

Divergent developments of alveolar stop *t̪ in Telugu

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It is widely accepted that the reconstructed Proto-Dravidian system has a three-way phonological distinction in the coronal series of consonants. The triple contrast is quite unique to Dravidian languages in the broader Indian Linguistic Area. Particularly, among the stops, a contrast between dental and retroflex is present in other Indian languages, but alveolar stop t̪ is peculiar to the Dravidian languages. There has been a considerable literature on the developments of this sound in various Dravidian languages. However, no detailed study of its developments in Telugu has been published. This paper attempts to document the divergent developments of this sound in Telugu.

The Proto-Dravidian consonants are generally reconstructed to include the following sixteen consonants. In addition, a laryngeal *h and an alveolar ɳ also figures in some reconstructions.

Proto-Dravidian Consonants						
	labial	Coronal Series			palatal	velar
		dental	alveolar	retroflex		
stops	p	t	t̪	ɖ	c	k
fricatives						
nasals	m	n		ɳ	ɲ	
laterals			l	ɭ		
resonants			r	ɻ		
approximants	w				y	

Proto-Dravidian *t̪ is defined phonetically as voiceless alveolar stop. However, this consonant doesn't occur in the word-initial position. Krishnamurti makes a stronger phonological statement that "all apical consonants (alveolars and retroflexes) are excluded from word-initial position in Proto-Dravidian." (Krishnamurti 2003, p. 119). Therefore, /t̪/ occurs only in the medial or word-final positions of root stems, either as an intervocalic consonant, post-nasal consonant or as a geminate consonant. The stops in Proto-Dravidian were known to have lenis allophones between vowels; after a homorganic nasal, all stops were voiced; word-initially and in gemination all stops were voiceless (Krishnamurti 2003, p. 93). Hence, we can posit that Proto-Dravidian */t̪/ had three realizations [t̪], [d̪] and [ɖ̪] in geminate, postnasal and intervocalic positions respectively, perhaps already present dialectically at the Proto-Dravidian stage.

Although, apical consonants didn't occur in word-initial position in Proto-Dravidian, they shifted to the initial position in the languages of Telugu and other South-Central Dravidian (South Dravidian II) by a

phonological change known as metathesis or apical displacement (Krishnamurti 2003, p. 157). We will also investigate words in Telugu with word initial alveolar consonants.

Alveolar stops in intervocalic positions

The alveolar stops in Telugu retained the lenis pronunciation of alveolar consonants resulting in a reflex of alveolar trill [r̥] in the intervocalic position. Here are a few examples of the reflexiation of alveolar consonant as alveolar trill in Telugu:

Proto-Dravidian	Meaning	Proto-South Dravidian	Proto-Telugu	Proto-Gondi-Kui	Proto-Kolami-Gadba	Proto-North Dravidian
*a ₁ t-a-	to speak, sound	*a ₁ r̥-ai-	*a ₁ r̥-a-		*ara-s- / *ara-p- (*-r̥-)	
*ā ₁ t-	to be cool; to be dry	*ā ₁ r̥-	*ā ₁ r̥-	*ā ₁ d-	*ā ₁ r̥- / *ā ₁ d-	*ar-t-
*bi ₁ t-	dense, tight	*vi ₁ r̥- / *vē ₁ r̥-i- / *vi ₁ r̥-	*bi ₁ r̥-		*ber- (*-r̥-)	
*bo ₁ t-	hole (in tree)	*bō ₁ r̥-, *pō ₁ r̥-	*bo ₁ r̥-	*bo ₁ r̥-	*bor- (*-r̥-)	
*bu ₁ t- (*p-, *-t-)	gourd	*bu ₁ r̥-aḍ -	*Pu ₁ r̥-	*bu ₁ t-k-	*bu ₁ r̥-	
*ce ₁ tV ₁ k-	sugarcane; sugar juice	*ceruk- (*-r̥-) (?)	*ce ₁ r̥ak-	*ce ₁ r̥ok-	*Serk- (*-r̥-)	*cur-ā (?)
*č ₁ tV ₁ t-	leopard, panther	*č ₁ r̥V ₁ t-	*ci ₁ r̥ut-			

Alveolar stops in post-nasal positions

The following table provides most important Proto-Dravidian root stems with a homorganic nasal followed by an alveolar consonant, in with their corresponding cognates in various subgroups including Telugu. As we can see, the proto-Dravidian alveolar stop consistently showed a reflex of retroflex stop /d/. The only exceptions are *kant̪- (scorched, burnt) and *pant̪- (pig) which show a reflex of dental stop /d/ in Telugu as kandu and pandi respectively.

