

Voicing of consonants in Old Tamil: New evidence from Tamil-Brāhmī

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1. Caldwell's Law

Caldwell's celebrated "law of convertibility of surds and sonants" states that the stops are always pronounced as surds in initial position and when doubled, and as sonants in medial (intervocalic and postnasal) positions.¹ The law was formulated by him on the basis of modern Tamil pronunciation. The question whether this law held good in earlier times has long been debated.² There is no direct evidence as the Tamil script does not distinguish between voiced and voiceless consonants. Attempts have been made to settle the question on the basis of Tamil loanwords in Indo-Aryan and Western classical languages and also in Kannada and Telugu literary works and inscriptions, as the scripts of these languages could have faithfully recorded voicing in the loanwords.³ The problem has also been studied more rigorously utilising the comparative method of Dravidian phonology.⁴ As far as Old Tamil is concerned, there is at present a consensus among Dravidian linguists that stops had weakened or lenis articulation leading to voicing in medial positions.

2. New evidence from Tamil-Brāhmī

The discovery of Tamil-Brāhmī inscriptions (ca. 2nd century B.C. to 4th century A.D.) has brought to light new evidence in the form of a sizeable vocabulary of Old Tamil interspersed with loanwords from Prakrit in a script derived from Brāhmī which has a complete set of voiced consonants. The significance of this new development for re-examining the problem of voicing of consonants in Old Tamil has been recognised;⁵ but no in-depth study could be undertaken earlier for want of reliable texts. The evidence presently available may be summarised as follows.⁶

¹ Robert Caldwell 1856 (3rd edn. 1961 reprint): pp. 138-139.

² The literature on this question is extensive. See especially T. Burrow 1968: pp. 1-17; Bh. Krishnamurti 1961: pp. 28-33; K. Zvelebil 1970: pp. 78-84; P. S. Subrahmanyam 1983: pp. 269-286 for discussion and earlier references.

³ E.g., for evidence from a 12th or 13th century literary work, see Bh. Krishnamurti 1971: pp. 356-361; for inscriptional evidence of Tamil loanwords in Kannada, Grantha and Nāgarī scripts, see K. G. Krishnan 1981: pp. 77-86.

⁴ See references in n. 2 above.

⁵ E.g., K. Zvelebil 1970: p. 79, n.3. P. S. Subrahmanyam 1983: p. 279.

⁶ From cave inscriptions, pottery graffiti and legends on coins, seals, rings, etc, in Tamil-Brāhmī script. The examples cited are from cave inscriptions unless otherwise stated.

3. Absence of voiced consonants in Tamil-Brāhmī

There are no voiced consonants in the graphemic inventory of the Tamil-Brāhmī script, even though they are present in the parent Brāhmī script and known to the local scribes as proved by the exceptional occurrence of *dhammam/dhamam* in two of the earliest inscriptions from Mangulam. The presence of voiced consonants in contemporary Prakrit inscriptions on pottery from ancient Tamil sites like Arikamedu also shows familiarity with the full range of the Brāhmī script.⁷ And yet Tamil words in the Tamil-Brāhmī inscriptions are written without exception employing only the voiceless consonants of the Brāhmī script in initial as well as medial (intervocalic and postnasal) positions as illustrated below:⁸

(e.g.)	<i>peruñkaṭuñkōṇ</i>	a personal name
	<i>neṭuñcaliyaṇ</i>	a personal name
	<i>toṇṭi</i>	a place name
	<i>tantai-</i>	"father"
	<i>-irumporai</i>	a dynastic name

4. Substitution of voiced with voiceless consonants in loanwords

Voiced consonants even in the loanwords from Prakrit are systematically replaced in all positions by the corresponding voiceless consonants (with the solitary exception cited above).

