Dravidian Linguistics
An Introduction

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Foreword

Pondicherry Institute of Linguistics and Culture (PILC) is an autonomous research centre established by the Government of Pondicherry with a view to promote research on language and culture in the Union Territory of Pondicherry. The institute is seriously involved in research and publications. The research publications from Pondicherry Institute of Linguistics and Culture have always been appreciated for their quality and high standard. Prof. Kamil V. Zvelebil's *Dravidian Linguistics: An Introduction* is a further testimony of this. Prof. Zvelebil's dedication and commitment to Dravidian studies in general and Tamil Studies in particular are exemplary. His treatment of Dravidian Phonology, Dravidian structure, diachronic aspects and subgrouping all in a nutshell is quite comprehensive. Prof. Zvelebil has adequately dealt with the Dravidian contribution to the Indian Areal Linguistics. He has critically examined the speculation connecting Dravidian with Harappan, Uralaltaic, Elamite and Japanese. His present work is no doubt an excellent microscopic survey of Dravidian Linguistics in its length and breadth providing wealth of information for researchers. PILC has done a commendable job in bringing out Prof. Zvelebil's work as its publication. I have no doubt that this publication is a most valuable document explicating the trends in Dravidian Linguistics as on date.

N. MANIMARAN
Minister for Education,
Government of Pondicherry,
Chairman, Pondicherry Institute
of Linguistics and Culture

Pondicherry
April 30, 1990

Dedicated with all honour, obeisance and affection
to my former teachers, colleagues and students
all over the world.

Contents

Preface

At the risk of sounding immodest I wish to say this: I have been engaged in studying and later in teaching various Dravidian languages and Dravidian linguistics at a number of universities and institutions in Czechoslovakia, Germany, France, United States of America, India and Holland since about 1949. While Dravidian studies were in their infancy when I was a student at Charles University, Prague, and, consequently, my first doctorate had to be and was in Sanskrit, after the nineteen fifties one could say with Emeneau, "Dravidian linguistic studies flourish in this mid-century period . . . this is a field in which all the world is engaged . . . Detailed work, descriptive and comparative, old-style and transformational-generative, core studies and sociolinguistics, is written and published, in a surprising number of journal articles and books." What Emeneau—master of masters—wrote, or rather published, in 1971, is certainly true in 1989. Again with Emeneau, I can say, like he had, that I did not hesitate "to publish anything that I might discover, whether . . . literary, linguistic, ethnological, folk tale, or any combination of any of these", when it concerned Dravidian, particularly Tamil, Kannada, one of the 'tribal' languages of the Nilgiris (Iruḷa), or Dravidian in general. "Generalism" may not be too fashionable, but I am not ashamed of it, for I see language as part of the total culture, and a most important part at that. It certainly was not far from the practice of my original teachers in Prague, or from the practice of my models—above all, Emeneau himself. And so, I remember my teachers and masters "with all honour and obeisance".

During my teaching experience, I and my students have, though, noticed and regretted the absence of one thing: a first, basic introductory course of Dravidian linguistics, a simple and yet comprehensive introduction to the field.

The following text should be precisely this, nothing more and nothing less: it has been designed as an elementary, opening course of Dravidian linguistic studies for students of Indic linguistics, for South Asianists, as well as for students of general linguistics. Whoever wishes to proceed from the basic essentials to more complex inquiries and more detailed

descriptions, will find guidance in the last portion of this introduction, in the annotated list of further readings, brought strictly up to date.

I wish to express my deep appreciation and sincere thanks to the Governing Body of PILC, and in particular to the Director of the Institute, Dr. R. Kothandaraman, for their fast and ready acceptance of this work for publication. It is in our days an unusual and uncommon phenomenon that authors of scholarly treatises are encouraged by such rare efficiency and readiness from the publishers.

Wassenaar, Holland,
June 30, 1989

KAMIL ZVELEBIL

Introduction

1. India is a "nation of nations", with thirteen major languages recognized by the Constitution, forty-seven other 'important' languages, and many tribal tongues and dialects, each spoken by over 100,000 people; according to one estimate, with a total of 179 languages and 544 dialects.[1]

Within this bewildering variety, four major distinct language families (genetic stocks) are predominant: the Indo-European languages in two branches, Indo-Aryan and Iranian, the Dravidian languages, the Tibeto-Burman languages, and the Munda languages. Among the Dravidian languages, one language, Tamil, has been characterized as "one of the two classical languages of India"[2]; not to know its ancient literature "is not to know a unique and major poetic achievement of Indian civilization."[3]

According to the 1971 *Census of India* (which is unfortunately very disappointing), the Dravidian family of languages is spoken by 131 million people as compared to 107 million of the 1961 Census, registering thus an increase of over 22%. The estimate in the late eighties of this century is at least about 150 million. Every fifth person in India speaks a Dravidian language.[4]

The population figures of the Dravidian languages are given in the following chart (for justification of this sub-grouping, due mainly to Bh. Krishnamurti, see Chapter 4 of this work). Figures are given in millions.

[1] Busnani Rajannan, *Dravidian Languages and Literatures*, Madurai, 1973, p. V.

[2] A. K. Ramanujan, *The Interior Landscape*, Indiana Univ. Press, 1967, p.67.

[3] A. K. Ramanujan, *Poems of Love and War*, Columbia Univ. Press, 1985, p.ix.

[4] This count does of course not take into consideration Dravidian languages spoken outside the Republic of India (above all Tamil of Sri Lanka, Malaysia and elsewhere, Brahui spoken in Pakistan, etc.). The estimate for 1987, including these speakers, would be at least *150 millions* or more.

South Dravidian	*1971*
Tamiḻ	37.7
Malayāḷam	21.9
Kannaḍa	21.9
Koḍagu	.072
Toda	.000.9
Kota	.001.3
Iruḷa	.005.1
Tuḷu	1.16
South-Central Dravidian	
Telugu	44.76
Gondi	1.69
Koya	.212
Konḍa	.034
Kui	.051
Kuvi	.196
Pengo	.001.3
Maṇḍa	(not available)
Central Dravidian	
Kolami	.067
Naiki	.054
Parji	.030
Ollari	.009.1
Gad(a)ba	.011.2
North Dravidian	
Kuṛux (Oraon)	1.236
Malto	.09
Brahui	.3

2. The West first came into (known and datable) contact with Dravidian languages—in modern times[5]—in 1554; or, to be more precise, this

[5] The "West" came, of course, into its very first known and safely attested contact with Dravidian languages, particularly with Tamil, much earlier: in the era of the Roman Empire, when "Yavanas" (the Tamil name for Greek, Roman, and other Western overseas merchants, soldiers and foreigners coming from the West in general) established trade and political relations with South Indian kingdoms some two thousand years ago; cf. K. Zvelebil, 'The Yavanas in Old Tamil Literature', *Charisteria Orientalia*, Praha, 1956, 401–09.

date—55 years after Vasco da Gama landed at Calicut—may be regarded as the beginning of Dravidian studies in Western languages. In this year, Tamil, transliterated in Latin script, was printed in Lisbon, Portugal, in the first known printed book in the Tamil language. One should therefore describe in some detail the life and activities of the one man who should be recalled as *the* pioneer of Western cognizance of Tamil: Fr. Anrique Anriquez (b.ca.1520–d.6.2.1600); and of the fates of the first Tamil printed book.

Vasco da Gama arrived at Calicut (in today's Kerala) in 1498, and soon after that, the Tamil and Malayalam speaking parts of South India came into close contact with the Portuguese. The first European missionary active among the Tamils was perhaps a Navarre Spaniard, Francis Xavier (7.4.1506–3.12.1552) who landed at Goa on May 6,1542 and performed intensive missionary work in the name of the Societatis Jesu in Tamilnadu. He lived there for several months (particularly in Tuticorin), and in his letters he compares his mother-tongue, Basque, with "their mother-tongue... Malabar" (=Tamil). Oddly enough, centuries later, N. Lahovary, a Rumanian-French scholar, produced a sweeping but bizarre hypothesis connecting Basque with Dravidian (1963).

Due to the encouragement of Francis Xavier, the missionaries who followed him to the "Fishery Coast" tried to learn Tamil. Thus we know from a letter sent by Anriquez to the famous General of the Jesuits, Ignatius of Loyola, dated 31.10.1548, that Fr. Antoni Criminali "learnt to read and write this language which is very difficult and he understands it well and speaks it fluently".[6] However, we have no direct record of the Tamil learning of this man.

His successor in the Fishery Coast was the "father of the Tamil press" and perhaps the first person who translated in any real sense from an European language into Tamil, and who was the first Westerner to study Tamil intensively and in depth.

Anrique Anriquez was born at Villa Vicosa in Portugal ca. 1520, descended from Jewish parents. As ordained priest and member of the Jesuit order, he came to Goa where he remained till 1547 when Francis Xavier sent him to take charge of the Fishery Coast. There he spent the rest of his life and died at Punaicael (Punnaikāyal) on February 6,1600. He is buried in Tuticorin. He is better known in modern records as Henrique Henriques.

Anriquez was the first Western Tamil lexicographer, the first gramma-

[6] *Documenta Indica*, Romae 1948–1966, I, 279, quoted by S. Rajamanickam, *The First Oriental Scholar*, Tirunelveli, 1972, p.172.

rian of spoken Tamil, and the first translator from a Western tongue into Tamil. He collected funds for creating a Tamil press and was the first to print Tamil books. One should see this activity—motivated, no doubt, by Christian missionary zeal—in the context of the history of printing elsewhere in the world. The first printing by Europeans in China was done in 1584, in Japan in 1590, in the Philippines in 1593. The first printed book in the New World dates from 1584 (though an earlier book of which no copy is now available is believed to have been printed in 1539). The first printing in an African language seems to have been done in 1624. Russia printed its first book in 1563; Constantinople had its first press in 1727, and Greece as late as in 1821. Thus the first Tamil printed book known so far, the *Cartilha* of *1554*, seems to be the earliest sample of printing done along Western lines outside of the European continent and its immediate vicinity.[7]

This first book printed in Tamil was produced in Lisbon. The full title is *Cartilha che contẽ breuemẽte ho q todo Christão deue aprẽder pera sua saluçam, Aqual el rey Dom Johan terceiro deste nome nosso senhor mandou imprimir ẽ lingoa Tamul e Portugues cõ ha declaraçam do Tamul por cima de vermelho.*[8]

There are no Tamil characters; the Tamil text is transcribed in large Roman characters having above it a word for word translation into Portuguese in red colour, and another Portuguese version below the Tamil text in black letters.[9]

The provenance of the only copy of this book now available is traced by Dr. X. St. Thani Nayagam in his paper in *Tamil Culture*, July 1958, 288–308. This precious copy is now kept in an iron safe of the Ethnological Museum of Dr. Leile de Vasconcellos in Belem, Lisbon.[10] The prologue of the brochure was written by three Indian Christians living in Lisbon (Vicente de Nazareth, Jorge Carvalho and Thoma da Cruz). They were apparently responsible for the translation of the "doctrine" into Tamil, and for the transcription. Their work was supervised by Fra Joam de

[7] Xavier Stanislaus Thani Nayagam in *Tamil Culture*, Vol. VII, 3, July 1950, p.291. Cf. also Taṉi Nāyakam Aṭikaḷ, 'Mutal accēriya tamiḻ nūlkaḷ', *Kalki Tīpāvaḷi Malar*, 1958.

[8] "Brochure which contains in brief all that a Christian should know for his salvation and which our Lord the King Dom John the Third of that name ordered to be printed in the Tamil language and in Portuguese with the Tamil meaning printed above in red" (S. Rajamanickam's transl.).

[9] A photostat copy of a page, and of the frontispice of the *Cartilha* is attached to S. Rajamanickam, *op.cit.* p. 176.

[10] Cf. also *Harvard Library Bulletin* VI,2 (1952) 151, but especially Xavier S. Thani Nāyagam in *Tamil Culture*, July, 1958. The *Cartilha* with French translation has been published by the Institut français d'indologie at Pondicherry in 1967 under the title, Jean Filliozat (ed.), *Un catéchisme tamoul de XVI*^{e} *siècle en lettres latines.*

Vila de Conde (a Franciscan who was guardian of the Order in Colombo, Ceylon).

Anriquez very probably composed a Tamil grammar, compiled Tamil and Malayalam dictionaries, and wrote a number of other works of which three are available. *Tampirāṉ vaṇakkam*, printed in Tamil letters in Quilon in 1578[11], is a collection of Catholic prayers; it is dated October 20, 1578, at the College of the Saviour, Quilon, and it states that Father Anriquez (Aṇṭiṟīk Pātiriyār)) translated these prayers into Tamil (with the assistance of Fr. Manuel of St. Peter). *Kiricittiyāṉi vaṇakkam* is a collection of prayers and doctrinal explanations on 122 pages. *Flos Sanctorum* (the Tamil title has not been preserved since the title page, the preface, and the table of contents are missing) is "the masterpiece of Henriques" in 688 printed pages in Tamil containing mostly the lives of saints. It was discovered by X. St. Thani Nayagam in the Vatican library in 1954.

A single copy of each of these three books is preserved in the Harvard University Library, in the Bibliothèque nationale in Paris, and in the Vatican library.

The probability of Anriquez having composed a Tamil grammar, mentioned above, changed recently to certainty. Thanks to the indefatigable energy of X. St. Thani Nayagam, and to the labours of H. J. Vermeer, we know now that Anriquez began composing a Tamil grammar in 1549. The book was completed in 1552, but revised continuously during the following years. However, it has never been printed. A copy was discovered by Father Thani Nayagam in the National Library in Lisbon (*Cod.*3141) under the title *Sumario de Arte malauar*. It is the *first* Tamil grammar so far discovered to have been written by an European, and the first Western grammar of a non-European language using a foreign script. This unique, pioneering work was critically edited by Hans J. Vermeer, with the English version provided by Angelika Morath (published in 1982); it has 30 + 199 pages.

Anriquez is thus *the first known European Tamil scholar*; he was the first to make a systematic study of Tamil, conducted a school of Tamil studies at Puṉṉaikāyal, persuaded the Portuguese missionaries to speak and write Tamil (and even punish themselves when they used Portuguese words instead of Tamil!). It is due to him that the first Tamil press was established, and due to him that—in all probability—Tamil is privileged to be the first non-European language to be printed in its own characters.

[11] Tamil types were first made in Goa by the Jesuits in 1577; we do not know what exactly was printed with these types since no book printed with them has survived. The next set of Tamil types was prepared in Quilon in 1577, followed by another set of 1578 (Gonsalves, Jaõ da Faria).

Moreover, Anriquez was the first modern prose-writer in Tamil.[12]

3. In 1816, a grammar of Telugu was published at the College Press, Madras, under the title, Campbell, Alexander Duncan, *A Grammar of the Teloogoo Language Commonly Called the Gentoo* (xxv + 208 + 19 pp.). This book contained a 'Note to the Introduction' in which Francis Whyte Ellis made an assertion that there exists a genetically related "family of languages which may be appropriately called the dialects of South India", and that it included "the high and low Tamil; the Telugu, grammatical and vulgar; Carn'at'aca or Cannad'i, ancient and modern; Malayalma or Malayalam", further "the Tuluva", "Cod'ugu", and "the language of the mountaineers of Rajmahal". Thus, Ellis enumerated seven Dravidian languages (Tamiḻ, Telugu, Kannaḍa, Malayāḷam, Tuḷu, Koḍagu and Malto), and recognized their genetic relationship.

Who was Francis Whyte Ellis? He was an Englishman who joined the administrative apparatus of Madras in 1796, rose fast in prominence, and finally reached the office of Collector. He studied Tamil with famous *vidvāns*, particularly with Swaminatha Pillai. In 1816, he sent another Tamil scholar, A. Muttuswami Pillai (d.1840) out into various Tamil districts to search for Tamil manuscripts. In particular, he was interested in the works of Vīramāmuṉivar (C.G.E.Beschi, 1680–1747), and it is probable that without his intervention, much of Beschi's work would have been lost. In addition he was also interested in Tamil poetry. He composed a detailed English commentary on the first thirteen chapters of the *Tirukkuṟaḷ*; it is a very learned piece of work, quoting many classical Tamil texts (edited by R.P. Sethu Pillai for the University of Madras in 1955). Ellis was a close friend of Irāmaccantirak Kavirāyar (a celebrated Tamil poet, author of a number of plays, and editor who published in 1824 Beschi's dictionary *Caturakarāti*), on whom he even wrote a Tamil praise-poem. In his comparison of the Dravidian data mentioned above

[12] For more details on Anriquez, cf. Joseph Wicky, Henrique Henriques, *Studia missionaria*, Vol.XIII, Roma, 1963, 113–68.—I have dwelt on these facts in some length since incorrect evaluations still circulate as to the priority of these activities. Thus we may read in Arno Lehmann's *It began at Tranquebar* (transl. by H.J. Lutz, p.102):" The very first Tamil printing was done by a Protestant about 1671 in Europe by John Borstius in Rotterdam" (the German version, *Es begann in Tranquebar*, 2nd ed. 1956, p.187, says even more emphatically, "Aber die allerersten tamulischen Drucke überhaupt sind von Protestanten seit 1671 und zwar in Europa, bei Joan Borstius in Rotterdam, hergestellt worden."); and, in John Murdoch's constantly used and quoted *Classified Catalogue of Tamil Printed Books* (Christian Literature Society, Madras, 1865) we read that the first Tamil types were apparently cut in Amsterdam in 1678. For *the truly earliest Tamil types*, prepared in Goa and Quilon in 1577, vide G. Schurhammer and W.C. Cottrol, 'The First Printing in Indic Characters', *Harvard Library Bulletin*, Vol.VI, No.1 (Spring, 1952).

Ellis was in part dependent on R.E. Roberts in *Asiatick Researches* 5.127–30 of 1798.[13] Ellis died at Ramnad in 1819.

4. The next one to be usually quoted in the lineage of Dravidianists is Robert Caldwell (1856). However, this is not quite correct. Between Ellis, the true predecessor of all Dravidianists, and Caldwell, who established Dravidology as a full-fledged discipline, there were at least three other scholars who recognized and in various degree stressed and described the genetic relationship among Dravidian languages. They were Lassen, Rost and Elliot, in this order.

Full twelve years ahead of Caldwell, the great classical Indologist Christian Lassen, a Norwegian, recognized, in 1844, that the relations of Brahui were to be sought in South India: witness the *Zeitschrift für die Kunde de Morgenlandes* 5.337–409, "Die Brahui und ihre Sprache". Lassen used data published by R. Leech in the *Journal of the Asiatic Society of Bengal* 7 (1838) 538–56.

Two years later, C. Rost compared the Dravidian "genitives" in his work "Über den Genetiv in den dekhanischen Sprachen" (*Jahresbericht der Deutschen Morgenländischen Gesellschaft*, Leipzig, 1846).

Walter Elliot was obviously mostly concerned with Telugu. In 1859 he published in Madras *Flora Andhrica: a Vernacular and Botanical List of Plants . . . in the Telugu Districts of Northern Circars.* His *English and Telugu First Book* (Madras, 1862) and his *English and Telugu Vocabulary* (in 3 volumes, Madras 1862–81) have been reprinted frequently. However, in 1847, full nine years before Caldwell, the *Journal of the Asiatic Society of Bengal*, Calcutta, XVI, Part II, published his paper "Observations on the Language of the Gonds and the identity of many of its terms with Telugu, Tamil and Canarese."

Finally, yet another forerunner of Caldwell should be remembered: R. Stevenson, with his "A comparative vocabulary of non-Sanskrit vocables of the vernacular languages of India", in *Journal of the Bengal Branch of the Royal Asiatic Society* 5, 1852.

Ten years before Caldwell, the two terms mostly used for Dravidian as a language family designation were either "Dekhan languages" or simply "South Indian dialects" or "South Indian vernaculars". However, the notion that they were mutually related, that they had distant "relatives" as far away as in northwestern and northeastern India, and that they were independent vis-à-vis Indo-Aryan, was not an 'invention'

[13] Cf. N. Venkata Rao, in *Annals of Oriental Research*, University of Madras, 12.1–35 (1954–55); T. Burrow and M.B. Emeneau, *A Dravidian Etymological Dictionary*, 1st ed., Oxford University Press, 1961, p.V; 2nd ed., Oxford, 1964, vii.

of Caldwell; this notion was there at least forty years before Caldwell.[14]

In South India itself, as far as we can gather information from earliest Tamil textual sources, roughly two views were prevalent: the view that the 'Southern language' (Tamil *teṉmoḻi* = Tamil) was totally independent of, and as ancient as, the 'northern language' (Tamil *vaṭamoḻi* = Sanskrit); and the opposite view that the languages of the people spoken in the South of the subcontinent were only 'corruptions' of Aryan Prakrits.

To build up pride in Tamil, Sanskrit and Tamil were since the earliest times shown as equal in age and status by many indigenous Tamil scholars; in fact, *muttamiḻ*, the "threefold Tamil" of speech/poetry, music and drama, was claimed to be as divine as Sanskrit, created either by god Śiva, or by god Skanda-Murugaṉ. Since very early times, the Tamil scholars distinguished between the colloquial, spoken, 'raw' and 'rough' language termed *koṭuṉ-tamiḻ*, and the polished literary style corresponding to a norm, called *cen-tamiḻ*. It also seems that from the rather early times, there was a notion that language (that is, Tamil) is not only that which is spoken as means of daily communication and/or fixed in literary texts when subject to a prosodic norm, but that there are two other possible channels how language may be 'realized', expressed: musical sound (i.e. in song), and accompanied by gesture, mime (i.e. drama): this was the rather specific (?) notion of *mu-t-tamiḻ* "threefold Tamil"—the first *mode* of expression being termed *iyal-tamiḻ* 'natural, current Tamil', the second mode *icai-tamiḻ* 'sound/sung Tamil', and the third mode *nāṭaka-tamiḻ* 'play/dramatic Tamiḻ'.

Tiruñāṉacampantar (7th Cent.A.D.) claims that god had created both Sanskrit and Tamil. The two languages were god's two eyes. On the other hand, late-medieval Tamil scholars like Swaminatha Desikar (17th Cent.) denied that Tamil was even an independent language; along with other South Indian 'vernaculars' it was only a 'corrupt' offshoot of the 'divine' Sanskrit.

5. Robert Caldwell is usually credited for inventing the term Dravidian as a generic name of the South Indian family of languages. "The word I have chosen is 'Dravidian', from Drāviḍa..." writes Caldwell in his monumental comparative grammar (3rd ed., reprint 1961, p.4)[15]. What

[14] All this pertains of course ot the Western, European cognizance of the Indian linguistic situation. For an informative account of the Indian views, cf. E.Annamalai, 'Movement for Linguistic Purism: the Case of Tamil', in: *Language Movements in India*, Mysore, 1979, 35–59. Cf. also G.Devaneyan, *Vaṭamoḻi varalāṟu*, Katpadi, 1967: the author gives quotations from Tamil literature indicating conflict between Tamil and Sanskrit.

[15] For Caldwell's work and importance in general, cf. K.Zvelebil, 'One Hundred Years of Dravidian Comparative Philology', *Archiv Orientální* 24, Praha 1956, 599–609.

is the etymology of the term *drāviḍa-* which Caldwell found in Kumārila Bhaṭṭa's *Tantravārttika*? And how has Caldwell come to employ this term? He found it in a passage in the ancient Sanskrit savant's work, probably misread as *āndhra drāviḍ(a) ādi* instead of *atha drāviḍ(a) ādi*. The pertinent text in Kumārila Bhaṭṭa (7th Cent. A.D.) begins *tadyathā drāviḍādi bhāṣāyām eva*... "and so in the Drāviḍa and other languages...". By the expression *drāviḍa ādi* the Sanskrit author apparently meant Tamil and other (Drăvidian?) languages.[16] When we search for the etymology of the Skt. *drăviḍa-* we are helped by the alternative Sanskrit form *dramila-* (in Daṇḍin's *Avantisundarīkathā*)[17] which probably refers to Toṇṭaināṭu (a tamilized name of Pallavarāṣṭra, the Pallava territory, round about modern Madras); by the Prakrit term *damila* in the inscriptions of the Ikṣvāku dynasty. (referring to Toṇṭaināṭu)[18], and by the term *damiḷa* occurring in the same meaning in the Ceylonese chronicle *Mahāvaṃśa* I.41.[19] These Indo-Aryan terms refer apparently to a geographical entity different from the ancient Tamil kingdoms of the Cholas, Cheras and Pandyas, namely to the Pallavadeśa (Tamil Toṇṭaināṭu, Toṇṭaimaṇṭalam, Skt. also Daṇḍakāraṇya?). In other words, *drăviḍa-* etc. as a designation of a language refers to (Northern) Tamil. The forms *damiḷa-/damila-* almost certainly provide a connection of *drăviḍa-*, and hence 'Dravidian', with the indigenous name of the Tamil language, i.e. *tamiḻ* < **tam-iṛ-* (DED 2508, DEDR 3080), probably developed from < ***tak-iṛ-*, whereby the further development might have been **tamiṛ* > **damiḷ* > *damiḷa-/ damila-* and further, with the intrusive, 'hypercorrect' (or perhaps analogical) *-r-*, into *drăviḍa-*. The *-m-/-v-* alternation is a common enough phenomenon in Dravidian phonology. If indeed ultimately derived from < ***tak-iṛ-*, the underlying meaning of *tamiḻ* would be 'the proper sound'.

The earliest indigenous reference to Tamil known so far from literary evidence is in *Tolkāppiyam*[20] (date uncertain; anything between 1st Cent.A.D.–3rd/4th Cent.A.D. for the first part of *Eḻuttatikāram*). *Tamiḻakam* as the land, the abode (*akam*) of Tamil(s) is referred to in the very early text of *Puṟam* 168.18 and *Patiṟṟuppattu Patikam* 2–5. *Tamiḻnāṭu* (today's official name of the former Madras State, i.e. Tamizhnadu,

[16] Cf. A.C.Burnell, 'An Interesting Passage in Kumārila Bhaṭṭa's Tantravārttika', *Indian Antiquary* I, 1872.

[17] Cf. *Madras University Journal*, V, Pt.ii, pp.5–6: *Avantisundarīkathā* (a Novel by Daṇḍin), pp. 347–8.

[18] *E.I.*XX, pp.22–23.

[19] Cf. also *S.I.I.*., ii, p.508 *dramiḷa*; the *-ṛ-* in all such forms seems to be an 'intrusive' hypercorrective *-r-*, see below.

[20] *Tolkāppiyam* I.386.1.

Tamilnadu) appears first in *Cilappatikāram* (ca. 450 A.D., in a number of *loci*, e.g. 10.58, 15.165 and 171,29.1.8).[21]

If indeed it was Caldwell who had first coined the term "Dravidian" then it must have spread incredibly fast since only eleven years later it occurs in a rather unexpected source: in a book entitled *Reise der Österreichischen Fregatte Novara um die Erde*, Wien, 1867. This book has what it terms *Linguistischer Theil*, and there, on pp. 73–104, we find a description of the Dravidain languages by Friedrich Müller, entitled *Dravida Sprachen*. As for the term 'Dravidology', I coined and began to use it in

[21] For some speculations concerning these and other early references to Tamil cf. N. Sanjeevi, "Earliest References to Tamil', *Annals of Oriental Research of the University of Madras*, xxvii, I & II, 1977. A more ancient *inscriptional* evidence may yet come to light. The relevant passage concerning Dravidian languages occurs in Kumārila's discussion of *mīmāmsā sūtra*, I.iii.9 where he quotes five "Dravidian" words as he was aware of them in his time (7th or 8th Cent. A.D.). The *sūtra* ordains that words borrowed from *mleccha* languages and used in the Veda ought to be understood in the sense they have in these *mleccha* languages and not to be ascribed new meanings. Kumārila, speaking ironically, says that when the Aryans hear *mleccha* words, they add to or drop from them some sounds and make them resemble Sanskrit words. According to the printed text of the *Tantravārttika* and to the manuscript copy in the Telugu script used by Ganganatha Jha (the translator of the work), the passage runs as follows: tad-yathā, drāviḍādibhāṣāyam-eva tāvad-vyañjanānta-bhāṣā-padeṣu svarānta-vibhakti strī pratyayādi-kalpanābhiḥ sva-bhāṣānurūpānarthān pratipadyamānāḥ dṛśyante. Tad-yathā, odanam cor ity-ukte corpada-vācyam kalpayanti. Panthānam atar ity-ukte atara iti kalpayitvā āhuḥ. Satyam, dustaratvāt, atara eva panthā iti. Tathā pāp-śabdam pakārāntam sarpa-vacanam; akārāntam kalpayitvā satyam pāpa eva asau iti vadanti. Evam māl-śabdam strīvacanam mālā iti kalpayitvā satyam iti āhuḥ. Vairśabdam ca rephāntam udara-vacanam vairi-śabdena pratyāmnāyam vadanti. Satyam, sarvasya kṣudhitasya akāraye pravartanāt udaram vairi-kārye pravartate iti... etc. (Engl.) "Thus, in the Drāviḍa etc. languages . . . when food is called *cor* (i.e. Tamil *cōru*, KVZ), they turn it into *cora*. . . When a road is called *atar* (Tamil *atar*, KVZ) they turn it into *atara* and say, true, a road is *atara* because it is *dustara*, difficult to cross. Thus they add *a* to the word *pāp* ending in *p* and meaning a snake, and say, true, it is a sinful being. They turn the word *māl* meaning a woman into *mālā* 'garland' and say, it is so. They substitute the word *vairi* in place of the word *vair*, ending in *r* and meaning stomach, and say yes, as all hungry people do wrong deeds, the stomach undertakes to do wrong (*vairi*) actions. . ."

The words *cor* and *atar* do not present any problem; the first is DEDR 2897 Tamil *cōru* (with the final non-morphemic automatic *-u* which is phonetically [ɯ], dropped), the second DEDR 3170 Tamil *atar*. *Pāp* obviously represents DEDR 4085 *pāmpu* (which, according to Burnell, *South Indian Palaeography*, p.126) is given in some of the best manuscripts as *pāmb*. Kumārila's *māl* is to be connected either with DEDR 183 Tamil *ammāḷ* or it may represent a lax, fricativized and finally contracted form of Tamil *makaḷ* (DEDR 3616, cf. Malayalam *mōḷ* daughter, Kota *mo ḷ* id.).

For the possible etymology of the name of the language, *tamiḻ*, cf. K.V. Zvelebil,' The Term "*tamiḻ*",' *Journ. Institute Asian Studies* (Madras) IV, 2, 1987; also, the speculation that the term *tamiḻ* was used in the meaning of *akam*, cf. Mayilai Cīṉi. Vēṅkaṭacāmi, 'Tamiḻ—Akam" (in Tamil), *JTS* 3 (Sept. 1973) 1–3.

the fifties. It has by now entered more than one language, and in Holland there is even a chair for 'dravidologie' (at the University of Utrecht).

6. Caldwell's *Comparative Grammar* (1856), a work of deep insights and monumental proportions, instead of stimulating research, was followed by a long spell of inaction in the field—for more than half a century almost nothing had been done. Vernacular experts believed strongly in Sanskrit as being the source of all Indian languages.[22] Western scholars, mostly missionaries and administrators, concerned themselves mainly with the preparation of grammars and bilingual dictionaries.[23] The 'official' non-native Indology was fully under the spell of Sanskrit studies, and the research into the relationship between the Aryan languages of India and other Indo-European tongues like Iranian, Greek, Latin, Balto-Slavonic, Germanic, Celtic etc.

The second phase of active Dravidian linguistic studies begins roughly after 1906, i.e. after the publication of the fourth volume on Muṇḍā and Dravidian languages of the *Linguistic Survey of India*, and it lasts throughout the first half of this century. It is characterized mainly by the discovery of hitherto unknown Dravidian languages, by speculations about the affinity between Dravidian and other linguistic families, by a systematic enquiry into the contacts between Dravidian and Indo-Aryan, and by first attempts at syntheses, and first typological-descriptive statements in detail. The names which come to mind above all are L. V. Ramaswami Aiyar and K. V. Subbayya among Indian scholars, and J. Vinson, P. Meile, A. Master, E. H. Tuttle, T. Burrow and M. B. Emeneau among Westerners. In 1946, Jules Bloch produced the first brief but very stimulating synthesis entitled *Structure grammaticale des langues dravidiennes* (Paris). The same period was the time of the formative and ripening years of the two greatest Dravidianists of mid-century, the above-mentioned Thomas Burrow of Oxford, and Murray B. Emeneau of Berkeley.

7. With the entrance of Burrow and Emeneau, followed by Bh. Krishnamurti, P. S. Subrahmanyam, N. Kumaraswami Raja, S. V. Shanmugam,

[22] Cf. e.g. M. Seshagiri Sastri, *Notes on Aryan and Dravidian Philology*, Madras, 1884. See Bh. Krishnamurti, 'Comparative Dravidian Studies', in: *Current Trends in Linguistics*, 5: *Linguistics in South Asia* (The Hague-Paris, 1969) 309–33.

[23] As outstanding instances originating in that period one may quote e.g. F. Kittel, *A Kannaḍa–English Dictionary* (Mangalore, 1893), H. Gundert, *A Malayalam and English Dictionary* (Mangalore, 1872), C.P.Brown, *A Dictionary, Telugu and English* (Madras, 1852). Interestingly enough, in some countries, e.g. the USSR, this tendency still prevails: textbooks, grammars, and dictionaries, apart from translations, are the main output of Indologists.

M.S. Andronov and K.V. Zvelebil into the field, Dravidian comparative, historical, and descriptive linguistics emerged as a full-fledged, critical, flourishing branch of linguistic scholarship. Various departments of Indic studies in the universities all over the world have incorporated teaching of Tamil and other Dravidian languages, mainly Kannaḍa and Telugu, into their curricula and syllabi, and a number of important works have been published.

More about these developments has been said in Vol.5 of T.A. Sebeok (ed.), *Current Trends in Linguistics*, and in K.V. Zvelebil, 'Dravidian Linguistics Today' (*Journal of Asian Studies* 2.1. Sept. 1984,1-40).

8. In this Introduction, I shall first discuss briefly and critically recent achievements (i.e. work performed roughly between 1966–1986), and point out the most pressing problems and tasks which face Dravidianists as the century moves towards its end.

8.1. A few "new" languages have been reported during the past two decades; although we cannot be certain whether some of these can be classified as separate languages or dialects of languages, the 'discovery' and classification of such 'new' tongues still remains an urgent priority of Dravidological fieldwork.

Koraga (Bhat 1968, 1971), *Iruḷa* (Diffloth 1968, Zvelebil 1968 et seq.), *Kuruba* (Upadhyaya, 1972), *Maṇḍa* (Burrow, 1976), *Kuṟumba* in at least five dialects (Kapp, 1972 *et seq.*) are among the most important additions. Ramakrishna Reddy (according to private communication to Bh. Krishnamurti) reports two other 'languages' closely related to Pengo and Maṇḍa from Orissa, called *Indi* and *Āwe*. Among the languages just quoted, Iṟuḷa, Koraga, Maṇḍa and Kuṟumba are definitely new members of 'language status'. A curious case is reported from the Dhanusa district of southern Nepal: *Dhangar*, supposed to be a Dravidian language closely related to Kuṛux and spoken by some 10,000 speakers in the Terai area (1972).[24]

We know for certain that there are areas where additional 'small' Dravidian 'tribal' languages are spoken in remote pockets, e.g. in the jungles of Wynaad (borderland between Kerala and Tamilnadu)—languages like Paṇiyan, or Wynaad Chetti, or Kāḍar—which have never been really described at all. We also know for certain that, e.g., Kuṟumba, mentioned above, is only a cover term for what may be as many as five

[24] Cf. *National Census*: Results (part-2), Table-8, p.20 (1961). K.L.Pike and Gordon H.Kent in *IJDL* I (1972) 1.56–79, and II (1973) 1.14–46.

or six different languages/dialects (Ālu Kuṟumba, recently treated in much detail and with excellence by D.B. Kapp of Heidelberg; Pālu Kuṟumba, Muḍuga, Jēnu Kurumba alias Kāḍu Nāyika, Muḷḷu Kuṟumba).

8.2. The following most important *results* have been achieved within the last approximately twenty years:

a. The publication, by the Oxford University Press, of the *Dravidian Etymological Dictionary* by T. Burrow and M.B. Emeneau (DED,1961), with its Supplement (DEDS,1968) and its monumental revised edition (DEDR,1984), as well as of *Dravidian Borrowings from Indo-Aryan* (DBIA,1962), and 'Dravidian Etymological Notes' (*JAOS* 92,1972).

b. A few major contributions to Dravidian comparative *phonology*, mostly by the following scholars (listed alphabetically): Burrow, Emeneau, Krishnamurti, Kumaraswami Raja, Sambasiva Rao, Subrahmanyam, Walldén, Zvelebil. They will be discussed in some detail while dealing with Dravidian phonology as such. Suffice it to say here that the accomplishments in comparative phonology are by far the most impressive during the period of the last quarter century.

c. This period has also seen some major contributions to comparative *morphology* on which very little was done till 1966. One must in this connection list the following names: Andronov, Emeneau, Krishnamurti, S.V. Shanmugam, Subrahmanyam and Zvelebil. Again, these developments will be discussed in some detail below.

d. In the field of *etymological* studies, one should mention a few short papers, mainly those by Andronov and Burrow (see *Annotated bibliography*).

e. A significant proposal was made concerning the *subgrouping* of Dravidian languages; a discussion went on concerning this problem among Krishnamurti, Subrahmanyam and Southworth, and some attention will be paid to this problem in Chapter 4 of this work.

f. Within the problem of the relationship of Dravidian to other language families in India, the most fascinating result is the dynamic development of the concept of the Indian linguistic *area*, due mainly to Emeneau; other scholars who have participated in discussing these problems were mainly C. Masica, F.B.J. Kuiper, A.K. Ramanujan, F. Southworth, and M.S. Andronov. See chapter 5 of this work.

g. Finally, there have appeared new studies relating Dravidian to *other language families* outside India: to Uralic-Altaic (Menges, Tyler, Andro-

nov, Vacek); to Elamite (McAlpin); to Negro-African (Upadhyaya) and Wolof (Senghor); to Japanese (Susumu Shiba, Susumu Ohno and others). See chapter 7 of this work.

h. Most exciting but as yet the least understood has been the decipherment of Indus Valley (Harappan) script/language as a form of early Dravidian (a Soviet team of Knorozov and his colleagues, a Finnish team of A. Parpola with his colleagues, Iravatham Mahadevan, and a few others). The most detailed critique of these attempts has been offered by Zide and Zvelebil (cf. chapter 6 of this work).

Rather conspicuous by its absence is any detailed, comprehensive, rounded *diachronic-historical* study of any of the four languages which can supply enough literary and epigraphical data for such study: Tamil, Malayalam, Telugu, Kannada. No detailed, comprehensive, complete historical grammar of any of these languages has as yet been produced.

On the following pages, I shall deal systematically with the problems outlined above, as well as with some other topics, in the following order: (1) Dravidian phonological systems; (2) the structure of Dravidian; (3) the diachronic view; (4) the subgroupings; (5) Indian areal linguistics and Dravidian; (6) Dravidian and 'Harappan'; and (7) Dravidian and other language families, in particular Altaic, Elamite and Japanese. In addition, an annotated list of further readings for detailed study will be given at the end of the work.

1. Dravidian Phonological Systems

1.0. There are at present in existence two comprehensive outlines of Dravidian comparative phonology: one by Emeneau (1970), another by Zvelebil (1970). Emeneau's *Sketch of Dravidian Comparative Phonology* deals with straightforward correspondences of vowels and consonants of Dravidian languages, and reconstructs the protophonemes. Since it was designed as a classroom material, a manual for students, originally as early as 1959 for the Coimbatore Summer course, further revised in Berkeley, and finally published by the Annamalai University in 1970, Emeneau does not deal in this slender volume with any of the complex problems of Dravidian phonology, either historically, or on the comparative level. Zvelebil's *Comparative Dravidian Phonology* (CDP, Mouton, The Hague-Paris, 1970) is the first extensive synthesis of all published work in the subject till about 1968.[25] Since the publication of these two volumes, much has been done in the field, and there is no doubt that a revision of a number of conclusions reached in the above-mentioned works is a desideratum.

1.1. The two most striking features of Proto-Dravidian phonology are the surprising number of *apical stop phonemes* (according to McAlpin the "world maximum"), and the *total absence of sibilants*.

There is an *ever-present lax* versus *tense contrast* which has different manifestations in phonetics. Tense vowels are long with clear qualities; lax vowels are short with variable qualities. Tense consonants are voiceless—when obstruent—and usually geminate; lax consonants are voiced, weakly articulated, and never geminate.

[25] Zvelebil's book should be read together with reviews by Emeneau in *Linguistics* 107 (1973) 77–82 and Krishnamurti in *Lingua* 39 (1976) 139–53. Cf. further reviews by H. Berger, *ZDMG* 12712, 150–52, J.R.Marr, *BSOAS* XXXV (1973) 1,161–63. Krishnamurti in *Oceanic Linguistics Special Publication* No.20, p.218 writes, "With numerous new facts on comparative phonology, we hope Zvelebil will soon publish the 2nd edition with revisions." Very important contributions to Dravidian phonetics/phonology appeared recently from the hand of Ruth Walldén, particularly her *Studies in Dravidian Phonology and Vocabulary*, Uppsala, 1982, and 'Reflections on the Tamil Alphabet', *Orientalia Suecana* 1982–83, 163–77.

1.2. The Dravidian vowel-system consists of five vowels

i u

e o

a

which occur both lax (short) and tense (long). The two diphthongs *ai* and *au* are best treated not as unit phonemes, but should be rather structurally interpreted as sequences of **ay* and **au*. **y* and **v* pattern with other sonorants (like *n,l,r*), e.g. the common Dr. word for 'hand', DEDR 2023 Tamil *kai* etc. can best be reconstructed for PDr as **kay* manifesting the same pattern (CVC) as **koy* to cut, pluck, reap, or **cal* to go.

Any vowel can occur root-initially. A non-morphemic (so-called enunciative) epenthetic vowel follows all stops in the final position; this vowel is obligatory and hence fully predictable, and, in phonetic terms, seems to have been a mere vowel-like release of the plosive in PDr to prevent a word-final occlusive. It has been discussed by various scholars but no overall agreement has been reached. The vowel is most clearly attested from SDr where it occurs as [ɯ] or [ɪ] in Tamil and some Kannaḍa dialects, and as [ə] in Malayalam. Elsewhere it is dropped or falls together with other vowels, usually /u/ or /i/. Probably the best way to treat it is to regard it as "schwa"—PDr **ə*.[26]

There are only two grades of phonemic length in Dravidian, viz. short and long. Vowel-length (i.e. vowel tenseness) is phonemic for PDr and all Dr. languages, cf. PDr **pal* (DEDR 3986/a/) tooth: **pāl* (DEDR 4096) milk.

There is a notable exception to the neat distribution of regular vowel-length in Dravidian, namely in Brahui which has no phonemes short *e* and *o*; **e* results in Brahui in either *i* or *a*, and **o* results in Brahui in either *u* or *a*, or *ō*. Examples: Tamil *cevi*: Brahui *khaf* ‹ PDr **kevi* ear (DEDR 1977/a/); Tamil *poccu*: Brahui *pōs* vulva (DEDR 4476). It is very probable that this irregularity in Brahui vocalic system is the result of the pressure or impact of Indo-Iranian or some other neighbouring group of languages.[27]

There are certain types of quantitative changes in the root vowels (shortening and lengthening of radical vowels) which cannot be dis-

[26] Cf. Bright, William, 'The Dravidian Enunciative Vowel', in *Dravidian Phonological Systems* (eds H. F. Schiffman and C. M. Eastman), Seattle, 1975, 11–46.

