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Phonology, Morphology, and Syntax Interfaces in Pakistani Languages

Abstract:

This paper is about language variation i.e. lexical variation caused by the interfaces of Phonology, Morphology and Syntax in Pakistani languages. According to Shackle (2014) Urdu, Punjabi and Seraiki languages belong to the Indo-Aryan language family. However, there are found many lexical differences significant enough to make these languages quite different from one another. The study focuses on these lexical variations based on three types of interfaces, i.e. Phonology/Morphology, Phonology/Syntax, and Morphology/Syntax. The data has been collected from the native speakers of Urdu, Punjabi, and Seraiki. The analysis of the data includes finding out the three types of interfaces, making derivations and notations (Chomsky and Halle; 1968), and formulating the rules. Then a comparison of all these rules and lexical variations have been discussed. Results have shown that these interfaces play an important role to cause lexical variation among Urdu, Punjabi and Seraiki; the languages with common ancestry.

Key Words:

lexical variation, Pakistani languages, Indo-Aryan, interfaces.

Introduction

The present study is concerned with the lexical variation occurring as a result of interfaces of Phonology, Morphology, and Syntax in Pakistani languages. Language is not a phenomenon entitled to uniformity and consistency. It is an entity prone to variation. There are a great many factors that bring about language variation, more specifically social factors as *language is what the members of a particular society speak* (Wardhaugh; 2006). So language variation is something so commonly found about language and can be observed or studied at different levels i.e. the level of pronunciation, level of vocabulary, level of grammar and level of usage. But this study is carried out keeping in view the lexical variation only. One point is to be made clear here is that the phenomena of language variation, specifically lexical variation are taken in the sense of difference in the vocabulary items of the three languages under study – Urdu, Punjabi and Seraiki – that belong to the same language family; Indo-Aryan (Shackle; 2014). There are significant differences in their vocabulary items and these differences of vocabulary items across the three languages are studied and understood as the phenomena of lexical variation. So the way language and lexical variation are studied in terms of variation within a single language is not the focus here, rather the difference between the lexis of the three Indo-Aryan languages is the subject matter of the study at hand.

Furthermore, this phenomena of lexical variation is studied as resulting from interfaces of Phonology, Morphology and Syntax, the

three important components of grammar of a language. These three components not only work in isolation but also depend upon or influence each other and thus bring about variations in vocabulary across the said languages. According to Dobrovolsky *et al* (1996), the interaction of these three components gives rise to three types of Interfaces: morphology and phonology, phonology and syntax, and morphology and syntax. These three interfaces cause lexical variations among varieties that make them be called separate languages.

After a historical comparison, Punjabi and Seraiki are viewed as languages most closely related but still not devoid of clear-cut linguistic differences (Shackle; 1976). In addition to this, Urdu, the Lingua Franca of Pakistan, also has an influence on Seraiki (Shackle; 1976) and Punjabi but again they have differences as well so all three languages show striking lexical variations mainly as a result of these interfaces.

Aims and Objectives

- To observe whether all three types of interfaces, i.e. Phonology/Morphology, Phonology/Syntax, and Morphology/Syntax, are found in Pakistani languages (Urdu, Punjabi Seraiki) or not?

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- To explore whether the lexical differences (variation) across the three languages under study are the outcome of these interactions (interfaces) of three aspects of grammar or not?

Review of the Literature

Different studies have been conducted regarding these interfaces. Dobrovolsky, Katamba, O'Grady (1996) have presented the interaction of morphology and phonology by the example of allomorphic variations in English. They have further discussed another aspect of phonology-morphology interface that is *prosodic morphology* where some morphological rules are conditioned to some aspects of prosodic structure. They have also discussed the rules of stress assignment to different syllables in different grammatical structures; English compounds and phrases, to reflect the interaction of phonology and syntax. In addition to this, the discussion of different morphological forms a word takes while placed at different positions in a sentence has been made to show the morphology-syntax interface.

Chomsky (1995) has given a hypothesis concerning the morphology-syntax interface in his Minimalist Program (MP). According to him, syntactic processes are controlled by morphological features.

Ralli and Stavrou (1997) discuss the Morphology-Syntax interface in Modern Greek by discussing A-N compounds and constructs. Ralli (1991, 1992) proposes that combinations of inflected adjectives and inflected nouns constitute compound words. The examples of these compounds have been analyzed to show that the variations in Greek compounds are due to the rich inflectional system in Greek morphology.

