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Phonological Adaptations of English Loanwords in Turkish

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Abstract

When trying to understand the phonological system of a language (the sounds used in speech), what are some of the ways to figure out the patterns of an unfamiliar language? The way that borrowed or loanwords (words taken from one language and used in another) are pronounced in a language reveals much about the language's phonology. The phonological system of Turkish has accommodated for starkly different syllable structures when incorporating modern English words into this contrasting language.

A personal survey of Turkish syllable structure has revealed how native speakers of Turkish cope with the phonological features of borrowed English words through several linguistic processes. This research shows how Turkish adapts English words through the processes of substitution, deletion, and epenthesis to ease the pronunciation of borrowed words. Substitution occurs when one sound is replaced with a more suitable native sound, as in the word "photograph" that is pronounced [foˈdægɹæf] in English and [fɔtɔɟɹɪɫf] in Turkish. The [g] was replaced with a [ɟ]. Deletion occurs when a sound is eliminated. For example: the word "apartment," [əpɑrtmɛnt] becomes [ʌpɑrtmɑn]. The final consonant [t] was eliminated. Epenthesis occurs when a new sound is added, as in the word "studio," [stʊdiə] becomes [sutɹɹɔɟɹɪɫf] when an extra vowel [u] is added. These are a few examples of the way that native Turkish speakers adapt English borrowed words to fit the mold of their own phonological system.

Keywords: Loanwords, Epenthesis, Vowel Harmony

1. Introduction

The world has become increasingly smaller as time has gone on. The interconnectedness of people and places today would have been unimaginable not too many years ago. Because of this contact between different people, cultures, and languages, the borrowing and interchanging of words from one language to the next has become more common. Each language has its own rules and strategies for coping with these incoming loanwords. As the processes used to handle borrowed words are explored at a deeper level, many interesting phenomena are revealed. Various changes are applied to new words that shed light on the rules of the native, and, in this case, the receiving language. Examples like that of vowel harmony in Turkish show that adaptations Turkish speakers use for borrowed English words are not random and they reveal more about how that language works. By examining what loanwords are and how they work, looking at a sketch of Turkish phonology in comparison to that of English, analyzing different processes of adaptation used on loanwords, and exploring the possibilities with using Turkish vowel harmony rules,

it is clear that the adaptations are not random, but are instead very systematic.

2. Background Information

2.1 loanwords

Before being able to understand the significance of English loanwords in Turkish, one must first understand what loanwords are and their implications on a language. According to Yoonjung Kang in her work on *Loanword Phonology*, “loanwords are words that are borrowed from one language to another.”¹ This is a linguistic phenomenon that occurs cross linguistically whenever one language interacts with another language, and generally when one word exists in one language but not in the second language. The English language contains many examples of loanwords such as *sushi*, *tsunami*, *bamboo*, *futon*, *enchilada* etc. The words are borrowed from the first language and incorporated in the second language, with speakers attempting to maintain a phonological pronunciation that is characteristic of the first language. However, there are stipulations to borrowing, because loanwords must be adapted to fit the second language’s speech patterns. The essence of the study of loanword phonology is the investigation of the adaptations that take place when a loanword is applied to the second language’s phonological system. These adaptations reveal information about the second language’s phonological system.

2.2 phonology

Just as English phonology reveals a phonological system of consonant and vowel distribution, so Turkish words, especially loanwords, expose the distribution of Turkish consonants and vowels. The two tables below show the distribution of common and unique consonants and vowels in both English and in Turkish. Shared consonants are shown by the color black. Consonants unique to English are shown by the color blue, and consonants that are unique to Turkish are shown by the color red. Similarly, on the vowel chart representing both English and Turkish, vowels are expressed by the colors black, blue and red. Black symbolizes commonly shared vowels. Blue represents vowels that are unique to English, and red represent vowels that are unique to Turkish. It must be noted that there is some controversy as to the exact number of Turkish vowels. Thus, this chart is a crude representation of Turkish vowels and may be subject to variation.

