

Effects of Co-Articulation on Pakistani English: A Case Study of Multilingual Speakers in Islamabad

Abstract

The postmodern era is linguistically hybrid since the speakers of different languages show the characteristics of Assimilation, Elision and Dissimilation in their everyday speech. This study intends to unravel these patterns in the English of Pakistani Punjabi speakers employing Generative Phonology as the main theoretical framework for the study. For the said purpose, 24 Punjabi native female speakers have been selected to analyze the production of English words in their connected speech to investigate the effects of coarticulation. As the phonemic inventory and phonotactic constraints of Punjabi and English are different, it is assumed that the Pakistani English speakers whose L1 is Punjabi apply the Punjabi phonotactic constraints on English which causes differences in co-articulatory process in their L2 production. The findings suggest that Punjabi speakers use assimilation, elision, dissimilation while speaking English, though the patterns vary from person to person.

Key words: *Coarticulation, Pakistani English, Generative Phonology*

INTRODUCTION

Pakistan has sixty-nine languages with fifteen major languages, including English. Factors like hybridity, globalization and technology have added to the use and significance of the English language in contemporary times. As a result, English has gained the status of global language and at present is widely acknowledged as a lingua franca. This rapid spread of English as lingua franca has resulted in the emergence of many varieties and dialects all over the world. Similarly, in Pakistan, English has been localized and nativized, thus enjoying a high official status along with the national language Urdu. As English in Pakistan has gone through an evolutionary process over the last century, the stage of deviations, inter-language and deficient varieties is over, and Pakistani English (PE) has assumed its independent entity among other non-native varieties.

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The present study investigates the aspects of assimilation, elision and dissimilation in the spoken English of Pakistani Punjabi native speakers. As the study is specific to the Pakistani variety of English, therefore, a sample comprising twenty-four female undergraduate/graduate students studying at Fatima Jinnah Women University, Rawalpindi having Punjabi as their native language, were purposively selected to obtain speech samples based on a dialogue prepared by the researchers. The features of assimilation, elision and dissimilation including L1 interference employing Generative Phonology (Chomsky & Halle, 1968) as analytical framework for the study have been analyzed to identify and investigate how the above mentioned features are followed in spoken English of Pakistani Punjabi native female speakers.

LITERATURE REVIEW

Punjabi is the most widely spoken language in Pakistan, being the native language of 44% of its population and eleventh most spoken language in India. Punjabi is considered as the ninth most widely spoken language in the world as according to the Ethnologue 2005 estimate, there are 130 million native speakers of the Punjabi language. Assimilation, elision and dissimilation are the most frequently occurring features of connected speech in almost all the languages of the world. However, these phenomena are rule bound and language specific though affected by particular phonotactic constraints of native language of speakers when it is analyzed with particular reference to L2 use employing Generative Phonology (1968) as conceptual framework. Generative Phonology, being one of the significant theories of Phonological perspectives, has highlighted the aspect of L1 influence on L2 by considering assimilation, elision, and dissimilation features of connected speech. Generative Phonology (1968) has its grounds in Generative Grammar by Chomsky and Halle (1968) basing its main notion on a finite set of rules resulting in infinite structures by operationalizing at two levels; 1) Phonemic Representation also known as D-structure and 2) Phonetic Representation also known as S-Structure. According to this theory, perception and production go hand-in-hand to create meaningful utterance. The main philosophy is derived from Distinctive Feature Theory's (DFT) concept of feature that is abstract and binary in nature (Jakobson et al. 1941-1956). Major categories that Generative Phonology considers while carrying out a phonological analysis of sounds are assimilation, deletion, dissimilation, insertion and metathesis. Generative Phonology is concerned with two types of rules; 1) optional and 2) obligatory. Obligatory rules (i.e. nasalization and aspiration) as the name depicts, have to be followed as they are mandatory in all situations as far as standard rules of any language particularly English language is concerned. However, optional rules (i.e. assimilation, elision, dissimilation, insertion and metathesis) may vary under the influence of L1 on L2.