(e.g.)	Initial	<i>gaṇi</i>	> <i>kaṇi</i>	"title of a senior Jaina monk"
		<i>dānaṃ</i>	> <i>tāṇa</i>	"gift"
	Intervocalic	<i>udayana</i>	> <i>utayaṇa-</i>	a personal name
		<i>nigama</i>	> <i>nikama-</i>	"merchant guild"
	Postnasal	<i>nanda</i>	> <i>nanta-</i>	a personal name
		<i>kuṭumbika</i>	> <i>-kuṭumpikaṇ</i>	"householder"

5. Adaptation of Pkt. loanwords in Tamil-Brāhmī

Loanwords from Indo-Aryan are mostly adapted to the Tamil phonetic pattern resulting in the following types of orthographic changes in Tamil-Brāhmī inscriptions.

(1) Loss of voicing

	Indo-Aryan	Tamil-Brāhmī
$g > k$	<i>gaṇaka</i>	<i>kaṇaka</i>
	<i>gaṇi</i>	<i>kaṇi</i>
	<i>gōpa</i>	<i>kōpaṇ</i>
	<i>nigama</i>	<i>nikama</i>

⁷ For a list of Prakrit (including Sinhala-Prakrit) inscriptions on pottery from Arikamedu, see I. Mahadevan 1996: p. 291.

⁸ The examples cited in the paper are selective. More examples with full documentation are found in *Early Tamil Epigraphy* (I. Mahadevan 2003).

$j > c$	<i>gōtraja</i>	<i>kōtiracaṅ</i> (pottery inscription from Arikamedu)
$d > t$	<i>dānam</i>	<i>tāṇa</i>
	<i>dēva</i>	<i>tēvaṅ</i>
	<i>dēvadattā</i>	<i>tevvaitattai</i> (pottery inscription from Arikamedu)
$b > p$	<i>kuṭumbika</i>	<i>kuṭumpikaṅ</i>

(2) Loss of aspiration

$gh > k$	<i>ghaṭikā</i>	<i>kaṭikai</i>
$jh > (c)c$	<i>upajjha</i>	<i>upacaṅ</i>
$ṭh > ṭṭ$	<i>adhiṭṭhāna</i>	<i>atiṭṭāṇam</i>
$th > (t)t$	<i>sattha, sātha</i>	<i>cātan, cāttan</i>
$dh > t$	<i>adhiṭṭhāna</i>	<i>atiṭṭāṇam</i>
$ph > p$	<i>phāṇita</i>	<i>pāṇita</i>
$bh > p$	<i>bhadamta</i>	<i>patantaṅ</i>
	<i>bhūti</i>	<i>pūti</i>

(3) Loss of anusvāra ṁ

<i>dānam</i>	<i>tāṇa</i>
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(4) Loss of *h*

<i>iha</i> (< <i>ibha</i>)	<i>iva-</i> (< * <i>i-a</i>) (Ta. <i>ipam</i>)
<i>hariti</i>	<i>ariti</i>
<i>hārita</i>	<i>āritaṅ</i>

(5) Substitution of sibilants

$s > c$	<i>sattha, sātha</i>	<i>cātan, cāttan</i>
$s > y$	<i>kāsapa</i>	<i>kāyapaṅ</i>
	<i>tisa</i>	<i>tiyaṅ</i>
$s > 0$ (zero)	<i>satiya</i> (< * <i>catiya</i>)	<i>atiyan</i> (read <i>atiyaṅ</i>)

(6) Intervocalic

$-p- > -v-$	<i>gapiti</i> (< * <i>gāpiti</i>)	<i>kāviti</i>
	(Sinh. Pkt.)	

(7) IA non-initial $-n > \text{Ta. } -ṇ$

<i>dāna(ṇ)</i>	<i>tāṇa</i>
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(8) IA final $-ā > \text{Ta. } -ai$

<i>ghaṭikā</i>	<i>kaṭikai</i>
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6. Substitution of voiced with voiceless consonants in Pkt. inscriptions

A tendency towards replacement of voiced consonants and sibilants with voiceless consonants is seen even in some of the contemporary Prakrit inscriptions on inscribed objects found in the Tamil country:

(e.g.)	<i>bhāvataṭasa</i>	for <i>bhavadattasa</i>
		(Pkt. legend on a gold ring from Karur).
	<i>cāmutaha</i>	for <i>samuḍaha</i>
		(Sinh. Pkt. inscription on pottery from Alagankulam).