Proto-Dravidian	Meaning	South Dravidian	South-Central		Central Dravidian	North Dravidian
			Proto-Telugu	Proto-Gondi-Kui		
*en̪t̪-	sunshine, heat of sun	*en̪r̪-	*end̪-	*ed̪-	*end̪-	
*kant̪-	scorched, burnt; black	*kan̪r̪-	*kand̪-			
*kont̪-	hill	*kun̪r̪-	*kon̪d̪-		*kon̪d̪-	
*mūnt̪-	three	*mūn̪r̪-	*mūnd̪-		mūnd̪-	
*nint̪-	to be full	*n̪l̪r̪-ai-, *n̪in̪r̪-	*ne̪r̪- /*n̪ind̪-	*n̪ind̪-	*n̪ind̪- (*- n̪d̪-)	*n̪ind̪-
*ñēint̪-	day	*ñān̪r̪-	*nēnd̪-	*nēi- n̪d̪- /*nāi- n̪d̪-	*nān̪	
*ont̪-	one	*on̪r̪-	*ond̪-	*und̪-		*ond̪
*pant̪-	pig	*pan̪r̪-i	*pand̪-	*pand̪-	*pand̪	
*tānt̪-	belleric myrobalan	*tān̪r̪-	*tānd̪-	*tānd̪-	*dānd̪-	
*tōnt̪-	to appear, be	*tōn̪r̪-	*tō(n̪)-	*tōnd̪-	*tōnd̪-	
*ūnt̪-	to plant, fix	*ūn̪r̪-	*ūn̪(d̪)-	*uds̪-	*und̪-	*ūd̪-

Alveolar Consonant in word-initial position in Telugu as a result of metathesis

Here are a few examples of alveolar consonant in word-initial position in Telugu. As discussed before, this is a result of phonological change known as metathesis. Since, this phonological change also shifts apical consonants to word-initial position, it is also known as apical displacement.

The following provides a few known examples of word-initial alveolar consonants in Telugu:

Proto-Dravidian	Meaning	South Dravidian	South-Central Dravidian		Central Dravidian	North Dravidian
			Proto-Telugu	Proto-Gondi-Kui		
*àṭ--ai	rock	*ăṛ-ai	*ṛāy-i			
*eṭ-	to shoot; to throw	*eṛ-i-	*ṛi-m- (?)	*eḍ- (caus. *eṭ-)	*eḍ-	
*ēṭ-	to rise; steep	*ēṛ-	*rē-	*ēṛ- (*-ḍ-)		
*[i]ṭej-	shrimp	*lṛ-av-	*rey- /*roy-	*rēy-	*reyy-a	
*uṭ-	to throw, fling	*uṛ-u(m)b-	*ṛ-uv-	*uṛ- (*-ḍ-)	*r-uv- (*ṛ-)	

