatus necessary to secure complete bibliographic control of a country's published records must include a current bibliography of thesis publications, according to Knud Larsen (1963).

Perhaps no where in the world has more been done to organise the bibliographic control of theses than in the U. S. Following are some of the bibliographies prepared by U. S. on theses in general and in particular on Linguistics arranged title alphabetically.

1. "Abstracts of dissertations on recent and on-going research" International Journal of the Sociology of Language 5 vols. 1975, P. 123–132.
2. "American Doctoral Dissertations", Ann Arbor, Michigan, University of Microfilms for the Association of Research Libraries.
3. "American doctoral degrees granted in the field of modern languages in 1956–57" by Miller, W. M. Marion MLJ XLII, 1958, P. 142–146.
4. "Bibliographic services throughout the world" 1950–Paris, UNESCO. (Summary of the National arrangements for the bibliographic control of theses throughout the world).
5. "A Bibliography of American doctoral dissertations in Linguistics 1900–1964", Rutherford, Philp R. Washington D. C., Centre for Applied Linguistics, 1962.
6. "A Bibliography of American Doctoral Dissertations in Linguistics : 1965–67, JoKovich, Nancy, Arlington, Centre for Applied Linguistics, 1975.
7. "DATRIX II Service" is a computerised facility.

8. "Dissertation Abstracts International" Ann Arbor, Michigan University of Microfilms, 1935 (Published monthly).
Section A: Humanities & Social Sciences
Section B: Physical Sciences & Engineering.

9. "Dissertations in Linguistics 1957-64", Shaughnessy, Amy E. Washington, Centre for Applied Linguistics, 1965.

10. "Doctoral dissertations on South Asia 1966-1970", Shulman, Frank J. The University of Michigan, Centre for South and South Asian Studies, 1971.

11. "Doctoral research on Russia and the Soviet Union", Dossick, J. J. New York, New York University Press, 1960 (Updated and issued periodically as a supplement to "Slavic review").

12. "Guide to bibliographies of theses in the United States and Canada", Palfrey, J. R. and Coleman, H. E. Chicago, The American Library Association, 1940.

13. "Guide to lists of Masters theses", -Black, O. M. Chicago, The American Library Association, 1965.

14. "Guides to theses and dissertations: An annotated International bibliographies", Reynolds, M. M. Detroit, Gale Research, 1975.

15. "A List of American Doctoral dissertations printed" Washington D. C., The Library of Congress, 1912-1938, Ed. by Charles A. Flagg. Published annually.

16. "Masters abstracts and theses" (Quarterly) Xerox / University Microfilms Inc.

17. "Modern Language theses accepted in the Universities of Great Britain and Ireland during the year 1956." YWMLS XVIII, 1956, P. 579-594.

18. "Research in Progress in the modern languages and literatures", Lindemann, Louise, PMLA LXXIII (2), 1958, P. 45-93.

The sales catalogue of University Microfilms and Micro-Methods which reproduces thesis in various form of Micro-reproductions are also a contribution to the bibliography. Lastly "DATRIX II". a computerised data base for American Academic theses, which is made available as an individualised search facility to users on demand.

In the United Kingdom effective bibliographic control was not achieved until 1950. Bibliographies and other means of access have been totally inadequate.

These are the few bibliographies of theses/dissertations:

1. "Index to theses accepted for higher degrees in the Universities of Great Britain and Ireland and the Council for National Academic awards" 1950-(Formerly issued as an Annual, since 1976 published quarterly) ASLIB.

2. "Ketrospective index to theses of Great Britain and Ireland 1716-1950" 5 vols. Oxford, European Bibliographical Centre, 1975.

In India, in the recent years only, a few institutions have taken up the compilation of bibliographies of theses. Following are the bibliographies of theses by Institutions in India, Humanities and Linguistics in specific.

1. "A Bibliography of Doctoral Dissertations accepted by Indian Universities, 1957-1970".

   a. Assamese, Bengali, Gujarathi, Marathi, Oriya and Punjabi.
   b. English, Chinese, French and German.
   c. Hindi
   d. Kannada, Malayalam, Tamil and Telugu
   e. Pali, Prakrit and Sanskrit
   f. Urdu, Persian and Arabic
   g. Humanities.

All are published by Inter University Board of India in the year 1974 excepting f. and a. which are published in the year 1975.

2. "Bibliography of doctoral dissertations, 1975-76, Social Sciences and Humanities, New Delhi, Association of Indian Universities, 1977.

3. "Bibliography of doctoral dissertations 1970-1975: Social Sciences and Humanities, New Delhi, Association of Indian Universities, 1979.

4. "Bibliography of doctoral dissertations, 1976-77: Social Sciences and Humanities, New Delhi, Association of Indian Universities, 1979.

5. "Bibliography of doctoral dissertations, 1977-78 : Social Sciences and Humanities, New Delhi, Association of Indian Universities, 1980.

6. "Bibliography of theses in the subject of Gujarati language and literature, *Pandya, N. I. *upto 1970 Bharatiya Vidya Bhavan, 1981.

7. Catalogue of theses submitted to Annamalai University, Annamalainagar, Annamalai University Library, 1979.
8. "Classified bibliography of linguistics dissertations on Indian Languages", Shankuntala Sharma, J. Mysore, Central Institute of Indian Languages, 1978.
9. "Dissertations on Tamilogy", Thomas, Annie, Madras, International Institute of Tamil Studies.
10. "Indian Dissertation Abstracts" Quarterly journal, ICSSR, New Delhi.

Few other Universities have brought out the list of theses submitted to their Universities in memeographical form.

Useful bibliographical tools cannot be developed unless individuals, Institutions and Universities extend their full co-operation regularly, as a matter of routine, bringing all the necessary information to the notice of the organizations concerned for the compilation of such tools. Specialized subject bibliographies of theses and dissertations still remain a weak link in the chain of bibliographical control. Fortunately attempts are being made to fill the gap by a few Institutions specialising in the subject area. To cite just one or two "Classified bibliography of linguistic dissertations on Indian Languages" published by CIIL, Mysore, 1978. This bibliography covers 1192 dissertations which are primarily doctoral, which includes Ph. D. & D. Litt. Some may be post doctoral dissertations and dissertations leading to M.A., M. Litt. and M. Phil. which are listed separately. Titles include not only those for which the degrees have been awarded but also those which have been submitted and which are in progress. The last point covered i.e. "In progress" is very important, because it helps to avoid duplication in selecting topics for research by scholars in future. As the title suggests the arrangement is in classified order. The Appendix include, Indexes to Scholars, Languages and Universities.

