The Dravido-Koreanic language family hypothesis: A second look at its merits, and a chance for revival - with intonation pattern analysis

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Abstract:

In 1984, Morgan E. Clippinger, in his paper "Korean and Dravidian: lexical evidence for an old theory" - proposed the Dravido-Koreanic language family hypothesis. This was based on shared elements of the lexicons between the two languages (or rather, language families). This hypothesis was discredited after the Korean language was grouped into the Altaic Language Family. However, the Altaic Language Family has since become obsolete - leaving the Dravido-Koreanic Hypothesis open for further research.

Indeed, research has been ongoing - but this is small in terms of the number of published papers, and they are primarily from a semantics/comparative linguistics perspective. According to an article in The Hindu, the president of the Korean Society of Tamil Studies, Jung Nam Kim, says there are hundreds if not thousands of morphemes the languages share. This has prompted theories of a shared heritage - and research interests from both parties.

In this study, the similarities - in terms of semantics, prosody (stress and intonation patterns) and morphology, are considered between the Korean language and the Tamil language of the Dravidian language family. Linguistic analysis software is used to see the similarities in terms of intonation and speech patterns between the two languages. The similarities in terms of dependent-marking SOV word structure and the lexicon of basic words has been established - but the theory has been discredited. More evidence will help to enable the formation of a new language group - or at least pseudo-language group - and can help revive the Dravido-Koreanic language group theory.

In summary, this research paper is an effort to illustrate the possibility of a link between the two language families. The linkage of the two language families will lead to further research in terms of the shared heritage of Tamil and Korean, could shed light on early human migration

patterns, the patterns of the propagation of languages and possibly even lead to a greater general interest in the field of comparative linguistics.

Introduction:

Tamil is a Dravidian language spoken by approximately 70 million individuals globally. Regions it is widely spoken in, include Tamil Nadu and neighbouring states (in Southern India), Bahrain, Canada, Fiji, Germany, Malaysia (Peninsular), Mauritius, Netherlands, Qatar, Réunion, Singapore, South Africa, Sri Lanka, Thailand, United Arab Emirates, United Kingdom, United States.

The Korean language is the official language of the Republic of Korea, and is spoken by approximately 80 million people worldwide.

A link between the two languages was first noticed by French missionaries in Korea (Hulbert). The same missionaries were present in Pondicherry, India - and noticed large portions of the lexicons of the two languages to be similar, and other parts of the lexicon seemingly derived. The notion of false cognates did not seem to occur to the Missionaries, and considerable research was done following the hypothesis. Studies have been conducted in this regard by Susumu Ono, who claimed a lexical derivation of Tamil from Korean and Japanese. Cliffinger, in his study on the lexical relationship between the two languages, proposed 400 possible cognate pairs.

Tamil does not contain grammatical articles, much like the Korean language. The Tamil language has a SOV - which stands for Subject, Object, Verb - word order. Korean also has a Subject Object Verb word order. Korean is an agglutinative language. This means that morphemes are added to one another to form complex words.

Tamil also employs aspects of agglutinative grammar. Words in Tamil consist of a lexical root to which one or more affixes are attached. Affixes are morphemes that are infixed into words. Most affixes in Tamil are suffixes, that is, morphemes added to the end of a word. Tamil

suffixes can be derivational suffixes, which either change the part of speech of the word or its meaning, or inflectional suffixes, which mark categories such as person, number, mood, tense, etc. There is no absolute limit on the length and extent of agglutination, which can lead to long words with a large number of suffixes.

The relationship between the Tamil language and Korean has been widely contested (Madhavan). There have been many proponents of the Dravido-Korean Language Hypothesis, but owing to, among many other reasons, its over-reliance on using cognates - and sometimes false cognates - and shared aspects of the lexicons between the two languages as the base of the hypothesis, this has resulted in much disdain and controversy.

Tamil and Korean are both agglutinative languages. An agglutinative language is one that involves the addition of infixes and suffixes to the root word - and this addition of suffixes is quite pronounced. A majority of the word is formed of morphemes that are not a part of the root word, in a classical sense of the term (Lewis).

This study falls in the category of contrastive and comparative linguistics. It will aid language learners, as well as show linguists the possible genetic relationship between the two language groups.