Table 1. distribution of English and Turkish consonants.³

	Bilabial	Labiodental	Dental	Alveolar	Palatal-Alveolar	Palatal	Velar	Glottal
Plosive	p b			t d			k g	
Fricative		f v	θ ð	s z	ʃ ʒ		χ	h
Affricate					tʃ dʒ			
Nasal	m			n			ŋ	
Lateral				l		ʎ		
Approximant	w				r	j		

Table 2. distribution of English and Turkish vowels.⁴

	Front	Central	Back
High	i y ɪ		u ʊ ʊ
Mid	e ɛ	ə ʌ	ə o
Low	æ a ɑ		ɑ ɒ

These charts display the significant number of consonants and vowels which occur in English that do not occur in Turkish. Consequently, as English loanwords are adopted into the Turkish vocabulary, phonological adjustments must be made in order to compensate for the additional English phones that are foreign to the native speaker of Turkish. .

2.3 syllable structure

A syllable is a unit of pronunciation that incorporates a vowel sound with or without surrounding consonants.² Each language has different rules of consonantal allowance within syllables. English can allow up to four consonant clusters, whereas Turkish does not allow for any consonant clusters. Consonant clusters occur when two or more consonants are next to each other, either before or after a vowel segment within the same syllable. For example, in the English word *train*, there is a consonant cluster of the two consonants *t* and *r*. Because Turkish syllable structure does not allow consonant clusters, native Turkish speakers will change the pronunciation of *train*, phonetically [treɪn], to *tren* pronounced with an extra vowel [tiren]. This change in pronunciation is one example of a series of coping strategies that are commonly used to adapt the loanword and its phonology to fit the phonology of the Turkish speaker.

3. Adaptation Processes

An adaptation process is a method that a language uses to adapt a loanword from its original native phonology to a secondary language phonological system. Turkish utilizes three main strategies when applying a loanword from English to its native phonology. These three methods are referred to as substitution, deletion, and epenthesis. In Turkish, these three coping strategies are those most commonly applied when compensations must be made to adapt an English loanword which contains English phonemes that are foreign to Turkish phonology. They are also useful in compensating for the occurrence of more consonants side by side than the Turkish syllable structure allows. Many times, more than one adaptation process will and can occur within a phonological segment that requires more than one phonological change. The examples described in the paragraphs below representing both English pronunciation and Turkish pronunciation will only highlight the coping strategies which the illustration is attempting to exemplify. The authors would like to note that the specific loanwords used in the examples may not have etymologically originated in the English language, and were at one point loanwords in English as well. However, as these loanwords into Turkish are explored in more detail and as native Turkish speakers were interviewed, the authors have come to the conclusion that these particular borrowings are recognized as having been taken from the English phonology and pronunciation of the word.

3.1 substitution

Substitution is the adaption process that a language uses by substituting one phoneme (speech sound) with another more familiar phoneme. For example, the English loanword *mathematics*, which is phonetically written as [mæθmædɪks], is pronounced by native Turkish speakers as *matematik*, phonetically written as [mʌtɛmʌtik]. However, since [θ] does not exist in Turkish phonology, native Turkish speakers will substitute the unfamiliar [θ] with the more familiar [t]. Thus, rather than pronouncing *mathematics* as [mæθmædɪks], native Turkish speakers will pronounce it as [mʌtɛmʌtik].

3.2 deletion

Deletion is the adaptation process of entirely removing a sound that makes a word too difficult to pronounce. Turkish has borrowed the word *apartment* from English, but native Turkish speakers have trouble pronouncing it correctly due to the consonant cluster *nt* that occurs at the end of the word. By using the process of deletion, Turkish speakers adapt *apartment* from its original pronunciation [əpɑrtmɛnt] to [apɑrtmʌn] by completely removing the final [t]. This simple consonant removal allows the elimination of a consonant cluster, thus conforming to the established Turkish syllable structure allowance.

