

THE SRI LANKA JOURNAL OF SOUTH ASIAN STUDIES



UNIVERSITY OF JAFFNA
JAFFNA, SRI LANKA,

No. 1 (New Series)
1986/87

THE SRI LANKA JOURNAL OF SOUTH ASIAN STUDIES is a publication of the Faculty of Arts of the University of Jaffna, Jaffna, Sri Lanka, published annually. The Journal is intended to cover subjects of relevance to South Asia that are of both contemporary and historical interest.

Subscription for the Journal is Rs. 50/- in Sri Lanka; Rs.50 (Indian) for India, Pakistan and Bangladesh and US \$ 10 or its equivalent for all other countries.

Institutions and Libraries wishing to obtain the Journal on exchange are requested to apply to the Librarian, University of Jaffna, Jaffna, Sri Lanka. All other inquiries relating to the distribution of the Journal should be addressed to the Managing Editor.

BOOKS FOR REVIEW should be sent to the Editor. Books relating to South Asia and especially to Sri Lanka are welcome.

Editor **DR. V. NITHIYANANDAM, DEPT. OF ECONOMICS**

Managing Editor **MR. K. M. PUVANESWARAN, DEPT. OF GEOGRAPHY**

Editorial Committee : **PROF. S. RAJARATNAM, DEPT. OF COMMERCE AND
MANAGEMENT STUDIES**
PROF. K. SIVATHAMBY, DEPT. OF FINE ARTS
PROF. A. VELUPILLAI, DEPT. OF TAMIL
**PROF. S. SUSEENDRARAJAH, DEPT. OF LANGUAGES
AND CULTURAL STUDIES**
PROF. A. SANMUGADAS, DEPT. OF TAMIL

THE SRI LANKA JOURNAL OF SOUTH ASIAN STUDIES
UNIVERSITY OF JAFFNA
JAFFNA, SRI LANKA

THE SRI LANKA JOURNAL OF SOUTH ASIAN STUDIES

No. : 1 (New Series)
1986/87

CONTENTS

	PAGE
Japanese — Tamil Cultural Relationship A Critical Analysis of Ohno's Proposition — <i>S. Suseendrarajah</i>	1
The Title PARUMAKA found in Sri Lankan Brahmi inscriptions — A Reappraisal — <i>S. K. Sitrampalam</i>	13
A Human Climatic Classification for Sri Lanka — <i>K.M. Puvaneswaran</i>	25
Geomorphology of the Valukkai Aru Drainage Basin — <i>Pathmadevy Puvaneswaran</i>	43
Problems in Acquisition of English consonantal clusters By Jaffna Tamils — <i>Parvathy Kanthasamy</i>	59
Tamil — Japanese Relationship : 1/ r Alternation — <i>A. Sanmugadas</i>	69
Vaiyapuri Pillai As a Literary Historian of Tamil ; An Analysis of his Ideology and Methodology as seen in his "History of Tamil Language and Literature" — <i>K. Sivathamby</i>	80
Book Review : Two Medieval Merchant Guilds of South India by Meera Abraham — <i>S. Pathmanathan</i>	105

JAPANESE - TAMIL CULTURAL RELATIONSHIP

A CRITICAL ANALYSIS OF OHNO'S PROPOSITION

S. SUSEENDIRARAJAH

In recent times Susumu Ohno, Professor of Japanese Linguistics at Gakushuin University has, as a result of his intensive research, found similarities between Japanese language and Tamil language on the one hand, and on the other, between Japanese culture and Tamil culture. At the outset these similarities appear to be very fascinating to scholars, for this is indeed a novel attempt linking two languages and cultures hitherto considered distinct and unrelated.

A systematic and critical investigation of the similarities as put forth by Ohno will certainly help scholars all over the world to strengthen, modify, revise or abandon the position taken so far on the question of Japanese-Tamil relationship. With this view in mind an attempt is made in this paper to examine critically the cultural similarities between Japanese and Tamils presented by Ohno in two of his papers namely

- (i) "World View : The Three Level Universe in Japanese and Tamil Cultures", and
- (ii) "Japanese and Tamil New Year Celebrations", both appearing in a volume titled 'World View and Rituals Among Japanese and Tamils'.¹

II

As we read through these two papers we firstly get an impression that Ohno has not primarily had a clear grasp of Tamil culture. This is obviously because he has not had correct and full information on Tamil culture. Some of his statements appear to have been based on partial or misrepresented and in some contexts on misinterpreted information on Tamil culture. His "comparison of the funerary rituals of the Tamil speaking people in the Jaffna region of Sri Lanka with those which are described in Japanese myths and those used in the Nara and Heian periods (710-794 ; 794-1185)" seems to be based on highly imaginative accounts in some contexts and in others on far fetched or untenable accounts. Certain novel practices hitherto unseen and unheard by people coming from different parts of Jaffna have been introduced as part of Jaffna culture. Doubt arises if this endeavour was to make some practices tally with Japanese culture. Practices dead and gone have been presented as current practices in the modern society of Jaffna. Some possible universals in cultures are being directly or indirectly emphasised as correspondences in these two cultures. Some of the pan Indian features are being discussed as something unique to Tamil culture. Cultural traits and practices are not viewed and compared in their whole form. Thus details are overlooked and assumptions

have been made on surface similarity. In certain contexts Jaffna Tamil society and Sri Lankan Tamil society are being confused as identical.² Practices confined to restricted areas are presented as normal practices in the whole society. Possible cultural variations within the Jaffna society have been not taken into consideration³. For all these reasons we feel strongly tempted to question Ohno's attempt to find and establish similarities between these two cultures.

III

In his first paper as the title itself indicates Ohno is concerned with the concept of a three level universe. He mentions a number of peoples in the world including the Japanese who have or had belief in a three level universe. Among them he includes "the Tamil speaking people of Jaffna area in Sri Lanka as well". Japanese believed that deities lived in the upper world, the human beings in the middle world and the dead went to the netherworld.

According to Ohno "there are many who would maintain that perception of the universe as three leveled is unique to the Turkic, Mongolian, and Tungusic peoples of northern Asia and Siberia". He points out that Yoshida Atsuhiko, a specialist in mythology and a professor at Gakushuin University does not think so. Ohno discusses the pros and cons of different views briefly and concludes that "this issue has not yet been resolved to the satisfaction of the academic world". Therefore he proposes to "leave off any direct discussion of this problem and instead approach it obliquely by a comparison of the funerary rituals of the Tamil speaking people in the Jaffna region of Sri Lanka with those which are described in Japanese myths and those used in the Nara and Heian periods".

Certain clarifications become necessary before discussing in detail the similarities between practices like the *mogari* in Japanese society and its correlates in the Tamil society.

It is not clear as to why Ohno has ignored or overlooked a vast majority of other people in this part of world who have belief in the concept of three level universe. No doubt Tamils or to say more precisely the Hindu Tamils both in Sri Lanka and India and perhaps in any other part of the world have belief in the concept of three world called *muuvulakam* in Tamil language. This is a broad division of the universe for there are several subdivisions and Hindu Tamils speak of *iireelulakam* "fourteen worlds". However at this juncture we would like to point out that his concept of three world is not something exclusive or peculiar to Jaffna Tamils or to Tamils in general. It is rather a pan Indian concept that prevails from very early times to this day irrespective of ethnic differences among Hindus. It has been attested in writings of the past all over India. So it is more appropriate to speak of it as part of Hindu culture rather than Tamil culture.

An important difference in the details of this belief between the Japanese culture as described by Ohno and the Hindu culture as it prevails today has to be noted. According to the Japanese all the dead go to the netherworld whereas according to the Hindu concept all the dead do not go to the netherworld. First the soul of the dead is taken to the Kingdom of Yama called *Yamalookam* in the southern direction of the upper world. The deeds of the soul are analysed and it is sent to the netherworld only if it had done *tii vinai* "bad deeds". Had it done *nal vinai* "good deeds" it would find a permanent place in heaven. According to Hindu culture netherworld is not a permanent abode of any soul. Herein we are reminded of the concept of re-birth and the Hindu Karmic theory. We would like to know the details in the Japanese culture.

Ohno gives the Tamil names of these worlds. All these names perhaps except one are from old Tamil literary works⁴. More common names for these worlds by which the ordinary man makes references to them are not given. They may be added herein: heaven is commonly known as *cuvarkkam*; "this world" is also known as *puulookam*; underworld is commonly referred to as *kiil ulakam* (in contrast with *meel ulakam* "upper world") and also as *paataala ulakam* and *narakam*⁵. These common names in day to day use indicate how deep rooted this concept is in the society.

Let us now elaborate our discussion on similarities in the funeral practices of the ancient Japanese and the Tamils of modern Jaffna in Sri Lanka. Ohno first speaks of and describes the practice of *mogari* in ancient Japanese society.

According to Ohno "*mogari* is a term which refers to the custom of setting the body of a dead person in one location and conducting rites over it for a certain length of time before burial. There a building was most often erected for the purpose of sheltering the body such a building was called a *moya*, literally, "a mourning house....." The four walls were secured so that neither man nor beast could intrude unwarranted entrance into the *moya* confines was not permitted. Only a single person of the closest relationship to the deceased - a husband, a wife, a parent, a child - could approach the body of the dead person".

The parallel practice in the Jaffna culture is presented as follows: "In Tamil society when someone is approaching death, he or she is moved to a special room or building. Into that room or building, only one person, a close relation-husband, wife, parent, or child - of the dying person, may go".

Now the question is whether such a practice as described above prevails everywhere in Jaffna society. Most areas don't seem to follow this practice. People would generally allow the person to die in his usual place.

Later they may or may not move the body to a spacious room, say to the hall, when close relatives gather. Hence the practice of moving the person approaching death to a special room or building is not a normal practice but a variant practice confined to a few areas. Enquiries reveal that even in these areas no special building is erected. Moreover the practice of moving the person is not part of any regular cultural practice. This practice has no specific term of reference in the Tamil language as other regular practices have. Perhaps the person is moved into the main hall or room of the house only for the convenience of the people, mainly close relatives, who may gather on hearing the news that the person is about to die. Usually close relatives gather around a dying person or a dead person and nowhere in Jaffna as far as our knowledge could reach there is any restriction on the number of close relatives who could go near the dead. Ohno surprisingly restricts the number to merely one. This restriction of course tallies the number in the Japanese culture. Further it should be emphasised that *mogari* in Japanese culture takes place after one's death whereas in Jaffna culture the parallel practice as described by Ohno begins to operate "when someone is approaching death"; Speaking in general, broad similarities do sometimes have minute but important differences (particularly when details are considered) that may play a significant role in final assessments.

However a fragment of similarity may be seen between the Japanese *moya* and the funeral *pandal* "a thatched shed" in Tamil culture⁶. The funeral *pandal* is specially erected for the purpose of conducting the funeral rites. This is done almost everywhere in Jaffna. The body of the dead person is bathed and brought to the *pandal* where the priest would have set a location for the ceremony. Funeral rites are conducted for an hour or so and the body is removed for cremation. It is very surprising that Ohno has not made any reference to this *pandal*.

Another custom related to the practice under discussion may be pointed out. In most areas in Jaffna when a person was about to die on a *pancam*-day⁷ people removed him out of the main house and had him in a specially erected temporary building. This temporary building was burnt as the body of the dead was taken to the crematorium. But when a person passed away suddenly on a *pancami* day people usually removed a few tiles in the roof of the house or made a temporary hole in the roof. These acts were due to a sort of fear that the spirit of the person who died on *pancami* would haunt the location where death took place and may do harm to others. In the past village people often spoke of *pancami peey* "ghost of *pancami*" in terror⁸.

While further describing the Japanese practice Ohno says: "In addition to a single close relative, two members of the *asobibe*, the funerary guild were also admitted (into the special room or building)..... On someone's

death, two members of the asobibe were chosen to play a most important role in the funeral rites, that of attending the dead during the period of mogari”

“Members of the asobibe will go to the place of mogari and serve in attendance. In doing so, one of the two will be called negi, the other, yogi. The negi, will put on a sword and carry a halberd; the yogi will put on a sword and bear food and drink”.

“The word negi has the same root as the verb negirau, meaning “to calm another with words; to soften another’s heart”. Thus the role of the negi is to speak to the dead. The role of the yogi, on the other hand is to offer food and drink”.

Now let us see the parallel practice in Tamil society as described by Ohno:

“In addition to the single relative, two others may enter to attend to the dead. These two both carry long knives of steel in order to protect themselves. One has the task of closing the eyes of the person who has died, then singing to him or her to give comfort. This person also speaks to the dead, telling the person that he or she need not worry, that he or she will go to heaven, thus setting the dead person’s spirit at peace. The role of the second attendant (who is a woman from a caste called Kōviyar, close attendants to the people of the high caste in Jaffna) is to prepare food. She is in charge of preparing food for other mourners”.

As in earlier instances we would like to check if the practice described above is dominant everywhere in the Jaffna society. A cross checking of this description with elderly and well informed persons coming from different parts of Jaffna revealed that they had neither witnessed nor heard of such practices. Many raised their eye brows on hearing the restriction placed on the number of persons attending on the dead as two. Some said that in the past people carried a knife or a piece of iron to the crematorium when the body was taken. No one sings to give comfort. All agreed that women lament aloud out of sorrow. We are not sure if Ohno refers to this lamenting as singing. In Jaffna society no one speaks to the dead in order to console him or her as in Japanese culture. There is no need because Hindu Tamils in Jaffna believe in good faith that the soul attains peace. It may be a wishful thinking but yet it is a strong belief. That is why in announcing someone’s death people usually verbalise it as *iraivan ati ceerntaar* or *civapatam ataintaar* “so and so has attained the Feet of Lord Siva”⁹.

The motive of Ohno in introducing the woman from the Kōviyar caste is obviously to draw a parallel with the members of the asobibe in ancient Japanese culture. This is rather strange because this caste emerged

only at a point of time not very early in the history of Tamils. This caste is something peculiar and exclusive to Jaffna society. It is not found in Indian Tamil society. Even in Jaffna only some groups of families in the high caste had the services of this caste. One is tempted to ask if Tamil culture was confined only to these small groups in Jaffna. Hence this aspect cannot be taken as representative of Jaffna Tamil culture. Moreover if we were to take this parallel (asobibe-Kōviyar) seriously, it may amount to saying that Japan is more close to Jaffna than to Tamilnadu in India.¹⁰

Ohno draws particular attention to the length of time set apart for mourning - eight days and eight nights - in ancient Japan. Professional mourners were used. Further "for seven days and seven nights no offerings of food were made. Due to this, evil and dangerous spirits were aroused. Members of the asobibe were sought throughout the land. They then pacified the spirits on the eighth day".

The practice in Jaffna is given as follows: "On the eighth day a banquet is laid out. On eight plates, eight different types of food are put, and both meat and liquor are served. Also the roots of a palmyra tree are dug up and made into a powder that is heaped into a cone. Over this water is then sprinkled. This is an offering for the eight demon hags who it is believed, come into the world of humans late at night to eat people and drink their blood. If though, they find this offering, they are satisfied and leave humans unharmed". Ohno has in fact said that "this is a normal custom in Sri Lankan Tamil society".¹¹

The "eighth day" is acceptable to all sections of people in Jaffna. People call it in Tamil *ettu-c-celavu* or briefly *ettu* "the expenditure on the eighth day". Nowadays this is being done on a day earlier than the eighth day. Number of plates (banana leaves) laid out varies from place to place. Most places have the number as three. Three plates (banana leaves) are placed in different winnowing pans and food is served in them. In most areas there is no restriction on the number of food types served. The only restriction is that the number should be odd and not even. Usually all the types of food favoured by the dead are prepared and served. Serving of meat and liquor is not a normal practice in every house-hold in Jaffna. They are served only if the dead was in the habit of taking them. There isn't any difference of opinion in this practice. This offering is primarily meant for the departed soul. Upto the thirty first day water is kept in a vessel during night times for the departed soul. A chopped coconut is also placed. An oil-lamp burns. Thus unlike in Japanese culture attendance on the dead is prolonged in Jaffna culture till the thirty first day of one's death. Important and significant ceremonies are done for the departed soul on the thirty first day. According to Ohno the attendance on the dead in Japanese culture was only for eight days.

Ohno makes reference to the practice of dropping a stone into the water in Jaffna culture. According to his interpretation "the purpose and meaning of this ceremony is to ensure that the dead person goes to heaven: the stone serves to block the entrance to the under-world thus breaking any link between the dead and the netherworld". He cites Tirukkural (38) as endorsing his interpretation. Further he makes reference to the custom of setting a stone on someone's grave during *Cankam* period. For him "this suggests a conscious need to block the way to the land of the dead". He concludes that "this act is basically the same as the practice, still found in Sri Lanka today, of dropping a stone into the water".

We are here concerned only with Ohno's interpretations of the purpose and meaning of dropping the stone into the water. They appear to be far fetched. He takes the literal meaning of the phrase "*vaalnaal vali ataikkum kal*" in Tirukkural (38) in support of his interpretation. But the whole phrase has a rather metaphorical sense. On the other hand the stone in the grave referred to by him has other meanings too. Here we are reminded of the stones erected in battle fields during ancient times. Scholars' attempt to explain the beginning of hero worship with reference to such stones should not be forgotten.

Also we wish to emphasise that the stone referred to by Ohno is a symbolic representation of the departed soul. It is considered sacred. Certain ceremonies including *puujah* are done piously for this symbolic stone. Hence our contention is that the stone put into the water cannot be considered as one that "blocks the path between this world and the underworld".

In concluding his first paper Ohno gives 12 corresponding events in both cultures. Similarity in them seems to be very meagre except in the use of professional mourners. Ohno may be pleased to learn that the idiom *kuulikkum maaratittai* "mourning for wage" in Tamil emerged out of a true practice that existed in the past¹². Finally we would like to point out that the total number of events that take place during a funeral ceremony in Jaffna are very many and that Ohno has attempted to set up similarities only in 12 events.

IV

In his second paper Ohno claims that Japanese and Tamils have several shared features culturally as well as linguistically¹³. He speaks at length about the cultural correspondences between "the Tamil New Year's festival of Pongal and the Japanese celebration of Koshōgatsu, the celebration of Little New Year".

According to Ohno's description "Pongal is a festival held annually in the Tamil region of India and Sri Lanka. It is an ancient festival, dating from before the incursion of Aryan culture. On the fifteenth of January

Tamil people make a gruel from a reddish variety of rice..... Both Pongal and koshōgatsu are held during the 14th, 15th and 16th of January under the solar calendar. In essence, both are New Year's supplications for bountiful harvests in the coming year.....It is only on January 14th or 15th that people celebrate the New Year". In another context he refers to this festival as "the January fifteenth New Year's agricultural festival".

It is not clear why Ohno considers Pongal as New Year celebrations. From the point of Tamils Pongal celebrations are not the New Year celebrations. For the Tamils the dawn of New Year is not in January. New Year celebrations take place in the month of April. Pongal celebrations and New Year celebrations are markedly different in significance and practices. Most of the events that take place during New Year celebrations do not take place during Pongal celebrations.

Pongal takes place mostly on January 14th and it is commonly known as Cuuriya Pongal. This celebration signifies a kind of thanks giving to nature for the (bountiful) harvest that farmers would just then have. The time of Pongal won't be appropriate for making any supplications for bountiful harvests in the coming year. It will be too early to make such supplications because harvests in the coming year will occur only after several months.

Usually people make use of the rice obtained from the recent harvest for Pongal, a kind of rice preparation with milk and other ingredients optionally used. This Pongal is usually cooked in the front courtyard of the house early in the morning as the sun rises¹⁴. Tamil poetry speaks of *cennel arici* "rice obtained from a reddish variety of paddy" as the best kind and most suitable for Pongal. But this is seldom available anywhere in Jaffna¹⁵.

The celebration on January 15th is known as patti Pongal. This is done in the evening near the cattle shed. The importance of cattle in an agricultural land needs no emphasis. Jaffna Tamils generally don't have any celebrations on January 16th connected with the two previous celebrations.

For Ohno there are 17 corresponding events of Koshōgatsu and Pongal. They are as follows :

Japan	Tamilnadu and Sri Lanka
January 14th	
1. tondoyaki (ritual burning of old things)	1. old possessions are burned
2. sheds are burned	2. cowsheds are burned
3. fire crackers are exploded	3. fire crackers are exploded

January 15th

4. decorations are hung
5. fresh water drawn for the first time in the year
6. rice gruel made with red beans is served
7. offerings to crows
8. people circle their houses while calling "Hongara hongara"
9. tree-beating

January 16th

10. apprentices' and/ or servants' holiday (a day for amusement)
11. new clothes given to employees
12. family gathers in parental home; visits to family graves
13. visit by performers
14. dancing and singing
15. shooting arrows
16. offering to horses and cows
17. kite-flying

4. decorations are hung
5. fresh water drawn for the first time in the year
6. red rice gruel or bean gruel is served
7. offerings to crows
8. people circle their houses while calling "Pongalō pongal"
9. tree-beating

10. a day for amusement
11. new sarees and other clothes given as gifts
12. family gathers in parental home; offerings made to ancestors
13. visit by performers
14. group dancing
15. stick games played
16. offering to cattle
17. kite-flying

Before discussing the details of these correspondences let us point out that the events do not strictly occur as scheduled above. According to the listed correspondences, serving of red rice gruel or bean gruel takes place on January 15th. Does it mean that such an event does not take place on January 14th? We have already indicated that in Jaffna society Pongal takes place mostly on January 14th. People would not like to burn their old possessions and cowsheds on that auspicious day. Such an act is considered inauspicious. Further certain events like the exploding of fire crackers, making decorations, gathering of family members in parental home, dancing, singing etc. are part of universals that occur during festive occasions in other cultures too. Most of these events take place in the Tamil society on other occasions too. For instance old possessions are burned on the eve of the New Year in April. Decorations are hung for any celebration-even for a funeral. Rice gruel is made on New Year day too. Offerings to crows are made on particular days of fast too.

The details of the correspondences as given by Ohno have to be compared and analysed for a clear understanding of the extent to which similarities exist. Burning of old possessions and cowsheds is not part of any ritual or regular practice during Pongal celebrations in Jaffna society. This may or may not take place in a household in Jaffna whereas it is done as a ritual in Japan.

Ohno says that "fire festivals are also held in Japan on January fourteenth." We have to seriously think whether we can equate the fire festivals that take place in Japan on January fourteenth and the burning of old possessions in Jaffna. Hindus have some kind of fire festivals during other months or occasions in the second half of the year. We wish to point out categorically that to our knowledge Ohno's information that "at Jaffna, people burn old objects on the evening of January fourteenth" and that "near the city of Jaffna in Sri Lanka, on the day of the Pongal festival, cowsheds together with fencing, are burned, and new ones are built" is rather inaccurate.

With regard to decorations Ohno says "on the day of Pongal in Sri Lanka, it is customary to cut banana plants and set them up at the door of one's home. He claims that this custom corresponds to the Japanese practice of setting up kadomatsu (pine trees put up at one's gate for New Year's)". Truly speaking Jaffna Tamils have this kind of decorations for a wedding or a funeral but seldom for Pongal. Rarely someone may set up banana trees in the location where Pongal is cooked but again not at the door of his home.

It is very interesting to read what Ohno says about the ritual of tree beating and wife-spanking in Japanese culture. According to Ohno "on January fifteenth in the village of the Shizuoka area, it was once the custom among farm families for children to stir rice gruel made of red beans, and then strike fruit trees with the wet stick. As they did this one of them would chant, "Big fruit, little fruit. Did you bear? Will your bear? Bear big fruit or I'll beat your branches". More amusing is the description of the practice of wife-spanking¹⁶.

We have not even heard about the tree-beating or the wife-spanking practice in modern Jaffna. Of course tree-beating prevailed in some parts of Jaffna in the past. But surprisingly Ohno says that "the tree-beating ritual takes place even today in the rural areas around the city of Jaffna, Sri Lanka". The questions we would like to raise here are: Is this really a current practice? Specifically where is it done in Jaffna? Is it done as a ritual on the fifteenth of January? Who does it, the young or the old? A few other points too deserve similar questions in his paper.

Ohno cites "providing employees with new clothes, visits to parental home, singing and dancing" as common practices in both cultures during Koshōgatsu and Pongal celebrations. But broadly speaking such practices take

place commonly in several other cultures too during festive occasions. His statements like "on Pongal, in the vicinity of Jaffna, Sri Lanka, too, a man goes from door to door, playing a drum and singing songs, after which he offers celebratory words and receives a small reward", "in the Tamil speaking area of Sri Lanka, the day for amusement is the same as in Japan, the sixteenth", "on Pongal day in the Jaffna area of Sri Lanka..... a type of bulfighting takes place" need further investigation for these are not customary practices in most parts of Jaffna. The usual occasion during which new clothes are distributed as gifts is Deepavali.. During other occasions such as the Pongal and the New-year new clothes may or may not be distributed as gifts. Visits to parents, relatives and friends are done more enthusiastically and also as part of regular cultural practice during the New Year celebrations. Japanese may have all these during Koshōgatsu celebrations in January but with regard to Jaffna society any such undue emphasis on these practices during Pongal celebrations will be considered artificial, far fetched and even motivated.

V

In the light of what we have pointed out and discussed, we feel that some kind of re-thinking becomes essential on the authenticity of the materials gathered for investigation, the interpretation of the materials, the correspondences set up, and the methodology and the scientific approach adopted in the study. We would like to emphasise the need to draw a line between past practices and current practices, widespread practices and practices restricted to a few areas, and between common practices and uncommon practices and also to have precise statements about these practices.

NOTES

1. Susumu Ohno, Arunasalam Sanmugadas, and Manonmani Sanmugadas. 1985. World View and Rituals Among Japanese and Tamils, Gakushuin University Series 13, pp 226, Japan.
2. For instance in some contexts the author refers to the Jaffna Tamil society and in others he speaks of Sri Lankan Tamil society. See p.9. Tamil language and culture differ even within the Sri Lankan Tamil society. Among others, the Jaffna Tamil society and the Batticaloa Tamil society differ markedly in linguistic aspects and cultural practices.
3. One could see a lot of variations in funeral practices from region to region and caste to caste in Jaffna. But this does not mean that Jaffna people don't agree on any practice. It is possible to find certain practices as common-core and project some of the variant practices as very old on time scale.

4. The name *kiil nilam* probably does not occur in old Tamil literary works.
5. The word *ulakam* may freely vary with the word *lookam* in these phrases.
6. *Pandal* "shed" is a Tamil word. It has been borrowed into English too. Funeral *pandal* differs from wedding *pandal* in structure. Both types of *pandal* are referred to by different names.
7. *Pancami* is the last five of the lunar days.
8. Nowadays people seldom have such beliefs. During the past five decades a lot of changes have taken place in the customs, manners and beliefs of the society.
9. Nowadays people especially the younger generation have a tendency to discard this traditional way of announcing one's death and to resort to new ways of it expressing it especially with regard to deaths caused by the armed forces of the government in the Tamils' struggle for more rights.
10. As this point was discussed in an informal gathering a school child asserted that Jaffna and Japan are similar. Asked how, she said with all seriousness : change ff to pp and interchange the final letters na in Jaffna, you will have Japan. This explanation was according to her Tamil pronunciation of the word Japan.
11. Recollect note 2 in this context too.
12. There are several other Tamil idioms whose literal sense portray early cultural practices in Jaffna society.
13. The linguistic correspondences between Japan – Tamil will have to be reviewed in a separate paper.
14. Only the relevant details are given here from the point of our analysis.
15. The author of this paper did not have a chance to see it or taste it during the past fifty years.
16. For details of wife-spanking see pp 36 – 37 in Ohno's volume.

THE TITLE *PARUMAKA* FOUND IN SRI LANKAN BRAHMI INSCRIPTIONS – A REAPPRAISAL

S. K. SITRAMPALAM

In Sri Lanka the Brahmi inscriptions begin to appear around the middle of the third century B. C. at the dawn of the historical period of the Island. Most of these have been edited by Paranavitana. His first volume published in 1970 contains 1289 inscriptions collected from 269 sites and the present study is based on the inscriptions included in this volume. (Paranavitana S. 1970). The vast majority of these inscriptions are Pre-Christian in date and concentrated in the Dry Zone; they are spread over the northern, northwestern, eastern and southeastern parts of Sri Lanka, where there are natural caverns suited for inditing these inscriptions. It is of special significance that the title *Parumaka* not only occurs in more than a quarter of the above inscriptions but also these inscriptions are found at sites where the relics of both the Protohistoric and early historic periods have been discovered. The materials contained in them are therefore invaluable for analysing the social and cultural institutions of that period. (Fig. I)

The word *Parumaka* occurs in inscriptions as the title of persons who made donations of caves or were the kinsmen of such donors. Inscriptions which refer to this title have a wide distribution. They are generally brief and run to one or two lines only. Nevertheless, the occurrence of this title in these records proves to be a valuable source of information for the study of the political, social and economic organisation in early Sri Lanka about which the Pali sources do not record detailed information. Although much has been written on the origin and the significance of this title, there is scope for a reappraisal in view of its occurrence in the Sangam literature which too is partly contemporaneous with the inscriptions as well as the recent archaeological findings which throw new light on the beginnings of civilization in the island. (Sitrapalam, S. K. 1980)

Various scholars have from time to time expressed different views on the origin of this word. Bell (1892) argued that it signified chief and was applied to kings. He also drew attention to the similarity of this word with Sanskrit *Pramukha* and Elu (Proto-Sinhalese) *Pamok* and the Tamil word *Perumakan* used to denote a prince or a noblemen. Goldschmidt however (1897), erroneously rendered this word as *Brahman*. According to Wickramasinghe (E.Z.1:17,35) Sanskrit *Pramukha*, Pali *Pamukho*, and *Pāmokkho*, Sinhalese *Pamok* are synonymous and mean "Chief" and phonetically too the Pali and the

Sinhalese forms are derived from Sanskrit *Pramukha*. Parनाविताना (1970: ixxiv), on the other hand, while endorsing the view of Wickramasinghe suggested that this word is the old Sinhalese form of Sanskrit *Pramukha* and Pali *Pamukho* or *Pāmokkho* which is often used to denote the president of a guild or a corporation. He further argued that this title too was borne by the nobles who were the members of the *gana* confederacies at the time of the Buddha. Finally he concluded that this title may denote the same group of people as the *Issara* (which means lord or noble) who are often referred to in the literary sources. Many others endorse Parनाविताना's view on this matter. (Nicholas.C.W. 1950; Ellawalla H. 1969) Before scrutinizing the arguments adduced in support of this view, it may however be noted that although this title occurs frequently in the Brahmi inscriptions, it is not found in Pali Chronicles such as *Dipavamsa* and the *Mahavamsa*.

Phonetically the derivation of the Sinhalese *Pamok* or Pali *Pamukho*/*Pāmokkho* from Sanskrit *Pramukha* is tenable. For, Sanskrit *Pra* becomes *Pa* or *Para* and not *Paru* in the Prakrit languages as in the case of Sanskrit *Priya* becoming *piya* and *chandra* becoming *chanda*. This only proves that the Sinhalese *Pamok* and the Pali *Pamukho*/*Pāmokkho* are really derived from Sanskrit *Pramuka*. Hence it is misleading to derive *Parumaka* of the Brahmi inscriptions from Sanskrit *Pramukha*, especially when there is already a parallel derivation. Therefore it is incorrect to argue that the *Parumaka* of the Sri Lankan Brahmi inscriptions is derived from Sanskrit *Prāmukha*.

Parनाविताना also argued that the *Parumaka* cannot be derived from the Tamil word *Perumakan* / *Parumakan* (Ray: 1959). According to him this Tamil term is a later occurrence than Sanskrit *Pramukha*. But, this is incorrect for the following reasons. The antiquity of the term *Perumakan* / *Parumakan* is clearly vouchsafed by the earliest literary works in Tamil, namely the Sangam literature, where it occurs as a title meaning "Chief", a leader. Although it is believed that the Sangam literature was composed in the first three centuries of the Christian era, one cannot ignore the fact that they contain much older words as well. Hence it is incorrect to say that the Tamil *Parumakan* / *Perumakan* is a later occurrence than the Sanskrit *Pramukha*. Moreover the analysis of the words *Perumakan* / *Parumakan* shows that they are not derived from Sanskrit *Pramukha* because as in the case of the Sinhalese *Pamok* and Pali *Pamukho* and *Pāmokkho* in Tamil too there is another parallel term *Piramukar* being derived from Sanskrit *Pramukha*. It may be asked why this term not occurring in the Brahmi records of Tamil Nadu. In Tamil Nadu these records number less than hundred and were inscribed only in some important centres. The Prakritic influence too was limited only to these places and did not penetrate the rural areas about which the Sangam literature provides elaborate information. Moreover, unlike in Sri Lanka where

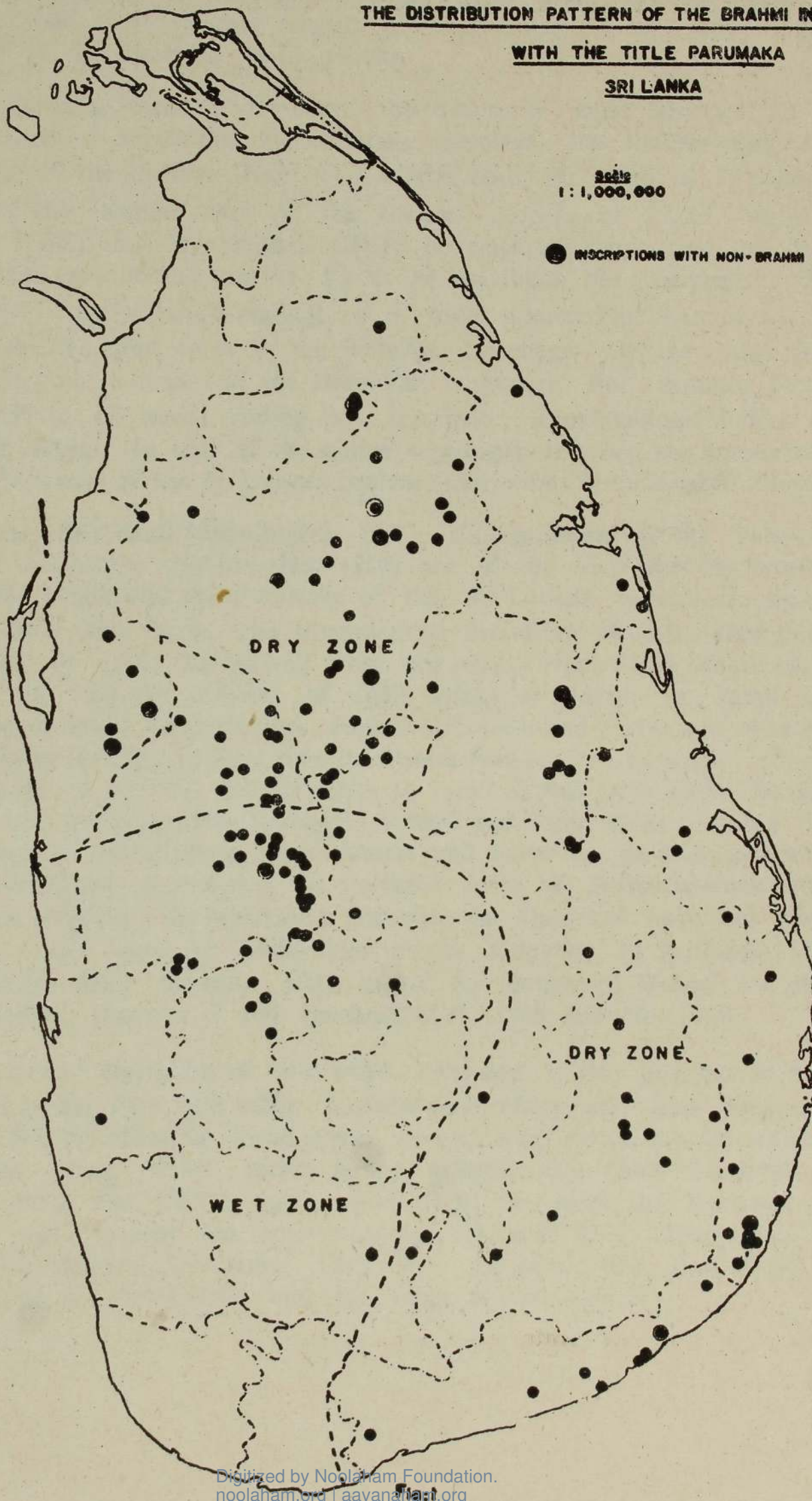
THE DISTRIBUTION PATTERN OF THE BRAHMI INSCRIPTIONS

WITH THE TITLE PARUMAKA

SRI LANKA

Scale
1:1,000,000

● INSCRIPTIONS WITH NON-BRAHMI SYMBOLS



Parumakas played an active role in the spread of Buddhism, in Tamil Nadu they did not play such a role. Hence there was no need for these *Parumakas* to be mentioned in the Brahmi records of Tamil Nadu, where many of them are records of donations to Jaina monks.

