

## INITIAL PLOSIVES IN DRAVIDIAN

KAMIL V ZVELEBIL

01 In Tamil and Malayalam, the occlusives *k*, *c*, *t*, *p* are pronounced voiceless initially, when long ('geminated'), and in combination with other occlusives, voiced when preceded by a nasal consonant, when in intervocalic position, they are pronounced as semivoiced to voiced with more or less audible friction. In other Dravidian languages, as well as in the informal styles of Tamil and Malayalam, many words do occur with initial voiced plosives. As an illustration, cf e.g. DED(S) entry 1423 Ta. *kutirai* horse, Ma *kutira* horse, cavalry, Ko *kudyr* horse, Ka *kudire*, *kudure*, *kudare* id., Kod *kudire* id, Tu *kudure* id, Te *kudira*, *kudaramu*, *gurramu* id, Kol *gurram* id, Nk *ghurram* id, Nk (Ch) *kurmam*, *kurrmam* id., Pa. *gurral* id, Konda *gurrām* id, Go (Ko) *gurram* id., Kuvi (F) *gūrumi*, (S) *gurromi* id. For the occurrence of initial vd plosives in the informal style of Tamil, cf such items as *bayō* fear, *ḡappā* carton, *ḡannal* window, *garvō* pride, *darmō* charity, dharma.

The question which arises at once is, was the state of affairs in the parent speech like the one found in standard Tamil and Malayalam, that is, roughly, is the initial voicing of plosives in the other languages secondary, or should we reconstruct two series of plosives, voiceless and voiced, as phonemes of Proto-Dravidian?

02 The first scholar who raised, and answered, this question was Robert Caldwell in 1856. He formulated what he called 'the law of the convertibility of surds and sonants', traces of which, according to him, 'are distinct in all the Dravidian dialects', and which 'is found most systemically and most fully developed in Tamil and Malayalam'. According to Caldwell, then, the 'Tamulian rule' which he saw, as he says, as 'essentially inherent in the

language', is valid for the parent speech itself <sup>1)</sup> That is, in modern phonological terms, there was in PDr only one series of stop phonemes, \**k*, \**c*, \**t*, \**ʈ*, \**ʈ*, \**ʈ* initially, when long, and when combined with other stops, they had voiceless allophones, in the medial, intervocalic and postnasal position, they had voiced allophones.<sup>2)</sup>

0.3 Caldwell's assumption that there were no (phonemic) initial voiced stops in PDr (as reflected by Tamil and Malayalam) was accepted by K V Subbayya (*Indian Antiquary* 38, 1909) but contradicted by Jules Bloch (*Indian Antiquary* 48, 1914, *Bulletin Soc. Ling.* 1919) on the basis of the history of a few items like Skt *ghotaka*- horse or Skt *drāvīda*- name of a people, which were according to Bloch loanwords from Dravidian. This view of Bloch received support from some scholars (e.g. Goda Varma in 1935-1937, F B. J. Kuiper in 1938, S K Chatterji in 1954), but was opposed by others. In a decisive paper published in *BSOS IX*, 1937-39, 711-22 ('Dravidian Studies I'), Thomas Burrow of Oxford ar-

<sup>1)</sup> It is worth while quoting Caldwell in extenso on this (3rd ed., repr. 1956, 138-139) 'The law, as apparent in the Tamil-Malayalam system of sounds, is as follows *k, t, ʈ, p* are always pronounced as tenues or surds (i.e., as *k, t, ʈ, p*) at the beginning of words, and whenever they are doubled. The same consonants are always pronounced as medials or sonants (i.e., as *g, d, d, b*) when single in the middle of words. A sonant cannot commence a word, neither is a surd admissible in the middle, except when doubled, and so imperative is this law, and so strictly is it adhered to, that when words are borrowed from languages in which a different principle prevails the consonants of those words change from sonants to surds, or *vice versa*, according to their position... The Tamilian rule... is not a mere dialectic peculiarity, the gradual result of circumstances, or a modern refinement invented by grammarians, but is essentially inherent in the language, and has been a characteristic principle of it from the beginning *ab initio* the Dravidian phonetic system, as represented in Tamil, its most ancient exponent, differed essentially from that of Sanskrit.'