In social science they have gone one step further by preparing-

a. "Synopsis of Doctoral theses in social sciences 1955-75, Karnatak University, Dharwar, 1978.
b. Abstracts of dissertations in social sciences 1920-1969, by S. A. H. Haqqie, New Delhi, Sterling Publishers, 1979.

Availability of theses :

The bibliographic control depicts what has been done in a particular area.

Where it is available:

As said earlier usually one or two copies will be deposited in the University Library/Institute to which the thesis has been submitted.

In 1954 SCONUL (The Standing Conference of National and University Libraries) produced a four point scheme:-

a. At least one copy of every thesis accepted by the University should be deposited in the University Library.

b. Subject to the consent of the original author every thesis should be available for loan.

c. Subject to the author's consent, every thesis should be available for photocopying.

d. At the time of the submission of the thesis, authors are asked to give their consent in writing to b. and c. and a copy to their consent statement inserted in the deposit copy of their thesis.

Only U. K. and U. S. have followed the SCONUL scheme to certain extent.

In U. K. every thesis should be deposited in two copies in the Library; one for the archives and the other for dissemination purpose like circulation, Inter-Library loan, photocopying etc. In lending the thesis, British libraries are generous. "British Library Lending Division microfilms the thesis for lending purposes. It can get all the thesis announced in "Dissertations Abstracts International part A and B".

In United States, they have gone a foot ahead. They bring out the thesis in Microfilms. It is a must for the candidate to meet the expenses of taking the negative microfilm copy by the University Microfilm International, which they use as a master copy for reproduction as and when there are requests and also give the copyright permission to them. Firms such as Micro methods and University Microfilms are issuing under license number of theses in one or the other various forms of Micro-reproduction.

Libraries in other countries are so rigid wherein the theses are kept only for reference purpose and not lent out on interlibrary loan. In India also, this was experienced when the Central Institute of Indian Languages (CIIL) undertook to get the theses all the Universities working in the field of Language and Linguistics, on loan for microfilming in the Institute.

In India two Institutions are working in this area, one is CIIL, completely devoted for Linguistics and allied fields and the other is Social Science Documentation Centre (ICSSR).

CILL's Part in Acquiring the Thesis:

CIIL acts as a clearing house of information in Linguistics and language related areas in India and abroad in fulfilment of one of its functions.

As a first step a decision was taken to keep various theses on Indian Language and Linguistics on microfilm in the archives of the Institute.

To achieve this, the Institute requested the University Grants Commission for a standing arrangement to send all theses for microfilming to the Institute. But some of the these may not reach the U. G. C. because those scholars who would not take any scholarship from UGC need not give a copy to them. The only way out to have access to all these theses was to write to the Registrars of various Universities which had the departments where research in Linguistics and allied fields were undertaken.

Once a thesis is submitted in India, the first refusal right is that of the University. Hence an authorization proforma was prepared wherein permission was accorded to microfilm dissertations and send along with the letter from the Director of CIIL, to the registrars of various Universities in India, requesting for copies of Ph. D., M. Litt. and M. A., dissertations in Linguistics and language related areas approved by that University.

Few Universities did not agree to send the thesis as they were treated as reference materials.

Few Universities put a clause stating that the original author's permission had to be obtained for microfilming. Without the authors correct address, the permission could not be obtained, since they had left the University.

Some libraries suggested that since they had the xeroxing facility they could send the zerox copy only instead of sending the thesis on loan by charging Re. 1/- per page, which was a very costly affair and had to be given up.

Executive Council of the Delhi University accepted the proposal of microfilming the theses by CIIL, subject to the following conditions .-

1. That the copyright should continue to vest in the Ph. D., candidates after the approval of the Ph. D., Thesis for the award of degree.
2. That any arrangement for microfilming should be between the candidate and the individual Institution desiring the microfilming.

Inspite of the above said drawbacks the Institute made it's fullest effort in getting the thesis microfilmed. Even the theses submitted in 1984-85 in Linguistics and allied fields are available in the Institute on microfilm.

It is proposed that the Institute produce microfilm copies available to other Universities, Institutions of interested individual scholars on nominal charges. This will help research work in various parts of the country and also avoid duplication, waste and plagiarism.

In order to enrich its collection in dissertation, apart from microfilming within the Institute, it has also acquired theses of its interest from University microfilms, both in book and microfilm form. And also published works from M/s Garland Publishers, New York, under the series "Outstanding dissertations in Linguistics".

Another institution in India doing commendable service in the promotion of usage in dissertations is Social Science Documentations Centre (ICSSR). It has devised a scheme to create a document base of dissertations. Under this scheme, the doctoral scholars are invited to deposit a copy of their thesis to the ICSSR along with its abstract. The ICSSR will pay a token money of Rs. 400-00 to the scholars. It has so far collected about 2000 theses. It has six centres at Bombay, Calcutta, Chandigarh, Delhi, Hyderabad and Shillong and all the Centres are authorised to purchase a copy of the theses, in their respective region. To solve the space problem it has started microfilming the theses. At present it has consultation facility. In near future, it provides microfilm or photocopy on loan or purchase.

Publications and Duplications

Great gaps yawn between where knowledge is located and where that knowledge ought to be if it is to be used. Publication is one way to narrow these gaps.

In United States and U. K. reprography has revolutionised the availability of theses. In India and other developing countries it has a long way to go.

The usage of published theses seems to have demand, which is proved from the citation analysis conducted in the field of Linguistics. For example: S. K. Chatterji's "Origin and development of the Bengali Language" and Bh. Krishnamurthi's "Telugu Varbal basis" got the 6th and 9th place respectively out of 2044 books cited. However all the theses cannot see the light of publication. In case of Science and technology, theses are shorter than that of Humanities/Social Sciences i.e. 25,000: 80,000 or even 1,00,000 words respectively. Science can easily fall into the publication trap, whereas the latter is too lengthy and requires a larger capital investment in production. All the theses may not have world wide sale, because the interest itself is too much limited.