Embick and Noyer (2005) have presented a different approach to the Syntax-Morphology interface that is based on the notion that Syntax is the only generative component in the grammar of a language and all the complex objects are constructed based on this Skeleton i.e. syntactic structure. This is basically the syntactic approach to morphology, in contrast to the Lexical approach that considers 'word-formation' to be special and independent of syntax. The implementation of this different approach to all the phenomena in the realm of syntax/morphology interface is yet to be checked.

Inkelas (1997) has studied morphologically conditioned Phonology in terms of Dominance effects. According to him, there are two types of affixes namely *dominant* and *recessive*. Kiparsky (1982c, 1984a), describes that dominant affixes delete some structure of the base they get attached to. This deletion can be of Tone, Stress etc. Whereas the recessive affixes do not cause any such deletion. To show this effect Inkelas (1997) has presented two case studies, Vedic Sanskrit and Hausa.

He has mentioned many other languages as well that show this contrast between dominant and recessive affixes such as Japanese (Poser 1984), Lithuanian (Kiparsky and Halle 1997, Halle and Vergnaud 1987a, b, Blevins 1993), Russian (Melvold 1996) and Moses-Columbia Salish (Czaykowska-Higgins 1993).

Schutze (1994) discusses the Phonology-Syntax interface by addressing the issues of clitic placement in Serbo-Croatian. In his discussion, he has specifically supported Halpern's (1992) proposal of the operation of Prosodic Inversion (PI) which changes the order of the clitic and the host word according to the needs of the clitic. So he has discussed enough pieces of evidence that along with syntax, phonology can also serve to re-arrange morphemes. So this study generally bears evidence to the nature of the phonology-syntax interface. Inkelas and Zec (1990) have also worked on the interaction of phonology and syntax.

In addition to these three interfaces, the fourth type of interface has also been discussed. Stiebels (1997) has presented the interface of morphology and semantics by discussing complex denominal verbs in German.

Significance of the Study

This particular study is different from previous studies in many ways. Firstly, it has taken into account three languages and not a single language as done by all the studies mentioned above. Secondly, it is not focusing on a single interface rather the three main interfaces of components of the grammar collectively. It has been discussed that these interactions are basically responsible for providing us with some reason for the lexical variations found in Urdu, Punjabi and Seraiki as these are the languages with the same ancestors (Shackle, 2014) but we can observe so many variations. So it is surely going to provide the impetus for the later studies in these languages both separately and collectively.

Methodology

As this research was concerned with exploring interactions between the three aspects of grammar, huge data was required to locate the patterns of interaction. For that purpose, some standard source for all the three languages was to be consulted along with native speakers. Dictionaries and textbooks were used in order to collect the data. So the data collected was both primary and secondary. Different patterns were observed by looking at the data available in the dictionaries. These patterns

were then classified under the three categories; Morphology/Phonology, Morphology/Syntax and Phonology/Syntax. The interface of Phonology and Morphology was then shown using the system of derivations and notations used by Chomsky and Halle (1968), to explain the changes occurring. Then rules were derived and finally compared to discuss the phenomena of language (lexical) variation. All three types of interactions/interfaces were not found for all three languages: Urdu, Punjabi and Seraiki. For example, Phonology/Syntax Interface was not found for Urdu and Seraiki languages but was present in the Punjabi language. Different types of interfaces in the languages under study show that the three aspects of grammar interact differently in languages how much similar they may be in terms of their ancestors, and thus bring about lexical variation. In addition to this, some interfaces are similar in all three languages, which is evidence that these languages have the same roots.

Interfaces

This section presents interfaces of phonology morphology and syntax in three Pakistani languages.

Phonology and Morphology

By the interface of phonology and morphology, it is meant that some aspect of phonology of a particular language is causing some change in the morphological form of certain words i.e. a particular phonological environment forms basis for the presence of a particular allomorph; an open or closed syllable is the condition for the presence of an allomorph of a particular morpheme. Following are the patterns of interaction of Morphology and Phonology that have been found for all the three languages under study.

- i) While exploring the interface of Morphology and Phonology in the Urdu language, we have observed that the morpheme [-t:v] that is used as a suffix with Nouns and Adjectives and brings about changes i.e. pluralizes nouns, turns nouns into adjectives and forms the third degree of an adjective, is phonologically conditioned. It has a variant/allomorph [-t:μ] as well and this transformation from [-t:v] to [-t:μ] is a result of certain phonological processes.

