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# **OSMANIA PAPERS IN LINGUISTICS**

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**Volume - 42 & 43 (Published in 2021)**

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Editor

**Prof. MOHAMMAD ANSARI**



**DEPARTMENT OF LINGUISTICS  
OSMANIA UNIVERSITY  
HYDERABAD - 500 007, INDIA**

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**Osmania Papers in Linguistics**  
Volume – 42 & 43

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(Note: This journal has to be published in 2016 & 2017 but published in 2021 due to unavoidable circumstances)

**Osmania Papers in Linguistics**  
Volume – 42 & 43

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## **EDITORIAL**

The department of Linguistics has been publishing this peer reviewed journal - 'Osmania Papers in Linguistics' (OPiL) since 1975 and it is my pleasure to bring to you the volume 42 & 43, as a combined volume. This journal has witnessed publication of articles ranging from Core Linguistics to Applied Linguistics to proposal of New Theories.

The present issue has twelve articles and one book review. The articles cover topics in Sociolinguistics, Stylistics, Syntax and Forensic Linguistics. Especially, the article on 'Dialect Corpus and Research Methodology: Two Major Issues in Language Documentation', covers an important area which is the need of the hour. The review article 'A review of Aligarh Journal of Linguistics (AJL) Volume No.10, Issues No.1&2, 2020-21, Editor-in-Chief: MJWarsi', covered a review of articles published in the volume in depth. The article on 'Constructing Modal System in Bangla from the Perspective of Grammaticalization' was submitted from University of Dhaka, which acknowledges the popularity of the journal, even overseas.

I hope the readers will be benefitted from reading this volume as much as I have enjoyed putting it together.



**Language typology and sociolinguistics:  
Investigating linguistic complexity with special  
reference to nominal incorporation in the  
Mon-Khmer languages of India**

**Anish Koshy**

*Dept. of Linguistics and Phonetics,  
The English and Foreign Languages University,  
Hyderabad.*

**Abstract**

*Linguistic typology and sociolinguistics are generally considered two distinct sub-disciplines within Linguistics. Instead, it is argued here that the eclectic possibilities of explaining linguistic phenomena within typology, allows room for findings from sociolinguistics to influence not only explanations within typology, but also the areas of research focus. Languages show variation, when it comes to the choice of linguistic structures they adopt as part of their evolution and change. This may lead to linguistic complexity or in its reduction. This paper tries to explore if this variation can be explained from a sociolinguistic typological perspective. Can socio-cultural reasons determine or influence the kind of morpho-syntactic structures that languages come to have? In the kind of socio-cultural milieu created in the current era of globalization and virtual social networks, are there certain structures that are at risk of being lost or altered in the future? Can sociolinguistics and typology come together to make fruitful predictions on the ability of languages to retain complex structures in the current era? The polysynthetic structures in the Mon-Khmer languages of India will be discussed as a case study. Their general absence in standard Khasi has led to the classification of Khasian languages as a whole as isolating*

*language. Why is it that polysynthetic structures are found so easily in Pnar and Mnar, but not in educated Khasi speech? Did Khasi never have these polysynthetic structures or are they getting gradually lost? Does this predict anything about the kind of future languages that we are likely to have?*

### **Introduction**

Language typology is the study of universals of language. It is an enquiry into the basic types that languages can be classified into. It studies variations/patterns in linguistic structures with the aim of discovering the limits of variation. As its basic tenet it holds that when languages differ from each other, they do not differ randomly, but that there is a pattern. The discovery of the underlying patterns of variation and the limits to variation defines the typological enterprise.

When typology talks about universals it gets compared to another major framework that studies universals – the generative enterprise. And when typology studies variation, it gets naturally compared to the major frameworks that study variation – sociolinguistic approaches. While the typological approach to universals is very different from that of Generative studies, it has a lot of common grounds with sociolinguistic studies. Like sociolinguistic studies, typology has a more eclectic view of explanations for linguistic phenomena. It is not limited to explaining (or explaining away) everything as rooted in biology (the language faculty). The explanations in typology come from discourse related phenomena, processing constraints, principles of economy or that of perception-cognition, iconicity in language (however limited), etc.

### **Sociolinguistic typology**

Several works in linguistics have highlighted countless examples

of social correlates of linguistic structures. We find many recorded instances of correlations between language phenomena and climate, geography and culture. These include, among many others, the words for snow in Inuit from Franz Boas' studies (though contested today), the classification system of reindeer winter pastures in Sami, honorifics in Korean and Hindi, deictic and directional markers in Tibeto-Burman languages, etc. Many metaphorical and idiomatic expressions across languages also show the language-culture-topography connections.

In Khasi, for example, an idiomatic reference to someone's death is made by the expression *bam-kwai ha-ka-duar u-blei*. This literally means 'eating beetle nuts at the door of God'. This expression is rooted in the Khasi culture of not only growing beetle nuts and its consumption but also offering it to all visitors as a welcome gesture. Someone who has just died is in God's presence, and God, like a true Khasi host, welcomes this new guest to heaven by offering him or her beetle nuts. The availability of such expressions in languages strongly support the cultural moorings of languages in general.

Sociolinguistic typology is an approach that tries to understand linguistic phenomena by integrating methods and tenets of sociolinguistics and typology. It is understood as "linguistic typology which is socio-linguistically informed, asks sociolinguistic questions, and tries to supply sociolinguistic answers" (Trudgill 2011: viii). Even though mostly associated with Trudgill's works (1997, 2002, 2008, 2009a, 2009b, 2010, 2011, 2012), there are also others who have taken up linguistic studies from this perspective. Drechsel (1981) and Thurston (1992) are among the earliest to have explored linguistic phenomena from a sociolinguistic typological perspective to study pidginization and language change. In recent times the

approach has been used even to understand sign languages (Schembri 2018). In the Indian context, there is only one work that has explored languages from this perspective (DeLancey 2014). Even though the approach sounds very fruitful, it still has not produced the kind of interactions between typologists and sociolinguists as should have been.

### **Understanding linguistic complexity through a sociolinguistic typology of languages**

Studying ‘types of languages’ from a sociolinguistic typological perspective also throws up some interesting questions. Is it possible that different types of human societies produce different types of languages? Does the kind of society in which the language is spoken, have any bearing on the selection of certain structures and not others in those languages? What role does society play, if any, in some languages and dialects changing faster than others? Does this have any implications on the future typology of human languages? It has been argued that it is indeed the case that different sociolinguistic conditions produce structurally different types of languages. In Labov’s works (1972, 2007), the link between sociocultural phenomena and linguistic change through diffusion of morpho-syntactic processes or their addition/retention, transmission of features, and other socio-culturally connected changes have been amply demonstrated. Sociolinguists have looked at language change as a reflection of the sociocultural environment. It has also been pointed out in the literature that different levels of language structure change at different rates –phonological changes are faster than changes in grammatical features. Trudgill has argued that linguistic change is strongly influenced by the relative degree of “contact vs. isolation of a speech community” as well as the relative “social stability vs. instability of a community”(2011:

13, 61). Trudgill has also argued that it is the case that social factors could “predispose languages to demonstrate greater or lesser degrees of complexification and simplification” (2009b: 98).

When languages are in contact with each other, they go through several types of changes. According to Trudgill, these changes may include among others, complexification by borrowing (2009b: 102), and/or simplification in linguistic phenomena and processes via “regularization of irregularities”, increasing “lexical and morphological transparency”, and/or loss/reduction of “redundancy” etc., (2011: 21-22). Thus, there seem to be clear indicators that foretell when contact leads to simplification and when it leads to complexification. It has been observed that smaller communities preserve linguistic features better than larger communities. Complexification develops in low-contact situations (Trudgill 2011: 89) when the transmission of the language is from parent to child, with children acquiring the language within its own social setting. This ensures that norms are shared across generations, and any change in the language (generally complexification) proceeds down without any interruptions. This lack of interruption in transmission contributes to what Trudgill calls “additive complexity” (2011: 42). Simplification, on the other hand, generally happens in high-contact situations. In these situations, the language is often also acquired by adult non-native speakers (Trudgill 2011: 89). Adult non-native speakers come with reduced language learning abilities. Their critical age for acquisition of a new language is already over, and this has a major impact in the way they learn this new language of contact. Adult learners often level and lose arbitrary distinctions as part of their learning process, thereby leading to the simplification of many constructions (Trudgill 2011).

Linguistic complexity is a difficult phenomenon to describe and measure. There may also be no consensus among scholars on what should be considered complex. However, this paper assumes that certain linguistic features like pronoun hierarchies, grammatical gender, inflectional morphological categories like venitive (come/bring); andative (go/take), etc., polysynthesis, evidentials, can be considered as instances of complex structures/phenomena. This assumption is primarily based on the rarity of these features in world languages, if not for how they are marked in the languages they are found in. Complex linguistic features only arise overlong periods of time. It requires speech communities that are small. Small speech communities tend to be socially more intimate, and generally more isolated. This isolation helps in preventing loss of grammatical features. The retention of older grammatical features, in addition to the development of newer features leads to additive complexification. On the contrary, as discussed earlier, lack of social intimacy, and breakdown in transmission from one generation to another leads to simplification. Let us look at a few case studies to understand this better.

An interesting case study of English (with relatively simpler structures) and German (with relatively complex structures) is presented in Trudgill (2011). It is investigated why the English morpho-syntax is not as elaborate as that of German, and why German has three genders and V2 whereas English is the only Germanic language with no gender and no V2. This is in spite of the fact that both these languages have been in contact with other languages. In this case study, Trudgill uses the concept of linguistic “equilibrium” and linguistic “transfer” to explain the complexity or the process of simplification that has come about in these two languages. German is presented as having

been existing in a state of “equilibrium” with other languages, which has allowed it to develop/maintain its complex structures. On the other hand, English has undergone simplification. This is the case primarily because the English we know today is not in the state or form as the Viking invaders who had brought it to its current geographical area knew it. The English as we know it today, is a language that was “transferred” to Britain. It was simplified as part of the process by which it was acquired by the indigenous Celts, who acquired it as adult learners (Trudgill 2011:50-53), a process familiar to those who study the origins of pidgins and creoles.

On the other hand, languages like Icelandic, Navajo and Khoi-San, have largely remained isolated. This has helped them in developing and/or retaining very complex grammars/grammatical phenomena. Some examples discussed in Trudgill (2011) include the 14 different forms marked for number, gender and case for the Icelandic adjective *rikur* ‘rich’; the absence of any regular verbs in Navajo; and the proliferation of click sounds in Khoi San, among others. All these features are considered complex phenomena for their typological rarity.

### **Is linguistic complexity a myth?**

As pointed out earlier, the idea of linguistic complexity is not without controversy. The equi-complexity of languages hypothesis maintains that all languages are equally complex. Is it possible that all languages at a given point of time in history may not be equally complex? Is it possible that at different stages in its history a language can be more complex or less complex than at another point in history? What do we know about how languages begin? Do they start simple and become increasingly complex? Is that process also cyclic? Pidgins and creoles and koinés give us the best clues. These are varieties of language

developed by adult learners. What explains the fact that these are always much simplified versions?

There are no two views on whether regular morphological processes are simpler than irregular processes. Similarly, there would be no argument on which is more complex - morphological processes that are transparent or morphological processes that are opaque and involve fusion. Linguistic complexity may be difficult to define comparatively across languages, but it is not an unacknowledged phenomenon in linguistic studies. Apart from increase in irregularity, and morphological opacity through fusion, etc., there are other factors/processes that contribute to linguistic complexity. This may include, among others, increase in syntagmatic redundancy, as well as increase in morphological categories. In typology, the presence of certain phenomena like grammaticalization or that of certain structures like complex predicates are seen as instances of linguistic complexity. All of these are found to make L2 learning for adults difficult. They are found in only those languages with a long history of stable development and low contact, that is, in 'societies of intimates'. They are often the dropped elements in the process of creolization, when we have what can be called 'societies of strangers' (Trudgill 2015).

In linguistic typology, there is often a mention of the morphological complexity of languages. This is seen to be a cyclic process. Languages, at any given point of time, are seen to fall anywhere in a cyclic continuum from analytic to polysynthetic languages, with inflectional and agglutinating languages in between. Except the Tibeto-Burman languages (Sino-Tibetan family), most languages in India are towards the synthetic end of the scale of synthesis – having more than one morpheme per word.

### **Mon-Khmer languages of India in this study**

In India, the Mon-Khmer languages are geographically represented only in Meghalaya and in the Andaman and Nicobar Islands. Meghalaya represents the Khasian sub-branch of the Northern Mon-Khmer languages. Many varieties of Khasi have been reported in the literature, even though not discussed or described in detail. However, this study focusses on a linguistic structure in only three of them – Standard Khasi, Pnar and Mnar.

Standard Khasi is traditionally the language spoken by people who live in and around Sohra, also known as Cherrapunji. It is also spoken in Shillong, the capital city of the state. It is the only variety from amongst all the other varieties of Mon-Khmer in Meghalaya, that has had a long tradition of a written grammar (Roberts, 1891; Rabel, 1961; Nagaraja, 1985) and is used for pedagogical, and administrative purposes. It is also the language of the church. Pnar is the spoken language of the second largest sub-group (the Jaintias) among the Mon-Khmer tribes after standard Khasi. It is spoken in the Jaintia Hills District of Meghalaya. Mnar is more commonly known as Jirang (the name of the geographical region where it is spoken) to outsiders. Mnar, is what the speakers, however, call their language. Jirang is in the RiBhoi district of Meghalaya.

According to the 2011 Census of India report on the languages of India, Khasi is spoken by 10,37,964 and Pnar/Synteng by 3,19,324 speakers. The exact figures for Mnar speakers are not available in official documents, as the Census of India has a policy of only listing such languages as are spoken by at least 10,000 speakers. It could probably mean that Mnar is not part of the Census because the number of speakers is less than 10,000. It could also mean that it is not part of the Census because the

government has ‘rationalized’ it under some other nomenclature, as is the policy in the preparation of the Census report.

**Mon-Khmer languages of India: Isolating or polysynthetic**

Certain morpho-syntactic processes or phenomena in languages are considered reflective of the complexity found in those languages. In the morphological classification of languages in terms of their predominant patterns, the analytic or isolating languages are considered morphologically less complex in contrast to the synthetic languages (inflectional, agglutinative or polysynthetic). DeLancey (2014), the only study to approach any Indian languages from a sociolinguistic typological perspective, highlights the case of certain Tibeto-Burman languages that have retained/preserved complexity or analyticity over millennia and suggests a possible sociolinguistic explanation for these tendencies. His findings are in agreement with most of Trudgill’s postulations on aspects of languages spoken by larger communities and those spoken by small communities.

Mon-Khmer languages of India have often been described as isolating languages with no or negligible morphology (Rabel 1961, Nagaraja 1985). This is quite in contrast to what is expected in languages with minimal contacts and long term stability. This is also in contrast to how structures of their genetically near-relatives of the Munda sub-branch of Austroasiatic have been described. So, do the Mon-Khmer languages contradict the generalizations of sociolinguistic typological studies on complexity discussed in the previous section? Let us look at a few examples of a grammatical phenomenon in the Mon-Khmer languages of India, to see how the older grammars and insights drawn from them have missed crucial aspects of the language that supports the socio-typological generalizations regarding linguistic complexity and isolation.

### **Nominal Incorporation in the Mon-Khmer languages of India**

One of the most interesting syntactic phenomena found in the Mon-Khmer languages of India, though often under-reported is that of nominal incorporation. Incorporation is considered a grammatical function changing process (Baker 1988). It is a process that reduces the number of arguments of a verb by one. It is understood as a “process whereby one semantically independent word is moved by syntactic rules to a new position and comes to be found inside another word” (Katamba, 1993). As a process that shows the interdependency between syntax and morphology (Baker 1988, 1995), nominal incorporation is a complex process. That linguists cannot come to a consensus on whether the process of nominal incorporation is lexical or syntactic, also shows how complex the phenomena is. It is also a rare process typologically. In what follows, data from three Mon-Khmer languages from Meghalaya (India), namely, Khasi, Pnar and Mnar are discussed.

