

A COMPARATIVE STUDY OF PASHTO AND ENGLISH CONSONANTS

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ABSTRACT

The present study is concerned with the comparison of Pashto consonant sounds with English consonant sounds. The study aims to look into both similar and different consonants in both the languages under investigation. It specifically focuses those consonant sounds which are not found in the other language. The study proves that some of the Pashto consonant sounds are not found in Standard Variety of English. While some of the Pashto consonants have the same manner of articulation but different place of articulation. On the other hand, some of the English consonants are not found in Pashto language. While some of the English consonant sounds have the same manner of articulation but different place of articulation in Pashto.

1 Introduction

The present study compares Pashto consonant sounds with English consonant sounds. The importance of English for Pashto speakers to communicate globally has already been established. The transfer from one language to another (L1 to L2) is conceded in phonetics and phonology more than in other systems of the language like morphology and syntax (Dulay, Burt and Krashan, 1982). The similarities and differences between languages influence the overall

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performance level if both the languages are spoken by a single speaker (Odlin, 1989).

The English dialect in this study is the Received Pronunciation (RP). It is considered the Standard dialect known by many names. It is called BBC English, King's or Queen's English or the Public School English. But British phoneticians commonly call it Received Pronunciation (Sethi and Dhamija, 1999). Although it is a minority accent, popular among 10% of the total native speakers of English, yet it has some preference for English speakers over other accents. But the trend of the native speakers of English to prefer this dialect in favour of other dialects is declining by adopting some other local accents (Adam Brown, 1991). The English consonants are compared to Pashto consonants of Yusufzai dialect. Pashto is spoken in Afghanistan as a Native and official language besides Dari. It is spoken in Khyber Pakhtunkhwa, Baluchistan provinces as a native language by a community of its own. It is also spoken in Iran and some other countries as a native language. As a whole Pashto has more than fifty million speakers (Hallberg, 1992; Habibullah and Barbara, 1996). Pashto has four major dialects. But the present study focuses the Yusufzai dialect spoken in most areas of the Khyber Pakhtunkhwa province of Pakistan. This dialect has a prestige over other dialect being the medium of instruction where Pashto is taught as a language (Hallberg, 1992). There has been very little work on Pashto and nearly no work on Yusufzai dialect except a few studies like Rahman (2009). So this study is an effort to compare the Pashto consonants of Yusufzai dialect to English consonants. There has been a detailed study of English phonetics and phonology being the medium of instruction and a global language. But there is no comprehensive works on Pashto. The Previous works in Pashto are mostly concerned with other dialects of Pashto, particularly the western dialects spoken in Afghanistan. The English consonants are taken mostly from the works of Daniel Jones (1972) and Peter Roach (2000).

2 English Consonants

Because of the confusing nature of the English spelling, the correct English pronunciation should not be learnt from the letters of the alphabet, but in terms of phonemes (Peter Roach, 2000). There are

forty four speech sounds in RP. These speech sounds are further divided into consonants and vowels. RP contains twenty four consonant phonemes. Table 1 shows these consonant phonemes.

Table 1 Chart of English Consonant phonemes

	Bilabia l	Labio Denta l	Denta l	Alveola r	Plato- alveola r	Palata l	Vela r	Glotta l
Plosives	p b			t d			k g	
Fricatives		f v	θ ð	s z	ʃ ʒ			h
Affricates					tʃ dʒ			
Nasal	m			n			ŋ	
Lateral				l				
Approxima nt	w				r	J		

Chart of English consonant phonemes adapted from (Peter Roach, 1983; Adam Brown, 1991; Daniel Jones, 1972)

The horizontal rows in the table show the place of articulation, while the vertical columns show the manner of articulation. The pair of sounds with respect to manner and place of articulation are either voiced or voiceless, which are identified in the table above.