The feminine form of *Parumaka* too occurs in eight instances in the Brahmi records of Sri Lanka. Paranavitana, however, has inadvertently read the suffix *la* of the Brahmi letter as *Lu* and read the word as *Parumakalu*. Readings of the similar form of the Brahmi records of Tamil Nadu by Mahadevan (1968) and Mahalingam (1967) convincingly show that this letter should be read as *La* and not as *Lu* as Paranavitana has interpreted. Even if we accept Paranavitana's reading, it is quite evident that there is no *Lu* ending for the feminine form in the Sinhalese Language. On the other hand *Lu* ending is quite common in the Dravidian languages. For instance Telugu, adds an "U" to all words ending in a consonant. Tamil colloquial does this to a certain extent. In view of the above arguments, it is not at all convincing to derive *Parumaka* of the Sri Lankan Brahmi inscriptions from Sanskrit *Pramukha*.

On the other hand Mahalingam (1967) Kanagaratnam (1978) Veluppillai (1980) and the author (Sitrapalam, 1980) are of the view that the word is of Dravidian origin and the *Parumaka* of the Sri Lankan Brahmi inscriptions is derived from this form. The etymological derivation of this word clearly confirms this. It could be derived from two ways; either from Tamil prefix *Paru* or *Peru* with the addition of suffix *Maka* or *Makan*. In Tamil *Paru* means large or bulky as in *Paruppu*, *Paruman*, *Parumai* and *P̄riya* and other such forms. If *Maka* is added to *Paru* then it becomes *Paru+maka=Parumaka*. (Burrow T and Emeneau S. M. 1960. 267 No. 3277) In Tamil as well as in other Dravidian languages such as Malayalam, Kannada, Telugu and Tulu, *Maka* meaning child or infant appears as the early form; *Makan* and *Makal* are its later derivations. It is also significant to note that the feminine form of *Makan* is *Makal*, which again means daughter. In Malayalam *Makan* is the Masculine form and *Mōn* is its variant. *Mōl* again in Malayalam means daughter. In Kannada *Maga*, *Magaru*, *Magu* refer to son, while *Makal* to daughter, *Makkal* in genera denote children. (Burrow T and Emeneau.M.B. 1960. 304: No. 3768).

A second derivation of this word *Parumaka* is also possible with the addition of prefix *Peru* with suffix *Maka/Makan*. (Burrow;T and Emmaneau, M. ., 1960:291 No.3613) In Tamil *Peru*, *Perum*, *P̄er*, *Periya* are the variations of the form *Peru*, which means large, greater, elder and important. In Malayalan *Peru*, *P̄er*, *Periya* again means large or chief. In Kannada *P̄er*, and *Percu* again convey the same meanings. So is in Tulu. Telugu has *Peru* which again denotes the same. Thus for *Parumaka* two derivations are possible. One is *Paru+Maka* and the other is *Peru+Maka*.

The suffix *Mān* which again is a variant of *Maka/Makan* of *Perumaka/Parumakan* reminds us of the chieftains ruling in Tamil Nadu such as *Atiyamān*. *Atiyamān* is in fact a derivation from *Atiyarmakan*. *Malaiyamān*, *Cēramān* *Tontaimān* *Velmān* are other such cases. Thus, we see *Makan* shortening as *Mān* as in the case of *Perumān*, *Netumān*, *Kōmān*. The connotation of *Makan* is son or an exalted person. As head of a resident clan group who achieved this rank designation the term *Makan* may imply descendant of the clan/lineage, ancestor, great descendant, scion and son (Seneviratne, S. 1984:288). References in the Asokan inscriptions such as *Keralaputa*, *Satyaputa* show that *puta* is a prakrit equivalent of *Makan/Mān*. In fact these are references to *Ceramāns* and *Atiyamāns* and conveys the meanings of a descendant, scion and so forth. The examination of the word *Perumakan* occurring in Sangam literature reveals that in almost all cases it refers to chief/clan chieftains.

It is also quite interesting to note that in the Sangam literature it is the form *Perumakan* that was used. The following are some of the references.

<i>Valvil ilaiyar Perumakan</i>	(Akam 152-15);
<i>Vatukar Perumakan</i>	(Akam 253-15);
<i>Vayavar Perumakan</i>	(Akam 69-17);
<i>Kallallaiyar Perumakan</i>	(Akam 83-9);
<i>Akavunar Perumakan</i>	(Akam 113 3);
<i>Aviyar Perumakan Perunkalñatan Pēkan</i>	(Circu; 86);
<i>Ōviyar Perumakan</i>	(Ciru 122);
<i>Canrōr Perumakan</i>	(Patir.58);
<i>Malavar Perumakan Atiyamān Netumān Anci</i>	(Narri 52-9);
<i>Villōr Perumakan Korran</i>	(Narri 265-3);
<i>Vicciyar Perumakan</i>	(Kuru 328-5)
<i>Pānar Perumakan</i>	(Aink 458-3);
<i>Māvarar Perumakan</i>	(Puram 88-3);
<i>Kuravar Perumakan</i>	(Puram 157-7;13);
<i>Pūliyar Perumakan</i>	(Puram 387-28)

The expression *Perumakan* also denoted king as is evident from the references in the post Sangam works such as *Cilappatikaram* (1-31; 10-47; 162; 13-63; 27-173; 215) and *Manimekalai* (14-71; 25-40; 62; 132). Probably taking the above meanings into account Tamil Lexican (1930:2881) gives three meanings for the term *Perumakan/Parumakan*. They are great men, chief and the king. *Perumān*, *Pemman*, a variant of this also meant a nobleman, great man, elder, king and God Siva. Again *Perumakkal* too meant great men. *Perumāl* a title

used by the Cēra kings had the original meaning elder, great man, nobleman, king or God (Tamil lexicon. 1930. 2882); *kōman* again denoted both king and God.

In the light of the evidences from the Sangam literature another strong possibility is that the title *Parumaka* is a Proto-Dravidian form having the same connotation as the Tamil form *Perumakan*. Such a view presupposes that an older form was retained for a longer period without any modification in the Island of Sri Lanka, while in Tamil Nadu it had undergone a process of phonetic change and development during the early historic period.

Interestingly the title *Parumaka* went out of use in Sri Lankan Brahmi inscriptions in the early part of the first century A. D. and was replaced by an other title *Ma Parumaka* and this persisted up to the 10th century A. D. It is also interesting to note that the prefix 'ma' in Tamil means 'great' (Burrow, T and Emeneau. 1960 No. 3923). This form could even be a Proto-Dravidian form. Hence, it is no longer possible to say that 'ma' is a derivation from Sanskrit 'Maha' which again denotes the same. Thus the addition of prefix 'Ma' to *Parumaka* again shows that the king himself was originally the *primus inter pares* among *Parumakas*. The survival of this form '*Maparumaka*' in the Sinhalese language itself shows that it has preserved more likely Proto-Dravidian forms such as 'Ma' and *Parumaka* in it. This again shows that in Ancient Sri Lanka as well as Tamil Nadu the political hierarchy developed along similar lines. The rare occurrence of "*Parumakal*" in both the Sangam literature and the Brahmi inscriptions of Sri Lanka again shows that the ladies in both countries did not take an active role in the then prevailing political and social system as did the *Parumakas* / *Parumakans* / *Perumakans*.

Paranavitana (1970 : ixxiv) on the contrary asserts that it is most likely that these *Parumakas* were the descendants of the Indo-Aryan pioneers who established village settlements in various parts of the Island during the early days of its colonization by immigrants from North India who played a vital role in introducing a settled agricultural life and the elements of Indo-Aryan culture, including the Sinhalese language into the Island. Finally he ended up by saying that 'the foundations of the economic, political, religious and cultural institutions which they laid stood firm for centuries and still remains so for those of the present and the future generations to build upon'. However, his arguments for North Indian origin of the *Parumakas* are not at all convincing for the following reasons. Firstly the etymological origin of this title shows that it has no semblance *what so ever* to Sanskrit *Pramukha* and hence indicates no North Indian origin. Secondly the close resemblance in the role of the *Parumakas* of Sri Lanka and the *Perumakans* / *Parumakans* of Tamil Nadu repudiates its North Indian origin. Finally there is neither literary (Mendis G. C. 1965 : 263–279) nor Archaeological (Sitrapalam S. K. 1980) nor Anthro-

pological evidences (Kirk R. L. 1976 : 91—99) to substantiate the story of the North Indian colonization of the Island. On the other hand the evidence for the early settlements in the Island in the form of Megalithic monuments shows that the early Civilization of both Sri Lanka and Tamil Nadu not only originated from Megalithic culture but also developed along the same lines before the introduction of Buddhism to the Island around the 3rd century B. C. The proximity of the Megalithic sites to the caves bearing the Brahmi inscriptions as well as the donations of caves to the Buddhist clergy by the *Parumakas* again show that it was these *Parumakans*/*Perumakans* who became prakritised with the introduction of Buddhism and its canonical language Pali. Subsequently this paved the way for their assimilation of North Indian cultural traditions. Scholars like Paranavitana failed to recognize this process and confused the later cultural infiltration with the original settlements. A thorough assimilation of the Buddhist cultural tradition by the progenitors of the present day Sinhala speakers need not imply and did not require a full scale Indo-Aryan migration from North India. (Goonetilleke, S. 1980, Sitrampalam, S. K. 1980).

Although one could dismiss the arguments of Paranavitana regarding the North Indian origin of *Parumakas*, yet his views on the role of *Parumakas* in the political, and the economic life of the island is quite convincing. Thus Nicholas (1950) is right as Paranavitana in saying that this title denoted a group of aristocracy immediately below royalty but high in social scale. According to him most of the high officials belonged to this group which formed a ruling class or a considerable portion of it. Similarly Perera (1951 : 78 - 96) expressed the view that they were the backbone of a stable local government at a time when the power of the kings was not sufficiently centralised in order to provide the protection and leadership the people needed. Although one could not get many more details of *Parumakas* / *Perumakans* / *Parumakans* in the Sangam literature and their role in the administrative, economic and the social set up of ancient Tamil Nadu as in the case of Sri Lanka, however, it may be argued that there too they would have played a similar role and the Sangam literary sources failed to take cognizance of this aspect in detail as in the case of the Sri Lankan Pali sources like *Dipavamsa* and the *Mahavamsa*.

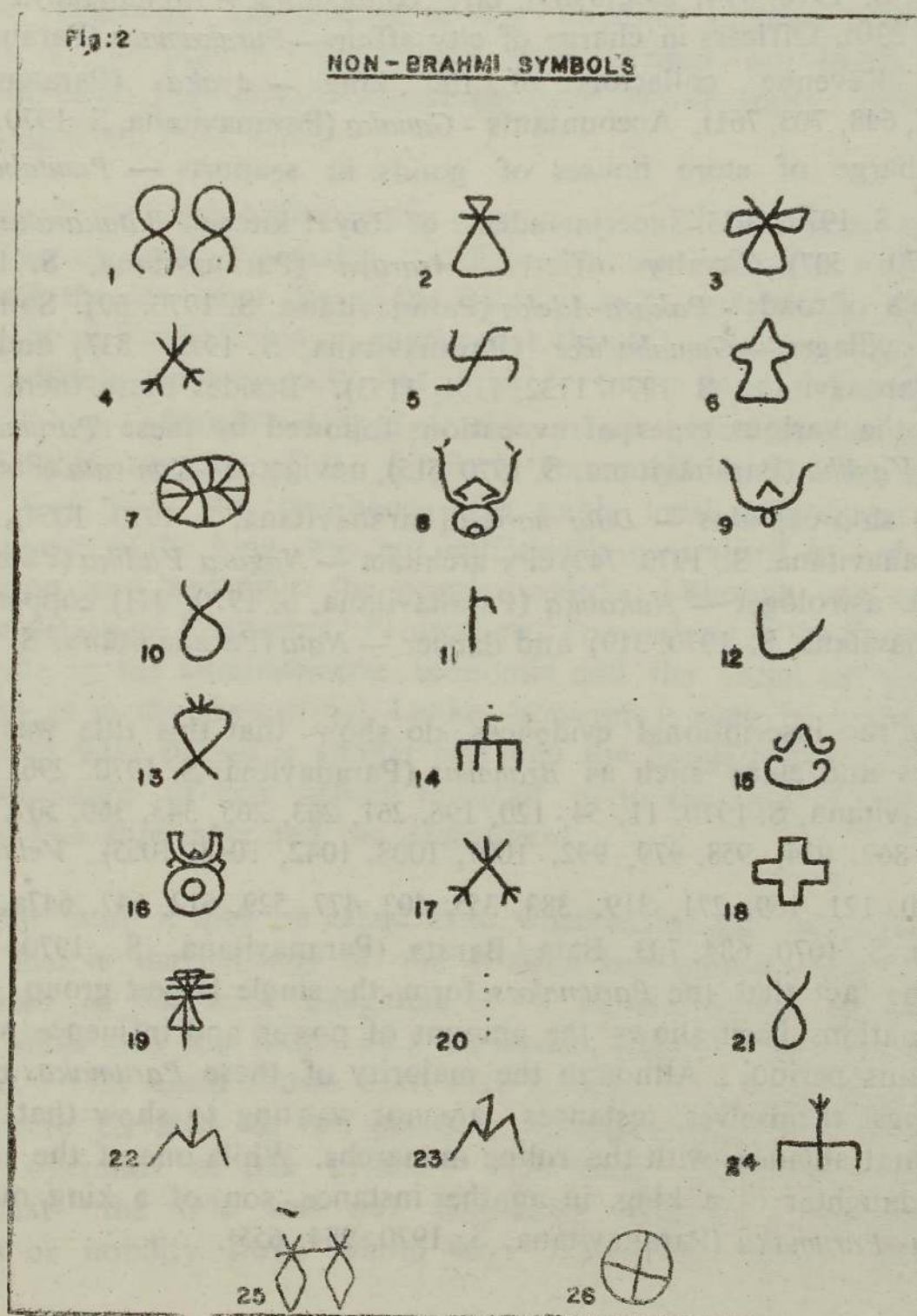
Further more it may be asked as to whether this title was a hereditary one. It is true that in the majority of the Brahmi inscriptions that the *Parumakas* are introduced as the sons / daughters of a *Parumaka*, yet instances are not wanting to show that the father of a *Parumaka*, did not have this title prefix to his name. This again shows that even people who were not the sons of *Parumakas* were elevated to this position. Ironically enough we do not know the modus operandi of this process. However, Nicholas (1950) succinctly concludes that "the title was not hereditary although it was borne by an upper class or nobility from whom were drawn the higher officials of the

kingdom. Men who were not the sons of *Parumakas* could be elevated to that rank". Therefore it is plausible to argue that the title *Parumaka* which appears to have been used on a hereditary basis seems to have lost its original character and subsequently was applied as a title of high rank.

The perusal of the body of the Brahmi inscriptions, in fact gives very many details of the role played by the persons bearing this title. They were ministers (*Amataha; mataha*) (Paranavitana, S. 1970. 161; 1202, 1205); Army commanders (*Senapati*) (Paranavitana, S. 1970. 620, 665, 724, 725) Keeper of the Treasury — *Badakarika* (Paranavitana, S. 1970. 3, 22, 59, 63, 64, 65, 66, 621, 1035, 1109) keepers of horses *Asa-Adeka* (Paranavitana, S. 1970. 355), Record keepers—*kanapedika* (Paranavitana, S. 1970. 1202), keepers of palanquins *Sivika - Adaka* (Paranavitana, S. 1970. 894, 895, 896a), city councillors — *Nagaragutiya* (Paranavitana, S. 1970. 230), Officers in charge of city affairs—*Purakamata* (Paranavitana S. 1970. 1002) Revenue collectors of the king — *Ayaka* (Paranavitana. S. 1970. 471, 647, 648, 703, 761), Accountants - *Ganaka* (Paranavitana, S. 1970. 212, 213), Officers in charge of store houses of goods in seaports — *Panitabadakarika*, (Paranavitana, S. 1970. 1035) Superintendents of Royal kitchen—*Batakaraka* (Paranavitana, S. 1970. 507), Cavalry officers — *Asaruya* (Paranavitana, S. 1970. 606), Superintendents of roads - *Pakara-Adeka* (Paranavitana, S. 1970. 69). Some of them even owned villages — *Gamabujhike* (Paranavitana, S. 1970. 837) and tanks — *Vapihamita* (Paranavitana, S. 1970. 1132, 1151, 1153). Besides these, there are even references for the various types of avocations followed by these *Parumakas*, such as Traders — *Vanijha* (Paranavitana, S. 1970. 515), navigator—*Kaniyata* (Paranavitana S. 1970. 977a) ship captains — *Duta navika* (Paranavitana, S. 1970. 1054), teacher—*Achariya* (Paranavitana, S. 1970. 749) city architect — *Nagara Vadika* (Paranavitana, S. 1970. 1092), astrologer — *Nakatika* (Paranavitana, S. 1970. 941) copper smith — *Tabara* (Paranavitana, S. 1970. 319) and dancer — *Nata* (Paranavitana, S. 1970. 910).

Finally the inscriptional evidences do show that this title was borne by various castes and clans such as *Brahmins* (Paranavitana, S. 1970. 296, 838, 1045), *Nagas* (Paranavitana, S. 1970. 11, 54, 120, 196, 261, 263, 265, 343, 360, 507, 639, 660a, 677, 725, 736, 869, 934, 958, 979, 992, 1007, 1008, 1042, 1048, 1055) *Vels* (Paranavitana, S. 1970. 121, 169, 271, 319, 383, 355, 403, 477, 529, 612, 647, 647a, 979), *Ays* (Paranavitana, S. 1970. 684, 703, Bata / Barata (Paranavitana, S. 1970. 321, 776, 896, 931). The fact that the *Parumakas* form the single largest group in making such cave donations itself shows the amount of power and influence wielded by them during this period. Although the majority of these *Parumakas* could have married amongst themselves, instances are not wanting to show that they even had matrimonial alliances with the ruling monarchs. While one of the *Parumakas* married the daughter of a king, in another instance, son of a king married the daughter of a *Parumaka* (Paranavitana, S. 1970. 984, 655).

Before we conclude, it becomes necessary to say something about the symbols occurring in the inscriptions bearing this title *Parumaka* (Fig. 2) Parnavitana, however, has named these as non-Brahmi symbols. (Parnavitana, S. 1970, xxvi). These symbols mostly occur either at the beginning or at the end of these inscriptions. But there are also instances where they occur in the middle of the inscriptions. The number of symbols found in these inscriptions too vary from one to five. Sometimes the same symbols are repeated twice in the same inscriptions and in some other cases with varying symbols. With regard to the details, symbol 1 actually consists of two symbols and in appearance looks like a Brahmi letter *ma* in an inverted position. This occurs in an inscription at Anaikutti kande (Parnavitana, S. 1970. 72) The symbol 10 and 21 are in fact similar to this symbol I. The only difference is that unlike the symbol 1 these appear single in the normal position of a Brahmi letter *ma* in the inscriptions at Ritigala and Tonigala (Parnavitana, S. 1970 269, 1051 - 55).



Although we are not quite certain about the meaning of this symbol it is sometimes taken to represent a fish in a stylised form. Nevertheless this appears as a graffiti mark on the Megalithic pottery of both South India and Sri Lanka. Although several examples can be had from South India, in Sri Lanka it appears at Pomparippu, Kollankanatte, Anuradhapura, Kantarodai and Makewite (Sitrapalam, S. K. 1980. fig. 46—48). Symbol 2 occurs in the inscription at Vessagiri (Paranavitana, S. 1970 81). Some feel that it represents the king's seal (Abeyasinghe, A. 1965: 245—266). Although it has no parallels in the Megalithic graffiti marks of Sri Lanka, however, it appears as a graffiti mark at T. Narasipur, and Salihundam (Seneviratne, S. 1984 298). Similar symbol without the middle stroke is also found at Alagarai (Seneviratne, S. 1984. 298) Presently it is difficult to correlate symbol 3 which appears at Handagala (Paranavitana, S. 1970 - 120) with any known parallels. This again looks like a Brahmi letter *ma* with triangular like decorations outside at the crossing of the bars.

Symbols 4 and 17 are in fact one and the same and appear in the inscriptions at Nattukanda and Situlpavuva (Paranavitana, S. 1970 166, 120). This too has many parallels in the South Indian Megalithic pottery but in Sri Lanka it appears as a graffiti symbol in the pottery at Anuradhapura. The only difference is that here it appears in an inverted position only (Deraniyagala, S. 1972. 124). Symbols 5, 6, 7, 8 and 9 appear at Ritigala (Paranavitana, S. 1970. 268) Symbol 5 is the usual popular swastika symbol which is taken to represent the sun. This not only appears as a graffiti symbol in the Megalithic pottery of both South India and Sri Lanka, but also it appears as one of the symbols in the early coins of both the countries.

Symbol 6 in appearance looks like a Mother Goddess. It is no wonder that Proto-historic people who were agriculturists worshipped her. Symbol 7 is again a cakra with eight spokes. In fact Lord Vishnu has the cakra as one of his symbols. It is sometimes taken to represent the sun or a Dharma cakra. This too occurs as a symbol in the early coins of South India and Sri Lanka.

Symbols 8 and 9 are in fact one and the same with slight variations. Could this be taken as a representation of a sulam (lance). Historically sulams have been represented with single, double and triple prongs. Here also two prongs are quite clear and the mark in the middle of this symbol credits it with Trisula. Sulams appear as symbols in the early coins. Trisulam also appears as a symbol on the bronze seal discovered at Anaikkoddai, Sri Lanka (Sitrapalam, S. K. 1984). However, one could find a double sulam being represented as a graffiti mark on the pottery at Pomparippu in Sri Lanka, (Sitrapalam, S. K. 1980) but in form it is different from the one that we are discussing. Symbols 10, 11 and 12 again appear in the inscription at Ritigala (Paranavitana, S. 1970 269). We have already discussed the symbol 10. Symbol 11 looks like Ankusa and has parallel in the graffiti marks of the Sri Lankan Megalithic pottery from Pomparippu and

Anuradhapura (Seneviratne, S. 1984. 297). Symbol 12 which looks like an arch may be a representation of the moon. This is similar to the graffiti symbol found at Anuradhapura (Deraniyagala, S. 1972. 123).

Symbol 13 occurs at Kandakadu (Paranavitana, S. 1970. 318). Although it has no exact parallels in the Megalithic pottery of either Sri Lanka or South India it occurs with some variation in the Megalithic pottery of South India (Lal, B. B. 1960. Pl VI 4). Symbol 14 has parallels in the graffiti symbols of Korkai and Alagarai, (Seneviratne, S. 1984. 297). This symbol again appears in the inscription at Erupotana (Paranavitana, S. 1970. 331). Symbol 15 occurring in the inscription of the above site (Paranavitana, S. 1970. 333) could again be a representation of a Mother Goddess in a different form. Unfortunately we have no parallels for this in the graffiti symbols. Symbol 16 occurring in the inscription, at Kudubigala (Paranavitana, S. 1970. 498) could be interpreted as a representation of Nandipada. Nandipada too occurs as a symbol in the early coins of India and Sri Lanka. We have in fact discussed the symbol 17 already. This is found in the inscription at Situlpavuva (Paranavitana, S. 1970. 620). Symbols 18, 19 and 20 occur at Periyakadu vihara (Paranavitana, S. 1970. 941). Symbol 18 is in fact a cross with broad arms. However crosses without broad arms do appear in the Megalithic graffiti symbols in both South India and Sri Lanka.

Symbol 19 has parallels in the Megalithic graffiti symbol of Adichchanallur, South India (Seneviratne, S. 1984. 298) and the symbol 20 is represented in the form of dots in a straight line. One is not quite sure of its exact significance. Symbols 21 and 22 appear in the inscriptions at Tonigala (Paranavitana, S. 1970. 1051 - 55). We have already discussed the symbol 21 and symbol 22 is similar to a graffiti symbol from Pomparippu (Sitrapalam, S. K. 1980 fig. 46). Symbol 23, 24 and 25 are found in the inscription at Mullegama (Paranavitana, S. 1970. 1074). Of these symbols 24 is the same as symbol 23 and the symbol 24 occurs with a slight variation in the Megalithic graffiti mark at Pomparippu (Sitrapalam, S. K. 1980. fig. 46). Symbol 25 which looks like two Brahmi *ma* letters joined by a bar has no parallels. Symbol 26 occurring in the inscription at Piccandiyava (Paranavitana, S. 1970. 1233) has a parallel in the graffiti symbol of T. Narasipur, (Seneviratne. 1984. 298).

It may be added that these symbols have a long antiquity. In India some of them occur even in the seals of the Indus Valley Civilization and persisted through the Chalcolithic cultures down to the Megalithic culture. These have overflowed to Sri Lanka as well, probably with the introduction of the Megalithic culture into the Island. Some symbols were in vogue during the historical period of the island as well where they occur as symbols in the early coins and persists even today as the brand marks of cattle. Thus their antiquity and continuity needs a separate study by itself. Presently we are unable to see any link between these symbols and the contents of the inscriptions. Could these be the symbols re-

presenting nature / religion / clan or all combined? Finally the above discussion of the symbols however, shows that the authors of the Megalithic culture of Sri Lanka and the personages bearing the title *Parumaka* are one and the same. This in turn confirms the close relationship between South India and Sri Lanka in those early days. In the light of the above analysis one could convincingly say that the title '*Parumaka*' is a Dravidian form or more likely a Proto-Dravidian form.

BIBLIOGRAPHY

- Abeyasinghe, A. 1965
Sinhalese Palaeography. Unpublished Ph. D. Thesis, University of London pp. 245 - 266.
- Aink: Añkurunūru, 1961
 Akam: Akanānūru, 1961
 Bell. H. C. P. 1892
 Burrow, T. and Emeneau, M.B. 1960
A Dravidian Etymological Dictionary, Oxford.
- Cilappatikāram. 1920
 U Ve Cāminātaiyar (ed) Madras.
- Ciru: Cirupanārru Patai 1962
 Deraniyagala, S. 1972
 Po vē Cōmacuntaranār (ed) Thirunelvely.
- Ellawalla, H. 1969
 E. Z. *Epigraphia Zeylanica*
 Goldschmidt Paul. 1897
 The citadel of Anuradhapura 1969. Excavations in the Gedige area in *Ancient Ceylon* No. 2 Dec. pp. 48 - 164.
Social History of Early Ceylon. Colombo.
- Goonetilleke, S. 1980
 "Notes on Ancient Sinhalese inscriptions" in *J. R. A. S. (C. B.)* p. 2.
 "Sinhalese - The origins" *Lanka Guardian* Vol. 3 No. 1 pp. 22 - 29.
- Kanagaratnam, D. J. 1978
Tamils and Cultural pluralism in Ancient Sri Lanka. Colombo.
- Kirk R. L. 1976
 "The legends of Prince Vijaya — A study of Sinhalese origins" in *American Journal of Physical Anthropology* Vol. 45 No. 5 pp. 91-99
- Kuru: Kuruntokai, 1962
 Lal B. B. 1960
 Po vē Cōmacuntaranār (ed) Thirunelvely.
- Mahadevan, I. 1968
 "From the Megalithic to the Harappa. Tracing back the graffiti on Pottery" *Ancient India* No. 16 pp. 4 - 24.
Corpus of Tamil Brahmi inscriptions (Madras)

- Mahalingam, T. V. 1967
 Manimekhalai. 1956
 Mendis, G. C. 1965
- Narri : Narrinai. 1962
 Nicholas, C. W. 1950
- Paranavitana, S. 1970
 Patir : Patirruppattu. 1963
 Perera, L. S. 1951
- Puram : Puranānūru 1962 - 64
 Ray, H C. 1959
 Seneviratne, S. 1984
- Sitrampalam, S K. 1980
1984
- Tamil Lexicon 1930
 Velupillai, A. 1980
- Wickramasinghe, D.M. De Silva 1912
- Early South Indian Palaeography* Madras.
 U vē Cāminātaiyar (ed) Madras
 "The Vijaya legend" in Jayawickrama (ed)
Paranavitana Felicitation Volume Colombo
 pp. 263 - 279.
 Po vē Cōmasuntaranār, (ed) Thirunelvely.
 "Some Offices and Titles in the early
 Sinhalese Kingdom" *University of Ceylon
 Review* Vol. viii No. 2 pp. 116 - 128.
Brahmi Inscriptions of Ceylon Colombo.
 Cu. Turaicamipillai (ed) Thirunelvely.
 The Brahmi inscriptions as a source for the
 study of the early History of Ceylon. *The
 Ceylon Historical Journal* Vol. I No. 2 pp. 78 - 96
 Cu. Turaicamipillai (ed) Thirunelvely.
History of Ceylon, Vol. I Part I (Colombo)
 "The Archaeology of the Megalithic Black
 and Redware complex in Sri Lanka" in
Ancient Ceylon No. 5 pp. 237 - 307.
The Megalithic Culture of Sri Lanka. Un-
 published Ph. D. Thesis, University of Poona,
 Poona
 "Ancient Jaffna An Archaeological Pers-
 pective" *Journal of South Asian Studies*.
 Vol. 3 Nos 1 & 2.
University of Madras (ed)
 Tamil influence in Ancient Sri Lanka with
 special reference to Early Brahmi inscriptions"
 in *Journal of Tamil Studies* vol. 17 pp. 16 - 17
Epigraphia Zeylanica (Lond).

A HUMAN CLIMATIC CLASSIFICATION FOR SRI LANKA

K. M. PUVANESWARAN

INTRODUCTION

Sri Lanka is an Island situated on the northern edge of a zone which is commonly known as a belt of calm of the Doldrums. This belt lies close to the equator and extends to about 10° North and 10° South of the equator. The Island's extent is 25,000 sq.mile or 65,000 sq.km. Island of Sri Lanka lies between $5^{\circ}.55'N$ and $9^{\circ}.55'N$ latitudes and between $79^{\circ}42'$ and $81^{\circ}52'$ East longitudes. Because of its latitude position, the sun can never (at midday) be lower than 57° above the horizon. The solar radiation always strikes the earth (Sri Lanka) at a high angle and is, therefore, relatively concentrated on any given area of Sri Lanka throughout the year. Although Sri Lanka is a small Island, it has a complex relief pattern—the mountainous area in the south central part ranges in elevation from about 3000 to 7000 feet, and is surrounded by an upland belt of about 1000 to 3000 feet, while the coastal plain occupies the rest of the Island. This plain on the south-west broadens out to a vast tract in the north. The central mountainous area plays an important role in determining Sri Lanka's physical (weather and climate) and cultural landscape.

Sri Lanka has four marked seasons in its climate, mainly based on its rainfall and meteorological controls of the Island. In the months of March-April and October-November, the Island's weather and climate comes under the influence of the inter tropical convergence zone (ITCZ). In other words, due to the planetary movements, the northern convergence zone crosses Sri Lanka through the lowest layers of the atmosphere during the month of April on its northward journey and during October on its return. Climatologically the Island experiences the convectional seasons during these periods. Since they occur in-between two monsoons, they are also referred to as the inter Monsoon Seasons. When the northern convergence zone moves away to the north of Sri Lanka, the Island comes under the influence of equatorial air or the equatorial westerlies. This is the air stream of the south west monsoon. However, the south west monsoon is experienced in the weather of the Island only from latter half of May up to September. Sri Lanka comes under the influence of the north east monsoon which generally prevails over the Island from the beginning of December to the end of February.

Note: This paper was presented at the International Geographical Union working group on Geography of Health, Symposium on incidence of infections and chronic diseases: Held at the Department of Geography, University of Madras, Madras, South India, between 1—4. December, 1981.

The term 'season' in Sri Lanka's context is entirely different to what the term means in the subtropical and polar regions. Here it depends purely on rainfall variation.

Although, several studies on human climatic classification have been done for the subtropical regions (Auliciems and de Freitas; 1976, de Freitas, 1979; Terjung, and Louie, 1971) there has not been a single study undertaken in the tropical environment. Several bioclimatic methods such as heat stress, cold stress, clothing requirements have been used in those studies to give a quantitative interpretation of the body environment relationship. In this study, we have attempted to use the clothing requirement model for the human climatic classification of Sri Lanka. It is an obvious fact that the requirement of clothing is very minimal in Sri Lanka which has a tropical climatic environment, compared to a country in the subtropics which comes under the influence of the winter cold. However, it has remarkable variations in the seasonal and day and night clothing requirement.

Description of climate in terms of clothing requirements is by no means a new concept. It has been used by the Chinese who use the term 'two suit months' when referring to November. Broad zones of insulation needs were devised by the U.S. Army quarter master corps (Simple, 1949), with divisions such as one layer clothing zone (sub-tropical), and two layer clothing zone (sub-Artic). Apart from this past attempts to assess climate in terms of physical units of measurement have failed to provide direct required thermoregulatory activity of the amount of behavioral response (Auliciems and de Freitas, 1976). Because of the complexity of human response and man's inability to make physical measurement no satisfactory human climatic classification has been devised. Gregoczuk, (1966), has put forward a classification based on Air Enthalpy which relates physiological stress or behavioural patterns to the total content of the atmosphere. Terjung's (1966, 67, 68) works in this field has provided a comprehensive scheme of classification.

The present study is based on a scheme of classification which was originally introduced by Herrington, Winslow and Gagge (1937). The scheme was substantially modified by Auliciems, de Freitas (1976), and de Freitas (1979) to overcome some of the shortcomings of previous classification scheme. This approach assumes the existence of a specific thermoregulatory state and then estimates the response in terms of clothing insulations required for the maintenance of that state in a given climate (Auliciems and de Freitas, 1976).

Clothing unit, Clo., is a widely used concept describing thermal resistance to dry heat flow along a temperature gradient (Auliciems, de Freitas, 1976). It is a physical unit defined in terms of a recognizable human scale which simplifies and standardizes discussion of thermal insulation of air layers, fabrics. (Gagge, Burton and Bszett, 1941).

METHOD :

Burtan and Edholm (1955) have shown that the amount of insulation required to maintain thermal equilibrium between the human body and the environment without sweating or shivering can be expressed by :

$$I_{cl} = \frac{T_s - T_a}{H} - \frac{I_a (H+R)}{H} \quad (1)$$

Where, I_{cl} , is the resistance to thermal transfer through clothing, T_s is the skin temperature at comfort taken as 35°C . (Hardy, 1949), T_a is the air temperature. I_a is the resistance to heat loss of the boundary air layer at the clothing surface. H is the rate of dry heat transfer to the environment constant at approximately 75% of the metabolic rate (Dubois, 1927). R is the net solar heat load on the human body.

Considered together, the I_{cl} and I_a terms represent the resistance in series to simultaneous convective and radiative heat loss from the body across the thermal gradient from skin to clothing and clothing to air. The standard formula in equation (1) is given by :

$$I_a = \frac{1}{0.62 + 0.19 V^{0.5}} \text{ Clo.} \quad (2)$$

Where, V is wind velocity in cm s^{-1} (Winslow, Gagge and Herrington, 1939, Burton and Edholm, 1955), have shown that because of the partly offsetting effects of air temperature on heat loss by radiation and convection, Equation (2) affords a reasonable approximation over the normal range of low air temperatures encountered by man. It was originally developed by Harrington, Winslow and Gagge (1937) on the difference in temperature between the body and its surroundings, ($T_s - T_a$). Its application in the present context has been described in detail by Burton and Edholm (1955), Auliciems, de Freitas and Hare (1973), and de Freitas (1979).

The literature in bio-meteorology gives the metabolic rates for a great variety of activities (Christensen 1953, Spector 1956, Durnin and Passmore 1967). Energy expenditure rates range from 58 Wm^{-2} for resting man, ($110-175 \text{ Wm}^{-2}$) for slow working and light activity and between 460 and 1050 Wm^{-2} for heavy work.