Few Universities publish the theses through the University Publishers which are established with no other original purpose than to publish material prepared in the University. Universities have traditionally used theses as a major source of material for their publishing programmes. Since the number of students submitting the theses have fabulously increased, it is difficult for the publishing channels to cater more than a fraction of the total output.

Duplication

In this vogue, modern methods in Photocopying comes so handy. Microfilming is economical. Especially microfiims in rolls are very useful medium for the storage of material. From it xerox copies also could be made for reference purposes and inter-library loan. Still cheaper and handy is the microfische cards which can be posted through ordinary postal cover when asked for inter-library loan. One sheet of 6"x4" dimension can accommodate 90 pages of typescript. Even the microfische reader is cheaper than that of microfilm. Varieties of portable Microfische readers have come in modern days.

Conclusion

Ph. D., was considered a pinnacle of achievement, which is the outcome of an individual scholar's concentrated effort for two or more years in working on a single topic. Hence it can be expected that it is a significant contribution towards the subject. Therefore efforts are to bc made to make this knowledge easily available to other scholars interested in the field of study.

Though CIIL is making all efforts to store the theses in microfilm and make them available to the researchers, there is not much of a demand to make use of the facilities offered. The bibliography of "Dissertations in Linguistics and on Indian Languages"

which contains the CIIL holdings of theses/ dissertations in microfilm, xerograph and typescript is published.

If the scholars voluntarily offer their thesis for microfilming in the CIIL, it could facilitate the Institute in achieving its goal of becoming the repository of dissertations in Linguistics and allied fields. So that all the theses in Lingistics and allied discipline would be available at one place. Further it also suggests to prepare an abstract of theses available in CIIL if there is adequate demand for it.

The Universities in India should be more co-operative and liberal in lending the theses for non-commercial but research and repository purposes.

India is yet to have publishers such as "University Microfilms", Michigan and "Garland Publishers", New York & London which work exclusively for dissertation and have an International market.

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International Journal of Dravidian Linguistics

COMPUTER AIDED TRANSLATION - A CASE STUDY

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Machine translation – is it possible?

The answer could be "Yes" and "No". A person when he translates uses his whole knowledge and experience in the source and target languages. If this knowledge and language experience of an expert translator could be abstracted and converted into physically accessible object and fed into the computer memory the first answer would be correct. But how much is its feasibility? One has to try and see.

It is common knowledge today that machine Translation systems are being developed in India and abroad and they are being effectively used in translating scientific literature. Scholars in the field agree on the point that computerised translation of scientific language is possible because of its stereotyped vocabulary and sentence structure. Machine translation of creative writings is out of question today.

Efforts are being successfully carried out in getting the translated material printed in the script of the target language. This Indian language script generation is effected through the dot matrix facility of the computer. Language is under constant change. When feeding it to the machine we have to freeze it at one point of time. Generally in a computerised translation the following factors are involved.

(1) Preparation of bilingual dictionary with grammatical tags.

(2) Preparation of Analysis programme.

(3) Transposition program.

(4) Grammatical tag replacement dictionary.

The case under study is the translation of a text in English to Malayalam. The text chosen is not from scientific literature but an extract from ordinary English prose. Following is the procedure adopted to carryout the work.

2. Procedure

2.1. Glossary:- In the glossary, Malayalam equivalents for the English words are entered in phonemic script (Roman). Both upper case and lower case letters are used for transcription to avoid diacritic marks. To start with, there were 17 nouns, 3 pronouns, 20 verbs, 3 adjectives, 4 adverbs, 3 articles and 6 prepositions as entries in the Glossary. In the glossary, words were listed and not the morphemes. These words were classified under different heads and this information is stored in the memory. The combination possibilities of NPs (17 nouns and 3 pronouns) and VPs (20 verbs) are tested by generating the sentences of the type NP + VP. With all possible combinations the computer generated 400 sentences. Out of this the majority of semantically incorrect sentences were eliminated by the rule that sentences of the type NP (+anim.) +VP alone are acceptable and the rest are to be ignored. When this rule was applied 100 sentences only 70 sentences were acceptable. The following structures were found unacceptable in Malayalam.

1. NP + be (copula)
   Eg. addeeham aanu 'He is'
2. NP + VB (-uka)
   Eg. addeeham ishTapeTuka 'He like'
4. NP + Vb. meaning 'to feel' (+ involutary, + /-mental)
   Eg. addeeham toonni 'He felt'

The above listed structures are unacceptable in Malayalam because of the following reasons.

1. The copular verb in Malayalam requires two NPs.
2. A sentence generally ends in Vb + tense marker and not in Vb + uka or the verb stem as such.
3. Certain verbs like toonn 'to feel' requires a dative NP (ie. NP + Dative case marker) in the subject position.

2.2. Pronouns

Under pronouns three entries were given-he, him and his. When 'his' follows 'he' in a sentence, the equivalent of 'his' in Malayalam will be replaced by the pronoun 'tanRe'. The English sentence:

(1) Eng. / He did not like his school life / was first translated to Malayalam as follows :

(1) Mal. / addeeham addeehattinRe skuuL jiivitam ishTapeTuka/
By instructing the computer to translate 'his' as 'tanRe' whenever it occures as the non-initial member of a sentence with a subject 'he', the following translation was obtained.

(1) Mal. addeeham tanRe skuuLjiivitam ishTappeTuka

he (self) school life like

In the above sentence the verb is not finite and in Malayalam a complete sentence will not end in a non-finite form. Moreover the program was for simple sentence with a single verb and the above sentence has more than a verb:-

a 'do' verb — did
a negative verb — not
and an infinitive form — 'to like'

The roots and affixes were not classified and entered in separate groups in the dictionary, with the rules for combining them. Hence the verb 'did-not-like' was treated as a single unit, joining them with a hyphen. The resultant sentence is an acceptable translation.