3.3 epenthesis

Epenthesis, which is the most common loanword coping strategy among Turkish speakers, is the process that inserts a vowel to make a word more pronounceable. Like deletion, epenthesis is generally used to break up consonant clusters that give native Turkish speakers extreme difficulty in the word's pronunciation. For example, the Turkish language borrowed the word *graffiti*, phonetically [græfidi], from English. Though English phonology and syllable structure allow English speakers to place consonants [g] and [ɹ] next to each other, Turkish speakers find this combination almost impossible to pronounce without adaptation. Thus, Turkish speakers will modify the pronunciation by inserting a vowel in between the consonant clusters [g] and [ɹ] resulting in the final pronunciation [gɯɾafiti].

3.3.1 choosing a vowel

The need and reason for inserting a new vowel into a word with consonant clusters has already been discussed, but, when considering vowel epenthesis, there is another key question that needs to be addressed. How do native speakers of Turkish decide which vowel is inserted into these borrowed words? When it comes to loanword phonology, perceptual limitations play a big role in what is and what is not pronounced accurately. When people do not recognize a certain sound, they will hear or pronounce the sound in their own phonology that is most similar to the foreign sound. Many times this is all it takes to decide which vowel to use to insert- choosing the known vowel that is most similar to the foreign one. Often, though, the inserted vowel is a “default” vowel that is very easy for the native speaker to pronounce. It is the vowel a speaker will resort to as a filler. For example, in English the sound [ə] or “uh” is used as a filler, and it eases pronunciation when replacing other more complicated vowel sounds in a word like “consonant” where the middle “o” is generally pronounced “uh” (a more central, relaxed sound than “oh”). Sometimes, though, the process of deciding which vowel to insert can be much more involved. For Turkish speakers, it goes all the way back to a unique characteristic of the language that is known as vowel harmony.

3.4 vowel harmony

3.4.1 spreading left to right

According to Abushihab in his analysis of some of the differences between Turkish and English, “Vowel harmony is a phonological process which determines what vowel will appear in all but the first syllable of a word”.⁵ This causes all vowels to agree with each other by grouping similar sounds into the same category. In the following examples, two different categories of vowels will be addressed. The first category takes an ‘e’ in the suffix. This category involves the vowels [e, i, ö, and ü]. The second category takes an ‘a’ in the suffix. These vowels are [a, ı, o, and u]. The vowel that determines the category is the last vowel in the root of the word. The category that this vowel is classified under will spread to all the vowels subsequent to it. The word *evinizde*, meaning ‘at your house’, is a perfect example of this spreading. The vowel ‘e’ in the root word *ev*, ‘house’, affects all the affixed vowels, making them all part of the same [e, i, ö, ü] category-- *Ev-iniz-de*, literally translated “house-your-at.” This shows that Turkish vowel harmony is spreading from left to right. Affixes that are attached to the end of words in Turkish, an agglutinating language, will use vowels that are in the same category as the final vowel in the root.

3.4.2 pluralization

Pluralization in Turkish shows a clear picture of how this works. To make a noun plural, the suffixes *-lar* or *-ler* are added to the noun, just like *-s* is in English. The factor that determines which one of the two is used is the final vowel in the root noun. The vowels [e, i, ö, ü] call for the *-ler* suffix, and the vowels [a, ı, o, u] call for the use of the *-lar* suffix. The word *gün*, or ‘day’, has an [ü]. So, to make it plural the suffix *-ler* is added, making it *günler* ‘days’. The word *radio* ‘radio’, though, has an [o] at the end of the word. The plural will then follow the ‘a’ category, making it *radıolar* ‘radios’.