The derivation of [-t:μ] from [-t:v] presents the phonological processes that brought about this change. (See

Table 1. Allomorphs of [-t:v] in Urdu language

UR	$\#v^{TM}\mu^{TM}\kappa-t:v\#\#\zeta^{TM}\eta^{TM}v-t:v\#\#\eta\left[\sigma^{TM}v-t:v\#\#\rho^{TM}\eta^{TM}\mu-t:v\#\#\eta^{TM}\lambda^{TM}\mu-t:v\#\#\Gamma^{TM}\mu-t:v\#\right]$					
	salt-	mind-	beauty-	mercy-	humbleness-	sorrow-
/ TM / deletion in 2nd syl.	$\#v^{TM}\mu\kappa t:v\#$	$\#\zeta^{TM}\eta v t:v\#$	$\#\eta\left[\sigma v t:v\#$	$\#\rho^{TM}\eta\mu t:v\#$	$\#\eta^{TM}\lambda\mu t:v\#$	-
Vowel Shortening	-	-	$\#\eta^{TM}\sigma v t:v\#$	-	-	-
Place assimilation	-	-	$\#\rho^{TM}\eta\mu t:v\#$	$\#\eta^{TM}\lambda\mu t:v\#$	-	-
Nasal deletion	$\#\zeta^{TM}\eta t:v\#$	$\#\eta^{TM}\sigma t:v\#$	$\#\rho^{TM}\eta t:v\#$	$\#\eta^{TM}\lambda t:v\#$	-	-
Insertion of segment (if the coda of 1 st syl. is a nasal)	-	-	-	-	-	$\#\Gamma^{TM}\mu\gamma t:v\#$
	$[v^{TM}\mu\kappa t:v]$	$[\zeta^{TM}\eta t:v]$	$[\eta^{TM}\sigma t:v]$	$[\rho^{TM}\eta t:v]$	$[\eta^{TM}\lambda t:v]$	$[\Gamma^{TM}\mu\gamma t:v]$
	salty	intelligent	beautiful	merciful	humble	sorrowful

Notations:

/TM/ → %/σ C ____ C [-t:v]

[Nasal] → %/σ ____ [-t:v]

Rule 1: When a Noun turns into an Adjective by getting inflected with morpheme[-t:v], Schwa in the second syllable of the word gets deleted, e.g. $[v^{TM}\mu^{TM}\kappa] \rightarrow [v^{TM}\mu\kappa t:v]$.

Rule 2: A process of place assimilation with the nasal /μ/ at the onset of second syllable of words getting inflected with morpheme [-t:v] occurs that turns [-t:v] into [-t:μ], e.g. $[\rho^{TM}\eta.\mu t:v] \rightarrow [\rho^{TM}\eta.\mu t:v]$

Rule 3: The nasal at the onset of the second syllable of words getting inflected with morpheme[-t:v] gets deleted, e.g. $[\rho^{TM}\eta.\mu t:v] \rightarrow [\rho^{TM}\eta t:v]$

- ii) Another example of the interaction between morphology and phonology in the **Urdu language** is of a morpheme [-ε:] that turns into [-ε□:] as a result of different phonological processes. It is used as a suffix in the process of pluralization. When it is added to a singular form with the open final syllable, it remains the same but with the close final syllable of singular form, it gets nasalized.

Following is the representation to show the phonological processes causing the occurrence of one of the two allomorphs; [-ε:] or [-ε□:]. (Table 2)

Table 2. Allomorphs of [-ε:] in Urdu language

UR	#κɪɾα:β-ε:##β TM σ TM ɾ TM -ε:##ρ TM κ TM ɾ TM -ε:##ρα:ɾ-ε:#
	book- bag- rickshaw- night-
Nasalization	#κɪɾα:βε□:# - - #ρα:ɾε□:#
/ TM / deletion (in final syllable)	- #β TM σ TM ɾ TM :##ρ TM κ TM ɾ TM :# -
PR	[κɪɾα:βε□:] [β TM σ TM ɾ TM :] [ρ TM κ TM ɾ TM :] [ρα:ɾε□:]
	books bags rickshaws nights

Notations: [-ε:]→[-ε□:]/ C σ ___ /TM/→%/ C ___ σ[-ε:]

Rule 1. When the plural morpheme [-ε:] is added to the singular form with a close final syllable, it turns into [-ε□:], e.g. [κɪɾα:β]→[κɪɾα:βε□:].

Rule 2. When the plural morpheme [-ε:] is added to the singular form with an open final syllable, /TM/ of the open final syllable gets deleted, e.g. [βTMσTMɾTM]→[βTMσTMɾTM:].

- iii) A third example of interaction of morphology and phonology in **Urdu language** is observed again in the process of pluralization where [-v:] is used to make the plurals. When it is inserted to bi-syllabic singular forms or monosyllabic forms with a cluster at Coda, it gets inserted as the nucleus of the final syllable. Whereas when added to monosyllabic forms, it causes the reduplication of Coda. So it has a variety of allomorphs depending upon the segments of the base it gets attached to. The following representation (Table 3) shows the phonological processes that take place when the singular forms get inflected by the above-mentioned morpheme.