[27] For details, cf. M. B. Emeneau, *Brahui and Dravidian Comparative Grammar*, UPCL 27, Berkeley, 1962.

cussed here, but have been mentioned or discussed elsewhere.[28] One striking case of vowel reduction, however, must be mentioned: the complete loss of vowels in unaccented non-initial syllables and the resulting long consonant clusters in Toda and Kota. Kota is perhaps extreme in this loss of vocalic peaks, cf. such forms as *anǰrčgčgvḍk* 'because of the fact that (someone) will cause (someone) to terrify (someone)', a case so striking that it became popular in general phonology.[29] Other instances of vocalic reduction from Toda and Kota: Tamil *kaḷutai* ⟨ **kaṟutay*: Kota *kaṛt*, Toda *katy* ass (DEDR 1364); Tamil *kaḷam/kaḷaṉ*: Kota *kaḷm*, Toda *koṭṇ* threshing floor (DEDR 1376); Tamil *kuranku* monkey, ape: Kota *korg* black monkey, Toda *kwarg* monkey (DEDR 1769); Tamil *neyttōr*: Kota *netr*, Toda *nötš/nets* blood (DEDR 3748).

1.3. Most of the Dravidian languages agree in showing the same vowel qualities in radical syllables. *Stability of root vowel* is apparently the rule in Dravidian, initial and medial vowels being equally stable as to their quality. The percentage of agreement is highest if the vowel can be traced back to a PDr long vowel, in particular to **ī*.

In spite of this relatively great vowel stability in the root, there have occurred some qualitative developments which must be mentioned. Perhaps the developments of new vowel contrasts through secondary splits in the Nilgiri languages and in Koḍagu (Coorg) are the most important changes known so far to us since they help us to understand "the nature of sound change and the interaction between successive sound changes vis-à-vis the phonological structure of these languages" (Krishnamurti). The best description of such 'new' vocalic subsystems are available for Koḍagu (Emeneau) and for Iṟuḷa (Zvelebil).

Emeneau[30] explains how *ë* and *ï* have developed out of pre-Koḍagu *e* and *i* under various statable phonological conditions which were subsequently lost or modified to give these vowels a contrastive status. After bilabial consonants, *ĭ*, *ĕ* become *ŭ*, *ŏ* respectively, a change found in Tuḷu and to some extent in many other SDr languages (Krishnamurti).

Zvelebil[31] discusses the sources of *ï*, *ë*, *ü*, *ö*, central unrounded and rounded vowels in root syllables in Iṟuḷa; the conditions are similar to

[28] For quantitative developments in radical vowels, cf. Zvelebil, *CDP* 35–38, Emeneau, *DCP* 28–31, 34–36, Krishnamurti in *JAOS* 75 (1955) 237–52, also *Studies in Indian Linguistics* 1968, 189–105.

[29] Cf. Ch. Hockett, *Manual of Phonology*, 1953, p.58, ex Emeneau, *Kota Texts* I, 1944, p. 16.

[30] M.B.Emeneau, 'Koḍagu Vowels', *JAOS* 90 (1970) 145–58.

[31] K. Zvelebil, 'Iruḷa Vowels', *Indo-Iranian Journal* 13 (1971) 113–22; *The Iruḷa Language*, Wiesbaden, 1973, *passim*.

those occurring in Koḍagu—retroflex consonants in the following position which in some cases are lost through subsequent sound developments. Examples: Tamil *piḻai* fault, crime: Iṟula *pïye* (DEDR 4187); Tamil *meluku* wax: Irula *mëkku* (DEDR 5082); PSDr **kēl* to hear; ask→ **kēḷkka*→**këḷkka* > Iṟula *kēkka* (Tamil *kēṭka*) infinitive 'to hear; ask'. If the retroflex is followed by a low vowel, centralization does not occur: PSDr **etay*, Tamil *itai* waist: Iṟula *eda* (DEDR 448). "The vowel system is much more symmetrical" in Iṟula than it is in Koḍagu.

Various other studies present a view of phonological developments in several subgroups and languages, particularly in Kota, Toda, Kui-Kuvi, Parji, Kurux-Malto and Brahui.[32] Tamil and Dravidian phonetics, phonology and graphemics have been recently treated in a series of interesting papers by Ruth Walldén of Uppsala; they are characterized by exceptional precision, attention to detail, and originality and boldness of solutions (cf. 8, Annotated bibliography).

1.4. Another important phenomenon of Dravidian vocalic system is the *i*/*e* and *u*/*o* alternation in South Dravidian, sometimes referred to as South Dravidian *Umlaut* or Dravidian *metaphony*. The rule can be stated simply as follows: Before a derivative **a* in PSDr, the contrast between PDr **i* and **e* was neutralized in the direction of **e*, and the contrast between **u* and **o* was neutralized in the direction of **o*; in this environment, then, PDr **i* and **u* fell together in PSDr with **e* and **o* respectively. Since many of the items showing the *Umlaut*[33] are found in all SDr languages, the occurrence of the *Umlaut* phenomenon should be attributed to a common period before their separation, viz. to Proto-South Dravidian.

[32] Cf. M. B. Emeneau, 'Kota Vowel Shift', *Journ. of Tamil Studies* 1 (1969) 21–34; 'Toda vowels in non-initial syllables', *BSOAS* 42 (1979) 115–34; also *Toda Grammar and Texts*, Philadelphia, 1984, 6–11; Bh. Krishnamurti, 'A vowel-lowering rule in Kui-Kuvi', *Proceed. of the 6th annual meeting, Berkeley Linguistic Society*, Berkeley, 1980; 'On diachronic and synchronic rules in phonology–a case from Parji', *Ind. Linguistics* 39 (1978) 252–76; F. C. Ekka, 'Remarks on the treatment of PDr **ō* in Kuṛux and Malto', *IJDL* 1 (1972) 19–28; M. Pfeiffer, *Elements of Kuṛux Historical Phonology*, Leiden, 1972, and Emeneau's review thereof, *Lg.* 50 (1972) 744–58; M. S. Andronov, 'Notes on Brahui', *Journ. of Tamil Studies* 1 (1972) 1–6.

[33] *Umlaut* phenomena (which is a case of 'vowel harmony') are rather general features occurring in many languages and language families; a close analog to the Dravidian Umlaut *i, u* [*a* > *e, o* is found e.g. in Old High German *bittu* I pray: *beta* prayer, or Skt. *yugám*: Old Icelandic *ok* yoke.

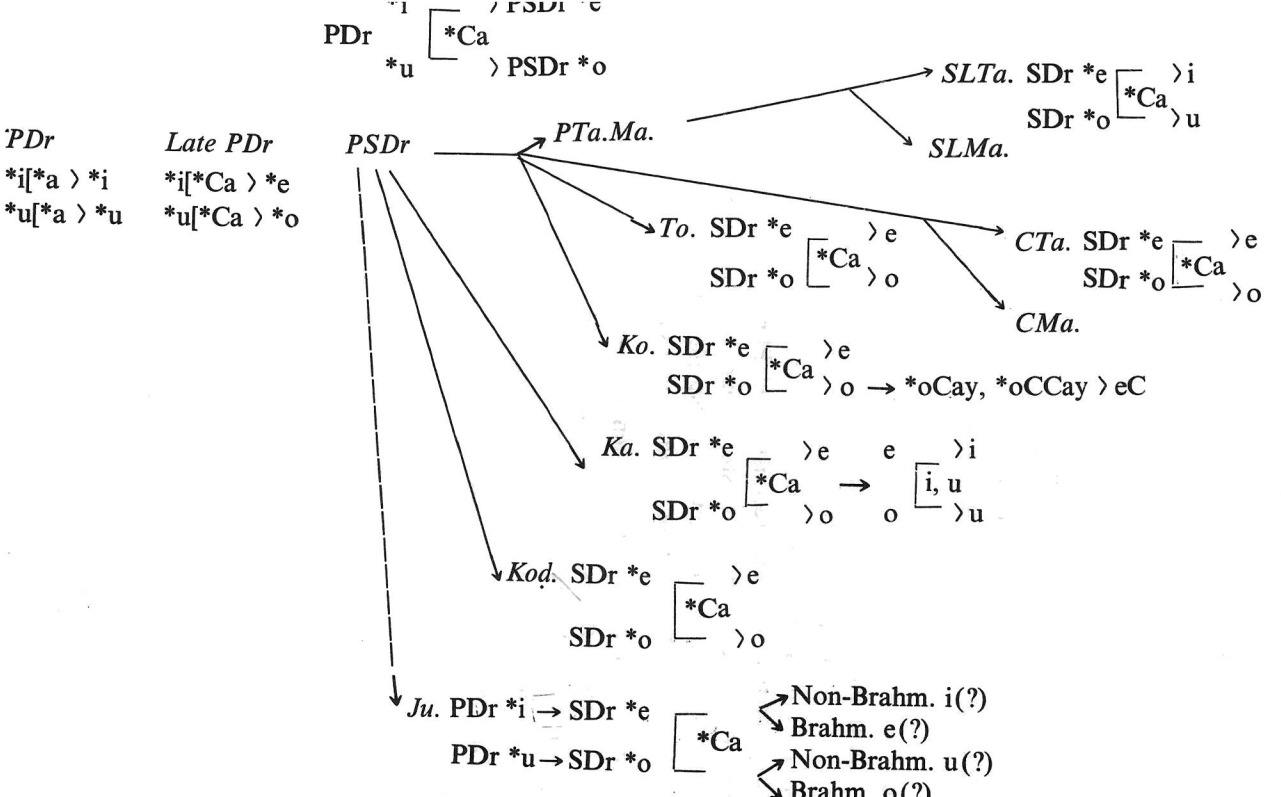


CHART 2

Dravidian Metaphony

Abbreviations: Ta. = Tamil, Ma. = Malayalam, SLTa. = Standard Literary Tamil, SLMa. = Standard Literary Malayalam, To. = Toda, Ko. = Kota, CTa. = Colloquial Tamil, CMa. = Colloquial Malayalam, Ka. = Kannaḍa, Koḍ. = Koḍagu, Tu. = Tuḷu, Brahm. = Brāhmaṇ dialect.

Within SDr, Telugu and Kannaḍa preserved these *Umlaut* qualities, while Tamil-Malayalam dissimilated these **e* and **o* before **a* at a later period again to **i* and **u* respectively. In other words, there are some instances of PSDr **e* and **o* 'becoming' *i* and *u* in Tamil-Malayalam, and those PDr **i* and **u* have "become" **e* and **o* in Kannaḍa and Telugu.[34]

Examples: PDr **il-ay* › PSDr **el-ay*: Tamil *ilai*, Malayalam *ila*: Kota *el*, Toda *eṣ*, Kannaḍa *ele*, *ela*, Tuḷu *elè* leaf (DEDR 497); PDr **pukay* › PSDr **pokay*: Tamil *pukai*, Malayalam *puka*, Tuḷu *pogè* smoke: Kota *pog* tobacco, Toda *pax* smoke, Kannaḍa *poge*, Koḍagu *poge*, Tuḷu *pogè*, Telugu *poga*, Kolami Naiki *pog*, Gondi *pogo* smoke (DEDR 4240).

The complex developments of Dravidian metaphony are best illustrated in the form of a diagram[35] (cf. chart 2).

1.5. Tuḷu seems to have also developed—at least in some of its dialects—additional vowel phonemes. According to D.N.S. Bhat,[36] the Brāhmaṇ (Šivaḷḷi) dialect of Tuḷu has the following phonemic system of vowels: *i,e,ɛ,a,o,u,ɨ*; in this system, the phonemes *ɛ* and *ɨ* are innovations when compared with the reconstructed PDr system. Also, occasional nasalization and aspiration of stops seems to be phonemic in some Tuḷu dialects. Nasalization of vowels is also phonemic in some Tamil dialects, cf. *colrẽ:* "I say" (1st p.sg.): *colre:* "you say" (2nd p.sg.).

1.6. An interesting regular *Umlaut*-phenomenon has been discovered by Zvelebil[37] in Iruḷa: this is the replacement of **ă* by *ĕ* when followed by **Cay* cf. Ta. *karai*, Malayalam *kara* shore, bank: Iruḷa *kere* (DEDR 1293); Tamil *mālai* (cf. Skt. *mālā*) garland: Iruḷa *mēle* (DEDR 4872).

1.7. Proto-Dravidian phonemes can be reconstructed in a charted form as follows:

Vowels

*i				*u
*ī				*ū
	*e		*o	
	*ē		*ō	
		*a		
		*ā		

[34] For details cf. Bh. Krishnamurti, *Lg.* 34 (1958) 4,458–68, his *Telugu Verbal Bases* (1961) 111–18, M.B. Emeneau, *Sketch DCP* (1970) 22–24, W. Bright, 'Dravidian Metaphony', *Lg.* 42 (1966) 311–22, Zvelebil, *CDP* (1970) 65–70.

[35] *Ex Zvelebil, CDP* (1970) p. 74.

[36] Cf. D.N.S. Bhat, 'Studies in Tulu', *Bull. of the Deccan College* 25, 11–31, and D.N. Shankara Bhat, *Descriptive Analysis of Tulu*, Poona, 1967.

[37] Cf. Kamil V. Zvelebil, *The Iruḷa Language*, Wiesbaden, 1973, 12–13.

Hence, we can reconstruct six vowels in the two quantities of short and long, plus—as we have seen above—a possible seventh, *ə.

Consonants

*p	*t	*t̲	*ṭ	*c	*k
*m	*n		*ṇ	*ñ (?)	
			*l̤		
		*l			
		*r	*r̤		
*v				*y	
					*H (??)

Hence, sixteen consonants (if we count */ñ/) plus a possible glottal fricative *H (see below for this problem).

1.7.1. As can be expected, the picture is much more complicated when it comes to the system of Dravidian consonants than with the vowels. Dravidian has one series of *obstruents* ('occlusives, plosives') differing by position: bilabial *p*, dental/dentoalveolar *t*, alveolar *t̲* (also symbolized as *t̲ for PDr), cacuminal ṭ, palatal affricate *c*, velar *k*. It has three *nasals*: bilabial *m*, dento-alveolar *n*, and retroflex *ṇ*, along with a possible fourth, palatal *ñ*. It has four *liquids*: alveolar lateral *l*, retroflex lateral *l̤*, tap *r*, and a retroflex voiced fricative *r̤* (also symbolized *z̤*, *ṟ* or *l̤*, and *zh* in "broad transcription"). There are two semivowels, *y* and *v*.[38]

1.7.2. Dravidian *lax obstruents* (also called plosives, P) are always weakened intervocalically: the apicals (alveolar and cacuminal) weaken to taps or trills: thus alveolar *t̲ is intervocalically *r̲*, e.g. PSDr *maṯam/maṯaṉ*: Old Tamil *maram*[39] valour, bravery (DEDR 4763), and cacu-

[38] A few remarks: (a) It is, I believe, necessary to distinguish between apical *cacuminal ṭ*, and apical *retroflexes ṇ*, *l̤* and *r̤*. (b) The phonemic status of ñ- is not quite certain, although it is advantageous to reconstruct it as such. (c) The transcription of *r̤* has been a "notational nightmare" (McAlpin)—e.g. *z̤*, *ṟ*, *l̤*, *zh* have all been used. It has also been described in rather divers phonetic terms: as vibrant, fricative, retroflex approximant "very close to a mid-western American *r*" etc. I prefer the term "retroflexed" or "retroflex voiced fricative".

[39] As McAlpin remarks, alveolar /t̲/ which is [r̲] intervocalically must not be confused with /r/ which functions as liquid, cf. the contrast between Tamil *maram* 'valour': *maram* 'tree'. However, they are phonetically similar in all languages which exhibit the contrast, and they have frequently fallen together.

minal *ṯ is [ɽ] or [ɖ], e.g. PSDr *paṯ-ay: Tamil paṭai [-ɖ-], Kannaḍa paḍe army, Toda paṛ crowd (DEDR 3860). These alveolar and cacuminal apicals do not occur initially. The non-apical plosives normally become non-strident voiced fricatives: *k* → [ɣ,x,h,ç], *c* → [dʒ, ʃ ʒ], *t* → [ð], *p* → [*β› v]. After nasals (N), lax obstruents appear as homorganic voiced stops. Examples: Tamil *akam* inside → [aɣ̃m] (DEDR 7); Tamil *atu* that-thing → [aðɯ] (DEDR 1), **tapu* to perish: Tamil *tapu*; *tavu* to be ruined, Kannaḍa *tavu* to decrease (DEDR 3068); Tamil *maṅkai* woman, Kannaḍa *maṅgu* female cat (DEDR 4625); Tamil *mañcaḷ*, Kannaḍa *mañjaḷa* turmeric (DEDR 4635); Tamil *maṇṭu* to glow, Telugu *maṇḍu* to burn (DEDR 4680); Tamil *mantai* flock, Telugu *manda* flock, herd (DEDR 4700); Ta. *maṉṟu* hall; herd of cows; court, etc., Koḍagu *mandï* village green (DEDR 4777).

Tense obstruents (PP) are always voiceless and are geminated except in clusters, e.g. Tamil *akkā* elder sister (DEDR 23), *accu* mould, type (DEDR 47), *aṭṭai* leech (DEDR 99), *attaṉ* father (DEDR 142), *paṟṟu* to grasp (DEDR 4034). *Sonorants* (also termed liquids, L) use gemination and length to maintain the tense: lax phonemic contrast, cf. Tamil *nalam* goodness (DEDR 3610): *nallam* charcoal; blackness (DEDR 3613).

1.7.3. As stressed above, the two most striking features of Dravidian consonantism are

a) a very high number of apical stop phonemes,
b) total absence of sibilants.

a) There are *six apical stop* phonemes: bilabial *p*, dental—dento-alveolar *t*, alveolar *ṯ*, cacuminal-retroflex *ṭ*, palatal *c*, and velar *k*. This type of apical contrast is quite unusual in world languages.[40]

b) Whenever sibilants do occur, they are borrowed from Indo-Aryan which is rich in sibilants. PDr lacks sibilants completely, even [s]. According to Walldén (1982–83), the "sound/letter" *c* in Tamil designated a dorsal palatal, i.e. approximately /ç/, possibly with a /t/ onset and thus, according to the usually terminology, an affricate.

1.7.4 No consonant of the alveolar or cacuminal-retroflex series (i.e. *ṯ,l,r,ṭ,ṉ,ḷ,ṛ*) begins a word in PDr. Only sonorants may occur finally: *m,ṉ,ṇ,l,ḷ,r,ṛ,y*. The labiodental/bilabial *v* is very rare finally since it is usually a development of **p* or **k* and patterns accordingly. No obstruents

[40] Cf. Chomsky, N., and M. Halle, *The Sound Pattern of English*, New York, 1968, and Ladefoged, P., *Preliminaries to Linguistic Phonetics*, Chicago, 1971, pp.100–102 on the above publication's pp.312–13.

can occur finally. When they do, they are followed by a 'non-morphemic' automatic (so-called epenthetic, or 'enunciative' or 'euphonic', i.e. predictable, morphophonemic) vowel *-ə which is regularly dropped according to morphophonemic rules, cf. Ta. *mār-p/u* chest (DEDR 4818 *mār* chest): accusative *mār-p-ai*.

1.7.5. It is "traditional and convenient" (McAlpin) to discuss basic consonant clusters, i.e. nasal-obstruents (NP) and geminates (CC) as simplex items, cf. Zvelebil, *CDP* p. 77, and McAlpin, *Proto-Elamo-Dravidian* p. 25.

1.7.6. Caldwell (1857) correctly assumed that there were no initial voiced stops in PDr—a situation reflected in modern Tamil—Malayalam. This was accepted by Subbayya (1909) but rejected by Bloch (1914, 1919) on the basis of a few items like Skt. *ghoṭaka-* horse or *drāviḍa-*, presumably of Dravidian origin. This view of Bloch received support from Goda Varma (1935–37), F.B.J.Kuiper (1938), A. Master (1938) and S. K. Chatterji (1954), but was opposed by others, notably by T. Burrow (1938) and Bh. Krishnamurti (1961). Zvelebil (1970) fully accepted the view of Caldwell, Burrow and Krishnamurti. As Krishnamurti rightly says, "not even a single protostem" can be discovered from the mass of Dravidian vocabulary "with a widespread distribution of initial voicing to merit the assumption of a PDr voiced initial even to a small extent."[41]

Also, according to Zvelebil (1970), it seems that we have no reason to posit voiceless intervocalic obstruents for any stage of Dravidian.[42]

1.7.7. Intervocalic **-p-* > *-v-* is almost universal in Dravidian. As an obstruent, *-p-*, is preserved only in very few items, cf. Ta. *tapu* perish (DEDR 3068), certainly not a borrowing (cf. *Tolkappiyam* 1022,1025). Some Dravidianists (Emeneau, Krishnamurti) do not reconstruct a

[41] *Telugu Verbal Bases*, p. 29.

[42] The whole problem is discussed in detail in Zvelebil, *CDP* (1970) 1.20.3, pp. 78–85, and in 'Initial Plosives in Dravidian', *Lingua* 30 (1972) 216–26. Cf. further A. M. Mervart, 'The History of the Intervocalic Stops in the Dravidian Languages', *Comptes rendues de l'Académie des sciences de l'Union des Républiques Soviétiques Socialistes*, B,7 (1928) 142–49; A. Master, 'Intervocalic plosives in early Tamil', *BSOS* IX (1937–39) 1003–18; and F. B. J. Kuiper, 'Two Problems of Old Tamil Phonology', *IIJ* 2 (1958) 2.191–224. On the 'feature' aspects of the opposition lax:tense cf. L. Lisker, 'The Tamil Occlusives: Short vs. Long or Voiced vs. Voiceless', *Ind. Linguistics* 1958, p.301.

PDr *-*p*- but it seems best to follow Zvelebil (*CDP* 1970,88–9) who does, although he is willing to admit the following distribution:

initially	*medially*	*finally*
p-		-p/u
	-pp- : -v-	
	-mp-	

The reflexes of a possible medial *-*p*- are seen mainly in the contrast of -*pp*- versus -*v*-. There are also a few indications of initial *p*-/*v*- alternations in Dravidian.

1.7.8. Intervocalic and initial *m* and *v* are in contrast. However, they also are in widespread alternation in the southern group of languages. Doublets exist in many languages to a great degree; it is often "difficult to ascertain which of the two is historically original" (Krishnamurti, 1961, p.43). Cf. Tamil *vatuvai*: Kannaḍa *mada* wedding (DEDR 4694; this indicates that the authors of DEDR would rather consider the **m*- original); Tamil *kaval* be troubled: Telugu *gamanamu* attention (DEDR 1328; *-*v*- original?). Zvelebil quotes instances which show that this *m*/*v* "confusion" continues in Tamil dialects (and even in the literary norm, cf. Tamil *vāṉam* : *māṉam* sky, *vīcai* : *mīcai* moustache; in addition, it occurs in loanwords, cf. Skt *mṛga*- › Tamil *mirukam*/*virukam* animal). For details, see Zvelebil, *CDP* 1970, 125–8.

Krishnamurti has suggested that in Brahui before front vowels, **m*- becomes *b*-, parallel to the development of **n*- › *d*-[43].

1.7.9. The nasal *n* is attested as dental when initial and as alveolar everywhere else. Exceptions are dental clusters (*nt*, **ntt*), and a few forms in Old Tamil manifest dental *n* intervocalically (*varunar* one who comes) and finally (*verin*, *ven* back DEDR 5488).

The overdifferentiation in Tamil graphemic system is almost certainly responsible for two graphemes, ந and ன, with the following distribution in Tamil:

ந -n-	
-n-	-ṉ-
-nn-	-ṉṉ-
-nt-	-ṉr-
	-ṉ - ன்

[43] 'Dravidian Nasals in Brahui', *Dravidian Linguistics*, Annamalai University, 1969, 65–74.

In PDr, *n* and *n̲* (i.e. dental [n̪] and alveolar [n]) should be interpreted as entirely allophonic in distribution. The case of final dental *-n* [-n̪] seems to be a variant of final *-m*, particularly when it comes to noun formative **-aN* (**maraN* : *maram*/*maran̲* tree, DEDR 4711/a/, cf. Tamil *maram*, Kota *marm*: Kui *mrahnu*, Kuwi *mārnu*, Kuṛux *mann*, Malto *manu*).

In Brahui, there is an important alternation *n*/*d* in which Brahui *d-* corresponds to **n-*, cf. Tamil *neyttōr*: Brahui *ditar* blood (DEDR 3748); PDr **nīr*/*īr* water, moisture: Brahui *dīr* (DEDR 3690/a/). According to Krishnamurti, **n-* becomes *d-* in Brahui before front vowels **ĭ*, **ĕ*, while it remains *n-* before non-front vowels.

1.7.10. Intial *ñ-* is rare, and tends to alternate with initial *y-* and initial *n-*. There are enough examples "to give it provisional status" (McAlpin) in PDr reconstruction, but since it seems somewhat peripheral to main phonological patterns, and since it is the only consonant not occurring in the second syllable, it is doubtful whether it is at all reconstructible for Proto-Dravidian. On the other hand, a limited group of etyma is best explained with an intial **ñ-* reconstructed (cf. DEDR 2901–2937).

Initial *y-* is very rare and occurs only before *ă̄*. For details, cf. Zvelebil *CDP* 1970, 135–39 and 159–60.

1.7.11. In contrast to all other phonemes (including *l*, *l̤* and *y*), *r̲* and *r̤* (also transcribed as *z̤*,*ṛ*,*l̤*,*zh*) do not occur in geminated form. They are quite common finally, medially, and as first members of consonant clusters in derivation.

The retorflex vibrant/fricative **r̤* has very complex reflexes; a discussion, perhaps even a dispute, still goes on concerning its exact phonetic nature (voiced fricative? vibrant? and other descriptions). For relevant literature, cf. the footnote. There is, however, no doubt about the ancient, Proto-Dravidian status of *r̤*.[45]

1.7.12. Zvelebil in *CDP* (1970) p. 77 states that there is no necessity to reconstruct a PDr **h* and that the fricative exists sub-phonemically as a

[44] For further discussion of the nasals, cf. Zvelebil, *CDP* (1970) p.129, Subramoniam, V.I., 'A Problem in the Reconstruction of the Proto-Dravidian Nasal Phonemes', *Pratidānam, Indian, Iranian and Indo-European Studies*..., The Hague, 1968, 344–47; Shanmugam, S.V., 'Dental and Alveolar Nasals in Dravidian', *BSOAS* 35 (1972) 74–84.

[45] Bh. Krishnamurti, 'Proto-Dravidian **z̤*', *Ind. Linguistics* 19 (1958) 259–93; T. Burrow, 'The Treatment of Primitive Dravidian *-r̤-* in Kuṛux and Malto', *Studies in Indian Linguistics*, Poona, 1968, 62–9; Zvelebil, *CDP* (1970) 147–55; M.B. Emeneau, 'Koḍagu and Brahui developments of Proto-Dravidian **r̤*', *IIJ* 13 (1971) 3.176–98.

secondary development in Tamil and a number of other languages. However, it has been shown, chiefly by Krishnamurti, Meile and Burrow, followed by McAlpin, that the reconstruction of a PDr *H is advantageous to account for a set of problems in attestations, revolving mainly around the deictic-interrogative stems (of the general formula CVH), the irregular verb "to die", and generally some reflexes in Brahui. For these forms, an underlying *H solves many problems. A hypothesis involving PDr *H provides some real solutions with regard to the irregular verb "to die" which shows variant stems in South Dravidian (*cā/ca/ce*, DEDR 2426) and is attested in Brahui as *kahing*; the PDr reconstruction is **catt-* (cf. the modern Tamil past tense *ce-tt-*). However, *H was never common, and has disappeared from most Dravidian languages almost completely.[46]

1.7.13. Consonant clusters are highly restricted. The first type of clusters consists of homorganic nasal plus obstruent (NP, *NPP); another type is the geminates (CC); finally, there is the type liquid (L) *l, ḷ* and *y*, and (R) *r, ṛ* with any obstruent or obstruent cluster: LP, RP, LPP, RPP, RNP. Instances of the first type: Telugu *ka-ṅk-i* ear of corn (DEDR 1084); Ta. *ka-ñc-i* rice-water (DEDR 1107); Ma. *ka-ṇṭ-i* breach in a wall (DEDR 1176); Te. *ka-nd-i* pigeon pea (DEDR 1213); Ta. *ka-mp-i* wire (DEDR 1241). Examples of the second type: Tamil *kakku-* to vomit (DEDR 1079); *kaccu-* to bite (DEDR 1097); *kaṭṭu-* to tie (DEDR 1147); *kattu-* to caw (DEDR 1206); *kappu-* to overspread (DEDR 1221); *kammu-* to become hoarse (DEDR 1246). Examples of the third type: Tamil *kē-ṭp-ēn* I shall hear; *ce-rnt-ēn* I joined; *vā-l̲nt-ēn* I lived; *ne-ytt-ōr* blood. *Any non-homorganic cluster implies a morpheme boundary*; indeed, the above-quoted instances should be etymologically 'split' as follows: *kēṭ-* (←kēḷ-)-*p-ēn*; *cēr-nt-ēn*; *vāl̲-nt-ēn*; *ney-tt-ōr*; the divisions represent boundaries between roots/stems and derivational/inflectional suffixes.

All of the clusters are well-attested apart from the series *NPP which is reconstructed. Kumaraswami Raja, in a paper and in a full-length monograph[47], discussed the historical derivation of post-nasal voiceless stops and came up with the reconstruction of the PDr *NPP. E.g. Tamil maintained *NP as NP but changed *NPP to PP giving rise to numerous NP:PP alternations, whereas Kannada changed *NP to NB (where B

[46] For details cf. Bh. Krishnamurti, Review of *Dravidian Etymological Dictionary*, *Language* 39 (1963) 556–64; F.B.J.Kuiper, 'Two Problems of Old Tamil Phonology', *IIJ* 2 (1958) 2.191–224.

[47] 'Post-nasal voiceless plosives in Telugu: a comparative study'. In *Dravidian Linguistics*, Annamalainagar, 1969, 75–84; *Post-nasal voiceless plosives in Dravidian*, Annamalainagar, 1969.

is constrastive voiced obstruent) and *NPP to NP, giving rise to a voicing contrast. No extant language preserves the reconstructed *NPP as such. This fact, and some other features of Kumaraswami Raja's reconstruction led several scholars to initially react very critically to his conclusions.[48] However, since then, his discovery has been almost universally acclaimed as brilliant, although purely hypothetical.

1.7.14. What has been presented above is only the briefest outline of comparative Dravidian phonology. For a detailed discussion of various matters, charts and graphs of specific problems, cf. Zvelebil's quoted *Comparative Dravidian Phonology* (1970), with its reviews. This monograph has so far remained the first extensive synthesis of most of the published material in the field till about 1966–68, although a revised edition is badly needed.[49] For a brief basic statement, lucid and informative, nothing is better so far than Emeneau's *Dravidian Comparative Phonology: A Sketch* (1970).[50]

1.8. Dravidian Morphophonemics

1.8.0. It is convenient to distinguish between *root* (R) and *stem* (S) while dealing with Dravidian morphophonemics and morphemic structure. The Dravidian root has generally been recognized as being *monosyllabic* of the pattern (C)V̆(C).[51] The next level, that of grammatical function, is that of the stem which may be identical with a bare root, but typically has an 'augment' or derivational morpheme added to it, and this in turn may be followed by additional augment(s): e.g. Ta. *kār* (DEDR 1466) be pungent, salty, CV̄C, where stem is identical with root[52]: *kar-i* be salty to the taste, R(CVC) + derivational morph *i* (V); *kar-il* pungency, R(CVC) + derivational morph *il* (VC); *kār-am* pungency, R(CV̄C) + derivational morph- **aN*. Hence the statistically prevalent Dravidian root is monosyllabic and biconsonantal CV̆C (cf. Tamil *peṇ* woman DEDR 4395/a/, *pal* tooth DEDR 3986/a/, *kāl* leg DEDR 1479, *nāy*

[48] Cf. Zvelebil's review of Kumaraswami Raja's monograph in *JAOS* 93 (1973) 1.297–300.

[49] "With numerous new facts on comparative phonology, we hope Zvelebil will soon publish the 2nd edition with revisions" (Bh. Krishnamurti in *Oceanic Linguistics Special Publications No.20*, University of Hawaii Press, p.218).

[50] For recent developments in the field cf. Bh. Krishnamurti, 'An over-view of comparative Dravidian studies since Current Trends 5 (1969)', in *For Gordon H. Fairbanks, Oceanic Linguistics Special Publication No.20*, Honolulu, University of Hawaii Press, 212–31.

[51] South Dravidian also shows evidence for a few disyllabic roots of verbs of the shape (C)VCV, like Tamil *kala-* to mix, or *naṭa-* to walk; in alternative analysis, however, this-*a*- may be considered a derivational morpheme.

[52] Or, put differently, root with a 'zero' derivational morph.

dog DEDR 3650), although roots of CV̄ or V̆̆C shapes are by no means rare (cf. Tamil *kā* to preserve, guard DEDR 1416, *oy/uy* to drag, carry DEDR 984, *ōr* to examine DEDR 1059) and a few V̄ roots occur, too (**a* demonstrative base 'that' DEDR 1, Tamil *ē* increase, abundance DEDR 870, *ū* flesh DEDR 728, *ī* fly DEDR 533). The typical *stem* may be CV̆̆C, too, but is commonly rather disyllabic and triconsonantal, CVC–VC. "This distinction is crucial in Dravidian morphology" (McAlpin).

1.8.1. *Krishnamurti's Rule.* Bh. Krishnamurti[53] formulated a basic morphophonemic alternation in derived forms which may be symbolized as:

$$C\bar{V}C : CVC + V.$$

There are many examples, e.g. Tamil *kār-* be pungent, salty etc.: *kar-i* be salty to the taste (DEDR 1466). This alternation is also found in archaic morphology, e.g. Tamil *īr/iru* two, *cīṟ/ciṟu* (< **kiṟu*) small (DEDR 1594), *nī* you-sg. (< **nīn*): *niṉatu* of you-sg.

1.8.2. *Krishnamurti-Emeneau Rule.* M.B.Emeneau[54] following Krishnamurti[55] has formulated a related rule which states

$$CVCC : CVC + V.$$

Example: Tamil *kapp/u-* to overspread (DEDR 1221): *kav-i-* to cover, overspread (< **kapi-*, DEDR 1221).

1.8.3. *Zvelebil's Rule.* K.V.Zvelebil[56] has discussed another morphophonemic alternation, which is not clearly derivational, and set up the following rule:

$$CV\text{-}CC : C\bar{V}C, \text{ i.e. } CV\text{-}CC : C\text{-}VV\text{-}C.$$

Cf. Ta. *meṭṭ/u* mound, heap of earth: *mēṭ/u* height, eminence, hillock

[53] Cf. 'The History of Vowel-Length in Telugu Verbal Bases', *JAOS* 75 (1955) 237–52; *Telugu Verbal Bases* (1961) 121–23.

[54] Cf. *Dravidian Comparative Phonology: A Sketch* (1970) 101–3.

[55] Cf. *Telugu Verbal Bases* (1961) 81–86. Emeneau, in the review of Zvelebil's *CDP* (1970) in *Linguistics* 107 (1973) p.80 explicitly credits Krishnamurti for the concept of this rule. It may be partly Zvelebil's mistake that it has become established in the literature as "Emeneau's Rule". However, Krishnamurti did not formulate the rule as specifically as Emeneau, and hence it is perhaps fair henceforth to designate it as the "Krishnamurti-Emeneau Rule" (cf. D.W.McAlpin, *Proto-Elamo-Dravidian* 1981, p.27 ftn.12).

[56] Cf. 'On Morphophonemic Rules of Dravidian Bases', *Linguistics* 32 (1967) 87–95; *CDP* 81970) 184–87.

(DEDR 5058). This rule operates also is some morphology, cf. Tamil *yāṉ* I (CV̄C): *enn-ai* me (accusative) (VCC-).

1.8.4. *The Sambasiva Rao controversy and Rao's Rule.*

G. Sambasiva Rao, in a stimulating paper (1973)[57] which stirred up a needless controversy, discovered the conditions under which can be stated the exceptions to the rules mentioned above. He shows that where the underlying and the derived forms belong to the same form class, the rules operate; where the derived form belongs to a different form class than the underlying form, the rules do not operate; e.g. *kār* to be pungent (verb): *kāram* pungency (noun): the rule does not operate; *kaṭṭ/u* to build (verb): *kaṭṭai* dam (noun): the rule does not operate. In other words, the three rules which are morphophonemic variations, are controlled by form class (McAlpin). This observation, and Rao's rule, "has set off one of the most vituperative exchanges in comparative Dravidian" (McAlpin), involving G. S. Rao, P.S. Subrahmanyam and B. Gopinathan Nair.[58] Characteristically, none of the original scholars (Krishnamurti, Emeneau, Zvelebil) took part in this controversy. Many problems remain and, undoubtedly, form-class is involved. Zvelebil believes in the basic validity of the rules, and prefers Subrahmanyam's phonological approach.[59]

1.8.5. *McAlpin's Stem Mutation Rule.*

McAlpin (1981)[60] made us aware of the following facts: observing some of the stem variants in South Dravidian, we see that the second consonant of a triconsonantal stem, CVCVC, frequently weakens and is lost, resulting in the fusion of vowels which in its turn results in a long vowel, cf. Tamil *peyar*: *pēr* name (DEDR 4410), but also *muka*: *mō* to smell (CVCV→CV̄, DEDR 4486). The phenomenon had been, however, observed and partly discussed long ago by Zvelebil (1970).[61]

[57] Cf. 'On Proto-Dravidian morphophonemics', *IJDL* 2 (1973) 217–42.

[58] P. S. Subrahmanyam, 'Quantiative Variation in Dravidian', *Ind. Linguistics* 36 (1975) 1–15; G. Sambasiva Rao, 'Dravidian alternations', *Ind. Linguistics* 38 (1977) 86–94; P. S. Subrahmanyam, 'Dravidian alternations: a critique', *Ind. Linguistics* 38 (1972) 227–33; B. Gopinathan Nair, 'On quantitative alternations in Dravidian', *IJDL* 8 (1979) 32–45.

[59] Cf. 'Dravidian linguistics today', *Journ. of Asian Studies* (Madras) 2 (1984) 1.1–40.

[60] *Proto-Elamo-Dravidian* (1981) 29.

[61] *CDP* (1970) p.36, 1.10.1.2. and p.66ff., 1.16.5.11.ff.

2. The Structure of Dravidian

2.0. This part of the description of Dravidian languages will deal with the form-meaning composites functioning in hierarchic structures,[62] in other words, with what in 'traditional' grammar is designated as morphology and syntax. The following division will be followed: 1. Morphology—introduction. 2. Dravidian word. 3. Word-classes. 4. Nouns. 4.1. Substantives. 4.2. Numerals. 4.3. Pronouns. 4.4. Appellatives. 5. Adjectives. 6. Verbs. 7. Indeclinables. 8. Dravidian syntax.

2.1. At first glance, Dravidian morphology seems simple and transparent, but a more detailed comparative work reveals "horrendous complications, particularly in the verb" (McAlpin).

As to their structure, Dravidian languages, generally speaking, may be called *agglutinative* in the terms of Schlegel and Finck. However, several features of 'internal flexion' are also present, not to mention the regular morphophonemic alternations mentioned above; they do occur within roots. On the whole, though, morphemes are strung together "like pearls in a necklace" (to use the overwrought metaphor), and they are at least a syllable in length, and most often identifiable or at least recognizable.

Normally, Dravidian morphology is characterized by the general pattern of

$$stem + medial(s) + ending(s)$$

where the *stem* itself consists of root $\pm$ *augment(s)*. The *root* (see below) is well understood; the endings tend to be transparent in origin and use. It is the middle ground of the augments and medials which is usually complex and ambiguous.

In Dravidian, *new morphology is added at the end of a word.* Thus, *suffixation* is the only type of affixation that occurs in Dravidian. The

[62] My theoretical bias is clearly influenced by the functional structuralism of the Prague school and by Pike's tagmemics: hence I regard grammatical units as form-meaning composites which perform identifiable functions in hierarchic structures from the level of a single unit ('word') up through the phrase, clause and sentence to discourses of various levels and patterns.

root-morpheme stands always as the first morpheme of a morphemic complex.

Another basic rule is that *the root does not* generally *change* and takes no part in morphology. All Dravidian roots are *monosyllabic.*[63] Root-syllables can be *open* (vowel-ending) or *closed* (consonant-ending), *long* or *short.* The specific syllabic pattern (so-called canonical form) of Dravidian roots in terms of V and C is thus $(C_1)\breve{V}(C_2)$. Consonant clusters seem to have originally occurred only on morph boundaries.

2.2. Typical Dravidian words have an agglutinative structure of

$$root \pm augment(s) + medial(s) + ending(s),$$

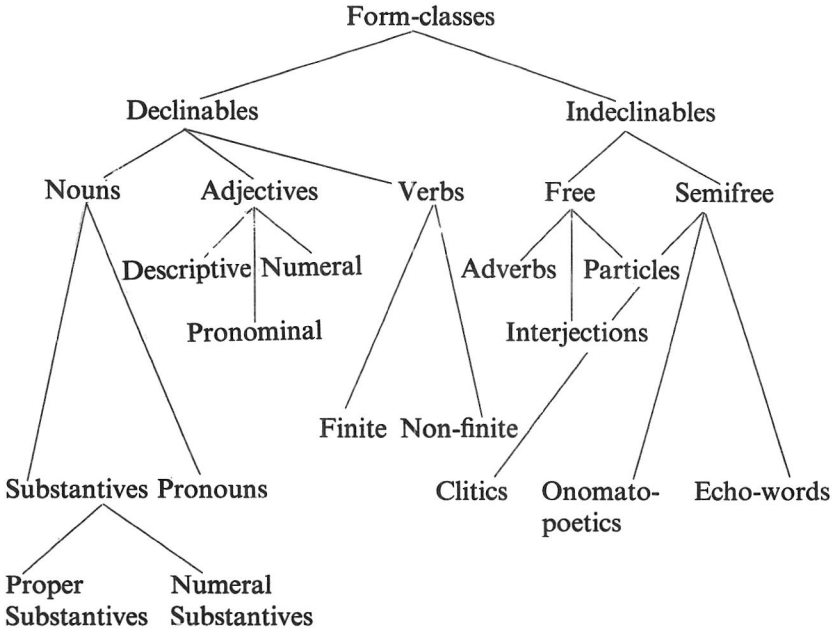
a structure almost certainly the same as that of Proto-Dravidian. This does not mean that the actual markers are the same or even similar, or that reconstruction is simple and easy. The agglutinative structure provides only a "reference grid" (McAlpin) whereas the actual morphological markers have a complex history. It must be admitted that we do not yet truly understand Proto-Dravidian morphology except for small, closed sub-systems like those of personal pronouns or numerals (see below).

2.3. As far as the form-classes ('word-classes' of the 'parts-of-speech' system) are concerned, the basic differentiation of the *noun* and the *verb* raises no doubt since either has its own typical paradigm: nouns are inflected for *case* and *number*, and verbs for *tense* and *person.* Thus, Dravidian morphology's most distinguishing characteristics is its *dimorphism*, and almost complete restriction to the two form-classes of nouns and verbs. Although there are many roots which are ambiguously both nouns and verbs (cf. Tamil *col* 'word' and 'to say', DEDR 2855), and although there are instances of mixed forms (like verb-nouns with tense), and of noun 'invading' the verbal system (such as appellatives, see 2.44), nouns and verbs are in general distinct and exclusive.