7. Weakened articulation of consonants

There is, however, some evidence for weakened or spirantised articulation of consonants in intervocalic position.

(e.g.) $-k- (> -x- *) > 0$ (zero)

as in *makaṇ* > *-mān* (read *-māṇ*) "son"

$-c- > -y-$

as in *kācīpaṇ* > *-kāyīpaṇ*, a personal name

$-p- > -v-$

as in *ceyipita* > *ceyivitta* 'which was caused to be made'

8. Minimal presence and loss of the sibilant s

Only one sibilant, viz. *s*, occurs minimally in loanwords in the Early Period. Even in the early inscriptions, loss of the sibilant occurs in initial position

($s- > *c- > 0$ (zero)).

(e.g.) *satīya* > *atīyan* (read *atīyaṇ*) a clan name

samaṇa > *amaṇaṇ* "Jaina monk"

9. *Tolkāppiyam* silent on voicing

Tolkāppiyam, the earliest extant grammatical treatise in Tamil, makes no reference to voicing of consonants.⁹

10. Evidence of voicing only from the early medieval period

The practice of employing Grantha characters for voiced consonants, aspirates and sibilants to express these non-Tamil sounds in loanwords occurring in Tamil inscriptions commenced only from about the beginning of the 7th century A.D. It is also from this period that we find evidence for the occasional presence of voiced consonants in medial position even in native Tamil words expressed by Grantha characters.

11. Interpreting the evidence

The evidence briefly summarised above has been interpreted in two diametrically opposite ways, one emphasising the negative evidence of the earliest Tamil-Brāhmī inscriptions and the native grammatical tradition, and the other stressing the objective results of the comparative method in Dravidian.

(A) There was no voicing in Tamil when the Tamil-Brāhmī script was devised and *Tolkāppiyam* was written. Had voicing been present, the readily available and known characters for the voiced consonants in the Brāhmī script would have been borrowed. This evidence is reinforced by the virtual avoidance of

⁹ According to P. S. Subrahmanya Sastri 1930 (1999 reprint Preface, p. xviii), it is evident that voiced consonants did not exist in the ancient Tamil language as *Tolkāppiyam* provides only for 30 primary sounds including 5 stops.

voiced consonants even in the Prakrit loanwords occurring in Tamil-Brāhmī inscriptions, indicating the influence of Tamil phonology with its lack of voicing. Equally important is the negative evidence of *Tolkāppiyam* which devotes a whole chapter to articulatory phonetics (*Tol. Eḷu. Piṟappiyal*) which would have dealt with voicing if the feature was present in the language.¹⁰

(B) The comparative method points to the existence of lenis articulation and voicing in medial position in Dravidian even prior to the pre-Tamil stage. As these features are present in modern Dravidian languages including Tamil, they must have existed in Old Tamil also, but not provided for in its orthography.¹¹ This omission is explained by assuming that those who created the earliest script for Tamil must have been aware of the principle of the phoneme and saw no point in borrowing Brāhmī voiced consonants to indicate voicing of allophones in complementary distribution which is completely predictable.¹² The consequent reduction achieved in the number of characters in the script was probably perceived as an advantage.

12. Discussion

While the comparative method is objective, the results in this case do not appear to be secure as they fail to resolve the following contradictions implicit in the argument summarised at (B) above:

- (a)** On the one hand, the orthography of the Early Tamil-Brāhmī script is described as experimental, halting or even defective; and on the other, the script is regarded as so sophisticated as to anticipate the modern theory of the phoneme and devise an orthographic system based on it.
- (b)** *Tolkāppiyam* has been rightly praised for its extraordinary insights into the principles of articulatory phonetics; but at the same time, the work is presumed to be unaware of the articulatory feature of voicing of the consonants in medial position.