2.1 English Plosives

English has six plosive consonant phonemes /p/, /b/, /t/, /d/, /k/, and /g/. The /p/ and /b/ consonant phonemes are bilabial plosive where the lips are pressed together. While /t/ and /d/ are alveolar, where the side of the tongue blade touches the alveolar ridge which is the area behind the front teeth. The /k/ and /g/ are velar as the tongue touches the areas where the hard palate ends and the soft palate begins. All these six plosive sounds exist in pairs bilabial (/p/, /b/), alveolar (/t/, /d/) and velar (/k/, /g/), where the first sound is voiceless while the second one is voiced. When the voiceless plosives begin the word, there is an audible puff of air following the release. These are called aspirated plosives. The aspirated sounds are indicated by superscript [h] following the

symbol for the plosives, for example [p^h], [t^h], [k^h]. These different realizations of the phonemes are called allophones.

2.2 English Fricatives

Received pronunciation has nine fricatives i.e. labiodentals /f/, /v/, where the lower lip is pressed against the upper teeth, dental /θ/, /ð/, where the tip of the tongue touches the upper teeth, alveolar /s/, /z/, where the tongue tip or blade is raised towards the alveolar ridge behind the upper teeth, plato-alveolar /ʃ/, /ʒ/ where the blade of the tongue moves towards the hard palate, and the glottal /h/ where the glottis is wide open and the air passes through the mouth freely. Out of these fricatives /f/, /θ/, /s/, /ʃ/ are voiceless, while /v/, /ð/, /z/, /ʒ/ are voiced. The eight English fricatives exist in the pairs, labiodentals (/f/, /v/), dental (/θ/, /ð/), alveolar (/s/, /z/) and plato-alveolar (/ʃ/, /ʒ/).

2.3 English Affricates

Received Pronunciation has two plato-alveolar affricate phonemes /tʃ/, /dʒ/ where the tongue blade touches the alveolar ridge and hard palate. The sound /tʃ/ is voiceless, while /dʒ/ is voiced. The /t/ component of /tʃ/ has a place of articulation rather further back in the mouth than the /t/ plosive usually has.

2.4 English Nasals

There are three nasal sounds in Received Pronunciation. These are the bilabial /m/ where both the lips are pressed together, alveolar /n/ where the tongue tip or blade is raised towards the alveolar ridge behind the upper teeth and velar /ŋ/ where the tongue back is raised towards the velum. For the production of nasal sounds the soft palate is lowered and so the air escapes through the nose.

2.5 English Liquids

There are two Liquids in Received Pronunciation. They are post-alveolar /r/ where the tip of the tongue approaches the alveolar ridge but not making a clear contact, and alveolar /l/ where the tip of the tongue touches the alveolar ridge. /l/ is a lateral consonant. There is

a complete closure between the center of the tongue and the alveolar ridge that is why the air escapes through the sides of the mouth.

2.6 English Glides

The alternative name for a glide is semi-vowel. They are called glides because there is no clear contact any kind between the articulators. There are two glides in RP. They are bilabial /w/ where the lips are closely rounded and palatal /j/ where the front of the tongue is raised towards the hard palate.

3 Previous Work in Pashto Phonetics and Phonology

There has been very little work in Pashto grammar in general and phonetics and phonology in particular, to carry further the grammatical tradition of Pashto language. That is why we will discuss here all those resources which are available and helpful to us in any sense. The work of the Tegey and Robson (1996) is based on the central dialect of Pashto which is spoken in the main areas of Afghanistan like Kabul. The authors have discussed the consonants and vowels of Central dialect, but they have highlighted the differences from other dialects of Pashto, from the point of view of speakers. They have also discussed their phonological characteristics in more technical terms. According to this description, there are thirty two consonants in the central dialect. They have listed Pashto consonants in four different groups. According to them, the first group is of those consonants, which are similar to English. These consonants include

/b/, /tʃ/, /dz/, /f/ /g/, /h/, /dʒ/, /k/, /m/, /p/, /s/, /ʃ/, /ts/, /w/, /j/, /z/.