In a Khasi prototypical verbal complex, consisting of a verb and its object complement, the verb has a pronominal clitic agreeing with the subject nominal/pronominal. The object nominal is optionally marked with the accusative/dative marker *ja=*, but is obligatorily specified by a gender/number classifier proclitic. Khasi structures like *t<sup>h</sup>iəd-səʔpiɛŋ* ‘buy mangoes’, *t<sup>h</sup>iəd-kət* ‘buy books’ (Nagaraja 1985: 64); *ai-dawai* ‘give medicine’, *siaʔ-p<sup>h</sup>an* ‘peel potato’ (Rabel 1961); *bam-dəʔk<sup>h</sup>a* ‘eat fishes’; *jəʔi-ksau* ‘see dogs’ are very interesting exceptions to this general structure of the predicate. These structures are interesting because they involve the juxtaposition of a verb with its object complement, as though they were one compounded word, except that they are

not compounds. In these structures, the object nominal does not carry its classifier proclitic which is generally obligatory. These structures in Khasi have often been ignored or under-reported as compounds in the literature. They have never been studied as incorporated structures. Nagaraja (1985: 64) lists these structures where compounding in Khasi is discussed. They are listed as ‘verb-noun’ compounds. In the detailed exposition on what a verbal complex may consist of in Rabel (1961: 29-38), these structures find no mention; nor are these structures discussed as part of the discussion on what clauses are built up of (87-98). In a long list of permissible omissions in Khasi drawn up in Rabel (1961: 128-29), these constructions find no mention. These constructions also do not find any mention in her list of what may constitute a complete verbal construction (133), adding to their under-reporting. It is in the narrative texts in Rabel (1961), that we find some of these structures like ai-dawai and siaʔ-p<sup>h</sup>an.

Are these structures compounds? Are these structures formed as a result of a morphological operation? If they were compounds, they would be among the most commonly found construction types globally. This would also mean that they are *prima facie* not to be considered examples of linguistically complex structures. This paper maintains that they are not compounds. These structures are not products of a morphological operation. These are formed by a syntactic operation, namely nominal incorporation. The structural evidence for this argument comes from similar structures in Pnar and Mnar. Pnar and Mnar significantly differ from Khasi as far as verbal agreement marking is concerned. Khasi verbal complexes begin with a proclitic (see (1) below). Pnar and Mnar verbal complexes end with an enclitic (see (4) and (6) below). This crucial distinction renders a lot of verbal operations transparent in Pnar and Mnar. In Khasi, since the agreement proclitic lies at the beginning

of the verbal complex, the verb is separated from its object complement only by markers on the object nominal itself. There is no formal marker to signal the end of the verbal complex. The object nominal carries the nominal's classifier proclitic and may optionally be marked with the ACC/DAT marker. In such a scenario it is not possible to clearly decipher if the verb and noun have become one cohesive syntactic unit. That is, in Khasi, it is not very clear if the verb and the noun are just placed next to each other, or if the noun has somehow moved inside the verbal complex. This is probably why they were either totally missed out on or have been mis-diagnosed in the earlier descriptions of the language. The enclitics on the verbal complex in Pnar and Mnar make this very transparent.

Thus, with respect to nominal incorporation, we can get a better picture by comparing Khasi structures with the other Khasian Mon-Khmer varieties that have enclitics. All these languages have a similar structure with incorporated nominals. When the nominal is incorporated, the object nominal is stripped of its ACC/DAT marker as well as its classifier proclitic and appears next to the verb. They only differ in terms of whether the verb take proclitics or enclitics for agreement marking. The following examples show the process of incorporation in Khasi. The data is from Koshy (2007).

1.    *ŋi=la-peit*                    *ja=ka=p<sup>h</sup>lim*                    *ha=ijɛŋ-baiskɔp*  
      1PL=PERF-watch   ACC/DAT=3FSG=movie   LOC=house-movie  
      ‘We watched the movie at the theatre.’
  
2.    *ŋi=la-peit*                    *ja=ki=p<sup>h</sup>lim*                    *ha=ijɛŋ-baiskɔp*  
      1PL=PERF-watch   ACC/DAT=3PL=movie   LOC=house-movie  
      ‘We watched the movies at the theatre.’

3.   ηi=la-peit-p<sup>h</sup>lim                    ha=ijeη-baiskəp  
       1PL=PERF-watch-movie    LOC=house-movie  
       ‘We watched movies at the theatre.’

(1) and (2) are structurally different from (3). In (1) and (2) the object nominal ‘movie’ is in its fully specified form. It carries the ACC/DAT marker, and also its gender/number classifier proclitics. In (3), the object nominal ‘movie’ is in its incorporated form. It has neither the ACC/DAT marking, nor the gender/number classifier proclitic. Apart from these structural differences, there are also semantic differences between incorporated and non-incorporated nominals. Structures with incorporation do not always have the same meaning as their non-incorporated counterparts. In terms of their meanings (2) and (3) are close to each other. The nominal in both cases is interpreted in the plural. However, the structure with incorporation can never be used to give a specific reading. That is, while the noun in plural in (2) can still be a specific set of entities, it can never be so in (3). This also restricts the incorporation of nominals in singular unless it refers to a non-specific entity. We do not have a structure with incorporation that means the same as (1).

Let us now look at nominal incorporation in Pnar. Pnar has a very productive process of nominal incorporation from the object position. Pronominal incorporations are not allowed. As pointed out earlier, in a prototypical Pnar structure, the verbal complex ends with an enclitic. This is followed by the object nominal marked with an optional ACC/DAT marker ja= but an obligatory gender/number classifier proclitic. So, when the verb-noun structures are formed in Pnar, the nominal is placed next to the verb, which is then followed by the agreement enclitic that closes the verbal complex. It becomes clear that the object

nominal has become part of the verbal complex. Let us look at a few examples from Pnar. The data is taken from Koshy (2007).

4. ka=sita      daŋ-bam=kɔ=o      u=sapeŋ      wa=iʔ=bha  
3FSG=sita      PROG-      3MSG=mango      RP=ripe=well  
eat=3FSG=3MSG  
'Sita is eating a ripe mango'
5. ka=sita      daŋ-bam-sapeŋ=kɔ      u=wa=iʔ=bha  
3FSG=sita      PROG-eat-mango=3FSG      3MSG=RP=ripe=well  
'Sita is eating a ripe mango'

Of the above pair of sentences, (4) shows an object nominal in its elaborated form, with the nominal specified by its classifier proclitic. (5), shows the same object nominal in its incorporated form. When an object nominal is incorporated, it is no more a theta-marked argument of the verb. Hence, just as we saw in Khasi, the ACC/DAT marker is dropped and the nominal that goes inside the verbal complex, is stripped of its proclitic marker too. One knows that the object nominal has moved into the verbal complex, as the enclitic subject agreement marker, which closes the verbal complex, comes after the incorporated nominal and closes the verbal complex. When nominals, which are modified by adjectives are incorporated, as demonstrated in (5) above, the incorporation of the nominal leaves the modifier stranded outside the verbal complex<sup>iii</sup>. Nominal modifiers are part of an alliterative agreement system in the language – all the nominal modifiers copy the gender/number proclitic of the head nominal that they modify. This is, however, not obligatory, and one does find structures with no alliterative agreement marking on modifiers. However, once the nominal is incorporated, the modifier has to be marked compulsorily with the nominal's proclitic, as can be seen in (5). This is probably a strategy that

aids interpretation. Like in Khasi, a structure involving an incorporated nominal in Pnar can also never be used to give a specific reading. The incorporated structure is possible with a singular object nominal only as long as the nominal does not refer to a specific entity.

Mnaral so has a very productive process of nominal incorporation. The following set of alternating examples show structures with the nominals occurring as free-standing arguments and structures with incorporated nominals. The examples are taken from Koshy and Wahlang (2011).

- |     |   |                   |                               |                   |          |          |
|-----|---|-------------------|-------------------------------|-------------------|----------|----------|
| 6.  | daŋtu   | liʔ-thuʔ=u        | ŋa=kam                        | imoʔ              | i=mi     | u=karo   |
|     | then  | go-look=3MSG      | 3FSG=work                     | ALL               | 3ESG=one | 3MSG=man |
|     | ‘Then he went, looked for work with one man.’                             |                   |                               |                   |          |          |
|     |   |                   |                               |                   |          |          |
| 7.  | daŋtu   | liʔ-thuʔ-kam=u    | imoʔ                          | i=mi              | u=karo   |          |
|     | then  | go-look-work=3MSG | ALL                           | 3ESG=one          | 3MSG=man |          |
|     | ‘Then he went, looked for work with one man.’                             |                   |                               |                   |          |          |
|     |   |                   |                               |                   |          |          |
| 8.  | jokro-jokro   | wa                | ba=aʔ=ra                      | gi=min-ai=bi:m    | ha=wei   |          |
|     | someone   | EVEN              | NEG=BE/HAVE=NEG               | 3PL=NOM-give-food | DAT=3MSG |          |
|     | ‘No one gave him food.’   |                   |                               |                   |          |          |
|     |   |                   |                               |                   |          |          |
| 9.  | jokro-jokro   | wa                | ba=aʔ-min-ai=bi:m=ra          |                   | ha=wei   |          |
|     | someone   | even              | NEG=BE/HAVE-NOM-give-food=NEG |                   | DAT=3MSG |          |
|     | ‘No one gave him food.’ (Lit. There was not even a giver of food to him.) |                   |                               |                   |          |          |
|     |   |                   |                               |                   |          |          |
| 10. | daŋtu   | liʔ=u             | ŋa=ʰei=liʔ                    | imoʔ=ŋa=ʰai       | ŋa=cʰŋi  |          |
|     | then  | go=3MSG           | 3FSG=NOM-go                   | ALL=3FSG=place    | 3FSG=far |          |
|     | ‘Then he went on a journey to a faraway place.’                           |                   |                               |                   |          |          |
|     |   |                   |                               |                   |          |          |
| 11. | daŋtu   | liʔ-ʰei=liʔ=u     | imoʔ=ŋa=ʰai                   | ŋa=cʰŋi           |          |          |
|     | then  | go-NOM-go=3MSG    | ALL=3FSG=place                | 3FSG=far          |          |          |
|     | ‘Then he went on a journey to a faraway place.’ (ʰei=liʔ=journey)         |                   |                               |                   |          |          |

As can be noted, in all the above examples, when nominals are incorporated into the verb, the gender-number classifier proclitics that appear on them are dropped. As the examples show, both derived and underived nominals can be incorporated. Since the Pnar and Mnar structures are parallel to the Khasi structures, the noun-verb combinations even in Khasi have to be looked upon as instances of object nominal incorporation into the verbal complex. This is clearly a syntactic operation and not a process of compounding. This is an example of polysynthesis. This is a very rare process as well. This rarity qualifies the structure to be considered a linguistically complex construction.

The under-reporting of the presence of polysynthetic incorporating structures in the Mon-Khmer Khasian languages is in stark contrast to their being reported as a significant feature of the Munda languages (Zide, 1997), which form an important subgroup of Austroasiatic along with the Mon-Khmer languages. The recognition of these structures in the Mon-Khmer Khasian languages suggests that nominal incorporation is probably a remnant proto-Austroasiatic feature. The structure is important to study not only because it is rare typologically, but also is significant for historical reconstruction.

### **8. Is Khasi losing this complex structure?**

Nominal incorporation is a good example of polysynthesis. It does seem strange that a complex structure that seems to trace its origins in the proto-Austroasiatic stage, a structure that could have been used as a prominent example of the link between the Munda and the Mon-Khmer branches of Austroasiatic, has been completely missed out on in the studies on Khasi. It is true that the structure is becoming rarer in written Khasi, but in Pnar and Mnar they come to the speakers with absolute ease and good frequency. One can

still find these structures in the spoken form of Khasi. Educated Khasi is today mostly associated with Shillong, the capital city of the state. One wonders if this modern urban setting of the language has anything to do with this gradual loss of polysynthesis. Would Khasi have retained polysynthetic structures had it been still mostly restricted to Sohra, an idyllic village setting?

This is a train of thought that is difficult to establish with absolute certainty. These structures do appear in Khasi. But mostly in extant literature, and are becoming increasingly rarer in the educated spoken form. Pnar and Mnar have largely remained spoken variants. Pnar and Mnar are also largely spoken in non-urban centres. The Jaintias who speak Pnar remain a close-knit community, largely concentrated in the Jaintia hills district, and engaged mostly in traditional occupations. Mnar, similarly, has remained mostly in the Jirang village. Khasi was once a language associated with Sohra, known to the outside world as Cherrapunjee. Standard Khasi is in fact also known as ka-tien-sohra, meaning the language of Sohra. The early Welsh missionaries, who were the first to write down Khasi, had chosen to settle down in Sohra. They translated the Bible into the variety of Khasian spoken in Sohra. With the increasing use of Khasi in literature, government and all official matters, the language has been increasingly standardized and codified. It is also the variety taught in schools. The process of codification and standardization strait-jackets this variety in ways that it does not when it comes to Pnar and Mnar.

With the administrative centre in Meghalaya being Shillong, Khasi as it is shaped today and is formalized is increasingly done in Shillong and not in Sohra. Shillong, unlike Sohra is not a society of intimates. It is populated by people belonging to different linguistic communities from within the state and outside. To many Khasi is the language learnt in the schools, with the spoken forms of Khasi and other varieties relegated

to a secondary status. The complex process and structures associated with incorporation have thrived in spoken forms in Pnar and Mnar but stifled in Khasi, especially in the written form. To new learners, it probably looks like a deficient structure that lacks something (the ACC/DAT marker and the proclitics are dropped) when compared to the expanded form. When a language is learnt in a society of strangers in an educational context, such expanded (fully-specified) forms look more correct and acceptable. The risk of being wrong with an incorporated structure is more, and it is likely that not being reinforced in the educational context has probably led to speakers suspecting the form to be informal or even ungrammatical. Khasi is not an exception in this regard. This has happened to many languages where first a grammar gets written, and then with time, everyone is expected to follow exactly as the grammar says.

In many ways the urban setting of modern Khasi, misses the kind of reinforcements that Pnar and Mnar get in their rural settings. While Pnar and Mnar may still be considered the languages of smaller communities that have largely remained within their geographical settings, if not completely isolated, the same cannot be said about Khasi. Khasi is the language of a rapidly urbanizing capital city today. The communities that speak them and learn them aspire to be global citizens and are influenced by and influence the most happening trends of today. As global citizens, their circles of contact expand beyond the defined margins of their community. They are part of a loose network of speakers, unlike Pnar and Mnar. This makes Khasi speakers/learners look up the written grammars for validation, more than speakers of other Khasian varieties do. When grammars do not highlight certain structures like these, for whatever reasons, then the confidence of new learners to use such structures without societal reinforcement is undermined. The structure becomes increasingly rarer, especially in written contexts, where the standardized language is expected.

**Effects of globalization and urbanization and the future languages**

With globalization and rapid urbanization, smaller isolated communities are becoming rarer. Small towns with regular contact with urban centres are seen to be mushrooming everywhere. There is an increasingly loose network of speakers everywhere. What does this predict about the future in terms of language structures that we are going to find more and more around us? With such changes taking place in the socio-cultural space within which languages are used, there are strong indications that languages in the future are likely to be very “atypical of how languages have been for nearly all of human history” (Trudgill 2012: 92). They are likely to be simpler/simplified. Complex structures are likely to give way to simplifications. Simplified structures are likely to sustain themselves. Structures with complex movements, deletions, and interpretation strategies, are likely to make way for simplified structures. Many of the complex structures in languages, like polysynthesis, are likely to be lost forever in future languages.