The solar heat load on upright man (R) in the present circumstances may be calculated by :

$$R = (R_c \cos \alpha p^m a_r b) \quad \text{W/m}^2 \quad (3)$$

Where, R_c is the solar constant taken to 1390 W/m^2 . α is the solar angle,

p is the mean zenith path transmissivity of the atmosphere. This shows the marked latitudinal and seasonal distribution north of the sub-tropics in northern hemisphere. However, there is not much variation on this component in the Tropics, where Sri Lanka is situated. It was taken to be 0.6 for Inter Monsoon seasons and 0.7 for North East and South West Monsoon seasons.

m is the optical air mass which is the exponent of the mean zenith path transmissivity (p). In the present context, this can be calculated from the following formula. (Terjung, and Louie, 1971).

$$m = \sin \left\{ (90 - Z) + 0.15 [(90 - Z) + 3.885]^{-1.253} \right\}^{-1} \times (P_z P_o - 1) \quad (4)$$

Where, Z is the zenith angle of the sun. $P_z P_o - 1$ is the ratio of air pressure at height z to the air pressure at sea level P_o .

a_r is the combined solar heat load term related to the body surface receiving radiation and b is the absorptivity factor, a_r is the sum of direct diffuse and terrain reflected radiation. So that, the solar heat load on man will depend mainly on the above factors. In the absence of the solar radiation data, to calculate the solar heat load on man, procedure (2) was adopted. The total radiation absorbed by the body will vary according to the proportions a_r and b with the value of the former dependent on the relative contributions of the direct, diffuse and reflected component to the total solar input. The effective body area exposed to direct radiation (projected area) and the total body area expressed as a ratio of direct radiation is directly related to \cos (Pugh and Chrenko, 1966), depending upon the body posture and orientation. In the absence of cloud cover diffuse radiation may be calculated from clear sky albedo varying according to Paltridge, (1974). Assuming an upright position facing the sun, approximately 40% of the body is exposed to direct radiation (Roller and Goldman, 1968). The diffuse radiation also plays an important role to increase the absorbing surface up to double this value, particularly in the case of reflected radiation, when fresh snow cover is present. As such, it is reasonable to assume a_r within the range of 40-80% (Auliciems and de Freitas, 1976). A similar absorptivity range for clothing (b) would apply (Burton and Edholm, 1955, Lee and Vangham, 1964). Several investigators, (Roller and Goldman 1968, Givoni, 1969) have shown that balanced estimates of the variable range of these factors provide a reasonably reliable prediction of the solar heat load on man. Given the degree of variability, it was decided that a combined total absorptivity factor ($a_r b$) of 60% was most suitable for the general classification. Therefore, the absorptivity factor of 0.6 was used for average conditions of maximum solar heat load and it will indicate the mean minimum resistance to thermal transfer through clothing.

In Equation (2), the component refers to solar angle, this can be calculated by using the latitude of a location (ϕ), solar declination (π), hour angle of sun (h). The standard formula is given in the following expression (List, 1963).

$$\sin \alpha = \sin \phi \sin \pi + \cos \phi \cos \pi \cos h. \quad (5)$$

Substituting for I_a (2) and T_s in equation (1) and converting to Col. units description of the thermal environment in terms of clothing requirements for comfort is given in a final Equation as follows:

$$I_{cl} = \frac{33 - T_a}{0.155 H} - \frac{H + 834 \cos \alpha \cdot 0.6}{(0.61 + 0.19 V^{0.5} H)} \text{ Clo} \quad (6)$$

Where, one cloth unit is defined in physical terms as the insulation that will allow the transfer of 1 Wm^{-2} with a temperature gradient of 0.155°C between the inner and outer boundaries of the insulating medium.

Employing the procedure explained, maximum clothing value were obtained using mean minimum monthly air temperature and lowest possible solar radiation (night time). Since there is no wind velocity data available in Sri Lanka for all meteorological stations it is necessary to use a standard night time wind velocity value found in the literature—a wind speed of 890 cm s^{-1} , a level representative of convective heat loss from the body. The insulation of air decreases very little at wind speeds greater than 400 cm s^{-1} . The relationship between wind speed and insulation of air is graphically explained by Bedford, (1948).

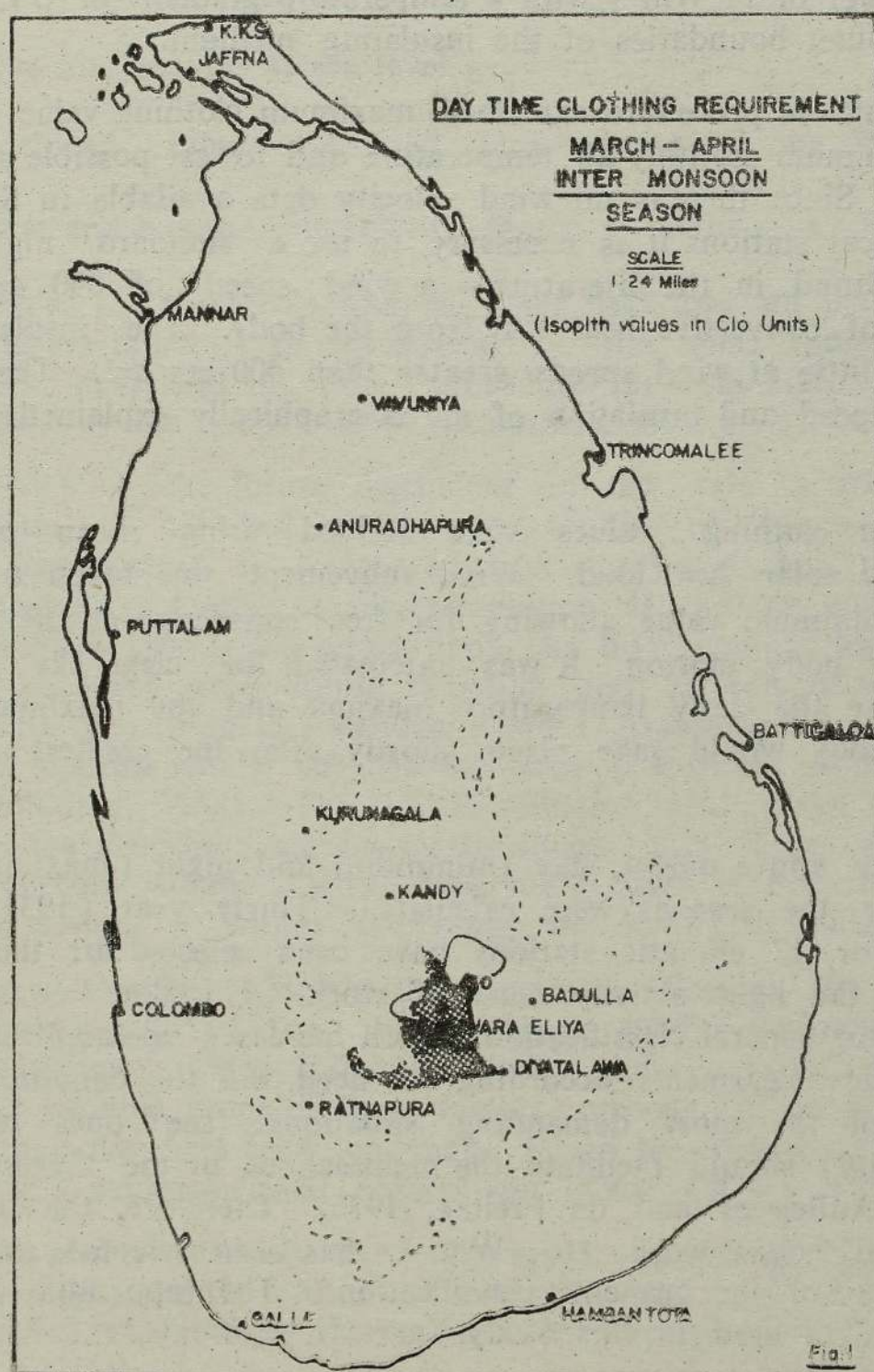
Minimum clothing values were derived using mean maximum air temperature and solar heat load. Wind movement was taken to be 44 cm s^{-1} which is the minimum value allowing for free convection at the skin clothing surface and for body motion. R was calculated for clear sky condition at 1400 h, because the daily temperature maxima and the maximum solar heat load on the body would take place shortly after the greatest solar altitude at 1400 h.

Using the above model, day (minimum) and night (maximum) clothing requirement for the seasons were calculated. Thirty year (1931-60) average climatic data for 17 climatic stations have been selected for this study. The lower limit of the light activity class of work, 116 Wm^{-2} was selected as most suitable for general classification. With increased metabolism, man should be able to remove garments according to need, but the definition of clothing requirements for the most demanding situations (the ones involving least muscular activity) should facilitate the maintenance of the thermal equilibrium at all times, (Auliciems and de Freitas, 1976). Therefore, the lower limits of the light activity class work, 116 Wm^{-2} , has been selected as most suitable for the purpose of the present classification. The appendix 1 gives the meteorological data used in this study.

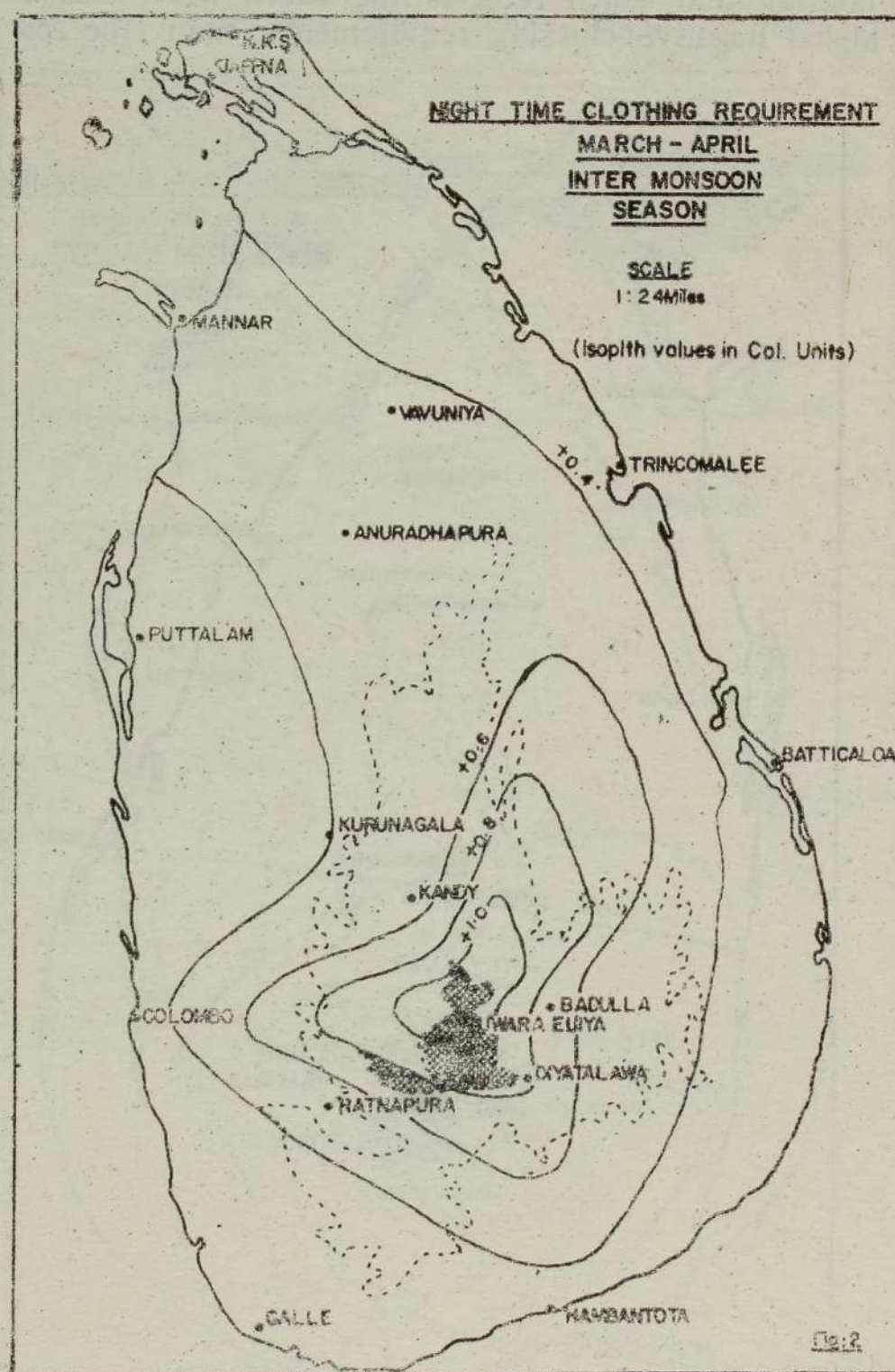
RESULTS :

The generalized areal distribution of day time (minimum) and night time (maximum) clothing requirements are shown in figs. 1 - 8. To give a clear picture of clothing requirements clothing unit maps are given separately for day and night together with the contour lines. The variations of clothing requirements in this classification clearly reflects the effect of the rainfall seasons and the variation of relief which goes up to 8000 feet.

Figure 1 for the Inter Monsoon Season of March—April which has a day clothing values between $+0.7$, $+0.09$ shows that only a very small area over 6000 feet in high in the central high lands requires 0 to 0.09 clothing.

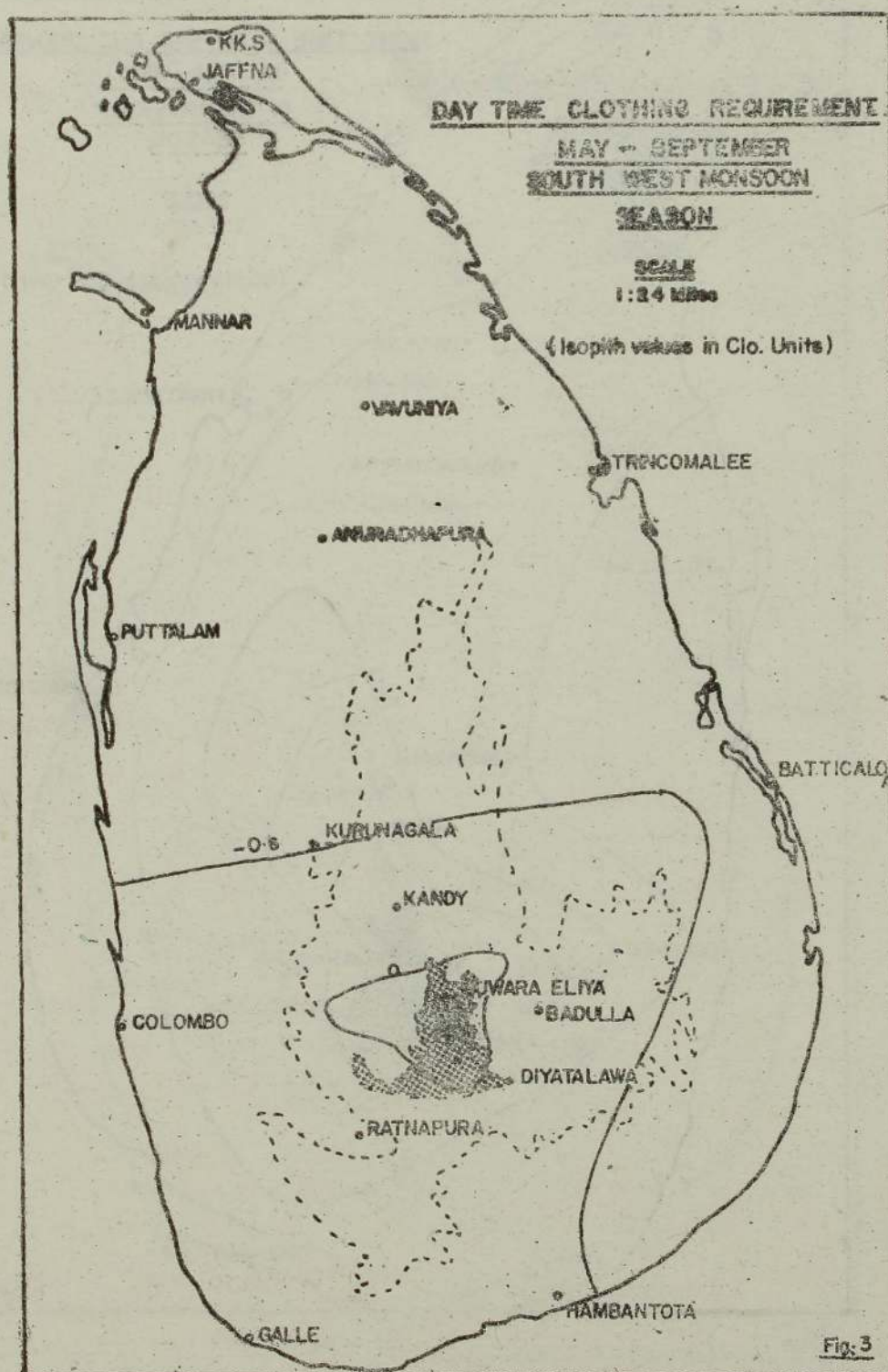


Except this, the dry high land (Diyatalawa, -0.13 , Badulla, -0.29), the mid land region (over 1000 feet) requires -0.4 clothing while the low land indicated increasing negative values up to (-0.8). The reasons for these differences, appears to be largely the result of the solar radiation intensity during this season. Since there are no monsoonal currents in March - April, intermonsoon season, the clothing units isolines do not show the influence of winds. It is notable that in the case of the South West and North East monsoon the isolines show the influence of winds in one particular directions i.e south west or north east. Decreasing negative clothing value towards the central high lands show the influence of elevation. The night clothing requirements of this season is shown in Fig. 2. Although, noticeable similarity



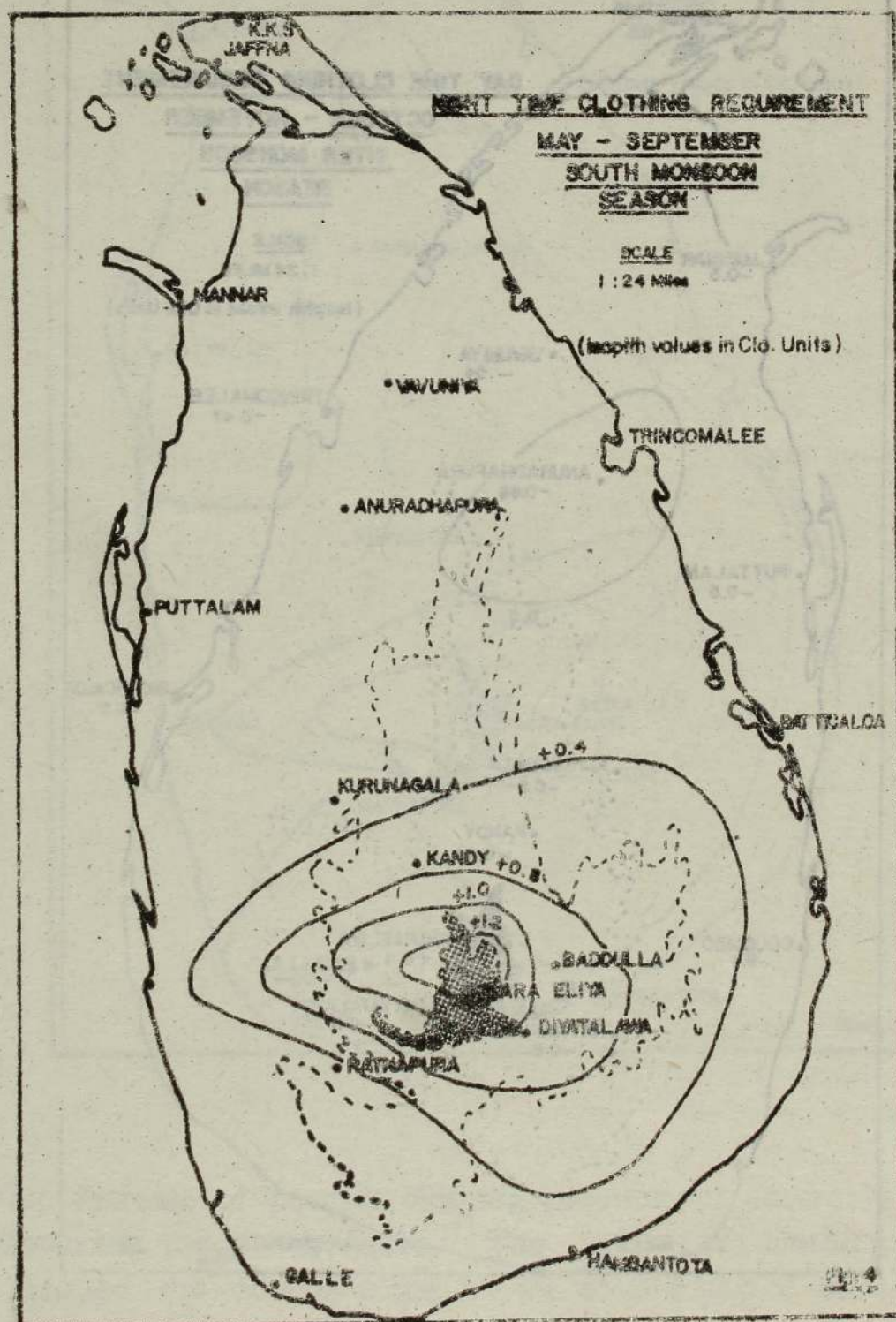
can be seen in the areal distribution between Figs.1 and 2, a remarkable change in clothing unit exists all over the Island for the night time. The gradual positive increase in clothing from the coastal stations towards the high lands clearly indicate the role of elevation and effect on clothing. All coastal areas require less than + 0.4 clothing in night time.

Following the March - April inter-monsoon season, the south west monsoon period prevails for five months in the Island's weather pattern in which the day clothing requirement nicely corresponds with the wind direction of the south west monsoon Fig. 3. The south west quarter of the island comprise with -0.4 clothing value curve and within this area an increase of clothing requirement according to height can be seen. Positive clothing units are indicated above 6000 feet. The south west coastal land which receives the south west monsoon shows comparatively higher negative clothing requirements than the rest of the low land



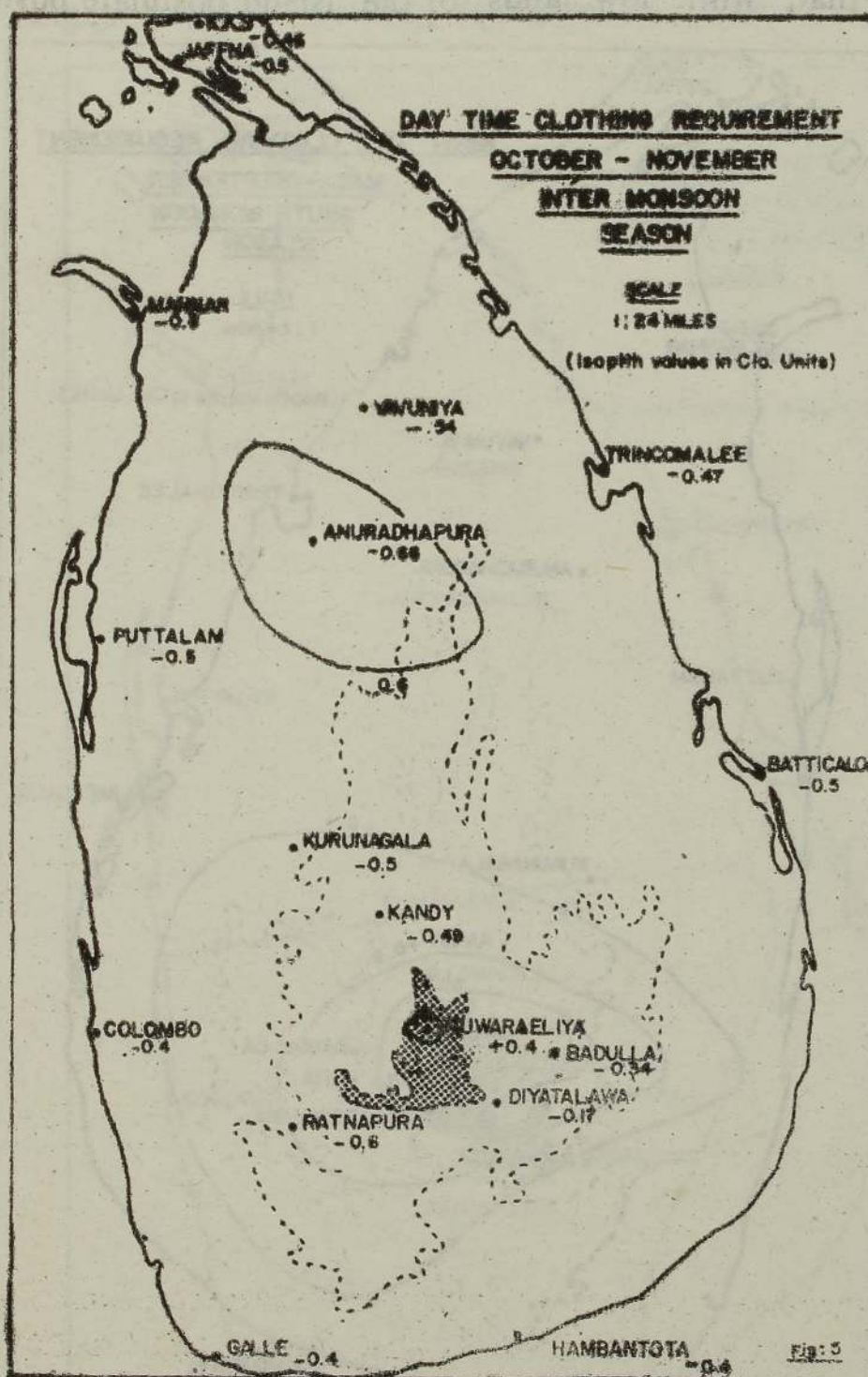
where the values range from -0.4 to -0.52. These differences although slight, between the above two regions, the positive effect of cloud on the incoming solar radiation in the south west coast during this period would have reduced the thermal effect by cloud albedo.

Positive increase in clothing towards the windward side, and negative increase in the leeward side of the central high land are remarkable features in front and rare side of central massive. For example, Badulla and Diyatalawa which experiences the leeward effects of south west monsoon and which are the two stations represent the dry hill land (Uva basin) shows realistic clothing figures of -0.36 and -0.12 respectively. Figure 4 shows the night time clothing requirement. It reveals that, while low lands of the island postulate positive clothing

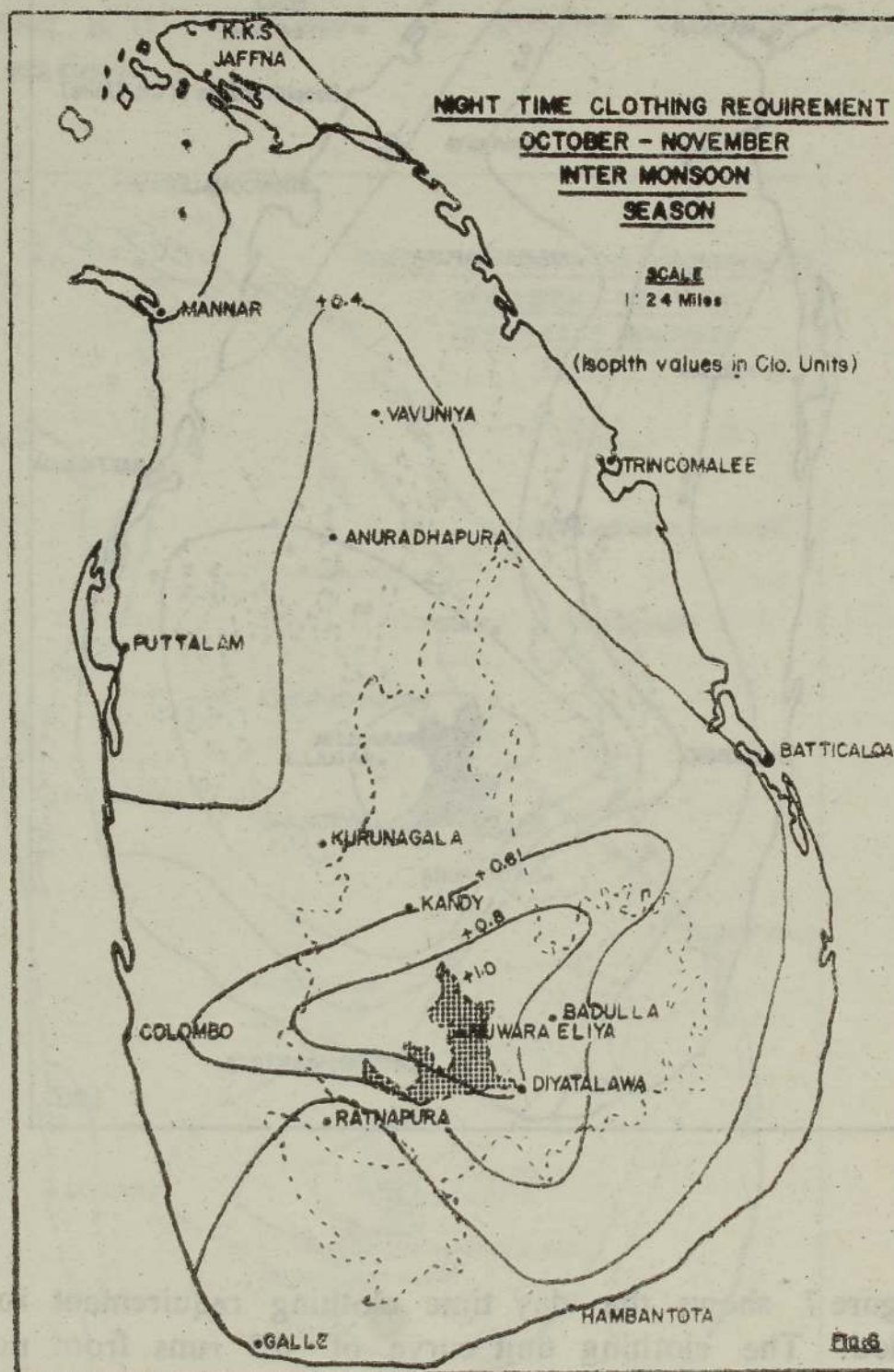


values, there is a gradual increase in clothing requirement from 1000 feet countour up to the highest elevation. At the hight of 6000 feet, Nuwara Eliya exhibits a higher clothing value of + 1.2. This value clearly illustrats the relationship between diurnal variation of temperature and clothing require-ment during night in the hill country.

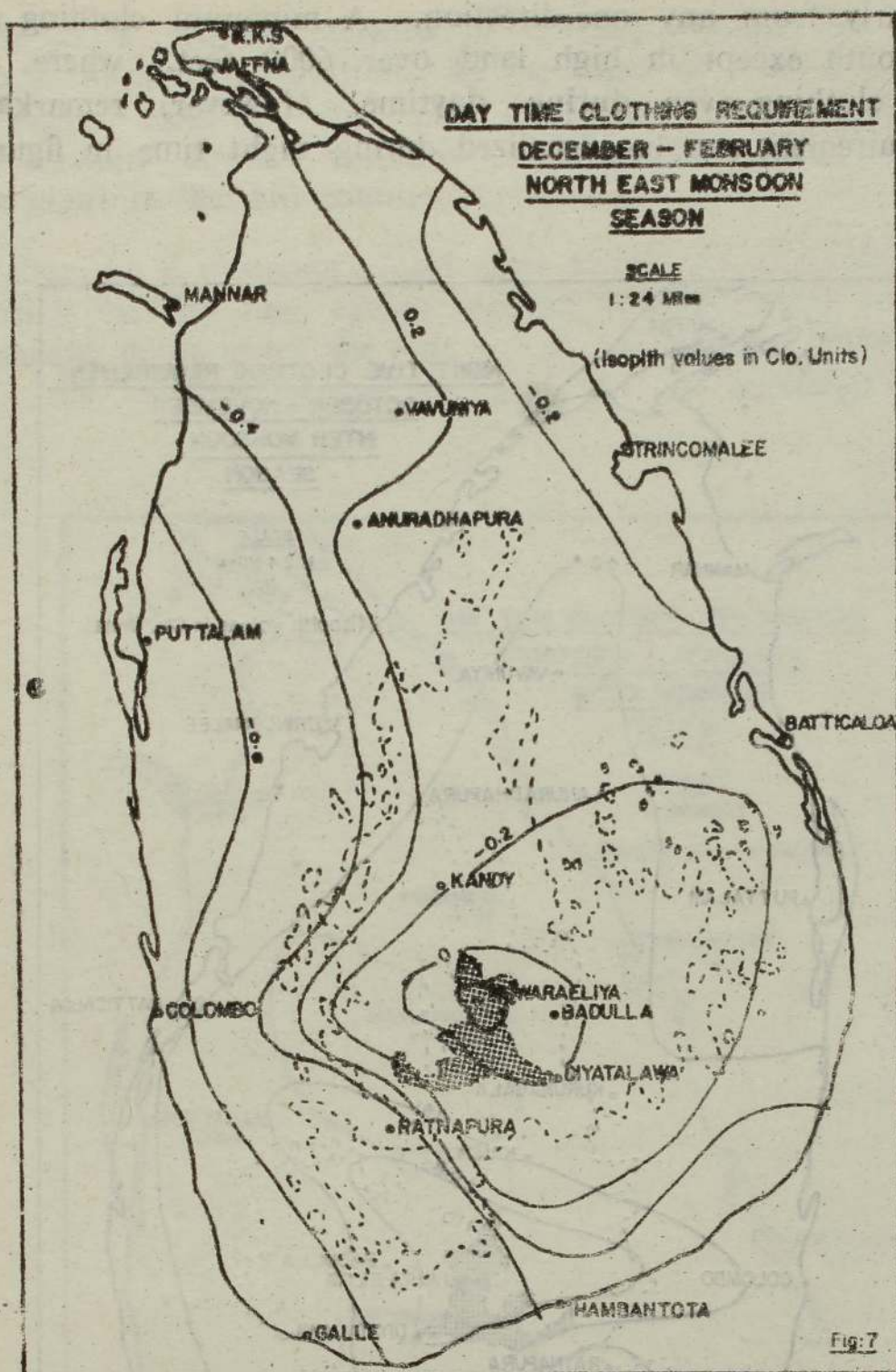
This situation is charging considerably during the following inter-monsoon season. During the day time, except arround Nuwara Eliya, rest of the Island demands negative requirement see Fig. 5. As in the case figure one, in this season also the isolines of clothing units do not explicate the influence of



winds particularly from any one direction. A minimum clothing units require during this month except in high land over 6000 feet, where, this region requir positive clothing even during daytime. However, remarkable change in clothing requirement can be visualized during night time in figure six.

