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A Comparative Study on the Lateral /l/ of English and Tamil

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Pearl, Jennifer. A comparative study on lateral /l/ of English and tamil. *The Linguistic Association of Korea Journal, 32*(4), 131-149. This study investigates the lateral /l/ in English and Tamil, chosen due to its varying articulation across languages and its role in pronunciation challenges for Tamil speakers learning English. The lateral /l/ is articulated differently across languages, and Tamil has multiple lateral variants, including dental, retroflex, and palatal forms, which contrast with the English clear and dark /l/. These differences make it difficult for Tamil speakers to acquire native-like pronunciation in English, often leading to phonetic interference. The study aims to compare the phonetic and phonological properties of the /l/ sound in both languages. Using acoustic analysis, speech samples from native Tamil speakers were recorded and analyzed for formant frequencies, duration, and place of articulation. The perception tests assessed how Tamil speakers recognize and produce the English /l/ sound in different phonetic environments. Results indicate that Tamil speakers often pronounce the Tamil palatal /l/ and sometimes retroflex /l/ similar to the English alveolar /l/, affecting intelligibility. Acoustic data reveal distinct formant transitions, demonstrating phonetic interference in second-language acquisition. These findings provide insights into cross-language phonetic variations and inform pronunciation training for Tamil learners of English. Understanding these articulatory differences can enhance teaching strategies, improving pronunciation accuracy and communication effectiveness in multilingual settings. This study also contributes to linguistic diversity research and second-language acquisition.

Key Words: lateral /l/, formants, formant values, formant frequencies, clear l, dark l, vowels, consonants

1. Introduction

The lateral /l/ sound is common in many languages around the world, such as English, Welsh, French, and various Asian languages. A sound created by lifting the front of the tongue to touch the roof of the mouth, with air flowing on one or both sides of the tongue (Ladefoged & Ian, 1996). It is noteworthy that while English utilizes a single consonant letter "L" to represent the /l/ sound, Tamil employs three distinct characters to denote variants of the /l/ sound: /l/ (ல), /l̪/ (ள), and /ɻ/ or /l̠/ (ழ). These different consonantal representations correspond to subtle variations in their acoustic properties and articulatory mechanisms (Krishnamurti, 2003). This paper examines the lateral /l/ sound in English and Tamil, a Dravidian language spoken mainly in Southern India (Tamil Nadu), Sri Lanka, and Malaysia through a comparative analysis.

From a sociolinguistic perspective, both English and Tamil exhibit significant dialectal variation. English dialects include American, British, Australian, and Canadian variants, while Tamil dialects include, Sri Lankan, and Malaysian varieties, each with further sub-dialects (Wells, 1982; Schiffman, 1999). Dialectal differences can impact the articulation of the lateral /l/ sound. However, this study focuses on the general or standard forms of the /l/ sound to ensure clarity and consistency in the comparison.

In phonetic terms, laterals are classified as approximants, where the airflow is less obstructed compared to other consonants. Unlike other approximants, laterals allow the air to escape along the sides of the tongue (Crystal, 1997). Depending on the type of lateral, the airflow may be channelled along one side or both sides of the tongue, suggesting the existence of multiple lateral variants based on airflow and articulatory gestures (Ahn, 2016).

In English, the lateral /l/ is realized in two distinct forms: the "clear l" and the "dark l". The "clear l" occurs before vowels, as in "*land*" and "*elephant*", while the "dark l" appears before consonants or pauses, as in "*fall*" and "*help*", where it is velarized by the raising of the back of the tongue towards the velum (Ahn, 2016; Gick et al., 2006). Although the distinction between these forms does not typically lead to misunderstandings, mastering them can enhance the naturalness of speech and aid in comprehension of native speakers. The two forms of the lateral /l/ in English differ in their phonetic articulation and have been summarized (Giles & Kenneth, 1975; Sproat & Osamu, 1993) in the table below.