(1) Mal. addeeham tanRe skuuLjilivitam ishTapeTTilla.

he his schoollife did-not-like

2.3. Case endings

The whole text was converted into simple sentencees of the form NP + VP/NP + VP (NP + VP + NP) and the different case endings were listed. Cases were specified in the source language by the symbols N,A,D,I,S,G,L as follows:

	Eng.	Mal.
1. Nominative	NP-N	NP-O
2. Accusative	NP-A	NP-e
3. Dative	NP-D	NP-kku
4. Instramental	NP-I	NP-konTu
5. Sociative	NP-S	NP-ooTu kuuTe
6. Genitive	NP-G	NP-nRe
7. Locative	NP-L	NP-il

With this instruction, while feeding the source text to the computer every word should be marked with an appropriate symbol or a O in the absence of any case ending.

Otherwise the machine will take the last letter as the notation for case and an incorrect sentence may result.

Eg. For translating the word HIMALAYA the correct input is:
HIMALAYA → HIMALAYA-e

The following rules are applicable to case relationship.

1. Wherever a preposition (expressing case) precedes the noun it should be marked as O and not by the case symbol.

Eg. to + NPD → NP + kku kku
It should be either

to + NP → NP + kku or
NP + D → NP + kku

2. 'M/m' ending nouns in locative case in Malayalam will delete the last character of the word and take the suffix -ttu. The preposition and case suffix will get nullified.

Eg. to QUILON → to KOLLAM → KOLLAttu

3. For nouns other than 'M/m' ending in the locative case (i. e. NPL) preceded by a preposition' 'to' (kku in Mal.), the preposition 'to' will be ignored and only the locative suffix gets added to the noun.

Eg. (5) Eng. He went to school ⟶
Mal. addeeham skuuLil pooyi.

4. Whenever the two prepositions 'to' and 'with' occurs in the same sentence, 'to' should precede 'with' while entering the source text.

Eg. (6) Eng. He went to school with his father, and not He went with his father to school.

5. For a word with locative case ending its equivalent in Malayalam will be relocated immediately before the verb phrase.

i.e. (6) Mal. addeeham tanRe acchanooTukuuTe skuuLil pooyi.
he his father with school went

7. With the available program sentences of the type:

(7) Eng. / He was born in Calcutta in 1861/cannot be processed correctly. The output we get is:

(7) Mal. addeeham 1861 Calcutta il il jeniccu
he in in born

instead of

(7) Mal. addeeham 1861 il Calcutta il jeniccu
he in in born

2.4. Poly semantic words

Multiple meanings are indicated in the dictionary by marking the words with numbers.

Eg.	*Eng.*		*Mala.*
	took 1	—	eTuttu
	took 2	—	kuuTTikonTupooyi
	is 1	—	aaNu
	is 2	—	unTu
	some 1	—	kuRaccu
	some 2	—	cila

The rule which places the casal endings immediately before the verb created a problem in the case of genitive case. Unlike other other cases the genitive case expresses the relation between two noun phrases and the genitive case marker occurs in between two nouns and is not juxtaposed to the verb. Hence to translate the sentence:

(9) ENG-His father took him to the village of Bolpur– was a tough task. The translation came out as follows:

(9) MAL–addeehattinRe acchaN addeehatte
1 2 3

gramattu Bolpur nRe/enna KuuTTikonTupooyi
4 5 6 7

The real problem was to shift the position of unit no. 6 in between 4 and 5. Moreover in genitive phrases the two NPs should be permuted to get the correct translation in the target language. For example the accepted translation of sentence (9) is:

(9) MAL-addeehathinRe acchaN addeehathe Bolpur enna/nRe
his father him Bolpur

graamattu kuuTTikonTupcoyi.
village took

Similarly, the sentence:

(10) ENG–Rabindranath Tagore is the greatest poet of Indaia- was translated as:

(10) MAL-Rabindranath Tagore eeRRavum Valiya kavi
1 2 3 4 5

indianRe aaNu
6 7

single word (by hyphenating the two words) for convenience of reordering the words. Thus the following form is obtained which is acceptable.

(10) MAL-Rabindranath Tagore indianRe eeRRavam-Valiya kavi aaNu.

2.6. Conjunction

Conjunctive sentences of the type

(11) ENG-Rama went to his house and took Sita.

have (verbal) participle constructions in Malayalam as equivalents :

(11) MAL-Raman tanRe viiTui pooyi siitae kuuTTikonTupooyi in the program these conjunctive sentences are treated as two separte sentences Thus we get ⟶

(11) MAL-raama addeehattinRe viiTuil pooyi. Siitae kuuTTikoNTupooyi.

Similarly for sentences connected by 'when' - The equivalent in Mal. is 'appool'

E.g.

(12) ENG-He felt joy when Rama took him.

Complex sentences of the type (12) sets reordered when translated to Malayalam: The subordinate clause will preceede the main clause in Malayalam.

i.e. Main clause + Sub. clause ⟶ Sub clause + Main clause.

E.g.

(12) MAL-raama addeehatte kuuTTikonTupooyi appooL. addeehamku santhoosham toonni.

2.7. Proper nouns:

Words and marked with a preceeding '#' sign will be carried over as such while translating. Proper nouns are entered this way:

£ RABINDRANATH ⟶ RABINDRANATH.

£ BOLPUR ⟶ BOLPUR.

Numbers will be carried over as such.

18610 ⟶ 1861.

About 100 sentences framed out of the glossary provided were tried for different structures and the program gave out correct translation. Whenever there are two verbs in a sentence in the source language only the second verb was translated and the first one was left out. It is because the Dictionary is organized in a very simple way and also the program has to be designed for taking care of the above structure.

ENG-He was known as a poet
1 2 3 4 5 6

⟶

MAL-addeeham oru kavi ennu aRiyappeTTu
1 5 6 4 3

(2 and 3 are verbs. The equivalent of 2 i. e. 'was' is not available translation).

Morphophonemics and the various inflectional forms of the verbs are not attempted in this work.

Limitations of the work

1. Arrangement in the glossary is not alphabetical. Words are grouped under different grammatical categories. In the glossary words are listed instead of morphemes. This is not economical from the point of memmory space. Words having more than one equivalent in the target language is listed repeatedly (e.f.2.4). To overcome these limitations, the software can be modified to account for the morphology and morphophonemic areas of the languages under study.

2. Pre-editing & Post editing is needed for choice of the alternatives in case suffixes. Also because both upper case and lower case letters are available in the output without discrimination.

