IV. THE PHONOLOGICAL WORD.

I.

The structure of syllable is made clear by the occurrence of certain sounds as initial and final sounds in a word and in cluster of sounds. The clusters have already been described and that portion should be brought here for a better understanding of the syllabic structure of the Tamil of the age of Tolkāppiyar. But we must consider the phonemes in Tamil.

II.

The twelve vowels are said to occur as initials. It is for consideration whether the sound ⟨ au ⟩ which is mentioned by Tolkāppiyar is an independent phoneme. Words like pauvam, nauvi, tauvai, kauvai, mauval and auvai are found in the Sangam literature and the later literature, and the later literature, mostly as pavvam, navvi, tavvai, kavvai, mauval and avvai. Tolkāppiyar himself states that av can alternate with au. If⟨au⟩ is equal to av, then a = a and u = v, the question then arises how the ⟨ u ⟩ becomes there the ⟨ v ⟩ or vice versa. It has to be
assumed for this purpose that $\sim v I$ was once a bilabial. Further, this $\sim v I$ alone rather than the $\sim a u I$ will give us the correct etymology of these words; for instance consider the relation between avvai and ammavai. One has to conclude that $\sim a u I$ though attempted to be introduced as an independent sound did not take root in Tamil.

As far as $\sim a i I$ is concerned though it has got the alternate forms $\sim a J + \sim i I$ and $\sim a J + \sim y I$, it has taken deep root. In the final position $\sim i I$ becomes $\sim y I$. In the initial position $\sim a i I$ is more or less pronounced as $\sim a J + \sim i I$ but it rhymes (initial rhyme) with any word which has got $\sim y I$ as a second letter. In the medial or final position, it is said in later times that $\sim a i I$ has only one unit of quantity. Perhaps in the initial position it has to be taken as a long vowel because of its position as occurring as though in a close syllable, that is $\sim a y I$. If so why not it be a long vowel in the medial position also? Does it remain as $\sim a J$ getting only an $\sim y I$ glide? Some others say it has only one and a half unit even in the initial position. The pronunciation of $\sim a i I$ as $\sim a y I$ belongs to a still later age and probably arose in those words which began with the palatal consonants.
followed by \( \text{ai} \). In this position these \( \text{a} \) becomes \( \text{ai} \). It is possible therefore to accept the alternate form \( \text{ay} \) and reject \( \text{ai} \) as a phoneme, though the persistent written system will be against this.

It must be taken that \( \text{ai} \) and \( \text{au} \) were pronounced during the time of Tolkëppiyar as diphthongs. This attempt to introduce \( \text{ai} \) and \( \text{au} \) must have been anterior to Tolkëppiyam because in ff. 4 he refers to ancient authors as including \( \text{ai} \) and \( \text{au} \) in the list of their long vowels.

In view of these considerations there will be only ten vowel phonemes. If the length is abstracted as a separate phoneme, there will be only six phonemes i.e. five sounds (a, i, u, e and o) plus a length phoneme. Though in some words the long vowels and the short vowels alternate as \( \text{änku} \) and \( \text{änku} \) the short vowels and long vowels contrast and therefore they are phonemes. See \( \text{kalam} \) and \( \text{kålám} \); \( \text{min} \) and \( \text{miñ} \); \( \text{pul} \) and \( \text{pul} \); \( \text{wel} \) and \( \text{wél} \); \( \text{oppu} \) and \( \text{ôppu} \).

In the syllabic structure one must provide for initial syllable occurring as vowels that is with zero on sets. Though there are cases of initial palatals disappearing (\( \text{cāy} \Rightarrow \text{āy} \)) it cannot be said that in all cases where
one has an initial vowel, there was once upon a time a consonant preceding it. The next sutram speaks of nothing but uyirmey occurring in the initial position. It is possible to interpret this sutram as stating that except vowel and consonant, nothing else will occur in the initial position. This interpretation will prevent the secondary sounds occurring in the initial position. But no commentator has given such an interpretation, because the secondary sounds have already been described as occurring only in the final and medial position. Tolkāppiyar is going to speak in the next chapter about all the words ending and beginning either in a consonant or in a vowel. But that should not be anticipated here. That new approach he prescribes for the purpose of explaining sandhi. uyirmey as a syllable has already been recognised by Tolkāppiyar in the first chapter but only impliedly in ff. 18 etc. The term uyirmey, however, as referring to the syllabic letter occurs only in this sutram.

III.

Since Tolkāppiyar has stated about the initial vowels and since secondary sound has been defined as occurring only in the non-initial position, the consonants alone remain
to be discussed. The consonants in the Tamil script occur in two ways as contemplated in ff. 17, one as pure consonants, the second as syllabic letter representing a consonant and vowel. The question then arises of these two which kind of consonant will occur in the initial position and this sutram asserts that not the letters representing the consonants per se but the syllabic letter representing a combination of a consonant and a vowel can occur in the initial position. One must state that the syllabic system of writing represents the earlier stage when syllables were realities. There uyirmey is contrasted in the written system with the pure mey. In interpreting ff. 16 Ilampūranar has taken uyirmey as consisting of one definite entity probably on the basis of the written form and the earlier recognition of syllable rather than the alphabet. There he has stated that uyirmey is like a mixture of water and milk. Therefore he has to assert that in this sutram that uyirmey is not taken as a single letter but as two sounds. If the author thought of syllabic letters, then he ought to have given us a list of such syllabic letters occurring in the initial position. This will unnecessarily swell the enumeration of the initial sounds given by Tolkāppiyar. When uyirmey is taken as representing two different sounds,
it is a category different from the pure may. Tolkāppiyār needs only to describe the initial consonants and define the vowels with which they will occur in the initial position. That is the explanation of Ilampūraṇar. Naccipārkkīnīyar adds that the sutram refers to the syllabic letters. The subsequent sutram which speaks of the consonants occurring only in combination with certain vowels become useless if uyirmey i.e. the syllabic letters other than vowels are said to occur in the initial position.

Where is then the necessity for speaking of the initial consonants? - that is his question. He tries to answer. It is because the author here speaks generally of all the consonants coming with the vowels in the preceding sutram he goes on in the following sutrams to define what consonants will occur with what vowels. The term uyirmey therefore is here a conjunctive compound emphasising the existence of two entities and not uyirmeytikai emphasising their unity as contemplated by Ilampūraṇar. ff. 61 to 65 define this restriction. The table in the next page give the initial consonants.
In the Table the letters written vertically represent consonants which occur as the first sound in the initial syllable. The letters written horizontally at the top are vowels which follow any of the consonants in the initial syllable. The intersections denote the possibility of a consonant being followed by a vowel in the initial syllable. Wherever a cross is given there is a possibility of such occurrence. The last horizontal line represents the occurrence of the vowel without being preceded by a consonant.
Therefore the consonants followed by vowels and not *K* the consonants alone begin the syllable. The structure of the initial syllable will therefore be \(V\) or \(CV\) where \(c = \) consonant and \(V = \) vowel.

IV.

These represent the characteristic feature of the language of Tolkāppiyam. These cannot be true of the later literary texts. But our commentators assume that Tolkāppiyam was the grammar which was in force even during the period of the Sangam age, the age of Patijēn kilkaṇakku and the age of Panca kāviyā. In that case it is necessary for them to explain the usages, found in these latter works which are at times contrary to the rules of Tolkāppiyam. One could explain these as usages current in the age later than that of Tolkāppiyam. But the commentators somehow try to bring all forms found in these works within the rules laid by Tolkāppiyar. He has contemplated that new usages and new forms of words may be coming into the language in course of time and that they could not be condemned if the age accepts them.

The difficulty first of all arises with
reference to \( \text{c} \, \text{J} \), \( \text{n} \, \text{J} \) and \( \text{y} \, \text{J} \) the three palatal consonants occurring in the initial syllables as onsets followed by vowel \( \text{a} \, \text{J} \). It has already been noted that Tolkëppiyar was not always considered as an authority by some later writers. Mayilainätar quotes the verse which enumerates the number of words in which \( \text{c} \, \text{J} \) occurs with \( \text{a} \, \text{J} \) as the initial syllable. The verse states that these words occur not only in colloquial usages but also in literary usage. The words pointed out as beginning with \( \text{c} \, \text{J} \) followed by \( \text{ai} \, \text{J} \) and \( \text{au} \, \text{J} \) are \text{caiyan} and \text{cauriyam}.

There are also words beginning with the initial palatal nasal followed by \( \text{a} \, \text{J} \), like \text{namali}, \text{naliyirru}. There are also words with the initial \( \text{y} \, \text{J} \) followed by \( \text{a} \, \text{J} \), \( \text{u} \, \text{J} \), \( \text{u} \, \text{J} \), \( \text{o} \, \text{J} \) and \( \text{au} \, \text{J} \) like \text{yavanar}, \text{yukti}, \text{yūmam}, \text{yōkam} and \text{yauvanam}.

Some of these words occur in the Sangam literature and some in epics like \( \text{Peruṅkatai} \) and \( \text{Cīvakacintāmani} \). Ilampūranar gives two explanations. One is that some of these are Sanskrit words which have become transformed in Tamil. The second is that they came in according to sutram "\text{katicol ilai kālattu-p-patinē} as new words coming
into approved usage. He has a third category such as to naliyirru, which he states is the usage of the men. The correct reading for alivalakku must be ilivalakku as found in Naccinarkkiniyar. Naccinarkkiniyar adds a fourth variety called ticaiccol 'the dialectic words.' Instead of ariyaccitaivu he uses the word vatacol, because according to him Sanskrit words have to undergo transformation as per ff. 402 and 403 in collatikaram. The word ariyaccitaivu is also used by Naccinarkkiniyar in the commentary on ff. 75 as explaining the word paccu, probably he retains that term for prakrit words coming into Tamil.