Table 1. Summary of clear/l/ and dark/l/ differences

Feature	Clear /l/ (e.g. *land, elephant*)	Dark /l/ (e.g. *fall, help*)
Tongue position	Tip touches alveolar ridge, tongue body stays neutral or slightly raised	Tip touches alveolar ridge, back of the tongue raises towards velum
Secondary articulation	None	Velarization (raising of tongue back)
Acoustic properties	Higher F2 (brighter sound)	Lower F2 (darker sound)
Phonetic symbol	[l]	[ɫ]

In Tamil, the distinction between /l/ and /ɭ/ is both historically and phonologically significant, resulting in minimal pairs with different meanings. The phonetic distinction between these sounds lies in their articulatory positioning: /l/ is produced with the tongue close to the position of the vowel /i/, with the back of the tongue lowered, while /ɭ/ involves retracting the tongue blade towards the hard palate (Krishnamurti, 2003). This distinction is evident in minimal pairs such as:

kallu[1](colloquial) ‘stone’ vs. kaḷḷu ‘toddy, palm liquor’
puli ‘tiger’ vs. puḷi ‘tamarind’
palli ‘lizard’ vs. paḷḷi ‘school’
ni:lam ‘blue’ vs. ni:ḷam ‘length’
va:l ‘tail’ vs. va:ḷ ‘sword’

Given the distinct contrasts between the lateral /l/ sounds in English and Tamil, this study aims to delve into the variations of these phonemes across the two languages. Comparing the /l/ sound in English and Tamil is crucial for understanding how linguistic differences affect language learning and intelligibility. The main reason for choosing to compare the lateral /l/ in Tamil and English is that Tamil speakers in India frequently use English in daily communication, as it is an official language. For example, English is commonly used in corporate meetings and as a lingua franca for

1) In Tamil, the word "கல்" (kal) /kal/ means "stone" in its standard literary form. However, in colloquial speech, a vowel "-u" is added making it as "கல்லு" (kallu) /kallu/ due to the addition of the schwa-like vowel sound at the end, a common feature in spoken Tamil and is more commonly used in everyday spoken Tamil, especially in rural and informal settings (Schiffman, 1996; Keane, 2006). Thus, for the sentence “*He picked up a stone and threw it*”, a formal and colloquial Tamil versions respectively are /avan **kal** eṭuttu vi ː sina ː n/ and /avan **kallu** eṭuttu vi ː si:tta ː n /.

communication between speakers of different Indian languages (Iyer & Sridhar, 2019). Understanding these pronunciation challenges is essential for improving intelligibility and second-language acquisition. Building upon fundamental concepts, the research objectives for this study are outlined as follows.

i) This study aims to analyze and compare the lateral/l/ differences in both the languages through acoustic and perceptual methods, providing insights into phonetic transfer between the two languages.
ii) Additionally, the study will analyze and compare the acoustic properties of the lateral /l/, specifically the formant values (F1, F2, and F3), to identify any significant variations between the two languages along with any effects in gender.

2. Literature Review

2.1. Phonetic Characteristics of Lateral /l/ Sounds

The /l/ sound, present in English and Tamil, has been extensively examined in the field of phonetics. The English lateral /l/ has two primary allophones: the "clear l" before vowels and the "dark l" before consonants or pauses (Gick et al., 2006). The "clear l" is defined by a tongue position that is both high and fronted, while the "dark l" is distinguished by an articulation that is retracted and velarized (Ahn, 2016). In comparison, Tamil displays three different lateral sounds: /l/ (ல்), /ɭ/ (ள்), and /ɻ/ or /l̲/ (ழ்), each characterized by unique articulatory and acoustic features (Krishnamurti, 2003). The difference in pronunciation between /l/, /ɭ/, and /l̲/ in Tamil is highly important because it impacts the phonology and distinguishes meanings in similar words as given in the below examples.

Table 2. Tamil examples for the difference in pronunciation of /l/, /ɭ/, and /l̲/

/l/ (ல்) vs. /ɭ/ (ள்)	/ɭ/ (ள்) vs. /l̲/ (ழ்)	/l/ (ல்) vs. /l̲/ (ழ்)
கல் (kal) – stone (with /l/)	முள்(muḷ) – thorn (with /ɭ/)	பல (pala) – many (with /l/)
கள் (kaḷ) – toddy (palm liquor) (with /ɭ/)	முழு(muḻu) – complete, full (with /l̲/)	பழ (paḻa) – fruit (with /l̲/)

2.2. Acoustic properties and formant values

Acoustic studies of the lateral /l/ sound often focus on formant values, which are crucial for understanding the phonetic characteristics of this sound. Research on English lateral /l/ has shown that formant values such as F1, F2, and F3 vary depending on the context and the allophone being produced (Gick et al., 2006). Formants (F1, F2, and F3) are the resonant frequencies of the vocal tract that characterize speech sounds.