The problems of machine translation are not so much of the machine as of translation. The procedure described may not be applicable to translate all the available structures of the language but designed for the limited text under study. This software for computerised translation is not a fool-proof method but an attempt of a novice in the field. However it would fall in line with the Machine Translation system developed at the computer centre, Thanjavur University and some of the works at I. I. Sc. Bangalore. The software can be improved upon to contain voluminous data.

TAMIL UNIVERSITY, THANJAVUR
MACHINE TRASLATION SYSTEM-ENGLISH TO MALAYALAM

SOURCE TEXT IN EGLISH

#RABINDRANATH0 #TAGORE0 IS0 THE0 GREATEST0 POET0 OF0 #INDIA0.
HE0 WAS0 BORN0 IN0 #CALCUTTA0.
HE0 WAS0 BORN0 IN0 18610.
HIS0 FATHER0 WAS0 KNOWN0 AS0 #DEVENDRANATH0.
#RABINDRANATH0 DID-NOT-LIKE0 HIS0 SCHOOL0 LIFE0.
HE0 CONSIDERED0 THE0 SCHOOL0 ROOM0 AS0 A0 PRISON0.
#RABINDRANATH0 FELT0 JOY0 WHEN HIS0 FATHER0 TOOKS0 HIM0 TO0 THE0 VILLAGEL OF0 #BOLPUR0.

HE0 BUILT0 AN0 ASHRAM0 THERE0.
HE0 CALLED0 THAT0 AS0 #SANTHINIKETHAN0.
#RABINDRANATH0 WENT0 TO0 THE0 #HIMALAYAML WITH0 HIS0 FATHER0 AND0 SPEET0 SOME0 MONTHS0 THERE0.
HE0 STARTED0 A0 SCHOOL0 AT0 #SANTHINIKETHAN0.

TRANSLATED TEXT IN MALAYALAM

RABINDRANATA TAGORE—INDIA nRe/enna eeRRavum-valiya kavi aaNu.
addeeham CALCUTTA il jeNiccu.
addeeham 1861 il jeNiccu.
addeehettinRe acchaN DEVENDRANATH ennu aRiyappeTTu.
RABINDRANATH addeehettinRe skuuL jiivitam iShappeTTilla.
addeeham—skuuL muRi oru jeyil ennu karuti.
addeehettinRe acchaN addeehatte—BOLPUR nRe/enna graamattu kuuTTikontu pooyi appooL.
RABINDRANATHku santooSham toonni.
addeeham oru aassramam aviTe paNitu.
addeeham atu SANTHINIKETHAN ennu viLiccu.
RABINDRANATH—HIMALAYAttu addeehettinRe acchaN ooTukuuTe pooyi.
cila maasaNGaL aviTe cilavaYiccu.
addeeham oru skuuL SANTHINIKEIHAN ilveccu tuTaNGi.

Acknowledgement

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International Journal of Dravidian Linguistics

A BIO-NEUROLOGICAL DEFINITION OF THE ULTIMATE UNIT OF SPEECH – THE ALPHA – PHONOID

C. R. Sankaran

I have propounded my Alpha-Phonoid theory leading to the determination of the Ultimate Unit of Speech, through the attempt at the outset to transfer the cantor-Dedekind continuum concept to any consonant vowel configuration to continuous speech.

I have pointed out then this transference of Cantor-Dedekind continuum concept to any consonant-vowel-configuration in natural speech breaks down, as by no possible experiments at the acoustical level the change point between the consonant and the vowel is determinable, thereby showing that speech is only a process of the totality of the consonants and the vowels having no absolute distinction.

I have pointed that the vowel and the consonant are different aspect of one and the same process as now being confirmed by experiments on synthetic vowels produced from playing back *hand-painted* spectrograms, wherein, when an initial transition of the formants-bands is painted so as to curve down or up to the straight formants corresponding to the vowel, and different consonant is heard to accompany the vowel initially, depending upon the rate and manner of the formant transition that is painted.[1]

It has also been shown that the 'consonant' is a concealed movement within a vowel and in its perfect or ideal state is silence.[2]

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[1]C. R. Sankaran – Process of Speech – p. 52. 1963. Cf. also Woodnorth and Schlosgberg–Experimental Psychology – Brown University and seventeen contributors – London – p. 253 Willard R. Thurlow Analysis of cues to speech sounds by synthesis pp. 253–254. Transition cues in spectrograms – Methuen and Co. Ltd., London.

[2]C. R. Sankaran – Determination of the Ultimate Unit of Speech – Phonetica – 14, 1966 p. 87.

The Alpha-phonoid pin-points the '(ultra)' – elementary constituent of perception extending in the time-series over what may be called *duration*, which is suigeneris.[3]

The speech-events forming any consonant – vowel configuration are superposed aggregates of observation on *time-instants*, each speech event having one to one correspondance with on instant in *time*. Therefore, when the transference of the Contor-Dedekind continuum concept breaks down with regard to any consonant vowel configuration, it equally breaks down with the *time-continuum* too. The Dedekind 'cut', philosophically speaking, is really 'a moment out of time' experienced 'within time' and the *time-instants* are "continous creation ... continually discontinued."[4]

That *time* can not be assimilated to cantor-Dedekind type of 'continuity', at one deeper level, means that out of overlapping events an immediate consciousness, different time-order is to be constructed other than the normal linear order, involving 'before' and 'after'.

We are perforce compelled to resort to a continuum of a higher type which is less restricted than the cantor-Dedekind concept. This continuum is known after the mathematician Veronese and Hilbert.[5]

My collaborator N. K. Patil and I have earlier made just an attempt towards to a purely theoretical picture of neuronal activity in the brain in speech-perception in the light of Veroneseam or Hilbertian continuum, demonstrating by the well-known *reducdio ad absurdum method*.[6]

I have named this (ultra)-elementary constituent of perception as 'subjective perception' which is really the 'motor' perception following the '*interval*' or 'gap' (we may perhaps, be able to establish possible or even probable links between the absents of the change-point in the acoustical picture of the consonant-vowel configuration on the one hand and the 'gap' between the sensory perception and

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[3]C. R. Sankaran – Cf. A philosophical Analysis of the Alpha-Phoneme Theory in relation to the problem of speech structure. Bulletin of the Deccan College Research Institute, Pune Vol. 14, p. 94–1955.