This paper will attempt to find another credible link between the two languages, and see if there are indeed, any valid grounds to establish the Dravido-Korean Language Family. It will do so by analysing variations in intonation.

Method:

The aspect of speech that was looked at is prosody. 4 speakers of each language were tested - 2 males and 2 females each - with a high-quality microphone, and results were analysed with the specialty open source speech analysis software Praat.

Different sentence types were used:

- Declarative
- Interrogative
- Imperative
- Exclamatory

For each sentence type, The sentences were not direct translations of each other, sometimes they were quite different from each other. The sentences were semantically related, in that they followed a general template with various placeholder words.

Emphasis was placed on simple, as opposed to complex, sentences, for two main reasons:

a. It would illustrate a more fundamental link between the two languages.

b. It would make translation and the subsequent comparisons a rather straightforward process.

The sentences were read out by native speakers of the respective languages, and the time taken for articulation varied, but was about 90 seconds for each speaker.

- Korean Declarative

I am going to the store.

저는 가게에 가는 중입니다.

I am learning Spanish.

저는 스페인어를 배우고 있습니다.

I like dancing.

저는 춤을 좋아합니다.

- Korean Interrogative

Where are you going?

어디를 가고 계십니까?

식사 하셨나요?

지금 집에 가십니까?

소식 들으셨습니까?

내일 학교에 갈 것입니까?

한국이 좋은 나라라고 생각하십니까?

엄마도 올 거야?

- Korean Imperative

Go to the supermarket.

슈퍼마켓으로 가세요. (syupeomakes-e gaseo)

오른쪽으로 가십시오.

Please, go to the right side.

천천히 말씀하십시오.

Please, speak slowly.

숙제를 내세요.

(Give me) the homework, please.

- Korean Exclamatory

Really? (To express wonderment or surprise)

정말? (jeongmal?)

Wow!

와우! (wau!)

Oh my god!

세상에!

- Tamil Declarative

I am going to the store.

நான் கடைக்கு போகிறேன்.

எனக்கு நடனம் ஆட விருப்பம்.

- Tamil Interrogative

Why are you going?

ஏன் போகிறாய்? -

எங்கே நீங்கள் போக pogirael?

நீங்கள் சாப்பிட்டீர்களா?

இப்போது நீங்கள் வீட்டில் போகிறீர்கள்? - Eppo ningal veetil pogirgal?

நீங்கள் செய்தி கேட்டீர்களா?

அம்மா நீங்கள் வர விரும்புகிறீர்கள்?

- Tamil Imperative

Go to the store.

கடைக்கு சென்று. Kadaki po.

Tayavu ceytu, valatu pakka cella.

Metuvāka pēcuṅkam.

Tayavu ceytu, metuvāka pēca.

Tayavu ceytu, vīṭṭu (eṉakku koṭu).

சரி போ.

தயவு செய்து, வலது பக்கm செல்ல.

மெதுவாக பேசுங்கள்.

தயவு செய்து, மெதுவாக பேச.

- Tamil Exclamatory

அப்டி யா?

kadavule!

Magizchi!

Equipment used:

A microphone, Audio-technica AT2020 Cardioid Condenser Microphone, was used to capture audio from the test subjects. This ensured minimal interference from external media.