Most non-urban languages today are under pressure from the more prestigious languages around them. These languages are mostly prestigious because they are the languages used in the cities, and are associated with education, jobs, and are thus, languages of global communication. These languages in the urban settings are under pressure to be more accommodative to learners from different linguistic backgrounds. They are getting simplified by learners, who focus on learning and getting along with the simpler and more transparent structures. Complex structures go out of use unless reinforced within a linguistic community. Such close-knit linguistic communities are no more the reality in urban settings.

### **Conclusion**

Today, many languages around the globe are endangered to the point of extinction. Even the ones that are apparently thriving are doing so by making many structural adjustments in favour of simplifications. Descriptive linguists, documentation linguists, field linguists and typologists have no time to lose. Typologists must be concerned because of what sociolinguistic study on complexity predicts regarding what will be left behind for linguists to study in a world that is increasingly in high-contact (hooked to Facebook), large but loosely networked (only existing virtually). We are probably staring at a future where languages would no longer be capable of reaching the level of complexities that languages did in the past. Or, to end on a positive note, we are probably looking at a future where the domains of complexities will shift from grammar to vocabulary or discourse markers.

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## **Gender, Class and Identity: A Critical Discourse Analysis of A Song of Ice and Fire**

***Smita Dhantal***

*Research Scholar,  
Department of English and Cultural Studies,  
CHRIST (Deemed to be University),  
Bengaluru, India.*

### **Abstract**

*Fantasy Fiction unifies supernatural elements and life with the help of imagination to build something novel. Though it is considered far removed from the primary world, it remains a reflection to reality. George R. R. Martin, an American Writer, created a whole new world as a setting for his Fantasy Fiction series, A Song of Ice and Fire. This he did, not only in the geographical sense but also in the social, political and religious sense. Martin invented religions, customs, traditions, legal systems, and languages to suit these, in order to make his world authentic. His inspirations from Medieval Europe are seen in the architecture, attire, food, mannerisms, social rules, language, and so on, which he constructed for his texts. The series has a complex structure and plot, with more complex characters. Gender, Class and Identity are some major concepts being discussed in academics. In this article, understanding of these key terms will be established. Subsequently, select instances from the text will be used to demonstrate how these concepts resonate in the selected text. For this purpose, Critical Discourse Analysis will be used as a method to examine the language used in the select instances. Critical Discourse Analysis is a transdisciplinary tool developed borrowing thoughts from fields like Sociology, Psychology, Linguistics, and Criticism. It is also a part of Hermeneutics as discourse analysis is used to*

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*explore the possible interpretations of a text and is, in itself, not a substantiating theory.*

**Key Words:** Class, Critical Discourse Analysis, Fantasy Fiction, Gender, Identity

### **1. Introduction**

Fantasy Fiction unifies supernatural elements and life with the help of imagination to build something novel. Though it is considered to be far removed from the primary world, it remains a reflection to reality. In the sense that, though the geographical setting and characters may be fictional, circumstances the characters face resonate with what people face in the real world.

Even in the fictional world, there are individuals with different gender orientations, individuals facing problems because of social and economic differences and more often than not, many major characters face identity crisis, wherein they struggle to find out their purpose. Such occurrences are seen in Tolkien's *The Hobbit* and *The Lord of the Rings* series, in J. K. Rowling's *Harry Potter* series, and in George R. R. Martin's *A Song of Ice and Fire*, to name a few. Martin has created a whole new world as a setting for his Fantasy Fiction series. He calls it Earth, but draws a new map with continents named Westeros and Essos. To give life to his new geography, he invents different societies with their respective customs, traditions, and rules. Like many other Fantasy Fiction writers, even Martin borrows from Medieval Europe and this is seen in the architecture, attire, food, mannerisms, social rules, and so on.

There are political and religious bodies to help these societies function. Additionally, he developed languages to suit these different cultures, like Dothraki, Valyrian, Ghais amongst

others. The language that the readers are familiar with in the text is called the ‘common tongue’, which for the readers is English with archaic touches.

Different social issues and ideologies are reflected throughout the series. These ideologies can be looked at microscopically if one studies the discourse used in the text. Discourse analysis, is one method which, moves “from seeing language as abstract to seeing...words as having meaning in a particular historical, social, and political condition” (McGregor, 2004). Furthermore, Critical Discourse Analyses (CDA) helps in describing, interpreting, analysing, and critiquing social life reflected in text (Luke, 1997). CDA sees “language as social practice” and considers the “context of language use to be crucial” (Wodak & Meyer, 2016, p. 5). In order to understand how certain ideologies like, gender, class and identity are reflected in this fantasy text, this article uses CDA as a method.

## **2. Method**

Critics accepted and took forward the theory of Critical Discourse Analysis (CDA) in the 1990s. CDA is a transdisciplinary tool developed borrowing thoughts from fields like Sociology, Psychology, Linguistics, and Criticism. Wodak and Meyer discuss the term ‘critical’ in the name of the theory by saying, “critical theory should improve the understanding of society by integrating all the major social sciences, including economics, sociology, history, political science, anthropology and psychology” (Wodak & Meyer, 2016, p. 6). It is also a part of Hermeneutics, as discourse analysis is used to explore the possible interpretations of a text and is, in itself, not a substantiating theory. This means that different people can interpret a text in different ways based on their experiences and thought processes. Terry Locke states that CDA “views discourse as coloured by

and productive of ideology” (2004, p. 1). CDA is not developed as a rigid method for discourse analysis; in fact, it gives the scope to adapt the method to suit the research objective. For this article, Critical Discourse Analysis is used as a method to examine a few instances from the selected text to understand how the language used by these characters reflects their gender roles and class differences while they struggle to identify and establish their own identities.

Though the Song series is set in a fictional secondary world, it reflects various complexities of life as seen in the primary world. Inequality based on socio-political reasons, gender-role discrimination and the struggle to find oneself are some of them. These concepts, that is, Gender, Class and Identity have been a part of academic discussion across disciplines for years, especially amongst Sociologists, Feminists and Linguists. There have been debates about which one is the appropriate term, ‘gender’ or ‘sex’ and what is the difference between them. The common notion is that ‘sex’ is biological, whereas ‘gender’ is constructed. Here, gender is taken as a social construction which defines the boundaries for their roles in the society. Class is a way to classify people based on their socio-economic status. And Identity is what makes one who they are. There are many identities a person can hold at a time, for instance, a person can have multiple identities like daughter, mother, wife, friend and a warrior depending on the situation she is in. Identities are also said to be classified into personal and social. Personal is what one believes themselves to be, and social is how they portray themselves in a society or what society thinks of them.

### **3. Analysis and Discussion**

To limit the scope of this article, two instances from two different books of the Song series are selected. These instances reflect on

how sometimes it is people from the same gender who dominate and cause a great impact on the notion of 'self'. Sansa Stark and Theon Greyjoy have faced many perils in their young age. Their experiences with others shape their sense of self and how they perceive the world. Cersei Lannister is unquestionably the most influential woman in Sansa's life. However, here a scene wherein Sansa is in direct conversation with the Tyrells is chosen. Sansa's utopian understanding of the world and the mannerisms her mother taught her as a high-born lady, in addition to Cersei's fear are all reflected in this scene. On the other hand, Theon Greyjoy, an obnoxious young man turns into a meek servant boy because of another man. Ramsay Bolton's cruelty creates a lasting impact on Theon's psyche. Ramsay is physically absent in the selected scene, but his impact is strongly visible.

**Sansa Stark:**

The first scene to be analysed is from A Storm of Swords: Steel and Snow wherein Sansa is invited to have supper with the Highgarden women. As the majority of the members at the supper are women, it can be seen how different women hold different positions at the table. Their conversation reveals their characters and also of those they speak about, like Lord Mace Tyrell and Joffrey Baratheon. The idea of class is reflected in the way Lady Olenna Tyrell talks to the servants and the fool, Butterbumps. Sansa's struggle to veil her true self and to maintain her identity as a "traitor's daughter" as she constantly fears that if she says anything ill against the Lannisters, she will be labeled as a 'traitor' herself, and imagines the worst for herself if such an occasion should arise.

It is revealed earlier that Lady Olenna Tyrell is called 'The Queen of Thrones' (of course not to her face). The title does not suit her physique as she is described as 'the wizened white-haired doll

of a woman' (p. 80) and as Sansa observes her to be 'the littlest bit of a thing'. It is only when she starts conversing with Sansa, that the name gets its aptness. She is straightforward and does not seem to think twice before making a comment. When Sansa attempts to pay her respects by mentioning Renly to Margaery, the grandmother snorts and says: "Gallant, yes, and charming, and very clean. He knew how to dress and he knew how to smile and he knew how to bathe, and somehow he got the notion that this made him fit to be king" (p. 81). The repetition of the phrase 'he knew how to' to list out Renly's positives which were not very 'gallant' but in fact very ordinary, are used to mock Renly's character. She does not hesitate to make this comment and further even disregards the wits of her own son. She says to Margaery, "As to your father, would that I'd been born a peasant woman with a big wooden spoon, I might have been able to beat some sense into his fat head" (p. 81). This comment also reflects how noble women have their restrictions when it comes to raising their own children; whereas, the common folk are more free to choose methods to discipline them. A while later, she calls out to a servant and tells her to take the leek broth away and instead to bring cheese for her. When the servant tells her that the cheese will be served after the cakes, she replies saying, "The cheese will be served when I want it served, and I want it served now" (p. 85). After that she turns to Sansa, who chooses silence over words as an answer to many of her questions, and asks her, "Are you frightened, child? No need for that, we're only women here. Tell me the truth, no harm will come to you" (p. 85). This dialogue of hers, works on two levels. It establishes the distance between the women of the noble houses and the women of the lower serving families. Showing that though the women of the upper class have their restrictions, women from the lower class are doubly marginalized. Secondly, by shouting at the servant she establishes her nature of getting what she wants when she

wants, indirectly telling Sansa that she needs her answers, and she wants them now.

The narrator is descriptive about Sansa, and her dilemma of what to talk about and how much to talk to the Tyrells. She is aware that Margaery will soon marry Joffrey; and is afraid that if she tells the truth, Margaery may cancel the wedding, putting Sansa into a lot of trouble. But Lady Olenna is persuasive, she first tries being gentle with her, then is harsh then finally asks Butterbumps to sing loudly and assures Sansa that the words they share will remain between them. She finally confides in them and, “‘A monster,’ she whispered, so tremulously she could scarcely hear her own voice. ‘Joffrey is a monster. He lied about the butcher’s boy and made Father kill my wolf. When I displease him, he has the Kingsguard beat me. He’s evil and cruel, my lady, it’s so. And the queen as well’” (p. 87). Soon she realises that she has said too much. She was ‘horrified’. In spite of her efforts to keep the truth to herself, she ends up voicing it to them. The words chosen here are important. She chooses to call Joffrey a ‘monster’ which more or less sums up his character. And the narrator says she was ‘horrified’, not ‘scared’ not ‘afraid’ but ‘horrified’, which depicts the effect the Lannisters have over her.

After this, Margaery changes the topic and asks Sansa if she would like to visit Highgarden and also tells her the plan to marry Sansa to her brother. It is from here that the song Butterbumps sings runs parallel to Sansa’s situation and emotions. His whole song is in capital letters to show that he is singing loudly, moreover the placement of the lines of the song amidst the conversation between Sansa and the Tyrells is symbolic. When Sansa agrees to liking all that Margaery mentions, it is followed by Butterbumps line: “OH, SWEET SHE WAS, AND PURE, AND FAIR! THE MAID WITH HONEY IN HER HAIR!”

(p. 87). When Lady Olenna shushes Margaery saying they do not even know if Sansa would like to come to Highgarden, Sansa expresses her excitement: ““Oh but I would’, Sansa said. Highgarden sounded like the place she had always dreamed of, like the beautiful magical court she had once hoped to find at King’s Landing” (p. 88). This is followed by the line where the Bear ‘SMELLS THE SCENT OF SUMMER AIR’. This symbolises how Sansa was entering the trap set by the Tyrells. As the narrator comments, Sansa is still a naïve child and in spite of everything that happened to her, she continues to dream about a utopian place.

When they offer her to marry Margery’s brother, she assumes it is Ser Loras and starts dreaming about him, soon Lady Olenna shatters her dreams by clarifying that they are referring to Willas. But she reminds herself that “courtesy is a lady’s armor,” and speaks carefully to not offend the Tyrells. She asks if Willas was a knight like Ser Loras. But after listening to what they had to say about him, it is Butterbumps’ song that reflects her thoughts: “I CALLED FOR A KNIGHT, BUT YOU’RE A BEAR! A BEAR! A BEAR! ALL BLACK AND BROWN AND COVERED WITH HAIR!” (p. 89). But in spite of what was going on in her mind, Sansa remains courteous. Because she knows if she retaliates, the Tyrells might take advantage of the information she gave them against her. Instead, she uses ‘courtesy’ as a shield to protect herself; a lesson her mother taught her as a young high-born lady.

This entire incident deals with gender in the sense that, throughout the book, most of the men assume women are not smart and cannot take part in politics. But this conversation depicts how some women in this text, have understood how the men around them think, and instead of overtly rebelling against it, they have

their covert ways of getting information and have the intellect to act out cunning plans. They do not change the gender roles, but manipulate things staying within the boundaries laid out for them. Talking about identity, after the things Sansa faces till this point, she continues to remain a naive girl who has idealistic dreams. But on the outside, she acts tough and submissive at the same time to survive. There is a constant struggle between her 'real self' and her 'social self'. Though she wants to trust people and hopes that things will soon be better, she also fears that no one is true to her, and if she reveals her true self to others, they will betray her to Joffrey and the queen, and she will be punished for it.

**Theon Greyjoy:**

George R. R. Martin's characters are dynamic, that is, they change for good or bad based on their experiences, thus changing their identity. One of the characters who struggles throughout the series with his identity is Theon Greyjoy. He is born as a Greyjoy, but after the battle on Pyke, he is taken in as a hostage by the Starks. However, Lord Eddard Stark treats him more like a ward than a hostage and provides him with similar facilities that his own children enjoy. In spite of growing up as one amongst the Starks, Theon was always aware of his home in Pyke and wished to be his father's heir someday. But to his displeasure, his father does not consider him as his lost son but as the ward of the Starks. When Theon is asked to prove himself to be a true Greyjoy, he betrays the Starks by capturing their castle and killing many Stark men. After many wrong judgments, Theon ends up as a prisoner of Ramsay Bolton. It is here, that Theon struggles to be himself and is forced to be Reek, Ramsay's pet. His inner thoughts are channeled through the language used to reflect his identity crisis. This next incident is from the book *A Dance with Dragons: Dreams and Dust*.

Theon is asked to make the people at Moat Cailin surrender to Ramsay Bolton. Though he is sent alone, he is conscious about everything Ramsay has taught him. The level to which Theon is conditioned can be seen in the following extract: “I have come this way before. It was a dangerous thought, and he regretted it at once. ‘No,’ he said, ‘no, that was some other man, that was before you knew your name.’ His name was Reek. He had to remember that. Reek, Reek, it rhymes with leek”(p. 295). This is followed by the description of the difference between the time he rode for the first time in this area and now. Previously, it was Theon Greyjoy with Stark banners, a man who knew how to ride and he had a strong horse. But presently, it is Reek with Ramsay’s peace banner, a broken man on a broken horse. “He was Lord Ramsay’s creature, lower than a dog, a worm in human skin.” Before sending him on his task, Ramsay told him, “You will pretend to be a prince...but we know the truth. You’re Reek. You’ll always be Reek, no matter how sweet you smell. Your nose may lie to you. Remember your name. Remember who you are” (p. 295).