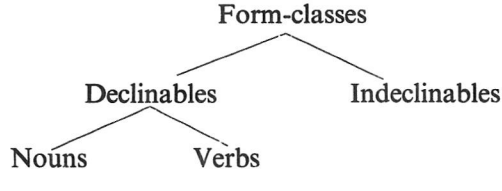
However, not every word in a Dravidian language is either a noun or a verb. There is also a small form-class of genuine primary *adjectives*, and a large class of *indeclinables.*

[63] For the hypothesis of monosyllabic roots in Dravidian cf. Bh. Krishnamurti, 1955 'The History of Vowel-length in Telugu Verbal Bases', *JAOS* 75, 237–52, and *Telugu Verbal Bases*, Berkeley, 1976; also Zvelebil—Glazov—Andronov, *Introduction to the Historical Grammar of the Tamil Language*, Moscow, 1967, pp.93–4, 115–16.

The modern Dravidian parts-of-speech system may be written out in the following chart:



We do not know what the situation was in Proto-Dravidian but the accepted hypothesis, based on criteria of syntactic behaviour as well as on present-day morphological classification, would suggest the following protosystem:



Later, probably, new sub-classes of inflected stems emerged within the more general class of Nouns: substantives, numerals, pronouns (a special sub-class of nouns since they are classified for person and are marked for the feature 'inclusive': 'exclusive') and adjectives (which are possibly genetically traceable to verbal and/or nominal stems): adjectives have neither nominal nor verbal paradigm, but a paradigm of

their own in predication.[64] Finally, there exist in many Dravidian languages so-called 'echo-words' which do not have an independent lexical meaning of their own.[65]

2.4. *Nouns*

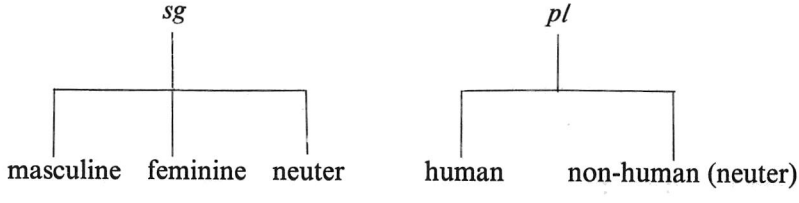
The typical Dravidian noun is agglutinative, tends to be well-defined at the ends (case endings), and is often ambiguous in its morphology in the middle.

Nouns in Dravidian are generally characterized by the presence of the categories of *gender* and *number*, *person* and *case*. Morphologically and syntactically, all nouns behave alike; however, for reasons which will be stated, we subdivide nouns into a) substantives, b) pronouns, c) numerals, d) appellatives.

2.41. *Substantives*

2.41.1. *Gender* of nouns in Dravidian has lexico-grammatical character. Gender distinctions are made grammatically only in the third person forms. Leaving aside minor and later developments, Dravidian attests *three* major patterns for gender and number (the gender and number categories are frequently intermixed).

TYPE I–SDr:

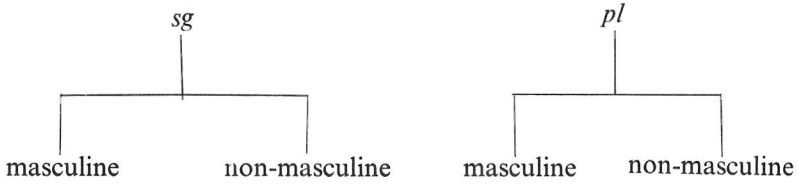


[64] Most modern adjectives are clearly derived from other forms, and hence many Dravidianists (Andronov, McAlpin, etc.) totally deny the existence of Proto-Dravidian adjectives. Others (S.A.Tyler, W.Bright, M.B.Emeneau, etc.) classify adjectives as distinct form-class at least in their descriptions of the respective modern Dravidian languages (Koya, Kannaḍa, Kolami etc.). There are a few forms, like the basic colour terms (**kem* red etc.), adjectival numerals (*oru*, *iru*) and a few descriptive stems (*nal* good) which are modifiers, have a distinct monosyllabic morphology, and may be reconstructed for Proto-Dravidian. It is my opinion that even a dozen or so such words justify the recognition of a distinct adjective word-class in the proto-language.

[65] Cf. the path-breaking study 'Echo-words in Toda', read first in 1937 (see M.B.Emeneau, *Collected Papers*, Annamalainagar, 1967, 37–45).

TYPE II–Telugu; Kuṛux–Malto:

TYPE III–CDr less Telugu:



Brahui, Toda and Malayalam seem to have each lost the gender category in their respective independent developments. At least the modern forms of these three languages do not manifest gender with nouns.

It is likely that Type II is the most probable Proto-Dravidian pattern (Subrahmanyam, Emeneau, McAlpin, Zvelebil). Type I added a separate feminine in the singular, whereas Type III generalized the singular's pattern to the plural.[66]

2.41.2. *Derivation of nouns.* Derivational morphology in Dravidian has not yet been worked out in detail. This is one of the fields where much additional work is expected. Derivational augments fall into the basic general pattern—VC affixed onto a monosyllabic root; but they do not remain confined to that pattern. Here I can list only a handful of the numerous derivatives, those which are statistically most productive.

The masculine singular derivative suffix **-antə/*-an*: It seems that the PDr form was **-anṯə*, and that SDr lost the final obstruant. This derivative affix is widespread, and always marks singular masculine substantives, often obligatorily. It is regularly replaced in the plural by the human plural affix **-ar*. Cf. PDr **tōr̤-antə* (DEDR 3563) friend, **kaḷ-v-antə* (DEDR 1372) thief.

[66] For the discussion of the problem of the reconstruction of gender in Proto-Dravidian cf. Kamil Zvelebil, *A Sketch of Comparative Dravidian Morphology—Part One*, Mouton, 1977, pp. 11–12.

The neuter singular derivative *-*aN* (= -*am*/-*an*): This ending is found throughout Dravidian and is typical of abstract and also concrete neuter nouns, cf. **maraN* (DEDR 4711 a) tree, **kaḷ-ḷ-aN* (DEDR 1372) theft. Since it occurs only in the nominative, regularly replaced by -*(t)t*- in the oblique, it can also legitimately be analyzed as a nominative case ending (Zvelebil).

The basic non-masculine ending is PDr *-*ay* (which often becomes *-*e*) and *-*i*. Both *-*ay* and *-*i* refer to female kin, animals, and general neuters, e.g. **akk-ay* (DEDR 23) elder sister, **mām-i* (DEDR 4812) maternal uncle's wife, **kapp-ay* (DEDR 1224) frog, **koṯ-i* (DEDR 2165) sheep, **puk-ay* (DEDR 4240) smoke, **kev-i* (DEDR 1977) ear.

Probably a related derivative suffix is *-*may* (< -*m-ay*?) with the specific usage as formative of abstract nouns, cf. PDr **oru-may* (DEDR 990a) oneness, **naṉ-may* (< **naṉ* DEDR 3610) goodness.[67]

Another general nonmasculine formative *-*tə* is closely connected with the appellative system (see below), but is also frequent as derivative of substantives, cf. **poṟu-ṯə* (DEDR 4559) sun; time; and its compound form (-*t* + -*i*) -*ti*, e.g. *paṉṯi* (DEDR 4039) < (?) **pal* (DEDR 3986a) tooth + *-*ti* > pig. In the form *-*tti* it is a feminine marker: **oru-tti* one female: **oṉṯu* (< **on-* + *-*tu*) one thing (DEDR 990). The feminine derivative *-*aḷ* is traceable to South and Central Dravidian.

2.41.3. *Basic Nominal Morphology—Number and Case.*

Morphological augments are added to the stem to form the base to which case endings are attached. Two primary bases, the *nominative* and the *oblique*, normally exist in Dravidian nouns; some languages also have a third base in *compounds*.

The morphological contrast between nominative and oblique is fundamental in Dravidian. In fact, one could maintain that there are in Dravidian fundamentally only two 'cases', the subject-case (nominative) and the oblique (as was the opinion of, e.g., Jules Bloch), and that the case-system is rather "underdeveloped"; in this conception, cases are in fact bound postpositions.[68]

2.41.3.1. *Number.* There are two numbers in Dravidian—*singular* and *plural* (without even a trace of a dual). The plural in Dr. nouns and pronouns is not an obligatory category (except for most CDr languages

[67] Thus, and not the other way round, as Andronov would have it; he would derive *nal* good from *naṉmai* goodness (*Dravidijskije jazyki*, Moskva, 1965, p. 56)—obviously an untenable hypothesis.

[68] For a general discussion, cf. K. Zvelebil (1977) pp. 25–27.

which have developed it later). In the proto-language (as attested by SDr and Kuṛux-Malto), plurals are restricted to human nouns or to situations where plurality is stressed. Neuter plurals are not normally used where the plurality is obvious contextually.

Of the plural markers, the general plural for humans, *-*Vr*, is found widely with nouns, and can be clearly reconstructed for the proto-language. Another ancient plural marker, *-*m* is restricted to personal pronouns. The most frequently occurring plural suffix has the shape *-*(ṅ)kVḷ(u)* [where V = *a,i,u*]. It can most probably be reconstructed as *-*kaḷ*, but originally it seems to have been a composite form, a coalescent of two plural suffixes, *-*k(V)* and *-*Vḷ(u)* (according to J. Bloch; also, M. S. Andronov). It is originally the plural of neuters, almost certainly later than either *-*Vr* or *-*m*. The neuter appellative plural *-*a*/*-*va* can probably be reconstructed for PDr, too.

2.41.3.2. *Case.* Mostly, what is termed 'cases' in Dravidian are bound postpositions. However, it seems to us that it is advantageous at least to an extent to distinguish between *case endings* and *postpositions*: case endings are bound, they cannot be separated from the nouns by clitics, whereas postpositions can. As McAlpin rightly observes, though, this distinction is valid for the synchronic situation but is very fluid diachronically. Perhaps the best definition of 'case' in comparative Dravidian is "a bound postposition which does not have any determinable etymology".[69]

The number of so-called cases is different in different languages, or rather is given differently by various authors describing the respective language. Generally, no one of the languages lacks, in addition to the subject-case ('nominative'), a direct-object case ('accusative'), an indirect-object case ('dative'), a case of adnominal relation ('genitive', with a possessive sometimes distinguished), and further, cases which express some kind of relations in space and time, static or dynamic; finally, a case of instrument ('instrumental') and, sometimes, a case of association ('sociative').

Statistically the most frequent *nominative* ending in Dravidian is zero (Ø). The only other possible nominative ending is *-*N*, analyzed as such by Zvelebil (1972) and Andronov (1976:717–18).

The *accusative* case (normally marking direct object of verb) has several markers, two of them most frequent: *-*Vn* (usually *-*an*), clearly

[69] For a detailed discussion with tables, charts and examples, cf. K. Zvelebil (1977) pp. 18–33, and Zvelebil, 'Dravidian Case Suffixes: Attempt at a Reconstruction', *JAOS* 92 (1972) 272–76; also, M. S. Andronov, 'Case Suffixes in Dravidian: A Comparative Study', *Anthropos* 71 (1976) 716–37.

Proto-Dravidian, and *-*ay* (in the Tamil-Koḍagu sub-group).

The *dative* is semantically very complex: it marks the experiencer of the verbal action ('indirect object'), but also the subject of verbs of emotion, physical/mental states, as well as indicating motion towards a place, and purpose. Formally, though, it is rather clear: the universally attested shape is *-*(k)ku*.

There are at least three different *genitive* endings, thoroughly mixed up with the oblique formations. Zvelebil (1972) has made an attempt to distinguish between the 'adnominal' (McAlpin "nonverbal") *-*in* and the 'possessive' *-*ă̄*. According to McAlpin (1981), we may ultimately reconstruct four genitive/oblique 'cases' for PDr: *-*ă̄* with possessive meaning, *-*in* with nonverbal functions, *-*(t)tu*, primarily an oblique marker with a wide range of functions (e.g. location), and *-*ă̆tu* which is pronominal. *-*ă̄* seems to be most archaic.

Of the rest of the cases, *-*ān*/*-*āl* ('instrumental') and *-*ŏ̄ṭu* ('sociative') may probably be reconstructed for the proto-language; these two cases have been much confused in function and meaning. No other cases with the possible exception of *-*il*/*-*in* (which cannot be reconstructed for PDr, and has a 'locative' function in those languages where it is found) can rank as 'case'. All are postpositions

Nom.: Ø and, possibly, -N (*-*m*/*-*n* with non-personal nouns)
Acc.: *-(V)*n*. Possibly, in a group of 'southern' dialects, *-*ay*.
Dat.: *-*(k)ku*.
Gen.: 1. adnominal *-*in*;
2. pronominal *-*atu*;
3. possessive *-*ă̄*.
4. oblique *-*(t)tu*.
Instr.: *-*ān*/*-*āl*.
Abl.: *-*in* (?).
Loc.: *-*uḷ*;
*-*in*/*-*il* (?).
*-*kaṇ* ⟨ **k*/*u* *-*aṇ* (?).
Soc.: *-*ŏ̄ṭu*/*-*(t)* -*ŏ̄ṭu*.

Chart 3: *PDr case-endings.*

with rather obvious etymological source—thus e.g. the Tamil possessive suffix *-uṭai-y-a* ⟨ **uṭay-* belonging to (DEDR 593), or the locative *-uḷ* in, within, inside ⟨ **uḷ* the inside (DEDR 698).

2.42. *Numerals.* The sub-system of numerals is one of the best-known

parts of Dravidian grammar.[70] Morphosyntactically, numerals behave like substantives. They are inflected for case by endings identical with those of substantives. However, they may be considered to form a subclass of nouns since they do not have the category of number, and are among the few forms that have anything like an adjective.

The Dravidian numerical system undoubtedly functions in base *ten*. However, there are traces of *octogenal* (base 'eight') system, since the compounding bases stop at 'eight', and the root for 'eight' = **eṇ* is perhaps the same(?) as the root for 'count' and 'number' (DEDR 784 and 793). We may speculate that an octogenal system had been in vogue before the Dravidians adopted the decimal system. From the semantic point of view, the Dravidian numerals are as follows: "one, two, three, four, five, six, seven, number (= eight), deficient-many (or many minus one = nine), many (= ten)". The reconstructed substantive numeral forms are **onṯu* (DEDR 990 d), **iraṇṭu* (474), **mūnṯu* (5052), **nālku* (3655), **cayntu* (2826), **cāṯu* (2485), **ēṛu* (910), **eṭṭu* (784), **toṇṭu* (〈 **toḷ-*, 3532)/**onpatu* (1025), **pattu* (3918). 'One' to 'eight' present no problems; 'nines' are a tremendous problem since 'nine' itself is **on-* 'one' + **paHtu* 〉 **onpatu*, or derived from **toḷ* (DEDR 3528). 'Ninety' and 'nine hundred' are rendered by the stem **toḷ* plus the word for 'one hundred' and 'one thousand'. 'Ten' is regular: **pattu* 〈 **paHtu* 〈 ? **pal-* + *tu* (DEDR 3987). 'One hundred', **nūṯu* (DEDR 3729) is Proto-Dravidian, whereas the word for 'thousand', Tamil *āyiram*, Kota *ca·vrm*, Toda *so·fer*, Kannaḍa *savira*, *sāsira* etc. may be a loan-word from Indo-Aryan (cf. Skt. *sahásra-*), but the reverse borrowing is not ruled out (cf. DEDR *Appendix* item 11, DED 309).

2.43. *Pronouns.* Personal pronouns are restricted to *first* and *second* person forms, and to *third* person *resumptive* ('reflexive') pronouns (resumptive = used when the subject is repeated within a sentence). Other third person situations are expressed by deictic appellatives (see below). Dravidian pronouns indicate *three* persons and *two* numbers, singular and plural. Generally, first person plurals have separate forms for *inclusive* "you and I (and they)" versus *exclusive* "they and I". Personal pronouns indicate clearly two basic forms, a nominative base and an oblique base: the most basic rule says that nominative manifests long

[70] Cf. M.B.Emeneau, 'Numerals in Comparative Linguistics (With Special Reference to Dravidian)', *Bull. of the Institute of History and Philology*, Academia Sinica 29 (1957) 1–10; M.S.Andronov, 'Dravidian Numerals: An Etymological Study', *IJDL* 5 (1976) 5–15; S.V.Shanmugam, *Dravidian Nouns*, Annamalainagar, 1971, 141–74; Zvelebil (1977) 33–36.

[71] Cf. Zvelebil (1977) p. 36.

vowels, whereas oblique manifests short vowels (e.g. the resumptive **tān*: **tan*, DEDR 3196).

Personal pronouns are the only sub-system of forms which can be completely and reliably reconstructed for Proto-Dravidian. This has been done by Zvelebil (1962; 1977), Krishnamurti (1968) and Subrahmanyam (1970).[72] This fact demonstrates, incidentally, the 'state of the art' in historical-comparative Dravidian linguistics.

The first person singular form is PDr **yān*, obl. **yan* (DEDR 5160). Later, in many languages, the nominative commonly picks up an initial *n-* (by analogy or contamination with 1st pers.incl. pl. **nām*/**nam*, DEDR 3647).

This results in forms with intial *y*/*ñ*/*n* often in variation: Old Tamil—although it regularly has *yāṉ*—also cites *ñāṉ* (cf. the Malayalam form *ñān*) and even *nāṉ* (which is the new Tamil form). The inclusive 1st. pers.pl. is **nām*/**nam*. The exclusive plural takes the regular pronominal plural marker *-m* on the stem **yā-*/**ya-* hence **yām*/**yam* (DEDR 5154).

The second pers.sing. form is PDr **nī(n)*, obl. **nin* (DEDR 3684). It is not quite clear whether the nominative had the final nasal or not, but probably yes. The plural is clearly **nīm*/**nim* (DEDR 3688); this form has often other plurals: the human pl. **-r* (**nīr*), and a composite form (new Tamil *nīṅkaḷ*).

The resumptive pronouns, **tān*/**tan* (DEDR 3196) functions also as the 3rd person of the personal pronouns. It is used when a noun, usually a subject, is repeated within the same sentence (or even within larger discourse). It is often called 'reflexive', but it has a wider range of use than that. Used as a clitic, it occurs as emphatic, immediately following its antecedent.

A very interesting feature of Dravidian grammar are the possessive clitics—the only true proclitics or prefixes occurring in Dravidian. They must have once formed a complete, full sub-system. In the modern languages they are rare (found e.g. in Kui, or as enclitics in Brahui), but Old Tamil texts have preserved the vestiges of an old sub-system: *āy* mother: *yāy* my mother: *ñāy* your mother: *tāy* his/her mother (DEDR 364). The forms in *t-* became generalized as the norm.[73]

[72] Cf. Zvelebil, 'Personal Pronouns in Tamil and Dravidian', *IIJ 6* (1962) 65–69, and *A Sketch* (1977) 36–47; Bh. Krishnamurti, 'Dravidian Personal Pronouns', *Studies in Indian Linguistics*, Poona, 1968, 189–205; P.S. Subrahmanyam, 'The Personal Pronouns in Dravidian', *Bull. Deccan College Research Institute* 28 (1970) 1–16.

[73] Cf. also another minisystem—*entai* my father (*Kuṟuntokai* 40, 51, 176 etc.): *nuntai* your father (*Kuṟunt.* 40, glossed as *niṉ tantai*), *tantai* his/her father, generalized as 'father'.—For 1st p.p.inclusive, Bh. Krishnamurti (1968:195) reconstructs PDr **ñām*/**ñam*; the problem with this reconstruction is that the **ñ* is not attested in Tamil and Malayalam which normally retain and exhibit this consonant elsewhere.

The oblique bases of pronouns function as the possessive.

Proto-Dravidian Pronouns (reconstruction)

	Sg	*Pl*	
1st nom.	**yān* I	1st excl.nom.	**yām* we ('they + I')
obl.	**yan*	obl.	**yam*
possess.	**y-*	1st incl.nom.	**nām* we ('you + I + they')
		obl.	**nam*
2nd nom.	**nī(n)* you		**nīm*
obl.	**nin*		**nim*
possess.	**ñ-*		
3rd nom.	**tān* self		**tām*
obl.	**tan*		**tam*
possess.	**t-*		

2.44. *Appellatives.* Appellatives consist of a set of personal endings which may be added to any noun or verbal to indicate *person.* Formulated somewhat differently, "an appellative is a noun, pronoun, or any other part of speech, except a finite verb, with a personal ending attached" (McAlpin). Appellatives may function as predicates or as proforms, and when added to the deictic/interrogative stems, they form 'third person pronouns' throughout Dravidian.

The labours of Krishnamurti (1963), Israel (1977) and McAlpin (1981) have resulted in the following conclusions concerning the deictics: the deictic series for PDr may be reconstructed as **iH* here (DEDR 410), **uH* neither far nor near; near you (DEDR 557), **aH* remote (in sight) (DEDR 1), **ēH* ⟨ ***(c)ēH* distant (DEDR 764), **uH/*oH* ⟨ ***HuH* ⟨ *?cu*—(McAlpin, ?557) out of sight; extremely far; and the interrogative **yaH/*eH* (DEDR 5151). These deictic-interrogative stems are unusual in that they are short monosyllables, and end in reflexes of Proto-Dravidian *H (a laryngeal which has never been common, and disappeared soon from almost all the languages).[74] However, the reconstructions, quoted above, are by no means certain, particularly the two last ones for the 'distant' deictic.

Appellative endings can occur with nouns, are widely attested in Dravidian, and can certainly be reconstructed for the proto-language. Cf. e.g. Old Tamil *āḷaṉ-ai* male person-you (*Puṟam* 40.5, DEDR 399), *kaṇ-ṇ-aṉ* of the eyes-he (*Puṟam* 300.4, DEDR 1159), Kuṟux *āl-an* man-I: *āl-as*

[74] Cf. Bh. Krishnamurti, Review of *DED* by T. Burrow and M. B. Emeneau, *Lg.* 39 (1963) 556–64; M. Israel, 'Demonstratives in Kūbi, Kū'i and Kuvi', *IJDL* 6 (1977) 223–32.

man-he, the man (DEDR 399). They can also occur on adjectives, numerals, 'adverbs', and other appellatives, cf. Tamil *nal* adj. good (*Puṟam* 2.11, 9.11, 15.3, 16.17 etc.) → *nal-l-a* good things (*Puṟam* 7.9, 106.1 etc., DEDR 3610), Kuṛux *kōhan* great-I (DEDR 2177), Old Tamil *avaṇ-atu* that place-it (*Puṟam* 50.14, DEDR 1).

2.5. *Adjectives.* Two facts are obvious as regards adjectives in Dravidian: first that—in spite of the doubts or denials of a few scholars[75]—there exists a separate word-class in Dravidian which should definitely be designated as *adjectives*; second, that primary, underived adjective stems are, in statistical terms, very rare in any Dravidian language.

It cannot be denied that most modern Dravidian languages have a morphosyntactic form-class of adjectives—usually classified as descriptive, numeral, and deictic adjectives in function; the controversy concerns the problem whether or not Proto-Dravidian did have such a word-class. The dispute is whether we can reconstruct 'genuine' adjectives for the protolanguage.

Most modern Dravidian adjectives are clearly derived, e.g. from verbs (Tamil *keṭu* become rotten, etc. → relative participle *keṭṭa* which functions as descriptive adjective 'rotten, spoiled, bad', DEDR 1942), or from nouns (Tamil-Malayalam *aḻaku* beauty → *aḻakiya* beautiful, DEDR 274). Such facts have led a few scholars to totally deny the existence of Proto-Dravidian adjectives.

However, there exists a limited number of forms which cannot be explained as derivations; they are obviously primary, basic, non-derived stems, most crucial among them the compounding forms of the numerals (e.g. **oru* one, **iru* two), the basic colour terms (cf. PDr **kem* red, DEDR 1931), and a few descriptive adjectives like **nal* good (DEDR 3610), as well as the deictic bases (**a* that-distant, DEDR 1, etc.). On the force of such forms, "Zvelebil (1977: pp. 59–69) makes a strong case for the Proto-Dravidian adjectives" (McAlpin). As McAlpin says, "Zvelebil is perfectly correct that the numerals, colors, and a few other terms are modifiers, have a distinct monosyllabic morphology, and are reconstructible to Proto-Dravidian" (1981:32). McAlpin questions, nevertheless, the legitimacy of positing a distinct form-class on the basis of "a dozen terms". In this point, I disagree with him: even though numerically a small group, the items belonging to that group are basic to the language semantically, are of quite obvious high frequency and strong productivity,

[75] Among those who tend to deny or do deny the existence of adjectives as a separate 'part-of-speech', the most prominent are Jules Bloch and M.S. Andronov. Master, Burrow and Zvelebil, on the other hand, accept adjectives as a separate word-class.

and cannot be explained away in any other way than by positing a *distinct word-class of adjectives* for the proto-language.[76]

2.6. *Verbs.*

2.6.0. As David W. McAlpin rightly says, "the verb has a central place in the grammar of all Dravidian languages, derivationally, morphologically, and syntactically".[77] Nevertheless, when viewed from the point of its built-up, its structure and function, and typologically compared, Dravidian verb has distinctly "nominal character" when compared e.g. with the Indo-European verb. The structure of Dravidian verb represents a complex combination of agglutination and inflexion. Although little detailed work has been performed on verbal morphology until now, particularly on the historical-comparative plane,[78] one feature appears clearly: we should keep as distinct the three components of the Dravidian verb—*verb root*, *verb stem*, and *verb base*. A verb *root* is the common, usually—but not always—monosyllabic portion shared by several verbs, or other words, often across language boundaries and word-classes, and most frequently it is simplex. A verb *stem* is the morpheme of any specific verb in an individual language, commonly constisting of the root plus an augment, and is often disyllabic. It may also consist of a single root, or of compound forms. A verb *base* consists of verb stem fused with other morphemes, and functions as a unit in the morphosyntactic situation of a given language.

2.6.1. *Verb derivation.* Primary augments for nouns and verbs consist of a syllable VC added to the root. In case of verbs, the resulting form is a *verb stem*. The short derivational vowel of the VC must be *a*, *i* or *u*. With a few exceptions, it is not possible to assign any *meaning* to the derivative suffixes. For most of the derivative suffixes there is at present no adequate

[76] Cf. in detail, for the entire controversy, Zvelebil (1977) 59–69, and, especially, A. Master in *JRAS* 1949, 106–7, and T. Burrow in *BSOS* XII (1947) 1.253–5. For an opposite position, cf. M. S. Andronov, *Dravidian Languages*, Moscow, 1970, 80–83.

[77] McAlpin stresses this centrality and importance of the verb as if it were a specific feature of Dravidian, or at least a feature specially characteristic of Dravidian. I doubt whether this is so. Many linguists have stressed the 'primacy' of the verb in general, e.g. Lucien Tesnière, or J. Erben (*Abriss der deutschen Grammatik*, 1958) in whose "valence" theory the nature of the verb determines how many and what kind of complements there can be in a sentence; or Wallace L. Chafe (*Meaning and the Structure of Language*, 1970, p.96), according to whom "the verb will be assumed to be central and the noun peripheral... The nature of the verb determines what the rest of the sentence will be like . . . it is the verb which dictates the presence and character of the noun, rather than vice versa."

[78] With the exception of Krishnamurti's path-breaking *Telugu Verbal Bases* (Berkeley, 1961) and Emenau's 'The South Dravidian Languages', *JAOS* 87 (1967) 365–412.

explanation. Secondary augments differ from primary augments in that they have a clearer meaning, somewhat more predictable structure, and that they follow primary augments.

2.6.2. '*Causatives*'. Traditionally, the categories 'intransitives', 'transitives' and 'causatives' are being recognized in Dravidian, but thanks mainly to the labours of Krishnamurti, Emeneau, Paramasivam and McAlpin, we know now that what is involved in these formations is *a shift in the degree of agentivity*, i.e. the "indication of the number of the rational beings who are the instigators of a verbal event, but who are not directly affected". Agentivity occurs in degrees: *zero* degree agentivity has *no* outside instigator (agent), *first* degree has *one*, *second* degree *two*, etc. In what follows, I am completely indebted to K. Paramasivam's work.[79]

a) In the zero degree, called *affective*, the subject is nonagentive, i.e. the verbs *affects* the subject; these forms are commonly but not always intransitive: Tamil *kuṭam uṭaintatu* "The pot broke"; *māṭu pullai mēyntatu* "The cow grazed (on) the grass-accus."

b) In the first degree, called *effective*, an agentive subject is added and the verb is transitive, i.e. the subject *effects* the object: Tamil *nāy kuṭattai uṭaittatu* "The dog broke the pot-accus."; *avaṉ māṭṭai mēyttāṉ* "He grazed the cow-accus."

c) If one more agent is added, a true morphosyntactic *causative* in *vi/ppi* is formed: Tamil *Cōḷaṉ tañcāvūr-k kōvilaik kaṭṭuvittāṉ* "The Chola king had the Tanjore temple-acc. built".

Paramasivam's work is "extremely enlightening" (McAlpin), but since it is limited to Tamil, problems remain on all-Dravidian level.

For Proto-Dravidian, there seems to have been the following basic system of augments: a medio-passive **-Vr-*, an effective (causative?) **-tt-*, and another causative **-pi-*.

At the Proto-South Dravidian stage, a major innovation must have occurred in verbal augments and morphology which led to the weak/strong system expressed so well in the Tamil-Koḍagu group (while largely lost in Kannaḍa and taking somewhat different shape in Tuḷu).

2.6.3. *Finite Verb.*

The typical Dravidian finite verb consists of a verb stem + medial + personal ending. The stem ← verb root ± augment(s).

[79] Paramasivam, K., 'Effectivity and Causativity in Tamil', *IJDL* 8 (1979) 71–151.

Example:

	stem (root + augm.∅)	+ medial	+ pers. ending
Tamil	*col-*	+ *-kiṉṟ-*	+ *-ēṉ*
	'say'	+ pres.	+ 1.pers.sg.

The personal endings are normally connected etymologically with the *appellative* system which in its turn is derived from the *pronominal* system. The medials, however, are troublesome: they do not exhibit internal agglutinative structure, but tend to have complex meanings and functions. Instead of a series of tense, aspect, and mood markers, they are cohesive, fused 'tense-aspect-mood' markers.

Three sets of these markers may perhaps be reconstructed for PDr. They are labeled (largely arbitrarily) Past, Non-past and Negative. Notice that *tense* indications (as well as aspect indications) seem to be quite secondary, if at all present: so-called *past* forms are used when a situation is specific, with a definite location in space and time, and real.

Non-past medials refer to habitual and durative action, to positive distant future, and to subjunctive mood. Non-pasts are nonspecific or nonreal.

As the various languages developed, 'past' began to gain *specific* tense and *aspect* connotations, while 'non-past' elaborated rather *modal* connotations. True tense and aspect system developed mostly with the addition of a 'present', and that happened in some cases rather late. In fact, in languages like Tamil, we may perhaps even 'date' this event.[80] Hence, no common Dravidian tense marker can be reconstructed as the present tense morph.

The most widely attested past medial is the dental *t* with *tt* and possibly *n(t)* and *i(n)* as conditioned variants. There is also an anomalous past medial *(k)k*.

Non-past medials: SDr has mainly *(p)p* which alternates with *(k)k*; *-um*, too, plays a role. CDr primarily uses *(t)t* with alternating *(k)k* and sporadic *-um/-n*. Kuṛux-Malto and Brahui use *-o-* with sporadic *-n-*. Thus, the labials are essentially restricted to SDr, the dentals to CDr, and *-o-* to NDr. The most widely spread and important non-past markers are *(k)k* and *-n/-um*.

As for *negative* markers, all Dravidian languages have *ă̄*, *vă̄*, or completely assimilated zero (∅).

[80] Cf. K.V.Zvelebil, 'The Present Tense Morph in Tamil', *JAOS* 91 (1971) 442–45.

Medials	Ta.-Koḍ.	Ka.	Tuḷu	Te.	Go.	Konḍa	Kui	Kol	Parji	Kuṛux-Malto	Br.
PAST											
1. t	×	×	×	(×)		×		×		(×)	
2. nt	×	(×)			×?			×			
3. tt	×	×	×	×	×	×		×			
4. i	×	R	×	×		(R)		R			
5. cc	?			D	R	R		R		×	×
6. kk										×	×
7. n	?			?				?			
NON-PAST											
1. (p)p	×	×	×			R					
2. (k)k	×	×			×	R		×			?
3. (t)t	?	R		×	×	?		×		×	
4. um	×	×	×	×				×			
5. n	R		R		×	×		(×)		×	
6. o										×	×
NEGATIVE											
1. ă	×	×	×	×		×		×		×	
2. vā					×	×					
3. Ø	×	×									

Chart 4: *Attested medials* (after P. S. Subrahmanyam, 1971, and D. W. McAlpin, 1981). Ta. = Tamil, Koḍ. = Koḍagu, Ka. = Kannaḍa, Te. = Telugu, Go. = Gondi, Kol. = Kolami, Br. = Brahui; × = attested; (×) = attested but rare; R = related form attested; D = derivative attested.

As chart 4 shows, among the *past* medials, the most widely distributed ones are the morphs *-tt-* and *-t-*. There is a neat division between Kuṛux-Malto and Brahui on the one hand with the past *-cc-* and *-kk-*, and all the other languages where these medials are presumably absent. Among the *non-past* medials, the situation is more complex; however, the morphs *-(p)p-* and *-(k)k-* are rather productive, and so is *-(t)t-* and *-um*, whereas *-o-* is restricted only to Kuṛux-Malto and Brahui. The zero-negative (Ø) is restricted to Tamil-Koḍagu, whereas the obvious pan-Dravidian and

The Proto-Dravidian Appellative Non-past and Its Reflexes
(after David W. McAlpin)

	Mod.Tamil appellative	Future mod.Tamil	Telugu future	Gondi 'past irrealis cum habitual'	Pengo future	Parji present	Kurux future	PDr non-past
1.p.sg.		-pp-ēn	-tā-nu	-nd-ūn	-n-an	-m-en	-o-n	*-N-en
1.p.pl.excl.		-pp-ōm	-tā-m	-nd-ūm	-n-ap	-m-om	-o-m	*-N-em
1.p.pl.incl.					-n-as		-o-t	*-N-aṭ(?)
2.p.sg.		-pp-āy	-tā-vu	-nd-ī	-n-ay	-m-ot	-o-y	*-N-ay/-i
2.p.pl.		-pp-īr	-tā-ru	-nd-īṭ	-n-ader	-m-or	-o-r	*-N-ir
3.p.sg.m.	-ppa-v-an	-pp-āṉ	-tā-ḍu	-nd-ūr	-n-an	-m-ed	-o-s	*-N-antə
3.p.sg.n.	-ppa-tu	(-kk-um)	-tun-di	-nd-ū	-n-at	-m-o	-o	*-N-(a)tə
3.p.pl.hum.	-ppa-v-ar	-pp-ār	-tā-ru	-nd-īr	-n-ar	-m-er	-o-r	*-N-ar
3.p.pl.n.	-ppa-v-ai	(-kk-um)	-tā-yi	-nd-ūṅ	-n-in	-m-ov	-o	*-N-av

Chart 5: McAlpin (1981:51) has reconstructed the PDr non-past with the appellative ("personal") endings. Notice the preservation of the excl.- incl. contrast in the verb in such languages as Pengo and Kurux. Also, the Gondi form, which is 'mixed' (non-past-*n*- plus past *-*t*- › -*d*-).

hence Proto-Dravidian negative medial is *-ă̄*. The chart shows that, with regard to the medials (e.g. the markers of tense and negativity), the North-Dravidian languages (Kuṛux-Malto and Brahui) are rather sharply separated from the rest. It also shows that some of the medials should almost certainly be reconstructed as very ancient markers occurring in the Proto-Dravidian verb: the past **t* and **tt*, possibly the non-past **(t)t*, and certainly the negative **ă̄*.

Personal endings. Typically, the personal endings closely parallel the personal pronouns and appellatives of the languages.

Subrahmanyam[81] reconstructs PDr **-ēn* for the singular and **-ēm* for the exclusive plural. Most modern languages have dropped the inclusive: exclusive distinction in the verb (even when it is maintained in the pronouns). What has remained seems to indicate two distinct markers: the Southern languages point to **-ăm*. Kuṛux-Malto has -(V)*t* which may be related to Konḍa and Gondi *-aṭ* and Kui *-as* (or to the *-ar* of Parji). The PDr form was probably **-ă̄m* with a possible alternant **-aṭ/*-at*.

Second person singular may be reconstructed as **-i/*-ă̄y* with no plausible explanation of the alternation. The plural forms go simply back to an easily recognizable **-ĭ̄r*.

Third person endings closely follow the appellatives. The masculine singular is **-anta*[82], while the non-masculine (neuter) singular is **-(V)tə*. The human plural is **-ă̄r* and the neuter plural probably **-av*.

As far as the medials are concerned, we still have to repeat what McAlpin wrote in 1981, viz. that there is no real understanding and concensus on the medials, except for fairly obvious general positions—pasts in dentals, non-pasts in velars and labials, and nasals playing an important but unspecified role. The arguments can be settled only in the details of the subgroups. Thus, e.g., I am convinced of certain common trends which are manifested in all non-literary languages of the Nilgiri 'mini-area'. The obvious task of comparative Dravidian morphology will include no doubt detailed investigation of such subgroups as Kota-Toda, Tamil-Malayalam including Iruḷa, Muḍuga, Paṇiyan, etc., to remain within the confines of a single (Nilgiri) area.

2.6.4. *Nonfinite predicates.* Typical of Dravidian languages is a set of non-finite verbs (converbs, also called gerunds, absolutives, or even 'past participles' which certainly is a misnomer) which function as nonfinal predicates. Characteristic of Dravidian syntax is a series of connected

[81] Cf. P.S.Subrahmanyam, *Dravidian Verb Morphology*, Annamalainagar, 1971, an extensive statement of great merit.

[82] After Krishnamurti, 'Gender and Number in Proto-Dravidian', *IJDL* 4 (1974) 328–50.

statements (which share, but don't have to, the same subject), each with its own predicate, whereby only the final one is finite. The others are of these non-finite verb-forms and depend on the finite verb for their 'tense-aspect-mood' markers and personal endings.

There are three of these non-finite verbal forms:

a) the gerund (converbial, absolutive, adverbial participle, 'past participle'—all these terms being used at different times by different authors),

b) the infinitive,

c) the negative gerund.

The *converbial* is a "past" non-finite form in the sense that the action of its verb must precede (or in some languages also be simultaneous with) the action of the following predicate (which may itself be non-finite, e.g. the infinitive).

The *infinitive* is the non-past non-finite in that the action of its verb must follow (or be simultaneous with) the action of the following predicate. It is commonly used to express purpose or intention (although some languages have developed a 'purposive participle').

The *negative gerund* is the negative of both these forms.

In South Dravidian, the converbial typically consists of the past medial without any personal ending (Tamil *pēc-i* having spoken, *cey-t/u* having done). However, it has no inherent tense of any sort (so that the above translations are in fact imprecise and only approximative). To illustrate: Tamil *nāṉ iṅkē vantu uṭkārntu paṭittēṉ* Having come here and sat down I read (preceding action); *avaṉ cirittup pēciṉāṉ* He laughed and spoke, He spoke laughingly, He spoke while laughing (simultaneous action). The rest of Dravidian, except for Kuṛux and Brahui, tends to use *-i* or *-ci* for the gerund.

The infinitive has clearly a PDr ending in **-a* (which may or may not be related to the verb-noun ending in **-al*). This **-a* is normally added to two of the set of non-past markers, *-(k)k* and *-(p)p*. In Modern Tamil the infinitive is (weak) *-a*/(strong) *-kka*, in Old Tamil it was *-a*/*-ppa*. The Old Tamil *-kka* was usually associated with hortative.

The negative converbial of PDr was very probably in **-ā*.

True *participles* are verbal adjectives. The past participle (also called 'past relative participle' since it functions analogically to the Indo-European relative clause) reconstructs as the past medial plus **-a*, cf. Tamil *nāṉ pār-tt-a nāy* The dog I saw. The non-past is different and reconstructs as **-um*, cf. Tamil *nāṉ var-um nāḷ* The day on which I shall come. The negative 'relative' participle has the marker *-*ā*.

There is a *conditional* form variously ending in *-iṉ*, *-il* and *-(k)k-il*

attested in Old Tamil. It seems to be archaic. Other conditionals in Dravidian tend to be periphrastic constructions.

The *imperatives* form a separate sub-system. The common imperative sing. equals the verb stem with no ending. The most widely spread plural (Proto-Dravidian) ends in **-um/*-im*. In South Dravidian, the infinitive functions as hortative.

Verbal nouns of many kinds exist; morphologically, they are special cases of appellatives or other nominal derivations. According to Jules Bloch, and after him K. V. Zvelebil, they played, morpho-syntactically, a rather important role in the diachrony of Dravidian.[83] Particularly the ending **-al* on the verb stem may probably be reconstructed for Proto-Dravidian.[84]

2.6.5. As I have found out only too well, McAlpin is right when he says that "the grammar of Old Tamil is not well formed". This is not an evaluative statement pertaining to its elegance, but a simple stating of the fact—a fact caused probably by several factors, viz.: the bardic language of Old Tamil texts comprises various local and social variants, 'dialects', and has obviously preserved relic forms and archaic usages which had disappeared from the spoken language. In this Old Tamil bardic language, there are relics of an archaic non-past, which were discussed by L. V. Ramaswami Aiyar (1938), and systematized into a paradigm by David W. McAlpin (1975).[85] These forms in *-pa* like *enpa* they say, in *-ku* (1.p.sing.) and *-kum* (1.p.plur.), *-t-ir* (2nd p.plur.) and *-t-um* (1.p.plur.) etc. found in Old Tamil, are, according to McAlpin, scattered as reflexes of an ancient paradigm widely throughout Dravidian (with details derived mainly from Old Tamil, Konḍa and Kuṛux), so that a Proto-Dravidian non-past paradigm can in fact be reconstructed. However, as even McAlpin admits, "Dravidian verbal morphology is completely intertwined to such a degree that we may never understand it entirely". It is up to the Dravidianist whether we ever shall: the next step must be careful, detailed reconstruction of *systems* through the various *stages*, and then their comparison, first within smaller related groups (like, say, Tamil-Malayalam, or Kuṛux-Malto), then within larger sub-groupings

[83] Cf. Jules Bloch, *Structure grammaticale des langues dravidiennes*, Paris, 1946; K. Zvelebil, 'Participial and Verbal Nouns as Predicates in Early Old Tamil', *Archiv Orientální* 25 (Praha, 1957) 653–57, 'Verbal Noun in Early Old Tamil', *Tamil Culture* VI (1957) 2,87–91.

[84] M. S. Andronov, 'Verbals in Dravidian: A Comparative Study', *IJDL* 8 (1979) 52–70, esp. p. 69.

[85] See L. V. Ramaswami Aiyar, 'The Morphology of the Old Tamil Verb', *Anthropos* 33 (1938) 747–81; David W. McAlpin, 'Elamite and Dravidian: Further Evidence of Relationship', *Current Anthropology* 16 (1975) 105–15.

	Old Tamil archaic non-past	Konḍa non-past	Kui future	Gondi future	Kolami durative	Kuṛux present (female)	PDr Non-past
1.p.sg.	-Ø-ku	-n-a	-Ø-i	-k-ā	-d-un	-Ø-en	*-N-ku
1.p.pl.excl.	-Ø-kum	-n-ap	-n-amu	-k-ōm	—	-Ø-em	*-N-kum
1p.pl.incl.	-Ø-tum	-n-aṭ	-n-asu	-k-āṭ	-d-um	-d-at	*-N-t-{-um, -ăṭ}
2.p.sg.	-Ø-ti	-n-i(d)	-d-i	-k-ī	-n-iv	-d-i	*-N-ti
2.p.pl.	-Ø-tir	-n-ider	-d-eru	-k-īṭ	-n-ir	-d-ay	*-N-tir
3.p.sg.m.	-m-an	-n-anṛu	-n-an	-ān-ūr	-n-en	—	*-N-antə
3.p.sg.neut.	-um-Ø	-n-ad	-n-e	-ār	-un-Ø	-Ø-i	*-N
3.p.pl.m.+f.	-m-ar	-n-ar	-n-eru	-ān-īr	-n-er	-n-ay	*-N-ar
3.p.pl.neut.	-Ø-pa	-n-e	-n-u	-ān-uṅ	-n-ev	-Ø-i	*-N-pa

Chart 5. D. W. McAlpin (1981) reconstructed a Proto-Dravidian verbal non-past paradigm mainly on the basis of the Old Tamil archaic non-past, vestiges of which we find in Old Tamil texts and inscriptions. We may accept this reconstruction with slight modifications. We should note that in Old Tamil, the forms with *-pa* have "human" subjects too. N = nasal. There are of course innovations among these forms, but the correspondences are such that a more or less safe reconstruction is possible.