According to Johnson (2012), the formant frequencies are essential in defining the sound quality of speech, as F1, F2, and F3 convey details on the articulation of vowels and consonants.

F1 (First Formant): Shows how high the tongue is inside the mouth, with higher tongue positions corresponding to lower F1 values.

F2 (Second Formant): Indicates the location of the tongue in the front-back dimension, which impacts the quality of vowels and the sound of lateral consonants.

F3 (Third Formant): Offers information on the level of lip rounding and other articulatory characteristics, which influence the overall acoustic profile of lateral sounds.

They are crucial in distinguishing different speech sounds, including the allophones of the lateral /l/. For instance (Sproat & Osamu, 1993; Recasens, 2014), - clear /l/, i) Higher F2 due to the fronted tongue position. ii) Slightly higher F1 than dark /l/, reflecting less tongue retraction. iii) F3 remains relatively stable; dark /l/, i) Lower F2 because the back of the tongue is raised toward the velum. ii) Lower F1 as the tongue position is more retracted. iii) F3 may also lower slightly due to increased velarization.

In Tamil, the formant values of lateral sounds are influenced by the language's specific phonological system, and variations in F1, F2, and F3 provide insights into how different lateral sounds are articulated (Narayanan & Abigail, 1999). Comparative studies on these formant values can reveal how the acoustic properties of lateral /l/ sounds in English and Tamil align or differ.

2.3. Cross-linguistic Influence and Language Contact

Given that English is one of the official languages in India, where Tamil is predominantly spoken in Tamil Nadu, research on cross-linguistic influence provides valuable insights into how Tamil speakers produce English lateral /l/ sounds. Previous studies have explored how bilingual speakers manage phonetic differences and transfer features from one language to another, which is essential for understanding pronunciation patterns in multilingual contexts (Bialystok, 2001). This comparative analysis helps in identifying how exposure to English affects the articulation of the lateral /l/ sound in Tamil speakers and vice versa.

2.4. Gender Effects

Research has shown that gender can influence the articulation of speech sounds, including lateral consonants, due to physiological and sociolinguistic factors. Studies on phonetics indicate that male and female speakers exhibit different acoustic properties in their production of consonants and vowels, with female speakers generally producing a higher formant value (Popescu et al., 2024). These variations may be attributed to both anatomical differences and sociophonetic influences, where gendered speech patterns shape pronunciation. Understanding the impact of gender on lateral /l/ production is crucial for phonetic analysis, as it highlights individual and group-level variations that contribute to linguistic diversity. Furthermore, such insights can be useful in refining language teaching strategies by accounting for these differences in pronunciation training for Tamil speakers learning English.

3. Method

3.1. Participants

The information for this study was gathered from a sample of ten individuals who are native Tamil speakers from Tamil Nadu, India, comprising an equal number of five males and five females. Every participant in the research was from Tamil Nadu, aged between 23 and 29, with an average age of 25.2 years. They are currently enrolled as college students in the local region. Each person mentioned they began learning English

during their formative school years, as it is commonly utilized as an instructional medium in private schools across India. Therefore, they have achieved a decent to elevated proficiency in English as their second language. This specific group provides a good example for investigating the pronunciation of the lateral /l/ sound in Tamil and English, taking into account their first language and proficiency in English. The equal chosen numbers of male and female participants also contribute to the gender effects on this study.

3.2. Stimuli

The stimuli utilized in this study consisted of six monosyllabic words, comprising of three in English and three in Tamil, each ending with a lateral /l/. These specific words were selected intentionally to include the short and long vowels /i/ and /i:/, respectively before the lateral sound, establishing a uniform phonetic context for analysis. Participants were instructed to utter the words in a natural manner and record them individually, with each word saved in its own audio file (comprising a total of six files). Later, these recordings were forwarded via email for further examination. The audio data were analyzed using *Praat*, a specialized software for acoustic analysis, which enabled the recording and editing of both mono and stereo sounds. *Praat* allows for detailed analysis of acoustic characteristics such as loudness, tone, length, and resonance frequencies, proving to be a valuable resource for examining the articulation traits of the lateral /l/ sound in particular words. The research consists of a list of six words given below that were used for reference.