<sup>2)</sup> I shall leave untouched the phonetic nature of the features /+ voice/ /- voice/ in Tamil and Dravidian. A treatment of this problem may be found in Leigh Lisker, 'The Tamil occlusives: short vs long or voiced vs voiceless', *JL* (1958) 294 ff, F B J. Kuiper, 'Two problems of Old Tamil phonology', *IJL* 2 (1958) 191-224, and in my *Comparative Dravidian phonology* (1970) 79-83. F B J. Kuiper's paper of 1958 is in all respects a lucid and excellent summary of the problems of 'surds and sonants' in Tamil phonology.

gued for Caldwell and came to the conclusion that voicing of initial stops was secondary and did not represent the PDr conditions Burrow stated four main reasons for his conclusion. (1) A very large percentage of Kannada and Telugu items beginning with voiced stops have no correspondences in Tamil; (2) a considerable number of the correspondences are only loanwords in Tamil-Malayalam from other Dravidian languages, and hence their evidence is of no value, (3) where there are correspondences, they are highly irregular; (4) in many individual items, voicing in Kannada and Telugu can be demonstrated to be secondary. Burrow then went on documenting these statements with impressive data, and reached the conclusion that 'Tamil alone among the Dravidian languages represents the state of affairs in the parent language in this matter. Telugu and Kanarese have for reasons that are obscure in most instances introduced secondary voicing into primitive Dravidian words.'

o 4 As so very often, Caldwell's intuition proved right, and Burrow's conclusion is correct. However, I have to offer the following three points of criticism of Burrow's paper. First, his statements are full of rather general formulations like 'numerous words', 'very large percentage', 'considerable number of words' etc. Such statements are not very convincing. Fortunately, thanks to the existence of Burrow's and Emeneau's *Dravidian Etymological Dictionary* (1st ed. Oxford 1961) and its *Supplement* (1968), we are nowadays able to formulate more exact statements, and I shall give below the results of a precise statistic count performed by one of my former students at the University of Chicago, concerning this matter. Second, Burrow compared only Tamil, Telugu and Kannada items, and largely ignored the non-literary Dravidian languages. In the statistic investigation referred to above, all Dravidian languages (as available in the *DED*) were taken into account. Third: Burrow's suggested solution of the secondary voicing is to 'assume the existence of some substrate language to account... for the existence of initial sonants.' This, I am afraid, is far too simple to be satisfactory. To take recourse to a substratum language should always be our last step – so to say a 'step into darkness' – when all other chances to arrive at a solution have failed us. I shall try to show that there exists a complex net of reasons to account for the secondary initial voicing.

0.5. Bh Krishnamurti in his excellent book *Telugu Verbal Bases* (Berkeley, 1961) also upheld the view of Caldwell. As he says, 'not even a single proto-stem could be discovered from the mass of Dravidian vocabulary with a widespread distribution of initial voicing to merit the assumption of a PDr. voiced initial even to a small extent. . . PDr. had only surds in the initial position, voicing in some of the descendants in this position is only secondary' (*op. cit.* 29) In the search after the causes of the initial voicing, Krishnamurti improved on Burrow in having discovered its general cause, as he calls it. this general cause of the initial voicing was the extension to the initial voiceless stops of voicing occurring in the succeeding syllables

1. What I am concerned with in this paper are primarily items with initial voiced plosives. These occur in *all* Dravidian languages, and not only in some, along with items with initial voiceless plosives. The only exception is the formal style of written Tamil, and Toda and Malayalam in their native (indigenous) vocabularies. The Tamil orthographic system does not possess signs for voiced plosives. Either the state of affairs in the parent speech was like that in Tamil which means that Caldwell's 'law of the convertibility of surds and sonants' was valid for PDr, and the initial voicing is secondary, or the initial voice in plosives is primary and the devoicing is secondary. In this paper I wish to put forward some suggestions which strongly support Caldwell, Burrow and Krishnamurti and do as I hope in a decisive way contribute to this crucial problem of Dravidian phonology

2. What speaks in favour of Caldwell's hypothesis?

2.1. The general state of affairs in Dravidian phonology in the first place. It seems to be a fact that it is Tamil which in most cases (though by no means in all) has preserved more or less faithfully the original situation prevalent in the phonological system of Proto-Dravidian. However, one has to add: it is a particular style of Tamil - the standard, formal, written language, 'frozen' in its phonological and graphemic system roughly at the beginning of our era which may be so considered. In this connection, one may compare what Burrow has to say (in *Studies in Indian Linguistics*, 1968, . . . 69): 'As a general rule it seems that it is not necessary to go

beyond the phonetic system of classical Tamil to account for Primitive Dravidian.'