Though there are many scenarios in the text which cover Theon’s identity crises, this particular one sums it up. His identity is such a big question here, that even this particular chapter is named not ‘Theon’ but ‘Reek’. Theon himself is seen beating himself up over remembering who he truly is. But in fact, he is suppressing his real identity to remember what Ramsay has taught him to remember. Ramsay tells him to “pretend to be a prince”, when in fact he is a prince who is conditioned to forget it. He even repeats phrases like Reek, Reek, it rhymes with leek, to remember his “true self”. Though Ramsay has been physically violent with Theon to bring him down to this stage, now, his words are enough. Ramsay’s language is prince like, soft and subtle but the underlying message is cruel. Ramsay’s words have such an

effect on Theon now that even thinking about his past life seems to be a “dangerous thought” to him. Theon reminds himself who he is supposed to be verbally, and not just mentally. He has become a different person not because he likes it but in order to survive.

#### **4. Conclusion**

This article proves how language can be used to depict not only the inner thoughts or exchanges between two or more characters, but also how society functions or how the influences from the society seep into one’s language. People who do not rebel against the rigid rules, learn to adapt and adopt things and shape situations to suit their purpose and needs, and if not that, then just to survive. There are of course some unconventional women like Brienne and Arya, who go against the current and achieve what they believe in by breaking the rules and being true to themselves. But most of the characters bend the rules instead of breaking them to avoid bigger problems, while they manage to get what they want. Lady Olenna is a character who seems to have learned this very well. She is physically fragile, but she is strong headed and knows how to get things done by bending the rules. It is clear that she wants to maintain the honor of her House, and does not hesitate to go to extremes for it. On the contrary, characters like Theon Greyjoy and Sansa, both from great Houses, were raised by the same family, and were both boastful and bashful in their happier days. The situations they face are different but none kind, some more horrifying than others. Their present psychological state varies as well. Theon is physically tortured and is himself suffering from the guilt of his past actions. On the other hand, Sansa is mentally and emotionally tortured, not just in private space but also in public. But the result at this moment is that they both turn meek and accept a new identity just for survival. It is also noteworthy

how the writer chose to use Butterbump's song to reflect Sansa's inner conflict. It is not a song sung by an artist, but by a fool. Sansa's naive nature and her dreams are subtly depicted to be as foolish as Butterbumps himself.

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# ATTRIBUTIVE ADJECTIVES IN ENGLISH AND ARABIC LANGUAGES: A CONTRASTIVE STUDY

*Ibrahim MuneerAbda latif Kub\**, *Meena Jawad Ibrahim\**,  
*Mohammad Ansari\**, *C.S.Swathi\**, *Sudhir Bhan\**

*\*Dept. of Linguistics,  
University College of Arts and Social Sciences,  
Osmania University, Hyd.*

## **Abstract**

*Many students face difficulty in the construction of English adjectives in attributive positions because English and Arabic adjectives employ different processes and structures in constructing the adjectivalsentences of the various types In the English language, adjectives come before the nouns they modify. However, the opposite is true for adjectives in the Arabic language; they follow the nouns. Unlike in English, where the adjective stays the same, and the noun inflects for the gender, plurality, definiteness, and grammatical case, in Arabic. Theadjective comes either before or after the noun that it modifies. This study attempts to note the similarities and differences between English and Arabic attributive adjectives. Data was listed by the last author using an intuitive method. In cases of confusion, dictionaries of both the languages were consulted. The study concluded that the Arabic adjectives come after the noun they qualify and should agree with it in gender, number, and sometimes even indefiniteness. Attributive adjectives are positioned after the head noun in Arabic whereas,*

*in English, attributive adjectives are positioned before the noun. Attributive adjectives in English and Arabic share more similarities than differences. The study also concluded that attributive adjectives are more complicated in Arabic than in English.*

### 1.Introduction

Using the different kinds of English adjectives is very important in the classroom activities and communicative purposes between the teacher and the students and outside the classroom in daily communications. There are five different adjective positions in a sentence in English - an attributive adjective, predicative adjective, adjective that comes before and after the noun, attributive and predicative adjectives in the same sentence, and postpositive adjectives. Attributive adjectives are common to all languages of the world. It is a grammatical process by means of which construction can be interpreted as being denied. There are many problems to be considered, such as the class of adjectives, their structure and distribution, the scope of adjectives, and their interaction.

The position of the adjective or the function is generally referred to as “Attributive”. The adjective ascribes a characteristic to the head noun. There is no need to modify the ending of the attributive adjective according to the gender or case of the noun qualifier in the English language. It’s important to know whether they should come before or after the word. Adjectives, in actuality, can present a number of

issues for students of both languages. There are two types of adjectives, attributive and predicative. It simply means that it can be said in both ways, i.e., *the big house* and *the house is big*; *the interesting book* and *book is interesting*. However, there are some exceptions. Most of the adjectives beginning with the letter 'a' cannot be used attributively; for instance, we can say '*the girl is asleep*' but not '*the asleep girl*'; or '*the animal is alive*' but not '*alive animal*'. There is some classifying adjective that behaves in the opposite way. For example, if we speak about a *woolen jacket*, it cannot be said as *my jacket is woolen*. In the same way, referring to *outdoor sports*, it is impossible to say *this sport is outdoor*. Another major problem of non-English speakers is to know the correct order of adjectives when there is more than one qualifying noun. For example, *is it a big, old house or an old, big house?* Do we speak of *the three first days of the exam* or *the first three days of the exam*? Native speakers naturally chose the correct order, as they have the intuition of the sentence constructions.

## 2. Aims and Objectives

The aim of this study was to study the structure and function of attributive adjectives in English and Standard Arabic. The following objectives were taken up in the current study -

- a. To identify and describe the attributive adjectives of English language in terms of types, structure, and potential restriction.

- b. To identify and describe the attributive adjectives of Standard Arabic in terms of types, structure, and potential restriction.
- c. To conduct contrastive analysis of the three languages in terms of types, structure, and potential restriction.

### **3. Methodology**

To achieve the above objectives a method of intuition was followed. Also, standard grammar books were referred to in the three languages in case of some doubt. The data for this article was taken from Meena (2014). This study was limited to investigating only to the syntactic aspect of Arabic and English attributive adjectives.

### **4. Attributive Adjectives of English language**

Chalker (1984), states that “A traditional definition of an adjective is that it says what somebody or something is like”. This definition may be found in any conventional English grammar book, but according to Chalker, current grammar books prefer to define adjectives by (a) position/function and (b) form/inflection, as they do other main word classes. To put it another way, they have a descriptive meaning. Crystal (1985), on the other hand, defines the term “attributive” as “the term typically used to refer to the role of adjectives and nouns when they occur as Modifiers of the Head of Nouns Phrase.”

Attributive adjectives are optional, that is in many ways, and a hallmark that adjunction exists. By “optional,” it is meant that an Adj-N structure will have precisely that same description as

the noun on its own. The syntactic properties of a noun, however, we may formulate them, are essentially unchanged by merging adjectives, so in the below examples (1a) is just as lawful as (1b):

- (1) a. The sky fell on his head.
- b. The cloudless sky fell on his head.

Attributive adjectives can be merged recursively, and this follows mainly from the above description that says attributive adjectives are optional. As merging an adjective has no discernible effect on the syntactic properties of the noun, there is nothing about merging an attributive adjective which should have any bearing, syntactically, on whether or not another attributive adjective is then merged, within the exact noun phrase, (at least theoretically). In the below examples support this position:

- (2) a. Rip-offs
- b. Childish rip-offs
- c. Blotchy childish rip-off
- d. Obvious blotchy childish rip-off

Relative adjective order is not entirely rigid. This can be seen including a given pair of attributive adjectives in either order. Relative adjective order is not entirely free if there is a significant variation in relative orders of multiple attributive adjectives; these orderings are not entirely free.

Though many adjectives are always attributive, never predicative, some adjectives are always predicative. The term ‘reference modification’ is used to describe those functioning exclusively in attributive position. For example, restrictive adjectives, which are attributive-only, show that the reference of the noun head has already been determined (the exact man). Also, normal non-predicative adjectives tell, in part, what the noun means (a medical doctor) (Bolinger, 1967 cited in Celce-Murcia and Larsen-Freeman, 1983).

While discussing the categories of attributive adjectives the terms ‘inherent’ and ‘non-inherent’ are used. Consider the following:

- 3) a. That old man is my friend.
- b. He is an old friend.

The adjective ‘old’ in (a) is an inherent one since it a quality (*old age*) that is natural and existing in the noun modified (*man*). That is why ‘old’ here, and the above definition refers to the noun directly since it denotes a quality directly related to an existing form.

On the other hand, ‘old’ in example (b) refers to the friendship of that person and not to the person himself. Thus, it does not refer to a character existing in the referent (He), and it is a non-inherent adjective. Non- inherent adjectives are confined to functioning only in attributives position. If ‘old’ is used predicatively, it will yield the meaning of (old in age) not (old or longstanding friendship). Accordingly, ‘old’ is a syntactic-

semantic homonym since it has two values or meanings: one is inherent, which is of (old age), and the other is non-inherent, which is of (longstanding friendship). Thus, it appears once as central and other as peripheral. Most descriptive adjectives can be used in an attributive position, defining a noun by some relatively permanent inherent quality and in a predicative position where the quality is predicated as new information. But some adjectives can only be used in one of these positions. In general, adjectives that appear only in attributive positions are less adjective-like than the descriptive adjective.

The statement that non-inherent adjectives are confined only cannot be generalized since some non-inherent adjectives can also be used predicatively. We can understand through the below examples:

- 4) a. New members are always welcomed with.
- b. New friends should be introduced to each other.

The adjective (new) in examples (a) and (b) is a non-inherent adjective since it refers to (*the newness of membership*) and (*newness of friendship*), respectively. However, (*new*) in example (c) can be used also predicatively, while in (d) it can not.

- c. These members are new.
- d. These friends are new.

The idea of intensifying adjectives was brought forth by Quirk et al. (1985), assuming that when modifying nouns, intensifying adjectives influence the meaning denoted by their nouns by either

heightening or lowering them. Close (1975) describes such adjectives as (sheer), (mere), and (utter) as “those that function like intensifiers” because they reinforce or emphasize what their sounds mean, and such a job is similar to that of intensifying adverbs like (very). Usually, an adverb is listed as an intensifying adjective, significantly when modifying nouns like (men). (girl), (moment) etc. Intensifying adjectives are generally reduced to attributive-only function since they are non-inherent, emphasizing their attributive only.

In general, adjectives that are restricted to attributive position or that occur predominantly in an attributive position do not characterize the referent of noun directly. For example, *an old friend* - one who has been a friend for a long time does not necessarily imply that the person is old. Old refers to friendship and does not characterize the person. In that use, old is attributive adjectives only. On the other hand, in that is *an old man*, old is the central adjective (the opposite of young), and we can relate that *old man* to that the man is old. Adjectives that characterize the referent of the noun directly are termed inherent; those that do not are termed non-inherent. Some non-inherent adjectives also occur predicatively. For example, both a new student and a new friend are non-inherent, though the former can be used predicatively: that student is new / my friend is new.

A few words with substantial emotive value are restricted to an attributive position, e.g., you poor man, my dear lady, and wretched woman. Attributive adjectives can modify proper place nouns, as

in old-fashioned Episcopalian (*New York*), ancient (*Mesopotamia*), and paranoiac (*Egypt*). Less commonly, adjectives modify the name of a person. As in little (*Laura Davies*). The wretched (*Paul*) or the late (*John C. Dreman*).

Attributive adjectives can also modify a personal pronoun. Attributive adjectives with pronouns are not common in any register but occasionally occur in conversation and function. Although no adjective is frequent in this role, the adjectives *poor*, *lucky*, and *silly* are somewhat more common modifying personal pronouns than other adjectives.

### 5. Attributive Adjectives in Arabic language

Arabic is one of the languages of the family that is commonly called Semitic and it is able to exist in a choice by the way of citation that makes Arabic to be well-maintained language.

In Arabic, the class of adjective has always been considered as a subclass of the nouns class. According to the Arabic grammarians there are two classes – a) a noun which is not adjective (اسم صفة) and b) a noun which is adjectives (اسم صفة).

اسم صفة /a:smsefa/.

For example, 'عدل' 'adel' may be a noun proper – 'the just one' or an adjective 'just' similarity between the two classes is greater than difference. The definite article is used in both nouns as well as adjectives. The feminine singular form of an adjective is usually formed by adding the clitic /tamarbuta/'ة' to the masculine form.

5) For example

- رجالن ذكفان

*rajulanthakiyan*

Two intelligentmen

- مدرس-ة ذكفة

*mudarsantuthakiyatun*

An intelligent teacher (f)

- مدرس نكف

*mudarisunthakiyn*

An intelligent teacher (m)

The main differences between the two classes may be stated as follows: the categories of definiteness, number, gender, and case are either selective (definiteness and case) or inherent in nouns (number and gender). In adjectives, the agreement or concord is known to be the part where adjectives are considered subordinate to the nouns they modify, and they must agree with it in number, gender, case, and definiteness.

6) For example

- مهندس- ذكف

*munhandustakyen*

*An intelligent engineer*

- المهندس - بن الـ ذكِين

(p) *althkiyyanalmunhandysaan*

Intelligent engineers

- المهندس - ان الـ ذكِيَان

*althakiyaanalmunhandsan*

Two intelligent engineers (p. only two person)

- المهندس ذكِي

*thakyenalmunhandus*

The intelligent engineer

Arabic adjectives are similar to nouns in almost every aspect, as mentioned before. However, they are said to be twins in their syntactic function followers 'نوابد ع' of the noun head where they agree with it in - definiteness, number, gender, and case.

The adjectives taken from the Intransitive verb, to denote a meaning based on what is described in a way that is proven, not on the way of occurrence. It has no time, because it indicates fixed attributes, known as 'الصفة المشبهة' 'alsifatalmushbihat'), which comes from the abstract triad by analogy with four (أوزان) 'awzan' weights (as below mentioned:

7) For example

'الصفة المشبهة' 'alsifatalmushbihat' in weight (الفعول) (الفعول) comes from the Intransitive verb, a continuous

analogy, when it denotes a color, or an apparent defect, or an apparent ornament.

For example: أحمر (in weight (ل-اع-)) (afeal') 8)  
ahmar

### Red

(الن-اع- 'faelan') 'alsifatalmushbihat' in weight (ل-اع-) ص-نة المش- بهة  
(الن-اع- 'faelan') comes from the Intransitive verb that indicates emptiness, fullness, or internal heat that is not a disease as in 'anger'.

9) For example: عطشان in weight (الن-اع- 'faelan')  
eatshan

### Thirsty

(ل-اع- 'faeal') 'alsifatalmushbihat' in weight (ل-اع-) بهة ص-ف  
Indicative of internal diseases, or what is similar, or what is opposite to it. And diseases, sexuality as pain, colic, and fatigue, and similar diseases that indicate sadness and gloom, such as grief, sadness, war, and ghost. And it is opposed by what indicates pleasure, such as joy, happiness, joy, and contentment.

10) For example: مرح in weight (الن-اع- 'faeal')  
marah  
Fun

(ل-اع- 'faeil') 'alsifatalmushbihat' in weight (ل-اع-) بهة  
It indicates the characteristics of a person either good or bad characteristics. 'ل-اع-' often comes from 'ل-اع-'

11) For example in **weight** ( 'faeil')

*hakim*

wise

Adjective derived from nouns are formed by adding the suffix '-y'.

(y) (termed *النسبة* *alnisba*) to the noun.

12) For example

• *يرمز*

*ramzy*

My symbol

• *ينفس*

*nafsy*

My soul

• *يعقل*

*?qly*

My mind

*Adjectives can be used both Attributively and Predicatively*

The Arabic adjectives are used both attributively and predicatively. Attributively adjectives generally post modify the noun head.

13) For example

*athakyu al waladu*

The boy the clever

The clever boy.

الولد ذكي

In a general sentence, predicative adjectives function as predicates (often to copula, verbal or otherwise is required).

14) For example

الولد ذكي

*athakyualwaladu*

The clever boy

Lamtahbet (2010) explains that adjectives in the Arabic language are called (نعت) Nat (صفة) Sifah singular of (صفة) Sifat). He added that adjectives describe a noun such as (house, car, and boy) are called (منعوت) Man'oot). He also explained that unlike in English adjectives in the Arabic language they came after the noun, they qualify and should agree with it in gender, number and sometimes even indefiniteness.