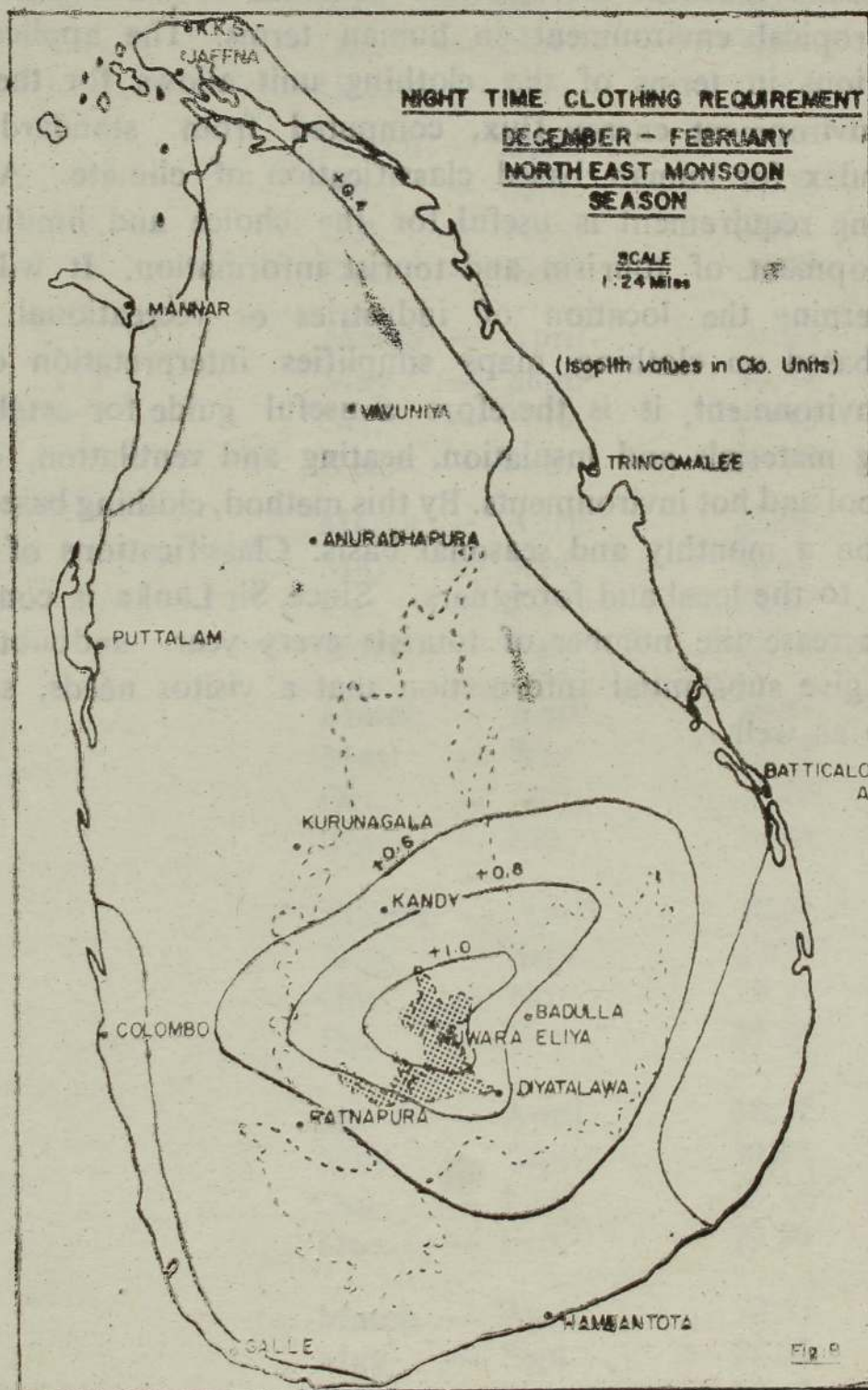


A conic increase of positive clothing requirement according to the height has been shown in the above figure. The values of clothing units ranges from +0.29 around the coastal plane to +1.1 at a height of 6000 feet.



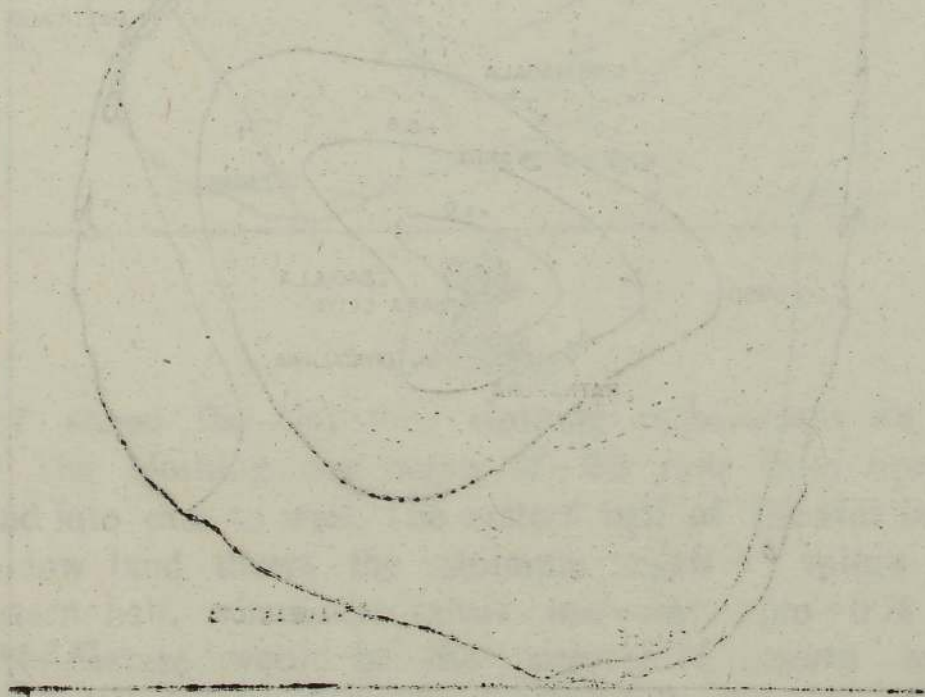
The figure 7 shows the day time clothing requirement for north east monsoon period. The clothing unit curve of -0.3 runs from north to south deviding the island into east to west. The eastern half of the area includes central high land eastern low land shows the minimum negative values of clothing compared to western half, where the values increases upto -0.78 . The reason for this remarkable feature would be the presence of north east monsoon which brings cooler air currents from Himialayan hills through the deep vallies of Ganga during this winter season. The north east monsoon is generally

cool, dry and stable wind and it is received by the eastern low land of Sri Lanka. However, west and south west parts of Sri Lanka have a minimum effects of the north east monsoon due to mountain barrier of central high and. The effect of relief has clearly been illustrated in figure 7. The zero (0) clothing isoline includes Badulla and Diyatalawa only in this season. The figure clearly illustrates that the dry high land gets the positive effects of north-east monsoon and it is elucidated by positive clothing requirement of these high land stations.



The clothing requirement is changed during night. Since, it is a winter season for northern hemisphere, all weather stations show high positive clothing requirement figures in a wider area. The island requires clothing values between $+0.3$ to 1.2 . Increasing clothing requirements towards the relief peak is clearly illustrated by $+0.4$, $+0.8$, $+1.0$ isolines and these isolines include wider areas than the night clothing requirement of previous seasons. Very cold air currents which flow from Jammu-Kashmir region through the Ganga Valley must have contributed tremendously to the higher clothing requirement.

The results illustrate the thermal demands of environment and human activity in a tropical environment in human terms. The application of energy balance Equations in terms of the clothing unit allows for the interpretation of the body-environment energy flux, computed from standard meteorological data as an index for human based classification of climate. A knowledge of average clothing requirement is useful for the choice and limiting of outdoor activity, development of tourism and tourist information. It will help to make decisions concerning the location of industries or recreational sites. Since a classification based on clothing maps simplifies interpretation of the thermal demands of environment, it is therefore a useful guide for establishing housing needs, building materials and insulation, heating and ventilation, or airconditioning needs for cool and hot environments. By this method, clothing based classifications can be done on a monthly and seasonal basis. Classifications of this kind gives greater insight to the local and foreigners. Since, Sri Lanka is concerned to develop tourism and increase the number of tourists every year, undoubtedly a study of this kind will give substantial information that a visitor needs, so that it has a practical value as well.



APPENDIX I

STATIONS	SEASONS	Tair °C (Max.)	Tair °C (Min.)
1. Colombo	March — April	31.03	23.83
	May — Sept.	29.69	25.03
	Oct. — Nov.	29.47	23.36
	Dec. — Feb.	30.22	23.31
2. Puttalam	March — April	32.11	23.64
	May — Sept.	30.64	25.82
	Oct. — Nov.	30.11	23.61
	Dec. — Feb.	30.17	22.17
3. Mannar	March — April	32.03	24.86
	May — Sept.	31.00	26.48
	Oct. — Nov.	29.72	24.77
	Dec. — Feb.	28.39	24.02
4. Jalfna	March — April	31.25	25.58
	May — Sept.	30.41	26.83
	Oct. — Nov.	29.42	24.64
	Dec. — Feb.	28.76	23.33
5. K. K. S.	March — April	32.08	24.19
	May — Sept.	32.13	25.91
	Oct. — Nov.	29.86	24.28
	Dec. — Feb.	28.02	22.64
6. Trincomalee	March — April	30.94	25.14
	May — Sept.	33.59	25.66
	Oct. — Nov.	30.00	24.08
	Dec. — Feb.	27.44	24.17
7. Batticaloa	March — April	30.36	24.42
	May — Sept.	32.77	24.07
	Oct. — Nov.	29.77	23.81
	Dec. — Feb.	27.83	23.20
8. Hambantota	March — April	30.75	24.11
	May — Sept.	30.43	24.83
	Oct. — Nov.	29.86	24.06
	Dec. — Feb.	29.56	22.78
9. Galle	March — April	30.11	24.16
	May — Sept.	28.51	25.07
	Oct. — Nov.	28.47	23.81
	Dec. — Feb.	28.98	23.00

STATIONS		SEASONS	Tair °C (Max)	Tair °C (Min.)
10. Ratnapura		March — April	33.19	22.83
		May — Sept.	30.73	23.52
		Oct. — Nov.	33.60	25.50
		Dec. — Feb.	32.09	31.83
11. Anuradhapura		March — April	33.22	22.50
		May — Sept.	32.82	24.36
		Oct. — Nov.	30.86	22.53
		Dec. — Feb.	29.28	20.88
12. Vavuniya		March — April	33.08	22.44
		May — Sept.	32.64	23.91
		Oct. — Nov.	31.11	22.08
		Dec. — Feb.	30.74	20.52
13. Kurunagala		March — April	33.31	22.94
		May — Sept.	30.72	24.06
		Oct. — Nov.	30.58	22.53
		Dec. — Feb.	28.78	21.15
14. Maha-Illupalama		March — April	33.22	22.31
		May — Sept.	31.83	23.89
		Oct. — Nov.	30.64	22.14
		Dec. — Feb.	29.07	20.76
15. Kandy		March — April	31.31	20.22
		May — Sept.	28.10	20.92
		Oct. — Nov.	28.30	19.83
		Dec. — Feb.	28.35	18.37
16. Badulla		March — April	28.58	18.50
		May — Sept.	29.90	18.66
		Oct. — Nov.	27.36	18.64
		Dec. — Feb.	25.52	17.78
17. Diyatalawa		March — April	25.61	15.25
		May — Sept.	25.53	16.78
		Oct. — Nov.	24.13	15.69
		Dec. — Feb.	22.76	14.76
18. Nuwara-Eliya		March — April	21.83	8.97
		May — Sept.	19.38	12.52
		Oct. — Nov.	19.86	11.06
		Dec. — Feb.	20.22	8.68

Temperature averages are taken for the standard period of 1931—1960
 Wind data were derived from the standard average of (1936—1960) 25 years.

REFERENCES

1. Auliciems, A, de Freitas, C. R and Hare, F. K, (1973); Winter Clothing Requirements for Canada, climatological studies, No. 22, Environment Canada, Toronto.
2. Auliciems, A and de Freitas, C. R (1976): Cold stress in Canada: A Human climatic classification, International Journal of Bio-Meteorology, 20
3. Bedford, T.(1948): Basic Principles of Ventilation and Heating, Lewis, London
4. Burtan, A. C, and Edholm, O. G. (1955): Man in Cold Environment, Arnold, London, Facsimile (1970), Hafna, New York.
5. Christensen, E.H. (1953): Physiological valuation of work in Mykroppa Iron Works. symposium on Fatigue, W.F. Floyd and A.T. Welford, Eds., Lewis, London.
6. De Freitas, C. R. (1979): Human climates of Northern China, Atmospheric Environment. Vol., 13.
7. Dubois, E.F. (1927): Basal Metabolism in Health and Disease, Lee and Iebiger, Philadelphia.
8. Durnin, J.V. and Passmore, R (1967): Energy, work and Leisure. Heinemann, London.
9. Gagge, A.P. and Burton, A.C. and Bazett, R.C. (1941): A practical system of units for the Description of the Heat Exchange of Man with his Environment Science, Vol., 94.
10. Givoni, B. (1969): Man, Climate and Architecture, Elsevier, Amsterdam.
11. Gregorczuk, M (1966): Bioclimates of the world related to air enthalpy, International Journal of Biometeorology, 12
12. Hardy, J. D. (1949): Heat Transfer, In physiology of heat regulation and the science of clothing (ed., Newburg, L.M), Saunders, Philadelphia.
13. Herrington, L. P., Winslow, C.E.A., Gagge, A.P. (1937): The relative influence of radiation and convection upon vasomotor temperature regulation. American Journal of Physiology, Vol., 120.
14. Lee, D. H. K. and Vaughan J. A. (1964): Temperature equivalent of Solar radiation on man, International Journal of Biometeorology, Vol., 20.
15. List, R. J. (ed), (1963): Smithsonian Meteorological Tables, Smithsonian Institute, Washington, D. C.

16. Paltridge, G.W. (1974): Solar Radiation Statistics for Australia, Division of Atmospheric Physics, Technical Paper, 23. commonwealth scientific and Industrial Research organization, Australia.
17. Pugh, L.G.C.E. and Chrenko, R.A. (1966): The effective area of the Human Body with respect to Direct solar Radiation, *Ergonomics*, Vol., 9
18. Koller, W. L. and Goldman, R. E. (1968): Prediction of Solar Heat Load on Man, *The Association of American Geographical Journal*, Vol., 61.
19. Simple, P. A. (1949) : clothing and climate. *Physiology of Heat Regulation and the Science of clothing*, L. H. Newburg, Ed. Saunders, chapter 12.
20. Spector, W.S. (Ed.) (1956): *Hand book of Biological Data*. Saunders, Philadelphia.
21. Terjung, W. L. (1966) : Physiological climates of the conterminous United States: A Bio climatic Classification Based on Man, *Ann. Asso. Amer. Geographers*, Vol., 56.
22.(1967): Annual Physioclimatic stresses and regions in the United States, *Geographical Review*, Vol., 57.
23.(1968) : World pattern of the distribution of the monthly comfort index, *International Journal of Biometeorology*, Vol., 12.
24. Terjung, W.H. and Louie, S.F. (1971) : Potential Solar Radiation Climates of Man, *The Asso. Ame. Geo. Annals*, Vol., 61.
25. Winslow, R. E., Gagge A. P. and Herrington, L. P. (1939): The Influence of Air movement upon Heat loss from the clothed Body, *Amer. Journal of Physiology*, Vol., 127.

GEOMORPHOLOGY OF THE VALUKKAI ARU DRAINAGE BASIN

PATHMADEVY PUVANESWARAN

This article is based on a survey carried out in the Valukkai Aru drainage basin to determine the important Geomorphological aspects of the basin. The study investigated the soil, water and proximity to the sea, stream and ponds of the Valukkai aru drainage basin. The Valukkai, though only a seasonal stream, is the only stream in the Jaffna peninsula. It was found that these characteristics of the region contributed to the drying up of the Valukkai stream.

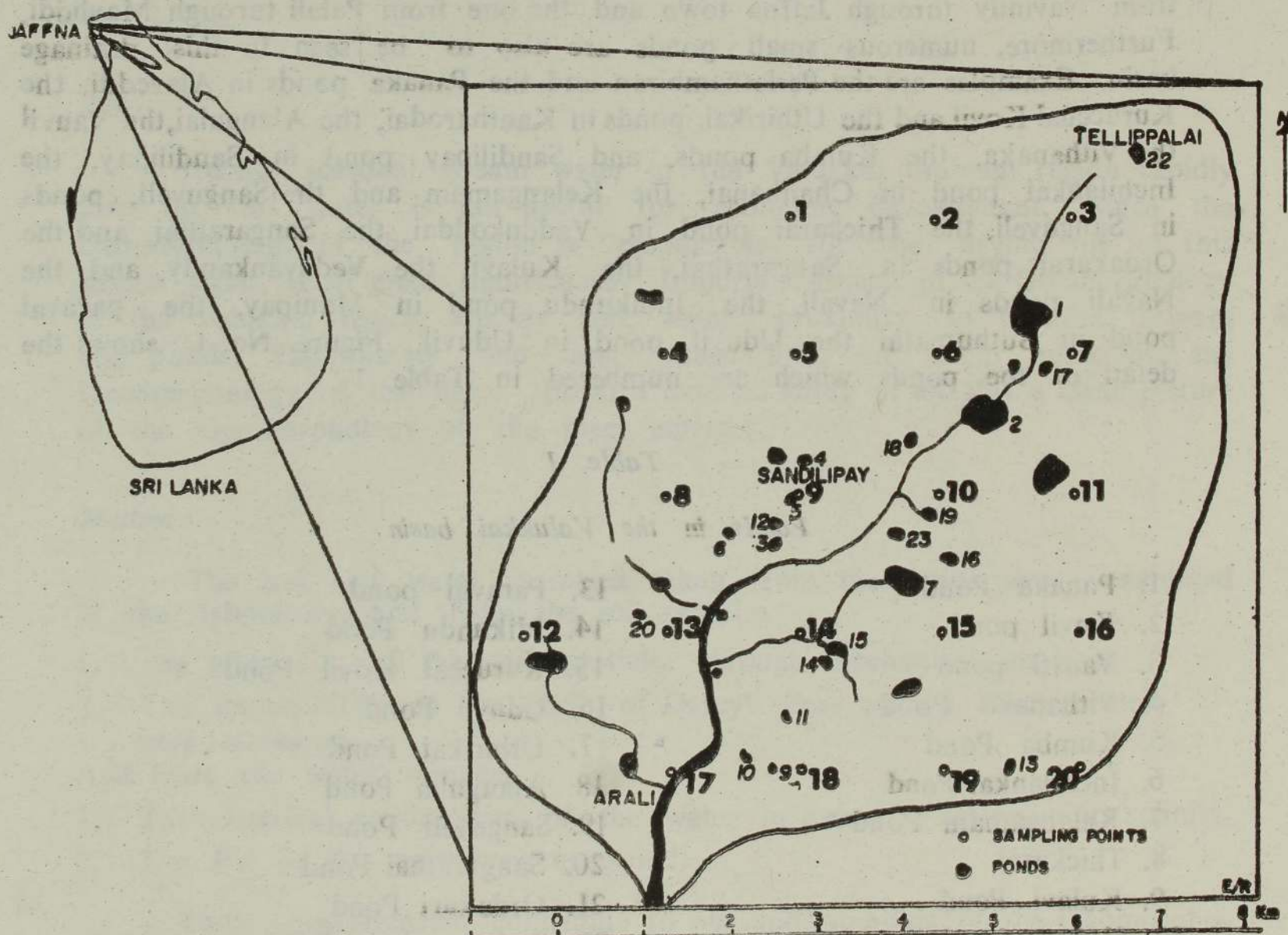


Fig. 1. LOCATION OF THE VALUKKAI ARU BASIN.

Study Area :

The Valukkai (Fig.1) is the only natural stream in the Jaffna Peninsula which lies like a crown at the top of Sri Lanka. It arises at Ampanni in Thellipalai which is at an elevation of about 10.67 Metres above sea-level and runs through Alaveddi, Uduvil and Manipay for a distance of 12.87 Kilometres and reaches the sea at Arali. On the basis of the gathering ground of the Valukkai stream system, and on the basis of a contour map of the area it was estimated that the Valukkai drainage basin consists of roughly 56.98 square Kilometres and encompasses Peria Vilan, Makiyappitty, Mallakam, Sithankerni, Alaveddy, Sandilipay, Sanguveli, Kantharodai, Vaddukodai, Kaddudai, Manipay, Suthumalai, Navali, Uduvil and Arali either in part or full.

Besides the few natural tributaries which swell the Valukkai artificial canals are also linked to the Valukkai at two places. These are the canal from Navindy through Jaffna town and the one from Palali through Mayliddi. Furthermore, numerous small ponds are also to be seen in this drainage basin. Examples are the Periathambiran and the Panaka ponds in Alaveddi, the Kuruccual Kovil and the Uthirikai, ponds in Kantharodai, the Alangulai, the Vauvil the Vithanaka, the Kumba ponds, and Sandilipay pond in Sandilipay, the Inchilankai pond in Chankanai, the Kelangamam and the Sanguveli, ponds in Sanguveli, the Thickerai pond in Vaddukoddai the Sangarathai and the Ordakarai ponds in Sangarathai, the Kulavi, the Veduvankandy and the Navali ponds in Navali, the Indikundu pond in Manipay, the paravai pond in Suthumalai the Uduvil pond in Uduvil. Figure No. 1 shows the detail of the ponds which are numbered in Table 1.

Table 1

Ponds in the Valukkai basin

- | | |
|---------------------|-----------------------------|
| 1. Panaka Pond | 13. Paravai pond |
| 2. Kovil pond | 14. Idikundu Pond |
| 3. Vauvil pond | 15. Kuruccal Kovil Pond |
| 4. Vithanaka Pond | 16. Uduvil Pond |
| 5. Kumba Pond | 17. Uthirikai Pond |
| 6. Inchilankai Pond | 18. Alangulai Pond |
| 7. Kelangamam Pond | 19. Sanguveli Pond |
| 8. Thickerai | 20. Sangarathai Pond |
| 9. Kulavi Pond | 21. Ordakari Pond |
| 10. Veduvankandy | 22. Periathamiran Pond |
| 11. Navali Pond | 23. Karapittiyar Kovil Pond |
| 12. Sandilipay Pond | |

Though this drainage basin appears flat the source of the stream is 10.67 Metres above sea level and the mouth of the stream at Arali is 1.52 Metres above sea level.

The drainage basin consists mainly of limestone which is covered for the greater part by Grey loam and to a small extent by Red soil. According to the soil analysis done by Joachim in 1945, this drainage basin falls within the Geological division "terra rossa" but according to the analysis of Moorman and Panabokke (1961) it belongs to the "red yellow latosol division".

The Valukkai is a seasonal stream which appears when this drainage basin receives rainfall during the northeast monsoon. Because of this, climate plays a large part in determining the Geomorphology of this region. According to the climatic classification of Ceylon (Sri Lanka) prepared by Thambiapillai (1952) this region is part of the "Northern coastal Area" which is denoted by 11 am.

Aim :

Because seasonal stream water in the Valukkai drainage region rapidly dries up, this water is not useful for economic development. Since the Geomorphology of the region is responsible for the drying up of this stream water, is of great significance. Important aspects of the Geomorphology of the Velukkai region are its soil, water, proximity to the sea, stream and ponds. The climate and land usage have left their mark on the Geomorphology of the place. From a detailed study of all this a clear picture of the Geomorphology of the place emerges.

Method :

The soil and water samples taken from the region were examined in the laboratory, and from the soil samples.

1. The grain size of the soil particles through mechanical analysis,
2. The permeability on the basis of Darcy's laws using a Permeameter, were measured.

And from the water samples,

1. The electrical conductivity of the water in order to determine its salinity.
2. The PH of the water were measured.

These measurements contribute to our understanding of the Geomorphology of the Valukkai stream region. Some relevant hydrological aspects such as water table etc. were also measured by the present author — by Puvaneswaran (1974), but not discussed here.

Results and discussion :

Using the hydrometer and applying the formula :

$$D_{mm} = 1.3555 \frac{U}{ew(Gs-1)} \cdot \frac{HR}{t}$$

Where, D_{mm} is Diameter of equivalent spherical particle (mm).

U is Viscosity of water at $T^{\circ}C$ (Poise).

ew is Density of water $T^{\circ}C$ (in c.g.s. units).

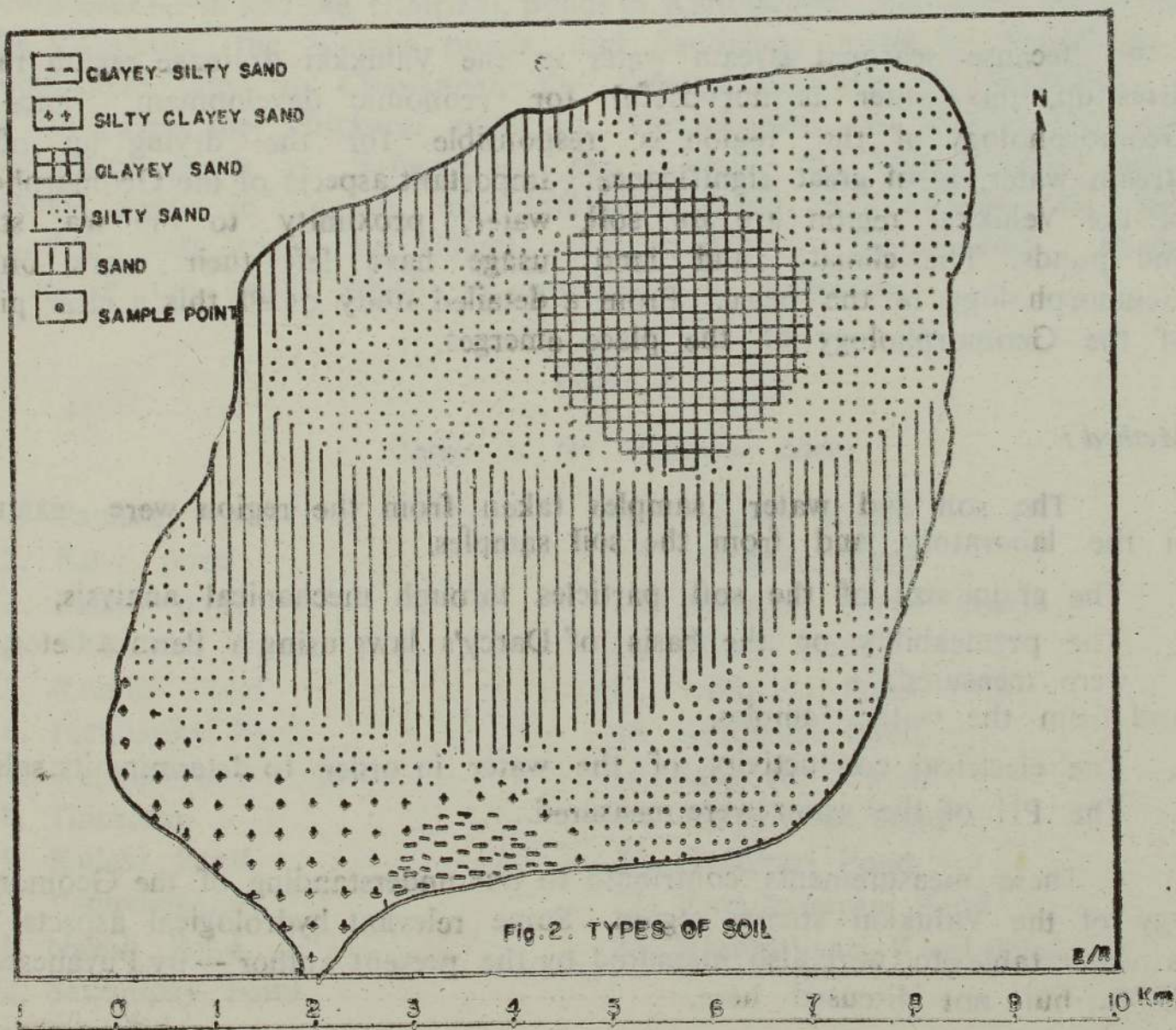
Gs is Specific Gravity of soil.

HR is Effective depth of immersion of hydrometer.

t is Time (seconds).

and also by the method certain data were obtained. From this data graphs were made and the average diameters of soil particle in different soil samples and the nature of the soil were obtained. These are given in table II. The graphs of soil samples are annexed. (see appendix 1,2,3,4.)

Looking at the figure (Fig.2) which was drawn using the information in table II the nature of the soil in this drainage basin is evident.



In places where there is stagnant water and in the drainage region of the stream clayey sand is to be seen. Because this stream and the depressions where water collects do not receive water throughout the year, but only during the north-east monsoon, the above places do not consist completely of clay but are made up of clayey sand. The average diameter of the soil particles in the whole region under investigation was found to be 0.17 mm.

Permeabilities are obtained using Permeameters which are either sand using constant head Permeameters or clay using falling head Permeameters. The choice of the type of Permeameter depends on soil texture. For the first type of Permeameter the formula.

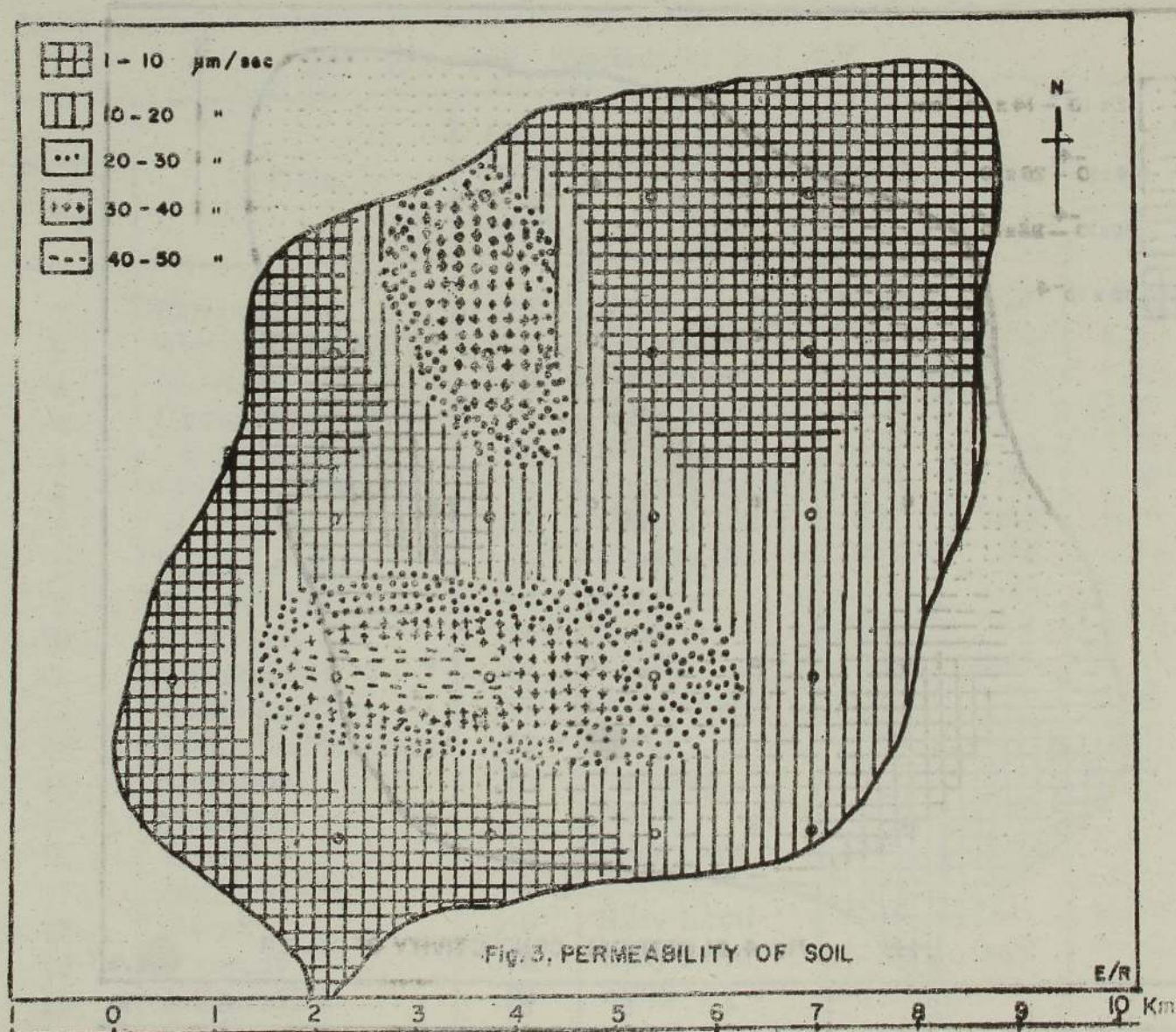
$$Q = \frac{KA.H}{L}$$

is applied to obtain the permeability and for the second type the formula.

$$T = \frac{LA}{KA} (\text{Log}_e H - \text{Log}_e H_0)$$

is used. The permeabilities obtained are given in Table II. This can be seen in Figure 3 which is a map of permeability.

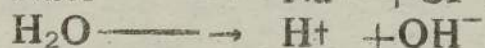
Because the soil samples consisted mainly of sand, plastic limit, Liquid



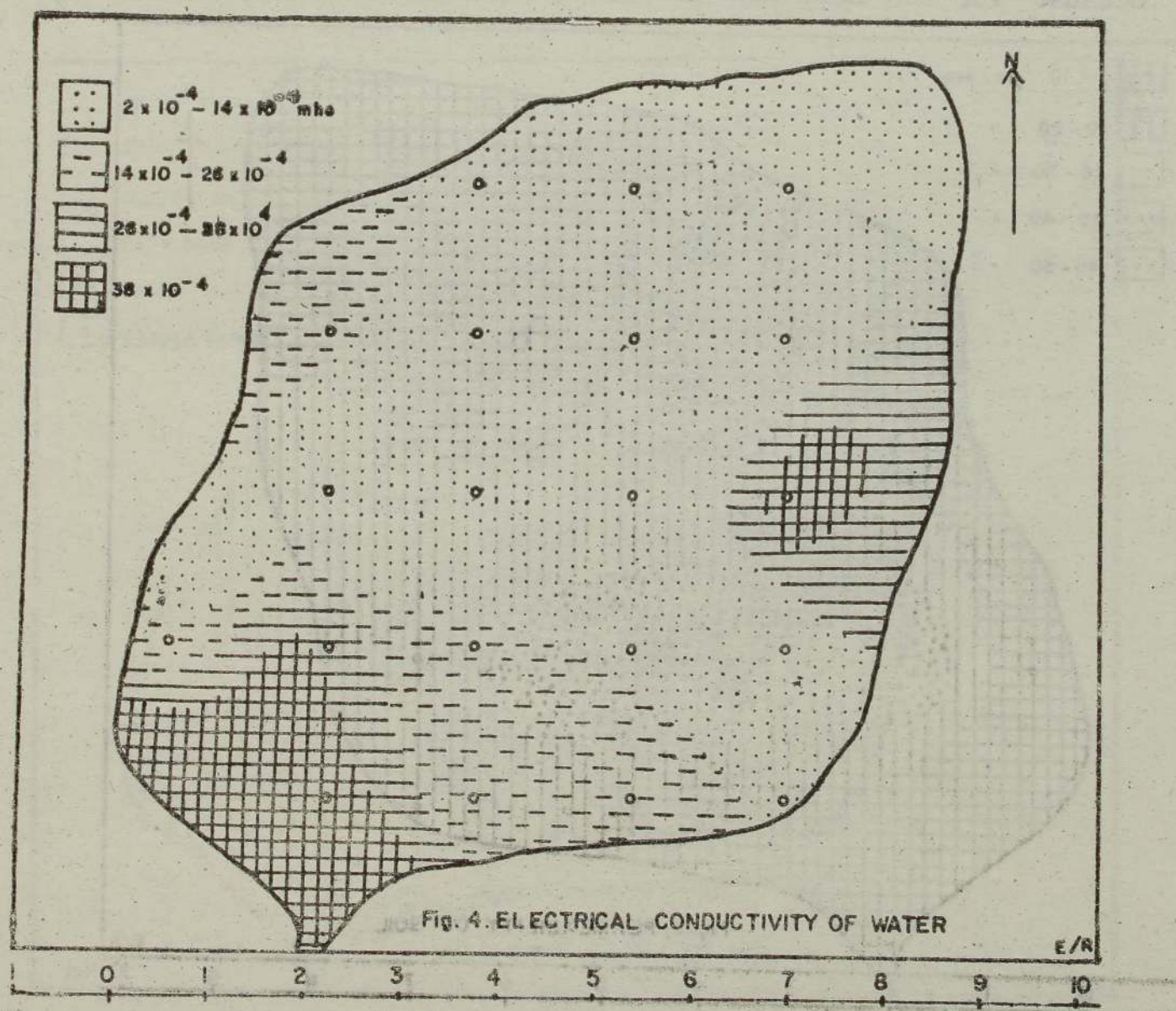
limit and plasticity Index were not present to any appreciable extent and therefore the attempt to determine these was abandoned.

The Electrical conductivity and PH of the water samples and their proximity to the sea are given in Table II.

The Electrical conductivity of the water samples is an indicator of their salinity. A high value for Electrical conductivity generally means a high degree of salinity and a low value shows that the salinity is low. (But if ionization is high, this also can increase the Electrical conductivity depends on ionization; the ionization of pure water is very low, so is its electrical conductivity. When an Alkaline or an acid is added to water ionization increases. Because the ionization of strong acids and strong alkalines is high the Electrical conductivity is also high. If we consider a solution of Sodium chloride (common salt) the solution will be completely or almost completely ionized.