Tavaneyapavinar with reference to c states that it is not proper to say that in Tamil it does not occur initially. He gives a number of words and states that there are more than hundred words which are pure, basic, very ancient, necessary and well established Tamil words which also occur in the colloquial usage. It is, therefore according to him a great mistake to assert that these words are only of later day occurrences. He also points out certain onomatopoetic words. The word cettan if the root was cā should have occurred as* cettan as may be seen from a comparison with other Dravidian languages such as Telugu and Majayalam.
is his objection that it is absurd to imagine that the TamiUans of Tolkappiyar's age who built forts could not make a catti 'earthern vessel'.

The whole argument misses the real point which is one of pronunciation. He has himself stated that the root becomes shortened in the past tense form; but we have the form cettan. Here the vowel a which is not very consistent in its pronunciation and therefore liable to be changed, becomes palatalised after the palatal consonants. This applies not to long vowels but only to the short vowel (See the various changes of a undergone in the various environments given on page 98 and 99 on the thesis on 'Tamil sound'.) This is not a solitary instance. The others, palatal nasal and the palatal semi-vowel also have the same influence on a. The vān and vām become in oblique form an and am. The same explanation applies to the absence of a occurring with h in the initial syllables. What to day is found as ṇantu occurred the as ṇentu. In all these cases there is a palatalisation of the original vowel a. But there must have been dialects in which such palatalisation did not occur. It is from such dialects the various words quoted by
the various authors should have come later on into the literary dialect. Ŧēliyirũ must have been Ŧēliyirru.

As a matter of fact the verb cey 'to do' is connected with the Tamil word kai 'hand'. The Telugu language has çē for both cey and kai. In Tamil the original[k] whenever followed by front vowels çi ñ or çe ñ becomes ççñ. kai must have had an alternation form kei which became cey. As long as ça ñ occurred after çk ñ there was no change but perhaps due to a dialectical variation the ça ñ came ççñ to be pronounced as çe ñ and then the consonant was palatalised. This shows that there was a tendency for the vowel in the initial syllable to be palatalised in that environment.

All the Sanskrit voiced plosives get their ça ñ following them palatalised as çe ñ, kehñai, pelam etc. This is a later usage and this is pointed out only to show that ça ñ in Tamil is liable to change. Even cey sometimes is written in Malayalam as cey. A comparison with other dialects and other Dravidian languages shows that this is a peculiar characteristics of Tamil languages to change the
short \( \textcircled{\text{a}} \) a \( \textcircled{\text{I}} \) of the initial syllable into \( \textcircled{\text{a}} \textcircled{\text{e}} \textcircled{\text{I}} \) whenever preceded by palatal consonant. Because of the number of dialectic words which flowed into the language one has forms like caṭṭi, ūṇṭu etc. This itself shows that Tolkappiyam is anterior to Sangam works which use such initial syllable. On account of the number of words in the dialect even the old literary words which began in \( \textcircled{\text{a}} \textcircled{\text{e}} \textcircled{\text{I}} \) came to be pronounced with \( \textcircled{\text{a}} \textcircled{\text{e}} \textcircled{\text{I}} \) on the basis of analogy. But certain words because of their frequency resist any change\(^{47}\) and cettān is one such important word.

V.

This question raises an interesting problem about \( \textcircled{\text{y}} \textcircled{\text{I}} \) being a phoneme in Tamil. It will be seen that it occurs only with long \( \textcircled{\text{a}} \) a \( \textcircled{\text{I}} \) in the initial position. This minimal occurrence is significant. It has already been seen that in the final position \( \textcircled{\text{y}} \textcircled{\text{I}} \) comes in as a variant form of the original vowel \( \textcircled{\text{i}} \textcircled{\text{I}} \). Therefore it may be taken to be occurring never at the end, except as a variant and that as a later day development. In the medial position it will not be found unless it occurs as an ending of a root. As already hinted elsewhere pre-Tolkappiyam Tamil did not have
any glides but had vowel clusters. And perhaps it had ori-
ginally the palatal \( \text{c} \) for the medial \( \text{y} \); the
colloquial language preserves the \( \text{c} \). If so the medial
\( \text{y} \) could not have had a place in the pre-Tolkâppiyam
Tamil, then the only place where \( \text{y} \) occurs is in the
initial position. It is for consideration here also whether
\( \text{y} \) could not be replaced by \( \text{i} \). Word like \( \text{yā} \)
must have been \( \text{iā} \) in the pre-Tolkâppiyam age when vowel
clusters occurred. In this way one may say that \( \text{y} \) was
not a necessary phoneme at least in the Tolkâppiyam language.

Another suggestion was made by Subbâicy. The
\( \text{y} \) becomes \( \text{e} \) in Telugu and \( \text{a} \) in Tamil.
\( \text{yanai} \) is \( \text{emuva} \) in Telugu and \( \text{ānai} \) in Tamil. He thought that
there was a proto Dravidian sound very much like \( \text{m} \) as
in the English word \( \text{m} \). When the Dravidian languages
adopted the Asokan script there was no sign assigned for
thissound and therefore according to him this \( \text{m} \) sound
became \( \text{y} \) or \( \text{e} \) or \( \text{a} \). These later variations
must have proceeded from a sound common to these and that is
\( \text{m} \).

VI. The examples given by these grammatical writers
are significant. Ilampūranar gives cakatam and caiyam. But Neminātam and Manul add also cau as an initial syllable. Maccinārkkiṇiyar who came after Pavananti therefore adds cauriyam. This shows the frequency of the Sanskrit words increasing from the time of Ilampūranar to that of Maccinārkkiṇiyar. One other thing is also important. Ilampūranar speaks of āriyaccaitaivu while others speaks of vatacol. That shows that Ilampūranar was familiar with the state of language when more words from Prakrit flowed in, than from Sanskrit itself. Foreign compounds like viccāvāti are also mentioned, that is from Prakrit; the Sanskrit term being vidya. vidya and vicca become viccai in Tamil. When the compound viccāvāti occurs, some Tamil grammarians explain it as a case of an a ending becoming an ai ending. Ilampūranar does so under his commentary on ff. 289. But Maccinārkkiṇiyar will not accept this kind of explanation for Sanskrit terms. According to him Tolkāppiyam is a grammar for Tamil words and not for Sanskrit words. This position is valid to a certain extent but when foreign words in Tamil change according to the genius of this language, an explanation of the basis of such changes does form part of the Tamil grammar.
Generally the changes which take place in a language are of two kinds. One belongs to natural evolution and the second consists in changes which explain the linguistic diffusion—changes due to the coming in of foreign words in so great a number that the syllabic structure itself is changed for instance those consonants that did not occur initially begin to occur. Both these developments are seen in the history of Tamil language. ya, yu, ye, yo and yau begin a word in post Tolkëppiyam period.

VII.

Next follows the sutram which seems to be intended to justify the reference by grammarians and others to the sounds themselves which will occur as initial sounds in such grammatical references though they cannot occur as initial sounds in as already described. 57 ꞌr ꞌr does not occur as an initial in a word; but it is referred as a sound; ra becomes a name for it and in that case ꞌr ꞌr occurs as an initial. So also there is another sutram which refers to the sounds which do not occur as final sounds in any word but which occur as finals when they are specifically referred to as such sounds or when their letters are
referred to. When $\underleftarrow{r} \underrightarrow{J}$ is the name of $\underleftarrow{r} \underrightarrow{J}$ it occurs not only as an initial but also as a final. Last these two specific sutrams should be interpreted as negativing the operation of previous sutrams enumerating the initial and final sounds occurring as such initial and final sounds when the letters are specifically referred to, the commentators, rely on some extra words or strained construction to draw out the meaning that they also can be so referred to. The last sutram referred to means only this "what remain do not cease to come". Really this sutram coming after the description of particular environments occurring after particular consonants can legitimately refer only to other vowels which have no such restriction of special environment. The vowels $\underleftarrow{u} \underrightarrow{J}, \underleftarrow{u} \underrightarrow{J}, \underleftarrow{e} \underrightarrow{J}, \underleftarrow{e} \underrightarrow{J} \underleftarrow{o} \underrightarrow{J}, \underleftarrow{u} \underrightarrow{J}$ can occur finally after a few consonants and other vowels $\underleftarrow{a} \underrightarrow{J}, \underleftarrow{a} \underrightarrow{J}, \underleftarrow{i} \underrightarrow{J}, \underleftarrow{i} \underrightarrow{J}$ and $\underleftarrow{ai} \underrightarrow{J}$ after all the consonants.

