Interlingual Homophone Retrieval in Typical Malayalam - Hindi Bilinguals

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Abstract: Inter-lingual homophones are words that have similar pronunciation but different meanings across languages. The processing of this may vary with languages. Few studies in Indian languages have been attempted (Maitreyee and Goswami in Kannada-Hindi, Rajalekshmi, Kumaraswamy and Rao Hindi-English, Vinodhini and Ramya Tamil-English) in accordance with this. The aim of the present study was to investigate the language of dominance and its pattern in Malayalam –Hindi bilinguals using interlingual homophones. Twenty native speakers of Malayalam and 20 non-native Malayalam speakers participated who were graduate students. A non-standardized list of 20 paired-words was formed as a stimuli. Words belonging to both the languages (Malayalam and Hindi), having the pronunciation but different meaning were selected for the study. The findings of the present study suggested that one can perform better in first language (L1) without the interference of the other (L2) effectively, giving the picture of two separate lexicons for both the languages. They show a selective lexical-access (i.e., only one language is stimulated at a time) and this is in accordance with the earlier findings.

Keywords: Inter-lingual Homophone, Retrieval, Bilinguals

1. Introduction

Semantics is the study of meaning of words, phrases and sentences. The semantic analysis focuses on what the words conventionally mean, rather than on what a speaker might want the words to mean. Whereas in Linguistic Semantics it is the conventional meaning being conveyed by the word and sentences of a language. [7]

Homophones, Homonymy and polysemy describes the relationship among words in language. Homophones are two different words which are pronounced the same way but differ in meaning or spelling or both [29]. In other words, homophones are words that share the same sound but have different spellings and meanings [26].

Interlingual homographs share spelling but not meaning across languages. Therefore, each interlingual homograph has one orthographic representation whereas interlingual homophones have two orthographic representations, one for each language. Bilingualism is a unique experience to every individual with variability in the amount and quality of exposure to the languages the individual learns, as well as the experiences he or she has using the languages when interacting with others (American Speech and Hearing Association (ASHA), 2004). The processing of interlingual homophones may vary within languages and bilinguals have more difficulty in processing mixed sequences of words than sentences presented only in a single language.

The effect of interlingual homophones in Vietnamese-English. Bilinguals prove that for each interlingual homophone, these unbalanced bilinguals were expected to have a phonological representation for both languages but an orthographic representation for first language alone. [23]

The inter-lingual homophone retrieval abilities in Hindi-Kannada bilinguals which says that the native language will be more dominant for retrieval of the meanings of the words. [21]

the abilities of the meanings of the inter-lingual homophones is superior in their native languages (L1) in younger adults. And also those who learn different languages
other than L1 exhibits equal proficiency in L1 and L2. [27] One can perform better in first language (L1) without the interference of the other (L2) effectively, giving the picture of two separate lexicons for both the languages. [23] Individuals ability to have a reasonable command of two languages lexical items are subconsciously activated in both the languages and those in the language not required being suppressed [11].

Mercier, Pivneva and Titone (2013) reported that effective inhibitory control appears to help bilinguals overcome cross-language activation during spoken word comprehension. Moreover Pryle and Bogusch (2000-2001) argues that regular homophone practice enhances vocabulary knowledge, spelling skills, pronunciation ability, and overall reading proficiency.

Influence of the mother tongue and the pervasiveness of interlingual transfer is indisputable especially in learning situations where students exposure to the foreign language is confined to a few hours per week of formal classroom instruction (Mahmoud, 2000). Thus interlingual transfer is a strategy that is readily available to the learners to compensate for the inadequacies when attempting to communicate in the foreign language.