These major categories are not isolatory phenomena but are rather part and parcel of connected speech and known as coarticulation effects. Co-articulation can simply be

defined as the articulation of two or more speech sounds together, so that one influences the other. It is the process of coarticulation where the aspects of assimilation, dissimilation and deletion occur as its divisions. For instance, in the process of connected speech pronunciations, the nearing/surrounding sound would get influenced having similarity, reduction, deletion or dissimilarity (Nathan, 2008; Roach, 2001). Less effort is needed at articulatory level to pronounce similar sounds together while more effort is required for the pronunciation of dissimilar sounds because when the process of dissimilation works on the neighboring segment feature, it avoids a segment systematically.

According to Cho (2004), Co-articulation works actively on both vowels and consonant sounds, henceforth, according to Chen et. al. (2007) and Li (2008) the consonant to a vowel would also make this process active. Therefore, co-articulation may be viewed as a universal phenomenon circumventing the previous results in which co-articulation at specific degree or type cannot be found at a huge level in any language (Farnetani, 1999). Moreover, the cross-language variation is very important in this phenomenon having the differences amongst the various degrees and patterns, significantly making it a pervasive process. According to Ohman (1966), the co-articulation patterns act differently in different languages and Beddor (1993) argues that among the all languages of the world, at the level of nasalization process, the process of coarticulation would occur frequently at extreme level. Henceforth, Ladefoged (2010) argues that refined as in English, nasalization and its degree would differ from language to language (as cited in Kluge *et al.*, 2009). To gain ease in the articulatory process, the speaker often makes sounds accidentally through distortion of distinctiveness; this is known as assimilation. Assimilation has two main features or kinds to be divided into; a) progressive assimilation, b) regressive assimilation, and these would base on the concept of one-another direction according to Brannan & Weiss (2007).

In progressive assimilation, a sound follows a sound, which is often very similar by observing the similarity of the following sound. For instance, the sound /n/ would be similar to the sound /m/ in ‘Happen’ in English language as follows, for instance, Dretzke (2008) exemplifies it as; /hæpn/-to-/hæpm/. On contrary, in the process of regressive assimilation, a preceding sound throw its influence on the following sound, as a result, the original sound changes into a new sound, Collins and Mees (2003) exemplifies it as; /waɪt pepə/-to-/waɪp pepə/

In coarticulation, the process of elision or deletion refers to the omission of one or more sounds (such as a vowel, a consonant, or a whole syllable) in a word or phrase. Often, sounds are deliberately elided to make a word easier to pronounce. However, in the English language, elisions come naturally as spoken by native speakers and are

often described as "slurred" or "muted" sounds. However, not all elided words are contractions and not all contractions are elided words (for example, 'going to' → 'gonna': an elision that is not a contraction; 'can not' → 'cannot': a contraction that is not an elision). Elision takes place at the following three positions, a) initial position: deletion involves silent letters (honest) and contracted forms (I'm) et cetera, b) middle position: deletion includes the elision of sounds in the middle of a word (friendship into frienship). It also deals with /r/ sound elision, a concept of rhoticity, however, c) the final position deletion removes the final sound at the end of a word (car into /ca/, must into /mus/ et cetera).

While talking about L1 influence on L2, Best & Tyler (2007) argue that the perception of people is often worked through L1 into L2 perceiving the segments of sounds from L1 into L2. They would amalgamate the L1 sounds into L2 consciously or unconsciously (Flege, 1995). Flege (1995) argues that L2 consonants and vowels are often perceived differently from the native speaker by the non-native speakers of any language (p. 237). The production of sound into both L1 and L2 often differs, therefore, perceived differences exist at significant levels in second language sound systems (Flege, 1995). For instance, nasal consonants which are word-final in English could be identified similarly by Brazilian learners i.e. /m/ and /n/ (Kluge et al., 2007; Kluge, 2010). Moreover, nasal perceptions in English are categorized differently into the Korean and Japanese language speakers (Aoyama, 2003).