(like, say, Tamil... Koḍagu), finally within the 'subfamilies'; areal features (like e.g. the Nilgiri area, or some areas within Central Dravidian) must also be taken into consideration. Finally, Dravidianists must solve such problems like some fundamental assumptions of the nature of "is Tamil-Koḍagu verb morphology a good model for Proto-Dravidian or not", or "is there a North Dravidian 'subfamily' comprising Kurux-Malto and Brahui"?

2.7. *Indeclinables.*

2.7.0. In 1971, I classified the indeclinables in Dravidian into six groups, perhaps a matter of overdifferentiation.[86] However, some of these forms can definitely be established as constituting separate sub-classes.

2.7.1. One is *clitics*, i.e. such grammatical morphemes which are bound, follow the words to which they are attached, and express some grammatical function. Examples: Tamil—*um* (probably reconstructible as PDr **-uN*) which indicates inclusion in a group or addition, i.e. the inclusive/additive "and" (Tamil *avaṉ-um vantāṉ* He too came, *avaṉ-um avaḷ-um* He and she); Tamil-*ē* indicating—among other functions—exclusion: *avaṉ-ē vantāṉ* Only he came; Tamil *-tāṉ* only, just, indicating emphatic uniqueness: *avaṉ-tāṉ vantāṉ* He alone came; the interrogative clitics Tamil *-ā*, *-ē*, *-ō*, e.g. *avaṉ-ā vantāṉ* Did *he* come?, *avaṉ vantāṉ-ā* Did he *come*?, *avaṉ-ō avaḷ-ō* He or she?

2.7.2. There are items which function as *interjections*, like *aṭāṭā* exclamation of surprise, pity or grief, *ō ō* behold, alas! All this is a matter of vocabulary.

2.7.3. Some forms may functionally be classified as '*adverbs*'; they have no distinctive morphology, and they function as adverbials, e.g. Tamil *iṉi* now, immediately (DEDR 410 a), Malayalam *dūre* far. Most of them are derived from substantive or adjective bases (Malayalam *dūram* distance ⟨ Skt.; Malayalam *dūra* adj. distant → *dūr-e* far).

2.7.4. As in all languages, there are onomatopoetic words in Dravidian; in point of fact, Dravidian languages make rather rich use of them, not only to imitate sound and describe external events, but also purely des-

[86] *A Sketch of Comparative Dravidian Morphology—Part One*, 1977, p.6, where I distinguish the following sub-classes of indeclinables: 1. particles proper, 2. interjections, 3.adverbs, 4. enclitics, 5. onomatopoetic words, 6. echo-words.

criptive in function (e.g. to describe colours) or even to express psychological (mental, emotional) states, etc. Cf. Tamil *paḷapaḷa* signifying bursting sound (DEDR 4013), Tamil *poṭukk-eṉa* signifying suddeness, quickness (DEDR 4483), Tamil *maṭakkumaṭakku* signifying gurgling sound of water in drinking (DEDR 4648), Kannaḍa *moṟō* imitative sound of crying aloud (DEDR 5013), Tamil *turuturu-v-eṉa* signifying restlessness, impatience, Tuḷu *turuturu* swiftly, quickly (DEDR 3368), Kota *dabakn* with noise of falling crashingly or floppily, Kannaḍa *dappane* with the sound of *dap*, Telugu *dabadaba* sound of walking quickly/pattering as of rain (DEDR 3069).

2.7.5. Finally, there are the *echo-words*: an echo-word has the function to express the thing denoted by the basic noun and things similar to or associated with it. In Dravidian, the echo-word—i.e. the repeated item—usually begins with the sequence **kǐ-*, cf. Tamil *paṇam-kiṇam* money and other precious things; some kind of money; Iruḷa *püli-gili* a tiger or something like it.[87]

2.8. *Syntax*

2.8.0. As an introduction to this brief discussion of Dravidian syntax I shall quote one English, one Japanese, and one Tamil sentence, all well-formed. Suppose we have to translate into Japanese the English sentence "The book which you gave me is here". The Japanese version of this utterance will be

anata-ga kudasatta hon-wa koko-ni arimasu.

In modern Tamil, this English utterance would be rendered as

nīnga tã kuḍutta puttagõ inge irukku.

When we compare the *structures* of the three sentences (by 'structures' I of course have in mind what is now fashionably designated as 'surface structures' after the application of a sets of literalization and linearization rules) we are at once aware that there is much closer relationship between the Tamil and the Japanese patterns than between either of these two and the English utterance which can be said to represent what has been termed 'average European-ese'.

The notion I wished to introduce with this one instance is the fact that *typologically*, the *structure of sentences* in Tamil and Japanese seems to be rather close. In Chapter 7 of this work I shall try to demonstrate that it is not only *syntactic patterns* typical for Dravidian but also other linguistic features that are common to Dravidian and Japanese. The *typo-*

logical affinity is striking; to account for it and explain it, however, is quite another matter.

A number of scholars have made us aware of similarities between Ural-Altaic or Altaic *vocabularies*, and the *lexical* features of Dravidian. Some *structural* affinities between the two families seem to have been discovered, too. This, again, will be the subject of brief discussion in Chapter 7. Finally, there are features of lexicon and grammar, including *syntactic* patterns, which have provoked at least one serious scholar to propose a Proto-Elamo-Dravidian hypothesis (see Chapter 7 for critical discussion).

2.8.1. There exists no doubt a syntactic pattern typical of Dravidian in a very general and deep sense, but it is very difficult to determine how much of it is inherited, and how much is influenced in the processes of diffusion and borrowing. The only Dravidian languages which vary significantly from the overall pattern (such as Kuṛux or Brahui) are clearly under the impact of Indo-Aryan or Iranian. It is therefore difficult to speak meaningfully of a syntax which could be labelled Proto-Dravidian, or, to put it differently, "There is a typically Dravidian syntax which is not necessarily synonymous with the syntax of Proto-Dravidian" (McAlpin). The whole thing is complicated by the fact that almost all scholars who have more recently approached Dravidian syntax (Annamalai, 1969, Schiffman, 1969, Vesper, 1971 Lindholm, 1978, Zvelebil, see below) have done so with some rather strong theoretical bias, using rather restricted and perhaps restrictive methodology. Thus I myself have dealt with Tamil syntax from the positions of Prague structuralism[89], tagmemics[90], a combination of tagmemics and transformational model[91], and Chafe's semantic model.[92]

[87] For echo-words in Dravidian cf. especially M. B. Emeneau in *JAOS* 58 (1938) 559–70, and *JAOS* 59 (1939) 503–5.

[88] E. Annamalai, *Adjectival Clauses in Tamil.* Ph.D dissertation, University of Chicago, 1969; Harold F. Schiffman, *A Transformational Grammar of the Tamil Aspectual System.* Ph.D dissertation, University of Chicago, 1969; Don R. Vesper, *Kurukh Syntax with Special Reference to the Verbal System.* Ph.D dissertation, University of Chicago, 1971; James M. Lindholm, 'Nested Case Relations and the Subject in Tamil', *IJDL* 7 (1978) 75–98.

[89] E.g. 'The Enclitic Vowels -ā,-ē,-ō in modern Tamil', *Archiv Orientální* 11 (Prague, 1954) 375–405; 'On Emphasis and Intensification in Tamil', *Archiv Orientální* 23 (Prague, 1955) 435–64.

[90] *Tamil in 550* A.D. *An Interpretation of Early Inscriptional Tamil*, Prague, 1974, pp.74; 'How to Handle the Structure of Tamil', *Archiv Orientální* 30 (Prague, 1962) 116–42.

[91] 'Towards a Taxonomic and Generative Grammar of Tamil', *Archiv Orientální* 33 (Prague, 1965) 602–13.

[92] 'A new model of language', *IJDL* I, 1 (1972) 98–111.

There have of course been more or less detailed (rather less detailed) descriptions of syntactic patterns of various Dravidian languages in the older grammars, and these were all done on traditional lines, often introducing the Indo-European or even classical (Graeco-Latin) model into the descriptions.

In this treatise I cannot, naturally, give an exhaustive survey of all the work done along the lines of the various theoretical models used more recently; what I can do is to exemplify the various approaches on a few selected instances, and to mention the pioneering attempts in this direction.

Thus, the first papers of Zvelebil on Tamil (1954, 1955) dealt predominantly with syntactic problems, employing the 'traditional' structuralist models and the Praguist approaches: the enclitic vowels *-ā*, *-ē*, *-ō* in modern Tamil (1954), and emphasis and intensification in Tamil (1955) were described in this way. Zvelebil's large dissertation *Studies in Early Old Tamil Syntax—The Syntax of Narriṇai* (Oriental Institute, Prague, 1959) based on a complete linguistic analysis of all the 401 stanzas of that text, remained unfortunately unpublished, just like the late Rama Subbiah's *A syntactic study of Spoken Tamil* (University of London thesis, 1965), and P. Arunachalam's *History of Tamil Syntax* (University of Malaya thesis).

As could be expected, the generative-transformational model was adopted by a number of linguists dealing with various Dravidian languages: as early as in 1961, V. I. Subramoniam published a paper entitled 'Transformation analysis of a lyric in Puranaanuuru'. A. K. Ramanujan prepared a preliminary analysis entitled 'Towards a Tamil syntax: The verb phrase" in 1963; and, most important of all, S. A. Pillai wrote his 1963 thesis entitled *A generative grammar of Tamil*. The same author—as S. Agesthialingom—published an interesting paper on structural ambiguities in Tamil (1965), trying to explain some bothersome phenomena found in the phrase and sentence structure of that language on the basis of generative theory and transformational methodology.

Another theoretical-methodological approach to Dravidian has been tried—that of K. L. Pike's tagmemics. Zvelebil's papers of 1962 and 1965, and his monograph *Tamil in 550* A.D. (1964) tried to demonstrate the usefulness of tagmemic theory and method when dealing with the structure of Tamil. They will be discussed below in some detail together with A. Dhamotharan's *A Grammar of Tirukkural* (1972), which represents another instance of the tagmemic model applied to a Tamil text.

Fir.ally, Zvelebil has made a modest attempt to try out the semanticist model developed by Wallace L. Chafe in his 1972 paper 'A New Model of Language'. He has also prepared a text of several hundred pages on

the application of Chafe's generative semantics to Dravidian in general, but this text has remained unpublished.

The generative-transformational model (adopted also explicitely or implicitely by some scholars dealing with Telugu like Gerald Kelley, 1967 *et seq.*, Bh. Krishnamurti 1964 *et seq.*) is known well enough by now, and hence need not be discussed here. However, less is known about the possibilities of the application of the tagmemic and semanticist models to Dravidian syntax. Therefore, I shall briefly describe these possibilities, as manifested in the published and unpublished materials produced by Zvelebil (1962, 1964, 1965, 1972) and Dhamotharan (1972).

In his 1962 paper ('How to handle the structure of Tamil', *Archiv Orientální* 30,116–42), Zvelebil first traced his attempts to analyze Tamil syntactic structures in terms of the traditional syntactic models (as adapted from V. Šmilauer's *Modern Czech Syntax*, Praha, 1947), and in terms of the Immediate Constituents approach (Bloch and Trager, Nida, R. Wells), characteristic for American descriptivism; finding both approaches inadequate, he adopted the tagmemic model of string constituent analysis with the concepts of grammatical slots and their fillers (Pike, Longacre, Pickett), and found it "most conveniently applicable and fully adaptable to the syntax of Tamil" (142). In 1964, Zvelebil was still a 'tagmemicist'; he has used in full the tagmemic model in his analysis of inscriptional Tamil and found it rewarding in dealing with the Pallankōvil Inscription of ca. 550 A.D. (*Tamil in 550* A.D. *An Interpretation of Early Inscriptional Tamil*, Prague, 1964), although from later perspective it would perhaps seems somewhat clumsy and tremendously laborious. In 1967, he still applied the same model in the *Introduction to the Historical Grammar of the Tamil Language* (on pp. 41–79) published in Moscow. Two features of Pikean tagmemics were in particular attractive to Zvelebil: due attention paid to meaning (in contrast to the dry and sterile formalism of American descriptivism), and the fact that one could and in fact should analyze structures larger, 'higher' than sentence (paragraph, discourse, conversation). Zvelebil has adopted the view that language is a form-meaning composite, and that the linguist must work both with form and with meaning from the very beginning of his investigation, and keep both of them in his definitions to the end. However, later, Zvelebil was somewhat disturbed by the Pikean stubborn behaviourism, and the procedures themselves seemed to him to be heavy-handed and clumsy.

Probably the best and most detailed applicatiom of the Pikean model to Tamil that has come to my notice is represented by A. Dhamotharan's *A Grammar of Tirukkural* (Heidelberg-Delhi, 1972). In his Introduction, Dhamotharan writes: "The scope of the present study is two-fold:

firstly, to describe in general the structure of the language of Tirukkural starting from high-level unit (sentence) and proceeding to the low-level unit (phoneme) of the text and secondly, to test in particular the procedural feasibility of the Tagmemic model by applying it to the grammatical description of the text, Tirukkural." In this attempt, the author has succeeded very well, analyzing and describing the language of the classical Tamil text of 2660 lines on the five levels of sentence, clause, phrase, word and phoneme.

In a short 1965 paper ('Towards a taxonomic and generative grammar of Tamil', *Archiv Orientální* 33), Zvelebil tried to incorporate into the theoretical framework of tagmemics the concepts of transforms and rewrite operations, so that the theory would function both as taxonomic and generative. Whether such attempt would sucessfully 'generate' a new 'tagmemic-transformational' model is questionable. However, Zvelebil has in the meantime became acquainted with and attracted to Wallace L. Chafe's 'semanticist' model, and in his enthusiasm published in 1972 a paper (probably somewhat hasty and premature) termed 'A New Model of Language' (*International Journal of Dravidian Linguistics* I.1). He illustrated the whole complex process of the generation of a phrase (Tamil *ilayil uṭkāra*) from its semantic 'bottom' or 'ground' *to sit to eat* through 'literalization' by postsemantic operations to 'to sit in the leaf', further through 'linearization' which transfigures the configuration of concepts into elements of surface structure ('leaf-in to-sit'), further through 'symbolization' providing the semantic structure with the phonemes (*ilai-il uṭkār-a*); finally, after the application of phonological rules, to actual phonetic output (the utterance) [ileyiluṭka:rʌ]; the ultimate step may (or may not) be graphemic representation in the pertinent written symbols. This model insists that both semantics (at the one, 'bottom' end) and phonetics (at the other, 'surface' end) be included in any linguistic description. The well-formedness of sentences is determined in one direction—from 'deep' semantic structure ('la penseé') to surface structure to (eventually) phonetic structure ('la forme').

Zvelebil's paper (using a few examples from Tamil and Telugu), although perhaps very tentative and somewhat sloppy, is rather thought-provoking, and has resulted in a series of lectures at Heidelberg University and in Utrecht, as well as in the preparation of a large text along these lines which has unfortunately remained unpublished, as stated above.

2.8.2. In spite of these divergencies in approach to the syntax of Dravidian, a few very fundamental syntactic traits valid for all Dravidian languages can possibly be accepted by all Dravidianists irrespective of their personal preferences and theoretical allegiance and bias; and since these

traits are so typical and so general, such features could point towards a Proto-Dravidian syntax.

1) The basic *order* of surface structures is regularly Subject-Object-Verb (if not disturbed by stylistic or emphatic shifts), whereby the *Verb* seems to be *nuclear* and *dominant* semantically. Instances: Tuḷu *a:ye*[1] *manta*[2] *bra:mmaṇe:kuḷenna*[3] *oḷette*[4] He[1] called[4] all[2] the Brahmins[3]; Parji *ḍoṅgal*[1] *an*[2] *cirin*[3] *ḍoṅed*[4] A thief[1] stole[4] my[2] buffffalo[3]; Koya *mā*[1] *talli*[2] *māminni*[3] *ī*[4] *rōgātkunci*[5] *vidipisa*[6] Our[1] mother[2] us[3] this[4] disease-from[5] release[6]; Kuṛux *kōhā*[1] *jōkẖas*[2] *kẖessan*[3] *pairim*[4] *cākẖālagdas*[5] The great[1] servant[2] is sowing[5] paddy[3] in the morning.[4]

2) As a rule, *modifier always precedes the modified*; hence adjectives, genitives, relative participles, and clauses always go before nouns, adverbs before verbs, converbs before finite verbs, etc. Examples: Tuḷu *enna kelasa* my work, *pucceda ba:yi* the mouth of the cat, *poṭṭu uggeḷi* dried up well, *sarva sampatti* all the wealth; *enna*[1] *iṣṭana*[2] *kayta*[3] *bireḷida*[0] *uguru*[5] *satidini*[6] the nail[5] of the finger[4] of my[1] friend's[2] hand[3] has died[6]; Parji *nīla reṇta rān* a forest of blue colour; *nike lāvta mane* a man of much strength; *mūdu juvelto nīr* the water of three wells; *kukonḍin tōl* panther's skin; *gāy manda* a herd of cows; Koya *kallu otta payya, andōru uttōru* After bringing palm wine, everyone drank; *agga dāyānanki nāku iṣṭam ille* there for-going to-me liking is-not; Kuṛux *gollas*[1] *gahi*[2] *kōhā*[3] *jōkẖas*[4] *tanghai*[5] *urbas*[6] *gahi*[7] *kẖal*[8] *nū*[9] *kẖessan*[10] *pairim*[11] *cākẖākẖālagdas*[12] The great[3] servant[4] of[2] the landlord[1] is sowing[12] paddy[10] in[9] the field[8] of[7] the master[6] in the morning[11]; *sapnā ērnā lekhā iyam ārskan be'edan* I arrived here as though in a dream (lit. dream seeing like here I-arrived).

3) *Cases* and *postpositions follow* nouns and are in turn followed by clitics. Instances: Tuḷu *ajji-na:kḷ-egi katɛpaṇpuṇane kelasa* For the old women, story telling (is) the only work; Parji *an-kan peru vercil cila* There is not much rice with me; *būte-kel cen* Go to work; *evul mer-arre īlomov* Leaves are falling from the tree; Koya *malla pēnu mandē-tagga vāyitōru* Again god shed-near they-will-go; *gaḍḍē-tagga lingukini-porro vaḍipitōṇḍu* Platform near lingus-on he-will-wipe-off; Kuṛux *ās*[1] *kīrā*[2] *-trū*[3] *kecas*[4] He[1] died[4] from[3] starvation[2]; *engā-gē*[1] *gollas*[2]*-tūlē*[3] *kẖakrā*[4] I[1] got[4] it through[3] the landlord[2]; *kẖēkẖēl ānkā gahi-lēkē kamrkī ra'ī* The world has been created by the word.[93]

4) *Equational* sentences usually *do not have a verb* expressed. Examples: Tuḷu *a:ye manuṣye* He (is a) man; *i gaṭṭige* You (are) clever; Koya *ōṇḍu*

[93] Parji *ōd mer-ti urked* 'he fell from the tree'; *ḍūv-in tōl-ug anḍkiter* 'he killed the tiger for its skin'.

cinna ōṇḍu He (is a) small one; *iddu bātādi* What (is) this; Kuṛux *ās kōhas* He (is) great; *nīm maldāuhar* You (are) wicked; *ēm ālam* We (are) men.

5) The complex sentence has usually several predicates of which only *the last is finite*. All the rest are *converbs* (i.e. non-finite verb forms), and usually these are gerunds or infinitives. The finite verb is often an auxiliary (like the Tamil *viṭu*). The gerund (absolutive, converbial) is by far (McAlpin says "by a factor of three") the most common verb form in Dravidian languages. Examples: Tuḷu *a:ye nāṭiti tinpe* Having begged, he eats; *undeni*[1] *ke:ṇḍiti*[2] *dhanikagi*[3] *bahaḷa*[4] *santo:ṣa:puṇu*[5] Having heard[2] this[1], the rich man[3] becomes[5] very[4] happy[5]; *ajjina*[1] *i*[2] *cinteni*[3] *su:tu*[4] *maṅge*[5] *paṇḍe*[6] Having seen[4] this[2] worry[3] of the old woman[1], the monkey[5] told[6] (her); Parji *mēven cūṛi kili ḍū culta* Having seen the goat the tiger arose; *ōd melli kuli ole veñed* He returned and came home; *rānti cul-culi metten* I was wandering about in the forest; *vercil*[1] *vītaka*[2] *ole*[3] *veñed*[4] he came[4] home[3] without having sowed[2] paddy[1]; Koya *nanna lōtki anji, vāyitāna* Having gone to my house, I will come; *ōṇḍu vāsi, pani tungi, uḍḍi, attōṇḍu* He having come, having done work, having turned about, he went; Kuṛux *ās baggē cān gūṭī skūl nū ra'ackā āl lekk'am kacna-krdas* He speaks as if he had been many years at school (lit. He many years till in school having been one like speaks).

6) There are *no relative clauses*, no relative pronouns, not even an analogue to these, in Dravidian. Cf. the above–quoted example of a Japanese and a Tamil sentence, and the following: Parji *olek*[1] *vēñuran*[2] *mañja*[3] The man[3] who is thatching[2] the house[1]; *an vēñuran olek* The house thatched by me; *āṭ*[1] *cendan-ed*[2] *gōvar*[3] *ole*[4] *mēdan-ed*[5] *cetur*[6] The man who goes[2] to the market[1] (is) a simpleton[3], the man who stays[5] at home[4] (is) intelligent[6]; Tuḷu *su:vare batti jana o:ḷuṇḍu* Where is the man who came to see? Kuṛux *ēn cēro īrkan ā naigas inña kiriyas* The priest whom I saw yesterday has returned today (lit. I yesterday saw that priest today came again); *Rāncī nū kundrkā khaddas īsim taldas* The boy who was born at Ranci is this one.[94]

7) Typically Dravidian is the use of a *quotative verb* for all questions, thoughts and similar embeddings; it has been reconstructed for PDr (Zvelebil, 1970) as **en-/*an-/*in-*. Instances: Tuḷu *eṅki po:vuḍu'nti a:ye paṇḍe* "I should go", thus he said; *ja:dompuṇa'nti a:ye a:lo:canɛ ampve* "What to do?" thus he thinks; *be:ga'nti paṇṭi a:ye balitte* "Quick'", having said so, he ran; Kannada *ivanu namma magan-emdu ballevu* We

[94] Konḍa *kīdu as-ti perku* 'the rice (which) he held in his hand'; *vānru mū-ṭi mūlku* 'the urine (that) he urinated'; *uṇ-i bāṭa ṛistan* 'he left out the food (which) he eats'.

know that this man is our son; *nānu māḍida tīrpu sama-v-alla-v-eṁdu nanage hēḷidaru* They told me that the decision I made was not right.[95]

2.9. In South Asia, an area of staggering linguistic diversity, are found languages spoken by roughly one quarter of the world's population, representing at least five major language families or sub-families: Indo-Aryan, Dravidian, Austro-Asiatic, Tibeto-Burmese, and Iranian.

The second largest family spoken in South Asia, Dravidian, is the *fifth largest linguistic family* of the world. This, in itself, is undoubtedly not a negligible fact. An additional dimension of importance is added when one realizes that one of its languages, Tamil, spoken today by more than 50 million people, is the second 'classical' language of the South Asian area, since it can boast of an uninterrupted past-to-present development, manifested by magnificent literature which goes back at least 2000 years.

These extralinguistic facts undoubtedly emphasize the enormous importance of Dravidian linguistic studies for Indian and general linguistics, and for cultural anthropology. In addition, there is the possibility (which will be discussed on the following pages) that Dravidian was the language of the people of the so-called Harappan civilization—the most ancient attested civilization in South Asia, and one of the most ancient, and certainly most advanced civilizations of early mankind.

[95] Konḍa "*radu bābu sonaṭ le*" *izi variṁ kūktan* 'he called them saying, "Gentlemen, come on, let us go"'; "*unzar māpru*" *izi būmidiṁ muṛistan* 'he worshipped Earth saying "O Lord!"'; "*ḍāṁ*" *izi pītta ṛistan* 'he broke wind (producing the sound)" ḍāng"'.

3. The Diachronic View

3.1. Thomas Burrow has discussed (1958)[1] the evidence for Dravidian and Munda influence on Vedic Sanskrit, and concluded that the Dravidian speech which exerted this influence (presumably at the time when the Aryans were still located mainly in the Panjab) must have been a *northern* Dravidian rather than any of the Southern Dravidian or Central Dravidian languages.[2] On the other hand, the linguistic features which have been mentioned in this connection (such as the occurrence of the retroflex: dental contrast, the rich use of gerunds, of the quotative particle, etc.)[3] are *general* Dravidian features, and cannot be identified with any particular branch of Dravidian. Also, we cannot identify that early Dravidian language of the Panjab with any of the languages designated today as North Dravidian (i.e. Kuṛux-Malto and Brahui). It is possible that the speakers of that early "northern Dravidian" may have been completely absorbed and assimilated into the Indo-Aryan speech communities, and ultimately abandoned their native language.

Burrow has also pointed out that there is nothing against the assumption that Dravidian speakers were an important segment of the population in the cities of the Indus Valley (Harappan) civilization.[4] In fact, the hypothesis is gaining ground that the Harappans indeed *were* Dravidian speakers—although the ultimate proof of such hypothesis is still lacking. As Southworth puts it, there is nothing *against* the *assumption* that the Indus Valley was the area where Dravidian speakers first made their

[1] T. Burrow, 'Sanskrit and the pre-Aryan tribes and languages', *Bulletin of the Ramakrishna Mission Institute of Culture*, 1958. Also, 'Some Dravidian words in Sanskrit', *TPS* 1945, 79–120; 'Loanwords in Sanskrit', *TPS* 1946, 1–30; 'Dravidian Studies-VII, Further Dravidian Words in Sanskrit', *BSOAS* 12 (1948) 2.365–96; and the introduction to Burrow's *The Sanskrit Language*, London, 1955.

[2] The terms South Dravidian (SDr) and Central Dravidian (CDr) are used in this particular context in a rather loose geographical sense, not as referring to strict and particular sub-branches of the family of Dravidian languages.

[3] Cf. F. B. J. Kuiper, 'The genesis of a linguistic area', *IIJ* 10(1967) 81–102.

[4] Cf. Also W. A. Fairservis Jr., 'The origin, character, and decline of an early civilization', *American Museum Novitates*, New York, 1967.

appearance in the sub-continent, after their presumed departure from West Asia (1976).[5]

Emeneau, too, has dealt in a few important articles with the linguistic prehistory of India.[6] Burrow had found some twenty words in the earliest Sanskrit recorded, the *Ṛgveda*, which he considers to be of Dravidian origin. A number of them have been accepted by Emeneau; among the most important and most interesting are Skt. *khála-* threshing floor, granary, place etc.: Tamil through to Malto *kaḷam, kaḷaṉ* threshing floor, open place, battlefield, etc.; Skt. *phála-* fruit: Tamil . . . Malto *paḻam* fruit, *paḻu-* to ripen etc.; Skt. *mayūra-* peacock: Tamil *mayil*, Tuḷu *mairu* . . . through to Kuwi. peacock; Skt. *bála-* strength: Dravidian **val-* be strong, strong, strength; Skt. *kāṇá-* one-eyed: Dravidian **kāṉ-* to see + negat. **-ă̈-*. As Emeneau says, "if the Rig-Vedic examples, or any of them, are accepted, this is evidence for the presence of Dravidian speakers as far toward the northwest as the Panjab, i.e. the upper Indus Valley, in the first centuries (it is uncertain how many) of the presence of Sanskrit-speakers on Indian soil. It is not entirely clear evidence for the Dravidian nature of the Harappa language or of one of the Harappa languages; it does, however, lead toward that hypothesis."[7]

In this context, I also wish to mention an excellent survey (little-known and rarely quoted, though) by F.B.J.Kuiper: 'Rigvedic loanwords' (1955).[8]

3.2. Linguistic evidence gathered so far strongly suggests that the present locations of Dravidian languages result from a number of *distinct movements*, involving a number of groups of speakers. We have no reason to assume that all of the Dravidian speakers came from the West by the *same* route or at the *same* time. Some may have come through Afghanistan via the mountain passes and river valleys; others may have come along the coast, possibly even by sea.

The present distribution of Brahui, Kuṛux and Malto suggests *two* main possibilities for their earlier, prehistoric distribution. One is that proposed by Burrow (1958): the presentday Brahui, Kuṛux and Malto represent surviving islands of a speech once extant over all of northern India and Pakistan. Another is suggested by the tradition that the speakers

[5] Franklin C. Southworth, 'On Subgroups in Dravidian', *IJDAL* 5(1976) 114–37.

[6] 'Linguistic Prehistory of India', *PAPS* 98(1954) 282–92; 'Dravidian and Aryan: The Indian Linguistic Area', *Symposium on Dravidian Civilization* (ed. A.F.Sjoberg), Austin-New York, 1971, 33–68.

[7] 'Linguistic Prehistory of India', *PAPS* 98 (1954) 282–92.

[8] 'Rigvedic loanwords', in Otto Spies (ed.), *Studia Indologica: Festschrift für Willibald Kirfel*, Bonn, 1955, 137–85.

of Kuṛux and Malto came up the Narbada Valley from the West Coast in fairly recent times. If we add to this the possibility that Koraga, a small Dravidian language of coastal Karnataka, may belong to this "Northern" branch of Dravidian (as its linguistic features seem to strongly indicate), then a location of Kuṛux-Malto on or near the coast is not unlikely.

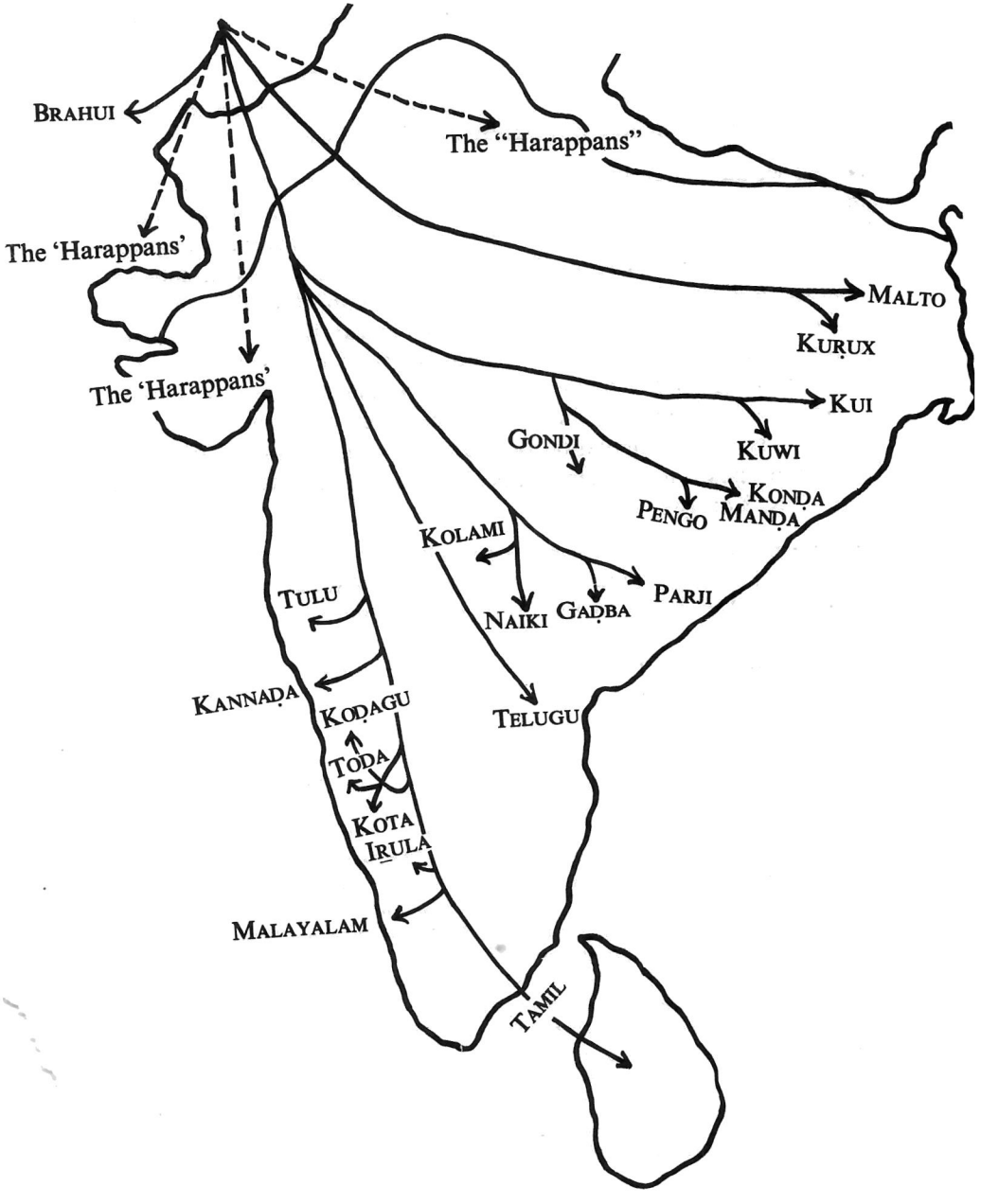
Additional evidence to support the notion that some Dravidian languages (like Tuḷu) were at one time located on the West Coast comes from the study of *Dravidian features* present in Indo-Aryan languages of that area. Southworth has noted (1971, 1974)[9] that the greatest concentration of such features is found in the *Western* Indo-Aryan languages (Sindhi, Gujarati, Marathi, Konkani), and he has also posited a *Dravidian substratum* in the Marathi and Konkani speaking areas, to be most closely related to Kannaḍa and Tuḷu. All these facts point to the possibility that the present area of central and southern Dravidian languages may have been populated via the coast and river valleys, as well as by a movement overland through the Dakkhin from the northwest.

3.3. In 1972, I proposed a hypothesis[10] that the Dravidians marched from the mountains of eastern Iran to South India and Sri Lanka, "dropping off" groups along the way rather like a bus depositing passengers. I wrote: "The Dravidians were a highlander folk, sitting, sometimes round 4000 B.C., in the rugged mountainous areas of North-Eastern Iran . . . whence, round about 3500 B.C., they began a South-Eastern movement into the Indian sub-continent which went on for about two and a half millenia. 'Along the route', various Dravidian speaking tribes 'peeled off' the main stock, the first to come off being the peoples speaking some form of North-Western Dravidian, who might have played an important, even a leading role in the ethnolinguistic composition of the Indus Valley peoples. The movement went on, and with it the 'losses along the route', until the Southernmost part of the peninsula was reached by the Proto-Tamils, who established, between ca. 600–400 B.C., the first historically recognizable literate and highly cultured Dravidian-speaking civilization."

[9] F.C. Southworth, 'Detecting earlier creolization: An analysis of the historical origins of Marathi', in: D. Hymes (ed.), *Pidginization and Creolization of Languages*, Cambridge, 1971; *Linguistic Stratigraphy of North India*, CCSAL 1974, 201–23.

[10] Cf. 'The Descent of the Dravidians', *IJDL* 1(1972) 2.57–63.

I adopted Andronov's schematic chart (1971) to show the 'descent' of the Dravidians:



I also hypothesized that the Dravidians were originally a 'mountain' people, on the basis of the frequent occurrence of the elements **ko-/kō-* or **ku-/kū-* (DEDR 2178), (DEDR 1864) as well as **mal-ay* (DEDR 4742) in the names which various Dravidian peoples used to designate themselves.[11]

I still consider this hypothesis a plausible and attractive one, though of course it remains strictly a hypothesis, and the dating of the beginnings of a distinct Tamil literate civilization may be too early.

3.4. As we have been warned repeatedly, we must not equate the category "*speakers* of Dravidian *languages*" with an *ethnic group* vaguely designated as "Dravidians". That the speakers of Dravidian *languages* moved from West or Central-West Asia to the South Asian sub-continent seems to be indisputable, but this does not imply that all present-day speakers of Dravidian languages are descended from these original speakers. The possibility of other groups adopting a Dravidian language and abandoning their own must be always taken into account; as a matter of fact, it is even more probable with the many component groups of Dravidian-speaking population of India. At various times, such origin has been proposed for the languages of 'tribal' groups such as the Iruḷas, Kuṟumbas, Koragas, etc.

3.5. We move from prehistory to protohistory and earliest history of Dravidian languages with the adaptation of Aśoka's (272–232 B.C.) Southern Brāhmī script to the pre-literary Tamil phonological system, and when the original proto-Tamil orality gave way to the earliest limited literacy, sometimes in the 3rd–1st Cent. B.C., in a few foci of early Tamil civilization such as Madurai, Tiruchendur, and the Kaviri delta. *Pre-Tamil* developed into *Proto-Tamil* and *pre-literary Tamil* then.[12] We

[11] Brahui, i.e. *brā'ūī*: according to Andronov (*Jazyk braui*, Moskva, 1971) ⟨ **vaṭa* + *kō* + *ī* 'people of the northern mountains'; Malto: *maleh* connected with PDr **malay* mountain; Kui ⟨ PDr **kō* mountain, cf. also *kui* above, over, upon; Kuwi: *kūvīnga* the Parja Khonds ⟨ PDr **kō*; Koṇḍa: *kūbi* the Koṇḍa Dora ⟨ PDr **kō*; Gondi: *kōītur*, *koy*, *koya* Gond man ⟨ PDr **kō*; Koya: *koytand*, pl.*koytar* ⟨ PDr **kō*; Gadba: *koṇḍekor* the Gadbas near Salur ⟨ PDr **kuṇṭu* mountain, hill; Telugu: *kōdu* a Khond, *kōya* name of a tribe of mountaineers ⟨ PDr **kō*. Malayalam: probably PDr **malay* mountain. However, Chandrasekhar (1971) has identified the element **kō-/kū-* with a root meaning 'speak/speech' (DED 1600). As Southworth says (1976), both suggestions seem equally plausible.

[12] The pertinent bibliography concerning this stage or stages of the development of Dravidian and pre-Tamil: S.K. Chatterji, 'Old Tamil, Ancient Tamil and Primitive Dravidian', *IL* 14 (1954) 1–19; revised in *Tamil Culture* 5 (1956) 1,148–74 (overdifferentiated); K. Zvelebil, 'From Proto-South Dravidian to Malayalam', *Archiv Orientální* 38 (1970) 45–67; K. Zvelebil, 'Beginning of the History of Dravidian Civilization in South India', *JTS* 23 (June 1983) 17–25; Clarence Maloney, 'The Beginnings of Civilization in South India', *JAS* XXIX, 3 (1970) 603–16.

know this stage of the language from the very brief earliest epigraphs. The earliest known *dated* inscription among these (known today) is the Pālāṅkuṟichi rock inscription of King Sendan Kutran "in excellent Tamil . . . free from orthographical errors" (R. Nagaswamy) referring to administrative divisions of the land, to wet lands, dry lands and groves, and to the Śaka era. According to Nagaswamy, it may be dated 270 A.D., and is thus the earliest dated record in Tamilnadu so far brought to notice.[13] However, previous to this record, we have more ancient epigraphs written in a form of Brāhmī script similar to that found in Sri Lanka, belonging to ca. the 3rd–1st Cent. B.C., and about two dozen Arikamedu graffiti of the first two centuries A.D. There are about 76 or slightly more of such inscriptions in Southern Brāhmī in existence in the Tamil area, mostly short donative records or single names, in rock-cut caves, from some 21 sites. They are too short, fragmentary, and not yet quite completely intelligible, the admirable work of I. Mahadevan[14] notwithstanding. This *pre-literary Tamil language* seems not to be too much removed from the language of the contemporaneous, or almost contemporaneous, perhaps slightly later, earliest *literary* records, although it shows some peculiarities which are due mainly to the strong influence of Prakrit on its vocabulary, and to the fact that the orthography of these epigraphs is still "rather halting and experimental" (Mahadevan). The first completely intelligible, datable, and sufficiently long and complete *epigraphic* monuments in any Dravidian language are the Tamil inscriptions of the Pallava dynasty, beginning with the Pallankōvil inscription dating from ca.550 A.D.[15] Thus, *fully epigraphically attested history* of the Dravidian-speaking Tamils begins in the middle of the 6th Cent. A.D.

3.6. *Kannaḍa*, the second Dravidian language to emerge from prehistory into the realm of literate civilization, can boast of its earliest inscription as early as in ca.450 A.D., whereas the oldest literary monuments belong to the 9th–10th Cent. A.D. *Telugu*, another great Dravidian literary language, is attested epigraphically from A.D. 633, and the earliest writer belongs to the 11th Century.

3.7. In a somewhat different language than that of the earliest inscriptions, and in very different style, the earliest Tamil *poetry* transmitted

[13] Cf. *The Hindu*, January 7, 1981.

[14] See Iravatham Mahadevan, *Corpus of the Tamil-Brahmi Inscriptions, Seminar on Inscriptions*, Madras 1966, 57–73; 'Tamil-Brahmi Inscriptions of the Sangam Age', *Proc. of the Second International Conference-Seminar of Tamil Studies* 1(1971) 73–103; also, T.P. Meenakshisundaram, *A History of the Tamil Language*, 1965, 40–50, and K.Zvelebil, 'The Brahmi Hybrid Tamil Inscriptions', *Archiv Orientální* 32, 1964, 647–75.

[15] Cf. K.Zvelebil, *Tamil in 550* A.D., Praha, 1964.

orally during the pre-literary stage, later refined and transformed into sophisticated court-poetry, and apparently enjoying great prestige, began to crystalize around certain nuclei which later became the core of *the earliest literary anthologies*. The short inscriptions may represent a spoken variety of Tamil used by the (most probably bilingual) Jaina and/or Buddhist monks, while the so-called bardic corpus of the court poetry represents a literary language which at that period was in the stage of standardization. We date that period in the *first few centuries* of the Western Christian era. From the silence of these texts about the powerful Pallava dynasty it may be reasonably assumed that they were composed before Pallava times. Whereas there is no evidence in these poems about the (later very lively) trade with South East Asia, a number of these texts mentions commercial and other contacts with Imperial Rome. There is therefore reason to conclude that these texts were composed at the time when overseas trade with Rome was still flourishing, before the Pallava era, before the decline of the Roman Empire, and before the rise of Islam. However, a more exact dating of the anthology poems cannot be attempted in the absence of a truly reliable historical evidence. Much use has been made of the so-called Gajabāhu synchronism between a Chera (Cēral) Tamil king called Ceṅkuṭṭuvaṉ, and a Ceylonese monarch Gajabāhu (Tamil Kayavāku), found in the text of the early narrative poem *Cilappatikāram* (ca. 450 A.D. or later). However, this synchronism is based on secondary evidence in Tamil sources—on the *patikam* (‹ Skt. *prátīka-*) to decade V of the Tamil anthology *Patiṟṟuppattu*, and a prose section appended to the *patikam* to *Cilappatikāram* by an unknown early editor. Hence this synchronism must be taken with great reserve.

What is important, from the point of view of linguistic development, is the fact that we can trace *the uninterrupted evolution of the standard literary Tamil language* from its first condification some 2000 years ago (or almost as long ago as that) till this very day.