Table 3. English and Tamil words taken for the study

English	Tamil	Meaning of Tamil words
kill	nil (நில்) [ல் /l/ –dental]	'to stand'
peel	mi:l̪ (மீள்) [ள் / l̪ / –retroflex]	'to rescue'
meal	ki:l̪ (கீழ்) [ழ் / l̪ /–palatal]	'down'

3.3. Procedure

This study is constrained by its reliance on audio data recorded and submitted via email, rather than conducting real-time recordings, which could offer more immediate and controlled data collection. The analysis is performed using *Praat*, a software specialized in acoustic analysis, but does not utilize additional equipment or software that might provide more detailed insights. The scope of the analysis is limited to examining the formant values (F1, F2, and F3) and the F2-F1 ratio, focusing on surface-level comparisons between the lateral /l/ sounds in English and Tamil. The study specifically addresses i) waveforms and spectrograms, ii) formant values, and iii) the gender effect as observed through the F2-F1 ratio, without delving into other potential acoustic or articulatory aspects.

3.4. Analysis

The primary focus was on measuring the frequencies of the first three formants of the lateral /l/ sounds, specifically F1, F2, and F3. Additionally, the difference between the second and first formants, denoted as F2-F1, was also calculated. The specific measurement, F2-F1, is particularly significant as it provides insight into the degree of "lateral darkness" in speech sounds—a concept discussed in depth by Stevens (2000). These measurements were compared across the two languages, English and Tamil, to identify any significant variations.

To ensure accurate analysis, the audio recordings of the lateral /l/ sounds were played back on the device that recorded them simultaneously, allowing for precise synchronization of audio and analysis. Both the waveform and spectrogram of each recording were examined to capture and note the formant values. This approach provided a comprehensive view of the acoustic properties of the lateral /l/ sounds.

However, it was observed that extracting formant values from some recordings proved challenging due to variations in pronunciation. These discrepancies in articulation affected the clarity and consistency of the formant measurements, making it more difficult to analyze the data uniformly. Despite these challenges, the overall analysis aimed to provide insights into the acoustic characteristics of the lateral /l/ sounds in both languages.

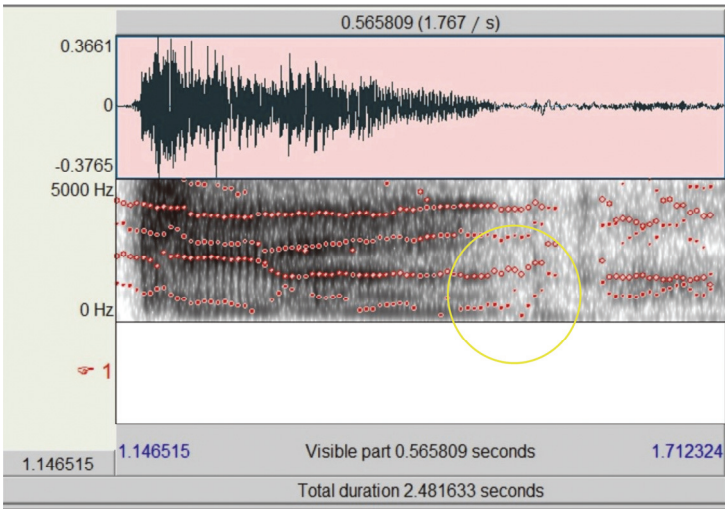

Figure 1. Inappropriate visuality of formant values from the word 'kill'

In the analysis of the lateral /l/ sound from the word "kill," a specific case illustrates a notable example of variation in formant values. The rounded part of the spectrogram highlights the precise location where the formant values of /l/ are identified. This observation suggests that the formant values may have been influenced by an obstruction in the airflow, likely caused by the tongue being positioned slightly away from the typical alveolar region. In this instance, the participant pronounced the preceding front vowel /i/ in a manner that deviated from the standard, sounding more like a mid /i/. This deviation in vowel production could have affected the articulation of the subsequent lateral /l/, leading to variations in its formant values. The formant structure of /l/ was thus altered, reflecting how slight changes in vowel quality can impact the realization of consonants.

This particular variation was observed exclusively in one participant, who exhibited similar deviations across three other words analyzed in the study. Such consistent discrepancies in pronunciation highlight how individual differences in vowel articulation can influence the acoustic properties of adjacent consonants, providing insights into the nuances of formant measurement in phonetic analysis.