2.2. Writing must have been known in the Tamil country at least as soon as the 2nd Cent. B.C. when Aśokan Southern Brāhmī was adopted and adapted for Tamil. It is now clear that even in that early period, initial stops were voiceless in Tamil. The fact that the symbols for voiced plosives were not borrowed from Brāhmī though readily available<sup>3)</sup> and in spite of the fact that the Tamil script is a very near approximation to the phonemic system of the formal style of the language should be interpreted in favour of the hypothesis that Tamil did not have phonemic voiced plosives at that time.

2.3. The fact that quite a number of voiced initial plosives occur in (a) onomatopoeic words, (b) loan-words

2.4. The statistical results. This seems to me to be of utmost importance. While Burrow and Krishnamurti had no results of exact counts at their disposal and could talk only in terms of 'greater' or 'lesser' numbers, I can, thanks to the labours performed by my former Chicago student Mrs. Diana Ukleja support their general conclusions by precise ratios. The results of Mrs. Ukleja's statistical investigation show that in all Dravidian languages without exception, the percentage of words beginning with voiced stops is strikingly lower than the percentage of words beginning with voiceless stops. The grand total, for all items in all languages in the *DED*, is 1.45% items with initial voiced stop<sup>4)</sup> out of 15,961 items with initial stop, a ratio of 1 : 10. For South Dravidian, the ratio is 1 : 12, 78% out of 9,137 having initial voiced stop. In Central Dravidian, 1,256 out of 5,920 items have initially voiced stop, a ratio of about 1 : 5. North Dravidian has a ratio of 1 : 14, with 56 out of 904 items having an initial voiced stop. When consulting the ranking of languages by ratio it is obvious that it is Telugu,

<sup>3)</sup> The only exception being that of *dh* in the word *dham(m)am*. Cf. I Mahadevan, *Tamil-Brahmi inscriptions of the Sangam age*, Preprint, II International Conference-Seminar of Tamil Studies Madras, 1968, pp. 20.

<sup>4)</sup> Not counting *v* < \**v*, as e.g. in Ka *biri* < \**viri* to expand (cf. Kui *uringa*, *DED* 4438).

Kolami and Kannada which have the greatest number of initial voiced stops (ratio of voiced. voiceless being 1 : 4). In the next group, there are Kui, Konda, Tuḷu and Kuvi (with the ratio being approximately 1 : 5) Tamil, Malayalam and Toda, on the other hand, have no voiced stops initially in their native vocabulary

These ratios show how many more times words begin with voiceless stops than with voiced stops, in each Dravidian language. This itself is a very important result which I believe strongly supports the contention that the Proto-Dravidian situation was like the situation in Tamil, Malayalam and Toda <sup>5)</sup>

However, yet another conclusion may be drawn from the statistics: it shows that initial voicing is distributed absolutely irregularly (for Malto, a North Dravidian language, the ratio is 1 : 20, as compared to Kannada, a South Dravidian language with the ratio of 1 : 4, while Tamil or Toda, also South Dravidian, have no voiced stops initially, in this respect showing similarity with the North Dravidian Malto) This shows that the feature of initial voicing is the result of an uneven and late development, spreading probably from a centre of diffusion irregularly and unevenly across the boundaries of languages and language-subfamilies, and not prevalent (at least not massively and regularly) in the parent speech itself.

The complete results of the statistics performed by Diana Ukleja, Chicago, follow next page.

Telugu would probably have a ratio of 1 : 4 or higher if instances of metathesis were eliminated. In any case, it is obvious that the trend towards the voicing of initial plosives is strongest in Telugu, Kolami, Kannada and Kui, while it is very weak in NDr, and there

---

<sup>5)</sup> The statistic disproves S. K. Chatterji's theory of widespread initial devoicing. In his 'Old Tamil, Ancient Tamil, and Primitive Dravidian' (*Tamil Culture*, April 1956, 148-74), S. K. Chatterji referred to the consonant shift in Germanic as evidence of the frequency of devoicing as a linguistic phenomenon. Tamil (and Malayalam) have in fact secondary re-voicing: loans from Kannada or Telugu, Koḍagu or Tuḷu, were devoiced rather late in Ta-Ma under the influence of standard Tamil orthography. A typical instance may be DED 4301 where all languages have *b*-versus Ta *p*-, only literary Tamil has *pommal*, *pommar*, but informal Tamil itself has *bomme*. Another clear instance is DED 3377 Ta *pāvili* an earring < Te *bāvili*.