C. R. Sankaran and N. K. Patil Alpha-Phonoid and Alpha-Phoneme-Phonetica – 17, p. 15 Foot Note 1, 1967.

[5]For a full discussion on Veronesean or Hilbertain continuum – see C. R. Sankaran–Process of Speech – pp. 29.

[6]C. R. Sankaran and N. K. Patil – Alpha-Phoneme and Alpha-phonoid – Zeitschrift for phonetik – sprachwissenchaft und kommunikationsforschung Akademic–Varlag Berlin 1970, pp. 215–221.

the motor perception on the other, at the brain level after the 'sensory' perception in the corfex, arising out of an external stimulus-audiotory or visual. I have also indicated the experimental investigations towards the determination of the Ultimate Unit of Speech.[7]

Liberman *etal's* proposal is that an interval model of speech production is used for phonemic analyses. This proposal is based on observations, indicating that phonemic discrimination is more closely correlated with phonemic articulation rather than its acoustics.[8]

G. A. Ojeman refers to the conclusions reached about the common sites in the brain being correlated to the sequencing oral movements with auditory phonemic discrimation. These findings seem to provide a confirmation, at the 'brain-levels' of the Motor-Theory of speech-perception. I take here the liberty of quoting G. A. Ojemann "our findings indicate that there is common cortex in both senquencing motor movements and in the decoding of auditory input."

Ojeman.himself observes that an alternative explanation is also possible for his finding. For, he says, "of course, this association of sequential motor movements and speech perception may have the other way around with the common area of contex initially being involved in detecting meaningful sounds, and then matching sequential oral movements to those sounds as speech out-put developes."[9]

We have already shown the specific condition when the 'Motor Theory of Speech' perception may hold good.

The main tenets of the Alpha-Phonoid theory are :-

(1) Both the production and perception of speech and music at their ultimate level are "Continuous-discontinuous" and

(2) "Activational and Motivational" aspects are present.[10]

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[7]Experimental investigations towards the determination of the ultimate unit of speech. Brain and Language teaching Dravidian Linguistics Association No. 38 - Trivandrum, 1981 pp. 14 - 18, 1981.

[8]Liberman et al perception of the speech code - psychological Review - 74 (431-461 : 1967) Leninggred - 1981 - Rangoon Press, pages 1 to 9.

[9]G. A. Ojamann - Identification, component systems, for syntax, verbal memory, focussing attention under system common to sequencing motor movements and phonemic discrimination - psychophysiology !- Today and tomorrow. Editor W. P. Bechtereva - Academy of Medical Sciences.

See also the concluding chapter in my forth-coming book. "The Ultimate Unit of Speech - Theory and Experiment."

[10]C. R. Sankaran and N. K. Patil, continuity in speech perception - Indian Linguistics, Vol. 30 pp. 182, 1969.

Alpha-Phonoid and Alpha - Phoneme - Phonetica, 17, 15-23, 1976.

The definition of the Alpha-Phonoid goes further, in order to distinguish human speech from animal calls so as to include the psychological component at high levels of obstration and integration. In terms of the brain this points to the convergent structures of the Limbic System, which is sub-contical and accessible only by implanted depth electrodes.

Here we refer to R. G. Health's recordings the electrical activity in Limbic structures in humans directly correlated with emotional thought and recall, but intra-cranial recording is not a generally applicable techniques in humans.[11]

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BOVIS OF KASARAGOD AND MANGALORE

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Bovis are fisher folk. They are called as Boyis also. In the coastal region from Neleshwaram of Hosdurga Taluk in Kerala upto Someshewara of South Kanara District of Karnataka this set of people are found. But they are found thickly populated in the coastal region of Uppala, some 20 K. M. north of Kasaragod to Uccila which is about 15 K. M. South of Mangalore. Apart from this, some of the families of this set of people are settled in different parts of South Kanara District. Fishing is their main occupation. In puranic days, besides fishing they were the drivers of the chariots of the kings. Later they used to do the profession of palanquin bearing of the kings and chiftains. Even in modern days these people carry the planquin of God in the procession of temple festivals.

Bovis are called as mooyar (plural) mooyon (singular) in their language; The term mooyon can be identified with mukkuvan (Malayalam) and mogaviira (Kannada) who are the fishing communities of the concerned region. Interstingly, these two communities are not found in the coastel region where the Bovis are thickly populated, i.e. Uppala to Uccila. Mukkuvas are found in the Southern part of Bovis region[and Mogaveeras are found in the northern part of this region. In mooyon's tongue the Mogaveeras are called as Tulu mogeyar (mooyar) and they call themselves as malaam mooyar.

Bovi is the referencial term to these mooyar. The reason for calling them as Bovis may be their occupation of chariot driving. The chariot is called as bannḍi and its drivers were called as Bovas. The same Bovas are called as Bovis or Boyis. In the epics Ramayana and Mahabharata we get lot of references about these Bovas.

Bovis are not natives of this place. They are migrated people from North. In olden days, in addition to chariot driving, they

were occasionally warriors also. Since they were peculiarly trust-worthy servants, they were engaged in household affairs and story telling in palaces. Thus some families in cluster are settled near and around the palaces. We can cite an example for this. Ballala kings were ruling in Vittla of South Kanara. Even now about ten families of Bovis are settled near the Vittla palace. Surely, this is a clear indication of their attachment to the kings.

Some might have migrated from North to South and settled down in coastal region where they undertook fishing as their main profession. These fisher folks have different names in different states. In Karnataka they are called as Bestha. Even in Andhra Pradesh also Bestha is a common term. In Andhra Pradesh they are even called as Boyis. Apart from Malaam Bovis there are some Bovi families in Moodubidre of South Kanara District, a few miles away from the coastal region. They speak Kannada as their mother-tongue. It is said that these families came from Mysore along with a king of Vijayanagara by bearing palanquin and settled down in that place. The Bovis, under our study have adopted a mixed culture i.e. they adopted the language and customs of Malayalees and food habits dress and hair style etc., of Kannada people of South Kanara. They are worshipers of Mother divine but they celebrate most of the festivals of Karnataka. There is no marital relation between Kannada Bovis and Malaam Bovis. There is an argument that these Bovis came from Coorg. For this, they mention that some of the customs and rituals of Bovis resemble with those of the Coorg people. Amritha Someshwara in his article on Bovis (Smaranike 1982) has mentioned that these Bovis might have migrated from Kerala to northwards. To support his arguments he mentions some reasons. Bovis are Bhagavathi worshipers. The stories prevailing with them on Bhagavathi, their antiquity, language, customs and rituals are identical with those of the Malayalees. Moreover he mentions that some of the containers used in religious ceremonies kept in some houses (Tharavad) resemble to those of the Kerala models.