4. Experimental Results

4.1 Waveforms and Spectrograms

To begin, we will visually compare the sounds from each language. For this purpose, two words were selected: "meal" from English and "mi:ɻ" from Tamil, as their pronunciations are quite similar. Both words were recorded from the same participant to ensure consistency and reliability in the analysis.

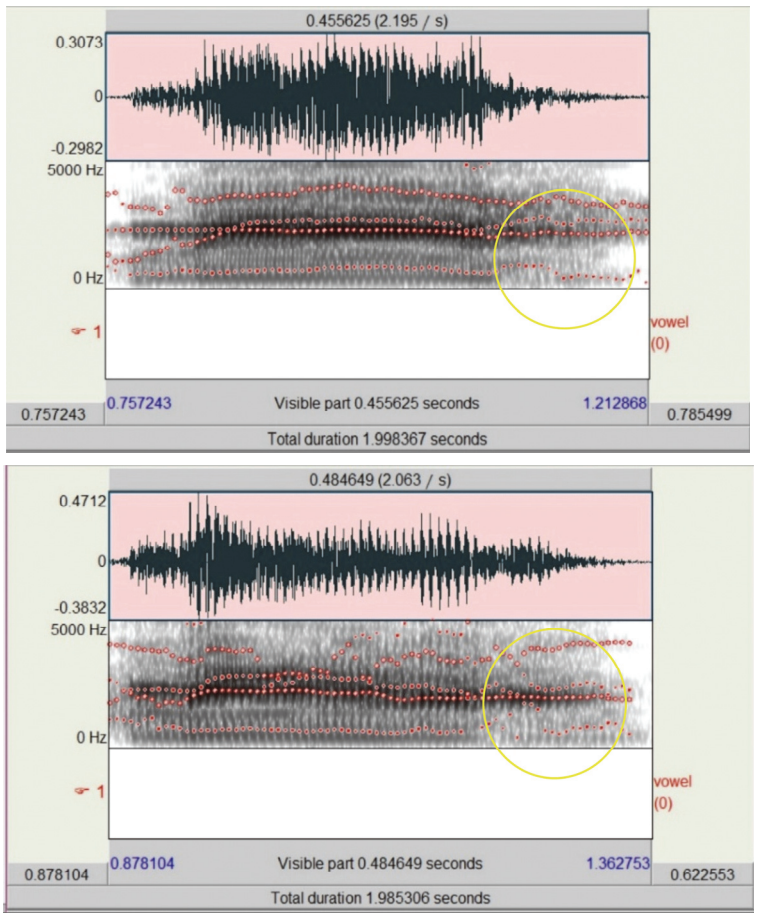

Figure 2. Waveforms and spectrograms of *meal* (top) and *mi:ɻ* (bottom)

The articulatory placement of the /l/ sound in English is typically alveolar, whereas in Tamil, one variant of the /l/ sound is retroflex (Rajaram, 1972). This distinction is evident in the comparative analysis of the sounds from the words "meal" and "mi:ɭ." In "meal," the /l/ sound is articulated with the tongue touching the upper teeth, allowing airflow to circulate around the sides of the mouth. Conversely, the /l/ sound in "mi:ɭ" is produced with the tongue tip curved upwards and contacting the middle of the palate, resulting in a deeper, lower-pitched sound. This retroflex articulation contrasts with the alveolar /l/ and is clearly demonstrated in the figures presented, highlighting the distinct acoustic and articulatory characteristics of the two sounds (Rajaram, 1972).

Only a few participants pronounced "meal" and "mi:ɭ" with a similar articulation. Specifically, some Tamil speakers pronounced "mi:ɭ" in a manner resembling the English "meal," where the retroflex /l/ was articulated similarly to the alveolar /l/. This misalignment between the expected retroflex articulation and the alveolar articulation is illustrated in the figures below.

The consistent pronunciation of the /l/ sound by Tamil speakers is mainly due to historical changes in the Tamil language. Throughout time, changes in pronunciation have caused the distinct /l/ sounds in the Tamil language—such as the dental, retroflex, and palatal /l/—to merge into a more common form, sometimes sounding like an alveolar or dental /l/ sound (Zvelebil, 1970). These alterations represent a normal progression in language, as certain distinctions in sound become less noticeable or combine because of different linguistic influences and historical events.