Due to the process of nativization, new varieties and dialects of English have emerged (Boltan, 2004). Kachru (1982) termed the international utilization of English as *World Englishes*. Pakistani English has distinctive features at phonological, grammatical, syntactic and lexical levels (Mahboob and Ahmar, 2004). At the level of phonology, Raza (2008) claims that speakers of English in Pakistan often utilize the phonological and phonetic features of their mother tongue into English speech production, thus exploring some distinctive features, i.e. rhoticity and epenthesis. For instance, various Pakistani linguists consider Pakistani English as a rhotic variety. Mehboob (2004) argues that Pakistani speakers often pronounce that rhotic /r/, which is a sociolinguistic factor (Rahman, 1990) which would not be seen in the acrolectal variety of Pakistani English. Therefore, rhotic factors would present into mesolectal and basilectal varieties. Moreover, Retroflexion of /t/ and /d/, RP alveolar are often replaced with retroflex stops (i.e. "dress" /dres/ and "strut" /ɪstrʌʈ/), having /d/ and /t/ retroflexion (Mahboob, 2004). On the other hand, in Pakistani English, dentalization of /t/ and /d/ is common. For instance, RP dental fricatives are often replaced with dental stops i.e. 'then' /den/ and "north" /nɔ:rt/(Mahboob, 2004) as a phenomenon which is a prominent and significant feature of Englishes in South Asia (Kachru, 1992).

RESEARCH METHODOLOGY

This research is qualitative in nature employing Generative Phonology as its conceptual framework to analyze the phonological variation found in spoken English of under/graduate female students with Punjabi as their native language. However, quantification of data is done to validate the findings resultings from qualitative analysis in order to add more validity and reliability to research findings. The following categories employed from Generative Phonology (Chomsky & Halle, 1968) have been operationalized as analytical devices for the purpose of analysis:

1. Assimilation
2. Elision
3. Dissimilation
4. L1 influence on L2; Insertion, accent and pronunciation

Sampling

As mentioned earlier, a sample comprising twenty four female students of Bachelors and Masters English (twelve each) between the ages of eighteen to twenty five, studying at Fatima Jinnah Women University, Rawalpindi having Punjabi as their Mother Tongue, is selected. The present study deals with the spoken English of young Punjabi females whose education is in process with at least Higher Secondary School education in common. The study has incorporated purposive sampling to choose students with Punjabi as their native language to analyze the influence of their L1 on their L2 (English).

Data Collection Instruments

An English dialogue (based on words that tend to assimilate and delete in RP) was given to the participants to analyze the aspects of assimilation, elision and L1 interference in the spoken English of Pakistani Punjabi native speakers. The variables included age, gender, medium of education and mother tongue have been considered. The data was recorded and analyzed keeping in view the objectives of the research.

Procedure of Data Collection

In order to analyze the phenomenon of coarticulation in spoken English of Pakistani Punjabi native speakers, the researcher has designed a dialogue to be performed in pairs. For the said reason, the purposively selected twenty-four students of Bachelors and Master in English are divided in twelve pairs respectively. Every pair was given the same dialogue to perform which was recorded using a smartphone.

RESULTS AND DISCUSSION

Recordings of English spoken by the sample population are made using a dialogue with special emphasis on words that tend to assimilate and to be deleted in connected speech. The sounds produced by more than fifty percent of the sample would be

treated as representing the speech of Punjabi Pakistani speakers' English. The pronunciation of respondents have depicted varied patterns of assimilation, deletion, elision and also reflected aspects of L1 influence (Punjabi) on English language. As there were total twelve pairs (twenty-four students of Bachelors /Master in English with Punjabi as their L1) who participated willingly as source for data collection, therefore, analysis is conducted accordingly (pair wise) keeping in view the following aspects of Generative Phonology:

Assimilation

During analysis, it is found that assimilation is a commonly occurring aspect in the spoken English of Punjabi Pakistani speakers as all the respondents assimilated words during the dialogue, though it was observed that diverse patterns of assimilation took place during their conversation. The following is the tabular analysis of assimilation that took place in the speech of Punjabi speakers' dialogue in English:

Table: 1 (Analysis of Bachelor of English Punjabi Native Speakers Recordings)