The interpretation given by Ilampurapar is unnecessary because it has already been said that the letters when they are referred to singly stand as initial and final letter, the uyirmey as the syllabic letter being taken as a
single letter. Therefore the ff. 99 is itself sufficient. It is in this sense probably Pavanaṇṭi has understood Tolkappiyam, for when he refers to the reference to individual letters, he refers only to the initial position; probably because when they stand themselves they are both the beginnings and the endings. Maccinārkkiṇiṇiyar finds that in the interpretation of Ilampūraṇar there is no rule in Tolkappiyam (though Ilampūraṇar in his commentary on ff. 66 and 77 reads this implication in a forced manner) explaining about these vowels \( \text{ā} \text{ a J}, \text{ī} \text{ a J}, \text{ī} \text{ i J} \) and \( \text{ī} \text{ i J} \) occurring with all the consonants. Maccinārkkiṇiṇiyar himself reads as an implication the rule that the other vowels except those specifically mentioned occur with all the eighteen consonants. He has to explain those vowels which do not occur initially with \( \text{ī} \text{ in J} \). For that he relies on the yukti called "tantuṇaṅṟūrturattal." But when there are other sutras defining the environments, to read this implication without reference to them is not proper. The subsequent sutras are again taken to be restrictions on this implied rule. It is noticed that the following sutras do not cover all the vowels. What is left out therefore according to him ought to be read in ff. 78 itself. Therefore sāţīya ellām is
taken as giving two subjects. \textit{āniya} is one subject referring to the vowels not defined i.e. \(\text{Î} \text{a} \text{I}, \text{Î} \text{a} \text{I}, \text{Î} \text{i} \text{I}, \text{Î} \text{i} \text{I}\) and \(\text{Î} \text{ai} \text{I}\) and \textit{ellam} as is another subject referring to the letters as per se occurring as finals without carrying any restrictions mentioned above as to the consonants preceding them.

VIII.

Tolkāppiyar divides the endings into two classes viz. vowel endings or consonantal endings. Since he has enumerates the initial vowels, he now speaks of the consonants occurring with the vowels. Here also on the same pattern it may be expected by the reader that he should explain the vowels occurring after the consonants. Though the beginning sūtram in this group\textsuperscript{60} refers only to the vowels, the subsequent sūtras which define their environment mention the consonants preceding them. But since we know that the vowel clusters were not barred in that age, he has to mention the vowels which occur without any such consonants preceding them. If it is a word consisting of only one vowel that vowel will be both the ending and the beginning. Such are the long vowels according to ff. 43. There are
also words of one open long syllable consisting of a consonant and a long vowel. All this elaborate explanation is given by Naccipärkkiniyar. One may expect that in view of ff. 42 which refers to long vowels standing as words, they need not have been referred to once again in this sutram. But Naccipärkkiniyar explains that since ff. 42 refers to initials, this reference here is necessary for treating them as finals. Nothing, therefore will be left by the commentators to any necessary inference. Everything has to be plainly stated.

Since the alapeṭai consists of a disyllabic vowel cluster, it occurs at the end of the word with only the short vowel. \( \tilde{s} \) e \( \tilde{I} \) however never occurs at the end of the word with only the short vowel a word as a part of uyir mey.

For \( \tilde{s} \) e \( \tilde{I} \) and \( \tilde{s} \tilde{e} \tilde{I} \) endings occurring after the palatal nasal, Ilampūranar does not give any example. He says that some words must have gone out of use and for the rest, he wants the readers to find out where they occur in literary and approved colloquial usage. But Naccipärkkiniyar gives examples except for the \( \tilde{s} \tilde{e} \tilde{I} \) ending but mentions the words uriṇō for the form which has come later into usage.
There is really a difficulty with reference to sutram \( \text{कु ज} \), \( \text{कु ज} \) कार्मणां नवावोतु नविला. That sutram has ordinarily been taken to mean that \( \text{कु ज} \), \( \text{कु ज} \) will not occur as finals when preceded by \( \text{न ज} \) and \( \text{व ज} \). Here also Ilāmpūraṇar repeats the statement he has already made with reference to \( \text{ठे ज} \) and \( \text{ठे ज} \) coming after \( \text{न ज} \). Because of the extra word नविला for word इलाई will be enough, the commentators read a suggestion that in a few cases the vowel \( \text{कु ज} \) can occur with \( \text{व ज} \). Ilāmpūraṇar gives two examples novvu and kavvu. Naccīṇarkkiṇiyar refers to many more words of frequent usage like katavu, turavu, kuvavu, puravvu and nukarvu. Tolkāppiyar himself speaks in ff. 234 of words like iravu, puravu, etc. It is true he does not contemplate always the glide there. But nor does he bar the glide coming in there. alavu is another word mentioned by him; unless one suggests there was \( \text{पु ज} \) instead of \( \text{वु ज} \), in all these cases, it is difficult to explain these forms in the face of the statement \( \text{कु ज} \) will not finally after \( \text{व ज} \). The name kalaviyal and the word kalavu should also be altered. The sutram under considera-
tion must belong to a very ancient period and the copyists of others sutras should have replaced \( \sigma \ p \ \gamma \) by \( \sigma \ v \ \gamma \), according to the usage of their times.

The sutram it must be assumed, does not consider augments as endings. The augment \( \sigma \{ u \} \gamma \) should be then considered as a separate word and not part of the preceding word.

porun taken as a verb, can take the form porunu and porunu as verbal noun and verbal participles respectively even as uriñ takes the form urinru and urinru. That is why Ilampūranar says that if in a few cases \( \sigma \ u \ \gamma \) and \( \sigma \ u \ \gamma \) occur after \( \sigma \ n \ \gamma \) it may also be explained away on the basis of the extra word navilā, the extra word coming only with the set purpose of making this implied suggestion. But in view of the specific bar against them such forms must be taken to have occurred never in the age of Tolkāppiyam.

In view of this a different meaning is suggested by reading in the word "respectively." It is suggested as a rule of interpretation that wherever there is a possibility of introducing the word "respectively" it
should be done. Then the meaning will be that \( \wedge n \bar{j} \) will not occur with \( \wedge u \bar{j} \) and \( \wedge v \bar{j} \) will not occur with \( \wedge u \bar{j} \). Here also the difficulty is that 'porun' occurs with \( \wedge u \bar{j} \) as an augment giving the form 'porunu' and one has to assume to justify this interpretation that Tolkāppiyar does not contemplate the augment as a natural ending.

There is one more difficulty. If the vowels whose environments are not defined are to occur with all the consonants without any restrictions, \( \wedge n \bar{j} \) should be taken as occurring with all the vowels. There are also no examples available for all the vowels occurring with all the possible consonantal endings. This shows the possibility of some sutras missing in the text as available now.

From ff. 76 to ff. 81 Tolkāppiyar deals with the consonantal endings. The following table explains the occurrence of the final sounds.

X.

In the interpretation of these sutras there comes to light another theory of interpretation. Even the enumeration of letters should be in the well known order and
In the table consonants are listed vertically and the vowels horizontally. In the final syllable consonant occurs followed by a vowel. The intersection represents the possibility of a particular consonant occurring followed by a particular vowel. Those which occur in the language are represented by a cross. The last vertical line represents the possibility of consonant occurring without any following vowel. The last horizontal line represents the vowels appearing by themselves as the last syllable.
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* Illustrations not available.
wherever, that order is not followed some suggestion should be found to be implied. In ff. 76 the alveolar nasal is found mentioned after the labial nasal $\sim n$ instead of at the very end as in the list of alphabets. Ilampūranar suggests that this is because of their similarity in occurring as alternates in the final position in neuter nouns. Ilampūranar calls this as mayakka-iyai'pu 'the relationship of alternation'. Naccinārkkiniyar adds one more reason namely the frequency of their occurrence. This may either mean that the alveolar nasal occurs more frequently than the semi vowels mentioned there or that in grammatical sutras the nasals are frequently grouped together in this order $\sim n$ $\sim$ $\sim$ $\sim$ $\sim$ $\sim$ $\sim$ $\sim$ $\sim$ $\sim$ $\sim$ in which case the alveolar nasal can occur after labial nasal.

A word may be stated here about another point found in Naccinārkkiniyar's commentary with reference to the final vowels. The first sutram namely 69, mentions the general rule that the word vowels here simply those vowels for which the environment has been defined in terms of all the consonants. Naccinārkkiniyar does not read that implica-
tion in that sutram; but when the next sutram defines the limited environment in which alone \( \text{au} \) will occur, he takes that sutram along with the previous sutram and reads the implication that the other eleven vowels have no such limitation and that therefore they can occur with all the consonants. When this is taken as a general rule the subsequent sutras are considered as exceptions to this general rule.

According to the tradition of the commentators, even grammatical rules like the legal rules are to be in the form of positive and negative commands or rules or in the form of rules and exceptions. \textit{varai-y-aruttal} is delimitation or what may be called niyamam. But a niyamam contemplates a general rule. Therefore this general rule is first stated by Naccinārkkāhīyār as an implication contained in the ff. 70 taken along with ff. 69. Then the subsequent sutras when they permit their positive occurrence only in restricted environment, then it is called \textit{varaiyarai} or niyamam. The statements which are negative in form are considered to be exceptions or \textit{vilakkulu}. ff. 70 is therefore \textit{varaiyarai}, so are ff. 75 and 76 whereas ff. 71 and ff. 73
and 74 are exceptions. ff. 72 is both a restriction with reference to occurrence of \( \mathcal{C} n \mathcal{J} \) and an exception otherwise.

In all the sutras, the exception or delimitation can be looked at from the point of view of consonants and also from the point of view of the vowels. Both the implications are stated by the commentators. The sutras themselves are being interpreted first in terms of vowels; when any exception is stated, it is implied under the general rule that the particular vowel will occur with consonants other than those specifically stated. Then arises the implication about the consonants that the particular consonant will occur with vowels other than those specifically explained.

The shorter \( \mathcal{C} u \mathcal{J} \) ending is not specifically stated, though with reference to the initial sounds, it had been specifically mentioned. This is probably because by definition it is a final sound and also because that it will occur only as a final sound under the general rule. \( \text{uccaKal} \) and \( \text{uppaKal} \) are therefore shorter \( \mathcal{C} u \mathcal{J} \) (fully rounded u). The commentators refuse to accept any foreign word even when Tamilised such as \( \text{paC\u0d21} \), the idea being that the grammar is for Tamil words and not for Sanskrit or foreign words occurring
in Tamil. It is on this basis Naccinārkkiniyar asserts that kālam, ulakam etc. which look like Sanskrit words are really pure Tamil words. 69

XII.