Religion

Bovis are Hindus, mainly mother diety worshipers. Bhagavathi is their chief diety. Bovis have altogether 11 Bhagavathi temples in different places. These temples are managed by the Bovis only. Each temple has separate management of their own community people who come under the jurisdiction of each temple. They raise funds from their own people for the management of the temple.

The annual festival is called as Naḍavaḷi. All the families belonging to the particular temple will participate in the festival. Apart from that, the relatives of their families belonging to the other temples are allowed to participate in the festival. The Kaḷiyaatam an extra-ordinary festival held once in 10 years or 30 years will be attend to by all Bovis. According to them, the Bhagavathis are very powerful female Dieties. There is a popular story about the Bhagavathis of Adka (Someshwara). Some 500 years ago Rani Abbakka, the queen of Ullal wanted to test the Bhagavathi of Adka. Some special arrangements were made for this. And in that test the queen lost all her wealth. Finally the queen realised and surrended to Devi and regained all the wealth.

An interesting item of festival can be cited here. In Adka there are two temples. One is Somanatheswara temple and the other is Bhavathati temple. Somanatheswara temple is common to all community people of that region. But Bhagavathi temple is meant only for the Bovis. There is a connection in celebrating annual festival in Somanatheswara temple and Bhagavathi temple. In the first day of the annual festival, errecting the huge dwajasthamba is the duty and right of the Bovis. On aaraaṭu (idol bath at the end of the festival) day the procession starts from the temple. From the opposite direction another procession of Adka Bhagavathi along with other Bhagavathis (Sapta matrikeyaru) will go and meet Siva before the holybath. Then Siva and these Bhagavathis together take bath (as jalakeḷi). This system almost resembles with that of the Trichur aaraaṭu mohootsavam of Kerala.

Though Bovis are Bhagavathi worshipers, they are not against in worshipping any other gods. They go to all other general temples also. Especially they worship Thirupathi Venkataramana. In every house they place a Huṇḍi meant for Thirupathi and send it there once in a while, either they go personally or send it along with those who are going to Thirupathi. Also, they believe and worship ancesters (Pitrus). Every year they arrange annual function to family gods and pitrus.

People and Life

It is due to their profession Bovis live in mass in the coastal areas. Male members of Bovis are physically very strong and stout. They go for fishing. Female members look after the household affair sand they go to the villages for selling fish both raw and dried

carrying in large baskets. From there they collect paddy, rice and vegitables. Most of the Bovi families are poor. They used to grow jute to prepare net for fishing. Nylone nets replaced the jute nets in modern days. Educated Bovis are very less. Among the female members educated ladies prefer to for teachers training and become teachers. Among the male educated members some are teachers and a few are clerks. Degree holders are very very less. There may be two or three post graduate degree holders. There were one or two high officials like civil justice and Madras Government Secretary in the Bovis Community. Bovis are very sincere people. Some Bovis are settled in Bombay from this region for search of job. According to some old people, a few of the Bovis went to Bombay for the first time as casual labourers in ships which came from Bombay to Ullal by the end of the 19th century. After their settlement in Bombay others also started to go over there to earn more. Now the Bovi people keep it as a trend having acquired some basic qualification, to go to Bombay. Now more than 800 hundred Bovis are settled in Bombay. This new settlers have formed a strong Association which started functioning some 50 years ago. They collect money compulsorily from each of their members and sent it to their respective temples in their native place for annual festival and other expences in those temples. Maharastra Government have provided them the Kannada Schools. Bovis are hard working people. Ladies who went to villages for selling fish used to stay there for two or three days. In the village in one or two homes they keep very close contact, and in those houses they used to stay. The food article they collected from the villages, will be stored in those houses only. These stored items will be taken home by the help of their male members. These food articles they store at home for the use of odd months in the rainy season. Now a days going to distant places in the villages is very rare. Instead, they sit in the market places and sell fish. At the same time the modern ladies do not favour the fish selling business. Each family try to keep their own country boats. The fisher men's economic status will be counted on the basis of the boats they possess. Persian boats are introduced for fast fishing. The families which are financially sound enough would buy the Persian boats. Sometimes four or five families joint together and keep their own boats. Now in Mangalore they have their own union. By collecting shares they buy Persian boats. Under that union now they possess 250 boats. Almost all the families have shares in boats. When this Persian boats were introduced for fishing all the young men were attracted by this and they used to go for fishing only in the Persian boats.

Now the trend has changed. The youths are once again coming back to country boats. Similarly in olden days they used to grow jute plants. Even if they don't have sufficient land to grow they go to the near by villages and get land at low rent and grow their jute plants in the rented plots. Since it is well known that these fishermen were not at all cheating people the owners used to give them lands for rent without any records. The procuring of lands from villagers for cultivating jutes is mainly done by ladies because they have contact with the villagers. These fisher folk know how to process the jute, threading and nitting the nets. The men folk fully utilise the time other than the fishing time for making threads, nitting the nets, repairing the nets and boats, oiling the boate etc. Either male or female member of these fisher folk never go for any cooli work to other community people's houses eventhough they don't have enough means to live in.

Marriage

Bovis' marriage are conducted in the bride's house. The bride-groom will bring the sari and blouse to the bride. During the time of marriage the bride should wear this dress. The marriage will take place by witnessing the fire (agni saakṣi). The marriage with agni saakṣi is a Brahmanical system. But Bovis strictlv follow this, which may be a peculiar feature among non-Brahmins. After paaṇigrahaṇam the beteal leaves and an arecanut will be placed in their hands. On this arecanut a litted wicke will be placed. The bride's father will pour rice three times on their hands. Pouring water (jaladhaara) is a common system among Hindu communities. But puring rice (akki dhaare) is again the peculiar feature in Bovis marriage. Before Paṇigrahaṇam the bride-groom and bride are allowed to take stepping on the nademadi (Pradakṣiṇa), (naḍemaḍi is pure white lengthwise folded cloth placed on the ground around the maṇḍapam)along with Sumangalies who hold in their hands litted lamp placed on the brass plates.