Although several attempts at its diachronic description have been made, they have remained either too simplified and brief, or only partial.[16] Thirty years ago, I have attempted to determine different evolutionary periods of this linguistic development as follows:[17]

[16] Cf. T.P. Meenakshisundaram, *A History of the Tamil Language*, Poona, 1965; K. Zvelebil, 'Lectures on historical grammar of Tamil', *Annals of Oriental Research*, Madras, XVIII, 2(1961) 1–31; and the two introductions to the historical Tamil grammar published in Moscow and Prague, 1967 and 1970, cited in the text.

[17] Cf. K. Zvelebil, 'Tentative Periodization of the Development of Tamil', *Tamil Culture* 6 (1957) 1,50–5.

Old Tamil : Early
Middle
Late

Middle Tamil : Early–begin.ca.550 A.D.
Middle
Late

Modern Tamil : beginning ca.1750

A complete, reliable, detailed *historical grammar* of the Tamil language remains even nowadays one of the great desiderata of Dravidian linguistics, in spite of some pioneering attempts by T.P. Meenakshisundaran in his *A History of Tamil Language* (Poona, Deccan College, 1965), K. Zvelebil, Yu. Glasov and M. Andronov, *Introduction to the Historical Grammar of the Tamil Language* (Moscow, Nauka, 1967) and Kamil Zvelebil-Jaroslav Vacek, *Introduction to the Historical Grammar of the Tamil Language* (Prague, 1970). As a matter of fact, we do not have any historical grammar of either Kannaḍa or Telugu, or Malayalam, the other three Dravidian languages which can boast of a relatively long recorded history, both literary and inscriptional, although more advanced attempts have been made in these languages than in Tamil: thus, as far as Malayalam is concerned, we have A. Chandra Sekhar's *Evolution of Malayalam* (Poona, Deccan College, 1953) and K.M. Narayana Menon's *Historical Grammar of Early Old Malayam* (thesis, ? 1965). As for Kannaḍa, there is A.N. Narasimhia's *A Grammar of the Oldest Kanarese Inscriptions* (Mysore, 1941), G.S. Gai's *Historical Grammar of Old Kannada* (Poona, Deccan College, 1946), and K. Kushalappa Gowda's *A Grammar of Kannada* (A.D. *1000–1400*), (Annamalainagar, 1972). Finally, as regards Telugu, there is Korada Mahadeva Sastri's *Historical Grammar of Telugu* (*with special reference to Old Telugu, c.200* B.C.–*1000* A.D.), (Anantapur, 1969). What is obviously needed are full, detailed historical grammars of the four literary languages which would cover their entire evolution, and, subsequently, a comprehensive treatment of Dravidian in diachrony, in its development, which would take into account a full analysis of epigraphic and literary texts.

4. The Comparative Picture–Subgroupings

4.1. Since the very beginnings of comparative Dravidian linguistics represented mainly by the names of Robert Caldwell and Sten Konow[1], subgrouping of various Dravidian languages based on comparative (and later historical-comparative) approach played an important role, satisfying the common tendency of Western scholarship to "neatly classify". Then followed a long period of only scatered comments on subgroupings[2] which ended with the work of Thomas Burrow (1943)[3], inspiring the emergence of a general theory of Dravidian subgrouping. In this view, Proto-Dravidian broke into *three* major groups, called *North Dravidian* (NDr), *Central Dravidian* (CDr) and *South Dravidian* (SDr). The evidence for this *tripartite division* is best presented in the work of Emeneau, Krishnamurti, Subrahmanyam, Andronov and Zvelebil.

Emeneau[4] wrote the foundations of North Dravidian. Krishnamurti[5] established that Telugu, while greatly influenced by South Dravidian Tamil and Kannaḍa, was genetically related to Central Dravidian Gondi-Kui. This structure was clarified by Subrahmanyam.[6] Emeneau[7] then wrote out a clear structure of South Dravidian. Thus, except for the unclear position of Tuḷu, the late 1950's and early 1970's saw *the general acceptance of the tripartite hypothesis*, once more clearly spelt out by Andronov, Zvelebil and Subrahmanyam.[8]

[1] Caldwell in 1857, 1875, 1913, Sten Konow in Grierson 1906.

[2] Krishnamurti (in: *Linguistics in South Asia* [*Current Trends in Linguistics*], The Hague, 1969, 325–6) and Shapiro-Schiffman (*Language and Society in South Asia*, Seattle, 1975, 111–37) have summarized well this period.

[3] Burrow, T., 'Dravidian Studies III', *BSO(A)S* 11 (1943) 122–39.

[4] Emeneau, M.B., *Brahui and Dravidian Comparative Grammar*, Berkeley, 1962.

[5] Krishnamurti, Bh., *Telugu Verbal Bases*, Berkeley, 1961, 236–71.

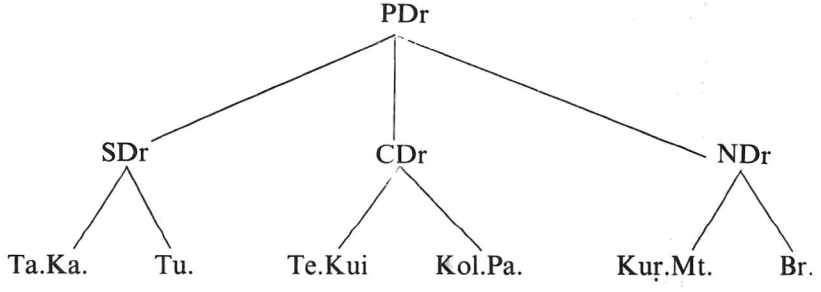
[6] Subrahmanyam, P.S., 'The Central Dravidian Languages', *JAOS* 89 (1969) 739–50.

[7] Emeneau, M.B., 'The South Dravidian Languages', *JAOS* 87,4 (1967) 365–413.

[8] Andronov, M.S., *Dravidian Languages*, Moscow, 1970; Zvelebil, K., *Comparative Dravidian Phonology*, Mouton, The Hague-Paris, 1970; Subrahmanyam, P.S., *Dravidian Verb Morphology*, Annamalainagar, 1971.

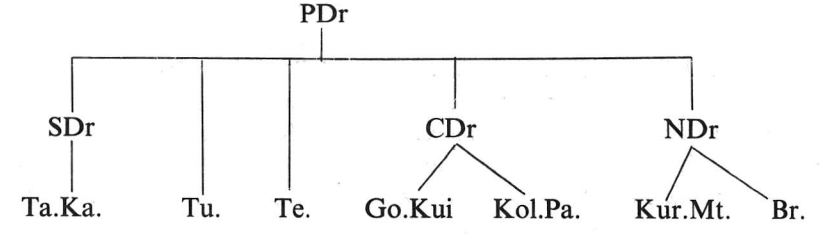
As soon as the tripartite hypothesis (cf. the 'trees' A and B) gained acceptance, major flaws appeared in it. The critical evidence for some of the tripartite groupings—i.e. a unique shared innovation—is minimal: thus, the North Dravidian hypothesis rests upon a *single* phonological shift (*k > x). It seems that the labels North, Central, and South represent only areal assimilations, besides being convenient labels because of the geographical position of the pertinent languages. It is difficult to distinguish *shared innovations* (which are valid grounds for grouping) from *shared retentions* (which are not). There is mounting evidence for *areal features* (see Chapter 5 of this work). Only South Dravidian is apparently a safe ground, but even there we struggle with the problem of the position of Tuḷu. Moreover, new languages do emerge all the time, and their emergence may change the picture; it certainly does complicate it.[9]

(A) *Krishnamurti* 1969, *Subrahmanyam* 1971



(Ta.=Tamil, Ka.=Kannaḍa, Tu.=Tuḷu, Te.=Telugu, Kol.=Kolami, Pa.=Parji, Kuṛ.=Kuṛux, Mt.=Malto, Br.=Brahui)

(B) *Andronov* 1970, *Zvelebil* 1970

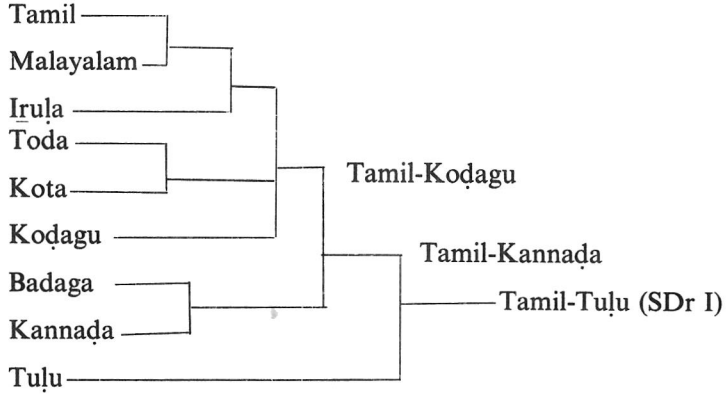


(Go. = Gondi)

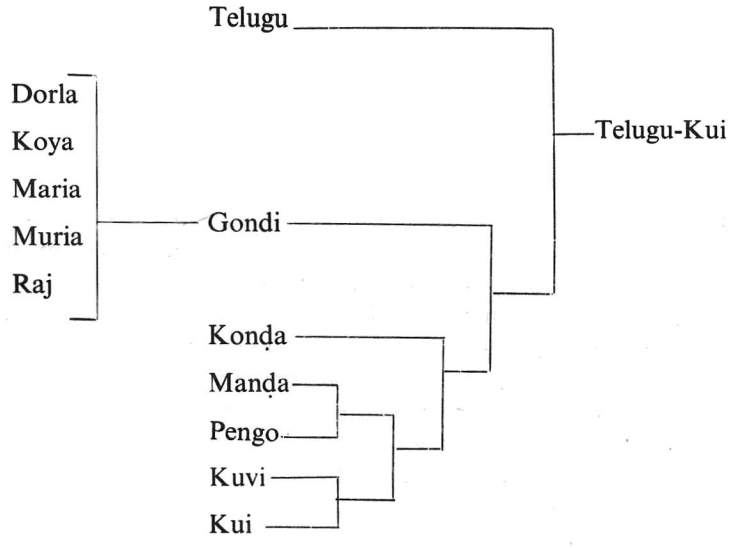
[9] See F. C. Southworth, 'On subgroups in Dravidian', *IJDL* 5 (1976) 114–37, for a discussion of these problems.

4.2. Once the tripartite labels (SDr, CDr, NDr) are discarded, we seem to be on much safer ground.

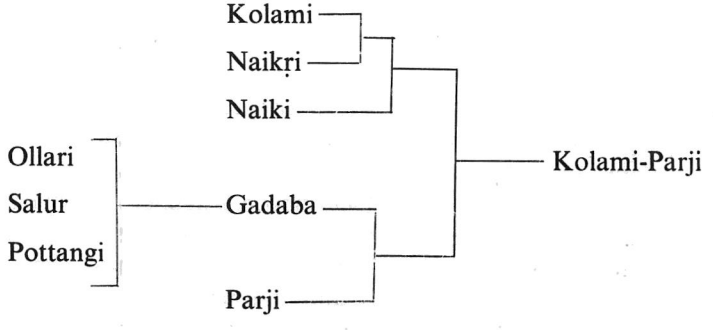
4.21. Tamil, Malayalam, Iruḷa, Toda-Kota, and Koḍagu form a tightly structured group; this has been accepted by now by every Dravidianist. Some other 'tribal' languages of the Southern mountains (like e.g. Paṇiyan or Muḍuga) will have to be very probably included, once they are better known and described. Tamil—Koḍagu is clearly but more distantly related to Kannaḍa and its major Nilgiri variant Badaga. Some of the 'tribal' speeches like Ālu Kuṟumba etc., spoken in the Nilgiris and other hilly areas will probably be included with this subgroup. It is generally believed that Tuḷu is related, but at a considerable distance. Thus we get what may be designated as *South Dravidian I:*



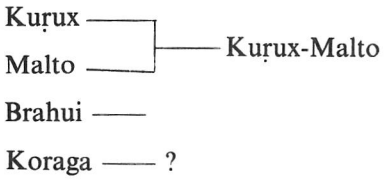
4.22. Another tight group is formed by Konḍa, Manḍa, Pengo, Kuvi (Kuwi) and Kui. Konḍa-Kui is clearly related to Gondi which is more of a large dialect cluster than a single language. Gondi-Kui is distantly related to Telugu; the whole thus forms a large Telugu—Kui group, which might be designated as *South Cental Dravidian.* Its most characteristic feature is the apical displacement (metathesizing)—e.g. **iṟi* → Tamil *iḷi* to descend: Telugu *ḍigu*, Gondi *ḍig-*, Kui *dīva* etc. According to Krishnamurti, there is a clear evidence that the Tamil–Kannaḍa (SDr) sub-group, and the *South Central Dravidian* sub-group had a common ancestor, a common stage of development, which is of course Proto-South Dravidian: a) the sharing of the vocalic Umlaut PDr **i, *u* > **e, *o* before C*a*; b) the development of PDr **c* > [s] > *h* > ∅; c) the sharing of the innovated 1st person plur. inclusive **ñām.* These three features, at least, point to that common PSCDr ancestor.



4.23. Kolami, its dialect Naikṛi, and Naiki of Chanda are closely related to Parji and Gad(a)ba. These two pairs clearly go together to form the Kolami-Parji sub-group which is now considered the only 'genuine' *Central Dravidian* group.

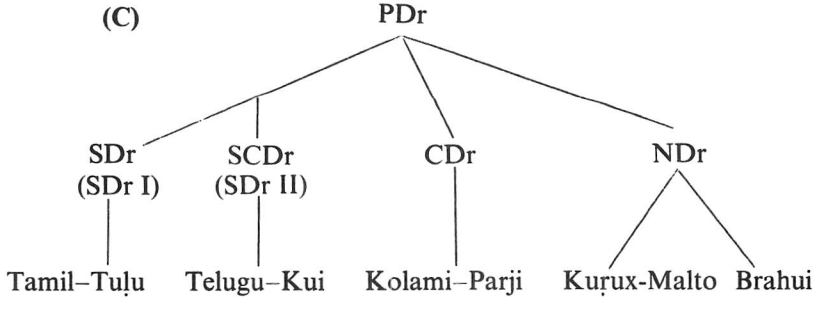


4.24. Kuṛux (Kurukh, alias Oraon) and Malto are no doubt closely related, forming the Kuṛux-Malto sub-group. In this view, Brahui is an isolate, as is the recently discovered Koraga which is at the moment a true enigma.



4.25. Thus we can (probably safely) speak of *four* major sub-groupings of Dravidian languages: Tamil-Tuḷu, Telugu-Kui, Kolami-Parji, and Kuṛux-Malto, along with Brahui and Koraga as isolates. It must of course be realized that even this conclusion is extremely tentative: at this very moment, the picture may be changing, either by addition of a new language which, though numerically probably small and culturally unimportant, may yet prove surprisingly important from the comparative point of view; or owing to a more detailed and better understanding of such languages as Koraga or Brahui.

In 1974 and again in 1978, Bh. Krishnamurti has posited a similar (but not quite identical) scema:



4.26. However, the whole picture of genetic relationship and sub-groupings on the *comparative level* is "totally muddled by *areal* considerations" (McAlpin, italics mine, KVZ). There have been two schools of thought concerning the problem which language, or which group of languages, has preserved more or most faithfully the Proto-Dravidian state of affairs. Before we briefly mention them, we must stress one point which may seem rather obvious, and another which is less obvious. The obvious point is that the *rate of change* in time is lower in those Dravidian languages which have been provided with a script at a relatively early period (Tamil, Malayalam, Tuḷu, Kannaḍa, Telugu) than in the non-literary languages. The pressure of early writing systems functioned as a brake on the rate of linguistic change not only in the standardized, formal, written styles of these languages, but even in the spoken, informal styles.

The less obvious point is that, on the whole and in general, when compared with Indo-European, the rate of change in time of Dravidian languages is lower; from the point of view of the rapidity of change in time, Dravidian languages are so to say 'conservative'.

One group of scholars, represented in the milder form by T. Burrow, M. B. Emeneau, K. V. Zvelebil, and a few others,[10] and characterized by the position of the *Dravidian Etymological Dictionary*, is inclined to look to the *Southern Dravidian I* group of languages, particularly represented by Old Tamil of some 2000 years ago, as manifesting more closely the Proto-Dravidian state of affairs. Another group, represented e.g. by Jules Bloch,[11] would rather search among some languages of the Central Dravidian and North Dravidian sub-groups for representants of the proto-language. The difference is by no means negligible. To quote only one striking example: the word for rice, paddy. DEDR 215 quotes the Tamil *ari*, and *ari-ci*, and it seems that this would be the ancient word, too, although the final reconstruction is by no means certain (however, we find reflexes of this word in our 'rice' which goes back to Latin and Greek *oryza*). E. H. Tuttle, who in the twenties was one of the radical representants of the second school of thought, would reconstruct the original Dravidian words for rice as **wrīghia*. The reconstruction as it would be probably accepted nowadays would rather be **ari/*ariki*.

On the whole, Old Tamil has indeed preserved, particularly in phonology, a very archaic state of affairs (thus, the retention of **ṟ*, of the contrast **r*: **ṟ* ⟨ **ṯ*, etc.); on the other hand, it, too, has innovated (palatalization of **k-* ⟩ *c-*, loss of **c-*, new morphological formations like the complex (?) present tense marker *-(k)kiṉr-* etc.). The fact remains that the status of Proto-Dravidian obviously applies to items found in all branches, all subgroupings of Dravidian. It is secure if reflexes are attested in Kuṛux-Malto or Brahui and somewhere else in Dravidian, best in South Dravidian I or II. The Kuṛux-Malto sub-group has a rather privileged position in such reconstructions. On the whole, the Proto-Dravidian status has generally been granted to etyma attested in *any two non-contiguous major groups*.

[10] In its extreme form, this school of thought is represented by some contemporary (and previous) Tamil scholars who would maintain that Tamil practically equals old Dravidian, and that it has not at all, or almost not at all, developed and changed in the course of its history. This is, of course, patent nonsense.

[11] The extreme position is represented by E. H. Tuttle in his slender but thought- provoking yet utterly misleading book *Dravidian Developments* (Philadelphia, 1930). Tuttle would produce some bizarre protoforms, like e.g. **wrīghia* rice (*JAOS* 47,1927,263–6): DEDR 215 **ari-*.

5. Indian Areal Linguistics and Dravidian

5.1. It has now for some time been recognized that a tendency for languages gradually to *converge* in structure and idiom with their immediate neighbours could be accepted as a process complementary to that of their gradual *divergence* from a common ancestor. The breaking down of old systems is compensated for by the building up of new ones, and such building up manifests a direction imparted to it by the structures prevailing in neighbouring languages. The *process* responsible for these patterns of resemblances is presumed to be *borrowing*, and the *agent* is believed to be the *bilingual individual.*

These factors may lead to the formation of *linguistic areas*—zones within which the processes of convergence are seen to operate with special strength and urgency, presumably because conditions—geographic, historical, political, cultural and the like—have been particularly favourable for mutual 'fertilization' among the languages within such zones.

It was left to the linguists of the *Prague* school—Jakobson, Mathesius, Trnka, Skalička to name only a few—to formulate in the thirties and forties of this century the basic concepts of linguistic convergence and demonstrate the facts of its occurrence. M. B. Emeneau has provided later a classic definition of a linguistic area, based on his evalutation of the Indian situation:

"...an area which includes languages belonging to more than one family but showing traits in common which are found not to belong to the other members of (at least) one of the families" (1956).[1] In a subsequent paper of 1962, Emeneau explains this phenomenon as a consequence of *structural borrowing through extensive bilingualism.*[2] We might wish to qualify Emeneau's definition somewhat by replacing *family* with *genetic stock/branch of a genetic stock* to include cases like the Balkan area where

[1] 'India as a Linguistic Area', *Lg.*32(1956)1:2–16.

[2] 'Bilingualism and Structural Borrowing', *Proc.Amer.Philos.Soc.*106, 430–42.

the languages involved (Greek, Albanian, Bulgarian, Rumanian and Serbo-Croat) all belong to the Indo-European *family* but to *different sub-branches thereof.*

5.2. A number of such areas have been pointed out: the Caucasus, the Balkans, northern Eurasia, Ethiopia—and, of course, very typically, *India.* Sometimes the affinities have only been phonological, elsewhere—like in India—the convergence has been shown to embrace syntax, morphology, and idiom as well.

The *Indian area* offers especially good material for such study. It involves hundreds of languages from at least four clearly distinct genetic stocks—Indo-European in the two branches of Indo-Aryan and Iranian, Dravidian, Tibeto-Burman, and Munda. There has been a good deal of work on the Indian area (initially, by Sir George Grierson and Jules Bloch), particularly stimulated by M. B. Emeneau who first applied the linguistic area concept in an organized and systematic manner.

The *term* 'linguistic area' was invented by H. V. Velten in 1943 who used it as a translation of the German *Sprachbund,* but, as pointed out above, as early as 1931, scholars of the Prague school discussed the *phenomenon* when speaking of the Caucasus and the Balkans (Trubetzkoy, Jakobson). Jules Bloch, after Sten Konow (1906) in the 1920's and 1930's developed the thesis of a linguistic area in India rather well.[3]

Since Emeneau's initial interest in the problem (1937) and his path-breaking paper of 1956, other scholars have been engaged in the investigation of diffusion and borrowing of linguistic traits in terms of Emeneau's basic methodology. What is this *methodology*?

5.3. The first necessity is to establish a *typological* feature as *pan-Indic,* and at the same time *not extra-Indic.* Once several features have been established as having the same boundaries, so that there is an approximation to a "bunching of isoglosses", the linguistic area can be considered to be typologically established. The second part of the methodology is the *historical* one. It is an investigation into the language of origin of the feature in question, its direction of diffusion throughout the languages of the area, and the attempt to relatively (and, perhaps, absolutely, too) date the event.

Emeneau's path-breaking work on the problem of linguistic areas has been put together by Anwar S. Dil and published in 1980 as *Language and Linguistic Area* (Stanford University Press)—an indispensable tool of classical writings for all Dravidianists. Many features have been identi-

[3] Cf. his *L'indo-aryen du Veda aux temps modernes*, 1934.

fied as *areal*: the wide occurrence of a number of retroflex consonants, the increasing occurrence of gerunds (non-finite verb forms), of the quotative particle *iti* in the *Ṛgveda*, of certain type of onomatopoetics and echo-words, of many items of borrowed vocabulary, etc. Most often, the direction of the diffusion was found to be from Dravidian and possibly Munda into Indo-Aryan.

5.4. Among the scholars who have been more recently engaged in the research of the Indian linguistic area I wish to mention in particular A.K. Ramanujan, Colin Masica, M.S. Andronov, D.N.S. Bhat, F.B.J. Kuiper, Franklin C. Southworth, Mahadev L. Apte, Madhav Deshpande, G. Diffloth, and K.V. Zvelebil.

Ramanujan and Masica in 1969 produced a searching study entitled 'Toward a phonological typology of the Indian linguistic area' (*Current Trends in Linguistics* 5,534–77). In 1974, volume 3 of the *International Journal of Dravidian Linguistics* (edited by V.I. Subramoniam) was devoted to *Contact and Convergence in South Asian Languages* (also published as a separate volume, edited by Southworth and Apte). F.B.J. Kuiper's important paper 'The genesis of a linguistic area' appeared in 1967 (*Indo-Iranian Journal* 10,81–102). A discussion of South Asian 'areal linguistics' may also be found in the very stimulating book by M.C. Shapiro and H.F. Schiffman, *Language and Society in South Asia* (1975). I have applied the concept of a linguistic 'micro-area' to the tribal languages of the Nilgiris[4] where I believe it can work very well.

5.5. Perhaps the most important summary treatment of this field—apart from the collection of Emeneau's papers mentioned above as absolutely basic and indispensable—is Colin P. Masica's *Defining a Linguistic Area—South Asia* (Chicago and London, 1976) where he deals with word order, causative verbs, conjunctive participles, explicator compound verbs, and the dative construction. This work is of particular interest to Japanese scholars since its author takes Japanese as one of the important languages for typological comparison with the languages of South Asia, including Dravidian. It appears that the entire vast region from Japan down to South Asia has been marked by elaborately hierarchical social structures reflected in language; it was an area of 'divine kingships', accompanied in some instances by elaborate class/caste structures. In Masica's book, we indeed find striking typological paral-

[4] Cf. K.V. Zvelebil, 'A plea for Nilgiri areal studies', *International Journal of Dravidian Linguistics* 9 (1980) 1–22, and 'The Body in Nilgiri Tribal Languages-A Contribution to Areal Linguistic Studies', *JAOS* 109 (1985) 4.653–74.

leles among the many languages of this vast region, and it seems obvious that some other parallels manifested in the linguistic status patterns are superstructures developing from these elaborate sociological systems (Emeneau). But we must of course be careful: to posit linguistic diffusion among the various areas, Japanese-Korean, Chinese, Southeast Asian, and South Asian, has probably little cogency, given our great ignorance of the chronology and of possible bilingual situations. Throughout this total enormous region we may possibly speak only of the so-called 'stimulus diffusion'. However, the matter is worth further vigorous investigation. There can be no doubt that—taking the two "extreme" cases—both Dravidian and Japanese belong to what may be roughly designated as the *Indo-Altaic linguistic macro-area* manifesting striking features of typological affinity.

5.6. After these preliminary remarks on the whole problem, I shall deal in some detail with three different aspects of Indian 'areal linguistics'.[5] First, I shall discuss some matters of its theory and methodology, attempting to apply it to the "mini-area" of the Nilgiri 'tribal' languages.

Second, I shall present in a somewhat detailed discussion one by one ten linguistic traits, and one sociolinguistic phenomenon, all of which could have been 'borrowed' from Dravidian, spreading throughout the Indian area; this discussion will be mostly based on what Bloch, Kuiper and Emeneau had to say about these traits, while the Nilgiri features and their discussion are derived from my own field-work, and that of D. B. Kapp.

Third, I shall discuss briefly the problem of vocabulary loans from Dravidian into Indo-Aryan, and list some twenty-five lexical items out of no less than about 750 etymologies which have been at some time or other suggested as Dravidian borrowings.

5.6.1. The region of the Nilgiri Hills[6] in Southern India, where in aboriginal days several mutually unintelligible Dravidian languages were

[5] I have used the inverted commas since the phrase 'areal linguistics' usually refers to a different concept than that of 'linguistics of the linguistic area'; it is a term invented by the Italian neo-linguistic school. The term 'linguistic area' was reintroduced by Emeneau after it had been used previously by H. V. Velten as a translation of N. Trubetzkoy's 'Sprachbund' in *Pacific Northwest Quarterly* 34 (1943)271–92, Cf. Emeneau, *Language and Linguistic Area*, p. 124, ftn.28.

[6] The Nilgiri region is dominated by the 6,000 feet high massif of the Nilgiri mountains. It has been for a long time relatively isolated, but the languages of the tribal peripheral zone have been influenced greatly by the speakers of closely related, vigorous literary languages of immediate neighbourhood (Tamil, Malayalam, Kannaḍa), whereas the languages of the tribal core (particularly Kota and Toda) have till rather recently not been thus influenced. After 1947, the area has been largely incorporated as the Nilgiri District into the State of

spoken, is a zone in which the processes of convergence may be seen to operate with special urgency, because socioeconomic and cultural conditions have been particularly favourable to mutual 'fertilization' among the societies and languages of that region. The Nilgiri tribal communities have formed a hierarchy of associations, a structured systemic network of interrelationships of caste-like character, with many bilingual or even multilingual individuals. It begins to be possible to speak of an *areal typology* of the Nilgiri languages and cultures (e.g. mythologies).[7]

It is necessary to stress the fact that *all* the indigenous languages of the 'larger' Nilgiri region (i.e. the three literary tongues, Tamil, Malayalam and Kannaḍa, and the—at least—sixteen non-literary, 'tribal' speech-forms known to date) belong to the South Dravidian sub-family of languages. Within South Dravidian *as pertinent to this area* we must distinguish at least three genetically (?) and typologically determined sub-branches: the Tamil-Malayalam sub-branch (comprising such tribal languages as Iṟula, Paṇiyan, and possibly Pālu Kuṟumba and Muḍuga); the Kannaḍa sub-branch with such tribal tongues as Ālu Kuṟumba, Jēnu Kuṟumba and Shōlaga, as well as Badaga, an old Kannaḍa dialect; and the Kota-Toda sub-branch. As to such small tribal speeches as Muḷḷu Kuṟumba, Bĕṭṭu Kuṟumba, Kāḍu Kuṟumba, Malabar Kuṟuma, Ūrāḷi Kuṟumba (and possibly more) we know next to nothing.

It is almost certain that in the Nilgiris, *both evolution and diffusion*, both divergence and convergence processes, have been going on for the last perhaps 2000 years or more. There *might* have been, in addition, a substratum of non-Dravidian language(s) spoken by the Caucasoid—Australoid and/or Melanid tribes, and it is just possible that some of their lexical material has survived in the Nilgiri languages of today. For the purpose of the study of diffusion, borrowing and convergence of linguistic features and cultural traits (e.g. kinship systems, myths) we have to distinguish at least *four types of society* in the Nilgiris: a) the inner 'tribal' core comprising Todas, Kotas, Pālu and Ālu Kuṟumbas (possibly with Muḍugas); b) the peripheral tribal zone (Iruḷas in four ethnic/linguistic sub-groups, other Kuṟumba tribes like Jēnu Kuṟumbas, Muḷḷu Kuṟumbas, Bĕṭṭu Kurumbas, as well as Paṇiyans and Shōlagas); c) Badagas who immigrated only after ca.1200 A.D.; (d) and the plainspeople (Tamils,

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Tamilnadu, Tamil becoming the 'official' administrative language: another result of this political development has been the massive influx of Tamil-speaking labour force (mostly Harijans of the plains). Also, the Badagas (and their language) have achieved lately a very influential position in the economic, social and administrative life of the Nilgiri District.

[7] I have in my field-data a few myths and a number of motifs which can clearly be designated as belonging to a common stock of 'Nilgiri areal mythology'.

Malayalis, Kannaḍigas, Telugus, Muslims of different linguistic affiliation, Englishmen etc.).

Thus, we recognize in the Nilgiris a situation described in a classical manner by Emeneau[8]: numerous minor non-literate, essentially backwood groups "under the shadow of several major" languages; a socio-economic structure with its graded castes or caste-like communities, between which complicated prestige factors and combinations of prestige factors operate to determine the direction and degree of diffusion. One of the resultant phenomena will be special local vocabularies belonging to all (or almost all) the languages of the locality involved but which (in the present state of our knowledge) cannot be etymologized as belonging to any one of the families apart from the locality; in addition, there will undoubtedly be also other locally circumscribed phenomena—phonological, morphological, syntactic, and semantic.

The term "Nilgirization" of the immigrant Dravidian languages[9] may possibly be used as a common designation of the processes leading to the specific traits exhibited by the languages of the larger Nilgiri area communities; G. F. Diffloth and myself[10] have identified some features of diffusion and convergence among the various local languages of the Nilgiris, and in 1980 I have specifically expressed 'a plea' for Nilgiri areal studies, using the term 'microarea'. Recently, Emeneau, with the insight and the lucidity characteristic of all his writings, reviewed the problem, and accepted the fact that the recognition of extensive polyglottism and bilingualism/multilingualism typical of the Nilgiris "leads one to attempt consideration of the Nilgiris as a 'linguistic area'". Elsewhere in the same paper he explicitly states that ". . . the Nilgiris can be treated as a linguistic microarea."[11]

[8] As described, e.g., in his paper 'Diffusion and Evolution in Comparative Linguistics', *India and Historical Grammar*, Annamalainagar, 1965, 3–24.

[9] We start with the assumption that the Dravidian languages spoken by the various communities of the Nilgiri area today had been brought into the area from outside by 'one kind' of people (speaking in terms of ethnos, of anthropology), and adopted by, possibly, a 'different kind' or kinds of people who had been there before. The Dravidian speakers obviously did not find themselves in a vacuum: one glance at the physical anthropology of the area is sufficient to convince us that people of *at least* three different stocks must have lived there—Melanid, Australoid, and Caucasoid.

[10] Cf. G. Diffloth, 'Vowel Centralization', in his dissertation of 1968, *The Irula Language, a Close Relative of Tamil*, 119–23; 'The South-Dravidian Obstruent System in Irula', in H. Schiffman (ed.), *Dravidian Phonological Systems* (with C. Eastman), Seattle, Univ. of Washington, 1975.; K. V. Zvelebil, 'A plea for Nilgiri areal studies', *IJDL* IX, 1 (Jan. 1980) 1–22.

[11] Emeneau, M.B., 'The Languages of the Nilgiris', pre-publication copy; courtesy of the author; pp. 10 and 11. Cf. also my recent paper, 'The Body in Nilgiri Tribal Languages: A Contribution to Areal Linguistic Studies', *JAOS* 105 (1985)4:653–74.

There are, according to my opinion, at least two general *phonological* features which may be recognized as characteristic of the Nilgiri languages: the centralization of vowels (a far-reaching innovation in the vocalic systems), and the six clearly different positions for occlusives (a characteristic retention of the ancient state of affairs).

a) One of the Nilgiri languages, Iruḷa, has undoubtedly the entire system of centralized vowels (as mentioned above: recognized for the first time simultaneously and independently by Diffloth and Zvelebil in 1968), i.e. /ï, ë, ä, ö, ü/.[12] Ālu Kurumba has centralized /ï/ and /ë/, e.g. *ïe* Kopfhaar (Kapp, DEDR 506) and *mëkku* Wachs (Kapp, DEDR 5082). Shōlaga (according to my incomplete field-notes) has also centralized phonemic vowels, cf. *bëggiri* rib (DEDR 4005), *möyiru* hair (DEDR 4707); so has Jēnu Kurumba (alias Kāḍu Nāyika), which appears to have a complete subsystem like Iruḷa, cf. *ïkküṭṭi* hiccough (DEDR 5383?), *këṛe* pond (*1980*), *äkki* paddy (215), *göḷu* roof/ceiling (?2136), *püli* panther (4307). Emeneau has long ago recognized centralized vowels in Toda: e.g. *ïb* needle (DEDR 486), *öw* seven (DEDR 910), *ṭüby* honey-making insect (DEDR 3328). Pālu Kurumba, too, seems to have at least some centralized vowels, cf. Pālu Kur. *mëkku* wax (DEDR 5082). Thus, at least six indigenous Nilgiri languages (Iruḷa, Ālu Kurumba, Pālu Kurumba, Jēnu Kurumba, Shōlaga, Toda) manifest this feature either systemically, 'fully', or partially (in addition to Koḍagu).[13] The centre of diffusion of this feature—i.e. the retention of strong vowel-centralization after the conditioning factors had largely disappeared resulting thus in the phonemic status of the centralized vowels—appears to be the Nilgiri area.

b) The other typical areal feature, manifested by Toda and Kota, Iruḷa, Ālu Kurumba, Bëṭṭu Kurumba and Paṇiyan (as far as we know) is the consistent three-way contrast of dentals, alveolars and retroflexes in addition to labials, palato-alveolars and velars (in sum, a six-way contrast for occlusives and nasals). The Nilgiri tribal languages have thus preserved quite (or almost quite) intact the six contrastive positions for obstruent phonemes (p t t̲ ṭ c k / and, probably, for the nasals /m n n̲ ṇ ñ ṅ/ so characteristic for the Proto-Dravidian phonological system—positions which have been partially lost in other Dravidian languages.

Leaving behind general phonological traits and coming to individual

[12] Cf. Zvelebil,K., 'Iruḷa—a South Dravidian Language', *New Orient Bimonthly*, Prague, 3 (1968) p. 95; 'Additional Vowel Qualities in Koḍagu and Iruḷa', in *Comparative Dravidian Phonology*, The Hague, 1970, 191–94; 'Iruḷa Vowels', *IIJ* XIII, 2 (1971) 113–22; Hamp, Eric, 'Labialization in Iruḷa', *IIJ* XVIII, 3/4 (1975) 251–2.

[13] First described by Emeneau in *JAOS* 90 (1070) 145–58.

developments, I wish to point out at least one interesting case—the word for 'wax' as manifesting shared features typical, in Dravidian, only for the Nilgiri area: the loss of the retroflex *ṟ (as the conditioning factor) accompanied by the preservation (and hence "rise" to phonemic status) of the centralized vowel: DEDR 5082 *meṟ-u-kku* (cf. Tamil *meḻukku*): only the Nilgiri languages and Koḍagu have the development **meṟuk-* › **meṟk-* › *mök(k)- /mëk(k)- /mek(k)- /muk(k)-*, cf. Iruḷa, Ālu Kuṟumba, Pālu Kuṟumba *mëkku*, Kota *mek*, Toda *mösk* wax, Koḍagu *mukk-* to smear (mud, manure on ground), cf. Brahui *miring* to plaster.

I think I can point to at least one areal *morphological* feature: a labial formative morph *-V*v*V- resulting in typical, areally limited cluster of etymologically related items DEDR 546 where we find in the non-Nilgiri languages Tamil *īral, īruḷ* internal organ of the body as liver or spleen, Malayalam *īral* liver, Kannaḍa *hīri* id. whereas in the Nilgiri languages we have Iṟula *īrvo*, Ālu Kuṟumba *īruvu*, Kota *īruv*, Toda *üruf* liver.

In my 1980 paper (see ftn. 10) I quoted four clear shared *semantic* features pertaining to the Nilgiri languages: the items with the underlying meaning of 'tip' or 'top' have only in the Nilgiri languages (and in the adjacent Kannaḍa) the meaning of 'breast-nipple' (DEDR 1049); DEDR 1438 Tamil *kāṭu*: in all literary languages, this word means 'jungle, wilderness, forest, uncultivated and uninhabited ground' (in contrast to *nāṭu*); in the Nilgiri languages, it means "forest patch cleared for cultivation; unfenced field in the forest, cultivated field".

DEDR 5264 Tamil etc. *vari* to bind, tie, fasten, cover; tie, bondage: cf. this with the more specific meaning in the Nilgiri tongues: Iruḷa *bäri* roof, Ālu Kuṟumba *bari* thatched roof, Kota *vayr* roof, Toda *pary* roof of hut.

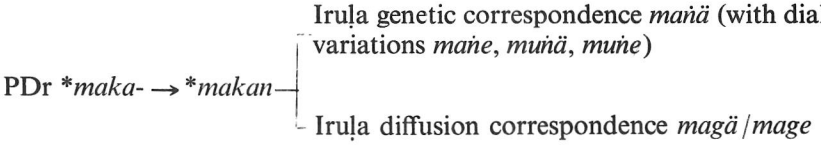
Finally, under DBIA 320 we find Sanskrit *varṇa-*, Prakrit *vaṇṇa-* colour, borrowed in Dravidian mostly with the same meaning (thus in Tamil, Malayalam, Toda, Kota, Tuḷu, Telugu). In addition, almost all Nilgiri languages (as far as we can say) have this loan-word in the meaning of 'coloured cloth to be worn; cloth to be worn; sari' or 'white cloth' and some even more specific meanings, cf. Iruḷa *vaṇṇa* female dress; sari, Kota *vaṇm* sari; large red cloth put over dead person; Toda *poṇ* coloured cloth with dots. However, the Ālu Kuṟumba *báṇṇa* (Kapp) means 'Farbe; weisses Tuch, das über Verstorbene gebreitet wird'. Cf. also Kannaḍa *baṇṇa* dress, decoration.

In 1971, Emeneau described the four-fold semantic structure of the verb (intransitive, causative of intransitive, transitive, causative of transitive) suggesting new terminology for Dravidian (simplex, mediative of simplex, causative, mediative of causative), finding this four-fold system in Toda, Kota, Koḍagu and Malayalam. Iruḷa has preserved the system

in full force: e.g. *pogegudu* (fire) is kindled: *pogekke* I kindle (fire): *pogevicuge* I cause (fire) to be kindled: *pogeppicuge* I cause (fire) to be kindled by someone.

We may subsequently take up the problem of the *vocabulary* of indigenous Nilgiri languages. One part of the method, described by Emeneau as pertaining to the investigation of linguistic areas, is the evalutation of *double sets of correspondences*, whereby the following principle applies: that correspondence which is closer to or even identical with the form of the other language in phonetic shape, represents borrowing, whereas that which is less similar, is genetically related. Two clear illustrations from Iruḷa follow. For the meaning 'way, road' Iruḷa uses two forms: *vaḷi* (with dialectal variations *väḷi*, *vëḷi*), and *vuyi/vüyi*. The underlying South Dravidian form is **vaṛi* (Tamil *vaḻi*, DEDR 5297). Obviously, of the two doublets, the first is a borrowing from Tamil *vaḻi* whereas the second, phonetically 'less similar', is genetically related and inherited from pre- or proto-Tamil, manifesting typical Iruḷa developments: the loss of the voiced retroflex fricative *-ṛ-*, and the vocalic change(s).

Another case: DEDR 4616 **makan* son. In Iruḷa, we have one straightline *genetic correspondence*, and another, a *diffusion correspondence*, both cognates of **makan*.



The Iruḷa genetic correspondence should be compared with the Ālu Kuṟumba *maṅá* son (Kapp). It must also be stressed that the two forms, the genetic correspondence with the velar nasal (this particular development being so far unexplained) is statistically much more frequent than the borrowing.

Another interesting problem are lexical groups of vocabulary items found only in various Nilgiri languages; hence, such items may be regarded as truly representing the Nilgiri indigenous "Wortschatz". Examples:

1) Iruḷa *kunni* (noted first by Bhattacharya in 1958), Pālu Kuṟumba *kunni*, Kota *kuṇy* bee (and [?] Tuḷu *koṇi*, *koṇḍi* a sting, DEDR 1867);

2) Iruḷa *kōḷe/kēḷe/kōḷe*, Ālu Kuṟumba *kēyi* (Kapp), Toda *kö·g* barking deer, Kota *ke·y* wild goat(?), Koḍagu *ke·më* barking deer (DEDR 2016): ⟨ **kēṛ-*?

3) Iruḷa *bugari/bugiriya* a large bamboo flute, Pālu Kuṟumba *bugiri* bamboo flute, Āul Kuṟumba *buguri* id., Kota *bugi·r* flute, Toda *puxury* Toda flute, Badaga *buguri* id., DEDR 4239;

4) Iruḷa *ebbu-kaṭṭe Strobilanthes*, conehead,[14] Ālu Kuṟumba *kaṭṭe* id., *ebbukaṭṭe* profusely flowering kind of conehead, Kota *kaṭ Strobilanthes*, Toda *kaṭ Strobilanthes* flower, Badaga *kaṭṭe Strobilanthes*. DEDR 1154. The component *ebbu* in the Iruḷa and Kuṟumba items has been explained by Emeneau as connected with DEDR 4411 Kota *peb* a profuse flowering of *Strobilanthes* (ultimately ⟨ Kota *pe-*: DEDR 4411 Tamil *peru*, *perum* great).[15]

Finally, there are items of Iruḷa vocabulary, either completely isolated, or related to at least one of the Nilgiri languages, which are so far without *any* etymology at all, and *may* be — provisionally — considered reflexions of a pre-Dravidian Nilgiri linguistic "substratum". These are:

1. *mattu* lip: found in all Iruḷa dialects; has cognates in Pālu Kuṟumba (*mattu*) and Muḍuga (*mattu*). So far, no etymological connection has been discovered.[16]

2. Another isolate is the unrelated Iruḷa word for panther (*Panthera pardus*) in its various (dialectal) forms *ḍökëṇe*, *ḍëkëṇe*, *ḍëkene*; *ḍëkkada*.[17] Unknown etymology.