Pairs of BS English Punjabi Speakers	Sounds Assimilated	Type of Assimilation	Total/partial Assimilation
Pair-1	Bad English as Bat English	Progressive	Partial
	Proud parents as Proup parents		
	Good girl as gug girl	Regressive	Total
	Thought provoking as thoup provoking	Regressive	Total
	Job ventures as Jov ventures	Regressive	Total
Pair-2		Regressive	Total
	Job prospects as Jop prospects	Regressive	Total
	Good girl as gug girl		
	Proud parents as proup parents	Regressive	Total
	Thought provoking as thoup provoking	Regressive	Total
	Can make as cam make	Regressive	Total
	Good speaking skill as goot speaking skill	Regressive	Total
Pair-3		Progressive	Partial
	Good girl as gug girl	Regressive	Total
	Proud parents as proup parents	Regressive	Total
	Thought provoking as thoup provoking	Regressive	Total
	Can make as cam make		
	Added bonus as addet bonus	Regressive	Total
	Good friend as gub friend	Regressive	Partial
	Now that my as now thath my	Progressive	Partial

		Progressive	Partial
	Should be as shoub be	Regressive	Total
	Added bonus as addet bonus	Progressive	Partial
	Job prospects as Jop prospects		
	Good girl as gug girl	Regressive	Total
	Proud parents as proup parents		
Pair-4	Thought provoking as thoup provoking	Regressive	Total
		Regressive	Total
		Regressive	Total
	Job prospects as Jop prospects	Regressive	Total
	Good girl as gug girl		
	Proud parents as proup parents	Regressive	Total
	Thought provoking as thoup provoking	Regressive	Total
Pair-5	Should be as shoub be	Regressive	Total
		Regressive	Total
	Bad English as Bat English	Regressive	Total
	Proud parents as Proup parents		
	Good girl as gug girl	Regressive	Total
	Thought provoking as thoup provoking	Regressive	Total
Pair-6	Job ventures as Jow ventures	Regressive	Total
	Not be available as nob be available	Regressive	Total
		Regressive	Total

Table: 2 (Analysis of Masters of English Punjabi Native Speakers Recordings)

Pairs of Ma English Punjabi Speakers	Sounds Assimilated	Type of Assimilation	Total/partial Assimilation
Pair-1	Should be as shoub be Good girl as gug girl	Regressive	Total
Pair-2	Good speaking as gug speaking Prod parents as proup parents	Regressive Progressive	Total Total
Pair-3	Should be a shoulb be Good girl as gug girl	Regressive Regressive	Total Total
	Thought provoking as Thoup provoking	Regressive Regressive	Total Total
	Should be as shoub be Job prospects as Jop prospects	Regressive	Total

Pair-4	Good girl as gug girl	Regressive	Total
	Proud parents as proup parents		
		Regressive	Total
		Regressive	Total
	Thought provoking as Thoup provoking	Regressive	Total
Pair-5	Should be as shoub be	Regressive	Total
	Job prospects as Jop prospects		
	Good girl as gug girl	Regressive	Total
	Proud parents as proup parents		
	I am good as Im goog	Regressive	Total
		Regressive	Total
		Progressive	Total
Pair-6	Thought provoking as Thoup provoking	Regressive	Total
	Good girl as gug girl	Regressive	Total
	Job ventures as jow ventures	Regressive	Total
	In life as il life		
		Regressive	Total

From these tables, it is clear that assimilation is the most commonly occurring feature of coarticulation in the English language. Moreover, the tabular analysis also depicts that Regressive assimilation is more frequent as it has taken place for **50** times whereas Progressive Assimilation has taken place only **07** times in the conversation of BS /MA English Punjabi speakers. Similarly, the phenomenon of total assimilation as compared to partial assimilation is more common as the difference is **51 Vs. 06** respectively.