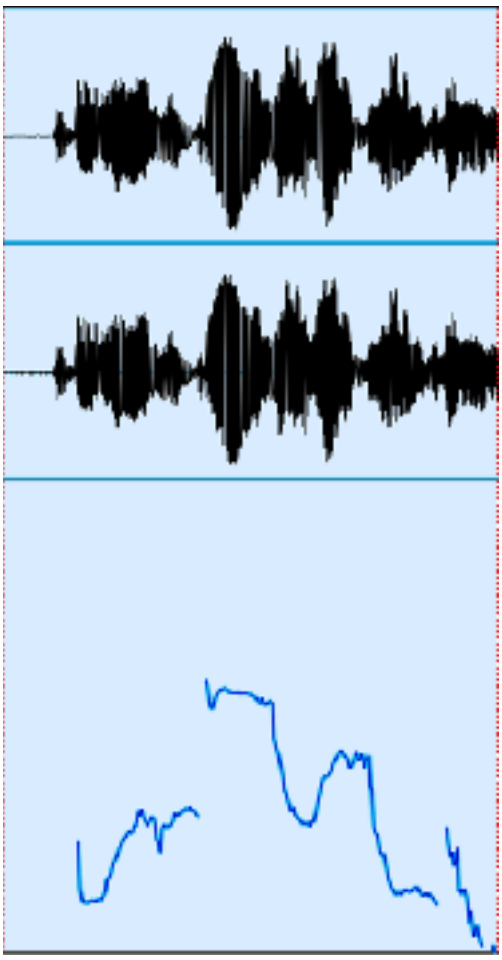
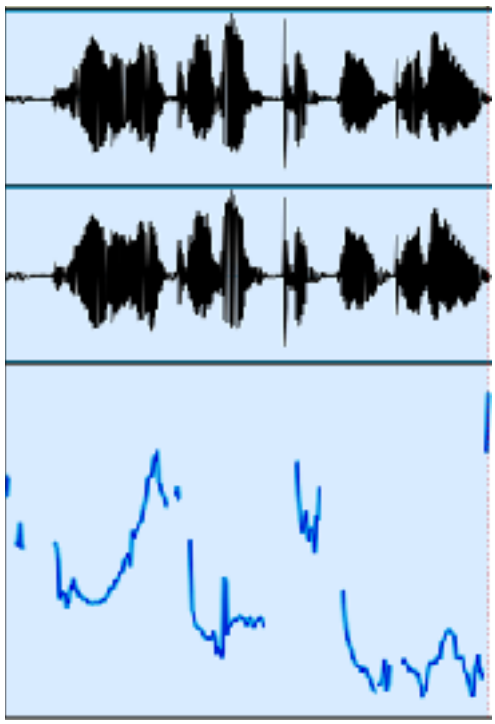
Test subjects:

There were a total of 6 test subjects in the study - 2 Tamil-speaking females, 2 Korean speaking females, 1 Korean-speaking male and 1 Tamil-speaking male. All test subjects were recorded speaking in similar conditions of day and time. Ages varied from 12 years old to 60 years old. The underlying implied difference in pitch of voice was factored in for the purposes of this experiment.

Results:

The intonation patterns, differing by sentence type and language, are placed side by side below:

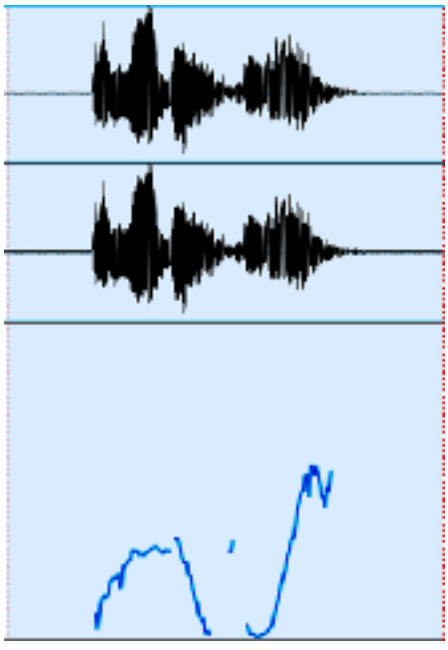
1. The first major similarity that was noticed in terms of intonation (and prosody) was the nature of declarative sentences in both languages. As visible in the pitch contour below, they both appear to be LHL:

	
Korean	Tamil

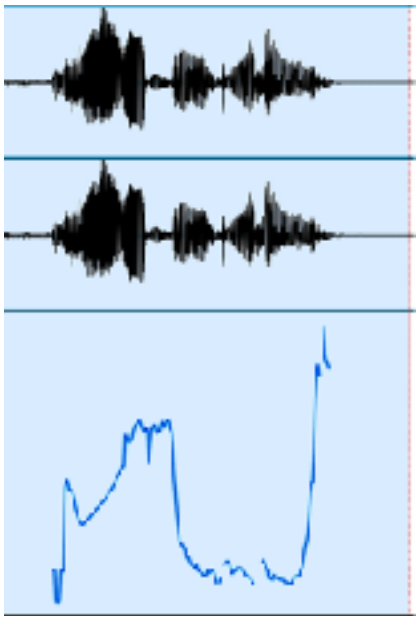
As observed, both graphs have a LHL pattern - Low High Low - of intonation.