In the second group, they have included the consonants which are somewhat different from English consonants. These consonants are /t/, /d/, /l/, /n/. In the thirds group there are consonant sounds that are very different from English. These consonants are symbolized by them as /ʃ/, /ɣ/, /h/, /x/, /q/, /r/, /kh/, /h/, /ɣ/. In the last group they have included Retroflex consonants found in Pashto language. The Retroflex consonants listed by them are /t̪/, /d̪/, /ŋ̪/, /ɽ/. The following table shows these consonant phonemes in the Central dialect.

Table 2 Pashto consonant phonemes

	bilabial	Dental	palatal	retroflex	velar	Uvular	pharyngeal	glottal
		l	l	x	r	r	al	l
Plosives	p b	t d		t ɖ	k g	q		ʔ
Fricative	f	s z	ʃ x		kh ɣ		ħ ʕ	h
Affricate		ts dz	tʃ dʒ					
Nasals	m	n		ŋ	ŋ			
Trill		r						
Flap				ɾ				
Literal		l						
Semivowel	w		j					

The chart of consonants of Central (Kabul) dialect of Pashto proposed by Tegey and Robson (1996: 13)

According to Tegey and Robson, the plosive sounds in this dialect include the voiceless bilabial /p/, and voiced /b/ the voiceless dental /t/, and voiced /d/, the voiceless Retroflex /ɖ/, and voiced /d/, the voiceless velar /k/, and voiced /g/, the voiced aspirated uvular /q/, and the glottal stop /ʔ/. The fricative listed by them are the voiceless labiodental /f/, the voiceless dental /s/, and voiced dental /z/. Other fricatives include the voiceless palatal /ʃ/, and voiceless palatal or front velar /x/, the voiceless velar /kh/, and voiced velar /ɣ/, the voiceless glottal /ħ/, and voiceless pharyngeal /h/, and voiced pharyngeal /ʕ/. The affricates proposed by authors are the voiceless palatal /tʃ/, and voiced palatal /dʒ/, the voiceless dental /ts/, and voiced dental /dz/. The nasals include the voiced bilabial /m/, and voiced dental /n/, the voiced retroflex /ŋ /, and voiced velar /ŋ/. Among the semi-vowels, Pashto includes the voiced bilabial glide /w/ which is different from English bilabial glide /w/ in as the lips are not rounded here, but it is pronounced with spread lips; and voiced palatal glide /j/, the voiced dental lateral /l/, and voiced dental tap or trill /ɾ/, and voiced retroflex flap /ɾ/.

Susannah (2004) proves that phonemic glides do exist, and provides a cross-linguistic representation for them which distinguish them from other segments like vowels. She further presents a typology of mapping from phonemic to surface or phonetic vocoids and tries to

suggest criteria to establish the existence of phonemic glides. She has listed nine languages that have phonemic glides, and Pashto is one of those languages. The work of the author is based on the work of Penzle (1955) which is mostly on Western or Kandahar dialect along with the work of Bell and Saka (1983) that is mostly on Eastern or Kabul dialect. Whatever might be the source and base of discussion, but there are some interesting comments on Pashto phonetics and phonology. In this study Pashto is included because it has a wide variety of normal consonant clusters as in some other languages, along with reverse sonority clusters. The consonant inventory proposed by the author adapted from Penzle (1955) is given in the table below.

Table 3 Pashto consonant phonemes

	Labial	Dental	Alveolar	Retroflex	Velar	Pharyngeal
Stop	p b	t d		ʈ ɖ	k g	
Affricates		ts dz	tʃ dʒ			
Fricatives		s z	ʃ ʒ	ʂ ʐ	x ɣ	ħ
Nasals	m	n		ɳ		
Liquids		r l		ɽ		
Glides	w					

Consonant phonemes inventory of Pashto by (Levi Susannah 2004 adapted from Penzle 1955).