3. The Iruḷa word for 'tomorrow' is apparently a compound or a complex, occurring in many dialectal variations: *ovarakaṅku*, *ōrakaṅku*, *ōraṅgeku*, *ōraṅge*. An obvious cognate is Ālu Kuṟumba *oṟákkuddu* (Kapp). The etymology is a mystery, unless we connect it somehow with Iruḷa *róṅgu* to sleep, *rókku* sleep, cf. Ālu Kuṟumba *oṟáṅg-* to sleep, *oráku* sleep (DEDR 707 Ta. *uṟaṅku*). D.B.Kapp suggests this connection. However, it is odd in view of the fact that Iruḷa uses also the form *ōrapodu* for tomorrow which would indicate that the first component is indeed

[14] The *Strobilanthes* is culturally tremendously important plant: in the first place, its bluish flowers may have given the Nilgiris (i.e. "Blue Mountains") their name; secondly, in ancient Tamil culture this plant, called *kuṟiñci*, is the symbol of the mountainous region (also termed *kuṟiñci*) where lovers meet and engage in spontaneous pre-marital love-making described in ancient poetry of a specific type (*akam*) designated as *kuṟiñci-t-tiṇai*, the *kuṟiñci* situation.

[15] Kapp (*Ālu-Kuṟumbaru Nāyan*, 1982, 302) gives the following ingenious derivation of the term AKu. *ébbu-kàṭṭe* ⟨ **per- pu: -kaṭṭe*.

[16] Although this high-frequency word has been noted independently in Iruḷa and the two Kuṟumba languages by Diffloth, Kapp and myself long ago.

[17] Could it *ultimately* be connected with DEDR **uṟ-*, cf. Tamil *uḻuvai* tiger, Kolami *ḍū* panther, Gondi (SR) *ḍukhyā* leopard? Hardly. Iruḷa also has a loanword, viz. *krba*, *kruba*, *kurba*, cf. Kannaḍa *kiṟuba*, Kota *kirbn*, etc., DEDR 1599.

ōra-, probably a contraction of *ovara-* (?), and is not connected with the Iruḷa *ró-ṅgu, ró-kku*. On the other hand, Iruḷa *róṅgu* ⟨ **oráṅgu* ⟨ **úraṅku*. The problem needs further investigation.

Further Iruḷa-items with no plausible etymology so far seem to be *buṇḍri* grasshopper,[18] *muṭṭri, muṭṭuri* butterfly,[19] *vutta* crossbar in a house, and possibly a few others.[20]

Concluding this passage on the Nilgiri languages, I wish to quote E. Benveniste who wrote in 1966 that the problem of future research in the sciences of man will be to discover the common basis of language and society; or, as W. Bright (1966) put it, to show "the systematic covariance of linguistic structure and social structure." Although the many Nilgiri ethnic groups remain culturally distinctive, they have influenced one another strongly but to varying degrees through diffusion of ideas. As a result, we have in that region an entity in which—for instance—an areal mythology is as much a fact as is the linguistic convergence. Taking methods of structural and areal linguistics as our point of departure, we should press the analysis of different aspects of our studies far enough to reach the level where "the passage from one to the other will become possible" (C. Lévi-Strauss). Hence I would prefer to designate the region in question the Nilgiri multiethnic and multilingual convergence (diffusion) area.

5.6.2. We shall now discuss in some detail a set of lingustic traits and one socio-linguistic phenomenon all of which could probably be regarded as borrowed from Dravidian and spreading throughout the Indian linguistic area.

5.6.2.1. Most of the languages of India, of whatever major family, have a set of retroflex, cerebral, or domal consonants in contrast with dentals, deno-alveolars or alveolars. The retroflexes include stops (occlusives) and nasals, and in some languages also sibilants, laterals, fricatives, vibrants, and perhaps others. Indo-Aryan, Dravidian, Munda, and "even the far northern Burushaski" form one block manifesting this phonological feature which, in phonetic terms, means that there is a set of consonants articulated so that the tongue-tip is either curled back ("retroflexed") of the alveolar ridge to make contact with the hard palate,

[18] Unless somehow connected with Malto *pinḍri* locust, grasshopper, DED(S) 3430, cf. DEDR 4169.

[19] Unless connected with DEDR 4850(b) Kota *miṭl* locust etc.

[20] Cf. Kamil V. Zvelebil, *The Irula (Ërla) Language*, Part II, 1979, 71–2. However, many entries quoted there have in the meantime been etymologically connected.

or that at least the tip of the tongue articulates against the hard palate without any substantial "retroflexion".[21]

Retroflex phonemes existed even in the earliest Vedic Sanskrit. F.B.J. Kuiper in his 1967 paper ('The Genesis of a Linguistic Area') reviewed the history of the argument on this striking trait. It was noted as the result of borrowing as early as 1833 by Pott, a view controverted first by Bühler in 1864 and as recently as 1922 by Jespersen and implicitly in 1956 by Renou and Leumann.

Retroflex phonemes are on the whole unknown elsewhere in the Indo-European languages, and they are certainly not Proto-Indo-European (Emeneau, 1956). On the other hand, in Dravidian, retroflexes in contrast with other consonants are without the slightest doubt a Proto-Dravidian feature, cf. such minimal reconstructed PDr pairs as **paṭaN* flat part of the hand or foot (DEDR 3843): **pataN* sharpness, fitness, ripeness (DEDR 3907), or **val* strong, hard, firm, able (DEDR 5276): **vaḷ* fertility, increase, growth, abundance (DEDR 5304).

As Emeneau (1956) says, retroflexes are "a clear instance of Indianization of the Indo-European component in the Indic linguistic scene", particularly when taken in correlation with similar contemporary phenomena, as Kuiper had done in his quoted 1967 paper.

5.6.2.2. Another phonological example of obvious diffusion, although on a much more limited scale, is discussed by Emeneau:[22] it is the representation of Old Indo-Aryan palatals in Marathi by the affricates *tš/dž* before front vowels, and by the affricates *ts/dz* before back vowels. Ā similar distribution is found in the Indo-Aryan (Southern) Oriya, and in the Dravidian Telugu and (Northern) Kannaḍa; according to J. Bloch, also in Kurku (Munda). These languages (Marathi, southern Oriya, northern Kannaḍa, Telugu and Kurku) form a continuous band across the subcontinent, and the trait "undoubtedly originated in one language and spread to the others from it" (Emeneau). It is not known which language was the feature originator"; my guess would be rather Telugu since in that language the feature is spread throughout all its dialects and represents the standard.[23]

[21] The distinction between 'true', genuine retroflexes (in terms of articulatory phonetics) and cacuminals (domals, cerebrals) was demonstrated in detail on the basis of palatograms, linguograms and X-ray photography in a detailed paper by Švarný, O.—K. Zvelebil 'Some Remarks on the Articulation of the so-called 'Cerebral' Consonants in Indian Languages, Especially in Tamil', *Archiv Orientální* (Praha) 23 (1955) 374–434.

[22] 'India as a Linguistic Area', *Language* 32 (1956) 3–16.

[23] This is, however, apparently true of Marathi, too.

5.6.2.3. On the morphosyntactic side, perhaps the most striking phenomenon is the abundance of the form which Jules Bloch called 'gérondif', and which, following Whitney, is usually called in English 'gerund' (but also 'absolutive', 'indeclinable participle', 'adverbial participle', 'conjunctive participle', even—incorrectly—'past participle', and in ancient Tamil grammatical tradition *viṉai-y-eccam*, i.e.' [that which is] incomplete [without a finite] verb'. A general Dravidian construction, found in Sanskrit (i.e. in India) already in the earliest texts (but not in Iranian!), although it is not a general Indo-European construction, is such "in which predications are strung together in temporal or cause-effect succession, each predication ending with a non-finite verb form (i.e. one that cannot end a sentence), and the whole sentence being finished with a predication ending with a finite form" (Emeneau). This is indeed a prominent, standard feature of Dravidian, and one of the syntactic traits of Sanskrit that distinguishes it form other Indo-European languages.

This feature was described by Bloch, Emeneau, Kuiper, and other scholars. One of the first to show that this syntactic trait is rather common to the entire Eurasia in general was Pavel Poucha as early as in 1947.[24] Emeneau, in 1956, wrote: ". . . such strings of verb stems or non-finite forms are a common feature of so many other languages and language families, e.g. Vietnamese, Chinese, Japanese, Korean, Altaic, Finno-Ugric (at least Hungarian); it is Indo-European and Semitic, if I mistake not, that are aberrant in this matter in Eurasia."

In India, however, this trait may be in all probability considered a Dravidian trait which has made its way into Sanskrit and, as Kuiper has shown, the "gerunds" were in use already in the *Ṛgveda*.

5.6.2.4. Another syntactic feature—discussed by Kuiper in his all-important paper of 1967—is the use of *iti* as a marker following a direct quotation—a peculiar feature of Indo-Aryan within the Indo-European family, found already in the *Ṛgveda* as well. The Dravidian parallel is the quotative verb **en-/*in-/*an-* to say so-and-so (DEDR 868) and its rigidly fixed position following a direct quotation. As Emeneau says, a most convincing detail is the parallel use of **en-* and *iti* after onomatopoetics.

5.6.2.5. It has been pointed out long ago[25] that modern Indo-Aryan, like Dravidian, adds the same inflexional morphemes of 'cases' to distinct stems for singular and plural, which is unlike the general Indo-European

[24] Poucha, Pavel, 'The syntactical relationship of some Asiatic languages', *Archiv Orientální* (Praha) 17 (1947) 2.265–92.

inflexional practice. According to Emeneau, this is convincingly to be interpreted as evidence of borrowing from Dravidian.

5.6.2.6. The echo-word construction (mentioned by J. Bloch) has been discussed by a number of Indian and Western scholars.[26] It is usually a construction in which a basic word is followed by an echo-word in which the initial group CV̆- of the basic (meaningful) word is replaced by a morpheme *kv̆-/gv̆-* or *v̆-* or (rarely) by some other morpheme, and the rest "echoes" the rest of the basic word. The meaning of the echo-word is "and the like, and something like that", or it simply adds the connotation of uncertainty or vagueness coupled with a certain amount of emphasis and expressivity. There are many variations, but nearly all Dravidian languages exhibit the sequence *kv̆-/gv̆-*. Cf. e.g. Tamil *paṇam kiṇam* some money, money and the like, Iruḷa *püli gili* a tiger or some animal like that.[27] "Most notable is the fact that the construction is found in all three families, there being good evidence for Dravidian, fairly good evidence for Indo-Aryan, and good evidence for at least So'ra in the Munda family" (Emeneau). However, it is very true what Emeneau adds: we need more detailed evidence and analysis; echo-words are a pan-Indic trait and it is apparently not an Indo-European feature; it is probable that Indo-Aryan received the trait from non-Indo-Aryan; at present, we can hardly say more.

5.6.2.7. Both Dravidian and Indo-Aryan show "a great proliferation" of onomatopoetics; their systems are remarkably parallel, and have been discussed in detail in a path-breaking paper by Emeneau.[28] I can here but reproduce his conclusions: (1) In the language families of India there

[25] *Linguistic Survey of India* 4.280; L. Bloomfield, *Language*, 1933, p.470.

[26] Cf. *Linguistic Society of India* circulars 3 (14.5.1928) 7–8, 4 (25.6.1928) 2,8–10, 13–14, 16; M. B. Emeneau has discussed Kota, Koḍagu and Toda version of a Tamil folk-tale built around an echo-word motif, published first by S. M. Natesa Sastri (*Folklore in Southern India*, I, Bombay, 1884, p.92; *Indian Antiquary* 14, 1885, 79–81): cf. *New Indian Antiquary* 1.109–17 (1938), *JAOS* 58 (1938) 559–70; *JAOS* 59 (1939) 503–5. Cf. also Kamil V. Zvelebil, *The Irula (Ĕrla) Language*, Part II, 1979, 106–8.

[27] The 'exact' meaning of the whole construction depends to a great extent on the context and sociolinguistic situation; thus it may express slightly scornful attitude of the speaker, e.g. when in a certain context we read in Tamil of someone having a *mīcai-kīcai* "a (funny/silly) sort of moustache"; or, on the contrary, it may carry the connotation of emphatic envy, e.g. "he has got a lot of *paṇam kiṇam*" i.e. he is a very wealthy man who might have acquired his wealth not quite honestly; or it may be simply expressive and intensifying.

[28] *Onomatopoetics in the Indian Linguistic Area*', *Language* 45 (1969) 274–99. Cf. Also E. Annamalai, 'Onomatopoeic resistance to sound change in Dravidian', *Studies in Indian Linguistics*, Annamalainagar, 1968, 15–19; Karl Hoffmann, 'Wiederholende Onomatopoetika im Altindischen', *Indogermanische Forschungen* 60 (1952) 254–64.

is a common pattern of onomatopoetics with great proliferation of items in all the languages, and some areal etymologies; (2) The Indo-Iranian family does not inherit the pattern from Indo-European; (3) Hence, we may postulate diffusion of both the pattern and some etymological items from the indigenous families into Indo-Aryan. Emeneau's study concentrated on such diffusion from Dravidian into Indo-Aryan.

5.6.2.8. Another trait that has already been presented above is the causative formation in the verb system. Latin, Germanic, and Slavic evidence shows that Sanskrit drew from its Indo-European origin the beginnings of its rich causative formation which continues, with much development, in Middle Indo-Aryan, and, with much restructuring, in New Indo-Aryan. Surprisingly, New Indo-Aryan manifests three stems, intransitive — transitive — causative, or, as Emeneau prefers to call them, simplex — causative — causative of causative. "This NIA system is in its complexity reminiscent of the Dr. causative system" (Emeneau). In Dravidian, generally speaking, we should set up four stems: intransitive, causative of intransitive, transitive, and causative of transitive (Emeneau, 1971). To show the difference between the New Indo-Aryan system and the Dravidian system, Emeneau introduced a new terminology: the NIA system contains, according to him, simplex: causative: causative of causative; while the Dr. system contains simplex: mediative of simplex: causative: mediative of causative.

Since Emeneau's paper, K. Paramasivam wrote (1977) and published (1979) his path-breaking dissertation on the subject of 'agentivity' in Tamil.[29] We shall try to coordinate Emeneau's earlier description with Paramasivam's conclusions, using Paramasivam's instances from modern Tamil (cf. Chart 6).

Emeneau found the four-fold system in Toda, Kota, Koḍagu and Malayalam. He was uncertain whether such sets of four forms should be reconstructed for Proto-Dravidian. However, Indo-Aryan "shows a chronologically progressive complexity in its system, carrying it in the direction of, but not to identify with, the SDr. (?PDr.) system. Convergence, with Indianization of IA, is the tempting solution."[30]

5.6.2.9. In his paper 'The Indian Linguistic Area Revisited'[31], M.B. Emeneau presents two additional matters as evidence for the existence

[29] 'Effectivity and Causativity in Tamil', *IJDL* 8(1979)71–151.

[30] Cf. 'Dravidian and Indo Aryan: The Indian Linguistic Area', in A.F. Sjoberg (ed.), *Symposium on Dravidian Civilization*, 1971, 33–68.

[31] *Intern. Journal of Dravidian Linguistics* 3 (1974)92–134.

of the Indian area of linguistic diffusion and convergence: one is an instance of a morpheme with a complex semantic structure; the two language families, Dravidian and Indo-Aryan, have the same semantics but quite different phonological representations of this morpheme expressing 'addition' and meaning 'also; and; even'. In Sanskrit, this is *ápi* (inherited in phonetic shape from Indo-European), in Dravidian, it is **-um* (probably ⟨ ***-uN*). According to Emeneau, "We have... the same five-usage semantic structure represented in Sanskrit by api, and in Dravidian, or, better said, Proto-Dravidian by **-um*." There must be some historical relation between the two since none of the Sanskrit semantic structure is inherited from Indo-European (not even from Indo-Iranian). "Given bilingualism between the two families in North India at this period, there is no probable solution of our problem other than diffusion from Dravidian into Indo-Aryan. The Sanskrit usages are essentially a calque of Dravidian **-um* by Sanskrit api."

The other problem discussed by Emeneau is the relevance of social structure for the linguistic structure in the Indian area: the linguistic implications of the caste structure of Hindu society.[32] After presenting rich evidence, Emeneau concludes: "We are almost forced to a hypothesis that the Dravidians whom the Indo-Aryan invaders met in the riverine plains of North India had a caste system with linguistic traits mirroring it, a system which they shared with the Dravidians of the plains of the South, while the tribal areas of the center had not yet been reached by this stage of social organization." But, as Emeneau himself admits, this conclusion is "hazardous"; yet, it is a fascinating field of sociolinguistic study, as yet very little explored.

5.6.3. *Lexical borrowings from Dravidian into Indo-Aryan.* It is beyond any reasonable doubt that there exist Dravidian loan-words in Indo-

[32] Ferguson, Charles A., and John J.Gumperz (eds), *Linguistic Diversity* in South Asia: Studies in Regional, Social and Functional Variation, *IJAL* 26(1960) 3, pt.2; Gough, Kathleen E., 'Brahman Kinship in a Tamil Village', *Amer. Anthropologist* 58 (1956) 5.826–53; Gumperz, John J., 'Sociolinguistics in South Asia', *Current Trends in Linguistics* 5 (1969) 597–606; Gumperz, John J., *Languages in social groups: essays*, Stanford, 1971; Krishnamurti, Bh., 'Language Varieties and Problems of Standardization of Indian Languages', *Ind. Ling.* 36(1975)191–96; McCormack, William, 'Social Dialects in Dharwar Kannada', in *Linguistic Diversity in South Asia*, *IJAL* 26 (1960)3, pt.2,79–91; Ramanujan, A.K., 'The Structure of Variation: A Study in Caste Dialects', *Structure and Change in Indian Society* (ed. by M.Singer and B.S.Cohen), Chicago, 1968, 461–74; Shanmugam Pillai, M., 'Caste Isoglosses in Kinship Terms', *Anthropological Linguistics* 7 (1965)3, pt.2, 59–66; Zvelebil, K., 'Spoken Language of Tamilnad', *Archiv Orientální* (Praha) 32 (1964) 2.237–64; and especially Michael C. Shapiro and Harold F.Schiffman, *Language and Society in South Asia*, Delhi, Motilal Banarsidass, 1981; this book also gives a very detailed bibliography. The list in this footnote was highly selective.

1. Emeneau: intransitive/simplex	*rāman*$_1$ *vantān*$_2$ "Rāma$_1$ came$_2$"
Paramasivam: affective (intransitive)	
2. Emeneau: causative of/mediative of intransitive simplex	*avan*$_1$ *maṉaiviyaip*$_2$ *pirintān*$_3$ "He$_1$ left$_3$ (his) wife-*acc.*$_2$"
Paramasivam: affective (transitive)	
3. Emeneau: transitive/causative	*nāy*$_1$ *kuṭattai*$_2$ *uṭaittatu*$_3$ "The dog$_1$ broke$_3$ the pot-*acc.*$_2$"
Paramasivam: effective	*avan*$_1$ *māṭṭai*$_2$ *mēyttān*$_3$ "He$_1$ grazed$_3$ the cow-*acc.*$_2$"
4. Emeneau: causative of transitive/ mediative of causative	**a)** with indirect 'loose' causation: *cōlan*$_1$ *tañcāvūrk*$_2$ *kōvilaik*$_3$ *kaṭṭuvittān*$_4$ "The Chola$_1$ had (x) built$_4$ the Tanjore$_2$ temple-*acc.*$_3$"
Paramasivam: causative	**b)** with direct 'tight' causation: *avan*$_1$ *eṉakku*$_2$ *inta*$_3$ *viṣayattait*$_4$ *terivittān*$_5$ "He$_1$ informed (caused to know)$_5$ me -*dat.*$_2$ (of) this$_3$ matter-*acc.*$_4$"

CHART 6

Aryan. A number of lists have been compiled, and probably 750 loanwords have been suggested.[33] As Emeneau says, these are all in fact merely "suggestions", as are, in the last analysis, all areal etymologies—unprovable "acts of faith" (in contrast to etymologies within a linguistic family which are provable through their conformity to phonological correspondences). However, common sense, criterion of economy, and general historical and cultural probabilities permit us to discuss at least those examples of very credible Dravidian borrowings in Indo-Aryan which are, in time-depth, rather or even very early, as well as those which possess a high degree of plausibility. In what follows, I shall discuss twenty-five such lexical items.

1) Skt. *mayūra-* peacock. The word appears in two Indra hymns in the *Ṛgveda* family books (3.45.1, 8.1.25). It is not Indo-European, not even Iranian; it is not further analyzable in Sanskrit terms. On the Dravidian side we have the Tamil *mayil*, *mañṇai*, Malayalam *mayil*, etc., cf. DEDR 4642, well attested throughout the family. As for the *r* in *mayūra-* instead of *l*, it was noted by Burrow; according to him, it is not entirely unexpected in Ṛgvedic Sanskrit. I am delighted to add that one dialect of Iruḷa, the Northern Kasaba, shows beyond any doubt the form *muyiru* (cf. Tuḷu *mairu*, Konḍa *mrīlu* and *mīril*).[34] T. Burrow also discussed Przyluski's Austro-Asiatic suggestion (**marak*?) and showed that the Sanskrit form is much closer to the Dravidian reconstruction **mayil*. In the light of the Northern Iruḷa, Tuḷu and Konḍa forms and the attested Dravidian alternation **r*/**l*, I would suggest a PDr recostruction **mayil*/**mayir*. This loanword is probably the most certain borrowing from Dravidian in (Ṛgvedic) Sanskrit and, in spite of Wüst, who is probably the only one to stubbornly uphold the "Indo-Germanic" etymology, we may say with Emeneau that we can "only hope that the evidence for *mayūra-* as a RV borrowing from Dr. is convincing to scholars in general and that it may add its detail to the areal hypothesis." Discussion by J. Bloch (1925),[35] J. Przyluski (1925),[36] T. Burrow (1945),[37] P. Thieme

[33] Burrow, T., 'Dravidian Studies VII, Further Dravidian Words in Sanskrit', *BSOAS* 12 (1948) 365–96.

[34] The Iruḷa situation is complex: Mele Nāḍu and Vēṭṭe Kāḍu Iruḷa dialects have *navil* peacock (and *nagul* peacock's tail); this is in free variation with *muyilu* peacock; one of the two forms may be a borrowing (from Kannaḍa?), cf. DEDR 2902; North Iruḷa (Kasaba) *muyiru*.

[35] Bloch, J., *Bull.Soc.Ling.Paris* 25 (1925) 16.

[36] Przyluski, J., *Bull.Soc.Ling.Paris* 26 (1925) 99ff.

[37] Burrow, T., *BSOS* 11 (1945) 608–10. Burrow also suggests that **mayil* is a secondary development of **mañil* (cf. forms in Parji and Gadba), and that **mañil* is to be compared with DEDR 2902 **ñamil* (with metathesis as explanation).

(1955),[38] Wüst (1956),[39] Emeneau (1954, 1971).[40] See also Turner, CDIAL, no. 9865.

2) Skt. *budbuda-* bubble; occurring as a member of a compound in an Atharvan-like charm in *Ṛgveda*. This word has been treated in full in Emeneau's paper on onomatopoetics[41] and again in his paper on Dravidian and Indo-Aryan.[42] After a careful study of its complicated Indo-Aryan and Indic connections, his conclusion is that, "all details considered, a Dr. origin is preferable to either IE or Munda" (cf. DEDR 4249 Telugu *buḍabuḍa* with a bubbling noise, etc., also Turner, CDIAL, no. 9278).

3) Skt. *phála-* fruit (*Ṛgveda* and later). One of the most frequently discussed items. To be derived from Dr. **paṛa-*, cf. DEDR 4004 Tamil *palu-* ripen (as fruits, grain), grow mature, etc., *palam* ripe fruit, etc. up to Kuṛux-Malto. Discussed by H. Gundert (1869),[43] Caldwell and Kittel; in modern times, by T. Burrow,[44] A. Ammer,[45] M. Mayrhofer,[46] J. Bloch,[47] F. B. J. Kuiper,[48] M. B. Emeneau.[49] However, H. Lüders (1909)[50] provided an etymology from a Sanskrit verb (*phal-* to congeal, get thick) which Mayrhofer finds uncertain, P. Thieme (1955)[51] accepts unreservedly, and this writer finds nonsensical. Sturtevant (1941)[52] considered a connection with the word for 'leaf'. I absolutely agree with Emeneau in

[38] Thieme, P., review of Burrow's *The Sanskrit Language* (1955), in *Language* 31 (1955) 428–48. Thieme is willing to admit a borrowing from an indigenous language.

[39] Wüst, W., *PHMA*, München, 1956, II.

[40] Emeneau, M. B., Appendix I to 'Linguistic Prehistory of India' (*Proc. Amer. Phil.Soc.* 98, 1954, 282–92) where he stresses the fact that the old Indo-European etymology (see Walde-Pokorny 2.243) on the basis of connection with Skt. *mímāti* below, bleat, *māyú-* bellowing (< **mey-*) is not convincing; further, 'Dravidian and Indo-Aryan' (1973, 33–68) in the text, and in ftn. 19. I am not so certain whether the Tuḷu *mairụ* in this item "has *r* by a peculiar Tulu development of **l* > *r*", since we have the Northern Iruḷa form *muyiru* (this language does not manifest such **l* > *r* alteration), and the Konḍa *mīril, mrīlu.*

[41] *Language* 45 (1969) 274–99.

[42] In *Symposium on Dravidian Civilization* (1971).

[43] *Zeitschrift deutsch. morgenländischen Ges.* 12 (1869) 519.

[44] *Trans.Philol.Soc.*1946:10.

[45] *ZDMG* 51 (1948) 128.

[46] *Anthropos* 47 (1952) 664.

[47] *Bull. Soc. Ling. Paris* 25 (1925) 17; *BSOS* 5 (1930) 740.

[48] *Acta Orientalia* 16 (1938) 305.

[49] 'Linguistic Prehistory of India', *Proc. Amer.Philos.Soc.* 98 (1954) 289–92; 'Dravidian and Indo-Aryan', *Symposium on Dravidian Civilization* (1971).

[50] *Kuhn's Zeitschrift* 42 (1909) 198ff.

[51] Review of Burrow's *The Sanskrit Language*, *Lg.*31 (1955) 428–48.

[52] *Language* 17 (1941) 6.

finding the Dravidian etymology much more attractive "as being semantically more straightforward", more economical, rather common-sense, than the Indo-Germanists' juggling with various remote meanings. Cf. also Turner, CDIAL nos 9051, 9057.

4) Skt. *káṭuka-* (*Ṛgveda*) pungent, bitter: DEDR 1135 Tamil *kaṭu-* v. be too highly seasoned, pungent; n. bitterness, pungency; all through up to Brahui *xarēn* bitter. Cf. Turner, CDIAL no. 2641. Dravidian hypothesis is more attractive than any other etymology.[53]

5) Skt. *kāṇá-* one-eyed (*Ṛgveda*): DEDR 1443 Tamil *kāṇ* to see with the Dravidian negative suffix **-ă̈*, cf. also DEDR 1159 *kaṇ* eye.[54]

6) Skt. *khála-* threshing floor, granary (*Ṛgveda*): DEDR 1376 Tamil *kaḷam*, *kaḷan* place, open space, threshing floor, battlefield; up to Malto. The meanings in all Dr. languages are, basically, 'threshing floor', or in Kuṛux-Malto, 'field suitable for tillage'. No Indo-European etymology has been plausibly suggested, and the borrowing from Dravidian is almost self-evident.[55]

7) Skt. *ulū́khala-* mortar (for grinding) (*Ṛgveda*): DEDR 672 **u/olakkay* 'pestle'. The connection is uncertain both in form and meaning, but possible.[56]

8) Skt. *bilva-* the wood-apple tree (*Aegle marmelos*) (occurs twice in an *Atharvaveda* passage): DEDR 5509 Tamil *veḷḷil*, *veḷḷiyam*, *viḷam*, *viḷā/viḷavu*, Kannaḍa *beḷaval* etc. (*Feronia elephantum*, closely related genus of the same species). The Dr. etymology has been accepted by Mayrhofer and Turner (CDIAL no. 9248).[57]

9) Gundert (1869), Bloch (1930), and Burrow (1948) suggested as an areal etymology the Dravidian items under DEDR 3039 (**taṭṭ-*, also

[53] Discussed in Emeneau's review of Mayrhofer, fasc.5–8, *Language* 33 (1957) 595–602; cf. also Turner, *CDIAL* 3777; Emeneau, 'Dravidian and Indo-Aryan' (1971), ftn.12.

[54] Rather speculative. Discussed in Emeneau, 'Dravidian and Indo-Aryan' (1971), ftn. 24.

[55] Discussions: T. Burrow in *BSOAS* 11 (1943) 133; *Trans. Philol. Society* 1946: 9; H. W. Bailey, 'Indica and Iranica', *Ind. Linguistics* 16 (1955) 114–19; P. Thieme, in *Language* 31 (1955) 428–48; T. Burrow, "Sanskrit *krand*—'step, stride, etc.'", *Bull.Deccan College Research Inst.* 20 (1960) 281–87; M. B. Emeneau, *Proc. Amer. Philos.Soc.* 98 (1954) 282–92, and *Symposium on Dravidian Civilization* (1971) 33–68, ftn.25. Turner, *CDIAL*, 3834.

[56] Discussion in J. Bloch, 'Some problems of Indo-Aryan philology', BSOS 5 (1930) 719–56; P. Thieme in *Language* 31 (1955) 428–48; F. B. J. Kuiper in *Rigvedic Loanwords* (1955); Turner, *CDIAL* 2360 seems to accept the Dr. origin following Mayrhofer. Cf. M. B. Emeneau, *Symposium on Dravidian Civilization* (1971), 33–68, ftn. 26.

[57] Discussed in M. B. Emeneau in *Symposium* (1971) 33–68. Cf. T. Burrow, 'Some Dravidian words in Sanskrit', *Trans. Philol. Soc.* 1945, 79–120 (114–15).

**taṭ-*) and 3156 (Kannaḍa-Telugu *tāṭ-* etc.) as connected with the Skt. verb-root *taḍ-* to strike, beat (of the *Nirukta*). Emeneau (1971), Mayrhofer and Turner seem all quite convinced of Dravidian origin. If so, then this is the earliest Indo-Aryan verb to be attested as borrowed from Dravidian. Cf. CDIAL, nos 5748, 5751, 5752 and 5632.[58]

10) Not a common word, but well attested in Atharvan battle charms, is Skt. *kúṇapa-* corpse, which Kittel (1894) and Burrow (1948) suggested belongs with DEDR 1822 **kuṟ-* to rot, putrify. There is no Indo-European etymology for *kúṇapa-*, and Mayrhofer, Turner and Emeneau have accepted the areal etymology. Cf. CDIAL 3257.[59]

11) The very widely spread late Sanskrit, Middle Indo-Aryan and New Indo-Aryan word for 'dog', *kukkurá-*, etc., appears first in the texts as Atharvavedic *kurkurá-*. This word was suggested by Gundert (1869), Kittel (1894) and Burrow (1948) to be an areal etymology connected with the Dravidian words for 'bark', DEDR 1796 Ta. *kurai-* to bark, Kannaḍa *kurekure* a sound used in calling a dog, etc.[60]

12) Among botanical names, the two which are earliest and most probably of Dravidian origin are Skt. *arká- Calotropis gigantea (Śatapathabrāhmaṇa*: DEDR 814 Tamil *erukku*, etc.) and *candana-* sandalwood, sandal paste (*Nirukta*; DEDR 2448 Tamil *cāttu* to daubt, etc., *cāntam* sandal, *cantu* sandalwood, etc.).

13) Other very early items which may have been borrowed by Vedic Sanskrit from Dravidian are: *kávaca-* coat of mail (*Śatapathabrāhmaṇa*; DEDR 1221),[61] *jáṭā-* matted hair of ascetics, etc. (*gṛhyasūtra*; DED 1897, DEDR 35 Appendix),[62] *mā́lā-* wreath (*gṛhyasūtra*; DEDR 4827)[63] and *eḍa-* sp. sheep (*śrautasūtra*; DEDR 5152).[64]

[58] Discussed by H. Gundert, 'Die dravidischen Elemente im Sanskrit', *ZDMG* 23 (1869) 517–30; J. Bloch, *BSOS* 5 (1939) 737; T. Burrow, *BSOAS* 12 (1948) 380; M. B. Emeneau, *Symposium*, 1971, 33–68.

[59] Cf. F. Kittel, *A Kannada-English Dictionary*, Mangalore, 1894, T. Burrow, *BSOAS* 12 (1948) 373, M. B. Emeneau, *Symposium*, 1971, 33–68.

[60] Cf. H. Gundert, *ZDMG* 23 (1869) 517–30, Kittel (1894), T. Burrow, *BSOAS* 12 (1948) 373, M. B. Emeneau, *Symposium*, 1971, 33–68, and also Emeneau, 'Onomatopoetics in the Indian linguistic area', *Language* 45 (1969) 274–99.

[61] Ta. *kavi-* to cover, overspread etc., Ko. *kavc-* to cover with a garment, Ka. *kavacu-* to put upon, etc., cf. Turner, *CDIAL* 2957; cf. further no. 3816 **khappa-* cover (Burrow, review of Turner's *CDIAL* in *JRAS* 1967, 39–42). The connection is, to my mind, rather tenuous.

[62] A good example of a very difficult etymology. *DED* 1897 connects Skt. *jaṭā-* with Tamil *caṭai* matted locks of hair, etc., Ka. *jaḍe*, etc., and its authors obviously preferred to think of it (in 1961, and again in 1966) as of a loanward from Dravidian. It is found in Turner, *CDIAL*, 5086; he prefers to favour the Munda connections (suggested by F. B. J. Kuiper);

14) The Skt. verb *kuṭṭáyati* crushes, bruises, belongs to the Atharvan *sūtra* corpus; its Middle and New Indo-Aryan derivatives have the meanings 'beat, pound, break, crush; cut'. Bloch (1930) and Burrow (1943, 1946) suggested origin from the Dravidian material in DEDR 1671 (**kuṭṭ-* to strike, pound) and 2063 (**koṭṭ-* to strike, beat), and Turner (CDIAL, *s.v. kuṭṭ-*, and 3241) accepts this derivation.[65]

As Emeneau (1971) writes, "We end, then, with a small, but precious, handful of Vedic forms for which Dr. etymologies are as certain and acceptable as may be expected in this field of areal linguistics", adding, though, that no chronology of the borrowings is possible. The earliest among these is probably *mayūra-* peacock which appears in two Indra hymns (*Ṛgveda* 3.45.1, 8.1.25).

Among later possible or very probable borrowings from Dravidian in Sanskrit, we should quote the following: **15.** Skt. *ketaka-*, *ketakī-* the fragrant screw pine (*Pandanus odoratissimus*): Tamil *kaital*, *kaitai*, Kannaḍa *kēdage*, Tuḷu *kēdai* etc. (DEDR 2026; CDIAL 3462);[66] **16.** Skt. *elā* cardamom: Tamil *ēlam* cardamom plant, *Elettaria cardamomum*, etc. (DEDR 907; CDIAL 2522);[67] **17.** Skt. *pallī*, *pallikā* house lizard, *Lacerta gecko*; lizard: Tamil *palli* etc. (DEDR 3994; CDIAL 7973);[68] **18.** Skt. *puttikā-* the white ant or termite; (*pipīlika-*)*puṭa-* anthill: Tamil *purru*, *purram* white anthill, Kannaḍa *puttu*, *putta* id., Kolami, Naiki *puṭṭa*, etc. (DEDR 4335; CDIAL 8264);[69] **19.** Skt. *nīra-* water (epic+); juice,

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Mayrhofer preferred the Dravidian derivation, still advocated by Emeneau in 1971. However, in the revised edition of *DED* (1984), the item has been removed from the group of early Dravidian loanwords, and has found its place among Indo-Aryan material borrowed by Dravidian. Cf. also Burrow, *BSOAS* 35:539. Indeed, the etymology Skt. *jaṭā-* › Ta. *caṭai* is to be preferred.

[63] Tamil *mālai* garland, wreath, etc., Malayalam *māla*, Kannaḍa *māle* etc. Cf. Turner, *CDIAL*, 10092. There is some dispute about this item, too; it cannot be gone into here.

[64] The Skt. *eḍa-*, *eḍa-ka-*, *eḍ-ī-* a kind of sheep (Turner, *CDIAL* 2512) is most probably a borrowing from Dravidian **yāṭu*, Tamil *yāṭu*, *āṭu*, Tuḷu *ēḍu*, Telugu *ēḍika*, *ēṭa*, Kuṛux *ēṛā*, Malto *éṛe* Brahui *hēṭ*. The wide distribution in Dravidian, the phonetics, and the semantics fit perfectly the notion that this is a typical areal etymology.

[65] Cf. J. Bloch, *BSOS* 5 (1930) 737, and T. Burrow, *BSOAS* 11 (1943) 134 and Trans. Philol.Soc. 1936, p. 8, also listed in his *The Sanskrit Language* (1955).

[66] T. Burrow, *Trans. Philol.Soc.* 1946, p. 16.

[67] F. Kittel, *Indian Antiquary I* (1872) 235–39.

[68] F. Kittel, *op.cit.*, M. B. Emeneau, *Univ. of Calif. Publ. Class. Philol.* 12 (1943) 261, ftn.31; T. Burrow, *Trans.Philol.Soc.*1946, p.10.

[69] T. Burrow, *Trans.Philo.Soc.* 1945, p.111. Cf. also the discussion of the developments (including borrowings) of Proto-Dravidian **tt* (*rr*) in Emeneau, *Proc.Amer. Philos.Soc.* 98 (1954) 282–92 *s.v.* in Appendix I.

liquor (lexical); *nīvara-* water, mud (lexical): Tamil *nīr* water, sea, juice, liquor, urine, etc. . . up to Brahui *dīr* water, etc. (DEDR 3690a; CDIAL 7552);[70] **20.** Skt. Nala- n.pr. of a man: Tamil *nal-* adj. good, *nala-* v. result in good, etc., *nalam* goodness, etc.; widely spread in Dravidian (DEDR 3610);[71] **21.** Skt. *malaya-* the mountains which border Malabar on the east (i.e. Western Ghats), etc.: Tamil *malai* hill, mountain, Malayalam *mala* mountain . . . up to Brahui *mash* hill, mountain (DEDR 4742);[72] **22.** Skt. *aye* excl. of surprise, recollection, or fear (esp. in dramas): Tamil *aiya* excl. of wonder, of pity or concern, *aiyō* excl. of wonder, of pity or concern, of poignant grief, etc., up to Malto *aya*, *ayyi*, *ayyu* excl. of wonder, etc. (DEDR 196b).[73]

5.6.4. The mapping, evaluating, and accepting of the traits that determine the Indian sub-continent as a linguistic area is far from finished. An early diagnosis of the situation was provided by Jules Bloch who between 1925–1934 summed up earlier suggestions to "the effect that Indo-Aryan had undergone, from the beginning of its presence in India, an Indianization through contact with Dravidian (and probably with other language families). This view has gone through a process of demonstration that

[70] This very important word, almost certainly a Dravidian loanword in Sanskrit, has been discussed by J. Bloch in *BSOS* 5 (1930) 739, and T. Burrow, *Trans.Philol.Soc.* 1946, p. 9, cf. Kittel, *op.cit.* "An old Indo-European etymology, that always required faith both in its phonology and in its semantics, has recently been revived with all the apparatus of the laryngeal hypothesis by Louis H. Gray, *Language* 25.376–77 (1949); it is hardly convincing vis-à-vis the general Dravidian word for 'water'." (M. B. Emeneau, *op.cit.* 1954 *s.v.* in Appendix I).

[71] The Sanskrit name is well-known as the name of the hero of the most popular episode of the *Mahābhārata*, the *Nalopākhyānam*. M. B. Emeneau in *Univ. of Calif. Publ. Class. Phil.* 12 (1943) 255–62 was the first who brought it into the almost certain connection with the very productive Dravidian root **nal-*. Mayrhofer agrees, cf. *Symbolae Hrozný* 5 (1950) 9.371.

[72] Cf. Kittel, *op.cit.*, also discussed by Gundert, *ZDMG* 23 (1869) 517–30 and Caldwell, *Comparative Grammar of the Dravidian Languages* (2nd ed., 1875) 565–79. Cf. the name of the language and country, Mala-y-āḷam. In view of the wide distribution of the stem **mal-ay* in Dravidian languages, of its antiquity and productivity, as compared with the uncertainty of Sanskrit commentators as to its meaning, and the fanciful derivation of Sanskrit lexicographers, it is more than probable that it is in origin a Dravidian word.

[73] A difficult item; interjections are almost always difficult to etymologize. There are Indo-European interjections of very close phonetic shape (cf. Greek αἰ. αἰ. αἰαῖ Lithuanian *aĩ*, *ái*, German *ei*, Sanskrit lexical *e*, *ai*). Emeneau says, "the Dravidian forms are so much more current than the suggested Indo-European etyma that a borrowing from Dravidian seems more plausible." For the discussion of Skt. *ketaka-*, *elā-*, *pallī*, *pallikā-*, *mayūra-*, *puttikā-*, *nīra-*, *Nala-*, *malaya-*, *aye*, *khala-*, *phala-* and Tamil etc. *mālai* cf. also and above all Emeneau, 'Linguistic prehistory of India', Appendix 1: Sanskrit Borrowings from Dravidian. In *Proc. Amer. Philos. Soc.* 98 (1954) 282–92.

has been capped . . . by Kuiper in 1967" (Emeneau, 1969). The hypothesis has achieved acceptance, mainly due to the more recent labours of T. Burrow and especially M. B. Emeneau. As he says, it is not necessary anymore "to go through the formality of defending the general thesis." New evidence of both structural and lexical diffusion is emerging constantly. At the same time, further theoretical work has resulted in several additional insights, e.g. that of constituting so-called micro- or mini-areas even within genetically related families and sub-families.

6. Dravidian and 'Harappan'

6.1. In 1875, Sir Alexander Cunningham reported the discovery of a "most curious object" which was found at Harappa by Major-General Clark, then Commissioner of Avadh. It was a seal made of "dark brown Jasper" and engraved on it was a humpless bull, looking to the right, with two "stars" under its neck. Above the bull was an inscription engraved in six characters. Though the inscription was unintelligible to Cunningham, he nevertheless concluded that the characters of the script were not Indian and therefore the seal was "foreign to India". This seems to have been the first reported discovery of a steatite seal with Harappan script.[1]

In 1886, more seals were brought to light; but their origin, significance and age remained obscure to scholars for quite some time to come. Larger amounts of texts became available only after the first regular excavations at Harappa were started by Rai Bahadur Daya Ram Sahni in 1920–21, and their prehistoric nature was established only by Sir John Marshall and his colleagues, Mackay, Gadd and Smith in about 1924, after the discovery of Mohenjodaro by R. D. Banerji.

6.2. As Wheeler pointed out long ago, Harappan civilization is the most spatially extensive of all the early civilizations we know. The mature Harappan phase seems to have extended from about 2000 to 1700 B.C., but most Harappan sites seem to have been occupied for no more than 200 years (with the exception of the few large cities). The final appearance of the Harappan cultural style was probably in Gujarat-Maharashtra around 1300 B.C. There are about 1000 Harappan sites spread over an enormous area. Recently, the French discovered a settlement close to the Oxus River, deep in Central Asia, and the Russians some apparently proto-Indian seals at Altyn Tepe. This raises, on the one hand, the possibility of Altaic connections and, on the other hand, of Indo-Aryan loanwords in Harappan vocabularies.