Tolkāppiyar explains that each of the long vowels standing by themselves as long syllables can occur as seven different words respectively. 70 The short ā vowels standing by themselves individually do not occur as words in their free forms. 71 And some of them alone can be independent words. Ilampūranar asserts that except ā o ā others cannot occur as words. 72 It is not clear whether he contemplates ā o ā occurring as a rule. But Naccinārkkiniyar is clear that the short vowels except with consonants preceding them as in ā tu ā and ā no ā can never occur as words by themselves. 72 According to both the sutram the structure of words are of the formula ā v ā or ā c ā and ā c ā ā. As a consonant has no unit of its own, the long letter denotes one long syllable that is the syllable with a long vowel.

Tolkāppiyar having stated this proceeds to classify the words on the basis of the letters. 74 The letter or sound is such when it remains only a symbol but when the
sound standing by itself instead of denoting itself, denotes a meaning, then it will become a word. This is the explanation given by Naccinārkkiniyar. Tolkāppiyar divides the words into monosyllabic, di-syllabic and poly-syllabic words. The majority of the poly-syllabic words are tri-syllabic but a few contain more syllables than three. Tolkāppiyar has grouped them into one class.

The question arises what is meant by eluttu here. It is ambiguous because Tolkāppiyar speaks of uyirmey as an eluttu though that is a combination of sounds forming one unit, since uyirmey is written as one letter. Elsewhere eluttu means one individual sound and we know that Tolkāppiyar treats the uyirmey as two different sounds when considering their pronunciation. Ilampūranar and Naccinārkkiniyar are agreed that when Tolkāppiyar speaks of long vowels forming by themselves as words, he speaks not only of the long vowels but also of the long uyirmey.

There is such a thing as a counting of eluttu's in prosody, for instance in the verse type called kattalaikaliutturai where every line consists of sixteen or seventeen letters. There in prosody it is stated that the sounds which are not
vowels are not taken into consideration in such a counting. Therefore in this context what is counted is only syllables. When Tolkâppiyar is speaking of the words in molimarapu he is concerned only with syllabic structure. In that case one has to count only syllables. But unfortunately Iḷampûraṇar interprets the term ajuttu as meaning only the letter form. In the writing system known to Iḷampûraṇar the uyirmeiy was written as one separate whole of a letter, and consonants in consonantal clusters were not written as syllabic letters except the last of the cluster. What precede this last consonant will be written separately even when the preceding consonants are more than one: if in vantuṃ n a j alone is written as a consonant and j t i is written combined with a j as a syllabic letter. See cettany, parttan.

It is only a convention of the writing system current even now specifically in Tamil. Perhaps something more is meant by this system of writing. The Tamil prosody may throw some light on this. It has already been shown that no initial syllable can begin with more than one consonant. This characteristic feature is not restricted to initial syllables only. When geminated consonants occur
the second alone can become the initial of any syllable. The first is therefore to go with the previous vowel and such consonants has apart from meaning nothing more than a mark of juncture between two syllables; it is usually taken as the ending of a syllable. A syllable therefore can be open or close that is \( C \) \( \bar{V} \) \( C \). If there are two consonants preceding another consonant they have also to be taken as part of their disyllable for instance previous syllable. Therefore the pattern of syllables in word will be \( (C1) \bar{V} (C2) (C3) + CV \) where \( V = \) Vowel short or long; \( C1 = \) First consonant; \( C2 = \) Second consonant; \( C3 = \) Third consonant. What is within brackets shows its occurrence is optional. The consonants \( (C2) \) in such cases can only be one of the three semi-vowels that is \( \varepsilon \ y \ \partial \), \( \varepsilon \ r \ \partial \) or \( \varepsilon \ l \ \partial \) which are so shortly pronounced that some times they are not counted even for separating one syllable from the other in later day prosody.

There is one other point of importance in prosody for this study. The unit in prosody is called acaı. The combination of the primary acaı gives the various unit occurring in a metrical line. The unit is in terms of quantity of two mātras. The long monosyllable open or closed
forms one kind of unit called nāracai. The unit of two short syllables or vowels without more than one consonant occurring between vowels has also the same two mātras and forms another unit because here two sounds seem to come in succession. This variety is called nīrācāi. A short syllable in combination with a long syllable also comes under this category. The consonant do not count here. Thus one has four kinds viz. (1) open short dy-syllable (2) closed short dy-syllable (3) open dy-syllable when a short vowel is followed by a long vowel (4) closed variety of the above. These may be called the 5th, 6th, 7th and 8th variety of units.

(1) nā
(2) nān
(3) ṇā
(4) paru
(5) vara
(6) varam
(7) mālā
(8) urāv

(1a) nāku
(2a) nānku
(3a) ṇāku
(4a) paruku
(5a) varaku
(6a) varampu
(7a) uray mālātu
(8a) urāvatu

Though the shorter  u  is not counted,
the words in which it occurs (see 10, 20, 30, 40, 50, 60, 70 and 80) is ordinarily a little longer than words in which it will occur. In this way we can arrange a gradation of increasing quantities (for instance 1, 2, 3, 1a and 2a) though the increase does not count for anything nār, mārpu, nīrai and nīrapu.

The difference between Ilāmpūraṇar and Maćiṅkarṇkiṇiyan is pointed out elsewhere. Ilāmpūraṇar's contention is that shorter ṣ u ṣ ceases as such when it is not occurrence final. But one has to consider the views of Maćiṅkarṇkiṇiyan in terms of the pronunciation of his age. Therefore when he interprets eluttu as syllables which are counted in prosody, one has to agree that the consonants and shorter ṣ u ṣ etc. though appearing separately in the written system should be omitted in counting the syllables in a word for understanding the syllabic structure. There are people like Tēvanāyappānaṉar60, K. Veḷḷaivāraṇar61 and Veṅkaṭarājulu Reddiar62 who objects to this system. But one wonders what useful purpose is served in counting the graphemes when one is studying the syllabic structure because the same thing if written in a different way in a different script, for instance, in Devanagiri's script, the grapheme will
differ. The study of written system in relation to word structure will be misleading. \textit{vanta} will be written in granta or Sanskrit script as two letters. Sometimes the \textit{ṣ t ṣ} sound is written as \textit{ṣ dh ṣ} in transliteration and in that writing \textit{vanta} will be written as \textit{vandha} with five letters. \textit{Naccinärrkkiniyar} looks very modern indeed in insisting on the syllables rather than the graphemes. But what is the opinion of Tolkäppiyar?

The question arises how Tolkäppiyar comes to denote consonant also by the term name \textit{eluttu} as he does in ff. 1. Instead of referring to the word \textit{eluttu} as a homonym meaning both the letter and the sound, \textit{Naccinärrkkiniyar} explains that Tolkäppiyar calls the consonants \textit{eluttu} in the first chapter because there Tolkäppiyar is describing individual sounds as sounds per se. In molimarapu \textit{eluttu} is treated as an organic part of a word, and what \textit{Naccinärrkkiniyar} means by this can be explained only in terms of syllabic structure.

However, as already stated, \textit{Naccinärrkkiniyar} atleast with reference to the shorter \textit{ṣ u ṣ} is not understanding Tolkäppiyar aright. The shorter \textit{ṣ u ṣ} becomes a fully
rounded \( C \) when other words follow it. This shows that a shorter \( C \) has not remained a mere release in the age of Tolkëppiyar. Therefore the shorter \( C \) could not be completely rejected like the consonants. It is because of this that the words ending in shorter \( C \) are not looked upon as ending in two consonants like \( Cm \).

The fact that Tolkëppiyar provides for two further categories of sçaia in addition to něr and nirai viz něrpu and niraipu. In cases where the shorter \( C \) occurs, shows that the shorter \( C \) is not a mere consonant. If něrpu and niraipu have an independence of their own whatever may happen in metre it is clear that they shorter \( C \) enters into syllabic structure. This is clear from Tolkëppiyar's statements themselves. Then netirrotar kurriyalukaram 'long monosyllable' the word consisting of shorter \( C \) a word which consists of a něracai and a shorter \( C \) is referred to as consisting of two letters. But in these cases also one can refer to Naccinärkkäniyär's distinction between the two uses of the word eluttu. One refers to the individual consonants(mey) letters apart from syllabic letters (uyirmaey) consonants as eluttu. When thinking of the syllabic structure eluttu means syllabic letter. This is the second sense.
This usage of the word eluttu in two senses certainly causes confusion in the chapters other than molimarapu. One must assume that the Tolkāppiyar is referring to all sounds as eluttu and that only in molimarapu he is speaking of syllabic structure. Though the netirrotar kurriyalukaram may be explained as Īrelsuttu oru moli as 'a word of two syllables' by assuming that the shorter Ɂ u Ɂ also forms a syllable. totar moli according to Tolkāppiyar contains more than two eluttus. If eluttu is interpreted as a syllable how can elku, telku, kokku and ampu which contain only two syllable be described as totar moli by Tolkāppiyar, unless the consonants are also counted as eluttu. It appears that Naccigārkkiniyar also counts the consonants as eluttu. He raises no objection to netirrotar-k-kurriyalukaram being called Īrelsuttu moli, which consists only a long syllable and a shorter Ɂ u Ɂ where if the shorter Ɂ u Ɂ were to be omitted from counting one will have only one letter and not two.