Rain water combines with the carbon dioxide in the atmosphere and forms carbonic acid. (Therefore on reaching the ground its PH) is less than 7. The Valukkai stream region is made up mainly of limestone. When rain water seeps through the soil salts such as calcium carbonate



and calcium sulphate dissolve in it and a salt solution results. Because of this the PH of the water in this region is greater than 7. The salinity of the well-water samples taken from the Valukkai region varies as shown by the various values for the electrical conductivity. In places where the water has a low electrical conductivity the salinity is low and in places close to the sea such as Vaddukoddai East and Arali North where the water has a high electrical conductivity, the salinity is high. This can be seen in Figure 4, which is a map of electrical conductivity.

To confirm the data obtained in this study 'r' test (Coefficient of correlation), was used. The correlation between mean diameter of soil particles and permeability plays a major role in determining the geomorphology of the region. For the Valukkai region the correlation between diameter of soil particle and permeability was found to be 0.46 (Regression line and Scatter plots were given in Graph 1.) which is between 0.05 and 0.02 level of significance. Obviously this shows that there is a significant relationship between the diameter of soil particle and permeability of soil. It is because there is a positive relationship between permeability and diameter of soil particle that there are small ponds in the Valukki region. However it should be mentioned that these ponds also depend on the seasonal rain for their water.

Table II

Mean diameter, Nature, Permeability of Soil, Proximity to the sea of Sample point and Electrical conductivity and PH of water.

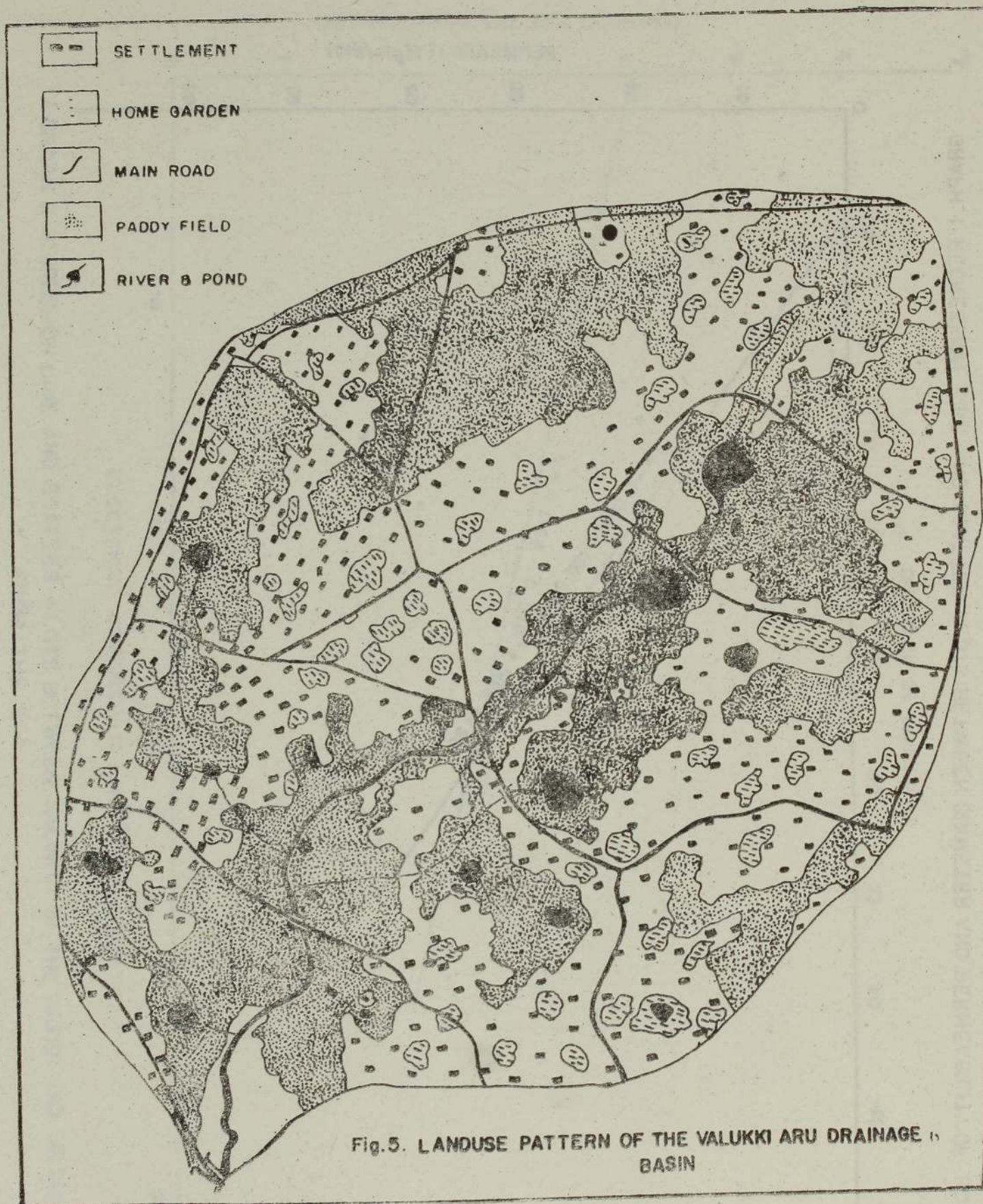
Samples No.	Place	Mean diameter of soil (mm)	Nature of Soil	Permeability (um/Sec)	Proximity to the sea (K meter)	Elect. Conductivity (10 ⁻⁴ mho)	pH
1	Periyavilan	.25	Sand	39.50	3.22	3.50	8.10
2	Alaveddi West	.10	Clayey Sand	8.25	4.02	2.30	7.85
3	Alaveddi	.15	Silty Sand	8.09	.48	8.25	7.80
4	Chankanai West	.17	Silty Sand	3.95	4.02	14.00	7.55
5	Chankanai East	.18	Silty Sand	38.50	4.83	4.35	8.05
6	Makiyappiddy	.19	Clayey Sand	5.30	5.63	7.00	7.60
7	Mallakam	.03	Clayey Sand	5.68	5.63	8.00	7.05
8	Sittankerni	.15	Clayey Sand	10.10	.83	9.50	7.55
9	Sandilipay	.20	Sand	11.10	.83	6.50	8.20
10	Sankuveli	.17	Sand	16.90	5.63	5.50	7.70
11	Kantaroday	.14	Sand	18.90	6.44	2.70	7.35
12	Vaddukoddai	.15	Silty Sand	3.87	3.22	12.50	7.30
13	Vaddukoddai East	.22	Sand	41.50	3.22	41.00	7.75
14	Kaddudai	.15	Sand	43.10	4.02	14.40	7.65
15	Manipay	.25	Sand	28.90	4.83	8.50	7.75
16	Uduvil	.17	Silty Sand	16.40	4.83	6.00	7.30
17	Araly North	.11	Silty Clayey Sand	1.10	1.61	40.00	8.35
18	Navali	.18	Silty Sand	1.20	2.41	14.50	8.20
19	Manipay	.18	Silty Sand	11.80	3.22	23.50	8.30
20	Suthumali	.20	Sand	17.80	2.41	5.50	7.60

To find out whether the proximity of the sea brings about any changes in the geomorphology of the region statistical method was used to find out the correlation coefficient between salinity of the water in a particular place and the distance of this place from the sea. The results which is -0.3 , showed that there is a decline in salinity with distance from the sea. (Regression line and scatter plots were given in Graph 2). Even though the proximity to the sea may affect salinity in a small way other factors such as climate and the nature of soil affect is considerable as far as the Valukkai region is concerned. Using statistical methods for the rainfall data in the region, the year was divided into wet and dry seasons. Since evaporation is greater during dry spells there is a corresponding increase in the salinity of the soil.

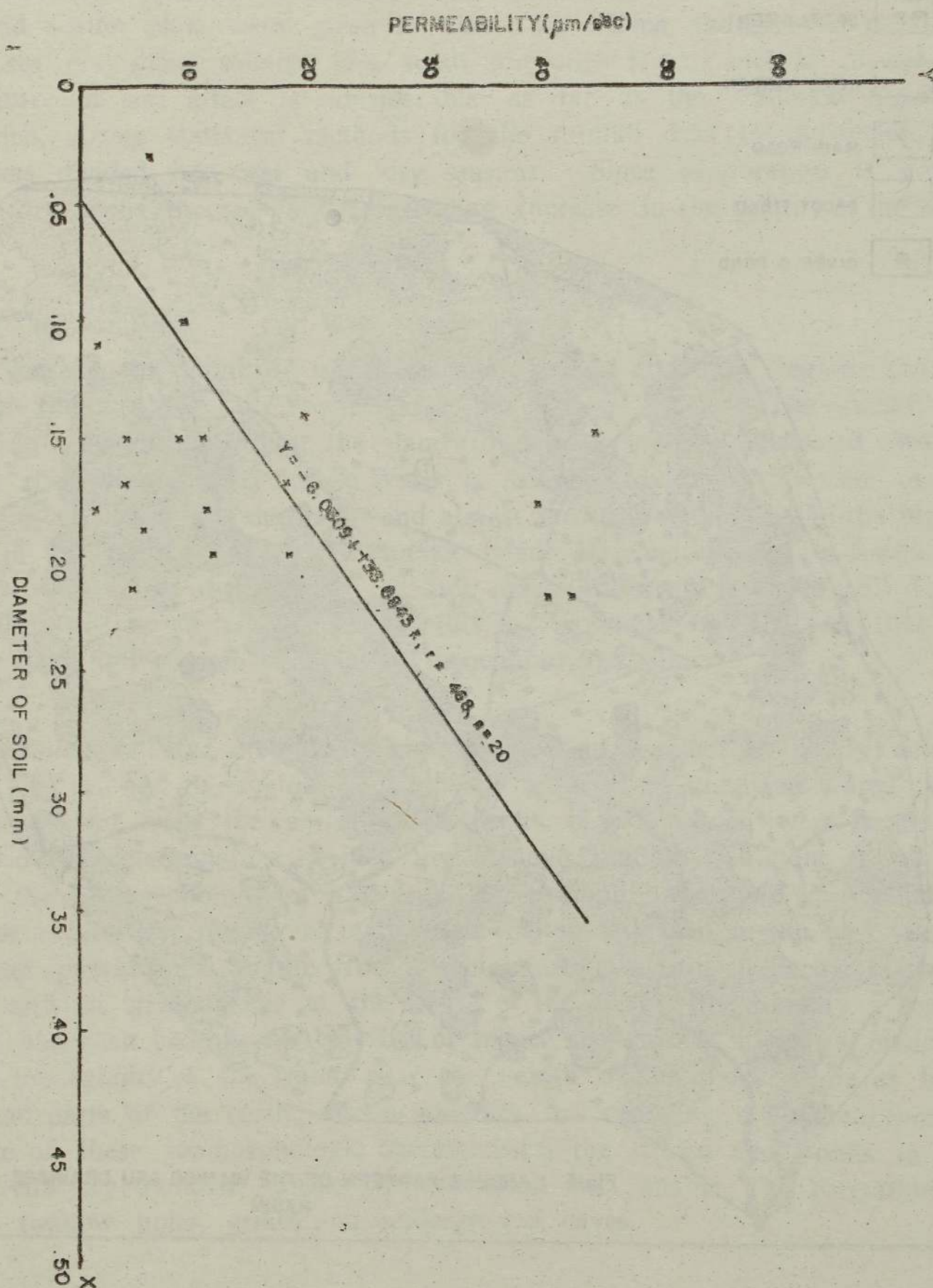
Conclusion :

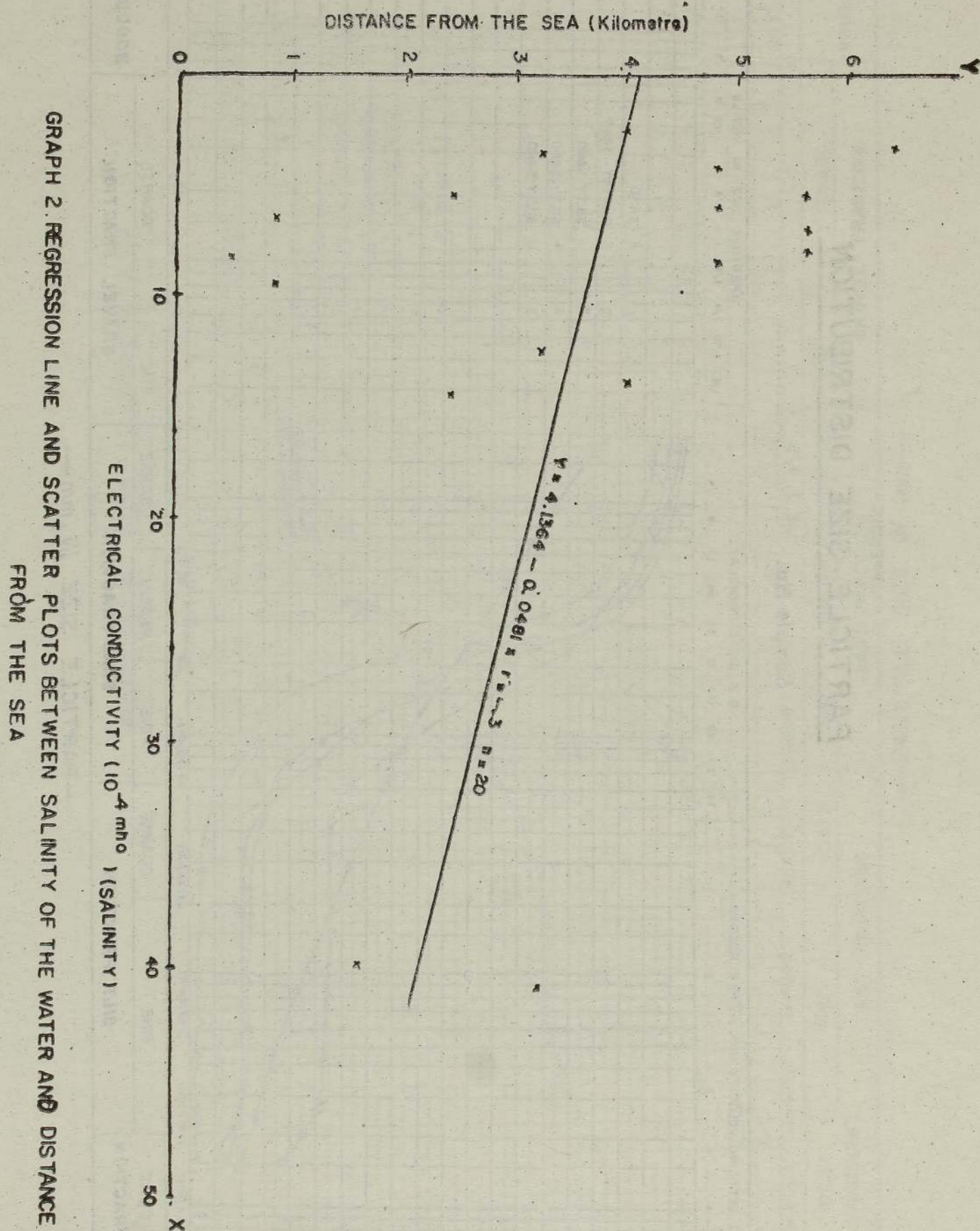
Because the Valukkai is a seasonal stream and the region through which it runs is not hilly or elevated but almost flat and the stream not flow from perennial springs, the land formations usually associated with a typical river are absent here. Water is found throughout the year in the area near the mouth of the river and almost throughout the year in the biggest pond in the region namely the Panaka pond. Here clayey sand is found. As for the rest of the region there is not much difference between soil found near the stream and elsewhere and this is explained by the fact that the stream does not contain water right throughout the year.

Almost half the Valukkai region is farmland devoted to paddy cultivation. The rest of the region is populated areas and small cultivated fields. This is evident from the aerial photographs (Fig. 5) which were examined and also the determination of land use through random sampling. Land use affects the geomorphology of any area. For example houses and large buildings built of cement are found in many parts of the Valukkai region and prevent the water provided by nature from seeping into the soil. Earlier sea water mixed with the stream water at the mouth of the river. But recently a cement barrier has been built here to prevent or reduce this mixing. This will obviously reduce the salinity of the water near the mouth of the river. Here as in all inhabited parts of the earth, man's activities are changing the geomorphology. Because of these geomorphologic characteristics the stream and ponds in this region run dry rapidly. These characteristics also enable the formation of ponds swallow holes, grikes and underground caves.



GRAPH. I REGRESSION LINE AND SCATTER PLOTS BETWEEN DIAMETER AND PERMEABILITY OF SOIL

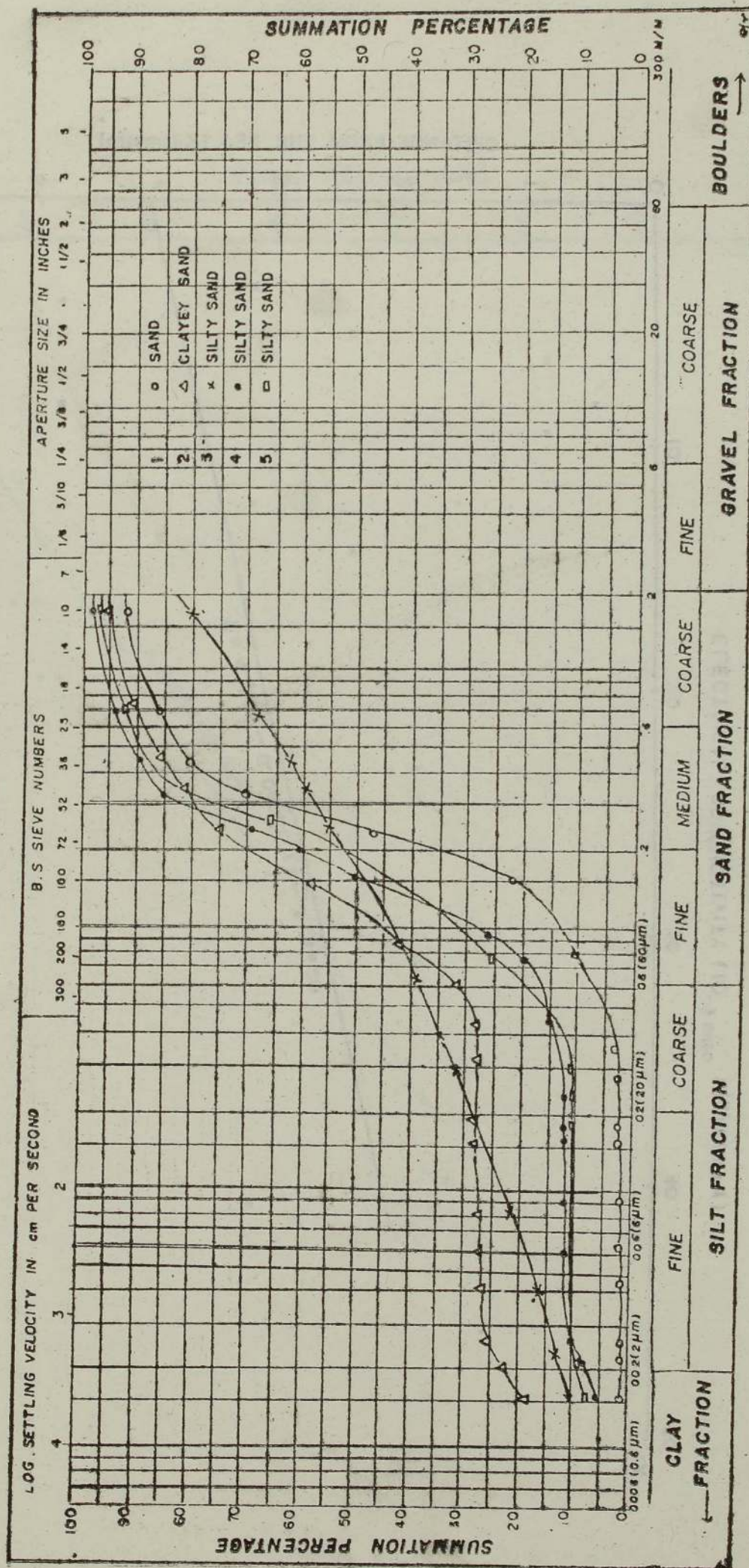




APPENDIX - I

PARTICLE SIZE DISTRIBUTION

Sample No. 1, 2, 3, 4, 5

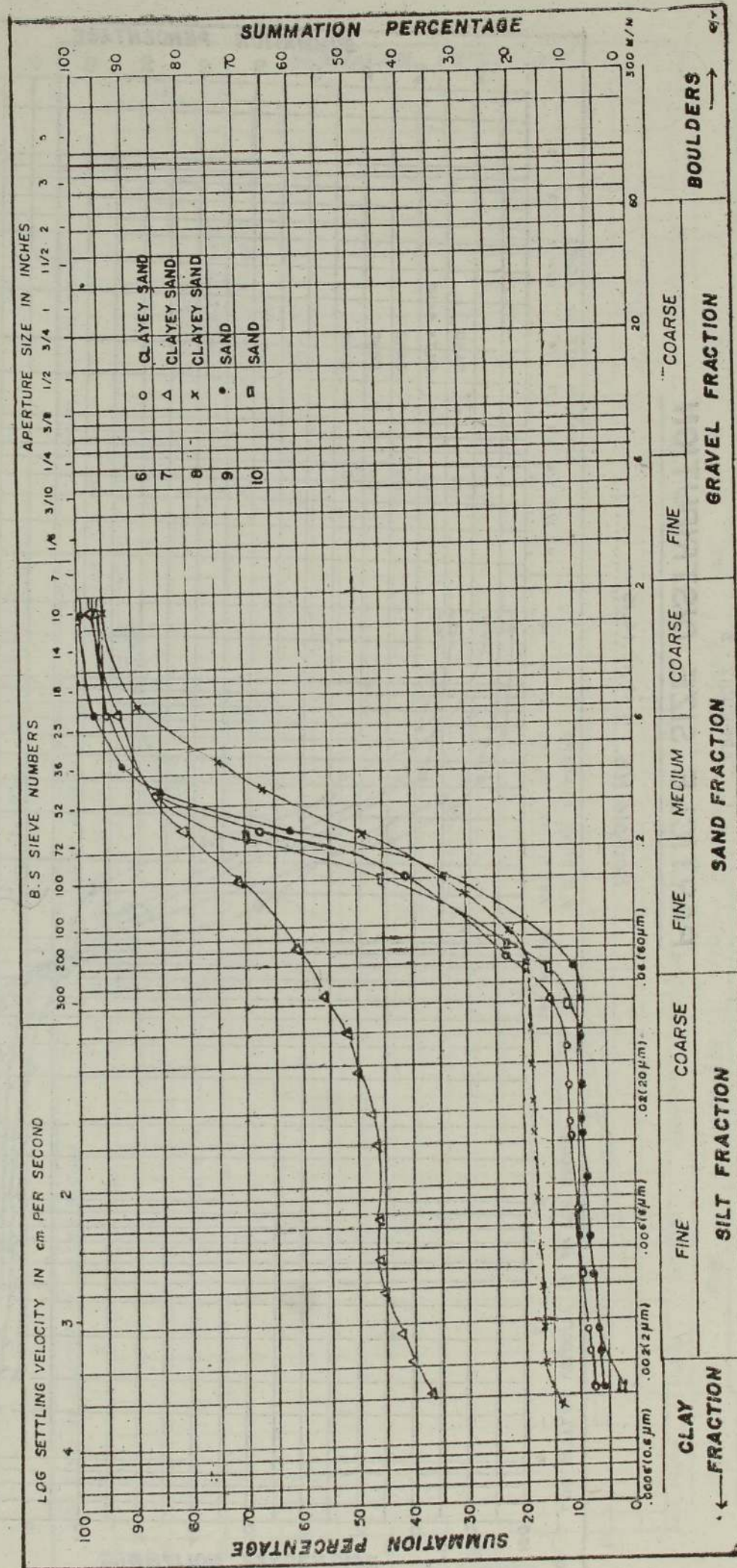


— PARTICLE SIZE IN mm —

APPENDIX - 2

PARTICLE SIZE DISTRIBUTION

Sample No. 6, 7, 8, 9, 10

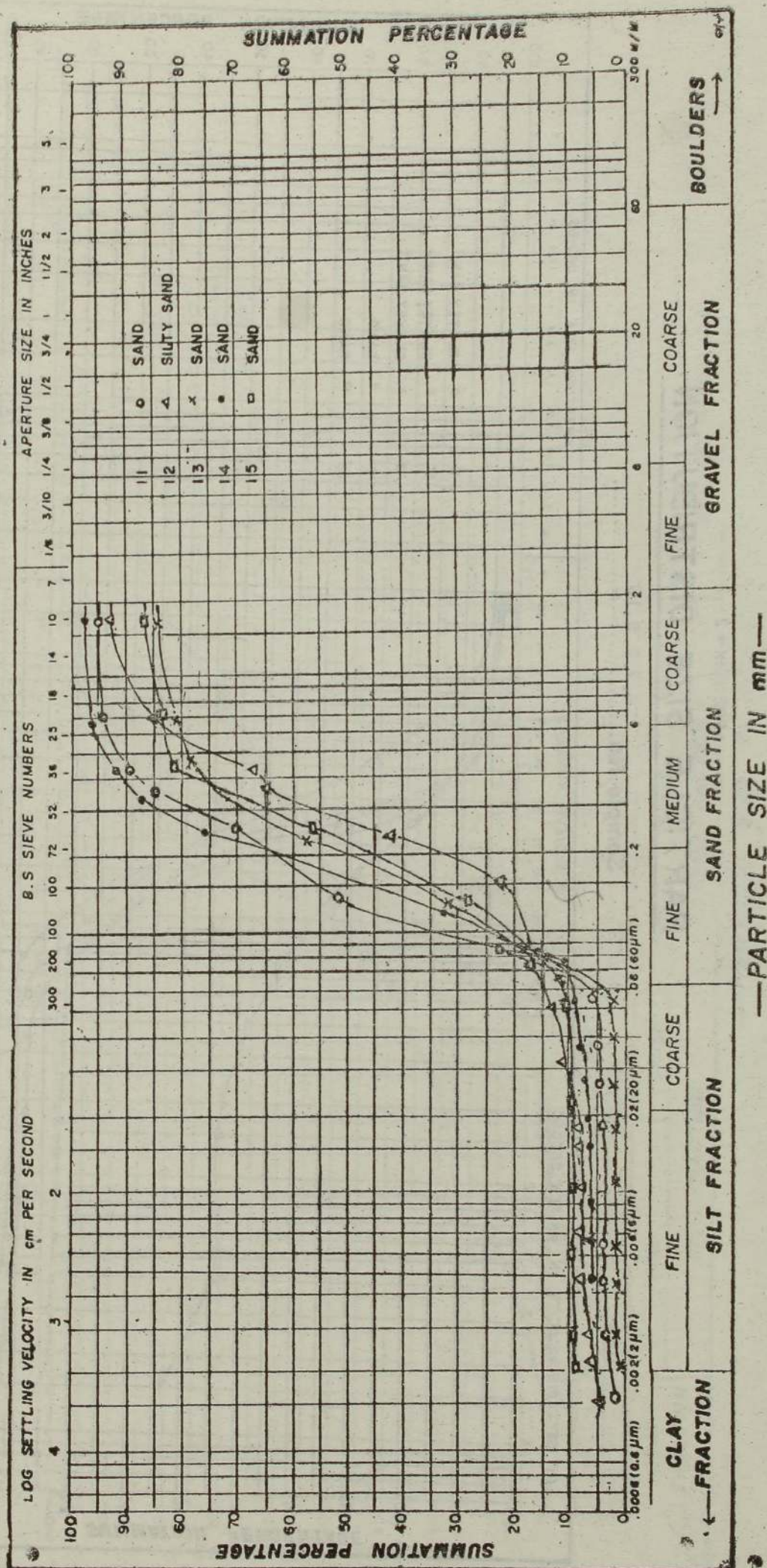


—PARTICLE SIZE IN mm—

APPENDIX - 3

PARTICLE SIZE DISTRIBUTION

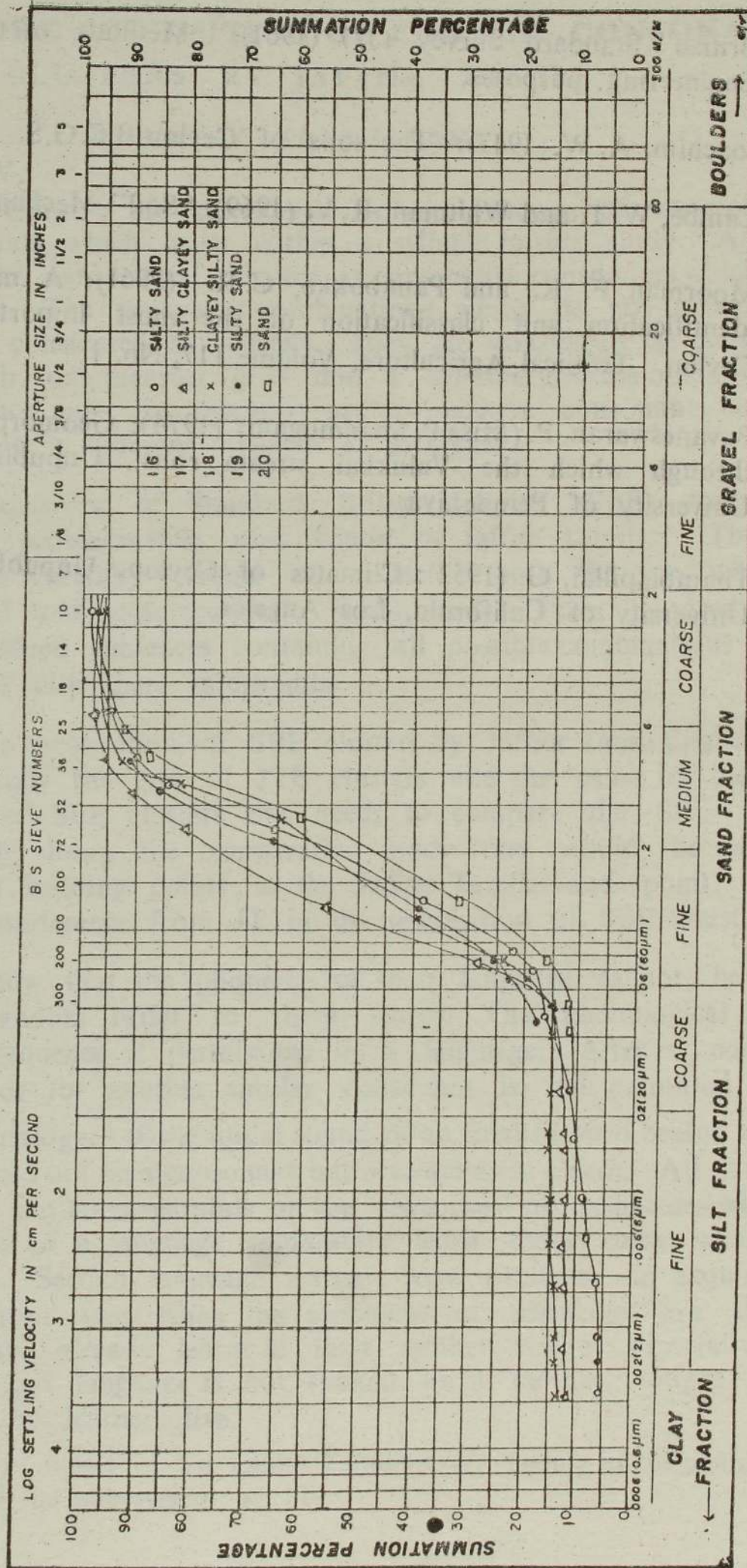
Sample No. 11, 12, 13, 14, 15



APPENDIX - 4

PARTICLE SIZE DISTRIBUTION

Sample No. 16, 17, 18, 19, 20



--- PARTICLE SIZE IN mm ---

REFERENCES

1. British Standard Survey 1377 (1961): Methods of testing soil for civil Engineering purposes.
2. Joachim, A. W. (1947): The soils of Ceylon B.C.G.S. Vol. 2
3. Lambe, W. T. and Whitman, R. V. (1969): "Soil" Mechanics
4. Moorman, F. R. and Panabokke, C. R. (1961): A new approach to the identification and classification of the most important soil groups of Ceylon. Tropical Agriculture, Volume 117, No. 1
5. Puvaneswaran, P. (Miss P. Shanmugam) (1974): Geomorphology of the Region through which the Valukkai stream runs. Unpublished Hon's thesis, University of Peradeniya.
6. Thambiapillai, G. (1952): Climates of Ceylon, Unpublished M. A. Thesis, University of California, Los Angeles.

PROBLEMS IN THE ACQUISITION OF ENGLISH CONSONANTAL CLUSTERS BY JAFFNA TAMILS

PARVATHY KANTHASAMY

1. INTRODUCTION:

Consonantal Clusters are considered as combinations of two or more consecutive consonants which occur within a syllable in this study. American linguists consider the consonantal clusters as consecutive consonants which occur within a morpheme. The consonant combinations which do not occur within a syllable are not considered as clusters. They are considered as consecutive consonants in which one member goes into a syllable and the other goes into another. For instance *mp* in '*compare*' are consecutive consonants but each consonant belongs to a different syllable as *com-^vpare*.

In the acquisition of Standard British English (SBE) consonantal clusters pose more problems than other sounds to Jaffna Tamils.¹ The study is based on twenty carefully selected informants of both the sex, who have different educational and socio-economic backgrounds. Three hundred chosen words and one hundred sentences containing all possible combinations of SBE clusters were tested with these informants.

To study the acquisition of SBE clusters by Jaffna Tamil English (JTE) speakers and to study the type of JTE clusters and the cause for the errors in the acquisition of SBE clusters one needs to compare the SBE clusters with that of JT. By doing the comparative study one would be able to predict the difficult learning points to the Jaffna Tamils and point out the possible area of interference from JT in the acquisition of SBE clusters.

Speakers know that the phoneme of their language cannot be strung together in any random order to form words. The phonological system determines which sequence is permissible in a language. After a consonant like /k/, /p/, /g/, or /b/ another similar consonant is not permitted by the rules of English phonology. If the initial sound of an English word begins with [c]^v the next sound should not be a consonant but a vowel as in *church*. All languages Jaffna Tamil have similar constraints on the sequences of phonemes which are permitted. Children of a language community learn these rules when they learn the language. Second language learners have problems in acquiring the phonological sequential rules when the sequences of phonemes are different from what they have already learnt in their mother tongue especially in the context where the 2nd language is not spoken as a mother tongue by the community where the learners live.

1. Jaffna Tamil is a dialect of Sri Lanka Tamil spoken mainly in the peninsula. Jaffna Tamil will be abbreviated as JT.

2. Types of SBE clusters

There are many clusters in SBE than in JT. SBE clusters can be classified into two main types.

- A. Clusters of asyllabic consonants and
- B. Clusters of syllabic consonants.

2.1 A - Clusters of asyllabic consonants:

There are three sub types of A type clusters: AICC, AIICCC and AIICCCCC.

2.1.1.A-I CC This is called biphonematic² clusters.

This type includes two consecutive consonants which belong to the same syllable. This structure is known as CC type (where C stands for consonants) CC can be further subdivided into two types as (a) \neq CC -and (b) -CC \neq

(a) \neq CC-type: This type consists of CC in the initial position of a syllable or a word. For instance *black* has *bl-* in the initial position. Both the members of *bl-* belong to the same syllable. Therefore this type of cluster is abbreviated as \neq CC-type.

(b) -CC \neq type: This type of cluster includes two consonants which fall into the same syllable or word final position. For instance *milk* has *-lk* in the final position. Both the members of the cluster belong to the same syllable. Therefore this type of cluster is abbreviated as -CC \neq type.

Neither of the members of -CC \neq are syllable and therefore they are known as asyllabic consonants. For instance -*pt-* in *stopped*.

English has more of CC types of clusters than other types.

2.1.2A II: This type is called Triphonematic clusters. This type includes triphonematic combinations which occur both in initial and in final position of a syllable or a word. It is further classified into types as (a) \neq CCC- and (b) -CCC \neq .

(a) \neq CCC- In syllable or word initial position this type of cluster is abbreviated as \neq CCC- type. For instance, *scream* consists of this type of cluster \neq *skr-*

(b) -CCC \neq In syllable or word final position this type of cluster is abbreviated as -CCC \neq type. For instance *gaped* consists of this type of cluster -*spt* \neq

English has less -CCC \neq type than \neq CCC-type.