Table 3. Allomorphs of [-v:] in Urdu language

UR	#θ TM λβ-v:β##ɪλμ-v:μ##μ TM ρ-v:ρ##σ TM dʒd TM -v:ɖ##ʃək-v:κ##həq-u:q#
	heart- knowledge- task- prostration- doubt- right-
Vowel (other than /ə/)shortening in the base form	- #əlmu:m# - - - -
/ə/ deletion in the 2nd syl. Of bisyllabic words	- - #əmrɪ:r# #sədʒɖu:ɖ# - -
Deletion of final segment of Coda cluster	#qəlu:b# #əlu:m# #əmu:r# #sədʒu:ɖ# - -
PR	[qəlu:b] [əlu:m] [əmu:r] [sədʒu:ɖ] [ʃəku:k] [həqu:q]
	hearts knowledge PL. tasks prostrations doubts rights

Notations. /ə/→%/σ C ___ Consonant → %/ Vowel C ___

Rule 1. Plural morpheme[-v:], when added to bi-syllabic singular forms i.e., [θTMμTMρ] or monosyllabic forms with coda cluster i.e., [θTMλβ], becomes nucleus of the final syllable, i.e., [əmu:r] and [qəlu:b] respectively.

Rule 2. Plural morpheme[-v:], when added to monosyllabic singular forms, causes reduplication of coda, e.g. [ʃək]→[ʃəku:k]

- iv) Phonology determines the morphology in Seraiki language when the morpheme [-vəŋ], that is used as a suffix to turn finite verb into infinite gets changed into [-əŋ] when it is added to a closed syllable (syllable having Coda). Thus the morphology is phonologically conditioned.

Table 4. Allomorphs of [-vəŋ] in Seraiki language

UR	#kər-vəŋ##reh-vəŋ##nikl-vəŋ##otɾ-vəŋ##pə-vəŋ##θi:-vəŋ##od-vəŋ#
	do- live- come out- come down- put- ??? fly-
/v/ deletion after close syllable	#kərəŋ# #rehəŋ# #nikləŋ# #otɾəŋ# - - #odəŋ#
PR	[kərəŋ] [rehəŋ] [nikləŋ] [otɾəŋ] [pəvəŋ] [θi:vəŋ] [odəŋ]
	to do to live to come out to come to put ??? to fly down

Notation: [-vəŋ] → [-əŋ]/ Cσ ____

Rule. Morpheme [-vəŋ] turns into [-əŋ] when inflects a form with closed final syllable, e.g. [kər-vəŋ] → [kərəŋ].

- v) The interaction of phonology with morphology was found in Punjabi language as well while observing the allomorphs of [-ŋə]. In a particular phonetic environment i.e. when the morpheme comes to be attached to syllable that ends on /t/ or /r/ it turns into [-nə], its variant.

Table 5. Allomorphs of [-ŋə] in Punjabi language

UR	#ləg-ŋə##səɾ-ŋə##bʰɪɾ-ŋə##mər-ɾə##{ɔr-ɾə##a:kʰ-ɾə#
	burn- fight- die- go- say-
Place dissimilation	- #səɾnə##bʰɪɾnə# - - -
Place assimilation with /r/	- - - #mərnə##{ɔrnə# -
PR	[ləgŋə] [səɾŋə] [bʰɪɾŋə] [mərnə] [{ɔrnə] [a:kʰɾə]
	to burn to fight to die to go to say

Notation. [-ŋə] → [-nə]/[ɾ] or [r]σ ____

Rule. When morpheme [-ŋə] attaches to bases with [ɾ] or [r] as codas, it becomes [-nə], e.g. [səɾ] → [səɾnə], [mər] → [mərnə].

- vi) Another pattern of interaction of Morphology with Phonology was found. The morpheme [-ndə] turns into [-də] when it gets attached to a close syllable, whereas with open syllables, it remains the same.

Table 6.

UR	#sikʰā:-ndə##kər-ndə##vəs-ndə##ləb-ndə##si:-ndə##hō-ndə##pē:-ndə#
	teach- do- live- find- sew- happen-
Deletion of segment	- #kərdə##vəsdə##ləbdə# - - -
PR	[sikʰā:ndə] [kərdə] [vəsdə] [ləbdə] [si:ndə] [hōndə] [pē:ndə]
	teaches does lives finds sews happens

Notation. [-ndə] → [-də]/ Cσ ____

Rule. Morpheme [-ndə] becomes [-də], by deletion of segment /n/ when gets added to base form with a closed final syllable, e.g. [kər-ndə] → [kərdə].