According to Levi Susannah, Penzle (1955) describes the fricative /s/ and /z/ as dental, and /ʃ/ and /ʒ/ as alveolar. But Bell and Saka (1983) describe all these phonemes to be alveolar. The authors are also of the view that the phonemes /f/, /ʕ/, /ħ/ and /q/ occur in formal speech only. The study includes the voiceless bilabial /p/ and voiced bilabial /b/, the voiceless dental /t/ and voiced dental /d/, the voiceless retroflex /ʈ/ and voiced retroflex /ɖ/ the voiceless velar /k/ and voiced velar /g/. Pashto fricatives proposed in the study include the voiceless dental /s/ and voiced dental /z/, the voiceless alveolar /ʃ/ and

voiced alveolar /z/, the voiceless retroflex /ʒ/ and voiced retroflex /z/. The voiceless velar /x/ and voiced velar /ɣ/ and voiceless pharyngeal fricative /h/. There are four affricates in Pashto according to this author. These Pashto affricates include the voiceless dental affricate /ts/ and voiced dental affricate /dz/, the voiceless alveolar affricate /tʃ/ and voiced alveolar affricate /dʒ/. The author considers the affricates /tʃ/ and /dʒ/ to be alveolar. There are three nasals in Pashto. These nasals include the voiced bilabial /m/, the voiced dental /n/ and the voiced retroflex /ŋ/. The author considers dental voiced nasal /n/ to be a retroflex nasal. According to the author the liquids in Pashto are the voiced dental /l/ and the voiced dental /r/ and the voiced retroflex /ɽ/. According to the author the only phonemic glide is the bilabial /w/. The author does not consider the palatal /j/ as phonemic in nature, but existing on the surface, so not a part of the phonemic inventory, in the light of the Penzle's work.

Khyal Bukhari (1960) has worked a lot in Pashto language, but most of his work is morphological and syntactic in nature. Khyal Bukhari has not used any phonetic representation of Pashto sounds, but the overall treatment of Pashto language is well enough to specify some of the phonetic and phonological features of Pashto in general and Yusafzai dialect in particular. The focus of the author is on Yusafzai dialect, although he describes the major differences with other dialects as well. The author specifies the following consonant sounds in Pashto without talking about their place and manner of articulation, so we will just refer to sounds in Yusafzai dialect without any reference to their place and manner of articulation. The consonants considered by the author are

‘پ’ /p/, ‘ب’ /b/, ‘ت’ /t/, ‘د’ /d/, ‘ت’ /t/, ‘د’ /d/, ‘ک’ /k/, ‘گ’ /g/,
 ‘ق’ /q/, ‘خ’ /x/, ‘ځ’ /ɣ/, ‘ح’ /h/, ‘ص’ /s/, ‘ث’ /s/, ‘ز’ /z/, ‘ض’ /z/,
 ‘ظ’ /z/, ‘ش’ /ʃ/, ‘چ’ /tʃ/, ‘ج’ /dʒ/, ‘م’ /m/, ‘ن’ /n/, /ŋ/, ‘ڼ’ /ŋ/, /l/,
 ‘ر’ /r/, ‘ږ’ /ɽ/, ‘و’ /w/, ‘ی’ /j/.

Unlike Hallberg, he does not consider different letters of Pashto to be spelled differently. For example the sound [f] which is mostly in borrowed words is pronounced as [p], as it is one of the native sounds of Pashto. There is no (ه) in Pashto language, so the words taken from Urdu etc. with these sounds are pronounced without (ه), e.g. ‘brother

’بهائی’ [bai], ‘پهانسى’ [pa:nsi] which are aspirated in Urdu, but not in Pashto.

Fricatives	f	s	ʃ	x	H
		z		y	
Affricates			tʃ		
			dʒ		
Nasals	m	n	ɳ	ŋ	
Lateral		l			
Flaps		r	ɽ		
Semivowels	w		j		

Hallberg (1992) conducted a Sociolinguistic Survey of Northern Pakistan, where almost more than twenty five languages are spoken. During his study, he investigated the similarities between different dialects of these languages, particularly the different dialects of Pashto Language. The dialect considered the standard dialect among these dialects of Pashto, with which we are concerned here, is Yusafzai dialect. Although his study was mostly on morphological grounds than on phonetic and phonological grounds, but the charts of consonants and vowels which he proposed for all dialects of Pashto in general and Yusafzai dialect in particular is helpful for us in so many ways. The chart of Pashto consonant sounds proposed by him is given below.

