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## **A Glottochronological Insight into Malyalam and Tamil Lexicon**

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### **Abstract**

The prime objective of this study is to explore the degree of similarities between Malyalam and Tamil words using glottochronological approach. In doing so a representative sample of 284 basic words were taken from Malyalam followed by listing their equivalents in Tamil. The findings revealed 140 words with partial phonological similarity between Malyalam and Tamil. Furthermore, the study also revealed that these two languages had belonged to one common parent language 1642 years ago.

### **1. Introduction**

Glottochronology is a method of lexicostatistics to compute not only the degrees of lexical similarities between two languages but also to find relationship between languages in terms of when they diverged from each other. The method of Glottochronology proposed by Swadesh (1955) assumes that common words in languages are maintained at a definite rate. According to Swadesh, (i) the rate of retention of vocabulary items in the basic core is constant through time; (ii) the rate of loss of basic vocabulary is approximately the same in all languages; (iii) the rate of loss was arrived at by testing lexical loss in languages with a long series of texts. On the basis of tests, 81% of loss is reported over the period of 1000 years. Once we know the percentage of cognates within the core vocabulary (284 in the present case) for any pair of languages, the length of time that has elapsed is computed to see when the two languages began to diverge from a single language. The following list of basic vocabulary, taken from the similar study of Jha (2020), has been prepared in terms of Malyalam-Tamil 284 words considered to the representative samples.

1. A-onn-onru-s
2. About-kurich-parri-d
3. Above-mukalil-mele-d
4. Add-cerkkuka,kuttu-d
5. After-sesham-piraku-d
6. Again-vintum-mintum-s
7. Air-vayu,karru-d
8. All-ellam-anaittum-d
9. Almost-mikkavarum-kittattatta-d
10. Along-oppam-utan-d
11. Also-kutate-melum-d
12. Always-ellayppealum-eppetum-d
13. And-oppam-marrum-d
14. Animal-mrigam-vilanku-d
15. Another-mattun-mattunru-s
16. Answer-uttaram-patil-d
17. Any-etenkilum-etenum-s
18. Around-chuttum-cutri-s
19. Ask-chodikuka-kelunkal-d
20. At-l-il-s
21. Away-dure-tolaiivil-d
22. Back-thirike-mintum-d
23. Bad-moshaman-moshamanatu-s
24. Ban-nirodhanam-patti-d
25. Because-karanam-enenil-d
26. Become-akuka-aka-s
27. Bed-kitakka-patukkai-d
28. Before-mump-mun-s
29. Begin-arambhikkunnu-totanku-d
30. Below-thare-kile-d
31. Between-idayil-idaiyil-s
32. Big-valut-periyutt-d
33. Book-pustakam-nul-d
34. Both-rantum-iruvaram-d
35. Boy-payyan-ciruvan-d
36. Bring-kontvarik-kontuvarunkal-s
37. But-pakshe-analum-d
38. By-elutiyat-valankiyaar-d
39. Call- vilikkuka-alaippu-d
40. Can- kariyum-mutiyum-s
41. Canister- kanisrrar-kuppi-d
42. Car-vandi-vandi-s
43. Carry-chomakkuka-etuttuc-d
44. Change-mattam-marram-s
45. Children-kuttikal-kulantaikal-s
46. City-nagaram-nakaram-s
47. Close-ataykuka-nerukkamana-d
48. Cold-tanupp-kulir-d
49. Come-varu-va-s
50. cough-choma-irumal-d
51. country-rajyam,nadu-d
52. cut-katt-vettu-d
53. daily-divasena-tinacari-d
54. day-divasam-nal-d
55. different-vyatyasta-vevveru-d
56. do-cheyyuka-cey-d
57. door-vadil-katavu-d
58. down-tharek-kil-d
59. earth-bhumi-pumi-s
60. eat-thinnuka-cappityu-d
61. end-avasanam-mutivu-d
62. enough-mathi-potum-d
63. every-ellam-ovoru-d
64. example-udharanam-utaranamaka-s
65. eye-kann-kan-s
66. face-mukham-mukham-s
67. family-kutumbam-kutumpam-s
68. father-achan-thanthai-d
69. foot-kaal-kal-s
70. few-kurach-chila-d
71. find-kantettuka-kantupiti-s
72. first-adyam-muthal-d
73. follow-pintutaruka-pinthothar-s
74. food-bhakshanam-unavu-d
75. for-vendi-ku-d
76. form-rupam-rupam-s
77. from-muthal-irunthu-d
78. get-netuka-pera-d
79. girl-penkutti-penn-s
80. give-nalkuka-kotu-d
81. go-pokuka-po-s
82. good-nallad-nallatu-s
83. great-kollam-periya-d
84. group-samuham-kulu-d
85. grow-valaruka-valara-s
86. had-untayirunnu-irunthatu-d
87. hand-kai-kai-s
88. hard-katina-katina-s
89. has/have-unt-ullatu-s
90. he-aan-avar-d
91. head-thala-thalai-s
92. hear-kelkkuka-ketka-s
93. help-sahayam-utavi-d
94. here-ivide-inke-d
95. high-uyarnn-uyar-s
96. hot-chud-chudana-s
97. house-veed-veedu-s
98. how-engane-eppadi-d
99. I-njan-naan-s
100. Idea-aashayam-yosanai-d
101. If-enkil-enral-s
102. Important-pradhanam mukkiyam-d
103. In-akath-il-d
104. Is-aan-irukkiratu-d
105. Item-sadhanam-porul-d
106. Just-veruthe-verum-s
107. Keep-vak-vai-s
108. Kind-daya-karunai-d
109. Know-ariyuka-ara-s
110. Land-sthala-nilam-s
111. Large-valud-periya-d
112. Last-avasana-katanta-d
113. Later-pinnit-pinnar-s
114. Learn-padikkuka-ariya-d
115. Leave- vituka-itu-s
116. Left-itad-itadu-s
117. Let-anuvadikkuka-vitunkal-d
118. Letter-kath-katitam-d
119. Life-jivitham-vaalkai-d
120. Light-prakasham-oli-d