All the above mentioned patterns of Morphology/Phonology interface and the rules governing the changes occurring as a result of this interface were found to be specific to either of the three languages under study, Urdu, Seraiki or Punjabi. These patterns of interaction and the consequent changes make it quite clear that interfaces between the three main components of grammar play a vital role in bringing about language (lexical) variation as it has been observed in the examples presented above that how these different patterns of interaction result in a variety of different lexical items in different languages; Urdu, Seraiki and Punjabi here.

But at the same time, there are certain patterns of interaction of Morphology and Phonology that are common to all the three languages that bring to light the similarities between the three languages, reaffirming that these three languages belong to a same language family. These pattern are as follows:

- i) We can observe phonology interacting with morphology; vowel quality determining the type of morpheme attached, in the pluralization of singular forms of nouns ending in an open syllable in all three languages focused upon in this study. If the final open syllable of singular form has close vowel [ɪ] as nucleus, it takes morpheme [-iʌ] to get added to it when pluralized. Whereas if it ends in an open vowel[α], it takes morpheme [-ε:] to make its plural.

Following representations (Chomsky and Halle, 1968) for all three languages are appropriate means to describe the interaction.

Table 7. Pluralization with [-iʌ] in Urdu

UR	#λ TM [ɽkɪ-iʌ]# #tʃʊ:ɽi-iʌ]# girl- bangle-
Deletion of /t/	#λ TM [ɽkɪʌ]# #tʃʊ:ɽiʌ]#
PR	[λ TM [ɽkɪʌ]] [tʃʊ:ɽiʌ] girls bangles

Table 8. Pluralization with [-ε:] in Urdu

UR	#λ TM [ɽkα-ε:##π TM νkHα-ε:# boy- fan-
Deletion of /α/	#λ TM [ɽkε:##π TM νkHε:#
PR	[λ TM [ɽkε:]] [π TM νkHε:] boys fans

Table 9. Pluralization with [-iʌ] in Seraiki

UR	#nɪʃa:ni-iʌ##tʃʊŋi-iʌ# sign- nice-
Deletion of /i/	#nɪʃa:nɪʌ##tʃʊŋiʌ#
PR	[nɪʃa:nɪʌ] [tʃʊŋiʌ] signs nice PL.

Table 10. Pluralization with [-ε:] in Seraiki

UR	#tʃʊŋa-e:##gʊdā-e:# nice- M. knee-
Deletion of /a/	#tʃʊŋe:##gʊdε:#
PR	[tʃʊŋe:] [gʊdε:] nice M.PL. knees

Table 11. Pluralization with [-iʌ] in Punjabi

UR	#mɔndʒi-iʌ:##k ^h ərabi-iʌ:##b ^h æɽi-iʌ:# girl- fault- bad-
Deletion of /i/	#mɔndʒiʌ:##k ^h ərabɪʌ:##b ^h æɽɪʌ:#
PR	[mɔndʒiʌ:] [k ^h ərabɪʌ:] [b ^h æɽɪʌ:] girls faults bad PL.

Table 12. Pluralization with [-ε:] in Punjabi

UR	#kɪ[ɽa-e:##bɔra-e:##mɔndʒa-e:# horse- sack- boy-
Deletion of /α/	#kɪ[ɽe:##bɔre:##mɔndʒe:#
PR	[kɪ[ɽe:] [bɔre:] [mɔndʒe:]

horses sacks boys

Notations. Singular form + /v/ → [-r̥iα□]/Plural form + ___ σ Singular form + /α/ → [-ε:] / Plural form + ___ σ

Rule 1. In Urdu, Seraiki and Punjabi, if a singular form of noun has open syllable in the end with close vowel [ɪ] as a nucleus; morpheme [-r̥iα□] is added in place of [ɪ] to make it a plural noun, e.g. [λTMɾkɪ] → [λTMɾkɪα□] (**Urdu**), [tʃəŋɪ] → [tʃəŋɪā] (Seraiki), [b^hæɾi] → [b^hæɾɪā:] (Punjabi).

Rule 2. In Urdu, Seraiki and Punjabi, if a singular form of noun has open syllable in the end with open vowel [α] as a nucleus; morpheme [-ε:] is added in place of [α] to make it a plural noun, e.g. [λTMɾkα] → [λTMɾkε:] (**Urdu**), [gɔdɑ] → [gɔdε:] (Seraiki), [kɪɾɑ] → [kɪɾε:] (Punjabi).

So as these two patterns of interaction are same for all languages (Urdu, Seraiki and Punjabi), we get the same notations and rules for all of them. So all these patterns discussed above, not only bring to light the resultant lexical variation, but also make evident the fact that these languages share the same ancestry.