Inter-lingual homophones are words that have similar pronunciation but different meanings across languages. The processing of this may vary with languages. Few studies in Indian languages have been attempted (Maitreyee & Goswami, Rajalekshmi, Kumaarsawamy and Rao, Vinodhini and Ramya) in accordance with this. Malayalam which is a Dravidian language used by 96.7% of people around the state of Kerala and they are exposed to learn other languages. Hindi is an Indo-Aryan language and, with all its dialects taken together, is the third most-widely spoken language in the world. The homeland of Hindi is in the North Of India, but it is studied, taught, spoken and understood widely throughout the sub-continent, whether as mother tongue or as a second or a third language.

The usage of only a single language at a time by a bilingual indicates the separation of the respective lexicons. The false cognates involves representations in separate lexicons [2, 5]. The interpretation of false cognates was constrained by meaning rather than language and the results imply that lexical representation in bilinguals is organized along morphological lines and is not governed by language when processing an interlingual homograph. [16, 86] There are a number of models which explains the phenomenon of visual orthographic processing in bilingual individuals and have studied on bilingual lexical representation.

Kroll and Stewart (1994) proposed the revised hierarchical model (Figure 1.) to capture the implications of early reliance on L1 for the form of word-to-concept connections. [15]

![Figure 1](centroid) Ref: Revised Hierarchical Model (source: Adapted from Kroll & Stewart, 1994).

The model fuses the word association and concept mediation alternatives into a single model in which the strength of the connections between words in L1 and L2 and concepts is proposed to take on different values. The initial dependence on L1 to mediate access to meaning for L2 words is assumed to create strong lexical level connections from L2 to L1. However, at a lexical level, the connections from L1 to L2 are not assumed to be particularly strong because there is a little need for the learner to use L2 in this way. Likewise, the model assumes that connections between words and concepts are stronger for L1 than for L2. A number of empirical findings supports the predictions of the
presented only in a single language. This finding reflects processing mixed sequences of words than sentences pseudo homophony in a lexical decision task the evidence bilinguals to translate directly at a lexical level.

All the models proposed till date have mostly examined the representation of both the languages in a bilingual brain using homographs, cognates, etc and hence have evaluated the visual orthographic processing in them. Research in alphabetic languages (English, Dutch) has frequently indicated a non–selective lexical access of the orthographic mental lexicon in bilinguals.

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the most individuals loose or recover multiple languages equally, but some recover one before the other, and some recover either L1 or L2. These outcomes insist that two or more languages may have different representation or levels of activation. [24]

Content plays a role in accessing words in one language or another, and those bilinguals have more difficulty in processing mixed sequences of words than sentences presented only in a single language. [9] This finding reflects that the opening word of the sentence ‘switches on’ the lexicon in either of the bilingual languages and that all lexical searching takes place initially in that particular lexicon.

The recognition of spoken homophones is a result of the interactions among phonological, lexical, and contextual information in both monolinguals and bilinguals. [26] Bilinguals access the meaning in both their languages when taking vocabulary tests in one of their languages.

Cross-language homophones in the lexical processing of Chinese-English bilinguals. [16] The results of their cross-modal naming show that the predictive sentence context significantly facilitates Chinese-English bilinguals’ recognition of homophones, which in turn facilitates their naming of the phonologically related words. Similarly, in a recent eye-tracking study using English-French homophones (e.g. pool – poule).

Jared and Levy, B. A. and Rayner, K (1999) examined the role of phonology in the activation of word meanings and found that phonology plays a role in activating the meanings of low-frequency words when correct homophones were not predictable and the impact of reading skill was examined. Overall the study demonstrated the role of phonology in the activation of word meanings and pseudo homophony in a lexical decision task the evidence indicated that phonology plays a role in activating, homophone effects for words in isolation using a lexical decision task (LDT) and suggested that phonology plays a role early in the word-recognition process Homophones were found to have longer decision latencies than matched control words in the LDT. [12]

Chambers and Crooke (2009) demonstrated that a semantically compatible sentence context eliminates the activation of the English lexicon when interpreting French sentences. Once again, these studies provide evidence that the degree of non-selective activation is influenced by the semantic characteristics of the sentence context. [4],[12] Hino and colleagues researched inconsistent with studies of both English and Chinese homophones were inhibitory homophone effects were found for homophones with few homophonic mate whereas facilitative homophone effects were found for homophones with many homophonic mates. These results suggest that homophone density may explain the discrepancy in results found in studies of English and Chinese homophones. Hino and colleagues explain the facilitative effect of increased homophone density using the global activation account. The authors suggest that when a word has many homophonic mates, the increased global activation in the lexicon facilitates one's ability to decide on the homophone's status as a word. One homophonic mate is not enough to cause this increased global activation.