15) For example

- شجرة كبيرة

*kaberah shajeatin*

Huge tree

A huge tree

- طفلة لطيفة

*lateefah tiflatin*

sweet child

A sweet child

- رجل نكي

*thakyun rajulan*

*intelligent Man(sg)*

An intelligent man

### ***Order of Attributive Adjectives***

In most languages, attributive adjectives usually occur in a certain order. For instance, in English, adjectives about size generally precede adjectives about age (little old, not old little) which in turn generally precede adjectives about color (old green, not green old). This order may be more rigid in some languages than others.

In some, as in Arabic it may be default word order with other orders being permissible to shift emphasis.

Swan (1994) states that there are not specific and agreeable criteria for ordering a cluster of attributive adjectives. “When several adjectives come before a noun, they usually have to be put in a particular order. The rules for adjectives order are very complicated, and different grammars disagree about the details”. It can be added that “English has no official order for attributive adjectives, but English student is often taught the mnemonic OSASCOMP, which stands for opinion, size, age, shape, color, origin, material, purpose”.

Arabic adjectives agree with the noun that they post modify in gender, number, case, and definiteness or indefiniteness.

In Arabic the definite article is used with both the noun and adjective.

16) For example : (batatatunkabeertun) بطاطة كبيرة can mean both:

a) بطاطة كبيرة

*kabeertun batatatun*

a big is potato

كبيرة (b) بطاطة

*batatatun kabeertun*

potato a big is

The context usually makes it clear to understand what it means, the former (a) is the most common in usage.

***Adjectives related indirectly to preceding head***

Adjectives can modify the head directly, syntactically. There is however another construction with the adjective that is related indirectly to the preceding head and directly with the following noun.

17) A tall (with regard to his stature) man came

جاء رجل طويل الزامة

Jaa rajulu tawelu alqanna

The adjective ”طويل” tawelu (tall) is indirectly connected with rajulu ”رجل” (man) but directly with ”الزامة” alqama. In this construction, the adjective agrees with the preceding noun indefiniteness and case only. The number of the adjective is generally singular.

18) For example

- لفان رجل طويل الزامة

*Alqanna tawelu rajulu wakan*

He was a tall man

- رايت الرجل الحسن الوجه

*Wajhuh alhasinu alrajalu raytu*

I saw the handsome man

- حررت برجال كريم ابوهم  
*Abaahum karematun berejaalun marrtu*

I passed by man whose father is a noble

### ***Intensification of adjectives***

The intensification of adjectives in Arabic is done by repetition and use of ‘kul’.

19) For example

- a) Repetition of the adjective in the form of synonym or semi synonym

انك شجاع كمل الشجاع

*alshjaa kul alshjaau anaka*

He is a true hero

انه حق العالم

*lalaam haqu anahu*

He is real scholar

- b) The use of *ḥákul* (very) or similar words

لها لون زاهية جميلة

*jameelatun zahiatun alwaanun laha*

They have very beautiful colors

انه ص-ادق امين

*amen sadiqun anahu*

He is very honest

## **6. Contrastive analysis of attributive adjectives in English and Arabic**

Based on the elaborations in the above two sections, in this section a contrastive analysis of the data was done. It lists the similarities and difference between the use of attributive adjectives in English and Arabic.

### ***Similarities***

1. Attributive adjectives in English and Arabic are meant to be subordinate to the head noun. In Arabic, this subordination is clear in case that adjective must agree with the head noun in number, gender, and definiteness. However, in English this subordination is implicit and not explicit
2. Attributive adjectives modify the noun both in English and Arabic.

3. English and Arabic Attributive adjectives can be inherent if considered from a semantic point of view of the speaker, so they relate to the head directly.
4. In English some adjectives are irregular forms of past participle verbs just like some Arabic adjectives which are derived from verbs.
5. According to form, by adding certain derivational suffixes to nouns and verbs, some English adjectives are formed. They may be attached to certain inflectional suffixes. In Arabic they are also derived from verbs or nouns by adding the suffix ‘ي’

### ***Differences***

1. In English, they pre-modify the noun as in:

‘A clever teacher’ /mudarisunthakyun / ‘كفسي مدرس’

In Arabic, attributive adjectives post-modify the noun as in:

‘an intelligent student’ /tilmeethunthakyun/ ‘تلميذ ذكي’

2. They pre-modify what follows and agree only in gender and sometimes with the number with the preceding noun, as in reasonable adjectives.

‘I don’t accompany a man whose manner is dispraised’ /la-

assdiqrajulunmathmomunxuliquhun/ ‘ق رجل مذموم اخلفتهال اص-اد’

3. In English, attributive adjectives are related directly to the head noun  
‘A tall man’

While in Arabic, the attributive adjectives are related to the head in two ways: either directly as in”

‘A tall man’ /rajuluntaweelun/ ‘رجل طويل’

Or indirectly as in:

‘The tall man’/rajuluntaweelu al-qamma /

‘رجل طويل الزامة’

4. In English, adjectives are a separate class of parts of speech; while in Arabic adjectives are usually considered to be only as a subclass, because they are only a part of a class of nouns.

## 7. Discussion

Through this study, it has been revealed that, there is a wide class of adjectives whose syntax gives them the appearance of one-place predicates but actually they are two-place relations. Using these words and their modifiers in the theory of the logical structure of the sentence reveals that there are far more words in the sentence in this form than there would have been otherwise. This semantic account can be used in almost all “adjectives.” In this analysis, the systematic interpretation of predicates is as follows: there are two types of semantically rudimentary predicates in English. These two kinds with their differences turn out to be reflected in the ways vagueness occurs in attributives and count nouns. Vagueness in attributives arises in ordinary non-opaque contexts. This research uncovered some properties of attributive adjectives that needed to be explained: It is optional to combine an attributive adjective; attributive adjectives may be combined

recursively; relative adjectives order is not completely linear, and multiple attributive adjectives interpretation is subject to scope impact.

In the kinds of adjectives, one type of the general type of adjectives is attributive adjectives that constitute the parts of speech of both languages. There is no need to change their endings according to gender and the case of the noun qualifier as attributive adjectives in English may not cause any problem. The question that needs to be answered is whether they should be placed in front of or after the noun. For example, most of the adjectives beginning with the 'a' cannot be used attributively. Some classifying adjectives behave differently. For non-English speakers, it is difficult to know the correct order of adjectives when there is more than one qualifying noun. To know the comparative and superlative form of those which come with two syllables also poses a problem to the non-English speaker.

Attributive adjectives have unusually been for a long time recognized as well as ignored since they create intentional contexts. The adjectives have no impact on the syntactic properties of a noun. If there is a considerable amount of difference in the relative orders of several adjectives, these orderings are not completely secure. Almost all descriptive adjectives can be used in both the attributive and predicative positions, with the attributive position identifying a noun by some reasonably permanent intrinsic merit and the predicative position defining the quality as fresh knowledge.

Adjectives that are restricted to attributive position or that occur predominantly in the attributive position do not characterize the referent of the noun directly; those that do not, are termed non-inherent. Only attributive adjectives that are confined to attributive position or that occur predominantly in the attributive position do not characterize the noun's referent. Prior to the head noun or pronoun, attributional adjectives change nominal phrases. In most cases, they modify common nouns. Those that describe permanent inherent qualities are meant to be stative adjectives. Most adjectives can be put on a scale of intensity.

The Arab grammarians call the class of adjectives (اسم غير صفة) 'a noun which is not adjective' and (اسم صفة) 'a noun which is adjective'. The definite articles are used both as nouns as well as adjectives. The agreement or concord is known as the part in Arabic adjectives: adjectives are regarded subordinate to the noun they modify, and they must agree in number, gender, case, and definiteness with it. Adjectives in Arabic are mostly derived from nouns and verbs. Size adjectives usually come before age adjectives (little old, not old little), which in turn come before color adjectives (old green, not green old). It may only be a default word order in Arabic, with other word orders permitted to shift the emphasis. When it comes to plural nouns that relate to non-persons, the adjective is used in its feminine single form. The majority of Arabic adjectives can be used before or after a noun, but a handful can only be used after a noun.

In attributive adjectives that accord indefiniteness, number, gender, and case, the noun head is post modified. Both

adjectives and nouns use the definite article. The real adjective may be one word, sentence, or quasi-sentence. In reasonable adjectives, what follows the adjective is analyzed differently. By putting the suffix(ة /j/), adjectives that are derived from nouns are formed. In an annexation, an adjective modifying a noun usually comes after the annexation as a whole. The adjective has no article prefix in the function when an adjective occurs in the predicate of a sentence and refers to a noun or pronoun in the subject. The adjective's form is determined by whether or not it has a broken plural form. However, these adjectives are less prevalent.

### **Conclusion**

The study concluded that attributive adjectives are more complicated in Arabic than in English. The reason being that in Arabic, they traditionally belong to the class of nouns and they are also of different types. From a syntactic point of view, both in Arabic and English they function as modifiers of the head noun either directly or indirectly. The attributive adjectives are positioned before the noun according to position in English. While in Arabic, they are positioned after the head noun. According to the study of form, it can be concluded that in English adjectives have no special form but some adjectives are characterized by certain suffixes and some of them are considered to be irregular past participle forms of verbs. On the other hand, in Arabic, they are derived from certain verbs and nouns. Attributive adjectives in English and Arabic share more similarities than differences.

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# **Figurative Speech (Metaphor and Simile) in the Novels of R. K. Narayan: - A Stylistics Approach**

***R.Parth Sarthi Vithal***  
*P.S.Telugu University,  
Hyderabad*

## **Abstract**

*R.K. Narayan is the Shakespeare of Indian literary academia and has no axes of any kind. He is that rare thing in India today, a man of letter pure and simple. Narayana used metaphor and simile as a great tool to help the readers to understand unfamiliar context by linking it to a concrete and familiar concept and made it easier for the readers to understand the line of context presented by the author. Metaphors and similes are the basic tool used in most forms of fiction writing. By comparing one thing to another, the writer can evoke mood or memory, help the reader to make connections, establish a theme, and add interest and colour to the writing. Metaphor and similes have an important role play because they have embedded meanings within. Narayan's language has an important role in enchanting the reader's appetite. He made very efficient and accurate use of figurative speech like metaphor and simile to deliver his purpose of understanding and comparison of two or more things which are similar or alike. The purpose of the present study is to analyze the language RK Narayan used in his novels. The language is studied under the context of figurative speech i.e. metaphor and simile and usage by the author and its nature and temperament in some of his novels.*

**Key words:** R K Narayan, Metaphor, Simile

**Introduction**

R. K. Narayan is known for his simplistic writing style, his ability to juxtapose fiction with reality, and to subtly embed simple, yet, deep lessons in the mind of the reader. R.K. Narayan is the most significant and unparalleled literary agent, editor, publicist, and Indian English writer, of the twentieth century, with fifteen novels and novellas and more than half –a-dozen collections of short stories in his store. His writing, no doubt, is in a most artistic and ornamental way. Narayan’s writing style in fact is simple with full of wit and humor and focused on lay men and women comprising the readers of next-door neighbors providing a greater ability to relate the topic.

The R. K. Narayan’s style is graceful and contains elegance and notable for its economy of detail and purity. It is never weighed with words. Narayan’s English has a virile force and a mastery which conveys the maximum of meaning in the fewest and simplest words; which reflect stylistic features of his art of fiction. He has perfect grip over English language profusely to convey the essence of his thoughts in order to delineate social patterns of life. None can resist from reading his novels/novella and thus readers get enthralled by his wit.

The present article explores the relevance and purpose of Stylistics (metaphor and simile) in the novels of R.K.Narayan. The main motive of this study is to rejuvenate the present generation scholars with some of the common and effective devices of stylistics viz. metaphor and simile and enable them to be more competent with the multiple meanings based on the context and also to improve vocabulary semantically which ultimately enhance their communication skills to a great extent. Further, to inculcate feeling amongst teaching fraternity and academia for style and to enable them to react

to the textual stimuli in the approved manner by pinpointing those textual features that cause stylistic responses and thus to add yet another weapon to their arsenal of teaching/learning methods.

### **Review of Literature**

In the words of Professor K.R.Srinivasa Iyengar- 1985 (“The Father of Indian Writing in English”), Narayan is “a master of comedy who is not unaware of the tragedy of the human situation, he is neither an intolerant critic of Indian ways and modes nor their fanatic defender, he is on the whole, content to snap Malgudi life’s little ironies, knots of satiric circumstance and tragic-comedies of mischance and misdirection”.

Shashi Tharoor noted that “Narayan at his best is consummate teller of timeless tales, a meticulous recorder of the ironies of human life, an acute observer of the possibilities of the ordinary”. Jhumpa Lahiri (2006: ix), the Pulitzer winner quotes that Narayan’s short stories as well as novels possess captivating feelings. She made some balancing act and compares him to ‘Guy de Maupassant’ for their ability to compress the narrative without losing the story written with an unyielding vision.

Graham Greene, a great admirer of Henry James, declared that ‘since the death of Evelyn Waugh, Narayan is the novelist I most admire in the English language (Ram and Ram 1996b:5). John Updik “Malgudi’s Master (1975:38) referred to Narayan as ‘the foremost Indian writer of fiction in English’.

Critics have further stated that Narayan’s works are based on more descriptive and less analytical. His attitude coupled with

his perception of life catered an unusual ability to combine characters and actions and ability to use ordinary incidents to create a connection in the reader's mind. He always made the text, the discourse interesting by using simple and understandable language to a common man by practicing various stylistics devices.

### **Methodology**

The aim of this article is to study the use of literary devices in Narayan's novels. Literary device are specific techniques that allow a writer to convey a deeper meaning that goes beyond what's on the page and work alongside plot and character to elevate story and prompt reflection on life, society and what it means to be human and humane as well.

For understanding the context of this article, the definitions of 'style', 'Figurative language', 'Metaphor' and 'Simile' are considered.

Style is the manner of linguistic expression both in verse and prose. Style comprises of figurative language, rhythmic pattern and rhetorical choice of lexical. It also refers to the tone, diction and imagery in writing. Style as the name suggests, is the study of style. While "style" in a general term which can refer to the way or manner anything is done (e.g. "We don't like so-and-so's style of teaching/learning"), or designed (e.g. "a building in the British style of architecture"), stylistics in particular examines the style of written or spoken texts. More specifically, stylistics attempts to study the style of language of literary texts.

Figurative Language refers to the high usage of figure of speech, which includes the use of metaphor, simile, irony,

symbolism and imagery, etc. Narayan deliberately used figurative language to decorate/beautify his writings, which made his writings ornamental. A few of them are studied and discussed in ensuing paragraphs. Figurative language is used to create layers of meaning, which the reader accesses through the senses, symbolism, and sound devices. Figurative language brings the readers deeper into the theme of the work, without the author having to explicitly lay out the theme for the reader.

Metaphors can be distinguished from other closely related rhetorical concepts such as metonym, synecdoche, simile, allegory and parable. Further, “metaphor involves language in unbalancing perceptions of reality and is more closely allied to the experimental character of poetry” (Bradford 28).

A simile is other side of the same coin in which two essentially dissimilar objects or concepts are expressly compared with one another through the use of “like” or “as.” Simile is used as a literary device to assert similarity with the help of like or as, which are language constructs that establish equivalency.

### **Descriptive Analysis of Data**

In the following discussion, the famous novels of R.K.Narayan have been reviewed to provide examples of figurative language in form of Metaphor and Simile. For all the examples, the page numbers are mentioned at the end as occurring in that novel.

#### **a) SWAMY AND FRIENDS**

Through the novel ‘Swamy and his friends’, RKNarayan made an interesting read on the early childhood days and friends.

In this novel, the following examples exhibit the instances of figurative language.