In olden days there was a system of testing the bride-groom to know his capacity and personality. The testing is very easy. The bride-groom will be invited to the bride's house and served food. His personality has been judged on the basis of the quantity of the food that he eats. Divorce, remarriage and widow marriage are permitted. No dowry system prevails among Bovis. They assume that, getting dowry is below their dignity.

Physical feature:

Bovis are black in colour. But some exceptions will be there. They are very strong and stout about five to five and a half feet

height. Most of the ladies are black but some of them are very fair in complexion. Whatever be their complexion they are beautiful. Men wear short muṇḍus upto their knee and sleeveless shirsts during their working hours. And on other occasions ordinary muṇḍu and shirts. Men wear golden ear rings sometimes red or white stone fixed rings. Ladies wear saries and gold ornaments. While going for selling fish they wear country hats made out of arecanut leaves stem (paaḷa).

Habits :

Male members were showing interest in playing foot-hall. In the foot-ball team they usually stood top. Another interesting hobby they are engaged in is swimming. They conduct a number of swimming competitions. People from different parts of the coastal region were participating in the competitions. During leisure times in the nights especially in the rainy season ladies and children from the same house or neighbouring houses sit together and old ladies used to sing folk songs related to the stories of their Goddess, temple heros and their adventures in the sea etc. In olden days ladies were singing the kaḷari paaṭṭu. This oral tradition has almost disappeared in modern days. Reciting bhajana songs at home is a common practice among Bovis. Every day evening immediately after lighting the lamps at home children both male and female. sit in front of the God's pictures and recite bhajana Kannada songs. This bhajana songs are only in Kannada. In some auspicious day either in schools or in temples, there will be special bhajana function, where all male and female young and old are very much interested in seeing yakshagana a Kannada folk art of Kasaragod and Karnataka. Some of the male members take part in yakshagana. There were/are some famous yakshagana artists among Bovis. However, in modern days cinema has its influence in the life of Bovis also.

Death

Bovis believe in the life after death. So each conducts functions annually to give food to the died person's souls of their family. Dead bodies will be burnt with all customs. On the twelth day of the death there will be a function in which all the relatives will attend. Barber and washerman have an important role in that function. There will be common shaving/hair cutting in connection with the function. No barber of the Barber community will go to their function. So from the Bovis society itself a section is doing this duty. Bovis don't have the marrital relation with this section. Now this secti n of Bovis also hesitate to do this work. After certain ceremonies the relatives go to the place of cremation with some

specially prepared food articles. Placing them near the burnt place, they give their last respect to the died person. Returning from the the cremating place, they take bath. At the end of the function there will be a mass meals. On the 16th day night there will be a small function among the close relatives. By this function they mean that the died person's soul will join among the Pitrus. After this function that soul will be given food annually along with the Pitrus. From the day of death upto 16th day the persons of the house and close relatives eat only vegitarian food. The 16th day function is celebrated in full with non-vegitarian food.

Festivals:

There is no special festivals entirely to this community. They participate and celebrate all the festivals of the local area of their settlement like Onam, Dasara, Deepavali, Srikrishnastami, Ganeshachaturthi etc. They also participate apart from their own temple festivals, other festivals of their neighbouring temples. Their own temple festivals, will be more attractive to them and all the family members go to the temple during its festival time to attend the function.

Bovis in Modern days

Bovis are socially, economically and educationally a backward community. But the whole community aspires to raise their social status. Due to financial backwardness most of the Bovis find it difficult to send their children to schools. But some are very keen in educating their children. Some of the socially awakened generous Bovis join together and do service to uplift their people. Some of of the leaders came forward to establish educational institutions. In someshwara Uchila of South Kanara 'Uchila Bovis Upper Primary School' started some 60 years ago and in Uppala of Kasaragod District 'Aila Bovi Upper Primary School' are two educational Institutions under the management of Bovis. Now they formed a state level association called 'Deevara Samaaja'. Kerala Government is also generously helping them for better life. Recently the Government of Kerala issued an order including them in OEC. Now they can enjoy all the educational and other facilities enjoyed by S. C. and S. T. in Kerala.

Language

Bovis in their tongue called as moyor (moyon singular) speak a variety of Malayalam which they call as malaam. In Kasaragod and South of Kasaragod their language is very much similar to the spoken form of Malayalam of that region. But the coasta

region north of Kasaragod upto Someshwara and other places wherever this community people are found speak a variety of Malayalam which shows common features with Kannada and Tulu. Though they speak Malayalam until recently there was hardly any one who knew to read and write Malayalam in this community. When schools were established in different places of that region under the management of that community people, or and other managements Malayalam was not implemented in any schools, and they were all Kannada medium schools. The Bovis were/are educated only in Kannada. The educated Bovis speak Kannada outside the house with Kannada speakers. With Tulu speakers they speak Tulu. There are a few good writers in Kannada among Bovis. Similarly their food habit dress, culture, festivals including their ethnography are mostly similar to Kannada culture of South Kanara and not to Kerala culture. But their tradition and certain customs are similar to Kerala culture. Regarding language, they always show affinity towards Kannada. Now some employees and school children in Kasaragod are studying Malayalam. Though they speak Malayalam, they cannot read and write Malayalam. Due to this mixed reasons it is difficult to come to a conclusion as to which area they have actually migrated from. But it is clear that in Karnataka there is o fish catching community. They are called Besthas in Kannada language. A Section of the Besthas might have travelled from north to south through kodagu. These migrated Besthas who always kept contact with palaces to carry palanquin were called Bovis. Some Basthas who have settled in the extreme nort part of South Kanara retained their mother tongue Kannada and some others who travelled South East i.e. to the coastal area of Kasaragod etc. might have adopted the local language, Malayalam. Or a branch of Besthas might have travelled through Kodagu to the coastal area of Kerala and they might have adopted the language of that region and from there, they might have travelled again to the south east coastal area.

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