	Total	Initial voiced stops	Ratio
	15 961	1 499	1 10
SDr	9 137	787	1 12
CDr	5 920	1 256	1 5
NDr	904	56	1 14

## Ranking of languages by ratio

Tamil	---	Brahui	1 8	Tulu	1 5,3
Malayalam	---	Gondi	1 7	Konḍa	1 5
Toda	---	Parji	1 6,5	Kui	1 4,25
Malto	1 20	Nairi	1 6	Kannada	1 : 4
Kurukh	1 15	Kuvi(F)	1 6	Kolami	1 4
Gadba	1 11	Kuvi(S)	1 5	Telugu	1 3,5
Koḍagu	1 10				
Kota	1 10				

are no initial voiced stops in Toda, Malayalam and Tamil (in the last two languages, in their formal, literary styles)

3. To prove the validity of Caldwell's hypothesis, we should be able to account, ideally, for every single instance of initial voicing, to formulate a theory which would explain in general how the initial voicing came about in every single language and in Dravidian in general; and, eventually, to point to a center of diffusion of the voicing phenomenon and to posit a relative and an approximate absolute chronology of the phenomenon

3.1. The first obvious step towards this difficult goal is to deal with very clear loanwords which contain an initial voiced stop in the original form and in the borrowing language. There are of course very obvious relatively modern loans from English and other Western languages, as well as from Urdū etc., which we may ignore here, like *brēk* 'break' (< Engl.) or *ḷēbi* 'a kind of sweet' (< Urdū) in modern Tamil and other Dr. languages. But there are almost equally obvious loans from Sanskrit and other Indo-Aryan languages which contain initial voiced stops like Skt. *bhaya-*. Spoken Tamil *bayō* 'fear'. Such loanwords are really no concern of ours but for the probability that the influence of these loans (very numerous in some languages like e.g. Telugu) might have had and

very probably had a trigger effect accelerating the drift towards initial voicing

As Burrow has shown in his quoted paper, a number of items in Tamil and Malayalam which, in their informal varieties, show initial voicing, are late loanwords from the two contact languages, Kannada and Telugu. Here belong e.g. such words as *DED* 3750 Ma. *bōy* palanquin-bearers, fishermen, borrowed from Kannada or from Tuḷu *bōyi* a caste of palanquin-bearers, fishermen. In this context it is very significant, I believe, that Toda, a tribal language almost 'uncontaminated' by any borrowings, has indeed no initial voiced stops whatsoever, and in this respect probably reflects most truly the original Dravidian state of affairs. It is also significant that quite a few entries in the *DED(S)* which have initial voiced stops are names of flora and fauna, which might point to a substratum language.

3.2. After having eliminated a large group of loanwords, we are left with the native, Dravidian vocabulary, and we have to deal next with those items which are obviously onomatopoeic. They form a subsystem for which specific rules are valid, which are different from rules valid for all other non onomatopoeic items. It has been pointed out by Emeneau<sup>6)</sup> that 'these forms often show phonological features that are rare, or even non-existent, in the remainder of the language.' Emeneau has also pointed out that 'in the language families of India there is a common pattern of onomatopoeics with great proliferation of items in all the languages and some areal etymologies.' He even goes so far as to say, 'It is probable that in reconstructed PDr no isolated word should begin with a voiced stop, except for some member of the onomatopoeic class'<sup>7)</sup>

4. Once we have eliminated obvious loanwords, and onomatopoeic items such as *DED* 1382 or *DED* 1525,<sup>8)</sup> we are left with

<sup>6)</sup> M. B. Emeneau, 'Dravidian and Indo-Aryan: the Indian linguistic area' (xeroxed) 1969.

<sup>7)</sup> *Ibidem*, appendix, (b), p. 57 C also M. B. Emeneau, 'Onomatopoeics in the Indian linguistic area', *Lg* 45 (1969) 212-74-99, and E. Annamalai, 'Onomatopoeic resistance to sound-change in Dravidian', *Studies in Indian Linguistics*, Poona and Annamalainagar, 1968, 15-19.

<sup>8)</sup> *DED* 1382 Ta *kutukutu*- to rumble, rattle, *DED* 1525 Ma *gulūgūlū*



the rest of the native vocabulary which should be handled as follows.