Therefore, this idea of bringing syllabic structure instead of the graphemes must have been even to Naccigārkkiniyar an after thought and it appears that he has not corrected his original commentaries on other sutras, in
accordance with his views expressed in mojitamarpu.

Even under ff. 145 it is pointed out that he counts the consonants also as elutru. It may be repeated that his commentary except in case where he has anything original to offer is a copy of Ilampuranar's commentary. There are one or two sentences which are not found in Ilampura\=nar's commentary, which are therefore Naccirarkkiniyar's own additions. Therefore wherever he thought that he has anything original to contribute, he altered the commentary of Ilampuranar whilst in other places, he left the old commentary as it was. In view of this the suggestion that he did not revise his commentary seems to be gaining strength. More shall be said about in the following section XVIII where according to Tolk\=appiyar it is asserted consonant are also to be counted.

XIII.

Tolk\=appiyar next proceeds to speak of the consonants being denoted by adding an enunciative \( \langle \text{a} \rangle \) to each of them; ka or \( \langle \text{k} \rangle \) denotes \( \langle \text{k} \rangle ^{35} \). This sutram has already been discussed.
The next sutram deals according to Ḳampūra-par with the occurrence of consonants in clusters, not contemplated by Tolkāppiyar in his chapter which dealt with such clusters. This has also been already referred to. For instance ([$ \overset{1}{\text{i}} \overset{1}{\text{i}} \overset{1}{\text{i}} $] will not be followed by ([$ \overset{1}{\text{i}} \overset{1}{\text{i}} \overset{1}{\text{i}} $] but when mentioning letters, we get phrases like the following:—

They all la Ḳakkān (ff. 24) 'of these [$ \overset{1}{\text{i}} \overset{1}{\text{i}} \overset{1}{\text{i}} $] and [$ \overset{1}{\text{i}} \overset{1}{\text{i}} \overset{1}{\text{i}} $];
here [$ \overset{1}{\text{i}} \overset{1}{\text{i}} \overset{1}{\text{i}} $] is found to follow [$ \overset{1}{\text{i}} \overset{1}{\text{i}} \overset{1}{\text{i}} $]; here la is the name of the sound [$ \overset{1}{\text{i}} \overset{1}{\text{i}} \overset{1}{\text{i}} $]. The sutram states that the ordinary cluster rules do not apply to these cases.

Naccinārkkiniyar does not see the propriety of this sutram occurring here instead of in Ṛṇimarāpu which really deals with the clusters. The propriety is that when even a consonant is referred to, that reference itself constitutes a word and as such it should dealt with in Ṛṇimarāpu rather than in Ṛṇimarāpu. Failing to realise this propriety, Naccinārkkiniyar interprets the sutram to mean that the syllabic sound consisting of a consonant and a vowel, is referred to in terms of the consonants, thus confusing the vowel itself with the consonant. He refers to the ff. 291, 342 and 21, where according to him the syllabic letter representing syllable consisting $ \overset{1}{\text{i}} $ of a
consonant and a vowel is called nasal, plosive or semi-vowel. But these sutras do not justify this interpretation because in all those places these terms refer only to consonants and in the treatment of sandhi. Tolkāppiyar does not refer generally to any syllabic letter but only to consonants and vowels.

XIV.

Next he deals with the coming together of three consonants. That occurrence happens only in a word and hence is discussed in this chapter, whereas clusters have been treated in the first chapter based on what may be called the attraction and repulsion of each individual sound. This sutram states that any one of the semi-vowels \( \sqrt{y} \), \( \sqrt{r} \) or \( \sqrt{i} \) can occur with any one of the following. \( \sqrt{k} \), \( \sqrt{c} \), \( \sqrt{t} \), \( \sqrt{p} \), \( \sqrt{n} \), \( \sqrt{\kappa} \), \( \sqrt{\eta} \) and \( \sqrt{m} \). In such examples will stand there two consecutive consonants as two dotted letters, e.g. \( \text{\textit{madāgan}} \ pārtān \). The idea of calling them only two consonants and not three consonants is that they occur in the writing as two dotted consonants and in the midst of a word or a compound or a phrase. This reference to the writing system is significant in view
of the counting of sounds of the letters in a word already referred to. The view of certain authors already referred to is correct that Tolkāppiyar seems to be counting letter forms.

These semi-vowels have been mentioned to have an attraction towards such consonants which have the characteristics feature of occurring as initials in a word. But in that case, there will be not only one consonant letter that is the first consonant written as such dotted letters while the second consonant will form part of the uyirmey 'syllabic letter' அங்கு. Therefore the consonant here following the semi vowel here mentioned precede such syllabic letter. See parttān where ta is a syllabic letter or syllable where தீர்த்து follows ஆர்ந்து; [X] precedes this syllabic letter as a dotted consonant and forming part of the previous syllable and making it a closed one.

There is difficulty however in finding examples. Iḷampūraṉar gives example for such a combination, but they are all compounds. If they are occurring at the juncture of two words coming together, Naccinārkkiniyar points out that such an occurrence can be learned from the sutras on
sandhi where \( \underline{r} y \underline{r} \), \( \underline{r} r \underline{r} \) and \( \underline{r} \underline{r} \) endings when followed by plosives get these plosives doubled or get an homorganic nasal after them. Therefore such sandhi sutras in view of this sutra become redundant or unnecessary if what Ilampūraṇar implies is correct. As a matter of fact Ilampūraṇar himself raises the question why this is stated here whilst this combination could be easily learnt with reference to the sandhi rules about these endings. He, therefore explains that this sutram is necessary because this combination or clusters occurs also within individual words themselves. This is a natural occurrence (iyalpu) a combination which cannot be learnt elsewhere whilst in combination of words they occur as sandhi transformation that is as vikāram. He gives however only two words īrku and pīrku. He raises the question which we anticipated why this is not noted in munmarapu where clusters are defined. His answer is that there the sounds were treated from the point of view of differentiation of verrumai navam whilst here they are treated from the point of view of unity orrumai navam. This distinction does not seem to be very clear but there is a statement of his which throws some light on this. He
states that here are really three consonants while the sutram refers only to two consonants. That shows that in the mūyamarapu the second consonant will always begin the sound of uyirmey e.g. in vantān two consonants underlined are written as  progressDialog here one has only one consonant written as a dotted letter whilst the other consonant is written along with the following  progressDialog as one syllabic letter  progressDialog the uyirmey. There is a differentiation in the treatment of uyirmey in these two places. Therefore the syllabic letter there, was not taken as a whole but split into two i.e. consonants and vowels, so as to acilitate the reference to the initial consonants. Therefore the point of view of looking at the syllabic letter there was one of differentiation.

In this place however the sutram speaking only of two consonants coming together, does not refer to the third consonant because that occurs as a part of a syllabic letter which is here treated as one unit. e.g. parttān has three consonants as underlined when however written as  progressDialog there are only two dotted consonants here; the uyirmey is not split or differentiated into a consonant and a vowel and hence it is taken as a unity - This is the point of view of unity.
As already stated the difficulty is to find out examples for all these combinations. Naccinārkkiniyar as already stated, objects to showing phrases or compound words as examples unless the compounds are *vipaittokai* or *panputtokai*. He therefore first attempts to give individual words *vēykka*, *vēycci*, *vēyttal* and *vēyppu* for */y/ occurring with */k/, */c/, */t/ and */p/ followed by short syllables. For */r/ he gives the examples *pīrkkku*, *nārci*, *vārtaal* and *ārppu*. For */l/ he gives *vālkkaal*, *tālcci*, *tāltaal* and *tālppu*. He gives examples for */y/, */r/ and */l/ occurring with plosives and also for */y/ and */r/ occurring with nasals. Except for *vālntam* where */l/ occurs with */n/, he does not give examples for */l/ occurring with other nasals. But even with reference to this last example, he states that it is a usage of his time only, probably suggesting that he could not get any example of older usage, perhaps because such usage had gone out of existence even by the time of Sangam literature.

Because he is in favour of giving *vipaittokai* and *panputtokai* as examples, he gives the following *tānkkulai*, *tānncinai*, *tānntirai* and *vīlmpesai*. Even here he is not definite that
such forms ever occurred in ancient usage; for he says that these are given on the assumption that they might have occurred in ancient times.

Whatever might be our opinion about Naccinärk-kigiyar's views, about the propriety of showing compounds as examples for clusters in nūmārapu, in this chapter on molimārapu which deals with formation of single words, he is right in insisting on showing only individual words. In that case one must avoid also all sorts of compounds including vinaittokai and panputtokai. Venkataṛājulu Reddiār also emphasises this point.

He, however, takes objection to vēykka and vēycci etc. According to him, it is not necessary to show such geminated consonants. But as Ṭampūraṭar points out, Tolkāppiyar is concentrating only on the written letters where two dotted consonants appear consecutively. Therefore, the third consonant which forms part of the syllabic letter is not at all taken here into consideration. The word ṭoṛṛu in the sutram does not refer to such geminated consonants. Therefore it is not clear why Venkataṛājulu Reddiār objects to these examples. Perhaps his difficulty is that no such
geminated nasals occur in combination with \( \text{ṣ \ y} \), \( \text{ṣ \ r} \) and \( \text{ṣ \ l} \). But the question of gemination does not arise. He however interprets the sutram as to mean that after the semi vowels \( \text{ṣ \ y} \), \( \text{ṣ \ r} \) or \( \text{ṣ \ l} \) the plosives \( \text{ṣ \ k} \), \( \text{ṣ \ c} \), \( \text{ṣ \ t} \) and \( \text{ṣ \ p} \) will occur with their homorganic nasals coming before the plosive. Even then he gives only the following examples.