Morphology and Syntax

Morphology/Syntax interface means some changes in the morphological form of words conditioned by some syntactic components of grammar or vice versa.

- i) The first example of interaction between Morphology and Syntax in Urdu language involves Pronouns. Any change in the Case of PN (syntactic aspect) brings about change in its morphological form.
 - a) *Us* ne khana khaya (He had meal)
 - b) *Ye uski* kitaab hai (This is his book)
 - c) *Ye uska* qalam hai (This is his pen)
 - d) *Mein ne usko* dekha (I saw him)

In a) *us* is Nominative case of PN, in b) and c), *uski* and *uska* are the Genitive cases of PN (determined by the Gender aspect). It takes the form *usko*, as shown in d) when the case of PN changes from Genitive to Accusative. So this is how syntactic aspect brings change in the morphological form of the words.

Table 13. Cases in Urdu

Form	Name	Example	English Gloss
Us	nominative	us ne ghar jana hai	He has to go home.
uski/uska	genitive	uska ghar acha hai	His house is nice.
Usko	accusative	Uski taqreer achi hai ye kitaab usko dydena sko ye kitaab dydena	His speech is good. Give this book to him. Give him this book.

- ii) Like Urdu, **Seraiki language** also shows the pattern of Case of PN determining its morphological form. Examples are presented in table 14.

Table 14. Cases in Seraiki

Form	Name	Example	English Gloss
un	nominative	un hik kitaab ditti	He gave a book
undi/unda	genitive	eh unda gar he eh undi gaalh he	This is his place This is his matter
unkun	accusative	me unkun aakhiya	I said to him

- iii) In Punjabi language, the interaction between Morphology and Syntax is again quite similar to Urdu and Seraiki as it involves Case of pronoun whose morphological form changes as a result of this interaction.
 - a) *Une* khana khada (She had the meal)
 - b) *Ae undi* kitaab e (This is his book)
 - c) *Ye unda* qalam e (This is his pen)
 - d) *Une usan/unun* akheya (He asked her)

In a) *une* is Nominative case of PN, in b) and c), *undi* and *unda* are the Genitive cases of PN (determined by the Gender aspect) and *usan/unun*, as shown in d) are the Accusative case. So this is how syntactic aspect brings change in the morphological form of the words.

Table 15. Cases in Punjabi

Form	Name	Example	English Gloss
une	nominative	une e gal dassi	He told this
undi/unda genitive		unda kaar changa e undi jeb kaali e	His house is nice His pocket is empty
usan/unun accusative		Ae kitaab usan de unun ae kitaab de	Give this book to him Give him this book

So by looking at the examples of this particular pattern of interaction, we come to know that as these three languages share the same ancestors, they share this pattern as well and how a variety of lexical items evolve as a result of this interaction of Morphology and Syntax.

But we have come to find some more patterns as well that are slightly different for the three languages. These patterns are as follows:

- iv) Morphology interacts with syntax in Urdu language where gender aspect of grammar changes the morphological form of the words. The gender of the head word of the sentence determines the morphology of the verb (auxiliary) in the sentence.
- a) Larki kitaab parh *hi* hai (The girl is reading the book)
- b) Larka kitaab parh *ha* hai (The boy is reading the book)

So, in the above examples, it is observed that the gender of head word *Larki* in a) and *Larka* in b) is bringing about a change in the morphology of the auxiliary verb that is having two forms, *rahi* and *raha* respectively. Similarly, not only the gender of the head word is reflected on the verb in the form of morphological changes but also on the PN.

- c) Ye uski *kitaab* hai. (This is his book)
- d) Ye uska *qalam* hai. (This is his pen)

Here the gender of the nouns in the sentences c) and d), the italicized words, is bringing about change in the morphology of the PNs. As *kitab* is treated as a feminine noun so it turns the possessive PN into the feminine as well i.e. *uski*. Whereas *qalam* is treated as masculine so we have observed change in the form possessive PN takes i.e. *uska*.

This is also called Gender agreement in Urdu.

- v) Along with Gender agreement, Urdu language also shows Number agreement, which presents another example of Morphology/Syntax interface where the Number aspect of grammar causes change in the morphological forms of word(s) in the sentence.
- a) *Baccha* khel raha hai. (The child is playing)
- b) *Bacchay* khel *rahay* *hein*. (The children are playing)

Here it is quite evident that when the head word is singular; *baccha*, the auxiliary verbs are also singular, *raha hai*. Whereas when the Head word is plural; *bacchay*; it changes the morphology of the auxiliary verbs as well, *rahay hein*.