Furthermore, the growing importance of English as a recognized language in India has also influenced this change in pronunciation. In the last ten years, the significance of English in formal and official settings has increased greatly. With English's rise as a prominent language in education, business, and government, Tamil speakers are now more exposed to and utilizing English, impacting their phonetic patterns. This increased exposure has led to Tamil's /l/ sounds becoming more standardized, resembling the English /l/ sound and causing the merging of previously separate /l/ sounds in Tamil. This merging demonstrates the wider effects of English on local languages and the adjustments that take place when languages come into contact and affect each other.

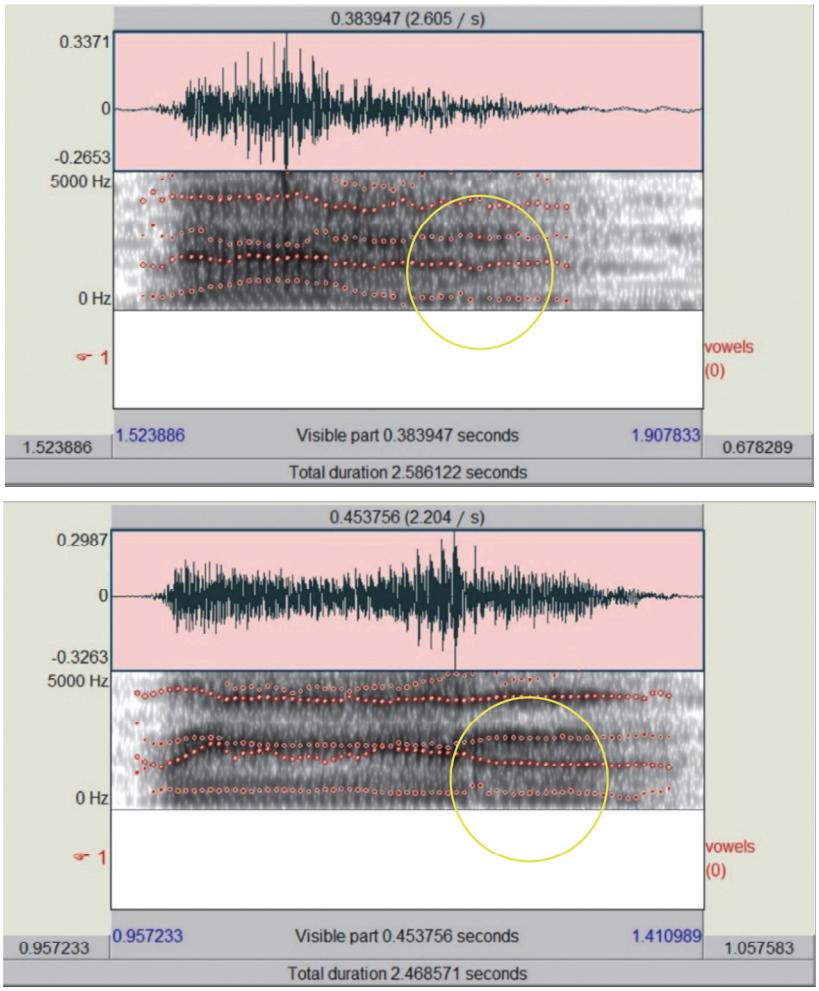

Figure 3. Waveforms and spectrograms indicating the similar pronunciations of English *meal* (top) and Tamil *mi:ḷ* (bottom)

4.2 Formant values F1, F2, F3, and F2−F1

The formant frequencies F1, F2, and F3 of the lateral sounds in both English and Tamil were analyzed. The average values of these formants for each language are summarized in the table below.

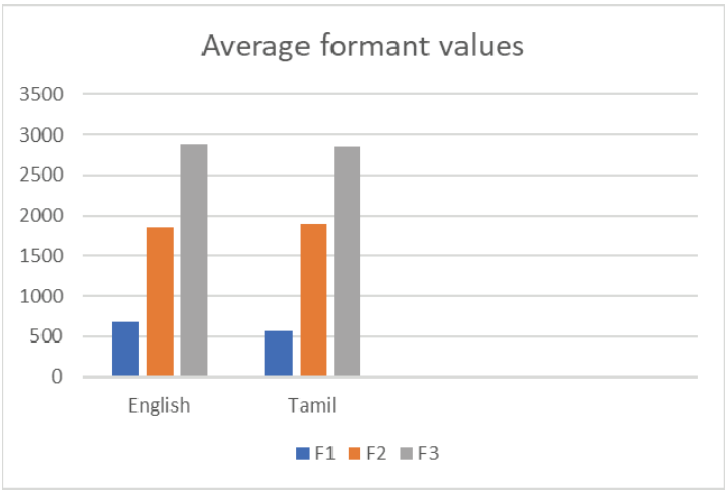

Figure 4: The average formants of the three formants of the laterals in English and Tamil