Dissimilation

As far as Dissimilation is concerned, it can be analyzed from the aspect of assimilation in the form of the dis-familiarity of two sounds. Therefore, if we analyze Tables 1 & 2 displaying the assimilation analysis of Masters and Bachelors of English students whose mother tongue is Punjabi, it is observed that dissimilation does not take place frequently in the spoken English of Punjabi native speakers of Pakistan. As per the analysis there were only two expressions i.e. '*bad English* as *bat English*', '*added bonus* as *addet bonus*' and '*now that my* as *now thath my*' which depict the aspect of dissimilation (dis-familiarity of two sounds).

Elision

Elision means deleting a sound unconsciously for the sake of adding fluency in speech and is one of the most commonly occurring phenomena of coarticulation. The same has been observed during the analysis of recorded conversations of the participants which is reflected in the table given below:

Table: 3 (Analysis of Bachelors in English Punjabi Native Speakers Recordings)

Pairs of BS English Punjabi Speakers	Examples of Elision from Analysis	Sounds Deleted	Position of Elision
Pair-1	Fluent speaker as fluen speaker	/t/	Final
	How about you as how abou you speaking skills as speakin skills	/t/	Final
	I am as M		
	I think as I thin		
	You could perhaps as you coul perhaps	/g/	Final
	I don't want my as I don wan my	/M/	Initial
	We must do as we mus do	/k/	Final
	She and I as She n i	/d/	Final
		/t/ and /t/	Final
		/t/	Final
	/d/	Final	
Pair-2	Fluent speaker as fluen speaker I can devote as I ca devote	/t/	Final
	I am as M	/n/	Final
	I donot want as I don wan	/i/	Initial
	We must do as we mus do	/t/ and /t/	Final
	She and I as She n i		
	Donot forget as dn forget	/t/	Final
	Perhaps as peraps		
		/d/	Final
		/t/	Final
		/h/	Middle
Pair-3	My bad English as my ba English	/d/	Final
	She and I as She n i		
	Birthday as birday	/d/	Final
	I am not a fluent speaker as m no a flen speaker	/th/	Middle
	Parents a parens	/t/ and /t/	Final
		/t/	Final
Pair-4	I am good too as M goo too	/i/ and /d/	Initial & Final
	She and I as she n i		
	I am afraid as M afrai	/d/	Final
	Good friend as gu friend	/i/ and /d/	Initial & Final
	Speaking skill as speakin skill	/d/	Final
		/g/	Final
	Different places as differn places	/t/	Final
	Helpful as hepful		
	We must as we mus	/l/	Middle
	Speaking as speakin	/t/	Final
That will as tha will	/g/	Final	
What do you as wha do you	/t/	Final	
We must as we mus	/t/	Final	

Pair-5	How are you dear as how are you	/t/	Final
	ear	/d/	Final
	She and I as she n I		
	I am afraid as M afrai that	/d/	Final
	Find someone as fine	/i/ and /d/	Initial & Final
	Parents as parens		
	Birthday as birday	/d/	Final
		/t/	Final
		/th/	Middle
	But I can make as bu I ca make	/t/ and /n/	Final
Parents as parens			
Think as thin	/t/	Final	
Pair-6	I don't as I dun	/k/	Final
She and I as she n i	/t/	Final	
I wanted as I wan my	/d/	Final	
You could as cou	/t/ and /d/	Final	
Birthday as birday	/l/ and /d/	Middle & Final	
Donot forget to as dun forge to	/th/	Middle	
That will as tha will	/t/ and /t/	Final	
	/t/	Final	

Table: 4 (Analysis of Masters in English Punjabi Native Speakers Recordings)

Pairs of MA English Punjabi Speakers	Examples of Elision from Analysis	Deleted Sounds	Position of Deletion
Pair-1	I am good as M goo	/i/ and /d/	Initial & Final
	I am as M	/i/	Initial
	I think as I thin	/k/	Final
Pair-2	Fluent speaker as fluen speaker I	/t/	Final
	am as M	/i/	Initial
	I donot want as I don wan	/t/	Final
	World as word		
Pair-3	Find as fine	/l/	Middle
		/d/	Final
	Good as goo	/d/	Final
	She and I as She n i	/d/	Final
	speaking as speakin	/n/	Final
	find as fine	/d/	Final
	must as mus	/t/	Final
	donot as dun	/t/	Final
	I am not a fluent as M not a fluen		
	You could as you cou	/t/	Initial & Final
Afraid as afrai	/l/ & /d/	Middle & Final	
	/d/	Final	
Pair-4	I am not a fluent as M not a fluen	/e/ & /t/	Initial & Final
	You could as you cou		
	Afraid as afrai	/d/	Final