121. Like-pole-ponra-s  
122. Line-vara-vari-s  
123. List-pattika-pattiyal-s  
124. Little-cheriya-chiriyas  
125. Live-thalsamayam-valka-d  
126. Long-nilamulla-ninda-s  
127. Look-nok-paar-s  
128. Lose-nashtappetuka-ilappu-d  
129. Main-pradhana-mutanmai-s  
130. Make-nirmikkuka-uruvakku-s  
131. Man-manushyan-manithan-s  
132. Many-dharalam-pala-d  
133. May-mey-me-s  
134. Me-nan-nan-s  
135. Mean-sharashari-sarasari-s  
136. Meet-kantumuttuka-kantippu-s  
137. Mid-itayil-naduppakuti-d  
138. Milk-pal-pal-s  
139. Mistake-thet-thavaru-s  
140. More-kututal-melum-d  
141. Morning-ravile-kalai-d  
142. Mother-amma-amma-s  
143. Mountain- parvatham-malai-d  
144. Move-nikkuka-nakarttu-d  
145. Much-valareyadhikam-athikam-s  
146. My-ende-en-s  
147. name-per-peyar-s  
148. near-samipam-arukil-d  
149. need-avashyam-tevai-d  
150. never-orikullam-orupothum-s  
151. new-puthiya-puthiya-s  
152. next-atuttat-atutta-s  
153. night-ratri-iravu-d  
154. no-illa-illai-s  
155. now-ippol-ippothu-s  
156. number-nampar-en-d  
157. of-nre-il-d  
158. off-ophan-mutakku-d  
159. often-palapozhum-perumpalum-s  
160. oil- enna-enney-s  
161. old- paraya-paraiya-s  
162. on-onan-an-s  
163. once-orikkal-orumurai-s  
164. one-onn-onru-s  
165. only-mathram-mattum-s  
166. open-turanna-tiranta-s  
167. or-allenkil-allathu-s  
168. other-marrullava-pira-d  
169. our-nammude-enkal-d  
170. out-veliyal-eliyel-s  
171. over-melil-mele-s  
172. own-swantham-sonthamanathu-s  
173. page- pej-pakkam-d  
174. Path-margam-margam-s  
175. Paper-pepar-kakitam-d  
176. Part-bhagam-pakuti-d  
177. People-alukal-makkal-d  
178. Per-oral-onruku-s  
179. Picture-chithram-padam-d  
180. Place-sthalam-idam-d  
181. Plant-chedi-cheti-s  
182. Play-kalikan-vilaiyatu-d  
183. Point-pulli-pulli-s  
184. Present-varthamanam -tarpotu-d  
185. Put-vakk-vai-s  
186. Read-vayikkuka-patikka-d  
187. Really-sherikum-unmaiyl-d  
188. Right-valath-valathu-s  
189. River-nadhi-nadhi-s  
190. Run-od-od-s  
191. Said-parannu-kurinar-d  
192. Same-athe-athe-s  
193. Saw-kandu-parthen-d  
194. Say-parayuka-choll-d  
195. School-vidhyalam-palli-d  
196. Sea-kadal-kadal-s  
197. Second-randaam-irandavadu-s  
198. See-kanuka-kanka-s  
199. Seem-thonnunu-therikirathu-d  
200. Sentence-vakyam-vakkiyam-d  
201. Set-sajjamakkuka-amai-d  
202. She- aval-aval-s  
203. Should-cheyyanam-vendum-d  
204. Show-kanikkuka-kattu-d  
205. Side-vasham-pakka-d  
206. Small-cheruth-chiriyathi-s  
207. So-athinal-athanal-s  
208. Some-chilath-chila-s  
209. Something-entho-etho-s  
210. Sometimes-chilappol-  
cilanerankalil-s  
211. Song-gaanam-padal-d  
212. Soon-udan-viraiivil-d  
213. Sound- shabhdam-oli-d  
214. Spell-manthram-manthram-s  
215. Start-arambhikkuka-thodakkam-d  
216. State-sansthanam-manilam-d  
217. Still-nischalamaya-innum-d  
218. Stop-nirthuka-niruthu-s  
219. Story-katha-kathai-s  
220. Study-padanam-patippu-s  
221. Such-atharam-ponra-s  
222. Sweets-madhurapalharangal-  
inipukal-d  
223. Take-etukkuka-etuttu-s  
224. Talk-sanvadam-pechu-d  
225. Tell-parayuka-choll-d  
226. Than-ennathinekkal-vita-d  
227. That-ith-athu-s  
228. Their-avarude-avarkaladu-s  
229. Them-avare-avarkal-s  
230. Then-pinne-pinnar-s  
231. There-avide-anke-s  
232. These-iva-ivai-s  
233. They-avar-avarkal-s  
234. Thing-karyam-vishayam-d  
235. Think-chinthikkuka-chinthiyukal-s  
236. This-ith-ithu-s  
237. Those-a-antha-s  
238. Thought-chintha-chinthanai-s