6.3. The seals are generally made of steatite alias soapstone, a singularly

[1] The seal itself was found sometime in or before 1872–73, and is now preserved in the British Museum, London.

soft stone which tends to disintegrate when it becomes too moist. Seal cutting must have been a master craft of the Indus people. According to Walter A. Fairservis Jr., the Harappan seal cutter was a highly accomplished master-craftsman. Among a large population, though, seal-bearers were a relatively small group. Nonetheless, even small Harappan settlements had their quota of seal bearers and users. On analogy with the Sumerian seals which can be read and understood, the Harappan seals may also be roughly divided into two major groups: a larger class of owners' seals used in administration and trade, with the name of the seal owner with or without further determinatives (occupations, clans, ranks, titles, etc.) added; and a smaller class of dedicative seals where the recipients of the gifts are gods or their representatives (temples, priests, rulers?).

6.4. Ever since the first specimens of the Indus script were published, they presented a standing challenge to scholars, resisting, so far, all atempts at decipherment. The problem consists of the fact that we have to do with an *unknown script* in an *unknown language*, with no bilingual inscription found so far. To make the matter worse, there are only eight texts longer than fifteen signs in the whole corpus; the longest inscription has twenty-six signs written on three sides of a triangular prism. The longest continuous text has 17 signs in three consecutive lines. The average length of an inscription is almost exactly five signs. Sometimes texts are confined to one or two signs. This script, invented around 2500 B.C., consists of some 419 signs occurring in seal texts and graffiti 13.376 times in 2.290 known texts. Of the 419 signs, 113 occur only once, 47 occur twice, 59 occur fewer than five times. Thus approximately 200 signs are in general use. About thirty-five signs can possibly be compared with proto-Elamite. These findings demonstrate that the Harappan script is in principle of the same type as the other known writing systems of the 3rd millenium B.C., representing probably the first phase of phonetization in which pictures of concrete objects are used both for the names of those objects and for other, homophonous words with entirely different meaning. In terms of historical analogies: Proto-Sumerian is dated ca. 2900 B.C., Proto-Elamite 2800 B.C., and Harappan ca. 2300 B.C. In terms of the number of signs, the 419 Harappan symbols are considerably fewer than Sumerian (ca. 600), Egyptian (ca. 700) and Chinese (ca.3500). The problem of the seal-cutter/scribe was often to provide maximum information in minimum space, and hence, maybe, the technique of combining as many as four different signs. As stressed above, in actual fact the total number of signs in regular use is less than 200. These findings (the number of signs and the occurrence of some signs as isolated single signs making

up an entire inscription) demonstrate that the script was definitely not alphabetic nor purely logographic, but most probably logosyllabic or something of that order: i.e. some signs represent words (lexemes), others may serve purely for their syllabic values, representing probably grammatical markers; in fact, in principle, a script like the modern Sino-Japanese, only much less complex.

6.5. The Indus script does not bear a close resemblance to any other known script so that it could be proved genetically related to any. The idea of writing may have come from Elam, but the script was probably invented independently. Already Hunter (1934) and Gelb (1963) among others noted the possibility of a common source of some signs in the corpus of Proto-Sumerian, Proto-Elamite and Proto-Indic. Both Proto-Sumerian and Proto-Elamite appear to have a distinct chronological priority over Harappan. However, none of the speculations in any of these directions has so far helped in the actual decipherment.

To sum up the enormous difficulties of the Harappan problem: a) an unknown language in an unknown script; b) the absence of any bilingual text; c) the 'unfortunate' nature of the texts—they are simply too short and very probably too limited in character; d) the absence of any real clue (like place-names or personal names); e) Harappan civilization is geographically remote from other civilizations of its time, and also historically remote from later cultural developments on the Indian subcontinent.

6.6. The decipherment of any unknown script and/or language presupposes the availability of some clue or reference. Where a clue or reference is absent, the decipherer can only exercise his own imagination, and the acceptance of any decipherment is an act of faith. In the absence of a bilingual clue, of geographical and other proper names, and of lengthy inscriptions, the prospects of ever understanding the Indus script and language have generally been considered very meagre. And, indeed, until approximately 1965 the attempts at the decipherment of the Indus Valley script and language must all be characterized as totally invalid, inspite of such tremendously honest work as that of G. R. Hunter (1939) or such highly imaginative approaches like those of Bedřich Hrozný (1943–48) or Father H. Heras (1953). There was the usual crop of amateurish nonsense or attempts typical of lack of chronological accuracy, linguistic naivity, untenable aprioristic assumptions and assertions—in short, the would-be decipherers largely ignored the criteria of rigorous approach and underestimated one or more, or all, of the difficulties mentioned above.

6.7. Tangible results have been achieved only since the introduction of computer techniques by Soviet and Finnish scholars in the early sixties. With the Soviet team's first announcement in 1965, important qualitative changes ushered in a new era of serious and partially successful treatment of the Harappan problem. Among all the pre- 1965 attempts only two will be briefly mentioned: the work of Hunter and the labours of Heras. In contrast, a more detailed critical information will be given on the following ventures: those of Knorozov and his team, the Finnish group, I. Mahadevan, W. Fairservis, Kinnier-Wilson, and S. R. Rao.

Sign lists and concordances to the Indus inscriptions were published quite early, in the 1930's: S. Langdon (1931), C. J. Gadd and S. Smith (1931), M. S. Vats (1940); but especially one must in this context mention with great admiration the excellent work performed without the aid of computer technology by G. R. Hunter in his book *The Script of Harappa and Mohenjo Daro and Its Connection with Other Scripts*, London, 1934. Hunter's was the most precise, most honest, and most rigorous work on Harappan script before the contemporary stage began in the early 60's. As for Heras, one should remember his attempt because it was de facto the first systematic and consistent attempt to decipher the script and read the language. Of course he has failed; but he reached the conclusion that the Harappan language was a kind of ancient Tamil, and many of his intuitions were adopted twenty years later by the Russian and Finnish teams. It is only fair to say that even the very recent attempts to decipher the script do not go very much beyond of what Heras had achieved intuitively. It is quite apparent that these contemporary attempts have drawn much inspiration from Heras, both as to the method of segmentation of signs, as well as to the interpretation of their function and meaning; the whole idea of homophones, of the rebus principle is, as a matter of fact, already contained in his work.

6.8. The computer was first used by the Russians under the inspiring leadership of Yurij V. Knorozov. What the computer enabled was, primarily, to compile concordances of texts for statistical and positional analyses of the signs. However, one must admit that the widely advertised possibilities and reliability of the computer-decipherment were largely exaggerated. As of today, no programs exist on the basis of which electronic computers could cope with the actual reading of the signs, let alone a translation of the texts. Hence, scholars proceed to work without the aid of computers, too (e.g. W. A. Fairservis). And, as will be shown, although the computers have achieved a lot, they have not substantially and essentially brought us nearer the actual interpretation and decipherment of the inscriptions.

We must distinguish between attempts at phonetic decipherment—i.e. attempts ultimately resulting in the 'reading' of the texts in their underlying actual language, and formal, structural-systemic analysis and description of the Indus texts based on positional statistics. These two steps represent two very distinct procedures, and this distinction one must always bear in mind while discussing what has and what has not been achieved. Scholars have progressed quite far with the second step—i.e. with the formal/structural analysis. In contrast, they were unable to move significantly ahead with the actual decipherment and reading of the inscriptions.

In this type of script, the signs can be read either semantically (ideographically) or phonetically. In the former case, a given pictogram stands for the object it depicts, and it can be understood without reference to the underlying language. All decipherments which will be discussed have this in common while the ideographic reading is frequently (not always, though) fairly acceptable, and often identical in the various attempts, the phonetic readings differ widely and are, from the point of view of linguistics, mostly unacceptable because they cannot be verified so far by any objective, independent, rigorous procedure. It has become apparent that the assignment of concrete linguistic values or meanings, and of grammatical functions even to the most frequently and regularly occurring signs is virtually impossible.

It is not necessary to use a computer to see that certain signs occur more frequently than others. Next question is: In what order do the signs occur? Do they fall into regular positions obedient to some convention, either of the Harappan seal writing, or some morphemic structure, or some fixed order in certain phrases? Clearly relative position offers us a clue as to sign behaviour (together with the statistical frequencies) and, in addition, some control is necessary if we are to properly analyze the role of the individual signs relative to one another. Hence the need for a *grid* system. Different decipherers have coped with these problems in their own ways: the Soviets breaking the inscriptions into what they call "blocks" and coming up finally with what they consider root morphemes and a few suffixes. In very similar ways, the Finns. A grid consisting of fourteen columns was constructed by Fairservis. Mahadevan came with his method of parallelisms. All of these scholars accepted the principle of *homophony* (the so-called rebus principle) as actively employed by the Harappan scribes. And yet, inspite of the fact that all of them, too, accepted as a basic axiom that the underlying language was some form of Dravidian, their results widely disagree.

6.9. The Soviet teams and groups headed by Y.V.Knorozov boast of

the distinction to have introduced the computer into the problem of the decipherment. They indeed were the first. According to Prof. Olderogge, they began working in the middle of 1964, and since then they have published an important series of papers in Russian and English entitled *Proto-Indica* (1965, 1968, 1970, 1973 and 1979) announcing their results of the computer-aided investigation. The computer programmes were prepared very carefully by M.A.Probst, and most of the analysis and interpretation was done by Knorozov, Volchok, Alekseev, Kondratov and Gurov. The Soviet and the Finnish attempts can be treated together since the methodology adopted by both teams is broadly identical: first, preparing careful computer programmes; next, to determine functional characteristics of each sign by statistical-positional analysis; third, to ascertain the probable phonetic value by the technique of homophony applied after linguistic reconstruction. Hence, both teams have also agreed broadly on the three basic conclusions though, as we shall see, in detail they disagree: a) the inscriptions generally read from right to left; b) the signs are mostly logographic and the rebus principle is widely employed; c) the underlying language is Dravidian.

However, the careful and often thought-provoking positional-statistical analysis of the texts, and the faultless programming notwithstanding, their further procedure is entirely intuitive-speculative, the conclusions possible but completely hypothetical, and, above all, absolutely unverifiable.

The Soviet and the Finnish scholars have overreacted to their own results. Their initial enthusiasm has taken them too far into vague and complex speculations, and, in addition, they had a tendency to believe that they were looking at something "mysterious", almost "mystical", rooted in the Harappan world-view which could well be ancestral to the intricacies of later Hindu civilization. This is particularly true of the work of Asko Parpola. I believe on the contrary with W. Fairservis that the Harappans were thoroughly pragmatic, unlikely to have constructed other than a functional world-view rooted in the control of a ranked society based on village agriculture which in turn was based on the availability of water resources. As Fairservis says, "village India written large". We shall not go into the details of the Soviet teams' decipherments.[2] Their work has of course its great merits, particularly in its pioneering nature, its primacy of employing the computer, its formal

[2] The Soviet methods and early results were subject to a very detailed criticism by A.R.K.Zide and myself in a monograph which we translated from Russian into English with a critical commentary, cf. Zide, Arlene R.K., and Kamil V.Zvelebil (eds.), *The Soviet Decipherment of the Indus Valley Script: Translation and Critique*, The Hague-Paris, 1976.

analysis of the texts and, last but not least, in the excellent mathematical preparation of the computer programming. However, they have not convincingly deciphered even one single short Harappan inscription, and they have not been able to offer a verifiable reading of any Harappan text.

6.10. Almost simultaneously with the Soviet teams' activities, a Finnish group based at Copenhagen and Helsinki used the computer programmes prepared by Seppo Koskenniemi. Asko and Simo Parpola were the chief investigators. More recently, Kimo Koskenniemi has developed computer programmes to generate a corpus of texts, analysis of duplicate texts, and a revised concordance based on single-sign occurrences (1982). The main role of the Soviet teams consisted in the pioneering use of computers; then they based their interpretations mainly on the insights of the Spanish Jesuit Father Heras, and thus bolstered up substantially the Dravidian hypothesis. The greatest merit of the labours of the Finnish scholars represents the preparation of the corpus (1979) and two concordances (1973, 1982), and the daring, often provocative but always stimulating interpretations of Asko Parpola. While working out the list of signs, all teams, particularly the Finns, encountered two main problems: How to distinguish between different graphemes? And in what sequences should the graphemes be ordered? It is very true what the Finns say in their 1979 (p.13) publication: A false identification of two distinct graphemes is equally detrimental as a false separation of two allographs. The problem would not arise if all the signs were drastically individual. But in the Indus script many signs have been inscribed in "more or less" similar but "not quite identical" form. What, however, does this "more or less" similar mean? What is the value of "quite" in "not quite identical"? It must be admitted that the Finnish scholars do very carefully try to set up criteria for identifying two or more graphic forms as variants of a single grapheme—and yet, none of these can be taken as really conclusive. In the course of this process they offer some sharp but deserved criticism of Mahadevan's sign list. Thus, e.g., it is really almost incredible that Mahadevan lists as separate signs (his) nos.110 and 112, the symbols for "seven", appearing once as  and next time as  . On the other hand, the Finns (and Fairservis) take  and  as identical. These signs may be identical, but it is by no means certain that they are. The difference could of course be explained either as a difference in 'regional' style or in gradual development, but it could also indicate some minor variation of a basically identical emic unit (i.e. phonetic or even semantic variation); and, one should not hesitate to say, and could even be two completely different signs,

e.g. one indicating ('meaning') "wheat", another "barley".

In their most recent publications (especially the 1982 concordance), the Finns' view is that the Indus script is "a relatively crude morphemographic writing system" in which the graphemes usually stand for the lexical morphemes. This view is almost identical with the present position of Mahadevan.

One contradiction in the Finnish approach should be mentioned. On the one hand, the principle of economy is repeatedly stressed by Parpola as very important in the Harappan script. How to reconcile this principle with the many graphic variants—or rather what is considered to be only 'insignificant' graphic variants of one sign, e.g.  ? If a script is so strictly economical, it should not display such wealth of merely graphic variations; in other words, every variant should be meaningful.

As for the function of the seals, the Finns, too, distinguish roughly between the owners' seals with owners' proper names ending in  , and dedicative seals, less frequent, ending in  . This gave them one of their basic clues: is a genitive-possessive suffix, is a dative marker. I shall return to these two signs later.

A. R. K. Zide and myself, and later I alone, have repeatedly criticized in detail the Finnish initial attempts and, in particular, their enormous enthusiasm due to which they definitely overestimated the value of their own decipherment, taking for absolutely granted the Dravidian hypothesis, and building upon it an entire system of a Proto-Dravidian Harappan astral religion and similar constructs. Easy conclusions were made and discarded on scanty material and on unverifiable data, and etymologies played with rather ruthlessly. One must of course admit that if Asko Parpola would not have let his imagination soar high from time to time, it would also not bring him the positive results it definitely did. And, we should stress, these are secondary phenomena. The greatest merit of the Finnish work is the excellent concordances they prepared—and this work will always remain one of the corner-stones of the entire process of decipherment.[4]

[3] Thus e.g. in June 1974, Parpola wrote that "statues of naked dancing girls have been found in the Indus cities, and they point to the existence of the devadasi institution. These sacred prostitutes probably formed groups according to the number of the various asterisms." Almost every word of that pronouncement is a wild misstatement.

[4] Zide, A. R. K., and K. Zvelebil, *Review of works on Indus Valley Script* (by Knorozov ed. and Parpola et al.), *Language* 46 (1970) 4.952–68; Zide, A. R. K., and K. Zvelebil, *Review of Parpola et al.*, Decipherment . . . and Progress . . . , *Indo-Iranian Journal* XII (1970) 2.126–34; Zvelebil, Kamil, 'The so-called "Dravidian" of the Indus Inscriptions', *Proceedings of the 3rd International Conference-Seminar of Tamil Studies*, Pondicherry, 1973, 32–41.

6.11. J.V.Kinnier-Wilson offered in 1974 the beginning of a decipherment which he called "a new approach to the problems of the Indus script". He began from a relatively safe basis: the numerals. His conclusions were tentative, cautious and modest. He operated mostly within one consistent frame work—that of economics (weights, measures, etc.). He constantly supported his identifications with Sumerian parallels. He was in favour of regarding the language of at least some strata of the Indus people as a type of Sumerian since he suggested that the two scripts, Indus and Sumerian, branched out from a single stem at some early period and that original features are preserved in both. But Dravidian, too, would be a likely candidate. The function of the Indus seals he saw almost exclusively as economic, and thus he searched not only for units of weight etc., but also, e.g., for a grain-sign which he found in  . On the whole, Kinnier-Wilson's attempt should be regarded with sympathy for its subdued tone, and its common-sense approach. Nevertheless, it cannot be accepted as a real wide opening of a road to actual decipherment either.

6.12. An American archaeologist, Walter A. Fairservis Jr., was inspired to attempt a decipherment by the excavations which he had been performing frequently on the Harappan site of Allahdino, about 25 miles northeast of Karachi. In 1976 he began pondering the meaning of the script in the context of rich archaeological evidence, and first proposed a model of decipherment proceeding on the assumption that the normal direction of the script was from left to right (1976, 1977). This came as a surprise in view of the near-unanimous and well-established concensus of a long line of scholars who all agreed that the direction was from right to left. Fairservis (1977) has advanced several arguments in support of his view but they were successfully refuted by Mahadevan in an excellent paper published in *Purātattva*, No.9, 1980. The wrong choice of direction has rendered the initial attempts of Fairservis invalid; in fact, we may agree with Mahadevan when he says that "no attempted decipherment... based on a left to right direction can be taken seriously". On the other hand, it must be admitted that no other scholar has dedicated so much careful attention to the techniques of Harappan writing as Fairservis had done. Also, the advantage of his approach is undoubteldy his outstanding archaeological erudition and his intimate knowledge of Harappan material culture. As was to be expected, his point of departure was to establish certainties demonstrable in archaeological evidence (like e.g. the dependence of the civilization on cultivation of wheat and barley), and to proceed from those material certainties to their relationships to a pertinent body of sign and symbol—without doubt a healthy, common-

sense procedure. From the beginning, his conclusions were that the seal inscriptions are basically iconographic and are the fruition of an ancient system of rank and title. After rather careful considerations, repeatedly commented upon critically by many colleagues, Fairservis came around 1980 with the hypothesis that the Harappan language is a form of Dravidian which in its basic root morphemes is closest to Tamil-Kannaḍa, with a logographic script containing about 400 graphemes that should be read generally from right to left. In March 1982, he modestly admitted that "what follows is meant to be a model only, it is not to be taken as a claim that the Harappan script is deciphered." He again repeated his basic—and to my mind sound—axiom that no decipherment of the script can occur without reference to existing knowledge, which is very considerable, of the Harappan civilization. Why did he point to early Tamil-Kannaḍa as the most likely candidate to have retained the vocabulary of Harappan civilization? Because, he says, the North Dravidian group was essentially older than the Harappan and was concerned culturally with other problems than city life and the expansion of village farming. Perhaps this is not a bad idea worth testing. Also, Fairservis pleads for a reconstruction by the Dravidianists of the obvious artifactual vocabulary familiar to the archaeologist which would include words for characteristically Harappan objects (he offers such word-list)—another idea worth attention. In support of the Dravidian hypothesis, he unfolds very impressive archaeological-anthropological evidence into which we simply cannot go here. He then bases the actual attempt at decipherment on the following premises: 1) The seals are concerned with the identification of the bearer as an individual—in other words: search for proper names, ranks, titles, occupation, pace of residence. 2) The script is logo-syllabic, like modern Sino-Japanese. 3) The homophonic or rebus principle was in use. 4) Dravidian—presumably early Kannaḍa-Tamil—is the most likely candidate since it has a word for grain which also means 'moon/month' (**nel-a*), and since its original system of numerals was to the base 'eight', as in the Harappan script.

Obviously the greatest drawback of Fairservis is his incompetence as Dravidian linguist. He is undoubtedly an outstanding archaeologist, has ingenuity, patience, perseverance, honesty and originality of ideas. But his linguistic knowledge of Dravidian is replete with striking errors, and his linguistic thinking is naive. This can be manifestly seen in his contribution to the *Scientific American* (March 1983). His so-called readings published there make no sense from a Dravidianist's point of view. In August 1976, the optimism of Fairservis reached its peak; he was convinced that he had found a definite clue to the actual decipherment. Since then, he has come a long way. He has stressed lately the fact that

the Harappan civilization was a *literate* civilization but that those who have the philological and linguistic skills necessary to tackle the problems of script and language do not have the command of archaeological knowledge. Vice versa, the archaeologists have fatal lack of philological and linguistic skills. The Harappan script is the product of the Harappan civilization, and hence it must reflect its function as a written media for the Harappans whoever they may have been. It follows that the best test of the validity of a decipherment lies in just how much the results reflect of what is archaeologically and anthropologically known, verifiable and validated. This takes us finally to the possibility of some kind of solution which must begin with broad and intensive cooperation among archaeologists, anthropologists, cryptographers, philologues and linguists.

6.13. In India, computer analysis of the Indus script is being carried out from 1971 on. After some early work at Madras, Iravatham Mahadevan secured the aid of the best Indian computer experts in Bombay, and in in 1977 appeared a magnificently produced book on the Indus script—Mahadevan's concordance based on the analysis of 11.303 legible sign-occurrences (which made the sample the largest ever analyzed since Hunter's 1934 figure was ca.3750, the Soviet team's ca.6300, and the Finnish team's 9147). The list of signs contains 417 distinct signs. The Mahadevan-Finnish concordances taken together may undoubtedly serve excellently as complementary.

In his decipherment, Mahadevan started from the basic groundwork provided by the Soviet and Finnish teams but applied an entirely different technique—the technique of parallelisms developed for Hittite by Emil Forrer. The observation of parallel phenomena is its basis. Encouraged by his overall correct interpretation of the Tamil-Brāhmī inscriptions, Mahadevan made the method of parallelisms the basic tool of his attempt, taking his comparisons mainly, but not only, from the Tamil-Brāhmī cave inscriptions. After he had published his own concordance, he set up some basic features of Harappan grammar which he described as "intelligible to the eye if not to the ear". This means that it is basically a formal structural analysis and description independent of any identification with a concrete language. Lately, in his method of bilingual parallels, he introduced two important changes: a) Instead of looking for homophones (rebus principle) he would search for ideographic parallels from later bilingual Indian traditions (available both in Indo-Aryan and Dravidian languages); b) The frequent terminal signs are no more considered formative or inflectional suffixes but they are rather indicative of the class of persons to whose names they were suffixed—i.e. they are ideograms. He would now identify the sign  with spear or weapon and hence with

the meaning "soldier". The yoke-carrier sign refers to an official "bearing the yoke of responsibility". Hence, the combination of spear plus yoke carrier is 'read' by Mahadevan as "official with military duties". This is attractive and "phantasievoll", but of course completely arbitrary, and hence rather uncertain—a kind of game. However, Mahadevan has disciplined himself to the honest admittance that the script has not been deciphered, and that even the language underlying the script has not been recognized. Therefore, he performs his formal structural analysis, rather than attempting concrete readings, and in that field, as his latest papers demonstrate, he has achieved considerable progress.

6.14. We shall now try to show what indeed has been achieved, what has not been achieved, and what could and should be done to achieve more—although there are grave doubts as to the ultimate success of any complete and verifiable decipherment of the Harappan script and language. When critically judging what has and what has not been achieved we must make a distinction between *evidence* and *proof*. None of the proposed models of actual decipherment has so far won general acceptance because none of the potential decipherers can prove their conclusions to be correct. In contrast, honest, albeit partial, evidence, although it cannot prove anything, can suggest greater or lesser possibilities and probabilities.

What, then, has been achieved?

Apart from the publication of the concordances, which is in itself a great achievement, the two relatively secure results obtained so far are:

a) the determination of the direction of writing;

b) the segmentation of texts into probable "words" and "phrases" through simple word-division techniques based on formal positional analysis and statistical counts.

a) The Indus script runs normally from right to left, and this is probably the best established fact about the script. For detailed arguments, one should consult Marshall (1931), Gadd and Smith (1931), G. R. Hunter (1934), A. S. C. Ross (1939), G. V. Alekseev (1965), B. B. Lal (1966, 1968) and I. Mahadevan (1970, 1980).

b) The Indus script consists almost certainly mainly of logograms. Almost all investigators have proposed that the script is most probably a logosyllabic system comprising word-signs and phonetic syllables, typologically similar to the modern Sino-Japanese script. However, no one has as yet been able to establish by objective and independent analytical procedures the existence of purely phonetic syllabic signs in the Indus script. Asko Parpola has recently proposed that the script is morphemographic, using signs with inherent semantic and phonetic values, applicable in either function. Mahadevan wishes to work with the hypo-

thesis that the script consists essentially of word-signs and not phonetic units with alphabetic/syllabic values. Some of the word-signs stand for lexemes as free forms, but some signs may indeed stand for grammatical markers.

c) If so, then we may reach a third conclusion: the word-signs of the Indus script are formed as 1) ideograms (i.e. picture-signs standing for concrete objects and concepts suggested by such objects), 2) phonograms (derived by the rebus principle from homonyms of the words represented pictorially), 3) conventional signs which are not pictures but arbitrary symbols or marks (e.g. strokes other than the numerals). Let me hasten to add that a) phonograms formed by the rebus principle can be recognized only if the underlying language is known, b) it is impossible to ascertain the meanings or phonetic values of the conventional signs directly in the absence of bilingual records.

This is, roughly speaking, all that has been truly achieved. Everything that goes beyond that is sheer speculation. In other words, it is significant that what has been achieved are mostly negative results.

1) The Indus script is certainly not alphabetic or quasi-alphabetic, judging from the number of signs and their functional/distributional characteristics. The precise nature of the script, however, has not yet been fully established.

2) The Indus script is not closely related to any of the contemporaneous pictographic scripts of the 3rd—2nd millenia B.C., although traces of diffusion and some similarities can be found, in particular with proto-Elamite.

3) The Indus script is not related to any later Indian script—either Brāhmī or Kharoṣṭhī.

4) Not one of the suggested grids has been proved powerful enough to "do the job" of decipherment.

5) The Harappan language is most probably not related to the Indo-European family as there is no evidence for prefixing or inflexional endings in the Indus script. It is almost ruled out that it would be an archaic form of Sanskrit (as proposed by S. R. Rao).

6) The Harappan language is most probably not related to any West Asian language since they place the attribute after the substantive-head of the attributive phrase. However, there may be some distant, as yet very vaguely understood, connection with Elamite.

7) The most common supposition that the several most frequent terminal signs of the Indus script (. . .) represent grammatical suffixes

like case endings or derivational morphemes has apparently not been confirmed by the concordances.

8) A major negative conclusion which must be unfortunately stressed most vigorously is that none of the published claims of decipherment of the Indus script (and language) is valid.

We may legitimately ask: Can the Indus script be at all deciphered? Are all further attempts bound to be futile and a waste of time and resources?

One is very much tempted to answer in the positive—unless, of course, a bilingual inscription is discovered, or unless a large text containing definite and verifiable clues is brought to light; if not, one must unfortunately admit, all further attempts may prove hopeless. And yet, to give up is impossible. No code, no cipher can ultimately resist decipherment. So far, none has.

What, then, should be the strategy employed? What could and should be done?

Because the chances of finding a bilingual or a large text are rather remote, scholars already engaged in the formal structural analysis should go ahead with their analytical work, refining it further along the lines indicated by Mahadevan in his paper of 1983. I regard the approach of Mahadevan via the structural-analytic procedures—based, naturally, on the achievements already gained by the application of computer analysis by the Russians and the Finns—as by far the most promising, and its possibilities not yet at all exhausted.

Second: the structural-analytical procedures should be accompanied by the approach as indicated by Fairservis, i.e. to attack the problem via the evidence of habitational archaeology within the frame work of our rich knowledge of the material culture of the Harappans.

Third: Although it is a priori possible that the Harappan language belonged to an unknown family which had disappeared without leaving any trace, the most probable candidate is and remains some form of Dravidian. Hence, Dravidianists should cooperate positively and sympathetically but with extreme caution and merciless rigour with the would-be decipherers, and also try to reconstruct possible Dravidian word-lists of items typical for Harappan civilization provided by archaeologists.

Four: The search for a bilingual text should go on with utmost intensity irrespective of our meagre expectations, and that not only in the whole vast area of the Indus civilization but also in other adjacent regions like Mesopotamia and Iran. Particular attention as far as the seal texts are concerned should also be paid to Sumerian parallels because their cultural context is largely similar to that of the Indus seals, and because we

know for certain about direct (commercial? diplomatic?) contacts between Harappans and Sumerians. Another area to be exploited are the early proto-Elamite levels in Iran: in that area, perhaps, we may hope for a discovery of longer texts or even bilinguals.

Five: Attempts at phonetic reading of the Indus texts should not be undertaken prematurely just to satisfy the ambition of the decipherers. All linguistic speculation, even when based on structural-formal analysis, should be taken with a very large pinch of salt.

While all this goes on we should never forget the words of J. Chadwick who wrote: "To preserve an open mind is incredibly difficult, because we are either mesmerized into swallowing camels, or so prejudiced we cannot manage the odd gnat."

7.1. Dravidian and Uralaltaic

7.1.1. It is a well-known principle of comparative linguistics that a list of identical or similar words alone, no matter how long, does not necessarily prove that two languages are cognate. If, on the other hand, we may bring in the evidence of structural similarities, or, to put it more precisely, if we find a reasonable number of common morphemes identical or similar in phonetic shape and grammatical function, it is an entirely different matter.

7.1.2. As soon as Dravidian became known to Western scholarship, and in fact even before it was recognized as an independent linguistic family, the question arose of its "origin" and its possible genetic kinship with other languagues/language families. Among all the candidates for such genetic relationship with Dravidian, the most plausible one was found to be Uralic-Altaic, precisely because, apart from undeniably striking lexical similarities, both in shape and meaning—scholars, particularly lately, were able to point out to structural similarities, both in form and function.

7.1.3. R. Caldwell (1856) was probably the first to discuss in detail what he called "near relationship, or at least a remarkable resemblance" of "Ugro-Finnish dialects" to Dravidian.[1] The over-all term for what is

[1] As early as at the beginning of the 19th century, Rasmus K. Rask (1787–1832) considered Dravidian as belonging to the "Scythian" languages ("Scythian" = non-Semitic and non-Indo-European peoples and languages of Eastern Europe and Western Asia; sometimes also termed "Hyperborean"). Among general typological discussions of Dravidian one should mention—besides Poucha and Masica who have been quoted–T. Kluge (1941–42) who compared numerals in Dravidian, Hamitic, Semitic and Caucasian languages. Specifically, Dravidian was brought into connection with (alphabetically) Austric (L. V. Ramaswami Aiyar, 1929–30, C. R. Sankaran, 1953), Basque and a 'Mediterranean substratum' (J. Vinson, 1879, N. Lahovary, 1948 *et seq.*), Egypto-Minoan and Indo-Sumerian (H. S. David, 1955 and 1956), Etruscan (Sten Konow in *JRAS*, 1904), Hamitic, Hittite (C. R. Sankaran, 1939 and 1940), Hurrian (T. B. Nayar, 1970, Indo-European (R. Swaminatha Aiyer, 1924, C. Narayana Rao, 1929 and 1930, S. Gnanaprakasar, 1938 and 1953), Korean (H. B. Hulbert, 1906), Libyan and other African languages (J. Mayer, 1924, E. H. Tuttle, 1932, L. Homburger, 1950 *et seq.*, J. T. Cornelius, 1955), Maori (A. M. Fergusson, 1881), Mitanni (C. P. Brown, 1930), Semitic (K. O. Shamsuddin, 1972), Sumerian (R. S. Vaidyanatha Aiyar, 1929, Vives J. Quintana, 1944, H. S. David, 1954, 1955, A. Sathasivam, 1965 *et seq.*).

today (roughly) designated as Uralaltaic used by Caldwell was "Scythian". Apart from numerous grammatical parallels scattered throughout Caldwell's magnum opus, the lexical similarities are listed in Part VII, 'Glossarial Affinities'. A résumé of Cadwell's views was compiled by Edward Webb (1862).

7.1.4. After Caldwell, C. Schoebel made his very intelligent observations on the subject in 1873 (at the First International Orientalists' Congress in Paris). He was followed only after half a century by F. O. Schrader who in his paper *Dravidish and Uralisch* inaugurated a new phase of investigation into the problem: Schrader's was the first rigorous and detailed inquiry into the question on a large scale. In 1935, Schrader published a second article on the same topic.

After Schrader came W. von Hevesy (1932), and then the all-important paper by T. Burrow (1943/46) on "the body in Dravidian and Uralian"; it represents a "vigorous, fundamental support in the etymological, and not only in the etymological domain" (Menges) for the theory of the genetic relationship between Uralic and Dravidian.

Subsequently, the theory attracted a number of serious scholars, both Dravidianists and Uralaltaists: Pierre Meile (1942)[2], Karl Bouda (1953, 1956), R. Austerlitz (1968), Pentti Aalto (1968), but especially Karl H. Menges (1964, 1977, etc.), S. A. Tyler (1968), M. Andronov and J. Vacek.

7.1.5. Bouda went rather far: he claimed to have shown that the essential basis of Dravidian ("die wesentliche Grundlage des Dravidischen") is to be considered as Altaic (1953:172). According to Bouda, "the genuine nature of Dravidian" is Altaic and the non-Altaic features of Dravidian are probably due to later substrata or adstrata met with and absorbed by Dravidian in India.[3] It is a tall claim which had been made by Bouda 35 years ago; and, let us add, rather improbable. What can we say now, after the publication of a few detailed and copious, basic studies in either field, Uralic-Altaic and Dravidian?

As Menges (1977) has put it, it remains to be seen whether Bouda's statement of the basically Altaic nature of Dravidian can be upheld, and if so, whether Dravidian is to be regarded as a "member" of the Altaic family, or whether this is to be modified in the sense that Dravidian

[2] Meile, however, proposed that the similarities are due to typological convergence, possibly as a result of language-contact, and in no way to genetic relationship.

[3] This is how Bouda's claim is reformulated in Menges 1977:141. Cf. also his review of Bouda in *Oriens* 9 (1953) 124–28.

would be assigned a rather close (genetic?) relationship with Altaic but not be included within the Altaic family. The problem gains urgency in the light of recent attempts (cf. 7.3. of this book) to connect Dravidian and Japanese. Since the publication of Roy Andrew Miller's *Japanese and the Other Altaic Languages* (1971), it looks as if Japanese can safely be classified as Altaic, representing (together with Rjú-Kjú and Korean) a very ancient eastern off-branch of Altaic; hence, "the problem of the relationship of Dravidian with Altaic (and Uralic) gains momentum" (Menges).

7.1.6. The detailed review of the whole problem by K. H. Menges (1964, 1977), as well as some new facts offered mainly by Andronov (1961, 1971) and Vacek (from 1978 onwards), combined with the previous research performed chiefly by Schrader and Burrow, have resulted in the following facts:

a. It seems that lexical agreements—i.e. etyma common to both families—have been established more or less safely.

b. The basic phonological features common to both families are partly identical developments of various sounds and sound-categories, but, more importantly, "tendencies in the developments of sounds which are similar or even identical in both families" (Menges).

c. By far the most important agreements between Dravidian and Uralaltaic are found in the sphere of morphology. Both families are 'agglutinative' without having prefixes, the order of the suffixes in both nouns and verbs being the same; there are in both families essentially two basic morphosyntactic categories, nouns (with pronouns and numerals), and verbs; the verb is of an overall nominal structure and character; the finite verb (functioning as predicate in the sentence) consists of a nominal form to which the personal pronouns or suffixes denoting person are attached; in the verb, 2.p.sg. imperative is identical with the plain stem, and so on and so forth.[4]

A very important fact is the apparent material identity of various suffixes in identical function; Menges, Andronov and Vacek have quoted in their published papers quite a few. It would seem that in all essential features, the Dravidian verb fully agrees with the Uralaltaic verb.

d. The basic and commonly valid syntactical rules are in both families identical: the subject-object-predicate sequence is common to both; the rule of subordinate members or parts of the sentence always preceding

[4] For a detailed description cf. Menges, 1977: 151–71.

that member or part upon which they depend is common to both (the *rectum* precedes the *regens*, the *determinatum* follows the *determinans*); adjectives and adverbs are in both families mostly not characterized morphologically, hence recognizable only in their syntactic function. The Dravidian verb, like the "outer Altaic" verb (i.e. Korean, Japanese, Rjú-Kjú), is poor in its morphology; and so on and so forth.

Lately, Vacek (between 1978–1986; see bibliography) tried to prove that "there definitely was a relationship between the ancestors of Modern Dravidian and Mongolian languages" (1978:149); he based this conclusion on similarities which he found "in the deeper morphological shift of derivation".

7.1.7. I am convinced that, indeed, etymological connections, typological similarities in the morphosyntactic sphere, and even some possible material identities of the morphological apparatus between Dravidian and Uralic/Altaic languages are too numerous and too striking to be purely accidental. It is my opinion that these similarities (sometimes even identities) in form, in shape, in function, in structure, are due to a relationship—a definite and hopefully positively definable relationship—between pre-Dravidian and pre-Uralaltaic. But what was that relationship? I am equally convinced that at this moment we cannot—yet—say. Three possible answers offer themselves.

a. The facts of basic agreements, particularly in the domains of morphology and syntax, as well as in lexicon, and, to a lesser degree, in some phonological features, cannot be reasonably explained as being due to contact and borrowing but only as the result of deep, prehistoric genetic relationship. The two language families[5] are part of a large complex of genetically related languages extending from Eastern Europe through Central and Southern Asia to the Far East: within this cluster, Uralic-Altaic and Dravidian constitute the Western group, Korean and Japanese the Eastern group. In this connection, it is interesting to compare the results of the typological comparisons arrived at by Colin P. Masica,[6] showing that a block of typologically related linguistic features exists in the Eurasian continent which comprises Uralic and Altaic in the West (to the exclusion of Indo-European and Semitic), Dravidian in the South,

[5] Or, if we wish to keep separate Altaic and Uralic (as do some authors, e.g. Menges), we would have to say, "these three language families".

[6] Cf. also K. Zvelebil, *Comparative Dravidian Phonology*, The Hague-Paris, 1970, pp. 22–23, and especially ftn. 34 on "Indo-Dravidian forms of the equatorial race" found in Khoresm, and on the Kelteminar culture of Khoresm which, according to Tolstov, Trofimova, Marushchenko and others, shows "Dravidic" features (?).

and Korean and Japanese in the East (but not Chinese, Vietnamese or Burmese).

A few scholars, notably Bouda, Burrow and Menges, explain the Uralaltaic and Dravidian affinities by definite genetic relationship, and they were or are keen to prove beyond doubt that there must have been a common ancestor to both, however remote in prehistory.

b. The prudent ones, e.g. Vacek, opt rather for another possibility: Central Asia was an area of prolonged ancient contacts; the typological and even material similarities may be explained by widely spread diffusion and borrowing due to bi- or multilingualism, ethnical mixture, conquest-movements, or accidental events. At the present state of our knowledge, I would rather tend to agree with this explanation, vague and unsatisfactory though it may be; however, I would never rule out a very deep genetic relationship, particularly if more affinities are discovered in the deep layers of derivational and inflexional suffixes between Uralic-Altaic on the one hand, and Old Tamil plus Kurux-Malto and Brahui on the other. However, it is to be feared that the common ancestry may be so remote in prehistory that it will be virtually impossible to prove.

c. A third possibility was suggested by Andronov (1968). I quote: "Remote Dravido-Uralian ties which are not relationship ties in their usual sense, should be regarded as a vestige of their prehistoric connection, a vestige of that epoch when there were neither Dravidian, nor Finno-Ugrian, nor Samoyed languages, but there were some other, now unknown language families, following whose evolution, diffusion and redistribution there appeared language families of our time". These "newly forming language families" used as "building material for their structure the linguistic substance of preceding unrelated languages or language groups." My comment on this would be: interesting, perhaps even possible, but very vague and utterly hypothetical.

Nevertheless, the Uralaltaic-Dravidian hypothesis remains the most promising, and the most convincing hypothesis of all: also, the most ambitious, since its proponents have posited serious problems to be solved, often with accuracy, rigour, honesty and in great detail.[6]

7.2. Dravidian and Elamite

In 1972–73, a young American scholar, David W. McAlpin, came out into the open with the first results of his research into a possible genetic relationship between Dravidian and Elamite. He first used lexical data from Hallock's 1969 glossary of the Persepolis Fortification Tablets for Elamite, and for Dravidian the Burrow-Emeneau *Dravidian Etymological Dictionary* and its *Supplement* (1961 *et seq.*). On about fifty cognate pairs, McAlpin tried to point out striking correspondences in lexical data, some phonological features, and even a few similar patterns in the noun case-endings and derivational morphemes. This paper, entitled 'Toward Proto-Elamo-Dravidian', was made available in *Dravlingpex* Vol. 5, No. 5, and published in *Language* 50, 1 (1974) 89–101. Subsequently, McAlpin supported the lexical evidence by correspondences from verbal morphologies, in a research report dated April 23, 1973, in which he was bold enough to speak of close genetic relationship between Dravidian and Elamite. I supported, with caution, McAlpin's hypothesis as early as 1974 in a biref report published in *JAOS*[1] where I called his attempt a 'real break-through' (however, still with a question mark). Other scholars reacted (Emeneau, Jacobsen, Kuiper, Paper, Rainer, Stopa, Vallat, Wescott), and their reactions were printed in the 1975 issue of *Current Anthropology* (Vol. 16, No. 1). Most of the comments were very reserved, apart from Paper who, like me, was rather positive. McAlpin went on with his work: 'Elamite and Dravidian: Further Evidence of Relationship' was published as introduction to the comments of the scholars quoted above. In the meantime, E. P. Marlow, in a unpublished dissertation (Austin, Texas), has apparently gathered considerable data showing that Uralic was cognate with Dravidian (1974). According to McAlpin, "cursory checks with her data have indicated the expected Uralic—Elamite connection". I quote this work and McAlpin's reaction to its results since, as will be shown, it has a bearing on a possible (rather vague and totally tentative) hypothesis which I intend to propose at the end of this chapter.

[1] 'Dravidian and Elamite—A Real Breakthrough?', *JAOS* 93 (1974)384–5.

McAlpin's further work resulted in a more definitive statement elaborated in the thought-provoking, well-documented and lucidly presented monograph published by the American Philosophical Society in Philadelphia in 1981 under the title *Proto-Elamo-Dravidian: The Evidence and its Implications.*

Elamite is an ancient language from around the Persian Gulf which—like Dravidian and Japanese—has been an isolate in historical and diachronic-comparative studies. McAlpin was certainly not the first to suspect a possible Elamite-Dravidian kinship. Long before him, Edwin Norris (1853, 1855), Caldwell (1856), and later H. Pedersen, V. Thomsen, Georg Hüsing, A. Trombetti and F. Bork discussed the idea of possible Elamite-Dravidian ties. Holgar Pedersen (1924, 1931, 1962)[2] put forth casual observations on the possibility; V. Thomsen is reported to have discussed the idea in or round 1910. G. Hüsing and A. Trombetti published articles dealing with the possibility in 1901, 1910 and 1913 respectively. F. Bork (1925) made a detailed case for the relationship between Elamite and Dravidian. The best recent description was given by I. M. Diakonov in the chapter "Elamskij jazyk" in his *Jazyki drevnej perednej Azii* (Moskva, 1967) 85–112.

On p. 13 of his work, McAlpin states his intention "to demonstrate that the Dravidian language family of South Asia is related to Elamite, a major language of ancient West Asia." This is even more strongly, indeed quite categorically repeated on p. 128: "The primary purpose of this work has been to prove beyond any reasonable doubt that Elamite and the Dravidian language family are truly cognate". Observe that McAlpin's intention was "to prove" and "beyond doubt", that the two are "truly cognate". Hence, in our critique, we should seek not only evidence of genetic relationship between the two but McAlpin's proof beyond doubt. I must comment on this point, at the very beginning of my discussion that, in spite of my sympathy with McAlpin's most attractive hypothesis, I do not see any real proof, albeit I may see a lot of evidence.