<table>
<thead>
<tr>
<th>( \text{ṣk} )</th>
<th>( \text{ṣc} )</th>
<th>( \text{nt} )</th>
<th>( \text{mp} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>y</td>
<td>-</td>
<td>tēyṅcatu</td>
<td>mēyntatu</td>
</tr>
<tr>
<td>r</td>
<td>-</td>
<td>-</td>
<td>cērntatu</td>
</tr>
<tr>
<td>l</td>
<td>-</td>
<td>-</td>
<td>vālnatu</td>
</tr>
</tbody>
</table>

Under this sutram Vēṅkaṭarājulu Reddiar's view about the clusters beginning with \( \text{ṣ \ y} \), \( \text{ṣ \ r} \) or \( \text{ṣ \ l} \) in nūmrarapu may also be referred to. There, he argues that in nūmrarapu these clusters occur only in individual words. But in clusters shown there, the first consonant alone remains a dotted consonant while the second consonant becomes a part of the syllabic letter. But no such example could be given for the occurrence of \( \text{ṣ \ ū} \) occurring after these semi vowels, as part of a syllabic letter. He could give only the example vēyṅkulāl where \( \text{ṣ \ ū} \)
alone remains a dotted consonants. According to him the clusters referred to are clusters occurring in individual words and not in compounds. But vēykalal is only an example of compound. The explanation for giving a compound is that the sūtram has been separated from other sūtrams on other consonantal clusters, because of this unique or exceptional characteristic feature.

C ē C seems to be giving a number of difficulties with reference to initial, final and cluster occurrences. It is very doubtful whether one has received all the sūtram on it as left by Tolkāppiyar. It is also a question whether even such sūtrams which have come down to us have reached us in the form in which he left them. The commentators give certain words like vēyñanam, vērñanam and vēlñanam etc. vēr, vēy and vēl are known words. If they are separated ñanam alone will remain. Since C ē C is not one of the initial sounds, one cannot take them as separate words. In that case there are no examples for showing that C y C, C r C or C l C occurring with syllabic letters beginning with C ē C. Venkatarājulu Reddiar's explanation is an attempt to catch at any straw to
escape from the overwhelming flood of confusion in the sūtras. Ilāmpūraṇar and Naccinārkkiṇigiyar give the example nāganam for \( \text{n} \). As Veṅkaṭārājulu Reddiar points out that if \( \text{n} \) is removed as the interrogative particle one gets only nān which cannot be, as already stated, an individual word. It is true that Pavanantī implies that nān is a word and that there \( \text{n} \) can occur as the initial syllable after the interrogative and demonstrative basis. That is because eṅkanam etc. which are on the pattern of nāṅkanam have by the time of Ilāmpūraṇar came to be pronounced as eṅnanaṁ. Thanks to the nasalisation of the plosives following the nasal, a tendency starting about the beginning of the Kollam era and getting well established in the dialect of Malayalam whilst not being continued in the other dialects except for the retention of such forms as eṅnanaṁ, aṅnanaṁ, innaṁ and vāṅnanaṁ because of their frequent uses. Veṅkaṭārājulu Reddiar therefore shows as examples the orralapetaṁ or the extra lengthening of some nasals. But Tolkkāppiyar does not speak of orralapetaṁ at least in eluttatikāram.

It is therefore for consideration whether nākaramotu in ff. 29 gives the actual state of the language
of Tolkëppiyar's time or only the innate possibilities of clusters though certain clusters may not actually occur in the language, that is to say, even though a particular combination may not occur, such non-occurrence is merely an accident and is not based on the genius of the language, preventing such occurrences. From this point of view the non-availability of certain examples could also be explained. This may apply for the geminated consonants as well. Or it may be that ḫakaramotu did not originally occur in ff. 29, and there was some sutram about $\bar{\imath} \, \& \, \bar{i}$ which might have been explained why it did not occur as a geminated consonant and which unfortunately has not come to us.

XV.

There is one another characteristic feature of the Tamil language, which seems to have continued in force even in modern times. $\bar{\imath} \, r \, \bar{i}$ and $\bar{\imath} \, l \, \bar{i}$ as preceded by any of the initial short syllable do not occur in any word. Because of this clue an $\bar{\imath} \, u \, \bar{i}$ necessarily occurs after such $\bar{\imath} \, r \, \bar{i}$ and $\bar{\imath} \, l \, \bar{i}$ in that context. $\bar{a}r$ is the root in $\bar{a}r$ (nta) when the initial long vowel is shortened, one gets a variant form as aru (nta) in aiṅkurunūru. When foreign
words like sarkkarai come into Tamil the \( \square r \) has to take an \( \square u \) and one has carukkarai.

Having started to discuss the occurrence of the juxtaposed two consonants as dotted letters with reference to clusters in which \( \square y \), \( \square r \) or \( \square l \) occurs Tolkāppiyar has to explain the peculiar characteristic feature of \( \square r \) and \( \square l \) refusing to be preceded by an initial short syllable in such clusters or elsewhere. He has to explain that the non short syllable may be either a single long syllable or words of more than two letters because in the latter case also one gets the minimum two units of length which usually belongs to the long syllable. This is to explain the occurrence of \( \square r \) and \( \square l \) after two short syllables.

kurrorru in ff. 49 means the consonant which occurs after an initial short syllable. This, as Naccipārk-kiniyar points out, contrasts with peekkorru i.e. the consonant occurring after an initial open long syllable. In words like pukar and pukał the \( \square r \) and \( \square l \) do not occur immediately after an initial short syllable. Even otherwise, there is contrast between the consonant occurring immediately after a
short syllable and the same occurring after two short initial syllables. The first syllable in the latter case is not a closed syllable. The second contrast is between kurro _rru_ the consonant after only one short vowel or syllable and kurilina _rru_ the consonant after two short syllables or vowels. It was pointed by Naccipärkkinniyan that there is no limitation to the syllabic letters clustering with pure consonant following them but there is a restriction only with reference to _r_ and _l_ in this particular environment i.e. they cannot occur immediately after an initial short syllable.

The next sutram as interpreted by Ilampūrana _ states that since words short and long are understood only with reference to quantity, poly syllables always behave like long syllables. This explains the occurrence of _r_ and _l_ in pukar and pukal etc. which are words of more than two letters which is the definition of _totar moli_ as interpreted by Ilampūrana. He also points out that when Tolkāppiyar speaks of a consonant after a long syllable that can be also interpreted as a consonant after two short syllables. Civa- ṇānamunivar explains the disappearance of the final _l_
of the word \textit{mutal} before \textit{makara iruvāy} in the first sutram of Telkāppiyam on the basis of the sandhi rule \textit{vis. netiyatan} \textit{muppār orru} which he has to explain on the basis of this interpretation of Ilampūranar. \textit{102} \textit{\ce{\textless} 1 \textgreater} of \textit{mutal} disappears; but the sandhi rule is only with \textit{\ce{\textless} 1 \textgreater} reference to the disappearing when immediately following a long syllable; since two short syllable are equal to one long syllable \textit{mutal} which is a disyllabic word, is considered to be equal to a long syllable even by Civaṉanaṉunivar.

Naccinārkkiniyar objects to this interpretation on the ground that two short syllables are never treated as one long syllable. \textit{103} That is to miss the point of Ilampūranar. Ilampūranar never counts the short disyllables as long syllables, but only states that these short disyllables behave like long syllables, because they have the units of two quantities of length like the other. Naccinārkkiniyar also refers to the fact that the short disyllables are treated as \textit{nirai-y-acaī} whereas long syllables are treated as \textit{nēracaī}. Here also he misses the point because Ilampūranar is not speaking of metrical consideration. But even with reference to prosody, this sutram throws a flood of light. The basic
metrical unit in Tamil according to Tolkāppiyar consists of two units of length. As already stated it may be one long syllable or two short syllables. Even the basis of this is thus explained by this sutram.

Since Naccinārkkinnīyar differs from Ilampūrapar, he gives a different meaning to this sutram, which is not easy to follow. He states thus "The shortness and length of sounds are measured by the ear; words in which the quantities of length occur consecutively are words where the long vowel is thus allowed to run beyond its established quantity."

The predicate occurs almost always in the Tamil sentence in the final position. The infinite verb of the pattern ceya, always occurs before the verb which it modifies. In the forced interpretation of Naccinārkkinnīyar iyala which occurs in the final position as a predicate according to the interpretation of Ilampūrapar and the genius of the Tamil language, is taken by Naccinārkkinnīyar as an infinitive, and he repeats the one word there totarmoli as the subject and also as the predicate. When it occurs with the predicate, the first word of the compound totar which is a verb is said to be modified by the infinitive which had been identified as
iyala. The word iyala as Venkatarajulu Reddiar points out occurs elsewhere more than ten times; and in no place Naccinārkkiniyar himself has taken it as an infinitive.

The necessity for this interpretation by Naccinārkkiniyar is again due to the change in the pronunciation which had occurred in the language between Tolkappiyar and Naccinārkkiniyar. In ff. 41 it is the short vowel that supplies the required length in a metre. That is because of what has already been explained viz. that alapeṭai was no more than a vowel cluster of a long vowel and a short vowel. It has been pointed out that even by the time of Yāpparumkalam and its commentary, it has become merely a long vowel; some times even the short vowel occurring in the written form of the alapeṭai was omitted to be taken into consideration for the purpose of meter and at other times the short vowel was also taken into consideration. The first procedure was only an exception. The long vowel was increased in length so as to have three units of quantity so that the whole was pronounced as an indivisible sound.