4. Loanwords and Vowel Harmony

This vowel harmony phenomena has been found to affect the adaptations on loanwords. There are three steps that loanwords undergo during this process of change. First, foreign vowel sounds are adapted to fit the Turkish phonological system. A word like “picnic” uses the [ɪ] sound, which does not exist in Turkish. Therefore, Turkish speakers will replace it with a similar sound that they do have- [i], making the final word [piknik]. Similarly, in the word culture, a [ə] is used like this [kəltʃəɾ]. This sound is non-existent in Turkish, so they replace it with their own vowel. This makes the word *kültür*, phonetically represented as [kültʃɾ]. These strange vowels seem more difficult for English speakers to pronounce, but Turkish speakers say them with much greater ease.

Second, when a vowel is inserted into the word, it tends to harmonize with the vowel nearest it in the root. The word *stüdyo* ‘studio’ provides a representation of this. In English, the word contains a consonant cluster *st-* and the pronunciation is written as [studioʷ]. The Turkish pronunciation inserts a harmonizing vowel that is exactly the same as the one in the root word. The pronunciation then becomes [sutadio]. The same is true for the word *prins* ‘prince’ which contains a consonant cluster *pr-* that is fixed through vowel epenthesis. However, instead of simply adding a duplicate of the root vowel like in the above example, the new vowel in this word is one that comes from the same category of vowels. The inserted vowel [i] harmonizes with the ‘e’ sound [e], making the pronunciation [pirəns] .

Third, the adapted words will then follow the normal rules of vowel harmony when affixes, like those marking plurality, are added. Native speakers of Turkish do not take on the English plural suffix ‘-s’, because it means nothing to them. Instead, they borrow only the singular form of the noun and, as with a native word, apply their own pluralization rules. For example, the word *iskelet* ‘skeleton’ becomes *iskeletler* ‘skeletons’, because the vowel harmony rules calls for use of the [e, i, ö, ü] category and the *-ler* plural suffix.

The word *restoran* ‘restaurant’ shows a similar process of pluralization, but it was first altered according to pronunciation and consonant cluster variation. For easier pronunciation by Turkish native speakers, the vowel sound [o] was used instead of the [ə] between the ‘st’ and the second ‘r’. The word-final consonant cluster ‘-nt’ was fixed through deletion as the ‘t’ was deleted, leaving Turkish with just an ‘n’. Finally, the word is made plural by following native Turkish rules of vowel harmony. Because the last vowel in the root is an ‘o’, the vowel category

used in the root is the ‘a’ [a, ɪ, o, u] category. The plural in Turkish is then *restoranlar*.

As loanwords undergo these processes and from examples like “skeleton” and “restaurant”, the researcher finds that loanwords are, in fact, fully adopted into the receiving language. The fact that native Turkish speakers use their own form of plurals and not the English ‘-s’ shows that they consider these borrowed words part of their own language. Though they originate in countless languages like French, Arabic, and English, loanwords have been completely incorporated into Turkish. From the way the words are adapted to fit that language, much can be learned about Turkish vowel harmony and Turkish phonology in general. The rules that have been applied to the loanwords in instances of pluralization bring the words to a new level. Through systematic coping strategies, loanwords become part of the native vocabulary.

5. Conclusion

After having defined what loanwords are and shown how and why they are used, the interconnectedness of cultures today and the specific processes of change related to loanword phonology are very evident in English to Turkish word borrowing. Loanwords must be altered to fit the rules of the receiving language. In this study, the consonant cluster allowance for English was contrasted with that of Turkish, thus revealing the need for adaptations like substitution, deletion, and epenthesis. An interesting rule in the Turkish language, vowel harmony, was important to the epenthesis process as it was a factor in determining which vowel native speakers inserted. These adaptations reveal aspects of Turkish phonology, such as vowel harmony, and their implications on loanwords. Through all of the research for this paper, it is clear that adaptations of loanwords are not random, and that loanword phonology gives a clear picture of what the systematic rules that native Turkish speakers employ look like.

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