The performance of native and non-native English speakers with similar age and educational backgrounds on a variety of cognitive tests. [14] The results suggest that non-native English language may have a negative influence predominantly on language-dependent tasks.

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The inter-lingual homophone retrieval abilities in Hindi-Kannada bilinguals. [20] The results revealed that the native language was more dominant for retrieval of the meanings of the words for children and adults in both Kannada and Hindi native speakers. On the other hand teenagers performed similarly in both the languages. It is hypothesized that a bilingual has separate lexicons for L1 and L2 in the younger age, and then an interaction occurs between both the lexicons and finally the most used language becomes dominant.

The two later-acquired but proficient languages, English and Hindi, of two multilingual individuals with transcortical aphasia basal ganglia lesion in GN and brain stem lesion in GS. [30] Dissociation between lexical and syntactic profiles in both the languages with a uniform performance across the languages at the lexical level and an uneven performance across the languages at the syntactic level were observed

The language of dominance and its pattern in Hindi-English bilinguals and multi-lingual’s using inter-lingual homophones. [27] Data was collected from 40 participants who were bilinguals. Twenty paired-words which consisted of inter-lingual homophones were used as stimulus. Result shows that the retrieval of the meanings of the inter-lingual homophones is superior in their native languages (L1) in younger adults. Those who learn different languages other than L1 exhibits equal proficiency in L1 and L2.

The language of dominance and its pattern in Tamil-English bilinguals and multi-lingual’s using inter-lingual homophones. [23] Data were collected from total of 60 participants (9-45 yrs) who are bilinguals (native speakers of Tamil and have acquired English as their second language). The participants were sub grouped into: Group I= 9-18 yrs; II= 19-28 yrs; and III= 29-45 yrs. Twenty paired words which consisted of inter-lingual homophones were presented. The participants were asked to listen carefully to the pairs of words which were in two different languages that they knew
and were asked to write the meaning of each word. The study reveals that native language (L1) was more dominant for retrieval of the meanings of the words for group II and III. Hence results suggest that younger subjects of group I exhibit a shared lexicon and Subjects of group II and group III show a selective lexical-access. This is an indicative of the fact that L1 has a stronger base compared to L2 while processing inter-lingual homophones.

2. Methodology

2.1. AIM

The present study aims at investigating the inter-lingual homophone retrieval abilities in typical bilinguals and to investigate the language of dominance and its pattern in Malayalam-Hindi bilinguals using inter-lingual homophones.

2.1.1. Participants

Forty graduates (Twenty native of Malayalam and Twenty non-natives) in the age range of 18-23 who were proficient with Malayalam and Hindi language in their day today life participated in the present study. Participants with any form of Hearing, Neurological problems were excluded from the study.

2.1.2. Stimulus Preparation

A list of 20 paired words which were commonly used from both languages (Malayalam and Hindi) formed homophones. The prepared word list was then given to Speech Language Pathologists who were proficient with both languages and working in the field for more than 10 years for judging the appropriateness of words and validation. The validated list was recorded by examiner with high quality condenser microphone.

2.2. Procedure

The validated pair of words list was displayed using headphone Sony Viao Laptop to the participants in a well illuminated room. The participant’s task was to listen and see the presented word list carefully and was asked to write the meaning of each word.

2.3. Analysis

A score of 1 for correct writing with meaning and 0 for wrong writing was given and the obtained data was statistically analyzed using Descriptive statistics and results are discussed in next chapter.