Naccinārkkiniyar probably thinking that this kind of pronunciation obtained even during the time of
Tolkāppiyar himself, wants to find some word somewhere in Tolkāppiyam to emphasize the fact of the alapetāi being only an extra long vowel. Therefore, he says that the short vowel mentioned in ff. 41 really comes only to give some more length to the indivisible long vowel. He states that when the quantities are measured, it is the long vowel that gets lengthened. This sutram therefore according to him refers to ceyyuliyal but that it is stated here because of the long vowel having more than two units of length. He emphasizes in this connection the form of the word alapu and interprets it as referring to the phrase mattirai alapu in ceyyulival. Therefore he interprets alapu as measurement.

He notes an important difference between the homonym which occurs as an infinite and also as a finite verb. He states that the infinitive verb is not pronounced emphatically whilst finite verb is pronounced emphatically. This is illustrated with reference to iyala, "to still further lengthen" is nittam vēntin (ff. 6) is the phrase used and accordingly in alapetāi the short vowel is important as much as the long vowel. This if taken literally goes against his own experience which know only of a monosyllable alapetāi
and not a dy-syllable alapetai and hence it has to be explained away. He proceeds to explain it away on the basis of orralapetai which occurs wherever some of the voiced consonants are sung on, to give one unit length of quantity and these occur always after a short syllable. He points out that as in uyiralapetai here in orralapetai also the short vowel occurs only to increase the usual length of the consonant. The short vowel is perhaps thus a symbol or a necessary environment a confusion which Naccinārkkiniyar does not proceed to explain; for in orralapetai the short vowel is an environment whilst in uyiralapetai according to the implications of Naccinārkkiniyar it can only be a symbol. This explanation should be understood with what had already stated about alapetai.

XVI.

Having explained these and after having given the necessary explanation, Ilampūranar continues the topic of clusters of consonantal letters. 107 pōlum which occurs at the end of the metrical feet assumes the alternate form pōm. Here also one gets a cluster of two letters viz. \( \overline{\eta} \overline{\eta} \) and \( \overline{\eta} \overline{m} \). He proceeds to state that in this particular place the final
\( \text{II m I} \) is shorter than its usual quantity. The commentators state that this explains what was stated already in ff. 16, which hints that there is an \( \text{II m I} \) which is reduced to half of its length when it occurs with another sound. The rare occurrence of \text{araiyālapu kurukal} is probably taken by Ilampūrapar as to mean that \( \text{II m I} \) will suffer a diminution in its assigned quantity of half a unit. That is why he states that this diminished \( \text{II m I} \) has to be assigned only one fourth unit, by way of explanation in his commentary.

Nacchinārkkiniyar does not say so, probably because he interprets the sutram in the way in which it has been explained above, in accordance with the general pattern of describing of \text{carpu sluttu} as (1) occurring in individual words and (2) in combination of words. Nacchinārkkiniyar states that the shortened \( \text{II m I} \) also occurs (1) in individual words as in \text{pōm} and also (3) in combination of words like \text{varum valavan} where also the \( \text{II m I} \) is said to get shortened when followed by \( \text{I v I} \) as contemplated in ff. 330. This sutram according to Pāraciriyar refers to what happens in music and therefore is a reference to the view of others or other scientists. The same statement \text{pirankōṭkūral}
'statement of other's views' is also found in Naccinārkkiniyar's commentary. But his idea is not clear and certainly does not refer to any occurrence in music. Perhaps he is referring to others who speak loosely of makarakkurukkam as dependent sound as against the definite use of that term in Tolkāppiyam. A question may arise in view of ff. 52 and 132 whether the sutram is necessary at all and in any case it may be argued it has no place in nūmarapu which deals with such sounds as do not change because of the environment. The script form of makarakkurukkam has been already explained.

In sutram ff. 52 Naccinārkkiniyar provides also for a usage which must have sprung up after Tolkāppiyam. Not only after । n । but also after । n । the । m । occurred as a cluster of two consonantal letters e.g. maruppu. He quotes from literary usage and here also the । m । is said to suffer diminution as noted by other later grammarians.

XVII.

The next sutram is something like the last sutra of pāṇini a, a where the । a । described in the astakāṭya as । a । persc differs when occurring
in words. The question may arise in the mind of those who knew Sanskrit whether any such change in sounds described in the first chapter, occur when the sounds are found in words as described in the second chapter. Tolkēppiyar quotes the authority of scholars, probably predecessors, that there is no change whatever. This is the interpretation which has been accepted by Civaṉānamunīvar, Aracaṉ Canṭhunār and Venkaṭarājalu Reddiar, Vellaiyēraṉar and Dr. P. S. Cuppṟamaṇiya Sastri. Pavaṇanti expresses the same idea moliyāyē totarīnum munnamaittu eluttē.

Tolkēppiyar speaks of terintu vēru icaiṭṭal here the words terintu and vēru emphasise two different facts (1) pronunciation of the sound separately as individual sounds and (2) pronunciation of these with variations in words. This is pointed out by Ilāmṛraṉar.

Naccinārkkiniyar objects to this explanation. He says that if it means that this much this sutram is unnecessary, because this will be got from the sutrams already mentioned. Perhaps what he means is that there is no room for any doubt arising about the pronunciation; for, though in sanskrit there is a difference there is none in Tamil and
that one need not frame a sutram in a Tamil grammar having in mind what occurs in Sanskrit.

XVIII.

There is something more to be said about Naccinārkkkiniyar's attempt at interpreting this sutram in a different way. He has stated that in counting eluttu the consonants should not be taken into consideration. He himself feels the ground giving way. Therefore he wants to strengthen the position by pointing out certain phrases occurring somewhere in Tolkāppiyam and this sutram comes in, handy for him. Naccinārkkkiniyar here seems to be conscious of the various sutrams in which the consonantal letters are also counted as already pointed out. Therefore he has somehow to meet the hurdles on his way. Probably he has no time to explain away these references.

And in interpreting this sutram, he refers to the two different approaches followed by Tolkāppiyar himself. (1) not counting the consonants and the shorter ĵ u ĵ in metrical lines (vēru icaittal) and (2) counting them as letters in words (terintu moli-p-paputtu icaittal). He must explain the rationale of these two different approaches.
He asserts that because these consonants and shorter $\mathsf{C\,u\,I}$ are important in differentiating the meaning, their existence could not be neglected. $\mathsf{anru}$ is not the same as $\mathsf{aru}$. $\mathsf{kampu}$ is not same as $\mathsf{kappu}$. Therefore the consonant has to be counted when the words of letter or sounds are pronounced for the purpose. $\mathsf{terintu}$ refers according to Naccinärkkinijar to an analysis of the meaning. The other approach is explained by the fact that in metre or rhythm the meaning does not count and there the sounds having quantities i.e. syllabic letter alone count. Therefore they are treated differently and pronounced in metre in a different way, so as to produce the required rhythm. There, the consonants and the shorter $\mathsf{C\,u\,I}$ need not be counted. But this does not bring out any change in the characteristic feature of these sounds described as having these assigned quantities. Therefore, though the shorter $\mathsf{C\,u\,I}$ and the consonants occur as sounds to make up the meaning, they are not counted in metre.

The isolated pronunciation of sound here referred to cannot be that of the shorter $\mathsf{C\,u\,I}$ which can be pronounced only in the particular environment and not separately. Propriety demands that this sutram should be
taken as referring only to the consonants.

Maccinärkkñinyar gives the number of words in which consonants occur after short vowel, after a long vowel and after a syllabic letter. After a long syllabic letter it occurs and the omission of that consonant will either change the meaning or make the word a nonsense. So also he gives consonants occurring after two short syllables after one short and long syllable (kaṭān) after tri syllables consisting of vowel and a short syllable and a long syllable (uṭāiyan) after four syllables (Tiruvārūr) and after five syllables in which in the consonants occur except in the first two syllable (akattīyanār). So also he gives four examples of shorter ∑ u ∑ where the syllable preceding the shorter ∑ u ∑ consists of in addition of a plosive (kokku) aytam (ekku) semi-vowel (telku) nasal (kuraňku). He quotes from ceyyuliyal to show that in metre, sounds other than vowel are not counted.

First Maccinärkkñinyar writes that consonants and shorter ∑ u ∑ are not counted in prosody though they are important for understanding the meaning of the words in which they occur. He seems to be suggesting that they are phonemes
though not counted in metre. It will be seen that he refers only to the consonants and the shorter $u$. 

In the present available editions in his commentary on ff. 53 Naccinārkkiṇiyar is said to have written the following when the aytam is also introduced. Because of this, consonants, aytam and the shorter $u$ stand as letters and satisfy meaning (as we would say) in modern linguistics as phonemes). Tolkāppiyam states that they will not be counted as letters or valued as units of metrical syllables. The phrase terintu vēru icaital does not apply to the shorter $u$; therefore according to the propriety of applying the rule only when it can operate but apply only to aytam and the consonant. The second sentence is probably an interpolation. Naccinārkkiṇiyar speaks of terintu molippatu icaital ‘uttering a letter in a word after realising its usefulness in bringing out the meaning’ and (2) vēru icaital uttering it without reference to meaning as useful only for rhythm or metre. He does not combine these two things so that one can speak of terintu vēru icaital. The latter kind of speaking can be indulged in only by others and who speak of terintu molippatutt icaital (uttering a letter in a word)
and terintu vēru icaittal (uttering a letter separately by itself). They could speak of the shorter ĺ u ĵ which can be pronounced only in environment, as not being capable of pronounced per se. But it is difficult to see āytam a dependent sound could be pronounced per se. Perhaps this refers to the later day pronunciation of āytam as ĺ h ĵ. In any case this sentence could not have been written by Naccinārk-kiniyar because it would contradict what he has written as the meaning of the sutram that the consonant and the shorter ĺ u ĵ are not capable of vēr-icaittal in metre. Therefore this sentence must have been a marginal note by a student which was wrongly included by a later day copyist into the text of Naccinārk-kiniyar’s commentary.

xii.