**Blind kitten**

Swaminathan, ‘you are a blind kitten; I will be a blind puppy (34)

**Milk**

Milk is one of the forms of Goddess Laksmi, the goddess of Wealth (35)

**Tail**

Swami’s old friends, who feel like they have been abandoned by Swami, begin calling him “tail.” A “tail” is a long thing that attaches itself to an ass or a dog.

**Unobserved Atom**

When Swami joins the crowd of protestors, he is described as an “unobserved atom” in the crowd, which alludes to the sense of invisibility, anonymity, and disconnected individuality that the crowd affords him. This feeling of disassociation is likely what gives him the gutsiness to start pelting rocks at the headmaster’s windows, despite the consequences that he might face.

**Collapsing like an Empty Bag**

The strangeness of the hour...oppressed him with a sense of inhumanity. Its remoteness gave him a feeling that he was walking into a world of horrors, and supernatural. He collapsed like an empty bag, and wept bitterly. He called to his father, mother, granny, Rajam, and Mani. (191-192).

To use ‘Collapse like an empty bag’ reflect a strong metaphor that displaces the solid and intimate form of human body with the fragile unnatural and vacuous form of a bag. By using such metaphor to describe Swami evinces how deeply his despair and

fear have estranged him from his own embodiment.

The language that describes Swami getting lost in the woods as he runs away becomes particularly figurative and vivid, registering an uptick in his imagination and feeling that colors how he perceives the world.

### **Leper**

All his friends were there...happy, dignified, and honored within the walls of the august Albert Mission School. He alone was out of it, isolated, as if he were a leper. He was an outcast. (173)

Swami's comparison of himself to a "leper" draws on deep stigma toward those suffering from leprosy and reveals the deep, visceral, and visible way in which he feels isolated, outcast, and condemned from the communities that he once belonged to.

### **b) THE ENGLISH TEACHER**

One of the most popular Narayan's Novels, the English teacher is also a victim of lopsided reception. The English Teacher blends naturally and makes an artistic whole.

"While better things in life" relates to the theme of the novel, the Jasmine here is specially favored, and not just for its fragrance: the flower is a symbol of human beauty and human striving in difficult circumstances. "Only object of any beauty hereabouts. The rest of the quadrangle was mere mud, scorched by Malgudi sun".

The flower also anticipates the climactic reunion; for the olfactory is the operative sense in Krishna's description of his wife's place of worship in their home. "The hung about this alcove a perpetual smell of burnt camphor and faded flowers".

After his wife's death, Krishna opens her phials now dried up. No other novel of Narayan's employs imagery as much as *The English Teacher*, we note an unusual frequency image in the early happy chord, followed by a dry spell, before the imagery is revived with the psychic contact, climaxing on the last page in a cloudburst.

'The softness of night was essentially psychic; I felt'(181).

'The fresh sun, morning light, the breeze, and my wife's presence' (57);his wife is equally nature's bounty. It is not surprising that Krishna enjoys, lie his creator, a flair for the Veena(148);music is not functional in '*The English Teacher*', as the Jasmine is;music goes with Krishna's poetic sensibility.

The child is a catalyst of harmony; she occupies a special place in the family.(35)

**c) Mr. SAMPATH**

Mr.Sampath, too, appeals to imagination, like Falstaff in *Henry IV*. Mr. Sampath presents two foci, with different degrees of intellectual and emotional appeal.

The major stylistic feature is the syntactical choice: a good proportion of the sentences in the opening passage are complex, and with subordinate adverbial clauses. The adverbial clause is grammatically more sophisticated than the other kinds. In opening passage, we 'experience' the subtler kinds: the conditional and the concessional clauses.

The women are anything but romantic. During his visit to Sampath, Srinivas finds Sampath's non-descript wife 'wearing a sari of faded red, full of smoke and kitchen grim' (85). When

Srinivas wishes to make up with his wife after losing his temper with her: 'He put his arm around her and pressed his ace against her black sari. A faint aroma of kitchen smoke and damp was about her' (96)

**d) THE FINANCIAL EXPERT**

The Financial Expert shares the spirit of the post-Independence period. A virtual orphan Margayya is also the first of post-independence failed fathers. A trace of anti-feminism in Margayya too, goes with the rajasic temper of the post-independence hero.

'Now avarice sits on Margayya's shoulders like the Old Man of the Sea: I want only money, not brick and lime or mud' (183).

'He viewed himself as a savior of mankind' (28)

From missionary to messiah to mystic!

'The spoilt kid throws Margayya's account book into the open gutter and later Balu's tearing up his SSLC register and throwing it into the same gutter.' The open drain is a handy metaphor for the seamy side of human nature and human society.

**e) WAITING FOR THE MAHATMA**

Narayan's *Waiting for the Mahatma* is a story of one generation in India interrogating others to come

'The portrait of Maria Theresa was no longer there to brighten up the surroundings' (152).

'The teacher had put a new idea into his head and he almost felt he was a veteran of the party' (23). His drift into the

Mahatma's hut shows how full of instincts and impulses this scion of an ancient Kabir Street family is. 'The door of Mahatmaji's hut was half open. Light streamed out through the gap. Sriram went towards it like a charmed moth. He pepped in like a clown'

First 'a charmed moth' and then a 'clown'  
'Bharti guides this frail vessel through its choppy career. 'Bharti gave his whole life a new meaning and a new dimension (162).

**f) THE MAN-EATER OF MALGUDI**

The Man-Eater of Malgudi breathes the spirit of the Indian epic tradition;a modernizedmyth of Bhasmasura, the Demon who after winning a deadly boon from Lord Shiva wishes to test it on the Lord Himself; but with opportune intervention from Lord Vishnu, the demon destroys himself. 'Yet the universe has survived all the rakshasas that were ever born' (183).

Otherwise what is to happen to democracy? Deocracy!

'No human being has set foot in the attic for years'(23);infested with vermin:impressively,mosquitoes,Vasu's nemesis (25)

He gave me a hard grip. My entire hand disappeared into his fist(16)

'Do you know what it looks like when it dries? It assumes the pink of an old paper kite picked out of a gutter' (108).

**g) INDIAN REMEDIES, PRIVATE SORROWS -THE VENDOR OF SWEETS**

R.K Narayan's The Vendor of Sweets (1967) like his other books is composed in simple, lucid English that can be read and

understood without turning and returning the pages after a single read.

‘Conquer the taste, and you will have conquered the self’, said Jagan to his listener, who asked, ‘Why conquer the self?’ Jagan said, ‘I do not know, but all our sages advise us so.’(1)

‘The captain seized the lock in ‘martial grip’ as if it were a hand-grenade and gave it a final jerk’.

‘This is a very strong lock, sir, can’t get it nowadays. I know about locks; this must have been made in a village foundry’.(14)

‘I did it with a blade, under the very nose of the librarian’ (39)

How presumptuous of the man to talk of America, while he was there to provide first-hand information! People’s notions were fixed. Stupid fellows, Frogs in the well! (54)

Ominously for Jagan the American sojourn also seems to have had a strange effect on the young man: ‘He seemed to cower back and recoil from the bright Indian sunlight’ (150)

### **Discussion and Summary**

Narayan’s place among the novelists of India is supreme and said to be one of the best novelists that India has produced. He is, no doubt, a novelist of common people and common situations. The narrative voice of R K Narayan is mirrored in evaluative epithets. A large number of adverbs of time, place, direction, and degree give his writing a palpable quality and the adverbs of manner throw light on the personalities of the characters, so as to render their total image for immediate apprehension.

Narayan's calculated use of figurative speech viz. metaphor, simile and application of transitive and intransitive verbs in his novels adds speed to the progression of images in order to dramatize inner conflict and symbolize it objectively through a situation or object. Moreover, the transitive verbs give the reader an impression of movement and activity and thus add liveliness to the narration. With a clever use of just the right amount of figurative speech and humor in his novels, Narayan was able to transform his seemingly ordinary characters into larger-than-life individuals, who brought a change in the existing social and political structures of Malgudi, a microcosmic and organic representation of our nation. His such notion work as catalyst and is inspirational to think, dream, and write differently, to delve into a magical reality is far better than the one we knew.

Narayan's skill of writing that allows him to use English to breathe life into his stories with ease can be observed in his novels. He employed language in such a way that allowed his readers to step into the streets of Malgudi, and to feel the same aromas, the same bright Indian sunlight and the similar feelings of his persona.

To summarize, no doubt his use of figurative language and narrative style regulate the tone of the story. The reader instead of remaining away from the happenings gets involved in it and becomes a character of the fictional world.

### **Conclusion**

R K Narayan was an effective craftsman who used tools of metaphor and similes through which he crafted the beautiful status of his writings. He used metaphor and simile to convey ideas as well as offer striking images.

The metaphor and simile used in his novels not only make his writing more ornamental and interesting but also help readers to think more clearly and understand his subject. Narayan is well known personality for using figurative speech in his works to invoke thoughts and feelings in readers' mind and allow them to understand the depth of the image he is trying to express. No doubt his style is distinctive for its razor-sharp precision and its knowledge enhances writing skills with imagery.

Voracious and planned reading and analysis reveals Narayan's creative skills: his fictional town of Malgudi is peopled with realistic characters with credible lives the world over. Narayan's fluid style of writing has enchanted readers. His masterful application of figurative speech is the result of fine literary skills, which no doubt, places him in the ranks of the greatest writer of English fiction in 20th century.

He used metaphor and simile as a great tool to help the reader to understand abstract and the unfamiliar content by linking it to a concrete and familiar concept. It became easier for the readers to understand the information presented by the author. R.K Narayan also used metaphor and simile creatively, humorously, and lively to explain the complex situation and to trigger emotions which make his work more appealing, effective, pleasurable and memorable. Further, it reveals the technique that RK Narayan uses – a combination of figures of speech, irony and humor help to grasp the basic technique that Narayan uses. Entire gamut of Narayan's mastery over the style of language is depicted in the brevity, in the conciseness of his description of the situations portrayed in the story and finds his plain language as a vehicle of truth.

Narayan's novels without any doubt can transform ordinary descriptions into evocative events; enhance the emotional significance of passages. Further, he made a complex thought easier to understand and more relatable and added flavour to his writing piece. Narayan has perfect grip over English language profusely to convey the essence of his thoughts in order to delineate social patterns of life. None can resist from reading his writings and the readers are enthralled by his wit. Moreover, his stories possess captivating feelings and even lay readers might dip into them. He tried to articulate in his literary text briefly, more in few words to achieve a maximum effectiveness and attitude coupled with his perception of life catered an unusual ability to combine characters and actions and ability to use ordinary incidents to create a connection in the reader's mind.

To conclude, R.K Narayan has left with us huge mines of knowledge. It is for us to mine, excavate, and cruise it and give proper color, understand to be used in the society for better understanding of the text as a finished product.

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# **The Contextual Variation of Tones in the Speech Function of Bangla Wh-Interrogative Clauses: A Systemic Functional Linguistic Study**

*Anannya Mondal*  
The EFL University,  
Hyderabad, India

## **Abstract**

*The tones carry the construal meanings in the message. From the social-semiotic perspective, the meaning of the message is conveyed through the exchange of 'text' between the speakers and the hearers in the spontaneous conversation of the context of situation. This study aims to explore the phonological realization of tones in the speech function of contextualized Wh-interrogative clauses in Bangla. It is based on the functional framework described by Halliday and Greaves (2008) and Halliday and Hasan (1985). In this study, six Wh-interrogative clauses with the Wh-element 'what' have been explored in six constructed contexts of neutral attitude, such as, /maneta ki/? (What is the meaning?), /ki kora jay/? (What to do?) etc. Using two methods, the data was elicited – a. in the form of questionnaire and b. voice recording. The data was recorded from 18 female native speakers of Bangla which was analyzed using PRAAT to study the tone. The study stands for three hypotheses – 1. The variation of tones occurs for construing the meaning in the context of situation during the process of communication. 2. The neutral realization of Wh-interrogative in Bangla is not restricted to a Falling tone. 3. Various tones can be used to construe the speech function of 'demanding information' in the Wh-interrogative clauses. The findings of the study reveal that there can be variety*

*of tones used to construe the meaning in the neutral context on the basis of the situational variables.*

**Keywords:** Tone, Contextual Variation, Construe, Realization.

### **Introduction**

Language plays the central role for a human to become a social being. The transmission for being a member of the society happens through the exchange of the language. It includes all the elements of interpreting experience, expressing the logical meaning, and the speakers' participation in the situation which altogether contribute to make meaning in the 'context of situation' (Halliday, 1978). In the domain of Systemic Functional Linguistics, there is no one-to-one correspondence in the process of speech function of communication. The language is organized in a system of strata which include the context, meaning, lexicogrammar, phonology and phonetics (Halliday & Greaves, 2008). These units are related to each other by the process of 'construal' and 'realization'. Through the operation of realization, the tone units are related to the information units and construe the contextual meaning of the message (Halliday, 1992).

From the socio-semiotic perspective, the function of the language is to construe the meaning in the context of situation through the simultaneous operation of the choices of tones in the information unit of the language (Bowcher & Debashish, 2019). According to O'Grady (2017:155), there is 'no extensive corpus investigation of this claim' which suggests that the choice of tone can be 'the unmarked realization'.

Many studies have been conducted concerning intonation in general, but there seems to be a dearth of research from the functional perspective of systemic approach. Thus, six Bangla Wh-interrogative clauses will be explored to find out the

contextual variation of tones in the speech function of Wh-interrogative clauses which construe the neutral attitude. Bangla, also known as Bengali, is a widely spoken language in Indian sub-continent. It is the national language of Bangladesh and the official language of many states in India especially in West Bengal, Tripura and Assam. Bangla is spoken in many other states of India as well as in the USA, UK, Singapore, Nepal and several other countries (Gordon 2005). Among several dialectal variations, Rarhi is considered as the standard one (SCB – the standard colloquial Bangla). The present research is confined within the colloquial variant of Rarhi to show the variation of tones that construe the ‘neutral context’ in the speech function of ‘demanding information’ in Bangla.

## **Research Objective, Hypotheses and Significance**

### **Research Objectives**

The objective of this study is to realize the variation of tones that construe the meaning in the neutral contexts during the process of communication in Bangla using the Wh-interrogative clauses. It focuses on investigating the choices of tones that the speakers make in the contextual domain of making meaning in the speech function of ‘demanding information’.

### **Hypotheses**

The hypotheses for this research are –

- i. The variation of tones occurs to construe the meaning in the context of situation.
- ii. The ‘neutral’ context does not necessarily have particular pitch contour of falling tone.
- iii. Various tones can construe the meaning within the context of situation.

**Research Questions**

The following questions are addressed by the study –

- i. Does ‘context of situation’ play a major role in the realization of tones?
- ii. Do the native speakers of Bangla use multiple tones to construe the meaning in the context?
- iii. Do the speakers recognize the ‘neutral’ contexts of all the Wh-interrogative clauses?

**Significance of the Research**

The study exhibits the communicative function of tones in the context of situation that involves the speaker’s active participation in the overall process of expression and intention. By including the detailed description of the contextual situation, the study provides the choices of tones that the native Bangla speakers used. As Bangla is a highly emotive language, a generalized pattern of tone is difficult to determine in construing the meaning of ‘demanding information’ in speech function of Wh-interrogative clauses. It is also important to read Bangla using the appropriate tones in the spoken texts which associate the contextual formation of the situation.

**Literature Review****Some Important Work of Bangla Intonation**

Chatterji (1921) stated that Bangla intonation shows high expressive values. He exhibited that different tones express different attitudes in the word level. In the sentence level intonation, he provided the examples with the sketch of pitch movement of tones along with the constituents of its focus. Ray, Hai & Ray (1966) used “demarcation” to denote the distinctive features of intonation and continue to talk about “pitch phonemes” and list nine of them that compose a pitch

contour. One of the most significant studies was done by Hayes and Lahiri (1991). In order to describe Bangla intonation, they adopted the formal description presented by Pierrehumbert (1980) and others. Another research was carried out by Lahiri and Cole (1999) which focuses on finding the Bangla emphatic clitics and focus intonation. Later on, Hasan (2015) exhibited different findings of focus intonation in Bangla. Hasan's (2015) study reported that Bangla focus intonation has H\*L1 which is different from the findings of Hayes and Lahiri. A comparative study was done by Hai and Ball (1961) where they stated that both Bangla and English intonation share some similarity from the grammatical point of view. They exhibited that statements and Wh-questions use a falling tone and a rising tone for yes/ no questions, requests etc. in both English and Bangla languages. Bangla includes many other notable studies in intonation.