2. Interrogative sentences:

1.Korean



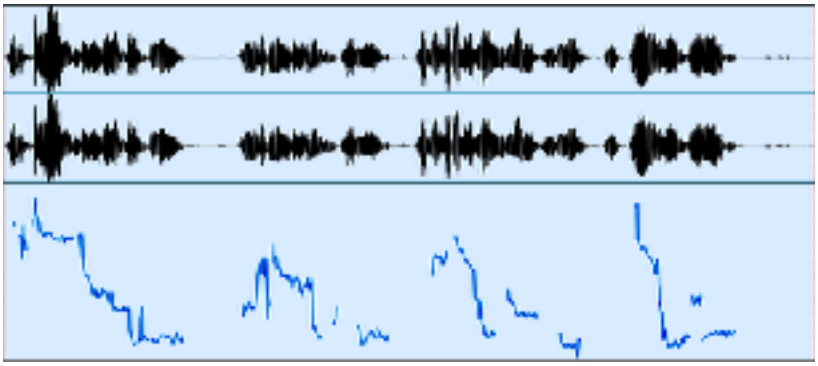
2. Tamil



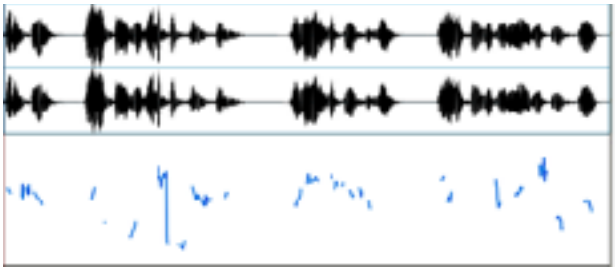
As clearly illustrated by the graph(s) above, the intonation pattern for questions or interrogatory sentences is quite similar in both languages.

3. Imperative sentences

This is the one area that had seemingly little similarity between the two languages. It could be due to issues with pronunciation and dictation with one of the test subjects. Below is the graph for intonation of the Korean male test subject:



And for the Tamil male test subject:



There is a degree of similarity, albeit unpronounced, between these two intonation patterns.

They both seem to be tending towards a LHL/ HL or Peaking/Rise-fall intonation. However, one cannot be certain. With the female test subjects, graphs similarly tended towards a lack of overall coherence.

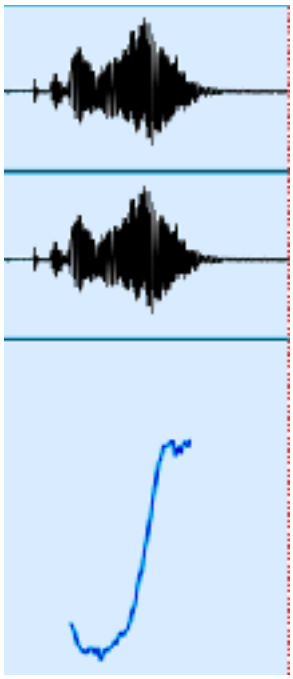
To reiterate, it does seem like there is similarity in terms of Rising intonation in this case, but for both languages - particularly so in the case of Tamil - imperatives do not seem to have a clearly defined structure, phonetically.

This is different from word order, which is quite well-defined in Korean - and similarly so in Tamil.

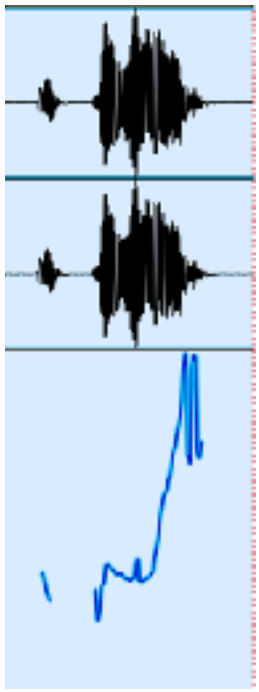
4. Exclamatory sentences

This is another area where the two languages see considerable similarities.

1. Korean



2. Tamil



The words above are 정말? (jeongmal?) and அப்டியா?(appdiya?), which stand for virtually identical expressions. They both loosely translate to “Really?!” (with wonderment or surprise, possibly sarcasm).