¹⁰ P. S. Subrahmanya Sastri 1934 (1997 reprint): pp. 49-57; his conclusion: "Therefore Dr. Caldwell's theory of convertibility of surds and sonants can hold good only with reference to the spoken Tamil of the present day." See also P. S. Subrahmanyam 1983: pp. 269-286. His view is: "on the whole, it will be better to conclude that at the earliest stage of Tamil (i.e., when the Tamil script was devised and *Tolkāppiyam* was written) plosives were pronounced voiceless in the medial position and later, i. e., perhaps at the beginning of our era, voiced or lax articulation of them in that position must have started." However, according to Suniti Kumar Chatterji (1956: pp. 164-165), voicing of stops existed in Ancient Tamil of the pre-Sangam and pre-*Tolkāppiyam* period, but voicing was totally lost in the period between the early centuries of the Christian Era, or even earlier still, and 600 A.D. "In oldest Tamil as in the Pallava inscriptions and as in the earliest Tamil of literature, the modern Tamil habit of pronunciation did not obtain. There were no voiced stops at all in the language; otherwise there would have been no need to frame a special alphabet and orthography for Tamil".

¹¹ K. Zvelebil (1970: p. 80) puts forth this view most forcefully: "After careful re-examination of this problem it seems that *we have no reason whatsoever to posit voiceless intervocalic stops for any stage of Dravidian*" (emphasis in the original).

¹² *Ibid.* p. 82: "This situation (namely that intervocalic voiced stops are regular, phonologically conditioned, positional allophones of one series of stop-phonemes, in complementary distribution with voiceless initial stops) was obviously well understood by those who first devised or adapted the Tamil system of writing; they had a clear conception of the basic principles of the phoneme and its positional variants, and Tamil orthography is truly and fully phonemic in this respect."

13. Conclusion

On the basis of the direct and unambiguous evidence from the Tamil-Brāhmī inscriptions taken together with the native grammatical tradition, the present study favours the interpretation summarised at (A) above, viz., there was no voicing of consonants in Old Tamil.¹³ There was a slight drift towards *lenis* articulation and spirantisation of consonants in medial position; but the articulation in these cases was perceived to be quite different from the full-fledged voicing in Indo-Aryan, which explains why the Brāhmī characters for voiced consonants were not borrowed into the Tamil-Brāhmī script. By the time voicing of consonants developed as a secondary characteristic in Tamil in the early medieval period as a result of contacts with Indo-Aryan as well as the Kannada and Telugu languages, the Tamil script had acquired fixity and resisted inclusion of additional characters in its graphemic inventory. The problem of representing voiced consonants in the loanwords from the Indo-Aryan was solved by utilising Grantha characters for this purpose. Even thereafter, Literary Tamil avoided employing Grantha characters to indicate voicing of consonants in medial position. This avoidance is also seen in Malayalam orthography for native words¹⁴ even though the script is derived from Grantha and has a full complement of characters for voiced consonants.

¹³ It is relevant in this context to refer to the dual system followed for romanised transliteration of Tamil. The *Tamil Lexicon* and linguistic publications strictly follow the phonemic method, using only one set of stops (*k, c, ṭ, t* and *p*). The official epigraphical publications follow the phonetic method indicating voicing in medial position with the use of voiced stops (*g, j, ḍ, d* and *b*) imposing modern Tamil pronunciation on ancient inscriptional language. The transliteration is, however, not always quite consistent. In practice, the official epigraphical publications follow the phonemic transcription for the Tamil-Brāhmī inscriptions, but switch over to the phonetic transcription for the later inscriptions in Vaṭṭeḷuttu and Tamil scripts.

¹⁴ Cf. Malayalam entries in DEDR. E.g., *akam* 'inside' (D. 7), *ampu* 'arrow' (D. 178), etc.

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