#### **Attitudinal Function of Tones**

Halliday (1970) pointed out that attitudes and emotions are part of meaning and intonation patterns that convey the meaning of the information unit. The Systemic Functional Linguistic theory draws the entire attention to the overall description and relation between the strata of the language system. The choices of tones realize the interpersonal relationship between the speaker and the hearer.

Another important aspect of tone unit is the Tonic prominence or Tonic syllable which helps to define the simple or compound contour of the pitch as well as the major and minor focus of the information. Not only does the tonic prominence establish the loudness and significant falls and rises of the information unit, but also it helps in selecting the tone groups of the whole utterance (Halliday & Greaves, 2008). Tench (1996) stated that the communication system is guided by the tone system.

He also added that the communication, attitude, information and grammatical units are realized by the tone units. According to Halliday and Matthiessen (2014), the tone group takes a great deal of responsibility in construing the meaning in the organization of the sequence of the information unit. In the phonological stratum of English, there are five simple and two compound tones which are labelled as the primary tones (Halliday, 1970). The secondary tones are the categories of the primary tones which are based upon the distinctive meanings and attitudes of the contexts. However, this study includes only the available choices of primary tones in the speech function of ‘demanding information’ in Bangla Wh-interrogative.

### **The Context of Situation**

Halliday and Hasan (1985) mentioned that the context of situation brings about the exchanges of process and product of the text. In order to interpret the concept of context of situation, they introduced a framework which includes the field, tenor and mode of the context. The field refers to the social action of the discourse. Tenor is concerned with the relationship of the participants (the speaker and the listener). Mode focuses on the operation of the status and the organizational function of the context. It includes the spoken/ written form of the different genres. This study reveals how the tones are realized in association with the neutral ‘context of situation’ in Bangla.

### **Methodology**

#### **Design of the Study**

Qualitative and quantitative both approaches were involved in the study to collect and analyse the data. Six Wh-interrogative clauses which are the target of this investigation are noted below along with transcriptions, syllable divisions and the translations:

Table 1. The target Wh-interrogative Bangla Clauses

Transcription	Syllable division	Translation
/maneta ki/?	[ma-ne-ta] [ki]	What is the meaning?
/ki bæpar/?	[ki] [bæ-par]	What is the matter?
/ki korbo/?	[ki] [kor-bo]	What will I do?
/ki bolle/?	[ki] [bol-le]	What have you said?
/ki kora jay/?	[ki] [kɔ-ra] [jay]	What to do?
/ki buj <sup>h</sup> le/?	[ki] [buj <sup>h</sup> -le]	What have you understood?

The study employed two types of tasks for data elicitation – a. a multiple choice questionnaire and b. voice recording. The first task incorporates 17 native Bangla speakers – both male and female. The questionnaire contained six Wh-interrogative clauses which are the target utterances of the investigation in the form of multiple choice questions accompanied by three options for each. This framework determines the accuracy of the constructed ‘neutral context’ created by the researcher as it is important to know the appropriateness of the context of situation.

The second task involved six constructed ‘neutral contexts’ of the target clauses for the voice recording of the speakers. The contexts were described with additional information of the situation, such as the background of the context, the involvement of the speaker, the activity, formality, intimacy, the non-verbal actions and the social correspondence of field, tenor and mode. This task was designed based on the framework of Halliday and Hasan (1985). The focus of the task was to provide the socio-semiotic perspective to the speakers and enlighten them with overall ‘context of situation’ for interacting in the interpersonal exchange of meanings.

In the second task, only the female speakers were involved.

It is observed that the female speakers tend to have more expressive attitude to convey the emotion than the male speakers. It can be possible for the male speakers to choose different kind of tones altogether to construe the meanings in the contexts. It might not be true for all six Wh-interrogative clauses but at least in some of them, the male speakers might show some differences.

### **Sampling**

The criteria for the selection of the informants are mentioned below:

- a. All the participants were native Bangla speakers.
- b. All the participants involved in the voice recording task are female Rarhi Bangla speakers (mostly from Kolkata and Nadia).
- c. The age range of the female speakers was between 20 and 50 years.
- d. They were all educated – some students and service holders took part in the investigation. They all have decent knowledge of reading and writing both Bangla and English.
- e. None of the participants had phonetic knowledge, training and experience.

### **Instruments**

For the first task, the questionnaire was written in Bangla script. The Bangla script gave them the sense of familiarity and comfort to personalize the context of situation described in the task. Out of seventeen informants, ten participants were female and seven were male. The participants were asked to read the contexts carefully and mark the correct attitudes against it in the provided space. A sample of the task is attached below:

The Contextual Variation of Tones...

Table2. Multiple choice questionnaire

বাক্য ১- মানেটা কি ?	
তোমার মা তোমাকে রোজ পড়াতে বসেন। তিনি আজ তোমাকে word-meaning পোড়ানোর সময় একটি কঠিন ইংরেজি শব্দ ব্যবহার করেন। তুমি তাঁকে শব্দটি দেখিয়ে জিজ্ঞাসা করে 'মানেটা কি?'	Happiness
	Anger
	Neutral

Translation:

Sentence 1 – What is the meaning?

Your mother teaches you regularly. Today, she is teaching you 'word-meaning' - translating Bangla to English. While she is teaching today, she uses a difficult English word which is beyond your comprehension. You pointed out the word using your finger and show it to her and ask her 'what is the meaning?'	Happiness
	Anger
	Neutral

After getting the authentic responses of the task from the participants, the second task was conducted.

For the second task, the constructed contexts were provided in the Bangla script to the informants. As it is mentioned earlier that this task is based on the theoretical framework described by Halliday and Hasan (1985), it incorporated the additional social perspective of the context. The situational description explored in the contextualization is as follows:

Table3. The description of background and the neutral context in the task

<p><b>পরসঙ্গ</b> : পড়তে বসে মায়ের সাথে প্রতিদিনকার কথাপকথন; যেহেতু মা প্রতিদিন বক্তাকে পড়ান।</p> <p><b>ক্ষেত্র</b> : শিক্ষামূলক অনুসন্ধানভিত্তিক প্রশ্ন।</p> <p><b>পটভূমি</b> : পরসঙ্গ থেকে বোঝা যায় যে, পড়তে বসে মাকে সাবলীলভাবে কোনোকিছু বুঝতে না পারলে অনুসন্ধানীভাবে প্রশ্ন করাটা মোটামুটি প্রতিদিনকার চেনা পটভূমি। বক্তা অন্যায়সে ও সবচেহন্দে কথা বলতে অভ্যস্ত।</p> <p><b>ধরণ/ প্রকার</b> : স্বতঃস্ফূর্তভাবে প্রতিদিনের মতো শিক্ষণ পদ্ধতি চলাকালীন প্রশ্ন করা।</p> <p>বাক্য ১- মানেটা কি ?</p> <p><b>Neutral</b> - তোমার মা তোমাকে রোজ পড়াতে বসেন। তিনি আজ তোমাকে word-meaning পোড়ানোর সময় একটি কঠিন ইংরেজি শব্দ ব্যবহার করেন। তুমি তাঁকে শব্দটি দেখিয়ে জিজ্ঞাসা করে <b>‘মানেটা কি?’</b>।</p>
--

### Translation:

**Context: Overview:** The regular activity of interaction during the time of study between the speaker and her mother. The mother teaches her daughter (the speaker) every day. It is a very common scenario of evening in Bengali culture as the mother keeps a track of her children’s progress in the school.

**Field:** Educational; inquiry to know about the something new.

**Tenor:** The background provides a regular but stern environment of attention for the ongoing teaching-learning activity. The relationship between the mother and the speaker is very warm and intimate which derived the speaker to ask the target question without any hesitation.

**Mode:** Spontaneously speaking during the exchange of information of teaching-learning process.

### Data

### Collection

This setup for the voice recording task required access to laptop and microphone. For the voice recording, PRAAT software (version 6.1.05) was installed in the laptop beforehand. It was connected with Boya’s noise-cancelling microphone. The microphone was clipped around 10-12cm away from the speakers’ mouth. The recording was done in a silent room without any background noise and echo.

### The Contextual Variation of Tones...

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The instructions that the researcher mentioned before the recording to the informants are as follows –

- a. The participant can read the questionnaire before the recording start to get familiar with the entire procedure.
- b. They are free to ask questions to the researcher if they have doubt about anything.
- c. They are allowed to repeat the utterance at the time of recording, if they feel.
- d. They can take time to read and comprehend the contexts and then express their attitudes.
- e. They only need to render the target Wh-interrogative clauses and not the contexts.

After providing the instructions, the researcher gave the participants the written constructed contexts.

The major constraint of the study was to collect the data due to the restriction for Covid-19. It was possible to execute the study only because of the cooperation of the informants who met the researcher in personal and gave the data willingly. However, it was time consuming to get in touch with all the informants over phone and fix a suitable time for data collection. Also, not all the people agreed to be part of this investigation with whom the researcher got in touch – some of them had safety issues and some of them were not comfortable. So, the researcher had to reach out to a great number of people to get the satisfactory number of informants.

### **Analyses of the Voice Recording**

For the analyses of the voice recording, each utterance was segmented into several individual tiers in PRAAT, such as - syllables, F0 readings, tones, duration, intensity, pitch settings

etc. A sample is attached below:

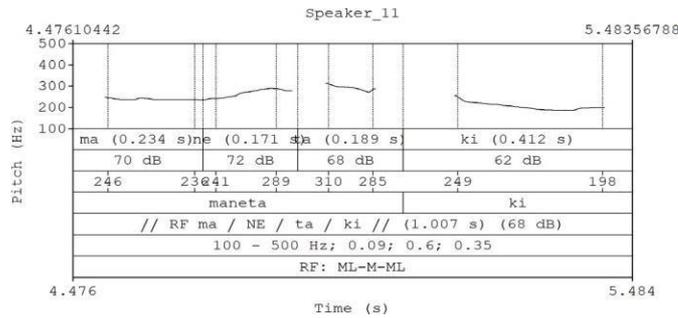


Figure 1: The analysis of the voice (/maneta ki/; Speaker 11)

## Results and Discussions

### Results

#### Questionnaire – Multiple Choices

The result of the multiple choice questionnaire, namely the frequency of the correct answers is shown in Figure 1. It is found that apart from two clauses, all the Wh-interrogative clauses were marked right by seventeen informants. In the second clause (/ki b•par/?), one informant marked the attitude as ‘sadness’ and in the third clause /(ki korbo/?), three informants selected two different attitudes to mark the appropriate context – one being ‘good’ and the other two being ‘anger’. The findings show that the correct answers are very high in frequencies which make the constructed neutral contexts potentially appropriate to conduct the next task.

## The Contextual Variation of Tones...

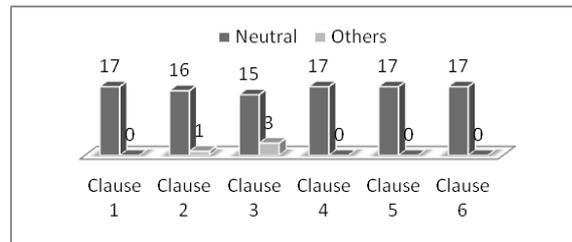


Figure 2: Result of multiple-choicequestionnaire

## Voice Recording

The result of the second task exhibits the variety of tones that had been realized by the speakers to construe the speech function of ‘demanding information’ in the Wh-interrogative clauses. The following table shows the percentage:

Table 4: The results of the variation of tones in the clauses

Clause	/maneta ki/	/ki b{par/	/ki korbo/	/ki bolle/	/ki kɔra jay/	/ki buɣ <sup>h</sup> le/
F (Falling Tone)		8 (44%)	7 (39%)	2 (11%)	5 (28%)	11 (61%)
R (Rising Tone)	3 (17%)	6 (33%)	2 (11%)	14 (78%)		
R F (Rising- Falling)	10 (55%)	1 (5%)				2 (11%)
F R (Falling- Rising)		3 (17%)	9 (50%)	2 (11%)	12 (67%)	4 (22%)
R + FR	4 (22%)					
RF + R	1 (5%)					
F + RF						1 (5%)
R; RF					1 (5%)	

The pictorial representations given below show the movement of F0 contour in six Wh-interrogative clauses. Almost all the speakers' (18 female) pitch contours had been used to show the overall realizations of the tones in each context. The solid darker lines represent the maximum use of the tone by the speakers in the neutral context; the dashed lines show the second, the dotted lines show the third and the dashed-dotted lines in grey colour indicate the minimum usage of the tones in the contexts to realize the neutral attitude. The variety of tones is observed across the clauses.

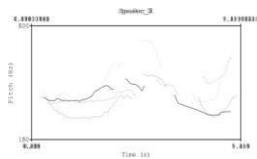


Figure 3./maneta ki/

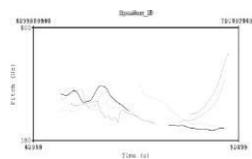


Figure 4. /ki bæpar/

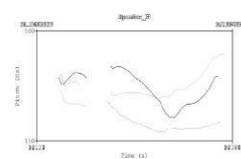


Figure 5. /ki korbo/

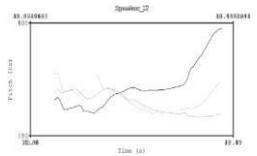


Figure 6. /ki bolle/

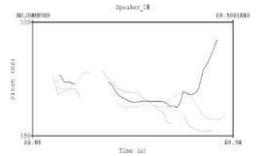


Figure 7. /ki kora jay/

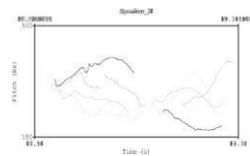


Figure 8. /ki buyhle/

### Discussion

In the first task, the contexts of the Wh-interrogative clauses have been remarkably identified by the informants of Bangla speakers. It establishes the fact that the contexts are ideal to give the essence of neutral attitude to the speakers and therefore, it provides the appropriate situation to express the speech function of ‘demanding information’. The results of the second task show that the ‘context of situation’ is one of the major kinds for the study of the realization of tones. It is hard to generalize any particular notion of tones in the speech function to realize the

meanings in the neutral contexts of demanding information.

To construe the meaning of the first context, 55% participants used RF tone and the tonic syllable is the second syllable /NE/ used by 11 participants. However, 4 participants have showed a compound variation of tone (R + FR) to realize the context having the tonic prominence on /NE/ as primary and /KI/ as secondary tonic syllable. Very few participants also used /KI/ and /MA/ as tonic syllables. In the case of second Wh-interrogative clause /ki bæpar/, most of the major pitch movements were observed in the second syllable /BYA/ which has been used by 16 speakers. 8 speakers used F tone, 6 speakers R, 3 speakers FR and only one speaker used a RF tone to construe the neutral meaning in the context. All 18 participants have used the second syllable 'KOR' as a tonic syllable in the third clause /ki korbo/ with the variation of tones, e.g. – FR by 9 participants, F by 7 and R by 2. In the fourth clause 'ki bolle/', the major pitch movement starts from the second syllable /BOL/ which has been used by 15 informants. The tones which have been used by the informants are – R (by 14 speakers), F (by 2 speakers) and FR (by 2 speakers). The meaning of the neutral context in the clause /ki kora jay/ was realized by FR, F and R&RF tones. FR tone has been used by 12 informants, F by 5; and a very interesting tone group has been used by one speaker (Speaker 15) who exhibited two tone groups to construe the neutral context. The first syllable receives an R tone which makes it a one distinguished tone group and the other one is heard as an RF tone having the last syllable as Tonic syllable. The tone group is analysed as – //R KI// //RF ko/ra/JAY//. The last utterance /ki bu<sup>h</sup>le/, again, shows the realization of the varied tones in the context, e.g. - F (used by 11 participants), FR (by 4 participants), RF (by 2 participants) and F + RF (by 1 participant). 13 speakers used the second syllable /BUJH/ as tonic syllable, 3 speakers used /KI/ and one speaker

used /LE/ and the compound tone appeared to get the primary tonic prominence on /KI/ and the secondary on /LE/.