Discussion:

In the study of language, otherwise known as linguistics, intonation is defined as being an aspect of pitch. Pitch is the frequency of a sound - which explains the distinction between high pitch and low pitch, in regards to a person's voice.

Intonation is an important aspect of the vocalisation of a majority of the world's languages. In English, intonation is widely employed. For example, the end of a sentence is raised to a higher pitch.

One can convert a sentence that is otherwise declarative or imperative into one that is interrogative or exclamatory by simply raising or decreasing the pitch at certain points in time during articulation. This must be distinguished from tone, which is a rather similar concept. Tone, in contrast to intonation, is not employed in a wide range of languages. Prominent examples of tonal languages are Mandarin Chinese and the Hausa Language (Mathew).

Indo-Aryan and Dravidian languages alike use intonation to convey meaning. Sentences are distinguished, and can vary, solely based on their spoken intonation (Patil).

Previous work on Tamil intonation suggests that each word in a phrase except the final verb typically bears a fall-rise-fall f0 contour (Keane). A f0 contour is a kind of pitch contour - these are functions that track the perceived pitch of sound over a time t. The graphs in this study were not f0 contours - these graphs were the visual representation of the pitch at any given point t. In these graphs, the pitch of voice was analysed in reference to the range. For female speakers, the range was set between 100-350 Hz, and for male speakers - it was set between 100-500 Hz. The pitch of the voice was analysed within these ranges, and this varied with gender and age - as one might expect.

For example, the pitch of a male test subject who was 13 years old was, not surprisingly, quite similar to a female 36 year old test subject. In another instance, the pitch (or frequency)

range of a 60 year old male test subject for Tamil, was higher than any of the other test subjects. These are not major hindrances. One must simply analyse the shape of the graph - in that its slope, any asymptotes, and other possible features.

All similarities in terms of intonation patterns were analysed in this way.

The reason that the parameter chosen for this study was intonation patterns is because intonation is a primary method of distinguishing variances of speech. If two languages have similar intonation patterns, there are bound to be similarities in other aspects of speech.

Speakers use intonation patterns to help them express their ideas or emotions. Intonation

conveys meanings that apply to phrase or utterances as a whole, such as sentence type or

speech act, or focus and information structure. Intonation patterns are specified as an abstract sequence of high and low tones. These tones have no absolute physical value. Rather, they are meant to distinguish between often subtle meanings and semantic differences. Tones are always implemented relative to each other (Mathew). One cannot set an absolute value of frequency to be achieved in order to express a particular intonation. This is where it (intonation patterns and tones) differs from music and musical analysis.

implemented relative to each other through the manipulation of pitch and the fundamental

frequency (F0) of the voice (Ladd 1996). These are as shown in Table 1.

In the case of Korean and Tamil, there have been a multitude of studies dealing with the common lexicon and indeed, such large commonalities between seemingly unrelated lexicons is quite remarkable. This is especially true considering the large geographic distance between the two regions - and subsequent improbability of similarities. One would not intuitively associate the two language groups. But there seems to be strong evidence of there being reason to do so.

Conclusion:

There appears to be a credible link between the intonation patterns of the two languages. Apart from the imperative sentence structure, there was a noticeable correlation with the graphs of the intonation. It is fair to conclude that there appears to be, if not a link between the languages themselves, a strong correlation between the intonation patterns of the two languages.

This is a comparative study of intonation. Questions, or interrogative sentences, have rising intonation in both Tamil and Korean. Exclamatory sentences follow suit.

It is important to understand, however, that this paper is a start in the endeavour to further research this interconnection. A genetic relationship, in the linguistics sense of the term, is quite possible.

As mentioned previously, the Altaic Language Family has been discredited. This leaves Korean in a rather precarious position, from a language family point of view. Japanese, its closest language geographically, is not semantically similar. Extinct languages have been identified as some form of Proto-Korean, and the East Asian region is in considerable linguistic exclusion in any case. The establishment of a new, or rather, the revival of an old, language family, will lead to wide-spread, long-lasting changes in the understanding of migration patterns in the prehistoric times, in addition to research behind the origin of speech, and indeed, language.

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