Table 4 Pashto Consonants

	Bilabial	Labio-dental	dental	Alveo-palatal	Retro-flexed	Velar	uvular	Glottal
Stops	p		t		ʈ	k	q	
	b		d		ɖ	g		

Table 4 showing Pashto consonants Of Yusafzi dialect Proposed by (Hallberg, 1992).

This chart was proposed on the basis of a Standard List of 210 lexical items which was collected from speakers of different dialects of Pashto at various locations to represent the regional varieties. The author further checked these lexical items with the published data. The two lexical items were considered similar if half of the segments compared were the same and the remaining segments rather similar. So the phonetic chart proposed by the author can be applied to the dialect with which we are concerned here.

The work of Madiha Ijaz (2003) is concerned with the verification of inventory of Yusufzai dialect. The focus of the study was to check the presence of retroflex nasal /ŋ/ dental affricates /ts/ and /dz/, retroflex oral stop /ɽ / and /ɽ̄ /, palatal fricatives /ʃ / and /ʒ / and the controversy regarding /v/ and /w/, along with the vowel specification and comparison of phonemic inventory with Urdu.

Table 5 Pashto Consonants

	Bilabial	Labio-dental	dental	Alveolar	Retro-flexed	Post-alveolar	Velar	Glottal
Plosives	p b		t d	ɽ ɽ̄			k g	H
Fricatives	f			s z		ʃ tʃ	x ɣ	
Affricates						dʒ		
Nasals	m			n	ŋ			
Lateral				l				
Flaps				r	ɽ			
Semivowels	w					j		

Table 5 showing Pashto consonants Of Yusufzai dialect Proposed by Madiha Ijaz

The Pashto plosives in the study are the voiceless bilabial /p/ and voiced bilabial /b/, the voiceless dental /t/ and voiced dental /d/. The voiceless alveolar /ɽ/ and voiced alveolar /ɽ̄/. The voiceless velar /k/ and voiced velar /g/, and the glottal /h/. The Pashto Fricatives include the voiceless labiodentals /f/, the voiceless alveolar /s/ and voiced alveolar /z/. The voiceless post-alveolar /ʃ/ and the voiceless velar /x/ and voiced velar /ɣ/. There are two affricates in Pashto proposed in this study. These affricates are the voiceless post-alveolar /tʃ/ and voiced post-alveolar /dʒ/. There are three nasal sounds in Pashto. They include the bilabial /m/, alveolar /n/ and retroflex / ŋ /. The author does not include /ŋ/ as a nasal sound in Pashto in the list of nasals proposed by her. Among the approximants the glides bilabial /w/ and post-alveolar /j/, the retroflex flap/ɽ/ and alveolar trill /r/ and alveolar /l/ are included in the study.

4 Summary of the Previous Works in Pashto

The previous works in Pashto can be summarized as follows. There is no difference of opinions in the previous studies with respect to the manner of articulation in the consonant phonemes, but the difference is mainly with respect to the place of articulation of some phonemes. The consonant phonemes /p/, /b/, /t/, /d/, /k/, /g/, /q/, /ɣ/, /h/, /x/, /m/, /n/, /ɽ/, /l/, /r/, /w/ are included in all studies without any difference of opinions regarding their place or manner of articulation. In the consonant phonemes /ŋ/, /j/, /ɳ/, /ʃ/, /tʃ/, /dʒ/, /s/, /z/, /f/, /ɸ/, /t/ and /d/ the difference of opinions is found in terms of their place of articulation.