Geminated Alveolar Consonants

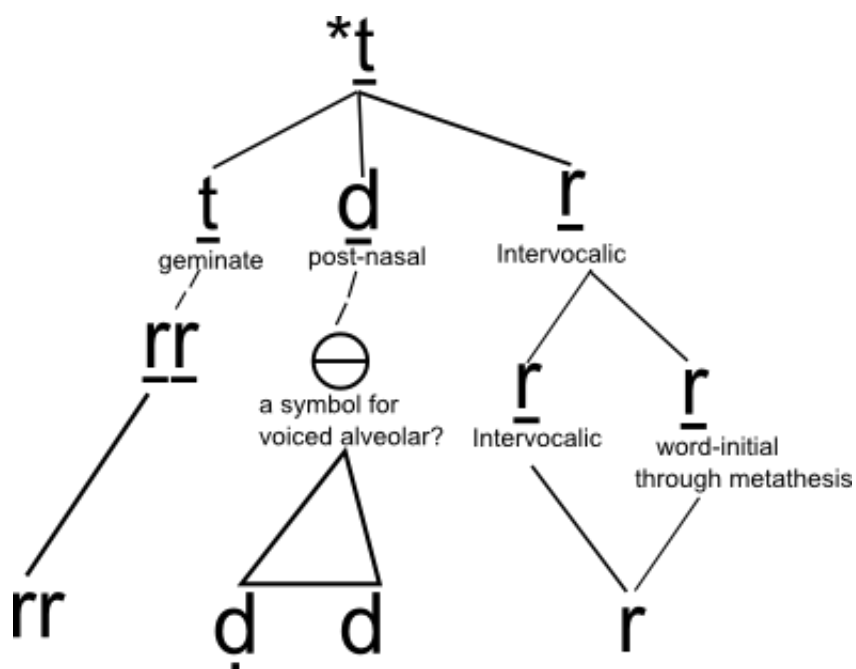
The following four reflexes show that geminated consonants are found as alveolar trill even in gemination. We know that in Tamil, geminated alveolar consonants tt are typically pronounced as tr but Telugu doesn't show any such reflexes.

Proto-Dravidian	Meaning	Proto-South Dravidian	Proto-Telugu	Proto-Gondi-Kui	Proto-Kolami-Gadba	Proto-North Dravidian
*koṭ/goṭ-	sheep, deer		*goṛṛ-		*gor-y- (*-ṛ-)	
*koṭl-	millet	*kUṛal-	*koṛṛal-	*koḍ-	*koyl-	
*toṭ-	kine	*toṛ-	*toṛṛ-			

*ju <u>t</u> (p)-	to sip, suck	*zu <u>r</u> -	*ju <u>rr</u> -	*zu <u>r</u> -	*cu <u>r</u> p-	*su <u>r</u> p
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Conclusion

Based on the lists of root stems containing alveolar stop /t/ with its reflexations in Telugu in various environments, we may be able to draw the following evolution tree to depict the divergent developments of this phoneme.



It is interesting to note that there is epigraphical evidence showing the use of two distinct symbols for representing two different reflexes of this consonant. It is possible that there was a historical period when Telugu developed a contrasting pronunciation of this sound in intervocalic and post-nasal environments, necessitating two distinct written symbols.

For example, in the inscriptions of Kalamalla, both $\ominus$ and 𑖦 are used distinctly. Further in the Rāmeśvara (Proddutūru) inscription, 𑖦 , 𑖧 , 𑖨 , 𑖩 and $\ominus$ are all seen to be clearly used, indicating that they are all distinct characters. It is tempting to suggest that the symbol $\ominus$ was used to represent voiced alveolar stop, as most of the attestations of this symbol consistently occur in post-nasal position. It is important to note that the alveolar stop in post-nasal position appears as retroflex d (𑖨), while intervocalic alveolars remained 𑖦 or merged into 𑖧 in modern Telugu. Therefore, it is likely that $\ominus$ represents an intermediate stage in Telugu in the development of alveolar stop in post-nasal positions as a voiced alveolar stop (𑖧), before getting merged with retroflex d (𑖨) or dental d (𑖩) in the later stages. However,

there are a couple of exceptions, like caΘu (probably ~ ceṛu for tank, lake) found in Rāmeśvara/Prodduṭūru inscription, which need to be carefully analyzed and explained.

§ References

1. *The Dravidian Languages*, Bhadriraju Krishnamurti, Cambridge University Press, Cambridge, 1st South Asian Edition, 2003, ISBN: 978-0-521-77111-5.
2. *Inscriptions of Andhra Pradesh: Cuddapah District - I*, Ed. Dr P V Parabrahma Shastri, Dept of Archaeology and Museums, Govt of Andhra Pradesh, 1977.