The last sutram in this chapter is important. The Tamil language divides the words into two main categories, the superior class of words and inferior class of words called uvartinai and akrinai respectively. As a general rule it may be stated that the first refers to human beings and the second class to all the rest, living or non-living.
Many of the inferior class words are now common to both the singular and the plural. The grammarians coined the word pālpaka aṭṭaṇai. It is not surprising that this distinction of number which is found in words of superior class of nouns and pronouns that should not exist in these inferior class of nouns. An explanation could be put forward on the basis of this final sūtram and on the basis of the distinction of number found in the pronoun. It is admitted that in the pronouns in the first person (yān, yām) second person (nīm, num) and third person (tān, tām) the singular is denoted by the alveolar nasal and the plural by the labial nasal. It is the original state of affairs. One may generalise that in other places also $\sqrt{\text{n}}$ denoted the singular and $\sqrt{\text{m}}$ denoted the plural. Unfortunately in Tamil the final nasal has got a tendency to be weakened.122 Again am becomes aī or the final nasal is recognised only by the nasalisation of the previous vowel (nān, nā) or it loses the nasality to become $\sqrt{\text{v}}$ or it is completely lost. am, aī, aṃ-ā. As a consequence of this weakening tendency of the final nasals have almost disappeared, except $\sqrt{\text{m}}$, $\sqrt{\text{n}}$, and $\sqrt{\text{v}}$. $\sqrt{\text{n}}$ and $\sqrt{\text{m}}$ have also disappeared except in the often repeated ordinary words. The words ending in cerebral nasal
have become vowel endings with additions of kannu, mangu and pummu.

Here a change has occurred because of the tendency above referred to, \( \ddot{\text{m}} \) and \( \ddot{\text{n}} \) can be pronounced almost alike, perhaps with nothing more than the nasalisation of the previous vowel. Therefore in the final position only where they denoted the inferior class of nouns, \( \ddot{\text{m}} \) and \( \ddot{\text{n}} \) were neutralized. Therefore both the ending \( \ddot{\text{m}} \) and \( \ddot{\text{n}} \) have the same meaning. \text{maram, maran, kulam} \) and \text{kulan} etc. But in the age of Tolkäppiyar there were nine words which were not thus neutralized. The commentators enumerate them viz. \text{akin, sekîn, vilan, payin, kuyin, alan, pulan, katan} \) and \text{vayan}. Later ages give more number of words but they must have come into the standard literary language from the dialects, after the age of Tolkäppiyam and they do not come into the theory discussed. On the basis of the later examples it has been defined that the nasalisation occurs after two consecutive short open syllables, but no such restriction is mentioned by Tolkäppiyam. This theory has to be studied in detail with reference to the other Dravidian languages.
The phonemes in Tamil may be noted. The vowel phonemes have been explained. Amongst the consonants

\[
\begin{array}{ccc}
\text{kāḷ} & \text{vāḷ} & \text{aṅ} \\
\text{cāḷ} & \text{vāḷ} & \\
\text{tāḷ (āṭṭu)} & \text{vāḷ} & \text{an} \\
\text{rāḷ (four)} & \text{vār} & \text{am} \\
\text{māḷ} & \text{vāy} & \\
\text{vāḷ} & \\
\text{nāḷ (to hang)} & \text{vāv (u)} & \\
\end{array}
\]

\(\text{cū} \text{J} \) and \(\text{cū} \text{y J} \), \(\text{cū} \text{ū J} \) and \(\text{cū} \text{n J} \) and \(\text{cū} \text{m J} \) and \(\text{cū} \text{n J} \) sometime alternate but in the above examples and the following

\text{vāy (my mother)}

\text{vāy (your mother)}

\text{vān (I)}

\text{vām (we)}

they contrast. The difficulty is about \(\text{cū} \text{ṅ J} \). As already stated, one has not before us all the sutras relating to \(\text{cū} \text{ṅ J} \); as it is, it has to be taken an allophone of \(\text{cū} \text{m J} \) when followed by the velar plosive. In ñūmūru
(three hundred) and mugguru (the first hundred) they contrast but they are compounds. The minimal occurrence of $\nu$ n $\nu$ except in the initial position in a word, is significant. There were only two words in which $\nu$ n $\nu$ occurred as final, verin and porun. The dependent sounds are allophones.

Coming to the syllabic pattern the initial syllable will be \((C) \overset{\nu}{(C1)} (C2)\) where C1 will be if C2 occurs. $\nu$ r $\nu$, $\nu$ y $\nu$ or $\nu$ l $\nu$ and where C2 will be a nasal or plosive and in these cases the next syllable will be a nasal or plosive \((C2)\). Otherwise C may be any consonant but if it is a plosive or m a nasal the next syllable will begin in a consonant. This pattern of the ending of the first syllable may apply to second syllable, also. The final syllable will be \((C) \overset{\nu}{(C1)} (C2)\) where C1 is $\nu$ n $\nu$ C2 will be $\nu$ m $\nu$; in other cases there will be only any one consonant $\nu$ n $\nu$, $\nu$ n $\nu$, $\nu$ n $\nu$, $\nu$ m $\nu$, $\nu$ n $\nu$, $\nu$ y $\nu$, $\nu$ r $\nu$, $\nu$ l $\nu$, $\nu$ v $\nu$, $\nu$ l $\nu$ and $\nu$ l $\nu$.

The words are generally of one, two or three syllable and in a very few cases of more syllables.
The Phonological word.

Reference.

1. I ff. 59
2. Kuzuntokai. 164
3. Puram 2. 21
4. Kural 167
5. Puram 120.10
6. Āvantakāntāmuni 153
7. Ibid 1046
8. I ff. 55
9. XVII p. 467
10. I ff. 54
11. I ff. 58
12. I ff. 56
13. VI ff. 98
14. X p. 28
15. XIV p. 136
16. XVI p. 18
17. I ff. 427
18. Ibid 429
19. III ff. 69
20. III ff. 73
21. I ff. 333
22. Gbid 339
23. I ff. 375
24. III ff. 572
25. Gbid 258
26. III 375
27. II 73
28. Gbid
29. I ff. 60
30. Ibid 103
31. II ff. 452
32. I ff. 62, 64 and 65
33. VI A. p. 37
34. Pēṣumāṇāyuppatai 132
35. I B. P. 55
36. Puram 56.18
37. Civaśaritāmāni 870
38. Puram 15.21
39. Peraṇkatai xxxiv. 15
40. Tamil lexicon.
41. I A. p. 25
42. II ff. 452
43. I A. p. 25 (ff. 94)
44. I B. p. 55
45. I E. p. 53
46. XVI. p. 23
47. XVII p. 159
48. Supra p. 62
49. XVIII p. 467
50. IX p. 48
51. I A. p. 25
52. V ff. 7
53. VI ff. 101
54. I B. p. 54
55. I A. p. 98 (ff. 285)
56. I B. p. 172 (ff. 285) and p. 266
57. I ff. 66
58. Ibid 77.
59. VI ff. 121
60. I ff. 60
61. I B. p. 57
62. I A. p. 27
63. I B. p. 58
64. I ff. 11 and 13
65. III ff. 97 and 113

66. Centamil Vol. II p. 82

67. I A. p. 29

68. I B. p. 61

69. II B. p. 65

70. I ff. 43

71. Ibid 44

72. I A. p. 19

73. I B. p. 43

74. I ff. 45

75. I B. p. 44

76. I ff. 10

77. Ibid 60

78. III ff. 351

79. XII p. 65

80. I B. p. 44 foot-note.

81. I C. p. 47

82. A.U.J. p. 47

83. I ff. 51

84. Ibid 404.

85. Ibid 46

86. Ibid 47
87. I ff. 44
88. I B. p. 46
89. I ff. 48
90. I A. p. 20
91. I B. p. 47
92. I C. p. 50
93. I C. pp 22 to 24
94. I ff. 29
95. I A. p. 14 and I B. p. 35
96. I C. p. 98
97. VI ff. 106
98. I C. p. 29

99. Aingua

100. I A. p. 20
101. I ff. 161
102. II p. 50
103. I B. p. 48
104. I C. p. 53
105. X p. 47
106. Supra. P. 43
107. I A. p. 21
108. I ff. 52
109. I A. p. 10 (ff. 13)
110. III B.
111. I B. p. 24 (ff. 13)
112. I ff. 53
113. VI C. p. 64
114. 116. I C. p. 66
115. VII C. p. 64
116. VIII C. p. 64
117. IV ff. 127
118. I A. p. 22
119. I B. p. 49
119a. I B. p. 50 See the foot-note
120. I ff. 62
121. VI ff. 281
122. XVIII A. p. 467

In the table given on p. 101 the letters written vertically are consonants which occur at the onset sound in the initial syllable. The letters written horizontally are stop sounds which follow any of the consonants in the initial syllable. In the integers spaces denote possibility of a consonant or a vowel being thus following each other in the initial syllable whenever there is a case there is possibility of such occurrence. The last horizontal represents the occurrence of the vowel without being followed preceded by any consonant.

In the table given on p. 101