Examining formant frequencies shows that English lateral sounds have F1 values that are slightly greater than those in Tamil. Nevertheless, there is little difference in the F2 and F3 values between the two languages. Interestingly, Tamil laterals have a slightly higher average F2 value than English (T=1897.9 vs. E=1856.46), whereas English shows a slightly elevated average F3 value compared to Tamil (E=2884.66 vs. T=2852.2). These variations could be affected by the phonetic environment, specifically the presence of the low vowel /i/ and high vowel /i:/ in front of the lateral sounds examined in the research.

In the study by Ahn (2016), it was found that the tongue's height greatly affects the first formant (F1), where high F1 values indicate low vowels and low F1 values indicate high vowels. The positioning of the tongue either towards the front or back mainly influences the second formant (F2), with a front vowel having a high F2 and a back vowel having a low F2. As a result, individuals who exhibited reduced F1 frequencies for low vowels in both English and Tamil may have articulated the words in a distinct manner, showcasing their individual speech patterns and mannerisms. The differences in pronunciation may explain the discrepancies seen in formant values among participants.

Alongside the measurements of the first, second, and third formant frequencies, the study also calculated the frequency difference between the second and first formant values (F2-F1). The F2-F1 difference essentially helps in understanding how "dark" or

"light" a lateral sound is, with greater differences typically indicating a lighter, clearer /l/, and smaller differences corresponding to a darker, more velarized /l/. This analysis allows for a deeper exploration of the acoustic qualities that distinguish lateral sounds in different linguistic contexts.

Table 4. The average frequency differences from the participants (F2-F1)

	English	Tamil
F2-F1(Hz)	1227 SD=307.92	1341 SD=164.29

The concept of lateral darkness, as previously noted, indicates that the laterals in Tamil exhibit a relatively lower degree of darkness compared to those in English, despite occasional instances of deeper pronunciation variations. The degree of this darkness is inversely related to the F2-F1 values, meaning that lower F2-F1 values correspond to a darker lateral sound (Ahn, 2016). This suggests that English laterals are generally darker than their Tamil counterparts. While Tamil laterals involve more complex articulatory movements, which might imply a higher degree of darkness, the influence of English as a dominant second language among the participants led to variability in their lateral pronunciations. Consequently, the expected darker quality in Tamil laterals was not consistently observed.

4.3 Gender Effect on the Lateral /l/

Male and female speakers often exhibit distinct characteristics in their pronunciation across languages, and this difference extends to the articulation of the lateral /l/ sound. In this study, the impact of gender on the pronunciation of laterals is considered an important variable. Recasens & Aina (2007) highlighted that the surrounding sounds, especially the neighboring vowels, significantly influence the articulation of lateral sounds. For example, the lateral /l/ tends to be darker or velarized following a back vowel like /u/ as in *cool*, but clearer after a front vowel like /i/ as in *feel*. The degree of darkness in English laterals is also affected by various factors, including the morpho-syntactic environment.

Gender differences in linguistic realization have been a focus of sociolinguistic research for decades. Studies have shown that female speakers often exhibit specific

linguistic features that differ from those of male speakers. For instance, Lakoff (1973) noted that women tend to use more lexical hedges and tag questions.

In light of these considerations, this study separately calculates the average F2-F1 values for male and female speakers in both English and Tamil. The primary reason for focusing on this F2-F1 difference is to assess the degree of lateral darkness, which is a key aspect of the study's objective. By examining these gender-specific variations, the study aims to shed light on how gender influences the acoustic properties of the lateral /l/ sound in both languages.