2.1.3. A III CCCC : This type is called quadriphonematic clusters. English has only a limited number of this type of clusters. This type occurs in final position of a syllable or a word. This type is abbreviated as -CCCC \neq . This type could be found in a few examples in English -*mpts* \neq as in *prompts*.

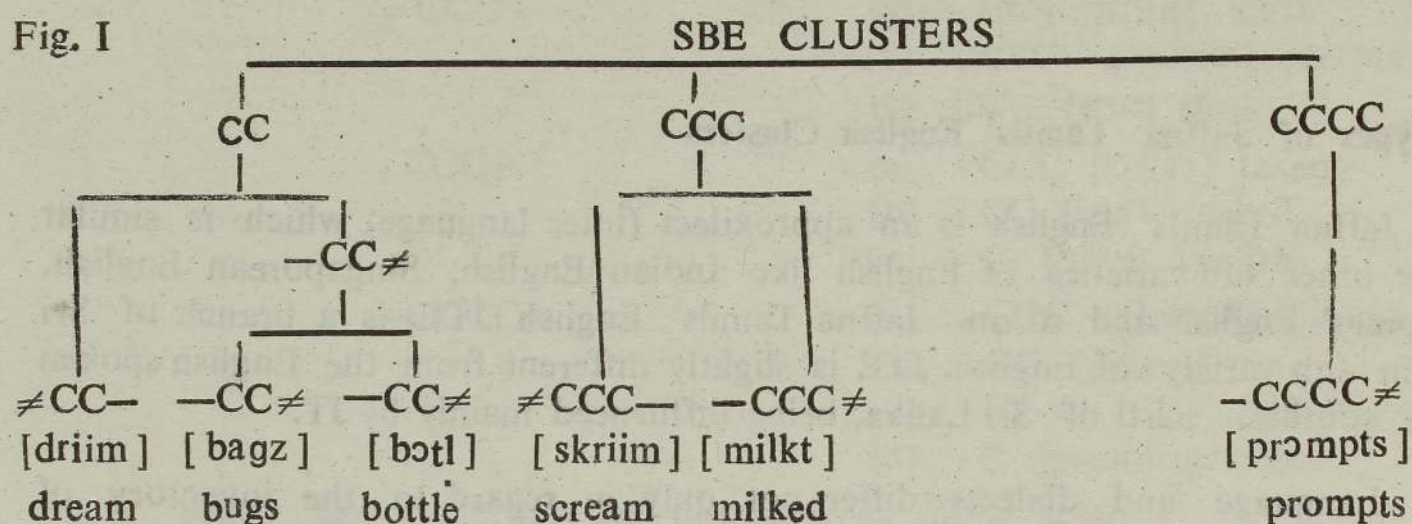
2. The term biphonematic, triphonematic and quadri - phonematic are adopted from Cohen (1952).

2.2. B-Clusters of syllabic consonants

Consonant combinations in which one of the consonants is syllabic. The syllabic consonants are sometimes called vowel-like and they are always nasals and liquids in SBE. For instance in *dapple*, /l/ is syllabic and /p/ belongs to the same syllable /dæ - p l/.

2.3 The following diagram shows the types of clusters in SBE.

Fig. I



3. Types of Jaffna Tamil clusters

Jaffna Tamil has consonants in combinations only in the medial position of a word. This combination occur syllable final positions as in *kaaLp-pu* which means *dislike*. Eventhough there are many combinations of consonants, all of them are not considered as clusters. For instance /nanme/ which means *benefit* has *-nm-* combination but not a cluster, /n/ falls into a syllable and /m/ into another syllable as /nan-me/. There are only a few clusters in JT. Any medial triconsonantal combination in JT belongs to two different syllables the first two members being syllable final and the third member being syllable initial as in /vaayp-pu/ which means *opportunity*. Clusters occur when the two consonants of the triconsonantal combination being geminated consonants. Geminated consonants always belong to two separate syllables in JT.

3.1 Consonantal clusters in JT are as follow :

1. -Lp- /kaaLp-pu/ hesitation
2. -Lt- /vaaLt-tu/ congratulation
3. -Lc- /viiLc-ci/ fall

4. -Lk- /vaaLk-ke/ lite
5. -yp- /caayp-pu/ shed
6. y-ċ- /maayċ-cal/ big effort
7. -yk- / vaayk-katici/ – raw rice for Hindu corpse
8. -ic- / kuLitci / cool

JT has no other types of clusters but biphonematic clusters. Only a small number of biphonematic clusters occur in JT.

4. Types of Jaffna Tamils' English Clusters

Jaffna Tamils' English is an approxilect (inter language) which is similar to the other sub varieties of English like Indian English, Singaporean English, Phillipines' English and so on. Jaffna Tamils' English (JTE) is a branch of Sri Lankan sub variety of English. JTE is slightly different from the English spoken in the southern part of Sri Lanka, being influenced mainly by JT.

Language and dialects differ not only in regard to the inventory of phonemes but also in regard to the sequences of phonemes permitted. English has many post vocalic consonant clusters of three or even four consecutive consonants: *rests*, *prompts* etc. JT permits only post vocalic clusters of two consonants and there are not many of these. JT has mainly consonant combinations each consonant of which belongs to a different syllable. In initial position there are no clusters in JT. Therefore JTE speakers produce many CVC very often instead of CC or CCC in the initial position of a syllable or a word. In word final position, JT also has closed syllables which mostly end in laterals and nasals but not in clusters. Consequently JTE speakers often produce -C (but not -CVC) for syllabic consonantal clusters of English. However, CVC is the frequent substitution in JTE for -CC≠ of SBE. There are more final clusters than initial ones in JTE,

Since there are limited number of clusters in JT, the JTE speakers have problems in the acquisition of SBE clusters. We have already seen the cluster types in SBE above. An average JTE speaker consists of biphonematic clusters usually. Triphonematic clusters are not common in JTE and there is hardly any quadri-phonematic clusters.

4.1 The following table indicates the JTE substitutions for SBE clusters in general.

Fig. 2 JTE SUBSTITUTION for SBE CLUSTERS

SBE CLUSTERS

JTE SUBSTITUTIONS

≠CC -

- (a) CC - [klaas] class
- (b) CVC - [kiLaas] class
- (c) C - [tuuN] tune

- CC ≠

- (a) - CC [vaast] vast
- (b) - C [res] rest

- CC ≠

- (a) - CC [æpl] apple
- (b) - CVC [ΣppiL] apple

≠CCC -

- (a) CCC - [sprit] sprit
- (b) CCVC - [skiriim] scream
- (c) CC - [sree] stray

- CCC ≠

- (a) - CCC [tΣksT] taxed
- (b) - CC [aasT] asked
- (c) - C [tuvel] twelfth

- CCCC ≠

- (a) - CCC [gLimsT] glimpsed
- (b) - CC [proms]
- (c) - C - C [sik-s] sixths
- (d) - C [prom] prompts

These types will now be discussed in more detail.

4.2 Table 1: A -types of SBE and their substitutions in JTE. (omitted words (OW)³ are excluded from the total number (n) of occurrences).

SBE	JTE	%	n
CCCC	CCC	13.3	167
CCC	CC	65.0	807
CC	CCVC	4.0	46
	C-C	0.2	3
	C	8.0	99
	CVC	10.0	125
	OW	-	27
	Total	-	1247

In C-C there is a clear break between the two consonants.

JTE has no CCCC combinations but only CCC and CC combinations. The CC type is the most common with 65% in JTE. However the CC clusters of JTE are not only representatives of the CC clusters of SBE but

3. I use the term omitted words and I assume that the speakers purposely omitted the words as the clusters were difficult for them to produce. Although the omitted words are not included in the intended total number of occurrences, the figures are given in the table to show that there are few omissions for clusters but that there is a certain number of omissions for certain contexts.

also of CCCC and CCC of SBE. As the structure CCVC of JTE contains the cluster CC, the CCVC type can be added to CC when the frequency of CC is calculated. Therefore, the CC of JTE would be (after adding CCVC to CC) 68% (853/1247) of the total A-types of SBE clusters. These A-type substitutions will be discussed in detail in the following section.

4.2.1.A1 -type substitutions: substitutions for $SBE \neq CC$ and $-CC \neq$ (Which in the table above are summed up as CC) will be discussed in this section. Table 2 provides statistics for the substitutions (cf. fig. 1)

Table 2: AI-types of SBE and their substitutions in JTE

SBE	JTE	%	n
$\neq CC$ -	CC-	70.0	306
	CC-	1.0	3
	CVC-	29.0	125
	OW	-	1
	Total	-	434
$-CC \neq$	-CC	84.0	426
	-C	16.0	82
	OW	-	11
	Total	-	508
CC	CC	78.0	732
	C	9.0	85
	CVC	13.0	125
	OW	-	12
	Total	-	942

There are some striking difference between $\neq CC$ -and $-CC \neq$

1. The former has a CVC substitution which the latter does not have.
2. The former has only three instances of C but the latter has 82 instances (despite the fact that the total intended number of occurrences for $-CC \neq$ is little different).
3. The later has 11 omitted occurrences while the former has only one.

The point made in 1 shows that initial clusters only have the substitution -CVC and points 2 and 3 show that, although the JTE-speakers seem to try hard to produce final clusters. They avoid pronouncing the word or produce a word with a single C. As JT has words with single consonant endings, the speakers of JTE produce many instances of -C≠ instead of some difficult combinations of -CC≠.

Considering CC SBE as a whole 78% are acquired correctly as CC and 13% as CVC and 9% as C. The JTE-speakers acquire ≠CC- clusters without great difficulty although the correct phonetic realization is a problem.

4.2.2 All-type substitutions: Table 3 shows All-types of SBE, ≠CCC- and -CCC≠ (which in the table above are summed up as CCC) and their substitution in JTE.

Table 3 : All-types of SBE and their substituitions in JTE

SBE	JTE	%	n
≠CCC-	CCC-	63.0	80
	CC	1.0	1
	CCVC	36.0	46
	OW	-	13
	Total	-	127
-CCC≠	-CCC	48.0	57
	-CC	42.0	49
	-C-C	1.0	1
	-C	9.0	11
	OW	-	2
	Total	-	118
CCC	CCC	56.0	137
	CC	21.0	50
	CCVC	19.0	46
	C-C	0.4	1
	C	4.0	11
	OW	-	15
	Total	-	245

Initial CCC is easier to acquire than final CCC. In initial position English educated JT speakers have some English loan words with initial clusters. This fact probably prevents the speakers from making many errors in initial clusters. It has been shown that in many Asian languages acquiring initial clusters is easier than acquiring final clusters. In initial position the JTE - speakers also substitute CCVC for CCC but not in final position. This fact, i.e. the insertion of a vowel is more or less similar to the insertion of a vowel in the CC-structure in initial position except that the vowel substitution here preserves two initial consonants as clusters. For instance, splice - JTE has the substitution CCVC where / sp-/ of [≠spl-] is preserved. ≠CCC- of SBE is substituted in 37% by ≠CC- (CC and CCVC and -CCC≠ of SBE in 42% by -CC≠. All the ≠CCC- of SBE are replaced by clusters (≠CCC- or ≠CC-) whereas in the case of -CCC≠, 90% are replaced by clusters (-CCC≠ and -CC≠). It should be noted that one instance of C -C and several instances of C are substituted for -CCC≠ of SBE (but not for ≠CCC- of SBE). For CCC SBE (≠CCC- and -CCC≠), the JTE- speakers produce 56% CCC, 41% CC (CC and CCVC) and 4%C.

4.2.3 AIII- type substitutions: Table 4 shows that AIII- type of SBE (-CCCC≠) and its substitutions in JTE (-CCC≠, -CC≠, -C -C≠ and -C≠).

Table 4: AIII- type of SBE and its substitution in JTE.

SBE	JTE	%	n
-CCCC≠	-CCC	50.0	30
	-CC	42.0	25
	-C -C	3.0	2
	-C	5.0	3
	Total	-	60

CCCC combinations occur only in final position in SBE and there is no CCCC combination in JTE as mentioned before. No vowel insertion is found for CCCC in the sixty JTE occurrences included in our data. CCC substitution for CCCC SBE is more frequent than the use of CCC for CCC of SBE (50 % versus 56%).

4.2.4 **Summary :** The following main points can be given for substitutions for SBE clusters.

- (i) Among clusters JTE has only CCC and CC for A - types.
- (ii) CCC and CCCC of SBE are substituted also by CCVC (but never by CVCC

which probably does not occur in JTE as substitutions for CCC and CCCC of SBE).

- (iii) Vowel insertion as one of the substituting features (CCVC, CVC) occurs in JTE, only for initial clusters of SBE.
- (iv) In addition to CC and CCC, C and C-C are substitutions for CC, CCC and CCCC, but only in word final position.
- (v) CC is the predominant cluster structure in JTE.

4.3 B - types of SBE and their substitutions in JTE.

Word final /l/ after obstruents is syllabic in English. When an /l/ is syllabic the preceding obstruent also belongs to the same syllable as in /æe-pl/ *apple*. In case of final nasals after obstruents, the speakers are not sure if the preceding obstruents belong to the syllabic /ŋ/ or not. However, Cohen (1952 : 63, 64) does not share our view.

“In the case of *bottle* and *button* taking the behaviour of English language users as our guide, we have to render such words phonematically as ending in /tl/ and /tn/, as insertion of /ə/ would make these words sound odd... since in our opinion the ‘syllable’ has no significant function in final-consonant clusters in English words. We shall refrain from using the term ‘syllabic consonants’.”

When I asked some English speakers concerning *eaten*, some preferred /iit-n/ and others /ii-tn/. To my knowledge no research has been carried out to establish the existence of syllabic consonants in English. I assume that the syllabic consonant /l/ has only sometimes the pronunciation [ə] where the vowel is more weakly pronounced than a vowel phoneme would be but that it is usually pronounced [l] as for instance *apple* is usually pronounced as [æe pl]. phonemically both [æe-pl] and [æe-pəl] are thus realization of /æepl/. In Indian English or in Sri Lankan English the pronunciation with inserted, and stronger vowel is the predominant form and English syllabic consonants are pronounced correctly only by the best speakers. “A Tamil speaker of English pronounces *simple* and *symbol* much in the same way. i.e. both of them as (simbəl) ... ” (spitzbardt, 1976 : 32).

In the Approxilect, B-types are different from the -CC≠ of the A-type where there is no CVC substitution whereas for B-types there are two kinds of substitutions CVC and CC, the former of which is the most frequent. Not only does JTE has a CVC structure but also, and more generally, Indian English and Sri Lankan English. “The adaptation of English words to the new Indian speech habits results in new structures of the sound-body of words, e.g. by inserting a vowel : IE [singəl] for “single”, B. E. [single]” (spitzbardt, 1976 : 32-33).

According to Kandiah (1965 : 163) *noble* is pronounced as [nooble] and *bottle* is pronounced as [botal].

Table 5 gives the substitutions for syllabic consonants in SBE.

Table : 5 B-type of SBE and their substitutions.

SBE	JTE	%	n
Syllabic consonants }	syllabic	5.0	16
	CVC	95.0	288
	OW	-	6
	Total	-	304

5. General Conclusion :

As we have seen above of the A and B types, A type is the most common in JTE. B type hardly exists in JTE. It has been seen that JTE has a high number of CC clusters. Initial clusters are replaced mainly by CVC or CCVC but not final clusters of a type. High degree of consonant reduction (reduction of one or more members of the clusters) takes place in the final position. There is hardly any consonant reduction in the pronunciation of initial clusters (only 1% each in \neq CC- and \neq CCC- types). There is 100% reduction in pronunciation of -CCCC \neq types, 51% in -CCC \neq types and 16% in -CC \neq types. As B -type is usually replaced by CVC in JTE, the existence of syllabic consonants in SBE is noted by JTE speakers (as epenthetic vowel is introduced). It should be noted that only the high vowels are used for the vowel insertion in the substitution of SBE clusters whereas in Sinhalese English only a schwa is used.

REFERENCES

1. Cohen, A. 1952. The phoneme of English. A phonemic study of the vowels and consonants of standard British English. Martinus Nijhoff. The Hague
2. Kandiah, Thiru 1965. Teaching of English in Ceylon. Some problems in contrastive statement. *Language learning* 15. 3, 4 : 147 - 166.
3. Spitzbardt, H. 1976. English in India. VEB Max Niemeyer Verlag Halle (Saale).

TAMIL — JAPANESE RELATIONSHIP: l/r ALTERNATION

A. SANMUGADAS

Tamil — Japanese relationship, a hypothesis of Professor Susumu Ohno (of Gakushuin University, Tokyo), is now receiving careful attention by Dravidianists. He has published a series of articles and books, both in English and in Japanese (an upto date bibliography is provided by Zvelebil (1985) which is reproduced at the end of this paper) which deal with the subject. Professor Kamil V. Zvelebil, an eminent Dravidianist, has recently studied Ohno's works and has noted his observations in a paper: "Tamil and Japanese - are they related. The hypothesis of Susumu Ohno" (1985). According to him, the most important among Ohno's writings are *Sound Correspondences Between Tamil and Japanese* (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). His observations on the items found in Ohno's *Sound Correspondences* are useful and encouraging. He says (1985 : 119 - 20) :

"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 Ta. p-: Jap. f-: *pari* (DED, 3268) 'to run' : Jap. *fasu* id.; Ta. *paru* (DED, 3277) 'become large' : Jap. *faru* id.; Ta. *piti* 'to grasp etc., catch' (DED, 3412): Jap. *fisi* 'to grasp, etc.'. Or, Ta. -l-: Jap. -r- is manifested e. g. by 44 Ta. *kal* 'stone' (DED, 1091): Jap. *kara* id., by 46 Ta. *kalai* 'to disperse, be scattered etc.' (DED, 1102): Jap. *karu* 'to depart, separate etc.'.

As instances of similarities in items of very specialized meaning one may quote e.g. 7 Ta. *accu* 'weaver's reed instrument for pressing down the threads of the woof' (DED, 45): Jap. *aza* > *aze* 'weaver's instrument for pressing down the threads'; or 27, 28 Ta. *avuri*, *aviri* DED, 228) 'indigo plant': Jap. *awo* 'blue (sometimes verging into green)'; Jap. *awi* 'indigo plant'.

A possible correspondence of derivational morphs may be indicated by such items as 47 Ta. *kav-il* (DED, 1121) 'be capsized' : Jap. *kaf-eru* 'be capsized'; or 38 Ta. *kat-ir* 'ear of grain', 'spear of grass' (DED, 1002): Jap. *kas-ira* 'spear of grass'; Ta. *ciluppu* (187) 'to churn, stir, agitate' DED, 2118): Jap. *sir-ōfu* 'to agitate each other'.

It is these three types of etyma which need a rigorous, detailed investigation."

As Zvelebil rightly pointed out, Ohno's items found in *Sound Correspondences* need a rigorous and detailed investigation. This paper makes an attempt to study certain items provided by Ohno where the phenomenon of an *l/r* alternation is found. Among the 357 items provided in the book, about 60 show that Tamil *l*, *l*, *l* have a regular reflex of *r* in Japanese. But in a few items the Tamil laterals *l* and *l* change into *y/s/z*:

Ta. *kal-i* 'peg to keep a yoke in a place, etc.'

Ja. *kas-i* 'rod to keep a yoke of boat'

Ta. *mal-u* 'axe'

Ja. *mas-akari* 'broadaxe'

Ta. *cul-al* 'eddy, whirl etc.'

Ja. *uz-u* 'eddy, whirl'

Ta. *cel-i* 'to thrive'

Ja. *siz-i* 'to thrive'

Ta. *ul* 'to grow old'

Ja. *ōy-u* 'to grow old'

Ta. *kol-u* 'fat'

Ja. *kōy-u* 'to grow stout'

Ta. *kal-i* 'gruel'

Ja. *kay-u* 'gruel'

Ta. *kul-ir* 'to feel cool, get numbed (as in death), coldness'

Ja. *kōy-u* 'to be chilled to the bone, be benumbed with cold'

Ta. *mūl* 'to kindle, catch fire, be kindled'

Ja. *moy-u* 'to burn, be in flames, be kindled, catch fire'

Except in the above instances, the Tamil *l* and *l* regularly change into *r* in Japanese. The regular reflex of Tamil *l* in Japanese is *r*. The following are cited as examples from among the 60 items provided by Ohno in which we encounter the *l-l-l/r* alternation:

3. T. ak-al : to spread, widen, extend, depart, go away. (D. 9)
J. ak-aru : to spread, disperse, part, leave.
4. T. ank-al-āy : to lament, grieve, sorrow, be envious, covet. (D. 33)
J. agar-si : to be lamentable, grievous.
16. T. amal-i : tumult, uproar, bustle. (D. 140)
J. amar-u : to be boisterous, uproarious. (dialectal)
42. T. kam-al : to emit fragrance. (D. 1045)
J. kam-ari : fragrance.
J. kam-aru : to smell, scent. (dialectal)
44. T. kal : stone, pebble, boulder, precious stone, milestone. (D. 1091)
J. kar-a : stone.
46. T. kal ai : to disperse (as an assembly, a defeated army), be scattered
(as clouds), be ruined. (D. 1102)
J. kar-u : to depart, separate.
47. T. kav-il : to be capsized, turned bottom upwards. (D. 1121)
J. kaf-eru : to be capsized, return
51. T. kal-ai : to weed, pluck out, pull up, extirpate. (D. 1157)
J. kar-u : to cut (grass), reap, share, trim, weed.
61. T. cal-avai : bleaching or washing of cloth, washed cloth. (D. 1957)
J. sar-asu : to wash and bleach.
62. T. cal-i : to sift. (D. 1959)
J. sar-u > zaru : sieve.
65. T. call-al : mud, slush. (D. 1993)
J. sar-afu : to dredge, clean (out), sweep (mud).
79. T. tal-ai : to flourish, thrive, grow luxuriantly (as plants), be abundant
(as a flood), prosper (as a family, people, state). (D. 2545)
J. tar-u : to flourish, to be abundant, sufficient.
80. T. tal-ar : to grow, weary, enfeebled, grow slack, become flabby from age,
become relaxed as a tie or grasp. (D. 2551)
J. tar-asi : to be weary, foolish; simpleton.
129. T. val-umpu : fat, suet. (D. 4337)
J. far-ē > bare : fat existing between skin and intestine of an animal.
130. T. val-ai : small beam, long piece of wood. (D. 4344)
J. far-i : beam of a house.
140. T. kāl : leg, foot, base (of tree), family, relationship. (D. 1238)
J. kar-a : family, clan.

148. T. tāl : to fall low, be lowered, descend, decline as the sun, sink in water, sink in circumstances or repute, decrease, decay, degenerate, despond, be dejected, prove inferior, fail, stay, reat, droop. (D. 2597)
J. tar-u : to hang down.
150. T. tāl : bolt, bar. (D. 2598)
J. sar-u : bolt, fastener (of a door)
151. T. tāl-i : large pan pot or vessel with wide mouth, jar, burial urn. (D. 2600)
J. tar-u : cask, barrel.
180. T. il-aku : to shake (intr.), agitate. (D. 432)
J. ir-aku > yuraku : to shake, swing, sway.
185. T. kil-i : to tear, rend, split, cut, rip up, lacerate. (D. 1316)
J. kiru- : to cut, chop, hack, carve, slash, saw, shear.
195. T. pil-i : to squeeze, express, press out with hands, drip, exude, shed or pour (as rain). (D. 3440)
J. fir-u : to press out, drip, exude.
196. T. mil-i : eye, eyeball, knowledge, wisdom. (D. 4456)
J. mir-u : to look, see.
199. T. vil : to sell, put on sale, be sold. (D. 4448)
J. *wir-u > uru : to sell; offer (thing) for sale.
200. T. vil-ambu : to speak, say, proclaim openly, make public, reveal. (D. 4460)
J. *wir-afu > urafu : to divine, tell a person's fortune.
219. T. ul : inside, interior of a place, mind, heart, a locative ending. (D. 600)
J. ur-a : inside of something, back, rear, reverse side.
228. T. kul-ai : cluster, bunch (as of fruits, flowers). (D. 1504)
J. kur-a : plant, bunch. (dialectal)
229. T. kul-appu : to mix, stir, confuse, disturb, bewilder, disconcert. (D. 1510)
J. kur-ufu : to become insane.
262. T. mūl-ai : brain, marrow. (D. 4146)
J. mur-ato : (the most important) viscera of human body; brain work.
285. T. pul-ar : to dawn. (D. 3531)
J. *fōr-a > fora : dawn. (used as in *asa-fora-ke*, 'dawning')
290. T. mul-u : all, entire, whole, large. (D. 4095)
J. *mōr-ō : all,
296. T. kūl : to crowd together, assemble, muster. (D. 1595)
J. *kōr-u > koru : to crowd together, concentrate.

316. T. tel-i : to strew, scatter, sprinkle, sow as seed, cast up in sifting, winnow, (D. 2827)
 J. tir-u : to strew, scatter, fall from a tree.
330. T. vel-avela : to quake, tremble (as one's limbs). (D. 4451)
 J. wer-awera : to shake one's body under the influence of wine.
332. T. vël : dart, spear. (D. 4555)
 J. fer-a : spatula.
347. T. ol-ukku : to draw out, as gold thread. (D. 851)
 J. ör-u : to draw out a thread, weave.
350. T. col-i : to strip off, peel off, tear. (D. 2336)
 J. sör-u : to shave.

1. Interchange of l / r in Dravidian Languages

Interchange of l and r is a phenomenon that is found in Dravidian languages. Caldwell (1856 : 159-60) noticed it first and explained it with many examples. He says : "In the Dravidian family, this interchange of r and l is one of common occurrence. Sometimes l is corrupted into r; but in a large number of cases r appears to be the original and l the corruption. In the case of the distinctively Dravidian r and l, the change is uniformly of the latter nature; and the change of the ordinary semi-vowel r into the corresponding l, though not uniform, is an exceedingly common one, and one which may be regarded as a characteristic of colloquial Tamil. It is common in Malayalam also." Caldwell in more than one instances emphasizes that in the interchange between r and l, the former seems to be the original and the latter the altered sound. However, he has not failed to mention that in certain instances l seemed to be the original sound. He has the following to say about the l changing into r:

"l changes into r. Whilst the ordinary change is that of r into l, the change of l into r is occasionally met with, and forms one of the peculiarities of Tulu. Tulu generally changes the final l of the other Dravidian languages into r - e. g. *vil*, Tam. a bow (*billu*, Can.) becomes in Tulu *bir*. In this instance it cannot be doubted that l was the original termination of the word, for we find the same root west of the Indus in the Brahui *billa*, a bow. A similar interchange between l and r takes place in the Central Asia. The l of Manchu is r in Mongolian. l sometimes changes into r - e. g. compare *nil*, Tam. to stand, with *niruttu*, to cause to stand.

In Zend and Old Persian, l was unknown, and r was systematically used instead. In Telugu, *lu*, the pluralising suffix of nouns, is sometimes changed into *ru*. This change, however, of l into r is not systematic, as in Tulu,

but exceptional. In Tamil, l is euphonically changed, not into r, but into r before all hard consonants - e.g. *palpala*, various, becomes in written compositions *parpala*. This proves that a change of l into r is not contrary to Tamil laws of sound."

According to Caldwell, the change of l into r is systematic in the Dravidian family of languages. Zvelebil in his *Comparative Dravidian Phonology* (1970) explains this systematic change in detail with the necessary examples. He thinks that the l / r alternation seems to provide for an isogloss between South-Eastern (l-) and North-Western (r-) dialects. Commenting on the situation in Gond, he says: "Owing to aphaeresis and metathesis, the original V+*l developed into *l+V, and an alternation appeared of *l-/*r- which developed further into a systematically conditioned alternation of l/r. Illustrations: *il-a 'young etc.' *la-i, *le-i > *ra-i > *leyor 'young man, young boy' / rayiol 'boy'." Further instances cited by him are : *ul-a-n > lōn : rōn 'house'; *ul > lopo, lopa/ropo ropa 'in, inside'.

1.1. Commenting on the Dravidian l, Zvelebil (1970 : 143) says :

"*l develops often to r in Tulu both medially and finally, cf. Ta. *talai* : Tu. *tare* 'head', Ta. *ilai* : Tu. *ire* 'leaf', Ta. *muyal* : Tu. *muyeru* 'hare', Ta. *mulai* : Tu. *mire* 'women's breast', Ta. *kāl* : Tu. *karu* 'leg' Ta. *pal* : Tu. *paru* 'animal's tooth', Ta. *vil* : Tu. *biru* 'bow'." Though the change of Tamil l to Tulu r is somewhat uniform, the latter, in certain instances, retains the l. Zvelebil provides the following examples: Ta. *muyal* : Tu. *mola* 'a large hare', Ta. *kāl* 'leg, quarter' : Tu. *kālu* 'quarter', Ta. *kal* : Tu. *kallu* 'stone', Ta. *kal* : Tu. *kalpuni* 'to study'. A few stems seem to have a widespread l/r alternation. The following are cited as examples: Ta. *kal* 'to learn, to teach etc.' : Tu. *kalpuni* 'to learn' : Te. *karcu* 'to learn', *karapu* 'to teach' : Kol. *karp-* 'to learn' : Nk. *karap-* 'to learn' : Go. *karitāna* 'to learn' : Kui *grāmb-* 'to learn', *grap-p-* 'to teach' (DED. 1090); Ta. *eḷ* 'to happen' : K. *erpa.r* 'preparation' : Te. *ērcu* 'to set in order' : Ka. *ērpātu* 'to be arranged, be ready to act' (DED. 766); Ta. *kāl* 'to vomit, etc.' : Ma. *kāruka* 'to retch', *kāruka* 'vomit' : Ko. *ka.r* 'to vomit' : Ka. *kāru* : Kod. *ka.r* : Tu. *kāruni* : Te. *krāyu* 'vomitting' (DED. 1236). As Caldwell pointed out, l in Tamil euphonically changed into r before all hard consonants. *Tolkappiyam* and other Tamil grammatical works have enunciated rules for this change. But the interchange between l and r has been noted by the commentator of the Tamil grammar *Nannūl* (13th century). He cites the following examples *pantal* > *pantar* 'shed or hut', *cāmpal* > *cāmpar* 'ash', *kutal* > *kutar* 'intestine', etc. The l/r alternation in

these cases takes place only at the final position of a word. The editors of Cankam poems (earliest Tamil literary compositions belonging to 300 B. C.—300 A. D.) have always preferred to the original *l* in certain words and have given alternate readings with *r* in them. For example, 278th poem of *Puranānūru* (a Cankam anthology consisting of 400 verses) has the following expression: *nārampelun tulariya*. The alternate reading given for this expression is: *nārampelun turariya. ulariya* and *urariya* exhibit the *l/r* alternation. The word *akil* 'incense' is employed in many Cankam poems (see, for example, *Kuruntokai* 286 : 2). But the word *akaru* is also used in some poems.

1.2. Tamil *l* (**r*(z)) changes into *r* in a number of Dravidian languages.

Examples: Ta. *ali* : Tu. *arpuni* 'to efface, obliterate, etc.' Ta. *alu* 'to weep, cry' : To. *arke* 'weeping, lamenting' : Tu. *arpini* 'to weep, cry' : To *arke* 'weeping, lamenting' : Tu. *arpini* 'to weep, cry' : Kol. *ar-* (*art-*) 'to weep' : Nk. & Ga. *ar* 'to weep' : Par. *rika* 'to weep' : Kuwi *riali* 'to cry' ; Ta. *ulu* 'to plough' Tu. *ura* 'ploughing' *uralu* 'ploughman's song' : Kol. *ur* (*urt-*) 'to harrow, plough' : Nk. *ur-* 'to plough' : Go. *urāna* 'to plough' : Kuwi *ruiyali* (*ru-*) 'to plough' ; Ta. *uluntu* : Ka. *urdu* : Tu. *urdu* Kol. *urunde* : Nk. *urndal* 'blad gram' ; Ta. *elu* 'to rise, etc.' : Ka. *erbu* 'to rouse, to lift up' : Tu. *erkuni* 'to rise' ; Ta. *katal* 'to be hasty, run swiftly, : Ka. *kadar* 'to be shaken, etc.' ; Ta. *kolu* : Ka. *korvū*, *korbu*, *kobbu* : Te. *k(r)ovvu* : Kol. (*Kin.*) *koru* : Nk. *koru* : Kui *krōga* : Kuwi (F) *korowa* 'fat'. According to Zvelebil (1970 : 147—55) the regular reflex of *l* (**r*) in Tulu, Kolami, Naiki, Mandala Gonda and Brahui is *r*. But regarding Kannada he concludes: "In Kannada, **r* is preserved as a phoneme till about the middle of 10th cent. Later, it has been replaced in the prevocalic and word-final position by *l* or *n*, and before stops by *r*. Since these developments are complementary in distribution, they may be regarded as a single development in the system. The first occurrence of the *l* / *l* alteration in Ka. is from 692 A.D.; of the *l* / *r* alternation from 750 A. D." He thinks that the regular reflex of *l* (**r*) in Tulu is *r* in the non-Brahman dialect, though *r* tends to occur also in the Brahmin dialect where the regular reflex is *l*. The position in Telugu is stated by him as follows : "a PDr sequence with an initial consonant and root final **r* develops into an initial cluster in early Te. with **l* and in classical Te. this **l* merged with *r*. In later Te., this *r* is usually lost. Instances : Ta. *polutu* : Te. *proddu* (> *poddn*) *plo-dd-* > *pol-t-* 'sun, time', Ta. *kolu* 'to grow fat etc.' Te. *krovvu* 'be proud' > **klo-vv-* > **kol-v-*."

1.3. The data from DED suggests that Tamil *l* changes into *r* in Kannada, Telugu, Gond, Brahui, Gadba (Oll.) and Kuvi (F). Since this change is not

a regular reflex in those languages, Zvelebil has not discussed it in his *Comparative Dravidian Phonology* (see, pp. 139—42). However, he has mentioned the development of a systematically conditioned alternation of l-/r- in Gond. He has shown that l first changed into l in Gond and then reflected as r (see, p. 7). DED provides the following examples : Ta. *ōkkalam* 'retching, vomiting' : Ka. *ōkari* : Te. *ōkara* 'vomit'; Ta. *ul* 'inside, etc.' : Go. *ron* 'inside': Br. *ūrā* 'house, wife'; Ta. *kal* 'toddy' : Kuvi (F) *kāru* 'country spirit'; Ta. *kilar* : Ka. *keralu* : Te. *keralu* 'to increase'; Ta. *nal* : Ga (oll.) *narkam* 'night'.

1.4. The following conclusions can be made on the basis of the data presented so far :

- (a) All three laterals of Tamil (i.e. l, l, and l) change into r only in Telugu, Gond and Kuvi. Examples:

l>r: Ta. *īcal* : Go. *īsri* 'whistle'
 Ta. *eḷ* 'to happen' : Te. *ērcu* 'to set in order'
 Ta. *kal* : Te. *karacu* : Go *kāritānā* 'to learn'
 Ta. *kāl* : Te. *krāyu* 'vomit'
 Ta. *talai* : Kuvi *trāyu* 'head'

l>r: Ta. *ila* 'young' : Go. *raiyōl* 'adult boy' : *raiyā* 'adult girl'
 Ta. *ul* : Go *ron* 'inside'
 Ta. *ōkkalam* : Te. *ōkara* 'vomit'
 Ta. *kilar* : Te. *keralu* 'to increase'
 Ta. *vel* 'white, pure, bright' : Go *verci* 'light'
 Ta. *kal* 'toddy' : Kuvi (F) *kāru* 'country spirit'

l>r: Ta. *alu* : Kuvi *riali* 'to cry'
 Ta. *ulu* : Go *urānā* : Kuvi *ruiyali* 'to plough'
 Ta. *kōlu* 'fat' : Te. *k(r)ovvu* 'be proud' : Kuvi(F) *korowa* 'fat (animals)'
 Ta. *pulu* : Te. *pur(u)gu*, *pruvvu* : Go. *puri* : Kuvi(F) *priyuli* 'worm'

- (b) Dravidian *l seems to be more stable. No regular l/r alternation is found in any of the Dravidian languages.

- (c) l and l(*r) seem to be regular reflex as r in a few Dravidian languages. Tulu is the only language which has both l and l changing into r.