239.	Three-moonu-moonru-s	262.	way-vari-vari-s
240.	Through-vazhi-mulam-d	263.	we-namal-nam-s
241.	ticket-ticket-ticket-s	264.	well-sheri-seri-s
242.	time-samayam-neram-d	265.	what-enth-enna-s
243.	to-ku-tu-d	266.	when-eppol-eppothu-s
244.	together-orumich-onraka-s	267.	where-evide-enke-d
245.	too-athum-athikamai-s	268.	which-eth-ithu-d
246.	took-eduthu-eduttatu-s	269.	while-athesamayam-pothu-d
247.	tree-maram-maram-s	270.	white-vella-vellai-s
248.	try-sramikkuka-muyarchi-d	271.	who-araan-yaar-d
249.	turn-valav-thirump-d	272.	whom-aar-yaar-d
250.	two-rand-irandu-s	273.	why-entukonde-en-s
251.	under-kiril-kil-s	274.	will-ichashakthi-viruppam-s
252.	until-varuvolam-varai-s	275.	with-kode-udan-d
253.	up-mukalilekk-mel-d	276.	without-kodathe-illamal-d
254.	us-nammal-enkalukku-d	277.	word-vaak-sol-d
255.	use-upayogam-payanpatu-d	278.	work-joli-velai-d
256.	very-valare-mikavum-d	279.	world- lokam-ulaka-d
257.	walk-nadakkuka-nada-s	280.	write-eruth-eruthu-s
258.	want-venam-vendum-s	281.	year-varsham-and-d
259.	was-ayirunnu-iruntatu-d	282.	you-ningal-ningal-s
260.	watch-kannum-parungal-d	283.	young-yuva-ilam-d
261.	water-vellam-nir-d	284.	your-ningalude-ungal-s

In the comparison of Malyalam and Tamil, two facts come on surface. Firstly 140 words out of the 284 pairs were registered as probable cognates. Statistically, if we divide 140 by 284, we get .49 (49%). In other words, one can say here that the degree of similarity between Malyalam and Tamil is 49%. This is the value which will also be used for C in the time depth formula.

Secondly, the study finds time depth of Malyalam-Tamil as to when these two languages started separating from a common parent language. In doing so, the following time depth formula of Swadesh (1956) was used:

### Time Depth Formula:

$$t = \frac{\log C}{2 \log r}$$

Where

t = time of separation

c = percentage of shared core vocabulary

r = the glottochronological constant (= 81%)

The result of computing the values using the above formula is as follows:

$$t = \frac{\log .49}{2 \log .81}$$

After computing the log value in the above formula, the result is as follows:

$$t = \frac{.713}{2 \times .217}$$

**.713**

$$t = \frac{\text{-----}}{.434}$$

$$t = 1.642$$

The quotient of 1.642 divided by .434 gives 1.6428571429 which is the indicated time depth, 't'. This needs to be read further as Malyalam and Tamil separated from each other about 1642 years ago.

## Conclusion

Meeting the objectives of the study, the study firstly has revealed the degree of similarities between Malyalam and Tamil which was found to be 49%. Secondly, the study reveals that Malyalam and Tamil belonging to two different language families-Indo-Aryan and Dravidian respectively, started separating from each other about 1642 years ago. The authenticity of the data is subject to further research.

## References

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