2.4. Need

Inter-lingual homophones are words that have similar pronunciation but different meanings across languages. The processing of this may vary with languages. Few studies in Indian languages have been attempted (Maitreyee and Goswami (2009) in Kannada-Hindi, Rajalekshmi, Kumaraswamy and Rao (2015) Hindi-English, Vinodhini and Ramya Tamil-English (2015)) in accordance with this. Malayalam which is a Dravidian language used by 96.7% of people around the state of Kerala and they are exposed to learn other languages. The usage of only a single language at a time by a bilingual indicates the separation of the respective lexicons. In spite of the above fact an interlingual homograph activates target words in both of the bilingual’s language in lexical-decision tasks. Hence, there was a need to study the retrieval of semantics of the perceived inter-lingual homophones in Malayalam- Hindi Bilinguals.

3. Results & Discussion

The aim of the present study was to investigate the language of dominance and its pattern in Malayalam-Hindi bilinguals and multilingual using interlingual homophones. The data were tabulated and analyzed using SPSS version 16. Descriptive statistics (mean and standard deviation values and ‘T’ test) for both the groups of speakers for Malayalam and Hindi was used to analyze the information and the results are discussed below.

![Figure 2. Showing the Mean & Standard Deviation value for native and non-native Speakers for Hindi words.](image-url)
Table 1. Showing the Mean, Standard deviation and significant value for native and non-native speakers for Hindi words.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>t value</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>NATIVE SPEAKERS</td>
<td>20</td>
<td>11.83</td>
<td>2.773</td>
<td>8.834</td>
<td>.000</td>
</tr>
<tr>
<td>NON NATIVE SPEAKERS</td>
<td>20</td>
<td>17.80</td>
<td>1.207</td>
<td>HS</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>14.81</td>
<td>3.689</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From the above table and figure it can be seen that non-native speakers performed better compared to native speakers for Hindi words and statistically significant difference (p=.00), which shows that non-native speakers had strong hold on the words.

Parameter: MALAYALM.

Table 2. Showing the Mean, Standard deviation and non-significance for native and non-native Speakers for Malayalam words.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>t value</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>NATIVE SPEAKERS</td>
<td>20</td>
<td>20.00</td>
<td>.000</td>
<td>-</td>
<td>NS</td>
</tr>
<tr>
<td>NON NATIVE SPEAKERS</td>
<td>20</td>
<td>20.00</td>
<td>.000</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>20.00</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 3. Showing the Mean & standard deviation score for native and non-native Speakers for Malayalam words.

From the above table and figure it can be inferred that the native and non-native speakers performed equally well for Malayalam words and no significant difference was noticed for the same.

Table 3. Showing Mean, Standard deviation & P value for words across speakers and words.

<table>
<thead>
<tr>
<th>Group Parameter</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>t value</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>NATIVE HINDI</td>
<td>20</td>
<td>11.83</td>
<td>2.773</td>
<td>13.18</td>
<td>.000</td>
</tr>
<tr>
<td>MALAYALM</td>
<td>20</td>
<td>20.00</td>
<td>.000</td>
<td>HS</td>
<td></td>
</tr>
<tr>
<td>NON HINDI</td>
<td>20</td>
<td>17.80</td>
<td>1.207</td>
<td>8.15</td>
<td>.000</td>
</tr>
<tr>
<td>NATIVE MALAYALM</td>
<td>20</td>
<td>20.00</td>
<td>.000</td>
<td>HS</td>
<td></td>
</tr>
<tr>
<td>TOTAL HINDI</td>
<td>40</td>
<td>14.81</td>
<td>3.689</td>
<td>8.89</td>
<td>.000</td>
</tr>
<tr>
<td>MALAYALM</td>
<td>40</td>
<td>20.00</td>
<td>.000</td>
<td>HS</td>
<td></td>
</tr>
</tbody>
</table>

From the above table when the data was cross compared across native and non-native speakers for Malayalam and Hindi words high significant difference (p=.00) was noticed.