2. l/r Alternation in the Context of Tamil-Japanese Relationship

In the light of the above discussion, Tamil-Japanese relationship with regards to l/r alternation seems to match that between Tamil and Tulu. But Tulu possesses l, l̄ and l̄̄ as distinct phonemes, and whereas Japanese is said to have no such sounds. However, in spoken Japanese, one tends to hear an l sound when the native speakers pronounce foreign words with r sound. Even r sound in some Japanese words is sometimes heard as l. Miller (1967: 71-72) while comparing Japanese with Altaic languages says: "It is clear at least two original liquids have fallen together in Old Japanese -r-." One of the original liquids, according to him, seems to be the original -*l-. However, one cannot overlook the remarkable l/r alternation found among Tamil, Tulu and Japanese:

1. Ta. *alar*: 'to blossom'
 Tu. *araluni*: 'to blossom'
 Ja. *ar-u*: 'to be born, come into being'
2. Ta. *kavil*: 'to be capsized, turned bottom upwards'
 Tu. *kap̄paru*: 'on the face'
 Ja. *kaferu*: 'to be capsized, return'
3. Ta. *kal̄*: 'leg, family, relationship, etc.'
 Tu. *k̄aru*: 'leg'
 Ja. *kar-a*: 'family, clan'
4. Ta. *īal̄*: 'to fall low, be lowered, sink in water, etc.'
 Tu. *taru*: 'to sink in, plunge'
 Ja. *tar-u*: 'to hang down'
5. Ta. *tal̄*: 'bolt, bar'
 Tu. *tarkolu*: 'key'
 Ja. *sar-u*: 'bolt, fastener (of a door)'
6. Ta. *pili*: 'to squeeze, press out with hands, drip, exude, etc.'
 Ta. *pūrencuni*: 'to squeeze'
 Ja. *fir-u*: 'to press out, drip, exude'
7. Ta. *mulu*: 'all, entire, whole, large'
 Tu. *mūrka*: 'full, brimfull, exceeding, very much'
 Ja. *mörö > moro*: 'all, entire'

3. Conclusion

Compare, for example, the consonant system of Japanese (the Northeastern dialect) and Tamil (Jaffna dialect):

Ja.: k-		-g-	-ng		
Ta.: k-	-kk-	-h-	-ng-	n̄	
Ja.: t-		-d-	-nd-	n-	-n-
Ta.: t-	-tt-	-d-	-nd-	n-	
	-tt-	-d-	-nd-		-n-
	-tt-		-nt-		-n-

Ja.: s-		-j-	-nj-			
Ta.: s-	-cc-	-j-	-nj-			
Ja.: F/h		w/zero	-mb-	m-	-m-	
Ta.: p-	-pp-	-b-	-mb-	m-	-m-	-m
Ja.: w-		-w-				
Ta.: v-	-vv-	-v-				
Ja.: y-		-y-				
Ta.: y-	-yy-	-y-				
Ja.:		-r-				
Ta.:		-r, r̥, l, l̥, n-			-r, l, l̥, n	

In the consonant system of Japanese, we find only one -r-. It cannot occur at the initial position of a word. Japanese has no retroflex consonants. There is no distinction between r and l. The Japanese -r-, according to Ohno (1980) is correspondent to Tamil r, l, l̥, and r̥ in Tamil. Ohno (personal communication) is unable to give any reason as to why Japanese possesses such a poor consonant, namely, -r-. However, he makes the following suggestions:

- (a) Before Japanese language got in touch with the Dravidian language, the Japanese people must have used an unknown language that had no distinction between r and l. Even after they came into contact with the Dravidians, the people in the Japanese archipelago could not distinguish between r and l (also l̥, r̥ and l).
- (b) The confusion between r and l that had already been existed in Tamil, a Dravidian language, might have introduced a similar one in Japanese too.

His second suggestion seems to be more probable. We have a number of instances to show that r and l confusion had been existing in ancient Tamil too. Consider, for example, the following examples from Cankam poems:

- | | | |
|----------------------|---------|--------------------|
| 1. Akanānūru 170:15 | amiltu | 'nectar' |
| Patiruppattu II:6:12 | amirtu | 'nectar' |
| 2. Akanānūru 60:5 | ayilai | 'a kind of fish' |
| Kuruntokai 128:3 | ayirai | 'a kind of fish' |
| 3. Narrinai 121:4 | aralai | 'Oleander' |
| Puranānūru 371:3 | alari | 'Oleander' |
| 4. Puranānūru 372:6 | kūvilam | 'a kind of flower' |
| Kurincippattu 65 | kūviram | 'a kind of flower' |
| 5. Akanānūru 152:9 | pattal | 'container' |
| Narrinai 92:6 | pattar | 'container' |

We can provide more examples from the Cankam works to show that l/r confusion had been existing from ancient time. Tamil literary compositions throughout the ages have exhibited this confusion. Therefore, as Ohno suggested, the l and r confusion in Japanese might have developed due to the influence of Tamil which itself has been possessing such a confusion from the time of its literary age. Later, Japanese must have dropped l completely from its consonant list.

Bibliography

- Caldwell, R., *A Comparative Grammar of the Dravidian Languages*, University of Madras, 1956 (Reprinted).
- Miller, R.A., *The Japanese Language*, The University of Chicago Press, 1967.
- Nannūl, Navalar Edition, Madras, 1966 (24th impression).
- Ohno, Susumu., "The derivation of the Japanese language: the close affinity between the Dravidian and the Japanese languages: A study especially on the terms of rice culture", *Asahi Shinbun* (Tokyo. Daily newspaper)., evening edition, 13.10.1879.
- Ohno, Susumu., *Sound Correspondences between Tamil and Japanese* (English), Tokyo, Gakushuin University, 1980.
- Ohno, Susumu, "Tamil and Japanese: A Comparative study", *Gengo*, Jan-Sept., Taishukan, 1980
- Ohno Susumu., "Tamil and Japanese (No. 1)", *Asahi Shinbun*, 27.11.1980.
- Ohno Susumu., "Tamil and Japanese (No.2)", *Asahi Shinbun*, 8.12.1980.
- Ohno, Susumu., "The relationship between Tamil and Japanese languages" (English), *Proceedings of the Vth International Conference/Seminar of Tamil Studies*, Madurai, 1981.
- Ohno, Susumu, "Tamil and Japanese (No. 3)", *Asahi Shinbun*, 26.1.1981.
- Ohno, Susumu, *Nihongo to Tamirugo*, Tokyo, Shinchosha, 1981.
- Ohno, Susumu., "Correspondences between Tamil and Japanese: a reply to S. Murayama", (English), *Kokugogaku*, No. 130, Sept 1982.
- Ohno, Susumu., "The loss of initial c- in Tamil and s-in Japanese (English)", *The Departmental Journal of Tamil*, University of Madras, 1981.
- Ohno, Susumu., "A study on the relationship between Tamil and Japanese: intervocalic stops in the two languages", (English), *International Journal of Dravidian Linguistics*, XII, 2, 1983. (DLA, Trivandrum.)
- Ohno Susumu., "The relationship between Tamil and Japanese", *Kaishaku to Kansho*, Jan-Nov. 1983 (to be continued).
- Ohno, Susumu, Sanmugadas, A. and Manonmani, S., *Worldview and rituals among the Japanese and Tamils*, (English), Tokyo, Gakushuin University, 1981.
- Tolkappiam*, Eluttatikāram, Kanecaiyar edition, Jaffna, 1952.
- Zvelebil, Kamil V., "Tamil and Japanese-are they related? The hypothesis of Susumu Ohno", *Bulletin of the School of Oriental and African Studies*, Vol. XLVIII,, Part 1, 1985.

VAIYAPURI PILLAI AS A LITERARY HISTORIAN OF TAMIL¹:

**AN ANALYSIS OF HIS IDEOLOGY AND METHODOLOGY AS SEEN
IN HIS "HISTORY OF TAMIL LANGUAGE AND LITERATURE"**

K. SIVATHAMBY

Vaiyapuri Pillai's writings have today become almost the bedrock of the history of Tamil literature as it is accepted in scholarly circles in that those have contributed immensely to the structuring of the chronological order of Tamil literary and grammatical works. In this the role of his *History of Tamil Language and Literature* (HTLL) (1956), published posthumously, has been great. Written in English and in a methodology so familiar and acceptable to Western scholars, the work became a very influential one. Kamil Zvelabil described it as "the most scholarly and the most critical, as well as very richly documented history of Tamil literature upto the age".² It remained the most important of the dependable and acceptable works in terms of "western" methodology, until such time as T. P. Meenakshisundaram, Kamil Zvelabil and others wrote on the history of Tamil literature.

While his HTLL was being accepted as the dependable history of Tamil literature, in certain sections of Tamil scholarly circles he was being attacked as "a traitor" to the Tamil cause, as one who had accepted the supremacy of North Indian influences over Tamil.

In the heat of the argument over his findings, there was never an attempt made to establish the ideological foundations of his writings and to see how his ideology and his methodology had interactions which determined the character of his writings.

An attempt is made here to ascertain his place in the field of Tamil scholarship, to identify the main characteristics of his methodology, the ideology that underlies his writings and to assess the academic significance of HTLL in terms of subsequent research.

1. Vaiyapuripillai the scholar and his achievements.

Vaiyapuri Pillai's name looms large in the world of Tamil Studies. The major Tamil lexicographer of this century (he edited the prestigious Tamil Lexicon) he was also an outstanding textual critic and editor of several literary and grammatical works, and the author of many articles and two books on the history of Tamil language and literature. He brought order into the chaotic area of the chronology of Tamil literary and grammatical works. He had covered this field with such thoroughness that now, after him, it is mostly a case of

either agreeing with him or discussing how and why he had taken an unsustainable position; there is no question of dismissing his findings as irrelevant.

Vaiyapuri Pillai, the son of Saravanapperumal Pillai and Pappammal of the Tirunelvely District, Tamil nadu, was born in 1891, into one of the Saiva-Vellala families, a group which in social terms was generally associated with anti-Brahmin politics (Vaiyapuripillai, as we shall see later, was a significant exception to this tendency.³) After his first degree (B.L. 1912) he practised as a lawyer for about eight years at Trivandrum, (1915-1923) the town where his wife's parental family was living, and for a short period (1923-1926) at Tirunelvely. Though a lawyer by profession, his main interest was in Tamil Studies which he was diligently cultivating since his student days. By 1926, the year he was appointed editor of the Tamil lexicon project of the University of Madras, he was already well known in Tamil scholarly circles for his erudition in Tamil studies and was able to count among his well-wishers such eminent Tamil researchers of the day like K.N. Sivaraja Pillai, V.O. Chidambaram Pillai V.V.S. Aiyar, K.G. Sankara Iyer, R. Raghavaiyangar and Chakravarthy Nayinar. Desikavinayagam Pillai the poet, and P.N. Appuswamy were his close friends.

When Vaiyapuri Pillai was appointed editor of the Tamil lexicon on 25.11.1926 only four parts (volume I was in three parts and the first part of volume II) running to 792 pages (only 21, 327 entries out of the 1,04,405 entries) have been published. The lexicon committee of the Madras University, however, was in existence from 1912. With Vaiyapuri Pillai, in the editorial chair, K.V. Krishnaswami Aiyar, the chairman of the committee was able to bring out the rest of the lexicon (the entire lexicon consists of six volumes, 3928 pages and 1,04,405 entries) within ten years a record time for such an undertaking.

After successfully completing his lexicon assignment, Vaiyapuri Pillai was Head, Department of Tamil, University of Madras from 1936—1946. It was during this time he established his friendship with K. A. Nilakanta Sastri, the then leading historian of South India who with his works "The Pandyan Kingdom" (1929) "Cōlas" (Vol I — 1935, Vol II 1937) effectively brought Tamilnadu within the vortex of Indian history. The association was mutually beneficial, facilitating Sastri with a knowledge of the literary developments of Tamilnadu and Vaiyapuri Pillai with a knowledge of the political developments that helped him with his datings. Another important association he forged was with the Professors of Sanskrit, first with Prof. T.R. Chintamani and later with his successor Prof. V. Raghavan. It is told by some of his later day students and colleagues that Vaiyapuri Pillai leaned heavily on Dr. Raghavan for details relating to Sanskrit literature.⁴ This period saw the publication by the University of important research works on literary history. Vaiyapuri Pillai developed it as a full-fledged research department. It is significant that Vaiyapuri Pillai was not given the Chair of Tamil at the University of Madras. He retired from the University in 1946.

What the University of Madras failed to do, University of Travancore did with ample grace and dignity. It invited Vaiyapuri Pillai as Honorary Professor of Tamil under the Alagappa Chettiar Endowment. He was there from 1951 to 1954. This was a very fruitful period. It was here his posthumous publication "*Kaviya Kalam*" took shape, first, as the text of the mandatory lectures he had to deliver. He also continued his work on indexing the Cankam works—a project he had started when he was at the University of Madras. At that time this indexing was done by Vaiyapuri Pillai it was proceeding on lexicographical lines, not on linguistic lines. Later when V. I. Subramaniam took over the Honorary Professorship (1954) the project was structured on rigorous linguistic basis (see his *Index of Purananuuru*. University of Kerala 1962).

Vaiyapuri Pillai was at Travancore University till 1954 and returned to Madras after his assignment. He passed away on 17.2.1956.

The most enduring of all Vaiyapuri Pillai's contributions will, no doubt, be the Tamil Lexicon, which, he completed within a period of ten years. His achievements in the field of textual criticism are in no way less important. It is regrettable that no major study has been done on the significance of Vaiyapuri Pillai's contribution in the field of editing. It is hardly realised and much less acknowledged that the texts we have now for Kamba Ramayanam and for the Cankam anthologies were largely arrived at through the critical insight and editorial brilliance of Vaiyapuri Pillai. He edited thirty-eight works in all—five Nikantus, four works on grammar (two of these were on Tolkappiyam, Porulatikaram — one Nachchinarkiniyar's commentary and the other Ilampuranar and twenty nine literary texts⁵.

But, in the field of Tamil studies, Vaiyapuri Pillai is better known as the editor of the major literary works. The following is the list of works he wrote on history of Tamil literature.

- 1947 — Ilakkiyaccintanai
- 1947 — Tamin Marumalarchchi
- 1949 — Tamilccutar Manikal
- 1950 — Ilakkiya Utayam I
- 1952 — Ilakkiya Utayam II
- 1952 — Ilakkiya Teepam
- 1954 — Ilakkiya Manimalai
- 1955 — Kampan Kaviyam
- * 1956 — History of Tamil Language and Literature
- * 1956 — Ilakkanaccintanaikal
- * 1956 — Corkkalai Viruntu
- * 1957 — Kaviya Kalam
- * 1958 — Ilakkiya Vilakkam

(those marked with asterisk were published posthumously).

Except two, all were collections of articles and forewords; the two exceptions being *History of Tamil Language and Literature* and *Kāviya Kālam*. As mentioned earlier, the latter constituted the lecture he delivered at the Travancore University on that subject.

A closer look at his writings and at his development as a scholar would reveal that it was his interest and expertise in the field of textual criticism that constitute the core of his scholarship.

It was the expertise he showed in the edition of *Manōnmaniṣyam* (1922) and the scholarship he revealed in his various articles that enabled the Tamil Lexicon committee to appoint him as editor of the project.⁶

It was as editor of the various literary and grammatical works that he became interested in the dates of the works. As we shall see later, in the methodology he adopted for dating the texts, it was the study of the texts of the works that attracted his attention most, for, very often, one could see him trying to place the work concerned in relation to other works, quoting important lines, especially the use of words and the employment of certain grammatical forms. To this day his edition of Cankam texts is the most scientifically done edition. The recent editions of Kamparamayanam are based on the spadework he had done on that epic.⁷

Within the field of textual criticism, which had such well known practitioners like C.W. Thamothearam Pillai and U. V. Caminata Aiyar, Vaiyapuri Pillai stands out because of the historical perspective he brings into his editions. His prefaces to his editions always indicate his ability to place the work he edits in its historical setting. It was his association with Nilakanta Sastri, the renowned author of *Colas* (1935, 37 1955) and *A History of South India* (1966), that gave him this historical view. This association was not a one way traffic, Nilakanta Sastri himself had acknowledged his indebtedness to Vaiyapuri Pillai.⁸ Vaiyapuri Pillai was able to place the work and its author in the proper historical perspective. And it is exactly in this area he excelled his distinguished forbears. He could see the importance of the work he edits in terms of the literary and linguistic evolution of Tamil.

The following excerpt taken from his presidential address to the thirteenth All-India Oriental Conference, held at Nagpur in 1946 reveals to us the broad, and penetrating view he had of literary history.

“In the study of a single literature, we have four important branches viz; editorial work, literary criticism, literary history, and treatment of historical and other materials besides two helpful pursuits, viz; cataloguing and bibliography. In literary history, *chronology has to be settled for several works and authors and it will be a branch by itself*. By Literary biography including a dictionary of National Biography will come in for consideration here.

Then general literary histories have to be prepared. The latter comprise genre and periods, old, middle and modern. Under genre, we have to include drama, fiction, poetry and several types of literature. In this connection a dictionary of literature will be of great help. There are considerable historical material in our languages, especially so in Tamil, chiefly in the form of inscriptions and copper plate grants and these must engage our attention as a separate branch. Mythology, legend and folklore, comprising motif-index and comparative studies, yield us substantial historical and pre-historical materials and these along with proverbs and popular sayings, form another important branch. The history of specific subjects and topics such as medicine, astrology, amusements, riddles etc., makes a third branch of study. Social history, culture and civilization along with witch-craft, magic and spirits and practices, totemism etc., form yet another branch, the fourth of this group⁹.

This gives us an insight into his view of how the study of a single literature could lead one on to a comprehensive view of the entire literary tradition of the language. And that is exactly how Vaiyapuri Pillai functioned as a historian of Tamil literature, he came from the single text (textual criticism) to the entire literary corpus (history of literature).

Vaiyapuri Pillai, though a specialist in certain micro areas, also had a full and an all encompassing view of the literary tradition of Tamil. He showed great interest in modern Tamil literature. He was the first Tamil academic to assert that Subramania Bharathi (1882-1921) was the major Tamil poet after Kamban (c.13th century AD)¹⁰. He was a friend of Putumaipittan (1906-1948) one of the greatest short story writers in Tamil. Vaiyapuri Pillai himself had written a few short stories and one novel (*Rajee*).

It should once again be emphasised that inspite of the many attacks he faced in the battlefront of literary history, his editions of *Kampa Ramayanam* (*Palakantam* (1937) *Yudda Kantam* (1937) and the Cankam anthologies (1940) are considered the most scientifically done editions. The recent composite editions of *Kamparamayanam*— the Murray Company edition and the Kampan Kalakam edition owe a lot to Vaiyapuri Pillai.

II. Vaiyapuri Pillai's methodology in dating literary texts and the politico-cultural consequences of the datings

The method that Vaiyapuri Pillai used in dating the texts is one of analytical inference.

He starts with a description of the work and goes on to fix the *terminus a quo* (the starting point) and the *terminus ad quem* (the terminating point), i.e., the period within which the work could have been written, arguing that it could

not have been before a particular time or author or after a particular time or author. He does this by a reference to the dates of works and authors referred to in the work, on the dates of whom there is hardly much difference of opinion.

He also used the linguistic usages found within the text to establish the period. By this he was able to establish a fairly dependable time — span within which the work could have been written.

Along with these, he also tried to identify the literary influences that the particular Tamil text has had from Sanskrit texts. This enabled him to place the work concerned in relation to the history of Indian thought.

Vaiyapuri Pillai's methodology in determining the date of a text is best seen in the manner he has gone into the dates of *Tirukkural* and *Cilappatikāram*¹¹.

As the methodology stands, it is, within the limits of its frame of reference, a very useful one. But there was one conviction of his which began to seriously affect the impartiality of his findings. That was the belief he had in the inherent antiquity of Sanskrit Literature. Whenever he discussed a Sanskrit text in relation to a Tamil text he was of the opinion that Tamil one was invariably at the receiving end and that the Sanskrit text would not have imbibed a South Indian tradition. Much of Indu Shekar's argument that the origins of Sanskrit drama could lie in a Dravidian source would not have found favour with him¹². He was not as much interested in the cultural history of India that underpinned the intellectual and artistic interplay in aesthetic creativity, as he was in the "chapter and verse" citations of what were found in the Sanskrit texts.

In fact it is at this point that 'positivism' as a methodology reveals its weakness in relation to 'historism'. The following illustrates that weakness.

"V. holds that, since the Skt. *Pancatantra* belongs to a post - 500 AD date, *Cilapatikaram*, which has this story in it must belong to a later date. Almost all who have challenged of V's dating of *Cil*, have referred to the fact that *Pancatantra* is a collection of fables and to insist that *Ilanko* had used it only after it was codified in Sanskrit would be, to say the least, to be unmindful of the Indian conditions'.¹³

Vaiyapuri Pillai could often been seen to neglect the general historical forces at work during a period, in favour of bookish, lexical references. It could be said that the rigour with which he applied his methodology did not allow him to consider the material realities of history. This 'rigour' in application, it was quite evident, increased in his later years and was in fact his personal response to the virulent criticisms to which he was exposed.

Perhaps his basic training in law had its own impact. He was extremely 'legalistic' in his approach. The mere mention of a word was enough, he would connect it up logically to its Sanskrit source; he would not take into count the historical dynamism of the situation.

In a way, the question of dating the texts had become essential by the thirties and forties when Vaiyapuri Pillai was fully involved in his textual editorial work. By that time the major literary works have been re-discovered and published in print. The need to bring them with an all-India focus was becoming essential. *In the case of the earlier textual editors, the main task was one of the re-discovery and publication. As far as scientific dating was concerned it could safely be said that the pioneer editors did not confront the problems as Vaiyapuri Pillai did.*

The literary situation in the forties and thereafter demanded that a firm time sequence of the rediscovered classical texts be established. *It could be said that the main contribution of Vaiyapuri Pillai was to serialise the works in chronological order.* The excessive positivist approach he had, eroded the validity of many of his datings, but it is to his credit that sequence in which he placed the texts has, by and large, stood the test of time.¹⁴

Vaiyapuri Pillai's writings in this field had one major feature about them, i.e. they were the only ones which had an all-Indian readership. At the time when the rest of India, and soon the Western world, began to take increasing interest in the study of Tamil and of the non-Aryan strands in Indian culture, it was Vaiyapuri Pillai's writings that attracted them with a sense of objectivity which was not alien to them.

But this very same academic objectivity had political implications and as we shall note later, there was a prima-facie charge of cause-and-effect relationship between this 'academic objectivity' and politics.

Vaiyapuri Pillai was articulating these views of his at a time when the Dravidian movement in Tamilnadu was taking a crucial turn.

Annadurai formed the Dravida Munnetra Kazhagam in 1949 and quite unlike Periyar E.V. Ramasamy his mentor. with whom he parted ways, launched on a campaign broadcasting his newly formed party, through the appeal to those non-Brahminic symbols of Tamilian cultural supremacy. This meant an avoidance of anything Tamilian with noticeable Sanskrit influence-Bhakthi Literature, Art and Architecture etc.... and an insistence on the Pre-Pallavan Tamil cultural and literary norms. It thus became essential to highlight the "Pre-Brahminic" achievements. The literary antiquity of Tamil and its mythified grammatical excellence was a rich field to tap. As has already been shown "Tamilian national consciousness at a particular stage of its development had to have a 'Dravidian' ring about it and it did go off when it was not essential.

The word 'Dravidian' conjures up in the minds of the literati the image of the independence of the Tamils. It is significant that at the seminal stages in the first quarter of the 20th century, even Brahmins who were conscious of their Tamilian heritage identified themselves with the cry. T.R. Sessa Aiyangar wrote the famous book 'Dravidian India'¹⁵.

By the early fifties, at the time the D.M.K. was being launched into existence, Annadurai postulated that the integrity of Tamil literature and that its independence of Sanskrit constituted a major political difference between the Brahmins and the non-Brahmins. Any attempt to present Sanskrit as the fountain of Tamil culture was taken as an anti-Tamil move. The Tamil teachers and pundits who had long suffered intellectual indignity at the hands of the Sanskritists rallied round this new political voice of the oppressed Tamil culture. One form of establishing the greatness of Tamil was to speak of its great antiquity. The pure Tamil Movement, started by Maraimalai Atikal was taken over by Annadurai's movement not with its avoidance of Sanskrit words (it tried its best to minimise the use of Sanskrit words and to coin new Tamil terms) but with its insistence on the pre-Aryan aspect of Tamil culture. This Pre Pallavan literature began to loom large in these attempts at showing them as non Sanskrit and pre-Sanskrit. Besides, there was also an ideological need to show that Tamil culture, bereft of Sanskrit corruptions, is basically secular in nature.

Thus, there arose an ideological necessity to present Pre-Pallavan Tamil literature as belonging to pre-Sanskritic antiquity. It may not be 'history' in the the Rankeian sense (14 A) of the term but it was an intellectual need to legitimise the new political ideology.

It is important to recall what Vaiyapuri Pillai said in defence of his methodology and how in fact, he formulated his methodology.

In an article published in the very first issue of Tamil Culture (Vol .I, No.I-1952) he said,

"In our eagerness to parade our patriotism in all its glory, we write and say things which are very far from the truth. Facts are nothing, evidences are mere game pieces on a chess board and the only thing cared for is the glorification of our country, people, land, literature. We must resist this alluring temptation with our might. This tendency defeats its main purpose and we become objects of ridicule. Truth must be the sole aim and facts must guide our steps and govern our conclusion".

In this one could see how Vaiyapuri Pillai was responding to a situation in which he was increasingly distanced from the general trend of Tamil scholarship of the day.

Vaiyapuri Pillai's research findings began to create problems for those who were supporting the new political ideologies. In fact gradually the leading institutions connected with Tamil studies began to have scholars supporting or supported by Dravidian ideologies and ideologues. Vaiyapuri Pillai was vehemently opposed by them; thus the alienation.

Vaiyapuri Pillai would not have had much of the hostile reception, if the question of dating did not relate to two Tamil literary works, which had become the symbols of Tamilian greatness—one taken as the acme of Tamil wisdom and the other hailed as the epic of the common man written at a time when Gods were considered the fit persons to be depicted in epics. Tirukkural, the didactic work par excellence in Tamil, and Cilappatikaram, the epic of wifely devotion and of righteous revolt against monarchic indiscretions, were being used as the cultural symbols of the Dravidian movement, as popularised by Annadurai.

Vaiyapuri Pillai argued justifiably that Valluvar was Jaina (this angered the Saiva-Vellala traditionalists who maintained that Valluvar was a Hindu, in fact a pure bred Saiva Siddhantist), that Valluvar lived in early 6th century (this was not liked by the Dravidian ideologues) and, worse still, that Valluvar had borrowed his ideas from Sanskrit works (this of course, infuriated all the Tamilists)

Worse still was his dating of *Cilappatikaram*. In a radio talk he gave on 8-10-1945, he expressed the opinion that cil. should belong 7th, 8th centuries (AD¹⁶). The second edition (1953) of *Tamilccutarmanikal* carries the same date. In *Kāviya Kālam* he takes the position that both *Cilappatikāram* and *Manimekalai* must have been written around 800 AD.¹⁷ In *A History of Tamil Language and Literature*, which definitely was the last major work written by him, he argues "that the Silappadigaram was most probably composed about the middle of the ninth century AD."¹⁸

The Tamil opinion of the day took it as a major insult to the entire community. Instead of attempting to refute his findings (as some of those following Vaiyapuri Pillai's methodology later did ¹⁹.) he was attacked as a traitor to the Tamil cause.

Kural and *Cilappatikāram* were not the only works that were given late dates by him. He assigned a late date to Tolkappiyam. In Vaiyapuri Pillai's opinion Tolkappiyar lived in 5th C AD²⁰. This enraged the Tamil pandits with whom an old date (Sometimes as unbelievable as 2000 BC) for Tolkappiyam was an article of faith.

The hostility to Vaiyapuri Pillai is well summed up in what Devaneyappavanar said about those who are not qualified to write on history of Tamil and its literature.

"Except those with a research experience in etymology, and with the courage of conviction to oppose Brahminism and the imposition of Hindi, *none of the Vaiyapuris who betray Tamil*, with any amount of knowledge of literatures or with any amount of Ph. D's or with appointment as Vice-Chancellors is *fit to write a history of Tamil literature*."²¹

Further down in the same book he says,

"It is quite clear (from the above arguments) that Mr. Vaiyapuri Pillai had written the above mentioned books with the express aim of degrading Tamil. Therefore it is quite in order that the word 'Vaiyapuri' has come to mean a traitor to Tamil'.²²

It is true that other scholars were not so abusive. Yet there was almost a conspiracy of silence at that time at the level of the establishment scholars (by this term, I refer to those Tamil scholars who attained positions of official distinction as a result of the political gains made by Tamilian nationalism as expressed by the D.M.K. This would include those scholars who are taken as symbols of Tamil learning but were not politically partisan). Mr. Varadarasan the ideologue of secular Tamilian nationalism, once Professor of Tamil, University of Madras, later Vice-Chancellor, University of Madurai in his thesis on the treatment of nature in *cankam* literature for Ph.D. to the University of Madras in 1947, avoids any reference to Vaiyapuri Pillai. In fact there is no discussion in that thesis to the date of the *Cankam* texts.²³ Nor is there any reference to Vaiyapuri Pillai in the thesis submitted in 1956 on *Love in Sangam poetry* by V.Sp. Manickam, who later became Professor of Tamil at Annamalai University and Vice Chancellor, Madurai Kamaraj University.²⁴ In both these works, Vaiyapuri Pillai's name does not occur even in the bibliographies.

N. Subramaniam's thesis on *Sangam Polity* presented to Annamalai University (1954), and later published in 1966, refers to Vaiyapuri Pillai on the question of the dates of some of the texts. Here again one is able to note the hostile terms in which Vaiyapuri Pillai is referred; quite often the suffix 'Pillai' (indicating the Vellala Caste) is dropped and is referred to as just S. Vaiyapuri.²⁵ To anyone who is accustomed with South Indian Social proprieties this is something very hostile, if not derogatory.

By the sixties, at level of the 'establishment' scholars, there was a slight thaw. Viayapuri Pillai's name was not being discussed at length, but his views were being referred to and objected to without much discussion. Such a renowned scholar as T. P. Meenakshisundaram in his *A History of Tamil Literature* (Annamalainagar 1965) mentions Vaiyapuri Pillai's name only in matters not of vital importance. There is no reference to Vaiyapuri Pillai's name and his views on

the dates of the major texts in those places where the dates of those texts are being discussed.

But, by the late sixties and the seventies, and thereafter the situation had changed. Even though there is yet some hesitation (some well founded and some not so) to his datings there was no tabu relating to the mention of his name. A good example is "*An Introduction to Tamil Literature*" (Madras 1981) by N. Subramaniam the author of *Sangam Polity*. Subramaniam refers to Vaiyapuri Pillai in his full name, and uses the honorific suffix Pillai too, as in the sentence "Pillai was a creative writer".²⁶

In recent times there is renewed interest in Vaiyapuri Pillai.

It should however be mentioned that almost all of Vaiyapuri Pillai's Tamil writings are out of print and are not available even in the libraries of well known institutions of Tamil learning in Tamilnadu. A generation of Tamil students have been trained in Tamil without any reference to his writings. They know him only as some one to be avoided.

Vaiyapuri Pillai's contribution to Tamil Studies by

- (a) the introduction of a scientific methodology for dating the texts
- (b) familiarising the principle of historical criticism in Tamil
- (c) and thereby bringing Tamil within current internationalist perspectives on research

and (d) Viewing Tamil literary texts in all Indian perspective in relation to evolution of Indian thought

is getting recognised now. But it needs to be analysed further, for Vaiyapuri Pillai himself cannot be exempted from an examination by the very canons of historical criticism he sought to introduce in Tamil literary studies. In the heat of emotional arguments over the dates of texts, the more crucial question of the ideological stance of Vaiyapuri Pillai has never been taken up.

It is therefore important that an attempt is made to present his major work in English (*History of Tamil language & literature*) in terms of its content and ideology and to indicate its standing in the face of the developments in Indian and Tamilian studies since 1956, the year Vaiyapuri Pillai passed away.

II. HTLL and its 'Thesis'

As is told in the sub-title to that book a history of Tamil language and literature that is dealt with in that book is from the beginning to 1000 A.D."

The work has got to be taken as only a summary of his findings on the history of Tamil literature, for, the extensive argumentation and the elaborate documentations to support them, which are so characteristic of Vaiyapuri

Pillai's writings, are not given extensively here. For a full view of those features one should read V's Tamil works like '*Ilakkiya Teepam*', '*Ilakkiya Cintanai*', '*Tamilcutarmanikal*',

'*Ilakkiyamanimalai*' and most importantly '*Kaviya Kalam*'. But this work has one distinction, this was the only work (he wrote) in English and is comprehensive enough to bring within it almost all of his major views on the problems of the history of Tamil literature.

S. S. Ramaswamy, his son-in-law (husband of Ms Sarojini, the author of Vaiyapuri Pillai's biography) informs that Vaiyapuri Pillai was working on this book around 1954-1955. It is told that Vaiyapuri Pillai who had, by then, completed the note on Tamil literature for use by Nilakanta Sastri in his History of South India (1955), was working on this book, realising the need for a comprehensive history of Tamil Literature in English.

The book is divided into two parts-part I from beginnings to 300 A. D. and Part II from 300 to 1000 A. D. Part I does not have a formal chapter division; it is prefaced with a chart of the topics analysed in that part. There are fifteen topics listed. This pattern is also seen in his "*Kaviya Kalam*" (Posthumously published) where he lists the problems discussed in a like manner

Part II, dealing with the period 300-1000 A. D. has five chapters-Anthologies, Grammatical works, didactic works, Bhakthi Movement and Secular Literature. The story of Manimekalai is appended to the book.

Vaiyapuri Pillai, in his attempt to delineate the literary development in Tamil in the period he has taken up for discussion, seems, at the outset itself, to take it into two major chronological units-beginnings to 300 AD, and from 300 AD to 1000 AD. The first phase, quite obviously deals with the "*Caṅkam period*". It is important to know how he comprehends the literary developments of this period, so much eulogized by the protagonists of Tamil culture. The pivotal portions in this work relating to this question are the following paragraphs:

".....No poet of the Sangam Age seems to be earlier than the second century AD.

We are as yet far from the beginning of Tamil literature. Before the second century A.D. there must have been crude attempts at literary expressions and those attempts must have been going on for a pretty long time. Moreover, the style, the diction and metrical perfection of the Sangam poems require for their development a considerably long period. At a rough computation, we may put this period of development as three centuries.

Looking back beyond these long centuries, we sight a period when the Brahmi inscriptions were in vogue. They show the Tamil script in its formative stage and from this stage up to its full development and its adaptation for literary purposes, the above estimate allows sufficient interval. Development in language, script and literature must have been going on at a rapid pace. Powerful influence must have been at work during this period as evidenced by the Brahmi inscriptions. The words 'Kutumpika' "Ila" and the circumstances in which the inscriptions were written tell their own tale. Contact with Sanskrit and Prakrit languages and literature, with adjacent countries like Ceylon, and with the Buddhist and the Saiva religions must have been largely influential in shaping the Tamil mind. The continuous influx of people from the North also must have had its influence. The Tamil language must have received new tributaries in its stream. Thus the even tenor of the life of the ancient Tamilian was ruffled and invigorated, *a desire was created in him to emulate Sanskrit Literature. The religious and moral side of the ancient Tamilians was given a new turn by the new influences noted above. The secular side remained uninfluenced and it went on very much as before.* The earliest literature would have necessarily its roots in the native soil of the Tamils and this literature must have been in verse".

Any doubt relating to the period when this 'new turn' was manifest, is cleared up subsequently when he specifically mentions how these are reflected in Puranānūru and Patirruppattu.

"A detailed description of a Yaga performance in Puram 166 and frequent references to vedic gods in Puram (eg. 16, 23) Patirruppattu (eg. 11) and other early collections furnish evidence of the spread of the vedic religion among the Tamils. Buddhists were also propagating their religion in Tamil countries.....Some poets bear Buddhist names, eg. Illambodhiyar. Theradaran, Siru-ven-thēraiyaṛ etc. Jainism supplied a new religious force which was for centuries a powerful rival to Hinduism in the South. Jaina mythology is found in Puram 175 and Akam 59. Thus the Tamil land became a fertile nursery and the several religions noted above thrived in friendly rivalry".