- vi) Nouns and Verbs of Seraiki language, like Urdu, show the agreement of both Number and Gender; the gender and number of Noun appears on the other elements of the syntactic structures in the form of changes in the morphological form. The examples are as follows;
- a) *Unda* *puttr* (His son)
- b) *Un di* *kitaab* (His book)
- c) O tuha *da* *pevo* e (He is your father)
- d) Eh tuha *di* *gaalh* e (This matter is yours)

In the above examples, the italicized words are the Nouns and the gender of these nouns is determining the morphology of the possessive PNs *unda*/*un di* in a) and b) and *tuhada*/*tuhadi* in c) and d).

- a) Eh *gaalh* *he* (This is the matter!)
- b) Eh *gaalhen* *hin* (These are the things!)
- c) Qiyamat *di* *nishaani* (The sign of the day of judgement)
- d) Qiyamat *diyan* *nishaaniyan* (Signs of the day of judgement)
- e) Eh mer *i* *kitaab* *he* (This book is mine)
- f) Eh mer *iyen* *kitaaban* *hin* (These books are mine)

- g) Un sakun *hik bota* *klittj he* (He gave us a bottle)
- h) Un sakun *tre botlan* *dittiyan hin* (He gave us three bottles)

Here the Number aspect of italicized nouns and adjectives is bringing change in the other elements of the sentence such as verbs ditti/dittiyan, auxiliary verbs *he/hin* and possessive PNs *dil/diyan* and *meri/meriyan*. So we can say that this pattern of interaction of Morphology and Syntax in Seraiki language; number/gender agreement is a bit different from the pattern found in Urdu where only the morphology of auxiliary verbs gets affected by change in the number aspect of noun.

vii) For Punjabi, different patterns of inflection are determined by grammatical gender (Shackle, 2003), so the second example from Punjabi Language is also similar to Urdu as well as to Seraiki where gender aspect of grammar changes the morphology of the words. But it is again somewhat different from Urdu because the gender of the head word of the sentence changes the morphology of all the other components of the syntactic structure whereas in Urdu only the verb (auxiliary) in the sentence reflects the change of gender.

- a) *Larki* kitaab parh *di pai e* (The girl is reading the book)
- b) *Larka* kitaab parh *da peya e*. (The boy is reading the book)

So in the above examples, it is observed that the gender of head word *Larki* in a) and *Larka* in b) is bringing about a change in the morphology of both the main and auxiliary verbs *parhdi pai* and *parda peya* respectively.

Then similar to Urdu and Seraiki, PNs also reflect the gender change of head word.

- c) *Ae undi* *kitaab e*. (This is his book)
- d) *Ae unda* *qalam e*. (This is his pen)

So this Gender agreement is a feature of Punjabi language as well.

viii) Number agreement is also found in Punjabi language which presents another example of Morphology/Syntax interface where the Number aspect of grammar causes change in the morphological forms of word(s) in the sentence.

- c) *Baccha* khel *dapeyae*. (The child is playing)
- d) *Bacchay* khel *daypaene*. (The children are playing)









Like Seraiki but unlike Urdu, the singular head word, *baccha*, is bringing change in the morphology of all the remaining components of the sentence; *khel dapeya e*. Similarly when the Head word is plural, *bacchay*; it changes the morphology of all the components and turns them into Plural; *khel day pae ne*.

After discussing the examples of Morphology/Syntax interface from the three languages, we have seen that these two components interact very slightly differently in the three languages as Punjabi morphology is similar in organization to Urdu and inflections of both nouns and verbs are marked by the addition or alteration of word-final morphemes (Shackle, 2003). Overall, the pattern is same but gives rise to different vocabulary items. So this interface also plays a role in bringing about lexical differences.

Phonology and Syntax

We have observed the interface of Phonology with Syntax when one aspect of phonology of a language brings about change in any syntactic element. For the languages under study, we were able to find this type of interface only for Punjabi language.

As Punjabi is a Tonal language, the difference in the intonation with which a word is spoken changes the grammatical category/syntactic label of the word. So this is how the categorization of the components of syntactic structure is conditioned by the supra-segmental phonological feature; intonation. Following are the examples of this interface.

 [kɫɾa] Bitter Adjective	 [kɫɾa] horse Noun
 [ka:r] House Noun	 [ka:r] doing Verb
 [vi] Twenty Noun	 [vi] too Adverb
	

[kəɾə]	[kəɾə]
Hard	Bangal
Adjective	Noun

So, the presence of this type of interface only in Punjabi language is again an evidence that any interface is not the property of a particular language family, any language of that family can lack it and thus plays a vital role in bringing about lexical variation in the language it is found in, making it distinct from the other languages of the same family.