The present study reveals that the retrieval of meanings of inter-lingual homophones are superior in native language i.e., L1 in younger adults. It also suggests that one performed better in native (L1) without the interference of other language (L2).

It can also be concluded that individuals have reasonable commands on two languages which are subconscious activated in both the languages and those in the language not required being suppressed.

4. Discussion

Results indicated that non-native speakers perform better...
Inter-lingual homophones are words that have similar pronunciation but different meanings across languages. Each Inter-lingual homograph has one orthographic representation whereas inter-lingual homophones have two orthographic representations for each language.

Bilingualism is a unique experience to every individual with variability in the amount and quality of exposure to the languages the individual learns, as well as the experiences he or she has using the languages when interacting with others (American Speech and Hearing Association, 2004). The processing of inter-lingual homophones may vary with languages. Studies in Indian languages have been attempted (Maitreyee and Goswami, 2009, Rajalekshmi, Kumaraswamy and, 2015, Vinodhini and Ramya, 2015) in accordance with this. Malayalam is a Dravidian language used by 96.7% of people around the state of Kerala and who are exposed to learn other languages.

Usage of only a single language at a time by bilinguals is exposed to learn other languages.

The study has its implications in the assessment, diagnosis and the intervention planning programs for bilingual younger adults. The retrieval of semantics of the perceived inter-lingual homophones which help us to know the influence of homophone words on language perception and processing. For adults, L1 can be considered as a medium of instruction during remediation, which will help to select the appropriate language of intervention for bilingual aphasic clients.

5.2. Limitation of the Study

a. Subject selected were limited in number in each group.
b. Excluded Malayalam-Hindi bilingual children’s and older adults.
c. A large sample would have yielded more reliable results.

5.3. Future Directions

a. The present study could be further extended in a larger population.
b. The study could be conducted with children and teenagers.
Appendix

Table 4. Phonetic Transcription for Stimulus Materials.

<table>
<thead>
<tr>
<th>Interlingual Homophones</th>
<th>Phonetic Transcription</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kalam</td>
<td>/kələm/</td>
</tr>
<tr>
<td>Chumma</td>
<td>/tʃuːma/</td>
</tr>
<tr>
<td>More</td>
<td>/mɔːrə/</td>
</tr>
<tr>
<td>Chorr</td>
<td>/ʃɔːr/</td>
</tr>
<tr>
<td>Payal</td>
<td>/pəˈjɑːl/</td>
</tr>
<tr>
<td>Sooji</td>
<td>/səːjɪ/</td>
</tr>
<tr>
<td>Chaya</td>
<td>/tʃəˈjaː/</td>
</tr>
<tr>
<td>Theri</td>
<td>/ˈtɛrɪ/</td>
</tr>
<tr>
<td>Chaar</td>
<td>/ˈchaər/</td>
</tr>
<tr>
<td>Thamasha</td>
<td>/t̪aməʃə/</td>
</tr>
<tr>
<td>Mook</td>
<td>/muːk/</td>
</tr>
<tr>
<td>Kalle</td>
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</tr>
<tr>
<td>Maan</td>
<td>/mɑːn/</td>
</tr>
<tr>
<td>Palle</td>
<td>/pələ/</td>
</tr>
<tr>
<td>Pathi</td>
<td>/pəˈθiː/</td>
</tr>
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<td>/pəˈjɑː/</td>
</tr>
<tr>
<td>Kaka</td>
<td>/ˈkəkə/</td>
</tr>
<tr>
<td>Koyyi</td>
<td>/koʊiː/</td>
</tr>
<tr>
<td>Aana</td>
<td>/əˈnaː/</td>
</tr>
<tr>
<td>Prachi</td>
<td>/pɾəˈtʃiː/</td>
</tr>
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</table>

References