It is quite clear that the *period of new turn* in which several religious ideologies flourished in Tamilnadu *was the Cankam period*. It is his contention that the period from the Brahmi inscriptions (according to him dating from 3rd century BC) to the end 100 AD was a period *preparatory* to the Cankam period and the Cankam period *was the turning point*.

Vaiyapuri Pillai takes this "new turn" as one essentially seen only in the religious and ethical life of the community. *It is his considered view that "the*

secular side remained uninfluenced and it went on very much as before". He takes the laudatory *puram* poems and the pre-marital and marital *akam* poems as coming from and depicting the earlier phase. As he concludes in discussion on the strength of the religious and the ethical fervour seen in the Cankam literary corpus, he makes the following comment.

"against this background lay scattered the several poetic pieces of the earliest times. They were secular, a good part of them praising Kings, and Chieftains and subtly introducing religious elements to attract and influence the nobility of the land, and the rest, dealing with love in all its aspects, to appeal to the literate among the masses".

The assumptions implicit in the above statement are far-reaching. He says (a) that the unadulterated secular *puram* poems—at least, some of them—must belong to an earlier phase than the Cankam period and (b) that the *akam* poems, as they stood were meant for the "literate among the masses". His understanding of the relationship of literature to (and in) society is that, while a major change is taking place in the religious life of the community, at the secular level, i.e. non-religious 'mundane' level of social existence those could have no effect.

Leaving those questions relating to the language of the Brahmi inscriptions and their affinity to (i.e. how far they were close to) the language of Cankam texts, which post-Vaiyapuri Pillai research has answered and taking only the assumption that religious changes in society have no relationship to the temporal power structure of that society, one would find Vaiyapuri Pillai taking quite an irreconcilable position which a scholar keen on the historical method could ill afford to. This is an important ideological facet of Vaiyapuri Pillai, not quite well noticed, but which needs close watch.

Vaiyapuri Pillai's delineation of the literary transition from the period of the Brahmi inscriptions cannot be sustained in the face of subsequent research done on the problem. Iravatham Mahadevan, who more than any other scholar of recent times, has been responsible for sorting out the problems of the date and the content of Brahmi inscriptions states that "linguistic analysis shows they (the Brahmi inscriptions) emerge in simple intelligible Tamil not very different in its matrix.....from the Tamil of the Cankam period".²⁷ He also states that "the assumption that several centuries must elapse for the full development of written language is not necessarily correct. The religious and cultural ferment generated in the Tamil country by the Buddhist and Jaina creeds and the enormous and perhaps sudden increase in prosperity on account of Indo-Roman trade must have triggered off a rapid development of the written language around the turn of the Christian era". Though this would be in agreement with the cultural ferment of which Vaiyapuri Pillai himself speaks the date is

clearly two hundred years earlier. Thus the date would be around 100 BC — to 100 AD a date which is not so appealing to Vaiyapuri Pillai. On the basis of Greco Roman evidence and their congruity with some of the references found in Cankam literature, Vaiyapuri Pillai would place the period between 100 - 250 AD (p. 25)

There is one more opinion of Viayapuri Pillai which has been challenged quite effectively. Speaking of the Akam poems of the Chankam corpus, he said

“Tall claims are sometimes made that the Aham poems are the sole monopoly of the ancient Tamils. Sanskrit literature abounds with poems of this nature and indeed some of these poems are very ancient. I may refer to the famous Hala Satassi. It is a collection of 700 erotic gathas in the Arya metre in Mahārāshtric Prakrit and it is ascribed to King Hala (AD 20—24)” (p.45)

In a comparative study of ancient Tamil poetry and its Sanskrit counterparts, George L. Hart II, went precisely into this question in detail and concluded,

“The Sattasai is filled with so many close parallels to Tamil verses that their close relationship cannot be questioned. Furthermore, because of the Dravidian meter and Dravidian rhyme that first appear in Indo-Aryan in the Sattasai and show how dependent that anthology is on the Dravidian tradition, *there can be little doubt that themes and situations that first appear in the Sattasai come from a southern tradition of poetry and not a northern one* and yet the agreement between situations and themes in ancient Tamil and *Sattasai* is not great enough for one to have borrowed directly from the other”.²⁹

Having dealt with the Cankam period as a turning point in Tamilian literary history in which there was a religious fervent which did not have anything substantial to do with the basic life of the people, he goes on to mark out the succeeding periods. It is true that an impression has been given at the outset that he tends to take the period ranging from 300-1000 AD as one era. But a closer look would reveal that he would phase it out into two units.

(a) from fourth century to the end of fifth century A.D. i.e. 300 A.D. to about 499 A.D.

and (b) from sixth century to the end of the ninth/beginning of tenth.

The dividing line between (a & b) is the Bhakti movement. “This movement began in the 6th century, caught the imagination of the people and spread rapidly. The controversy which had hitherto been conducted on a generally intellectual level became now coloured with emotion and the sectarian spirit consequently

deepened. It gathered momentum as time passed and changed to purely emotional level" (p.78).

He takes the period from the beginning of fourth century A.D. as marking "a new epoch in the history of Tamil language and literature even as it does in the political and social history of the Tamil land". He does not mention what the epoch making political and social events were, but he mentions the major literary event; it was the effort to collect the ancient poems and arrange them in handy and systematic anthologies" (p.49) But, "the collections were made after the first grammatical treatises were written or at least after grammatical speculations had crystallized into conventional terms" (p.51) Tolkappiyar, the author of Tolkappiyam, is taken as belonging to the second half of the fifth century A.D." (p 65)

The emergence of the concept of 'Centamil' (standard Tamil) is also traced to this period.

Vaiyapuri Pillai takes Jainism as the dominant religion in this period and considers the formation in 470 AD of the Dramila Sangha by Vajranandi, as "an event of first rate importance (that) occurred in the history of Tamil language and culture" (p.58) for, according to him, "inspite of the paucity of direct evidence the remarkable output for grammatical and ethical works soon after the establishment" (p. 61) He was of the opinion that "the smooth and gently flow of harmony (that characterised this period) existed till the end of the fifth century" (p.78). It is perhaps the extent and the manner of achievements of the Jains that prompted him to say that "so far as the Tamil region is concerned, we may say that the Jains were the real apostles of culture and learning." (p.60)

It is refreshing to note that Vaiyapuri Pillai has not failed to highlight the socio-political significance of the acceptance of the concept of 'Centamil'. He speaks of the importance of Madurai as a city in social, economic and cultural terms and adds that Centamil must have been the language of the upper class and quotes Tolkappiyam to justify his surmise (p.75)

Inspite of his emphasis as a period of great socio-political importance in the history of Tamilnadu, he has not discussed what these important socio-political matters were.

A close reading of what he has written on the subsequent period (from the beginning of the sixth century to the end of the ninth) would show that Vaiyapuri Pillai identifies four literary trends with the second one (the bhakthi movement) dominating the other three.

The four major trends are

- (i) the rise of gnomic and didactic works, ushered in by the great Tirukkural of Valluvar. This was essentially the result of the Jaina option for proselytism, 'to gain the allegiance of the people' (p. 79)
- (ii) The bhakthi movement of the Vaidic religions (Saivism and Vaisnavism). This movement was a response to the success of the Jains. "The success of the Jains set them a thinking and a rival religious force strong enough to stem the tide of overspreading Jainism had to be created". "Political powers also took sides in this grim battle of religion" (p.101). Vaiyapuri Pillai says that it began in the sixth century and its culminating point was about the first quarter of the seventh century. "The Saivate movement preceded the Vaisnavaite movement, the latter represented by the twelve Alvars who flourished between AD 700—900".

This was the dominant trend and it leaves its imprint on the entire literary production of the period.

- (iii) The continuity of "other and more ancient forces" (p. 134) as could be seen in the highly stylized forms like Kovai. This was a feature seen in the secular literature of the period.
- (iv) The rise of the Kavyas, another literary offshoot of the highly resourceful Jainas. "The Jains tried to gain the allegiance of the people by writing stories about royal personages who figured largely in the history of their religion and culture and about their saints and other great men" (p.137). The epics dealt with in their chronological order are Perunkatai, Cilapati-kāram, Maṇimēkalai, Cīvakacintāmaṇi, Kuntalakēci, etc.

Vaiyapuri Pillai, concentrating most, as he has, on the history of ideas, seems to consider the religious disputes and controversies as pivotal in the conflict between Jainism and Buddhism on one side and Hinduism on the other. In his analysis the bhakthi movement seems to be, at least the start, not a primary cause but only a secondary one; "There was one element which fanned the flame of controversy to red heat and that was the bhakthi". (p.78)

It is important to observe the manner Vaiyapuri Pillai deals with the bhakthi movement. Though he stated the importance of the movement in the literary formation of the period, and had emphasised the popular character of the movement, he does not go into the all-important questions of

- (a) who reacted against the Jains or who led this reaction against the Jains?
- and (b) Why did they react, in other words, what was the need for such reaction?

The highly positivist approach he has adopted would have naturally shunned him from raising these questions. Nevertheless, as these are the questions, which had determined the exact character of the movement and the nature of its literary output the questions are important. It is redeeming to note that he describes the chief challenge the Bhakthi movement had to face thus: "Neither in the *ghatikas* nor in the Yagas were the people at large allowed to participate. Brahminism had to be transformed into Hinduism in which all and sundry could take part" (p.100)

From the manner he has structured the periods and the phases, it is quite clear that Vaiyapuri Pillai was trying to get at a history of the people and the region in so far the history of that literature was concerned: he was not concerned with literary history, in the sense it is an interaction of literature and history. i.e. as one of studying the role of literature in history.

When compared with the periodization given in his '*Kaviya Kalam*' the one given in the History of Tamil Language and Literature, looks better structured.

The periodization given in *Kaviya Kalam* is as follows:

1. Murcanka Kalam (Early Cankam Period) AD 100-350
2. Tokai cey Kālam (period of anthologization) AD 400-500
3. Pircanka Kalam (Later Cankam Period AD 600-750
4. Bhaktinurkālam (period of Bhakti works) AD 600-900
5. Neeti Nurkālam (period of didactic works) AD 600-850
6. Murkāviyakālam (Early epic period) AD 750-1000
7. Pirkāviya Kālam (Late epic period) AD 1100-1300
8. Tattuva Nurkālam (period of Philosophical works) AD 1000-1350
9. Viyākkiyāna kālam (Period of the commentaries) AD 1200-1500
10. Purāna pirapanta kālam (period of puranas and prabandhas) AD 1500-1850
11. Tarkkālam (Modern period) AD 1850-

The period covered in HTLL is only up to the sixth mentioned above. The concept of periodization in *Kāviya Kālam* seems to be one of finding a chronological format for placing the major literary activities and literary forms in Tamil in a 'development' perspective. Compared with such and extreme form of empiricism, the one in *History of Tamil Language and Literature*, seems to have an underlying ideology and that is literature is primarily a product of ideas. The manner Vaiyapuri Pillai applied it was from above, i.e. he saw ideas as factors motivating the change and the people act as agents for the ideas. Vaiyapuri Pillai, in other words, has been Hegelian in his approach.

It is also clear from the manner he had described the "new turns" and developments, Vaiyapuri Pillai had not paid much heed to the indigenous poetic traditions of akam and puram (which he himself praises-p 46) and had not tried to explain the ideological and the aesthetic significance of the new influences in relation to the indigenous poetic traditions. It could be said that he failed to see the process of literary formation in Tamilnadu as a process of acculturation, of the ideas that came into Tamilnadu, but saw them supersessions which did not owe much to the earlier traditions. Vaiyapuri Pillai, also failed to realise that the Tamil tradition too had an important place in the composite Indian tradition and that what has been taken as the general Sanskrit culture was itself an outcome of the mingling of the Aryan and non-Aryan trends. Vaiyapuri Pillai, a victim at the hands of 'Dravidian' ideologues, did not want to accept this concept of shared themes.

The book, inspite of its title, has much less on language and the little that is found is more philological in nature than rigorously linguistic. Viewed in terms of linguistics, what is found in this work cannot be described as history of Tamil Language.

And that takes us on to an assessment of the work in relation to the subsequent development in the fields of knowledge concerned.

IV. Research Developments in areas connected with Tamil Literary History since 1956.

It would be grossly unfair by any scholar to judge him by those developments in the fields of his/her concern, subsequent to the person's death. Nonetheless such an attempt is essential to establish his/her continuing academic significance and to see how intuitive the scholar was of the developments that were to take place soon.

It would not be possible to go into each of those specialized areas which meet at the interdisciplinary confluence of Literary History. It is only possible, in a note like this, to chart out the contours of the change.

It is rather ironic that Vaiyapuri Pillai was summarising his views in Tamil with almost inflexible rigidity at a time when there were challenges to the existing historiographical notions of Northern/Aryan supremacy in Indian culture formation and Indian historiography was changing. It is all the more disheartening to note that he was not unaware of these changes; he refers to them in an enpassant manner in his presidential address.

"Those very exhaustive and intensive studies made of the culture of the Gangetic valley, its authors and its diffusion into other parts of the Sub Continent and even beyond in the South Asian region began to reveal that there was something

more in that culture-complex, which until then was considered exclusively 'Aryan' and 'Sanskrits'. The linguistic researches of Burrow and Emeneau, the archaeological excavations of Wheeler, the cultural studies of Filliozot and Suniti Kumar Chatterjee revealed the urgent need to explore Dravidian South more closely. *And Tamil perhaps the only non-Aryan language in India that records the changes that were taking place with the penetration of the Aryan influence began to attract the intellectual attention in a manner that it had not in the earlier days*".³¹

This led to a fundamental questioning of some of the hitherto held basic assumptions. The emerging notion was "there cannot be any conception of India without either Dravidian (and other pre-Aryan) or Aryan. Like the warp and woof of a piece of woven stuff, Aryan and Dravidian have become interlaced with each other to furnish the texture of Indian civilization".³²

All these led to a serious erosion of the carefully constructed and consciously preserved historiographical notions of some South Indian scholars that South India and Tamilnadu were always at the receiving end of the cultural transmission and have had nothing to offer.³³

The late fifties and the early sixties also marked a definite departure in Indian historiography in general and with the arrival of scholars like Kosambi, R.S. Sharma and Romila Thapar, concepts of Aryan supremacy and Sanskrit dominance ceased to be keypoints in viewing Indian historical development. There was an effort to synthesise anthropology and archaeology epigraphy and sociology to get a comprehensive picture of the over all Indian development, in which folkways figured as prominently as sanctified literary sources.³⁴

All these led to the emergence of a historical viewpoint of development unsustainable from the standpoint of Vaiyapuri Pillai. For instance, studies in the field of linguistics, (which received great impetus in the sixties) showed:

".....the earliest vigorous bloom of Tamil culture began before the Sanskritization of the South could have had any strong impact on Tamil Society. It is now an admitted fact by scholars in historical Dravidian linguistics that Proto-South Dravidian linguistic unity disintegrated some time between the 8th—6th cent B. C. and it seems that Tamil began to be cultivated as a literary language sometime about the 4th or 3rd cent. B.C.

Besides linguistics, archaeology also began to provide a picture of a South Indian development based on the use of iron, which has a remarkable continuity of culture. Raymon Allchin, an archaeologist of distinction, has found the descriptions in Perumpānārrupatai very useful in identifying and explaining the Neolithic ash-mounds of South India. He has related them to the general mullai culture of the Cankam poems. Viewed in terms of the function of

literature within that social formation this evidence is enough to establish the historical significance of Cankam literature and the past it refers to.

More important, from the point of Vaiyapuri Pillai's view, is the advances made in the study of the Indian literary culture and the place of Sanskrit and Tamil within it. George Hart's study of "the shared literary themes" in ancient Tamil and Indo Aryan literature is important in this respect. The very concept of shared themes ruled out any questions of "emulation of Sanskrit literature" or being at the receiving end. Going into the specific question of Hala's Sattasai, about which Vaiyapuri Pillai makes unjustifiably provocative statements, Hart concluded that the Sattasai came from the southern tradition.³⁷ Hart locates the origin in "a common popular and undoubtedly oral tradition".³⁸

The concept of the shared themes should remind us also of the dynamic interrelationship the southern religious tradition of Bhakthi had in the formulation of the Indian precept and practice of religiosity, which has attracted scholarly attention in recent times.³⁹

A close analysis of Vaiyapuri Pillai's writing on the early Tamil literature reveals that his concept of that literature is one of "written" literature. He has not taken into account the possibility of an oral base for Cankam Corpus. Kailasapathy in fact starting off from a hint from Vaiyapuri Pillai himself that Cankam literature should be "heroic" in terms of Chadwick's Heroic Age".⁴⁰ had argued the case for an oral literary base for Cankam poems. This has constituted a major shift of emphasis in viewing Cankam literature.

Vaiyapuri Pillai dismissed oral traditions and myths out of hand in considering the dates of texts. With the previously mentioned change in Indian historiography myths are now treated with some respect and are considered "inverted" history.

An attempt made to delineate another 'cultural product' from within the same culture viz; drama has shown that other cultural institutions have not been as dependant on Sanskrit as literature has been made to appear in Vaiyapuri Pillai's presentation of its development.⁴¹ In terms of the Social production of the arts, it cannot be argued that, (granting fully the relative autonomy of each of the art forms), the pattern could have differed basically. The question is one of acculturation and integration and not one of borrowings and emulations

There are some of the major developments since the death of Vaiyapuri Pillai which have brought about conceptual changes in the approach to Tamil literary history.

It should not however be forgotten that these conceptual changes were effected by scholars and researchers, standing, firmly, as they did, on the findings

of Vaiyapuri Pillai, especially the serialisation of the ancient Tamil literary texts, which were for the first time given a chronological span to work out the dynamics of Tamil literary and cultural formation. *So understood properly, these are only advances on Vaiyapuri Pillai thesis, not condemnations of it.*

The abiding value of HTLL lies in that it serialised the major Tamil literary works in a time sequence. In saying so, one should hasten to add the time sequence is correct, except in the case of Cilappatikaram. The amended serialisation would be that Cilappatikaram is pre-pallavan i.e. pre - 700 A.D. and was written about 450 - 550 A.D. This would necessitate, without dislocating the basic chronological sequence of the literary works.

NOTES

1. The writer wishes to thank Thiru. S. S. Ramasamy, Vaiyapuri Pillai's son-in-law, for readily discussing some aspects of Vaiyapuri Pillai's biography, and Thiru. T.M C. Ragunathan and Thiru. R. Parthasarathy for the encouragement they gave. Thiru. Parthasarathy's comments on the first draft were very helpful.
2. Zvelabil K. *The smile of Murugan on Tamil literature of South India*. Leiden 1973 P 339.
3. For a fuller biography of Vaiyapuri Pillai see Sarojini. V. Vaiyapuri Pillai Valkaikkurippukal, Madras, 1957 (Tamil).
4. I am grateful to Prof. V.I. Subraminian for giving this information.
5. Rm. Sundaram, *Vaiyapuri Pillaiyin Aivu Muraiyum Tiranum* in his *Col. Putitu Cuvai Putitu-Madras-1978*.
6. S. Vaiyapuri Pillai Akarati Ninaivukal - (1959) Madras - p 7.
7. No effort has yet been made to trace the textual history of the major literary works in Tamil
8. Sarojini V. op. cit. Nilakanta Sastri K. A. *A Comprehensive History of India*. Orient Longmans.
9. Vaiyapuri Pillai. S. presidential Address; All India Oriental conference- Thirteenth Session : Nagpur University-1946 pp 125-6 (emphasis added).
10. Sivathamby K and Mary. A. "*Bharathi Maraivu mutal Mahakavi Varai*" N.C.B.H. Madras 1984.

11. Vaiyapuri Pillai - *Tamilccutar Manikal* - Madras 1952-pp 61-80. Vaiyapur Pillai - Kaviya Kalam - Madras 1957 pp-95-164.
12. Shekhar L. Sanskrit Drama.
13. Sivathamby K. *Vaiyapuri Pillai's dating of Cilappatikaram in Vidyodaya Journal of Arts Seicnce and letters*. Vol 5 No. 182-1972/76. Nugegodai Sri Lanka.
14. Subramanian V. I. *Landmarks in the history of Tamil literature*. paper presented to IATR - IInd conference Madras 1968.
- 14(A) Leopald Von Ranke : A German Pragmatists - Historiographer who "insisted on systematised erudition in-exorable logic a scientific attention to the arrangements of facts in next catagories". "The gate way of History"- Allan Navini p 42.
15. Sivathamby K. "Understanding the Dravidian Movement-problems and perspectives" - Keynote paper at the seminar on the Dravidian Movement in Tamilnadu" organized by N.C.B.H. Madras-Feb. 1983.
16. *Tamilccutar manikal* - Madras 1952 - p. 63.
17. Vaiyapuri Pillai S. *Kaviyakalam* - Madras 1957, P.141.
18. Vaiyapuri Pillai S. *History of Tamil Language and Literature* - Madras-1956. p. 153.
19. See Rm. Sundaram - op.cit Sivathamby K. loc. cit. Arunachalam.p. *Cilappatikaraccintanai*
20. *Tamilccutarmanikal* p.38. Currently the view is that Tolkappiyam is not a work of unitary authorship. Zvelabil-op cit.
21. Devaneyan.G. *Thamil Ilakkiya Varalaru* North Arcot - July 1979 in a note, "Those who are qualified to write a history of Tamil literature" coming prior to the introduction to the book. (not paged)
22. ibid p. 277
23. Varadarajan M. *The Treatment of Nature in Sangam Literature*. Madras - 1957.
24. Manikam V. Sp. *The Tamil Concept of love*. Madras 1962.
25. Subramanian N. *Sangam Polity*. London 1966. p 30-32.
26. Subramanian N. *An Introduct;on to Tam l Literature* - Madras 1981. p 95.
27. Mahadevan I. *Tamil Brahmi inception of the Cankam Age*. IATR (Madras) 1968.
28. ibid.

29. Hart III G. L. *The poems of Ancient Tamil*. Berkley. 1975 p. 252. It would be interesting to know of Madhivanan's comment on Vaiyapuri Pillai's statement referred to in the body of this work. Madhivanan who has done a Tamil translation of the Sattasai and classified them thematically as is done traditionally in the case of Akam poems, makes a sneering reference to the fact Vaiyapuri Pillai has said Sattasi as Sanskrit literature (overlooking another fact that Vaiyapuri Pillai does refer to Maharashtri Prakrit) and goes on to say the following :

"The dimensions and repercussions of literary prevarications of truth on hearsay evidences have not only misled Tamil scholars and reading public, but also tend to fantastic concept of the perpetual literary mortgage of Tamil language to Sanskrit not warranted by historical evidences and facts. For the benefit of such men in Tamil literary world, I affirm that I adopted appropriate Tamil literary thematic classifications in these love poems when rendering these translations from original Prakrit work."...

(Madhivanan, R. *Antiranattu Akananuru* - Madras. 1978. pp VI—VII) This is an apt illustration of the type of attack Vaiyapuri Pillai had to face. As has been already made clear, the cause for all this 'righteous indignation' was because Vaiyapuri Pillai has said that Sanskrit too has poems of the Akam type. This quotation is also representative of the polemical stance and the sense of bravado displayed by some Tamil publicists when they were able to challenge Vaiyapuri Pillai successfully.

30. For the contents and extent of the discipline of Literary History see Sivathamby K. - "*Literary History in Tamil - a Historiographical Analysis*" - Tamil University, Thanjavur. 1986
31. Sivathamby. K.- "He responded to the call of Indian Historiography' in TAMILARAM. - a volume of tributes to the memory of Fr. X. S. Thaninayagam Jaffna 1983 p.54 (emphasis added).
32. Chatterjee S. K. Dravidian - *Annamalai agar* 1965 - p.49.
33. Cf. Sastri. K.A.N. called the Pre-Aryan culture in Tamil Nadu as "rather primitive and poorish" - *Culture of History of the Tamils* - Calcutta 1966-p 7. and contrast this with the writings Kamil Zvelabil and the Allchins.
34. For a description of the activities on the field of Indian historiographical studies, see Morrison, M.Barrie, "Sources, Methods and concept in Early Indian History" in *Pacific Affairs*. VI XLI NO. 1968 (USA).

35. Zvelabil.K. *The Smile of Murugan* - Leiden. 1973. p.4. (emphasis added).
36. Allchin F.R. *Neolithic cattle keepers of South India*. 1963-p 110.
37. Hart III G. L. *The Poems of Ancient Tamil Society*. Berkely 1975 p. 252.
38. ibid. (It is important to note that Basham has also referred to the common origin of both. He of course, locates it in the common folk song. - Basham. A.L. *Wonder that was India* - London. 1954 p 461. It is worth mentioning here the present writer has argued "that the origins of Akam poetry lie in the primitive songs of ancient South India and that the evidence for the antiquity and the continuity are seen in Hala's Saptasutaka and Toda Oral poetry".
39. Hardy, Friedhelm, *VIRHABHAKTHI - The Early History of Krsna Devotion in South India*. Oxford. Delhi 1988.
40. Kailasapathy. k. *Tamil Heroic Poetry*. Oxford - London 1968. Vaiyapuri Pillai - Kaviya Kalam p. 71.
41. Sivathamby K. *Drama in Ancient Tamil Society* - NCBH P Ltd., Madras, 1981.

TWO MEDIEVAL MERCHANT GUILDS OF SOUTH INDIA

BY

MEERA ABRAHAM

NEW DELHI, 1988, PP 273+xii WITH FOUR MAPS

In the opinion of an eminent scholar, S. D. Gotein, 'The India trade was the backbone of the international economy in the Middle Ages in general and inside the Islamic world in particular'. It 'furthered the rise of a flourishing merchant class and created close and fruitful links between the countries of Islam and the Far East on the one hand and Europe on the other'. Yet the knowledge about India's contribution and participation in international commerce in the Middle Ages has remained vague and fragmentary until recently and the information pertaining to this subject has remained scattered in the texts of inscriptions recorded in different languages and in the literary notices of diverse origins..

Meera's monograph supplies a long felt need and fills a major gap in the economic and social history of South India. It is the result of many long years of patient, painstaking and exhaustive study of published and unpublished materials by the author one of whose main contributions is to have collected and analysed with imaginative understanding almost the entire range of available information pertaining to the trade and commerce of South India in general and the two merchant guilds in particular. In her monograph written with professional academic skill the author has co-ordinated and harmonized the findings of modern scholarship with those of her own and many issues relating to trade and urban development of medieval South India have been clarified for the first time. In academic quality and the level of scholarship it surpasses all other volumes on Medieval South India produced by Indian authors during the past two decades.

In many respects, this volume is complementary to Kenneth Hall's excellent treatise, *Trade and Statecraft in the Age of the Colas* (New Delhi, 1988) which is comparatively restricted in scope, being confined to the Tamil country. Meera Abraham's study covers a much wider area of Peninsular India. Many localities now included in the states of Kerala, Karnataka and Andhra Pradesh also figure prominently in her work which concerns the *Manigramam* and the *Ayyavole* who were the most wealthy, influential and powerful among the merchant guilds of South India.

The book consists of five chapters of which the first one is devoted to an examination of the activities of the *Manigramam* in the wider context of India's foreign trade. The origins of the *Manigramam* are obscure and some scholars believe that it is identical with the *Vanikgrama*, referred to in a tenth century Sinhalese inscription in Sri Lanka and mentioned in some early Indian texts. The trading activities of the *Manigramam* association of merchants covered a range of coastal towns and localities which are now included in Kerala and Tamil nadu. They were closely interacting with Christian and Muslim mercantile interests and with other merchant guilds. They were participants in internal and foreign trade and played a significant role in the development of urban centres. In the port town of Quilon they functioned in a subordinate capacity to the Syrian Christians but in Cranganore they secured a virtual monopoly as the commercial sector of the town was under their control. At Talakkad they had secured a privileged position among the merchants and had established a market with the support of the local village community in the eleventh century. In the Tamil country where Kodumbalur was their principal base of operations, the merchants of the *Manigramam* were associated with the distribution of commodities of internal and overseas trade during the thirteenth and early fourteenth centuries.

The History of the *Ayyāvole* association of merchants, whose activities were spread over a large part of Peninsular India, is examined in considerable detail in Chapters II—IV which constitute a major portion of the monograph. The origins of this influential and powerful merchant guild, often described in inscriptions as the five hundred svamis of *Ayyāvole* is attributed by the author, on the basis of an intelligent understanding of epigraphic notices, to the efforts made by the *Mahajanas* of the *Mahagrahāra* of Aihole to institutionalise control of existing commerce in that region.

Thy *Ayyāvole* branched out into two linguistic groups, Kannada and Tamil, most probably during the ninth century and in the Tamil country the *Ayyāvole* were generally referred to as *Tisai āyirattu aīnnūrruvar*. On the basis of evidence from the Munisandal inscription, which is probably the oldest inscription recording their activities in Tamil nadu, the author concludes that 'a corporate association with very close links with the Kannada groups of the five hundred svamis of the *Ayyāvole* had moved into Padukottai and remained active in the two present day taluks of Tirumayyam and Kulattur right through almost till the end of the tenth century'. As pointed out by her the members of the Tamil speaking group identified themselves with the five hundred svamis of the *Ayyāvole* in the use of the same numerical formula in their title, in the use of their *prasasti* or inscriptional preamble and in their adherence to the deities of the *Ayyāvole*

although 'the social groups who sponsored the founding of the guild in Aihole, and those who belonged to the guild in the Tamil speaking areas were different. The activities of the Kannada group of Ayyāvole were confined to Karnataka and some parts of Andhra pradesh while those of the Tamil group were spread over most of Peninsular India. The active participation of the *Tisai āyirattu aīnmurruvar* in the overseas trade is indicated by the inscriptions they had set up in Śrī Lanka and Sumatra.

The Ayyāvole associations were composite groups of merchants interacting closely with the *Nānādesis*, (*Vīra*) *Valanjiyar*, the *Manigramam* and other such merchant guilds in commercial enterprises and cultural activities and had links with the dynasties exercising political power in Peninsular India. They had close links with commodity producers and peasant farmers and had in their service groups of armed retainers for the protection of their markets, ware houses and caravans. They played a significant role in the development of urban centres and the townships they established developed as self-governing institutions under a dignitary styled *Pattanaśvamin* in Karnataka and under corporate management in the Tamil country.

In the last chapter of the monograph the author has collected and analysed almost all available information on the overseas trade of South India and the section on commodities of trade is of special interest as providing a clear indication of the nature of India's role in Asian Commerce in the Middle Ages.

Some of the important conclusions of authoer may now be briefly formulated here. By the cleventh century the South Indian village communities were no longer isolated and self-sufficient with a subsistence economy. They were penetrated by itinerant merchants and had markets where goods other than those produced locally including overseas wares were sold. A considerable economic expansion in the latter half of the twelfth century accompanied by a marked increase in overseas trade and the development of uaban settlements is indicated by the Ayyāvole inscriptions. Since the late twelfth century there is clear evidence of increasing foreign trade in luxury goods and a thriving, local internal trade in basic necessities including grain and pulses. Iron, cotton goods, arecanuts, brass vessels, dyes and pepper were some of the principal items exported from India while horses, elephants, camphor, aloes, sandalwood and aromatics figured prominently among the items that were imported into South India. The Ayyāvole and the *Manigrāmam* were engaged in local and long distance trade. In the late tenth and eleventh centuries the Cholas and Tamil merchants were actively engaged in foreign maritime trade. A close connexion between Chola military expeditions

and the activities of the Tamil branch of the *Ayyāvole* merchants in Karnataka, Sri Lanka and South-east Asia is suggested by circumstantial evidence. Since the eleventh century luxuries became less important and basic necessities such as dyes, yarn, textiles, processed iron, pepper and horses figured prominently in the *Ayyāvole* inscriptions. That the distribution of these commodities within South India and the resale and onward despatch of such items was largely in the hands of the *Ayyāvole* is indicated by inscriptions. The merchants associated with the *Ayyāvole* also most probably handled the carriage of textiles, iron and steel, spices, dyes, areca and some Indian aromatics and perfumes for purposes of trade.

The history of the *Nānādesis* and the (Vira) *Valāñjiyar*, two other South Indian merchant guilds, who played an important role in South Indian commerce and with whom the *Ayyāvole* were interacting very closely remains to be investigated. The precise nature of the relationship between the *Nānādesis* and *Ayyāvole* is still not clear although the *Nānādesis* are often referred to in the inscriptions of the *Ayyāvole*. The military power of the merchant guilds and their connections with religious and cultural institutions require a more detailed examination than has been attempted in the monograph under consideration.

Meera Abraham's treatise on the merchant guilds represents a major contribution to Indian studies in general and South Indian history in particular.

S. PATHMANATHAN

CONTRIBUTORS

Parvathy Kanthasamy,

B.A., B.Phil (C'bo) Ph.D. (Monash)

Senior Lecturer in Linguistics, University of Jaffna, Jaffna.

S. Pathmanathan,

B.A. (Cey.) Ph.D (Lond.)

Professor of History, University of Jaffna, Jaffna.

K. M. Puvaneswaran,

B.A., M.A. (P'deniya) M. Soc. Sc. (Q'ld.)

Senior Lecturer in Geography, University of Jaffna, Jaffna.

Pathmadevy Puvaneswaran,

B.A., (P'deniya) M.A. (W.Aus.),

Lecturer in Geography, University of Jaffna, Jaffna.

A. Sanmugadas,

B.A. (Cey.,) Ph.D. (Edin.)

Associate Professor of Tamil, University of Jaffna, Jaffna.

S. K. Sitrampalam,

B.A. (Ccy.), M.A. Ph. D. (Poona)

Senior Lecturer and Head, Dept. of History, University of Jaffna, Jaffna.

K. Sivathamby,

B.A., M.A. (Cey.) Ph.D (B'ham),

Professor of Tamil and Head, Dept. of Fine Arts, University of Jaffna, Jaffna.

S. Suseendrarajah,

M.A. (Madras), Ph.D. (Annamalai)

*Professor of Linguistics and Head, Dept. of Languages and Cultural Studies,
University of Jaffna, Jaffna.*

NOTE TO CONTRIBUTORS

The Editor welcomes articles based on original research both in the Humanities and Social Sciences with emphasis on South Asia. Contributors are requested to adhere to the following format in the preparation of articles for the Journal:

Typescript : Typescript should be double spaced (including all notes and references) and typed on one side of the page only, and should not normally exceed 6000 words. Two copies of all papers must be submitted.

Illustrations : Copies of maps and charts may be submitted in manuscript or near-final form. After a paper has been accepted for publication the author must submit the originals of all illustrations.

Tables : Tables must be typed and should be numbered consecutively.

Notes and References : Authors may choose one of two systems :

1. Author's name (no initials) and dates given in the body of the text (e.g. Snodgrass, 1966) and the references listed alphabetically at the end of the paper (under the heading References) in the following form :

Snodgrass, D. R (1966) *Ceylon; An Export Economy in Transition*, Richard D. Irwin Inc. Illinois.

2. Numbers are inserted in the text and references to those are given in numerical order at the end of the paper under the heading References.

Submission of an article will be taken to imply that it has not been previously published and that it is not on offer to any other publisher.

THE SRI LANKA JOURNAL OF SOUTH ASIAN STUDIES

No. : 1 (New Series)

1986/87

CONTENTS

	PAGE
Japanese — Tamil Cultural Relationship A Critical Analysis of Ohno's Proposition — S. Suseendrarajah	1
The Title PARUMAKA found in Sri Lankan Brahmi inscriptions — A Reappraisal — S. K. Sitrampalam	13
A Human Climatic Classification for Sri Lanka — K.M. Puvaneswaran	25
Geomorphology of the Valukkai Aru Drainage Basin — Pathmadevy Puvaneswaran	43
Problems in Acquisition of English consonantal clusters By Jaffna Tamils — Parvathy Kanthasamy	59
Tamil — Japanese Relationship : l / r Alternation — A. Sanmugadas	69
Vaiyapuri Pillai As a Literary Historian of Tamil : An Analysis of his Ideology and Methodology as seen in his "History of Tamil Language and Literature" — K. Sivathamby	80
Book Review : Two Medieval Merchant Guilds of South India by Meera Abraham — S. Pathmanathan	105