Conclusion

By the discussion of all the interfaces and their examples in the languages under study we come to the conclusion that among so many aspects that bring about language variation, more specifically lexical differences across languages, interfaces between the components of grammar of a language, i.e. Phonology/Morphology, Phonology/Syntax, and Morphology/Syntax, are an important aspect as the lexical variations – differences of vocabulary items across the languages under study – are found to be produced, to a great extent, due to these interfaces.

Secondly, the presence of one pattern of interaction or one interface in one language does not guarantee its presence in all the members of that particular language family because out of the three languages focused in the study, the Phonology/Syntax interface is found in one language (Punjabi) only. So all three types of interfaces are not present in all the languages under study.

Moreover, due to these interfaces, not only content words but function words also take different forms and new vocabulary items evolve that are significant enough to differentiate one language of a language family from another of the same family.

This study is unique of its kind because it has discussed three languages of the same language family and the focus has been the lexical differences; variations found among them as a consequence of three main interfaces between three main aspects of the grammar of any language. So it can be considered an important study that can provide precursors for further research in terms of the interaction of aspects of grammar as well as in any one of the languages or interfaces discussed.

References

- Chomsky, N. (1995). *The Minimalist Program*. Cambridge, MA: MIT Press.
- Chomsky, N., & Halle, M. (1968). *The Sound Pattern of English*. Cambridge: MIT Press Cambridge.
- Dobrovolsky, M., Katamba, F.; O' Grady. W. (1996). Interfaces. In *Contemporary Linguistics: An Introduction* (pp. 245-267). London & New York: Longman.
- Embick, D., & Noyer, R. (2005). Distributed Morphology and Syntax-morphology Interface. In *The Oxford Handbook of Linguistic Interfaces*. Oxford: Oxford University Press.
- Hares, W.P. (2001). *An English-Punjabi Dictionary*. Lahore: Sang-e-Meel Publications.
- Hudson, R. A. (1996). *Sociolinguistics*. (2nd ed). Cambridge: Cambridge University Press.
- Inkelas, S. (1997). The theoretical status of morphologically conditioned phonology: a case study of dominance effects. In G. Booij and J.V. Marle (Eds.). *Yearbook of Morphology* (pp. 121-155). Netherlands: Springer Science+ Business Media.
- Inkelas, S., & Zec, D. (1990). *The Phonology-Syntax Connection*. Chicago: The University of Chicago Press.
- Kiparsky, P. (1982a). From Cyclic to Lexical Phonology. In H. van der Hulst and N. Smith (Eds.). *The Structure of Phonological Representations*, part I. Dordrecht: Foris.
- Kiparsky, P. (1982b). The Lexical Phonology of Vedic Accent. Unpublished manuscript, MIT.
- McCarthy, J; Prince, A. (1995). Prosodic morphology. In John Goldsmith (Ed.). *The Handbook of Phonological Theory*. Oxford: Blackwell.
- Mughal, S. (2010). *Shaukat-ul-Lughaat*. Multan: Seraiki Adbi Board.
- Punjabi language. (2015). In *Encyclopædia Britannica*. Retrieved from <http://www.britannica.com/EBchecked/topic/483596/Punjabi-language>
- Ralli, A. & Stavrou, M. (1997). Morphology-syntax Interface: A-N compounds vs. A-N constructs in Modern Greek. In G. Booij and J.V. Marle (Eds.), *Yearbook of Morphology* (pp. 243-264). Netherlands: Springer Science+ Business Media.
- Schutze, C.T. (1994). Serbo-Croatian Second Position Clitic Placement and the Phonology-Syntax Interface. In *MIT Working Papers in Linguistics*, (pp. 373-473).
- Shackle, C. (1976). *The Siraiki Language of Central Pakistan: A reference Grammar*. London: Unwin Brothers Limited.
- Shackle, C. (2003). Punjabi. In Cardona, G. and Jain, D. (Eds.). *The Indo- Aryan Languages* (pp. 581- 621). London: Routledge.
- Siraiki language. (2015). In *Encyclopædia Britannica*. Retrieved from <http://www.britannica.com/EBchecked/topic/535269/Siraiki-language>
- Stiebels, B. (1997). Complex denominal verbs in German and the morphology-semantics interface. In Booij, G. and Marle, J.V. (Eds.). *Yearbook of Morphology* (pp. 265-302). Netherlands: Springer Science+ Business Media.
- Urdu language. (2015). In *Encyclopædia Britannica*. Retrieved from <http://www.britannica.com/EBchecked/topic/619612/Urdu-language>
- Wardhaugh, R. (2006). *An Introduction to Sociolinguistics*. Oxford: Blackwell Publishing.