4.1 Consonants in Yuzafzai Dialect of Pashto

In the light of the above gaps in previous studies with help of the data from native speakers of Yuzafzai dialect with their acoustic analysis, the following consonants are found in this dialect of Pashto.

Table 6: The chart of consonants of Yuzafzai Dialect of Pashto

	Labial	Labio-dental	dental	Alveolar	Retroflexed	Post-alveolar	Velar	uvular	Glottal
Plosives	p b		t _r d _r		t d		k g	q	
Fricatives			S Z			ʃ	x ɣ		H
Affricates						tʃ dʒ			
Nasals	m			n	ɳ		ŋ		
Lateral				l					
Flaps					ɽ	r			
Semivowels	w					j			

5 Comparison of Pashto and English Consonants

The gap analysis above in different studies related to Pashto phonology help us to specify the difference in different varieties of Pashto in terms consonant sounds. The gap analyzed and the consonant

sounds found in Yusufzai dialect once determined in this study are compared with the consonant sounds of standard dialect. The following table shows the consonant sounds found in both the languages. This table shows the similarity in terms of both place and manner of articulation. The consonant sound is assumed to be similar in both the languages if it has the same place and manner of articulation. The following table shows those sounds which are found in both the languages with the same place and manner of articulation. No difference is found in the following consonant sounds.

Table 7 showing similar English and Pashto consonants

		Bilabial	Dental Labio Dental	Dental	Alveolar	Retroflex	Palato-alveolar	Palatal	Velar	Uvular	Glottal
Plosives	English	p b							k g		
	Pashto	p b							k g		
Fricatives	English						ʃ				h
	Pashto						ʃ				
Affricates	English						tʃ dʒ				
	Pashto						tʃ dʒ				
Nasals	English	m							ŋ		
	Pashto	m							ŋ		
Approximants	English	W					r	j			
	Pashto	w					r	j			

On the other hand, the following table shows the consonants different in both the languages. The consonants that have either

different place or manner of articulation are assumed to be different in both languages. The consonants that have either different place or manner of articulations are problematic for the speakers of the other language (Rahman et al. 2012).

Table 8 Chart of English and Pashto consonant sounds different in both languages (Peter Roach, 1983; Adam Brown, 1991; Daniel Jones, 1972)

	Glottal	Uvular	Velar	Palatal	Palato-Alveolar	Alveolar	Dental	Labio-Dental	Bilabial
Plosives	English					t d			
	Pashto		q			t d		t ^r d ^r	
Fricatives	English				ʃ	s z	θ ð	f v	
	Pashto						s z		
Affricates	English								
	Pashto								
Nasals	English					n			
	Pashto					n			
Approximants	English					l			
	Pashto					l			

6 Conclusion

The study concludes that some of the consonant sounds of English are similar to Pashto consonant sounds. This similarity is found in both place and manner of articulation of these sounds. On the other hands, there are consonant sounds in one language which are not found in the other language. The difference founds is either in terms of both place and manner of articulation. The study proves that some of the Pashto consonant sounds like dental voiceless plosive / t_̣/, dental voiced plosive / d_̣/, uvular plosive / q/, velar voiceless fricative / x/, velar voiced fricative / ɣ/, retroflex nasal / ŋ/ and retroflex flap / ɽ/ are not found in Standard English. While the Pashto retroflex voiceless plosive / ṭ/ retroflex voiced plosive / ḍ/, the dental voiceless fricative / s/, dental voiced fricative / z/, dental nasal / n/, and dental flap / r/ and lateral / l/ have the same manner of articulation but different place of articulation from the Standard English consonants. On the other hand, the English labio-dental voiceless fricative / f/, labio-dental voiced fricative / v/, dental voiceless fricative / θ/, dental voiced fricative / ð/ and alveolar voiced fricative / ʒ/ are not found in Pashto language. While some of the English consonant sounds have the same manner of articulation but different place of articulation in Pashto. This similarity should be availed and the difference should be given due regard to help learners in acquiring phonemes of the other language (Rahman, 2012).

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