4.1. First of all, a great number of words with obviously secondary voicing initially resulted from metathesis <sup>9)</sup> Consider just two illustrative examples: Te *ḍigu* to *aiḡhi*, descend, as compared with Ta. *iḡ* to descend etc. (DED 426) shows that the initial voiced plosive in the Te. item resulted by metathesis from the form \**iḡ-g-* through \**li-g-*. Or, cf. Ta. *uḡal*, Ko. *orḡ*, Ka. *oḡal*, Tu. *uḡalu*, Te. *oḡalu*, *oḡlu* body, belly Ka. *doḡlu*, *doḡlu*, Tu. *ḡoḡlu* id (DED 501) The initial voiced plosive in such items is in fact a medial voiced plosive which shifted through metathesis to the initial position and 'stayed' voiced.

4.2. However, even after the elimination of onomatopoeic forms which obviously have their 'own' phonology, of certain other semantic groups (like the names of flora and fauna, possibly borrowed), and of metathesized forms, we are still left with a number of items which display initial voiced stops, and we have to account for the reasons of initial voicing in purely linguistic terms. The results of the statistical investigation have shown that though initial devoicing may be a frequent enough linguistic phenomenon (e.g. in Germanic), it is rather the absence of voice initially which must have been the prevalent feature in the proto-language, and the voicing that was secondary.

4.2.1. The operational cause of the voicing was most probably the transfer of the feature /+voice/ from the middle to the initial position of the word. Such regressive assimilation in voicing

---

sound of fruits falling into water. In 1382 the initial is voiced throughout except for Tamil, Malayalam and Toda. Tamil of course never *writes* a voiced stop in this position in any words, though in actual pronunciation the stops in such onomatopoeic items are voiced Malayalam sometimes writes a voiceless, sometimes a voiced stop (since the writing system in Ma has symbols for voiced occlusives).

<sup>9)</sup> For the feature of metathesis, cf. e.g. § 1.39 in my *Comparative Dravidian phonology* (1970) 164-7, L. V. Ramaswami Aiyar in *Quarterly Journal of Mythical Society* 22, 4, 1932, A. Master (in *BSOAS* XI-XII, 1943-1948), M. B. Emeneau, *Kolams*, 1955, and elsewhere

occurred, obviously, in some languages, under one of the three following conditions. First when there was medially a voiced stop present, or the group 'homorganic nasal plus voiced stop'. Thus e.g. in the Kuvī *bhovyri*, *būi* smoke, when compared with Ta. *pukas*, Ka *poge*, Te *poga* etc (DED 3483), the initial voiced stop developed by the transfer of the feature /+ voice/ from the pre-Kuvī form *\*b(h)ogri* < *\*pogri*. Or, in the Tu word *bongu* protuberance, the initial voiced *b*-developed by the transfer of voice from the medial voiced cluster *-ng-* (cf Ta. *ponku* to boil up, Ka *pongu* to boil over, DED 3658).

4.2.2. A situation favourable to initial voicing was also provided when, due to the loss of the root-vowel, a cluster arose at the beginning of a word, the second component of which had the feature /+ voice/ strongly present: a clear case of this phenomenon is Kui *grāmb-* to learn, *grāpp-* to teach < *\*krāmp-*, *\*krāpp-* < *\*karāmp-*, *\*karāpp-*, cf Kol *karāp-* to learn, Te *karapu* to teach (DED 1090).

4.2.3. Finally, there was the simple loss of initial vowel which resulted in the occurrence of an initial voiced occlusive. Cf. the Tu *damma* left side with the Te. *eda*, Ta *itam* id., DED 368.

4.3. It is suggested here that these three major operational causes – transfer of medial voice to the initial position, voicing of initial stops in initial clusters, and loss of initial vowel preceding a voiced stop – were fostered by the effect of Indo-Aryan loans beginning with initial voiced stops and that, probably, some other causes, like metanalysis, analogy, and the pressure of semantic patterns might also have played their role in the spread of the feature of initial voicing. The results of the statistics quoted above seem to point strongly to the fact that there must have been a centre of diffusion of this spread of the trend towards initial voicing, and that the feature can be considered an areal feature, transgressing the boundaries of linguistic sub-families. The centre of diffusion is probably to be sought somewhere in the Central Dravidian area, probably in the Telugu-Kolami area whence it spread massively to the South Dravidian Kannada, and less significantly to the other South Dravidian languages. In conclusion then we may

say with a rather high degree of certainty that Caldwell's so called 'law of the convertibility of surds and sonants' was valid for the parent Proto-Dravidian speech, and that Tamil, Malayalam and Toda have preserved the original state of affairs in this respect.

*Institute of Eastern Languages,  
University of Utrecht,  
Nobelstraat 2B, Utrecht,  
The Netherlands*