Table 5. The average F2-F1of English lateral /l/ in male and female participants

English	Male	Female
Avg. F2-F1	1337 SD=332.63	1117 SD=192.36

Table 6. The average F2-F1of Tamil lateral /l/ in male and female participants

Tamil	Male	Female
Avg. F2-F1	1329.26 SD=140.96	1327.13 SD=138.96

Based on the data presented in Tables 5 and 6, it becomes evident that in English, female participants tend to produce a darker /l/ sound compared to their male counterparts. This suggests that female speakers may be more inclined to adopt a standard or prestigious linguistic form, particularly in their articulation of the dark /l/. Conversely, in Tamil, both male and female participants exhibit a nearly identical degree of darkness in their pronunciation of /l/. However, a closer examination reveals that female speakers show a slight variation, indicating a tendency towards a darker /l/ sound.

This variation in darkness can be attributed to the additional retraction of the tongue dorsum towards the velum, which is characteristic of dark laterals. Female speakers, by more tightly constricting their oral cavity, are required to exert greater effort in positioning their articulators. This increased articulatory effort results in speech that is more distinct (Kent & Read, 1992).

Furthermore, while this analysis primarily focuses on the F2-F1 values, the actual values of F1 and F2—particularly in relation to the backness of preceding vowels, should

also be taken into account. However, due to certain limitations, this study only examines the difference between these formant values, rather than a comprehensive analysis of their individual contributions.

5. Discussion and Conclusion

Various elements, such as differences in sociolinguistic and personal speech patterns, are crucial in influencing how speech is produced. These factors include a variety of influences, from the social and cultural environment in which a language is used to unique characteristics in speech habits. Sociolinguistic differences, including regional accents, social status, and ethnic background, can greatly influence the pronunciation and interpretation of speech sounds. Speakers from various places may have unique ways of pronouncing words because of their local language customs. Likewise, the distinct ways in which sounds are created are influenced by one's personal speech patterns and preferences.

This study focused on how prosodic elements like pitch changes, tone, and breaks affect speech traits. These features of speech production are essential and have a significant impact on the pronunciation of particular sounds. Differences in pitch can change how a sound is perceived, while changes in tone can affect how clear and distinct sounds are perceived. On the contrary, breaks between individual sounds in words can impact the smoothness and authenticity of spoken language. Examining these prosodic features yielded important understandings of their impact on the pronunciation of lateral /l/ sounds in English and Tamil.

Thoroughly examining these intonational aspects has the potential to significantly broaden the research scope within this field. Researchers can develop a better understanding of the intricacies of articulating certain sounds by studying the impact of pitch, tone, and pauses on speech production. This might result in more precise speech production models that consider both the sound's acoustic characteristics and the prosodic elements that influence how it is produced.

This experimental research aimed to examine the waveforms, spectrograms, formant values, and gender influences on the articulation of lateral /l/ sounds in English and Tamil. The visual representations from analyzing waveforms and spectrograms showed how the /l/ sound is produced, uncovering key acoustic characteristics. Formant values were measured to identify specific traits of the lateral /l/ in both languages, as they play

a key role in differentiating between sounds.The results of this research revealed notable differences in the acoustic and articulatory characteristics of the English and Tamil lateral /l/ sounds. For example, Tamil has three main ways of articulating the lateral /l/: superficial, medium, and profound. However, distinguishing the pronunciation of these different forms was not always clearly noticeable in reality. The absence of clear distinction may result in possible confusion or misinterpretation of words, as slight differences in pronunciation can change the intended message. These discoveries highlight the significance of acknowledging and dealing with pronunciation differences in language instruction and communication.Furthermore, the research pointed out that English lateral sounds typically have more velarization than Tamil lateral sounds. Velarization is when a sound is produced with the tongue pulled back towards the velum, creating a deeper and more resonant sound quality. Factors such as gender and contextual usage influenced the degree of velarization found in English laterals. Female speakers, specifically, were observed to display varying levels of velarization in comparison to male speakers, potentially due to a variety of physiological and sociolinguistic factors. The existing research on comparing lateral /l/ sounds in English and Tamil indicates the necessity for more investigation in this field. Future research could gain advantages by including a variety of analytical approaches to study articulatory patterns and their impacts on different languages. Researchers can have a more complete understanding of how lateral sounds work in different linguistic contexts by using a variety of analytical methods in their research.In general, this study offers important perspectives on whether Tamil laterals are naturally darker than English laterals. The results indicate that it is necessary to conduct more research on the role and differences of lateral sounds in various languages. This type of study may help us gain a more comprehensive insight into the production and recognition of speech sounds, leading to a deeper understanding of phonetic and phonological patterns in various language contexts.

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