Pair-5	Good friend as gu friend	/d/	Final
		/g/	Final
	What do you as wha do you	/t/	Final
	We must as we mus		
	Do not as dun	/t/	Final
	Speaking course as speakin course	/t/	Final
	Fluent speaker as fleun speaker	/n/	
Pair-6	World as word		Final
		/t/	Final
		/l/	Middle
	I don't as I dun	/t/	Final
	She and I as she n i	/d/	Final
	She might not as she migh not	/t/	Final
	Must as mus	/t/	Final
	I am good as M goo	/d/	Final
	Learning as learnin	/g/	Final

Tables 3 and 4 reflecting the feature of elision, depict that elision is also one of the most occurring features of English connected speech. The data depicts that elision in the speech of Punjabi speakers takes place in all three positions i.e. initial, middle and final. However, deletion in the final position seems to be more frequent as compared to other positions. Elision of sounds /t/ and /d/ is more frequent as compared to other sounds in the spoken English of the participants. The main sounds, which are deleted along with their ratio of elision is shown in the table below:

Table: 5 Ratio of Sounds Elision

Sounds Deleted	Total number of sounds deleted in the conversation
/t/	39 times
/d/	26 times
/n/ and /g/	5 times each
/l/	04 times
/k/ and /th/	3 times each

1. L1 Interference

During analysis, the interference of L1 (Punjabi) on L2 (English) is found. It is observed mainly in the recorded conversation of Masters in English students for the purpose of data collection. L1 interference is reflected mostly in the pronunciation of words like **not**, **venture**, **prospects**, **parents**, **want**, **okay**, **join** et cetera have been mispronounced as *noth*, *ventureay*, *prospectus*, *paaarents*, *went*, *okaaaeey*, *jaain* et cetera. Their pronunciation may be described as stressed and clear in the dialogue. Moreover, one of the participants has used the Punjabi word '*khair*', quite

unconsciously instead of *'well'* and the additional gap filler *'mmm , na'* was also found in the conversation of one pair of MA students.

Following are the findings of the research:

1. The features of coarticulation i.e. assimilation, elision, and dissimilation are common in English speech of Punjabi native speakers who are still studying. However, these features are found more frequently in the conversation of Bachelors of English students as compared to MA English students having Punjabi as their L1.
2. Regressive and Total assimilation are more common as compared to Progressive and Partial Assimilation in the spoken English of Pakistani Punjabi speakers.
3. Elision of /t/ and /d/ sounds is a frequently occurring feature in the spoken English of Pakistani Punjabi speakers. Moreover, elision took place at all three places i.e. initial, middle or final positions.
4. The results depict a degree of L1 (Punjabi) interference upon L2 (English) as Punjabi speakers experience variation not only at the level of phonological features in connected speech but also at the level of accent.
5. It was also observed that all the Punjabi speakers in the study pronounced /v/ sound as /w/ since Pakistani Punjabi English speakers cannot differentiate between the production of /v/ and /w/ (Mahboob, 2004).

CONCLUSION

English is essential for many Pakistani students coming from diverse linguistic backgrounds in Pakistan, as it is the passport for advancement, an official/academic language and has assumed ever-greater significance because of the effects of globalization. However, the vast majority of Pakistani students struggle with it and provide varied structures of pronunciation on the basis of optional rules mainly (Halle and Chomsky, 1968) as it is not their mother tongue and it does not matter that a great many of them do not begin studying it until after they have completed their primary education. For future research, the same phenomenon may be studied from the perspective of other regional varieties by doing a comparative analysis as Pakistan is a language rich country with more than 72 languages being used in its various regions.

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