The basic clue for McAlpin's comparison of Dravidian with Elamite is the existence, formation and functions of appellatives. McAlpin (p.15) says that a possible subtitle of his work could be "a diachronic study of appellatives", a formation which he sees as crucial to his approach, and which he broadly but correctly defines as nouns, pronouns, or any other parts of speech, except finite verbs, with a personal ending attached. Appellatives are discussed in detail with the grammars of the respective

[2] *Sprogvidenskaben i det Nittende Aarhundrede: Metoder og Resultater* (Copenhagen, 1924). Engl. transl. by J. W. Spargo, *The Discovery of Language: Linguistic Science in the Nineteenth Century* (Cambridge Mass., 1931; 1962).

languages, and as a system that can be "readily reconstructed" for Proto-Elamo-Dravidian on pp.117–121 of the above-metioned publication.

When comparing Dravidian with Elamite, McAlpin presents first phonological correspondences and developments, and then Proto-Elamo-Dravidian lexical etyma. As I see it, there are four factors or features of his approach which, although they do not invalidate his results, yet weaken their credibility to some extent.

The first factor results from the nature of the data: its 'asymmetry'. As against a large linguistic family with many languages in all imaginable state of development both horizontally and vertically, with a wealth of ancient texts and an enormous amount of data, some of them well-classified and fairly minutely discussed (Dravidian), he had at his disposal one ancient language in a few forms, relatively poorly documented, in a script which is not well suited to it, with comparatively meagre data (Elamite).

Second: Even Dravidian linguistics, in spite of its recent advancement and achievements, is only in its beginnings as far as the understanding of Proto-Dravidian and pre-Dravidian is concerned. Thus, what in fact can be compared, are two very hypothetical, dimly and feebly established entities, and we may legitimately ask whether time is ripe for such procedures (when compared with Indo-European and Semitic philology/linguistics).

When it comes to McAlpin's procedures as such, I believe to detect a kind of vicious circle in some of his argumentation (the third obstacle mentioned above). On the basis of the comparison of a few reconstructed Proto-Dravidian and Proto-Elamite items which are *presumably* cognate, he establishes a rule, say, e.g., that PED had a fricative *š*. He also establishes that "its reflexes in Dravidian are quite complex due to its being entirely lost". When he then presents the list of his lexical items and etyma, they of course behave in agreement with this rule which he had established. Thus he can compare as etymologically related, hence cognate, such item as Acham. Elam. *aš* herd(s), livestock and Tamil *āṉ*, *ā* female ox, etc., *āy* cowherd caste. . . , Kannaḍa *ā*, *āvu* cow, Telugu *āvu*, Kuṛux *ōy*, Malto *óyu* id. (DED[S]283), or MElam. *iriša-* large, to enlarge, AElam. *irša-* great with Tamil *iṟai* a great person, lord, king etc., Kannaḍa *eṟe* master etc., Old Telugu *eṟa* lord (DED 448). It may sound very plausible (although the semantics in the second case is somewhat tenuous, too). The ultimate reconstructions are Proto-Elamo-Dravidian **aš* cattle, and **iṯ(a)š* great, large. However, there is no explanation anywhere (at least I could not find it) of the fact that the Proto-Dravidian reconstruction **āy* cattle contains long vowel, and why; why should PDr **ā* (most certainly phonemic) in this monosyllabic root (V̄C) correspond to PE **a* (there was apparently no indication of vowel length

in Elamite except for a few words where the vowel was explicitly repeated)? As to *-š̲, it behaves in Dravidian according to McAlpin's rule—i.e., it disappears, with complex reflexes. But, the PDr word could also be reconstructed differently, as, e.g., *ā + -cu/*ā + -vu. I admit that this is somewhat far-fetched, but so is a number of McAlpin's reconstructions. I have on purpose chosen these two cases (*aš̲, *it̲(a)š̲) because they manifest both the weakness and the attractiveness of McAlpin's procedures. They could indeed reflect genuine linguistic kinship, for there is an inherent, inner consistency here (final -š̲ disappears in Dravidian, in both cases appears as *-y, cf. PDr *āy, *ir̲ay, etc.); however, certain things remain unexplained (e.g. Elam. *a: Dr. *ā), and the reconstructions themselves, in PE and PDr, are by no means certain. Let me add here, though, that McAlpin's obviously powerful intellect has dealt with the data in a very skillful manner and, if we are prepared to accept certain indeterminateness, and the fact that there appear to be too many exceptions to McAlpin's rules, and too many irregularities (the fourth obstacle), we may still go along with McAlpin a long way, even if we are not prepared to accept wholeheartedly his conclusions as proven.

The phonological correspondences between Elamite and Proto-Dravidian are, according to the author, "very regular indeed". His rules focus on the initial (C)VC since, beyond the first syllable, PDr reconstructions are vague and unreliable. For the three basic vowels *a, *i, *u the correspondences, says McAlpin, are "incredibly straightforward" (p.83). Why "incredibly"? If indeed there was a language which could be designated as Proto-Elamo-Dravidian, then the stability of the three basic vowels is not incredible but represents a very fundamental trait which was to be expected, given the phonological facts of the reconstructed Proto-Dravidian.

On the whole, the system of vowels found in Proto-Elamo-Dravidian is directly maintained in PDr and in most Dravidian languages (p.88). McAlpin has tentatively reconstructed a neutral final vowel *ə for PED. This explains elegantly the PDr *ə which almost certainly existed to prevent obstruents from final occurrence (it falls together with PDr *u as a rule, and is found regularly only in a few languages, Tamil, Koḍagu, some Kannaḍa dialects, as [ɯ], and in Malayalam as [ə]).

When it comes to consonants, it becomes obvious, too, that the phonology of PED is very similar to that of PDr (p.90): thus e.g. the PED liquids are "the Proto-Dravidian system intact" (p.92), and the reflexes of most PED obstruents are straightforward (p.90). Only the nasals are bothersome, and McAlpin's discussion illustrates well how confused is our picture of Dravidian nasals.

Subsequently, McAlpin offers his "Proto-Elamo-Dravidian lexical

etyma". I do not unfortunately share his enthusiastic characterization of the data as "massive" and as manifesting" high percentage of correspondences". I find the following formulation too optimistic: "The massiveness of the data and the high percentage of correspondences make the data as a whole very secure." Is 81 items a "massive" number? Also, we must not forget that the entries are concerned with lexical roots only, and particularly with the initial (C)VC. It is obvious that they are, in fact, not "massive" but very limited. On the other hand, one must admit that some of the correspondences in sound and meaning *are* very striking, and can hardly be accidental.

Among the 81 PED reconstructed lexical items and etyma, there are at least four types of correspondences.

The 'easiest' ones to believe in are of course those which are most straightforward in the sense that a strikingly close phonetic/semantic resemblance or even near-identity makes them fully acceptable as cognates and enables an easy reconstruction of the PED forms. Such are e.g. No.24 ME *kap-* to shut(up), hide, AE *kap* treasury: Tamil *kappu* to overspread (of clouds), *kavi* to cover, overshadow, Kannaḍa *kappu*, *kavi* to cover, etc., DED(S) 1024 PDr **kap-*, PED **kap* cover; No. 69 ME *pari-* to draw, pull, drag, be pulled: Tamil *paṟi* to pluck, pull out, Kannaḍa *paṟi*, Telugu *peṟuku*, *per(u)ku* etc., DED(S) 3317 PDr **paṟi-* to pull (out), pluck, PED **paṯi-* to pull, draw, drag; No. 67 ME *pari-* to go, AE *pari-* to go, to issue: Tamil *pari* to run (away), Kannaḍa *pari*, to run, go away, etc., DED 3268 PDr **pari-* to run (away), go away, PED **pari-* to go away. Here belongs, too, the basic 2nd pers.sing. pronoun PDr **nī* (Tamil etc. *nī*): OE *ni* you, ME *nu*, PED **ni* you (first suggested already by Caldwell in 1856; see below).

A special case of this first group which is, according to my opinion, rather acceptable, is that particular cluster of etyma which can be compared on the basis of close phonetic correspondence and a spectacular, specific meaning. A fascinating case is offered by McAlpin in No. 52: Tamil *taḷḷu* to push, force forward, Kannaḍa *taḷḷu* to push, thrust, Tuḷu *taḷḷuni*, *talluni* to push in, press through (DED 2259): ME *tallu-* to write, AE *talli-* to write: PDr **taḷ(1)*—to push, shove, reject, PED **taḷ*—to push in. Considering that Elamite was always written on clay or inscribed (while the Dravidian words for 'write' usually come from verbs meaning 'paint' or 'draw'), this is indeed a striking correspondence with highly interesting semantics. Not only that: the meaning 'to push in' → 'to write' is highly specific to cuneiform writing on clay (Elamite) whereas the meaning 'to paint/to draw' → 'to write' indicates rather writing on palm leaf or paper (India). According to McAlpin (p.134), we have thus "very good evidence" that the Elamite-Dravidian separation was pre-

literate. This type of reasoning is typical for McAlpin: it is very ingenious, very clever indeed; however, the degree of hypothesizing is enormous.

The second type of lexical correspondences, and in a way the most important one for arguing a linguistic kinship, are those on which can be manifested well the operations of regular sound changes, or which show consistently regular sound correspondence. Such are, according to my opinion, e.g., items 16–22 of McAlpin's list: they all show his rule 7b, i.e. PED **h-*:PDr Ø); in addition, 17 shows **-p-* › **-v-* and 21 **-š* › *-y*, cf. PED **han-* to like, love: ME *hani-* to like, love; want, wish: PSDr **an-/*aṇ-* love, etc. (cf. Tamil *aṉpu* love, *aṇi* love, etc., suggested first by Diakonov in 1967); PED **(h)api* to apply pressure: PDr **avi-* to be represented; to suppress, etc.; PED **hiṭ-* to herd (goats); goat: PDr **iṭ-* to herd (esp. goats, cf. the caste of *itaị-y-ar* goatherds, shepherds); PED **hit-* to distribute: PNDr **itt-* id.; PED **huḷ-* to exist, be (in a place): PDr **uḷ-* to exist, be, etc.; PED **heš-* to know how to: PDr **ey-* to know how to, understand; PED **hoṭ-* to break into pieces: PDr **oṭ-* to break off, etc.

The third type (rare) represents etyma which are very striking but where the connection is somewhat (or rather) suspect. Such is, I think, item 35: in Dravidian, this represents a universally attested adjective meaning "small" (cf. Tamil *cinna* . . . Brahui *cunak*, DED[S]2135, PDr **cinna*). As against this, we have a minimal attestation in Elamite, viz. AE *zinna* "qualifies boys, pps. 'infant'". Can indeed these two be connected?

Finally, there is (large) group of lexical etyma where the connection is tenuous, weak, or unconvincing (either because there are phonological problems, or because the nature of the semantic connection is improbable or unconvincing, or because they exhibit some universal tendencies and thus cannot be used as evidence). McAlpin has himself provided an Appendix (141–48) of such provisional and suspect (and rejected) etyma, and I would add to these further items from his list, viz. nos. 26, 37, 39, 42, 43, 49, 59, 70, 71, 72, 74, 77. However, the burden of the proof would be on me: I would have to show in each individual case that the phonetic/semantic resemblance is due to other reasons than genetic relationship, or that it is in fact no resemblance. There is no place in this work for such detailed discussion; it is therefore left to the reader of McAlpin's work and of my review of it[3] to judge individual cases for himself. There is one very interesting item in the Appendix II, namely the word for 'horse'. McAlpin argues that **kutiray* refers to the domesticated horse (*Equus caballus*) and is almost beyond doubt "an Elamite loanword into South Dravidian" (though how and when an Elamite loan entered South Dravi-

[3] See *JAOS* 105 (1985)2,364–72.

dian is left unexplained), while the old Tamil *ivuḷi* and Brahui *hullī* refers to the onagar (*Equus hemionus*) native to South Asia (Burrow published a paper on this problem in 1971).[4]

On the whole, however, we may I believe agree that McAlpin has exemplified rather consistently and systematically the Elamo-Dravidian phonological correspondences in the sets of lexical etyma, and thus has established the basic case for Elamite and Dravidian being cognate. The problem is the limiting factor of Elamite since there are fewer than 250 lexical roots of the (C)VC pattern "with both a well described phonology and a useable meaning" (pp.128–9). Of this limited base, according to McAlpin, about 40 per cent of Achaemenid Elamite and 50 per cent of Middle Elamite roots are cognate, which, indeed, is high above chance level.

McAlpin deals further with "derivational and morphological etyma". Of the five noun formatives occurring in Elamite, all appear to be cognate with the five noun formatives reconstructible for Proto-Dravidian; four are straightforward cognates in terms of phonetics, meaning and function (**-mai*, **-əN*, **-tə*, **-(a)nt)*, but one presents some problems (**-(a)š*: PDr **-ay/*-i*, which is hardly convincing).

In contrast, the pronominal plural PED **-m* › PE **-m*: PDr **-m* is fully acceptable: in addition, the fact that it is highly restricted in both Elamite and Dravidian, and "is found in precisely the same locations", makes the reconstruction very significant.

Among the 'cases' (which are in both languages "tightly bound postpositions with no immediately available lexical source"), most reconstructions are highly convincing: thus the accusative PED **-n* › PE **-n*: PDr **-Vn* (› *-an*), the adessive PED **-əkk ə*› PE **-ikkə*: PDr **-kkə*; the locative/oblique PED **-tə* › *PE **-tə(-te)*: PDr **-(t)tə*. Four genitives are mentioned: the most archaic PED **-a* › PE **-a*: PDr **-ă̆*; PED **-in* › PE **-inni*: PDr 'adnominal' **-in*; and the Achaem. Elam. *-na* which is, according to Grillot, a combination of the genitives *-inni* and *-a*.

Thus, all of the basic, "securely reconstructible" Proto-Dravidian case endings are cognate with Elamite, while none of the rest of the case endings (the "late" instrumental and sociative, and ablatives) are. Hence we may agree with McAlpin that, PED, Proto-Dravidian and Proto-Elamite "share a basic paradigm in which all of the fundamental postpositions are cognate" (p.112).

The personal pronouns present many difficulties, notwithstanding the

[4] Burrow, T., 'The primitive Dravidian word for the horse', *International Journal of Dravidian Linguistics* 1 (1972) 18–25.

fact that second person pronouns are almost certainly cognate; this was recognized as such already by Caldwell in 1856. I wish in particular to stress the morph *-*m* which in Dravidian is the regular pronominal plural, and in Elamite the second person plural. The most important feature of the pronominal system are, however, indeed the second persons. The sophisticated statements are as follows: 2.p.sg. PED **ni* › PE **ni*: PDr **nī(n)*: Brahui *nī*. 2.p.pl. PED **nim* › PE **num* (**nim*?): PDr **nīm*: Brahui *num*. The nature of the correspondences is obvious. The plural form "is precisely the expected counterpart of PED **ni* 'you'". The plural morph *-*m* "encourages the *i* to become *u*". Indeed as McAlpin says, the second person pronouns establish and exemplify the Proto-Elamo-Dravidian pattern for personal pronouns, and, I may add, they are one of the strongest indications that McAlpin's Elamo-Dravidian hypothesis is basically sound. If any one of these (the plural *-*m*, or the oblique in *-*n*, or the 2nd persons **ni*: **nim*) could be established individually, it would not be so significant; but when all three co-occur and shift together in Elamite and Proto-Dravidian, it becomes very significant. As McAlpin remarks (p.117), "one morpheme is chance, two is a trend, and three is a firm case for cognation", provided, of course, that this is supported by systematic correspondences in the vocabulary.

Among the small group of noun-appellative bases, the deictic-interrogatives (**ah*, **huh*, **i̯ah*) and the numeral 'one' (**ol* or **on*) are reconstructed for PED by McAlpin. From further discussion it is obvious that Elamite and Dravidian share systems in which appellatives play a major role, as stressed above. These appellative systems contrast with non-appellative morphologies. The appellative paradigm survived intact in Middle Elamite on the "nominal conjugation", whereas in Proto-Dravidian it survived as the verbal non-past (cf. the complete systems preserved almost intact in Old Tamil, Koṇḍa, and the female speech of Kuṛux). Thus it happened that Achaemenid-Elamite appellatives correspond item for item not with Dravidian appellatives but with Proto-Dravidian verb morphology. McAlpin explains this phenomenon by "morphological slippage", a shift "one step to the right": the forms in Dravidian verbs are not cognate with their *functional* equivalent in Elamite, but with the morpheme one functional slot further. "The morphology has slipped" (p.124). This seems to be part of a general pattern since it concerns verb stem augments, appellative medials, tense markers, appellative endings, and verb endings. The Dravidian appellatives are not cognate with Elamite but seem to be an innovation. The Dravidian system of verbs, which is cognate with the Elamite appellative system, was "largely buried by its more productive alternative", and this is designated by McAlpin as "the dual nature of Proto-Dravidian verb morphology".

Although quite hypothetical, I consider this insight the most brilliant part of McAlpin's work. If accepted, it will explain the (seemingly inexplicable) contradiction: sound correspondences, a number of lexical etyma, and occasional morphological patterns (case-endings, pronouns) insist that Elamite and Dravidian are closely cognate. However, this genetic relationship is not apparent in most of the morphology reconstructed for Proto-Dravidian. If Elamite and Dravidian are so *closely related*, where are the expected morphological correspondences?

McAlpin wants us to accept that what he calls "morphological slippage" is the right answer. Can we accept that? Let us first look at the appellative personal endings. There is no objection against accepting the reconstruction of 1st person sg. PED **-kə* > PE **-kə*: PDr **-kə* (Old Tamil *-ku*)—i.e. the nonpast ending of ancient Tamil forms. 1st p.plural is somewhat less convincing, but what I find most striking and convincing is the 2nd p. sing., 3rd p. sing. human (or masculine), and 3rd p. plural. The second person is PED **-ti* > PE **tə*: PDr **-ti* (e.g. Old Tamil *varuti*)[5]. The third person sing.m. while phonologically somewhat complicated, is also acceptable: PED **-(a)nṯə* > PE **-ṟə*: PDr **-anṟə*. Most convincing is the 3rd person plural PED **-pə* > PE **-p(ə)*: PDr **-pa* (> *-va*).[6] It is striking (in the negative sense!) that Elamite has no evidence for the very productive human plurals in *-r*, clearly attested for Proto-Dravidian and Brahui.

I shall abstain from quoting other possible correspondences (like the negative verb **al*, the past marker, the infinitive, etc., mentioned by McAlpin on pp.122–28 of his work). Instead, let us look at what has emerged in the end when Elamite and Dravidian morphologies are compared:

a) There is no obvious systematic relationship between the morphologies of Elamite and Dravidian, apparent in the first sight.

b) Only after a hypothetical reinterpretation, three morphological patterns emerge as cognate sub-systems: the basic cases, the personal pronouns, and the appellative endings.

c) A few other morphemes (such as derivatives and verbal clitics) seem to be cognate.

[5] I would like to quote McAlpin *verbatim* (p.120): "The type of detail that is most convincing for the cognation of Elamite and Dravidian is illustrated by these second person forms. Both groups of languages attest and reconstruct pronouns in *ni*, obliques in *nin*, plurals in *nim*, and endings in *-ti*. This consistent, essentially arbitrary, type of detail can be explained only on the basis that these languages are cognate."

[6] Preserved in such old Tamil verb-forms as *enpa* 'they say' and in 'tribal' languages, cf. the Iruḷa *-enba*, *-nba*, *-mba* as quotative/narrative marker (dicitur).

Conclusion: There is evidence to regard Elamite and Dravidian as cognate, even closely cognate, if the reinterpretation is accepted as genuine, 'real' and inevitable.

When it comes to syntax (which is the least safe and acceptable sphere for comparison since it can ultimately neither prove nor disprove fundamental genetic relationship),[7] we find both Elamite and Dravidian being basically left-branching: they are both subject-object-predicate (verb) languages, and have postpositions instead of prepositions. However, Elamite shows often the modified followed by modifier. McAlpin explains this feature as follows: "Given Dravidian's consistent pattern we can safely assume that it has maintained the original format and that Elamite, under areal influences, has started to move away from it, but only in specific constructions, particularly the noun and the adjective." What "areal influences" he does not specify.

The separation of Dravidian and Elamite would not have been earlier than 10.000 B.C. Given the lexical evidence, says McAlpin (p.134), it is most probable that Dravidian and Elamite separated late, and in West Asia (presumably in Iran), after 5500 B.C. but before 3000 B.C. He then quotes evidence for the Dravidians not being autochthonous in South Asia, and for the consistent northwest to southeast movement through Gujarat. Finally, he admits that Dravidian might be cognate with Uralic, and adds that "Dravidian's connection with Elamite in no way interferes with this hypothesis".

What can we make out of it all? Dravidian and Uralaltaic, Dravidian and Elamite—and, as we shall see, Dravidian and Japanese. There is a massive block of left-branching, subject-object-verb languages where the modifier precedes the modified.[8] This massive block includes Dravidian and Indo-Aryan languages of the Indian subcontinent, Tibeto-Burman, Iranian, Dardic languages, Burushaski, Armenian, Kurdish and Ossetic in the West, and the Turkic and other Altaic languages, Korean, Japanese, the Palaeoasiatic languages, and Eskimo in the East and the North. As against this block, there is the Western Verb-Object block including Arabic and Berber, Greek, Romance, Celtic, Germanic, Balto-Slavonic, most African languages, even Georgian and Finnish; and an Eastern VO block that includes Chinese, Thai, Mon-Khmer languages, Vietnamese, and Indonesian languages.

[7] Syntax being to a great extent a linguistic universal. On the other hand, certain very fundamental syntactic rules or 'principles', e.g. *determinans precedens determinatum*, may be taken legitimately into account in comparative considerations.

[8] This is an approximative statement, for not all of the languages concerned are consistently and exclusively left—branching.

Thus there is a huge Indo-Altaic Object-Verb macrozone circumscribed by the basic Object-Verb isogloss—a middle segment of the world, a largely left-branching syntactic zone of which India is the main "Southern anchor". It is flanked by two equally well defined Verb-Object zones, the Euro-African and the Sino-Indonesian. What is important in our considerations is that the OV macrozone includes Dravidian, Altaic, Japanese, and Elamite, all of which were suspected, by quite respectable scholars, to be "more or less" related—although Elamite, and that makes it even more interesting, is not *consistently* left-branching (it is an OV language, but adjective follows noun, quotations follow quotative verb; however, adverb precedes verb, and subsidiary verb precedes dominant verb). Why? Because Elamite fits into one of the *transitional* sub-zones where the basic left-branching syntax begins to give way to right-branching phenomena: the Iranian sub-zone.

Thus, there *is* a deep and basic typological surface-order trait (OV) determinating the syntax of a vast number of languages, and Dravidian, Altaic, Japanese and Elamite do emphatically belong to this group of typologically related languages. What does this typological affinity reflect? The geographic distribution of the languages is also suggestive—it indeed represents a macrozone which forms a massive central segment of the Eurasian continent in which, roughly, Turkish and Iranian (with ancient Elamite) are on its Western fringes, Dravidian marks its central southernmost point, Japanese lies on its Eastern fringe, and Eskimo and Palaeoasiatic in the North. We may imagine a centre of diffusion somewhere in Central Asia—many millenia ago.

Whether we indeed may consider this *typological* relatedness a reflexion of tremendously remote *genetic* cognation can hardly be even suggested as a possibility (some scholars would hesitate to even relate Altaic with Uralian). However, as far as some languages of this macro-area are councerned, though, viz. Dravidian, Elamite, Uralic (and Altaic), possibly Japanese, they might have been, ultimately, genetically related. I am afraid, however, that the genetic connection was at such time-depth—perhaps earlier than 10,000 B.C.—that it will not be possible to demonstrate it with the methods used in established historical and comparative linguistics since the degree of divergence will probably be beyond the reach of our current techniques.

How, in conclusion, to evaluate the Elamite-Dravidian hypothesis which, as we have seen, had been suggested very long ago, but has now found an eloquent proponent in David W. McAlpin? I believe McAlpin has himself evaluated the attempt when he wrote (p.130): "Many of the specific observations and connections presented here could be mistaken, without altering the basic fact of cognation." I am convinced that McAlpin

has, in an elegant and attractive manner, gathered rich evidence for supporting the hypothesis; but I am also convinced that much additional work is to be done and many alterations will have to be made to remove the genetic cognation in question from the realm of sheer hypothesis and establish it as a fact acceptable to all.

7.3. Dravidian and Japanese

There has to be something deeply unsatisfactory, disturbing and provocative about a linguistic family which is 'isolated', particularly when the family is as large as the Dravidian group of languages (spoken by more than 150 million in India and elsewhere), or when the language is so politically, economically and culturally interesting and important as Japanese.

Japanese has been said to be related to almost every known language under the sun; the most recent and 'serious' attempts include Ainu (J. Bachelor), Korean (W. G. Aston and others), Chinese, Tibeto-Burmese (C. K. Parker), Ural-Altaic (Klaproth and others), Altaic (Ramstedt and others), Uralian, Mon-Khmer, Malayo-Polynesian (Lablerton), and even Indo-European (Taguchi Ukichi), Greek(!) (Kimura Takataro) and Lepcha (Yasuda Tokutaro). The view that Japanese belongs to the Altaic languages, including Korean, has the support of many prominent linguists, above all, of Roy Andrew Miller (1971). However, one must admit that, at the present moment, Japanese cannot *conclusively* be linked with any particular language.

The same is true of the Dravidian linguistic family, in spite of the attempts of scholars like Burrow, Andronov, Menges and Bouda, Tolstov and Vacek and Lahovary. As Emeneau wrote in 1969, most of these attempts may be characterized as "a colossal adventure in 'time' and 'space'", and some of them, like tracing direct genetic connections between Dravidian and Basque, Egyptian, Sumerian, etc., may be passed over in silence, since the methods and data used in their support have been unimpressive, even bizarre.

Recently, however, two hypotheses emerged which deserve more careful sympathetic attention. One is the Elamite hypothesis of David W. McAlpin discussed above, the other the Japanese connection proposed by Susumu Ohno[1]. Since both Dravidian and Japanese were

[1]Ōno Susumo, b. 1919, graduated from the University of Tokyo in 1943. Professor of Japanese linguistics at Gakushuin University. Author of, among others, *The Origin of the Japanese Language* (1957), *The Birth of the Japanese Language* (1980), etc. (see bibliography). He also coëdited the *Manyōshu* (1957–62) and other works of Japanese literature.

thought to be related to Uralic or Ural-Altaic, and since these attempts, although still unproven, manifest a fairly large amount of evidence to show that there is good chance of some very remote and deep relationship between the respective families, one should consider an Altaic-Japanese-Dravidian hypothesis, with a possibility of Elamite connexions, with careful and impartial interest.

Let us examine the possibility of Japanese-Dravidian (or Japanese-Tamil, as Susumu Ohno obviously prefers to speak about it at this point) relationship. He was not the first scholar to compare Japanese and Dravidian. The first attempts date quite far back, but in recent years, a few Japanese and Indian scholars began to look in that direction again (Susumu Shiba in 1973–74, Akira Fujiwara in 1974–1980, Minoru Go 1979–1980). Approximately at the same time, too, Susumu Ohno, by profession an eminent Japanologist, became engaged in working out a possible relationship between Japanese and Tamil. Since then, he has published a series of articles and books, both in English and in Japanese (cf. bibliography), which deal with the subject; most important among them are *Sound Correspondences between Tamil and Japanes* (Gakushuin University, 1980), and two papers, one dealing with the loss of the initial *c-* in Tamil and *s-* in Japanese (1983), and another with the intervocalic stops in the two languages (1983). Recently, he published a book entitled *Worldview and Rituals Among Japanese and Tamils* (Gakushuin University, 1985) (in coöperation with two Tamil scholars).

As an obviously very general framework, Prof. Ohno hypothesizes five strata or stages in the evolution of Japanese: an 'unknown' proto-language which contained the basic sound system of Dravidian, Altaic and Japanese; the next, a stage of the Dravidian languages with the basic vocabulary and main grammatical features; another strata of Altaic, which provided Japanese with a part of its cultural terms and such features as vowel-harmony; a stage when Chinese provided Japanese with a large part of its cultural vocabulary and with the script; finally, we reach new Japanese, which is the result of these developments and the combination or "amalgam" of these strata. Since I have no knowledge of Japanese linguistics, I will refrain from commenting on this framework, and will disscuss S. Ohno's hypothesis from a Dravidianist's point of view.

One general remark at the outset: a distinction must again be made between *evidence* and *proof*. Is there any valid evidence at all for a (genetic?) relationship between Tamil and Japanese? This question, according to my opinion, expressed here with utmost caution, may be answered in the positive. On the other hand, if we ask about proof of such relationship, there is, so far, none. However, the evidence—in matters of deep grammar, surface syntax, lexicon, and probably even in phono-

logy—is such that it is intrinsically not ruled out that some kind of non-accidental connexion between Japanese and Tamil (Dravidian) may be posited. It would be premature sweepingly to dismiss such a hypothesis as impossible and fantastic.

In the Introduction to his most ambitious English language publication so far, the work of 1980 in which he enumerates some 350 words that he hopes manifest etymological correspondence, Ohno quite clearly states that it is "yet to be shown" whether these correspondences establish "kinship between Tamil and Japanese", or whether they are "a result of ancient, heretofore unknown borrowing". Although nothing can altogether be ruled out, an ancient borrowing from "Tamil" or pre-Tamil into Japanese, involving 350 items (in another context S. Ohno speaks of 420 words) is most unlikely, for the obvious reasons of utter historical improbability and tremendous geographical distance. This leaves us with either linguistic kinship (of many possible varieties and degrees), or accidental similarities.

Promising to undertake a morphological comparison of Japanese and Tamil,[2] Ohno enumerates five grammatical similarities between the two languages, and one grammatical difference. Unfortunately, among the five similarities, four may be designated as almost universal linguistic traits, too general to be of any real validity for establishing kinship (Old Japanese is agglutinative, like Tamil; but so is Turkish or Finnish or Hungarian; Old Japanese places adjectives before nouns: so does Czech or English or Hindi; Old Japanese puts adverbs before verbs: so do many more languages than Tamil; the same is true of the use of postpositions, particles and auxiliary verbs—thousands of languages use them). Only the distinction among three demonstrative pronouns according to distance between speaker and the object referred to is specific enough to be taken into consideration. However, there are indeed, in addition, some striking deep semantic and grammatical similarities between Japanese and Tamil which I may add to support Ohno's hypothesis.

Our uses of time are mainly generated by the grammar of the verb. This, as George Steiner observes, "is no Whorfian fantasy". Different cultures operate with different conceptualizations of time. Japanese and Dravidian apparently roughly agree with each other, but both are in contrast to our Indo-European "past-present-future axis" which is "a feature of grammar which runs through our experience of self and of being like a palpable backbone" (G. Steiner again). As against this dis-

[2] As far as I know (personal communication), S. Ohno is at present engaged in a detailed comparative study of the verbal systems of Tamil and Japanese, particularly in working out the correspondences among the suffixes.

tinctive Western (European) apprehension of time as linear sequence, both old Tamil and Japanese distinguish rather between two aspects of Perfect(ive) and Imperfect(ive).

Another interesting similarity is the use of the V-*te* in Japanese, as compared with the Tamil *viṉaiyeccam* ('converb', 'gerund') and its constructions and uses. Even more striking is the absence of relative clauses in the two languages: a Japanese sentence like *watashi-ga kinō atta hito* is structurally *very* similar to the Tamil *nāṉ tāṉ nērru cantitta maṉitaṉ*, lit. "I yesterday met person", i.e. "the person (whom) I met yesterday". One more feature: the absence of rhyme in the accepted sense in Japanese poetry is, according to J.V.Neustupný, closely connected with the dominance of agglutination within the grammar of Japanese. We may very probably claim the same reason for the complete absence of final rhyme in 'genuine' Tamil (and Dravidian) prosody. This is certainly an analogy.

The structural difference quoted by Ohno—i.e. Old Japanese verbs do not conjugate in reference to persons—is certainly not "the only structural difference between Japanese and Tamil" as he claims. There are more. But, on the other hand, it is quite probable that pre-Tamil, and even more so, primitive Dravidian, did *not* "conjugate in reference to persons", and that the typical (modern) Dravidian structure 'verb root+derivational stem-suffix+tense (aspect)+person-gender-number' (e.g. DED 2801 Tamil *tek-uḷ-kiṉr-ēṉ* 'I increase', cf. Tam. *teviḷ*, *tevuḷ*, *tekiḻ* 'be full', which isolates **tek-*/**tev-* as verb root) developed from a much older primitive use of 'unconjugated' verb nouns in the slots of Predicate (e.g. Old Tamil *Akam* 143 *nōk[u]ō yāṉē* 'suffering—I' → 'I suffer + *-ō*'; *Akam* 212 *nōval yāṉē* 'suffering—I' → 'I suffer'). On the whole there are a few yet little investigated and less understood grammatical similarities between Tamil (Dravidian) and Japanese, but they may rather point in favour of S. Ohno's hypothesis than against it.

In his book, *Sound Correspondences*, S. Ohno has also briefly dealt with phonology; more imporantly, he has discussed two problems pertaining to phonology in the two papers mentioned above. Although the paper on the loss of the initial affricate/sibilant in Tamil/Japanese (April, 1982) may be somewhat lacking in philological sophistication, the phenomenon itself is striking; we must not forget, however, that this tendency is in fact confined to South Dravidian and is strongest in Tamil–Malayalam. It points rather to parallel but unconnected developments in the two languages or groups of languages. Nevertheless, even a common tendency, though not a proof of genetic relationship and of 'special connexion', points to a shared trend or direction in phonological development and should not be dismissed altogether, particularly in the light of

other cumulative evidence. The August 1982 paper on intervocalic-*p*- is thought-provoking indeed: according to Ohno, intervocalic -*p*- actually did exist in Old Tamil, at least in a few relic forms, and it corresponds to Japanese -*F*- which developed from earlier -*p*-. This Japanese -*F*- is 'voiceless' and 'bilabial'. Some Dravidianists (Emeneau, Krishnamurti) do not reconstruct *-*p*- even for the proto-stage but according to D. W. McAlpin, for example, it seems best to maintain it since the contrast helps separate -*v*- (*-*p*-) from a possible *-*v*- and from other shifts. In my manual of comparative Dravidian phonology I discussed this problem at some length and tended rather to maintain an intervocalic *-*p*-. Now Ohno quotes a Japanese correspondence for the Tamil *tapu* 'to kill' (which he correctly locates in the old Tamil grammar *Tolkāppiyam*, although he greatly antedates it in the fifth century B.C.), viz. *taFu*-. If we accept this correspondence, it would support our hypothesis of the reconstruction of a pre-Tamil *-*p*- for Dravidian. According to Ohno, whereas the contrast of -*p*-: -*v*- was lost in Tamil, it has been preserved in Japanese -*F*-: -*b*-.

In the realm of phonology, there are some features of Old Japanese which contrast sharply with Tamil / Old Tamil / pre-Tamil and Dravidian: thus we certainly reconstruct more than four vowels for all stages of Dravidian; we most definitely recognize and reconstruct contrastive (phonemic) length in Dravidian ("there was no distinction between long and short vowels in Japanese"); we reconstruct retroflex consonants even for the earliest stage of Dravidian whereas "in all its history Japanese has no cerebrals". These differences sound rather damaging for Ohno's hypothesis. On the other hand, primitive Dravidian, and Tamil, like Japanese, does not admit of initial consonant clusters; we do not recognize any genuine diphthongs in Dravidian (there were no dipthongs in Old Japanese); a verb–root "consisted of CVC" in Old Japanese (we can reconstruct, for Dravidian, the canonical form of $[C_1]\,\breve{V}\,[C_2]$ with the statistically most frequent $C\breve{V}C$ as the root-form).

Ohno attempts, in the forword to the book quoted, and especially in its Japanese version (see bibliography), as well as in his papers and in the list of lexical correspondences, to account for the sound correspondences between Tamil and Japanese; this attempt is partly accomplished successfully, and partly fails.

When it comes to the actual lexical correspondences supposed to be etymologically related, i.e. cognate, the only thing we can say is that they cannot be written off as the product of mere coincidence, and on this point we agree with S. Ohno. Some of them, however, are obviously 'false cognates': a typical example is the comparison of Tamil *cēttu* 'red' (DEDR 1931 *$c\breve{e}\breve{e}$- ⟨ *$k\breve{e}\breve{e}$-) with Japanese *sita* 'red'. This cannot stand up to a

critical scrutiny since the palatalization *k- > c- in this item (and elsewhere) is historically *very* late (between the 5th—3rd cent. B.C.), manifested *only* in the Tamil-Malayalam sub-branch of South Dravidian; any relevant comparison with Japanese is therefore ruled out.

The majority of items are, at this point in our knowledge, of such nature that it is difficult to say anything either positive or negative about them. In the context of possible regular phonetic correspondences, if and when these are worked out at some future date, such lexical pairs may be ultimately accepted as legitimate cognates. Ohno certainly cites a few comparisons which are striking, either because they indicate certain phonetic regularities, or because they reveal closely related and yet very specialized meanings (referring perhaps to affinities in culture) matched by reasonable similarity in sound shapes, or, finally, because they manifest a possible correspondence in derivational apparatus.

Thus, e.g., items 101, 102 and 192 show a regular correspondence Tamil *p-*: Japanese *f-*: Tamil *pari* (DEDR 3963 'to run': Jap. *fasu id.*; Ta. *paru* (DEDR 3972) 'become large': Jap. *faru id.*; Ta. *piṭi* 'to grasp, etc., catch' (DEDR 4148): Jap. *fisi* 'to grasp, etc.'. Or, Ta. *-l-*: Jap. *-r-* is manifested e.g. by 44 Ta. *kal* 'stone' (DEDR 1298): Japanese *kara id.*, by 46 Tamil *kalai* 'to disperse, be scattered etc.' (DEDR 1311): Japanese *karu* 'to depart, separate etc.'.

As instances of similarities in items of very specialized meaning one may quote e.g. 7 Tamil *accu* 'weaver's reed instrument for pressing down the threads of the woof' (DEDR 48): Japanese *aza* > *aze* 'weaver's reed instrument for pressing down the threads'; or 27, 28 Tamil *avuri*, *aviri* (DEDR 269) 'indigo plant': Japanese *awo* 'blue (sometimes verging into green)'; Japanese *awi* 'indigo plant'.

A possible correspondence of derivational morphs may be indicated by such items as 47 Tamil *kav-il* (DEDR 1335) 'be capsized': Japanese *kaf-eru* 'be capsized'; or 38 Tamil *kat-ir* 'ear of grain', 'spear of grass' (DEDR 1194): Japanese *kas-ira* 'spear of grass'; or Tamil *cil-uppu* (187) 'to churn, stir, agitate' (DEDR 2570): Japanese *sir-ōfu* 'to agitate each other'.

It is these three types of etyma which need a rigorous, detailed investigation. We would find ourselves in a very nebulous realm indeed were we to venture to speculate about the general *historical* probabilities of a Dravidian-Japanese connexion. Were both Dravidian and Japanese genetically related—in very deep prehistory—with Altaic, and are what remained as vague similarities in structural traits and some striking similarities in phonetic shapes and in meaning vestiges and relic forms of this remote (in time) genetic kinship? Or did, again in very deep prehistory, the ancestors of the Japanese, Dravidian and Altaic peoples live

for a long period of time in close neighbourhood and intimate interrelationship so as to enable these traits of similarity to emerge as a result of diffusion and borrowing? Did the "Dravidians" then move 'down' to the South and finally 'split' into Western (pre-Elamite) and Eastern (pre-Dravidian) groups, while the pre-Japanese peoples moved east and via Korea to inhabit their islands, whereas the Altaic people proper remained? All this is of course sheer speculation. I doubt whether these immensely complicated problems can be solved by a single scholar.

However, the more I proceed with my investigation of the comparison between Japanese and Dravidian, the more I become convinced that there *is* a strikingly close *typological* affinity between Dravidian (particularly modern Tamil) and Japanese in their morphosyntatic structure. As Prof. Emeneau writes[3], in this field, too, "a more sophisticated theory is needed to combine typology and history to everyone's satisfaction, but it seems a pity to neglect an opportunity when it is under one's nose".[4]

[3] In his review of Colin P. Masica's *Defining a Linguistic Area*, see *References*.

[4] My review article in *BSOAS* XLVIII, 1 (1985) has provoked Roy Andrew Miller to a virulent invective against Susumu Ohno's hypothesis (in *BSOAS* XLIX, 3, 1986). In personal communication (May 1, 1987), S. Ohno tells me that most of R. A. Miller's objections and critical remarks are irrelevant and unfounded. At the time of writing this footnote, S. Ohno is preparing a detailed reply to R. A. Miller.

Afterword: Summing up

To sum up: In 1972 I argued that the Dravidians "were a highlander folk, sitting, sometimes around 4000 B.C. in the rugged mountainous area of North Eastern Iran (where they came into extended contact with the speakers of Uralian/Altaic languages), whence, round about 3500 B.C., they began a South Eastern movement into the Indian subcontinent which went on for about two and a half millennia" (Zvelebil 1972:57). Since then, due to the labours of Masica, McAlpin, Gurov, Krishnamurti, Boisson, Illič-Svityč, Peiros and Shnirelman and a few others, the picture has been slightly changed and worked out in some more detail. Bongard-Levin and Gurov (1988:67) argued that the period of Proto-Dravidian unity should be pushed back to the 5th–4th millennia B.C., that the separation of Brahui occurred at the end of the 4th millennium, and that in the 3rd millennium and at the beginning of the 2nd millennium there were three subgroups of Dravidian: Brahui, Northeastern (later Kuṛux and Malto) and "Proto-Dekhan" (later, during the 2nd 1st millennia B.C. to split into South and Central Dravidian). Peiros and Shnirelman very recently (1989) maintained that the period of PDr unity goes back to the 4th millennium, and that "the Proto-Dravidian language split c.3000 B.C. into two or three branches: Proto-Central-Southern (an ancestor of the majority of modern Dravidian languages), Proto-Northeastern (an ancestor of Kurukh and Malto) and, probably, Proto-Northwestern (Brahui). The Proto-Central-Southern branch, in its turn, split c.2000 B.C."

All this is still in the nature of speculation. A truly convincing hypothesis has not even been formulated yet. However, there is, among most Dravidianists, a near concensus as to the notion that the ancestors of Dravidian speakers entered India from the Northwest; also, the dates of the various "splits" are more or less agreed upon.

What also seems to be a vague yet progressively more and more accepted hypothesis is the notion that Dravidian was related to both Uralic and Altaic in a vast "super-family" or "super-phylum" comprising Indo-European, Afroasiatic, Kartvelian, Dravidian, Turkic, Mongolic, Tungusic, as well as Japanese and Korean (Masica, Vacek, Susumu Ohno, C.P. Boisson and others), with the addition of Elamite (McAlpin). The old hypothesis of "la langue nostratique" has been revitalized as Nostratic theory by Illič-Svityč and Aron Dolgopolsky (1971, 1976, 1984), and by Mark Kaiser and V. Shevoroshkin (1988).

8. Select Annotated List of Further Readings

The following bibliography is highly selective; even an approximation at a complete bibliography on Dravidian linguistics would require a large volume containing thousands of entries. (Please bear in mind that this is an introductory course to the subject, in the nature of a textbook.) It was probably unavoidable for the selection to be characterized by certain personal, theoretical and methodological preferences, perhaps even bias, as is every choice. With the exception of the basic works, the stress was on more recent publications (since c.1965). The comments were kept to the minimum.

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In conclusion: As stressed above, the bibliography must not be regarded as in any sense even approximately exhaustive. The compiler offers his sincere apologies to those authors and editors whose works have not been for whatever reason included. His suggestion is that one of the Indian institutions vigorously active in the field of Dravidian linguistics take up the task of the compilation of a *complete* bibliography of the subject- a formidable work, but not beyond the possibilities of a team equipped with computer technology.

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