The ranges of the pitch movements majorly started from the Mid or Mid-Low position and it finished either at the Mid or Mid-High or Mid-low position at the end for all the utterances of all the contexts, only except few cases which show the extreme difference of taking High or Low pitched range. But the number of the exceptions is too insignificant to mention.

All these analyses contribute to assign that in the contextualization, the speech function of ‘demanding information’ can realize varied tones to construe the meaning in the situation. The findings also suggest that in the Wh-interrogative clauses, most of the tonic prominences are observed on lexical items rather than the Wh-elements. The ranges of the F0 contour, duration of the utterances keep the fairly ‘neutral’ attitudes of the contexts within the general meanings of the primary tones.

### **Conclusion**

It is an undeniable fact that the impact of context in realizing the tone is significant. The study reveals that it is hard to generalize the pattern of tones. The use of different tones which is observed in the speech function of ‘demanding information’ in the Wh-interrogative clauses in Bangla justifies that the neutral meaning can be realized by more than one tone depending on the situation of the context.

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# PHONOTACTICS OF BANJARA LANGUAGE

**K. Balu Naik**

*Dept of Linguistics,  
Osmania University, Hyderabad*

## **Abstract**

*Banjara language belongs to the central group of Indo-Aryan Family of languages. Not much work has been done on Banjara on the phonological aspects. Hence, an attempt is made in this paper to study and describe the salient distributional patterns and restrictions of consonants in Banjara language. The paper also deals with the syllable structure of Banjara language.*

**Keywords:** Banjara Language, Phonotactics, Consonant Clusters

## **Introduction**

Banjara being a Nomadic tribe are scattered throughout the central India with heavy population concentration in Maharashtra, Karnataka, Telangana and Andhra Pradesh. The tribe is known by various names Banjara, Wanjari, Brinjari, Lambadi, Lamans, Lambanis, Lamanis, suga:li, Gurmati and Singali. According to Grierson the name 'Banjara' has probably developed out of Sanskrit word Banj/Vanija(Trading), because of their main and age old vocation (prior to British trade and raj) of transportation of food grain and other commodities, the name Banjara is attached to them. The original home of Banjara was western Rajasthan. In their Folklore they are depicted as the descendants of Rajputs. They have a long history of migration no so much due to any invasions or the exhaustion of the sources of livelihood as usually the case with nomadic tribes as due to

the business transactions as the carriers of merchandise to the invading mohammedan and British armies. That is how they came to the south and scattered though the length and breadth of the Deccan plateau. The Chronology of their migration is a controversial issue, but one can understand from the various historical accounts that Banjaras migrated to the Deccan during the mogul period. The Banjara language belongs to the central group of Indo-Aryan Family of languages. Not much work has been done on Banjara. The Banjara tribes or believed to be descendants of the roma gypsies of Europe who migrated through the rugged mountains of Afghanistan, to settle down in the deserts of Rajasthan and many other states in India 2300 years ago. Banjara Tribes is very famous in whole India as they occupy most of the states in India.

### **Methodology**

Researcher is fluent speaker of Banjara and it is also his mother tongue. The data was collected from his native village. It was validated by other speakers from his community.

### **Data Analysis**

A phonological word in Banjara may have one to five syllables. Each syllable has a distinctive peak and may or may not have an onset and or a coda. The peaks may be simple or complex. Simple peaks are formed by any one of the vowel.

### **Syllable**

Phonemes and the complex peaks are formed by the nasalized vowels. Similarly the onsets and coda may be simple or complex consisting of one or more consonants respectively.

### **Syllable Structure**

Syllables are of four types, namely (a) Peak type, (b) Onset-peak type,

(c) Peak-codetype, and (d) Onset-peak-codatype. The fact whether the onsets, peaks and coda constituting the syllables are simple or complex, which give rise to the further sub-types of the syllables.

**Peak type**

For example

/ a /	‘come’
/ u /	‘he’
/a-u/	‘I came’
/ ka-i/	‘what’

**Onset-Peak type**

For example

/ di /	‘two’
/cu /	‘I am’
/ dho/	‘wash’
/ dhu/	‘smoke’

**Peak-coda type**

For example

/ u:T/	‘get up’
/ a:T/	‘eight’
/ac-De/	‘udder’
/a:nt-re/	‘intestine’

**Onset-Peak-Coda type**

For example

/ ka:l /	‘Yesterday’
/ ca:d /	‘Moon’
/ wyar /	‘times’
/ dha:ns /	‘run’
/gand/	‘smell’
/bha:nd/	‘tie’

**Peaks**

Complex peaks are uncommon in the peak-coda type syllables occurring in word-initial position.

**Onsets**

All the consonant phonemes except /n/ occur as onsets in the syllables. /N/ and /L/ do not occur as onsets in the word-initial position. Complex onsets consist of a stop+h, a stop +(h)+y/w combination or a consonant plus y/w combination.

**Coda**

All the consonants except /h/ occur as coda. A complex coda may consist of a Nasal+stop combination or any of the following clusters /LD/ /rs/ and /yp/.

**Clusters**

Two-member clusters of consonants and vowels are very common, clusters consisting of three members are also found to occur although not so frequently. The only four-member consonant cluster available in the data is /mandlya/ 'amulet'. Each vowel occurring in sequences constitutes the peak of a syllable. Therefore, after each vowel occurring in a sequence there is a syllable boundary provided they are not preceded or followed by a word juncture. The first member forms the coda of the preceding syllable while the second member forms the onset of the following syllable. In case of consonant clusters occurring in the post-juncture position the cluster as a whole constitutes a complex onset of the first syllable. In other positions if the last two consonants of a three-consonant clusters happen to be a consonant followed by a /y/w/h, they form a complex onset of the following syllable while the first consonant of the cluster forms the coda of the preceding syllable, otherwise the syllable boundary occurs after the first two consonants.

**Two-consonant clusters**

The following observations can be made regarding the distribution of consonants in the two-consonant clusters.

- (a) All the consonants except /h/ and /n/ occur in germination.
- (b) /h/ does not occur as the first member and /n/ does not occur as the second member of the two-consonant clusters. /h/ occurs only after stops and /n/ occurs only before stops.
- (c) Among the stop consonants /D/ occurs with the largest number of stops whereas /c/ occurs with the least number of stops.
- (d) /s/ does not occur before voiced stops.
- (e) Among the nasals /m/ occurs with the largest number of consonants as the first member whereas /N/ occurs with the largest number of consonants as the second member of the two-consonant clusters.
- (f) /y/ occurs only before stops and nasals.

The two-consonant clusters are exemplified below

/pp/	/koppu/	‘crown’
/pt/	/hapta/	‘times’
/pT/	/capTi/	‘pincers’
/pD/	/kapDa/	‘cloth’
/pn/	/sapno/	‘dream’
/pN/	/bapNi/	‘eyelid’
/pl/	/ceplu/	‘chappals’

Table 1: Consonant Clusters in Banjara

	ll	P	t	T	c	k	b	d	D	j	g	s	h	m	n	N	n	l	L	r	w	y
P	pp	pt	pT						pD		ps			pn	pN		pl		pr	pw	py	
t	tp	tt	tk						tD					tm	tn	tN		tl	tL	tr	tw	ty
T	Tt	TT	Tk						TD						TN		TL		Tr	Tw	Ty	
C	ct		cc	ck					cD					cm	cn	cN		cL	cr	cw	cy	
k	kt	kT	kk						kD		ks			kn	kN		kl	kL	kr	kw	ky	
b	bt			bb				bD	bj						bN		bL	br	bw	by		
d	dt						dd	dD						dm	dn	dN		dl	dr	dw	dy	
D	dp	dt		Dk	Db	Dd	DD		Dg	Ds				Dm	Dn	DN			Dr		Dy	
j	jt			jb				jD	jj					jm	jn	jN		jl	jL	jr		
g	gt	gT						gD	gg						gN		gl	gL	gr	gw	gy	
s	st	sT	sk							ss	sm	sn	sN				sl	sL	sr	sw	sy	
h																						
m	mp	mt	mT	mc	mk	mb	md	mD	mj		ms			mm	mn	mN		ml	mL	mr	mw	my
n	np	nt		nc	nk		nd		nj	ng	ns			nm	nn				nr	nw	ny	
N	Nt	NT		Nk			Nd	ND	Nj	Ng					NN				Nr			
n					nk					ng												
l	lt			lc	lk		ld			lg				lm	ln		ll		lr	lw	ly	
L	Lp	Lt	LT	Lc	Lk		Ld	Ld	Lj	Lg					Ln		LL		Lr	Lw	Ly	
r	rp	rt		rc	rk	rb	rd	rD	rj	rg	rs			rm	m	rN		rl		rr	rw	ry
w	wt						wd	wD							wN		wl	wL	wr	ww	wy	
y	yp				yk		yd								yn							yy

**Three consonant Clusters**

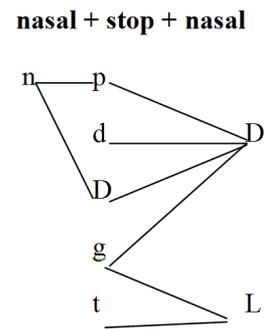
There are four types of three-consonant clusters. First, clusters having a nasal + a stop + a stop or a liquid or a /n/, /h/ o /y/.

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Which are most common among the three consonant clusters. The second type involves a stop + a lateral or a stop + a/h/ or /y/. The third type consists of a stop + h + a /w/ or /y/. The fourth type consists of /r/ + a stop or a fricative + /h/ after stops and a stop or a liquid after a fricative.

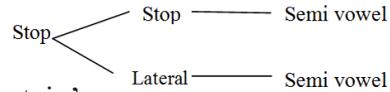
**Nasal + stop + stop / liquid/semi vowel+lateral**

/npD/	/kanpnDi/	‘temple (anat.)’
/ndD/	/mundDi/	‘ring’
/NDg/	/paNDga/	‘festival’
/ngD/	/singDi/	‘rainbow’
/ngN/	/kangNene/	‘bangle acc.’
/ncl/	/canclar/	‘of cencu tribe’
/ngl/	/bangla/	‘bungalow’
/mpL/	/pimpLero/	‘of peepul’
/mdr/	/samdrer/	‘of the sea’
/ntr/	/santra/	‘orange’
/ncr/	/bancro/	‘is saved’
/ndr/	/wa:ndri/	‘monkey’
/NDr/	/TaNDri/	‘woman’
/ngr/	/bongrAm/	‘top’
/mpy/	/rampya/	‘saw’
/nty/	/tantya/	‘step’
/ndy/	/bindya/	‘brass pot’
/nky/	/mankya/	‘man’
/NDy/	/guNDya/	‘hooligan’



**Stop + Stop /Lateral + Semivowels**

/pTy/	/khopTya/	‘palm’
/Tky/	/khaTkya/	‘butcher’
/Dky/	/tadkya/	‘bamboo curtain’
/Tly/	/paTlya/	‘Village chief’
/kLy/	/DhokLya/	‘an edible fish’



**Stop/Trill/Lateral+ Stop/Lateral+ Stop/Lateral/Trill/Semi-vowels**

/NTD/	/gaNTDi/	‘bundle’	Stop — Stop — Semi Vowel/Stop/Lateral/Trill Nasal —
/NDy/	/guNDy/	‘rougue’	
/nky/	/na:nkya/	‘small’	Trill — Stop — Semi vowel
/Tly/	/pa:Tly/	‘chill power’	Lateral — Lateral — Semi vowel
/ngL/	/rungLi/	‘small stream’	
/nkL/	/sa:Nkli/	‘chain’	
/LLy/	/meLLya/	‘stick’	
/rcy /	/marcya/	‘chillies’	
/ntr/	/mantri/	‘minister’	

**Trill+ /Fricative + /Stop/Trill**

/rst/	/barsro/	‘rising’	Trill ----- Fricative ----- Trill/Stop
/rsp/	/warspat/	‘thursday’	

**Conclusion**

Banjara language allows two consonant clusters in word initial and medial position. Word final consonant clusters are not allowed in Banjara language. It allows maximum number of four consonants in word medially (only one example was found in my data i.e. /mandlya/ - ‘amlet’). The sequence of these consonants is as follows - nasal + stop + lateral + approximant. Even though Banjara language is in contact with Telugu but it has retained the aspirated consonants even among illiterate people. Word initially three consonant clusters are not allowed in Banjara word medially 3 consonant clusters sequences are allowed. Finally, it was observed that not all consonants combine with all other consonants. The two consonant combinations are preferred over the three, and a greater number of combinations are possible in the word medial position than in the word initial position. The three consonant clusters in the following order of consonants – Nasal+stop+stop /liquid/ semivowels/ lateral, stop+stop/ lateral+semivowels, stop/trill/lateral+stop/lateral+stop/ lateral/trill/semi vowels

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## **Relli: Linguistic Parallelism with Odiya And Telugu**

***Kalloji Susheel Kumar***

*Dept. in Linguistics,  
University College of Arts and Social Sciences,  
Osmania University, Hyderabad.*

### **Abstract**

*Relli speech is considered as southern most border dialect of Odiya. Equally authentically it can be called as a separate language because the level of intelligibility between standard Odiya and Relli is pretty low. So we can say that Relli is a language which is related to Odiya but has distinct qualities at phonological and lexico-grammatical level. In this presentation I am looking at a Relli folk song and its Telugu translation to examine the consequences of close contact of Relli speakers with Telugu speakers of north coastal district of Andhra Pradesh like Srikakulam, Vijayanagaram, Vishakapatnam and also north Telangana Districts like Adilabad, Karimnagar, Warangal. Here I would like to analyze the Relli song (aṣṭa:çemṇma:) and its Telugu version, to look into the details of Linguistic parallelism with Odiya and Telugu.*

**Keywords:** Relli, Intelligibility, Standard, Distinct qualities

### **Introduction:**

At social level Relli refers to the 'scheduled caste' community in Andhrapradesh and Telangana states. The Relli people migrated from Odissa (Orissa) one of the southeast states of India. Odissa and Andhra Pradesh share the geographical border. The people of Relli community migrated decades back from Odissa to Andhra and Telangana in search of their livelihood. They also

migrated to some other northern states of India. According to Singh(2003:1638) the word 'Relli' refers to a kind of grass in Telugu. The name refers to the fact that historically the relli people's chief means of livelihood was cutting and selling 'Rellu' (grass).The primary occupation of Relli people in A.P is collection and sale of fruits and grass. But to survive they also got engaged in other kind of jobs too. Most of these people are in menial jobs like scavenging.

This community is also known as 'Chachati', 'RellyChachadi', 'SapruorSabri' but the census of India has listed Relli, Chachati, and Sapru as separate schedule caste(Singh 2003:1638). The 2001 census also listed rellichachandi with the name Ghasi and Haddi. According to the Relli community people are mainly distributed in southeast coastal districts such as Srikakulam, Vijayanagaram, Vishakhapatnam, East Godavari, West Godavari, Krishna and Guntur districts in A.P and Adilabad, Karimnagar, Warangal, Khammam, districts in Telangana. They are there in Koraput and Rayagada districts of Odissa too.

### **Review of Literature**

Linguistic parallelism refers to the repetition of a syntactic construction in successive sentences for rhetorical effect. In Linguistics parallelism means the use of parallel or similar syntactical structure in a text. Parallelism can be practiced at different levels, i.e. from word to the sentence level. It is simply the repetition of similar constructions while writing and speaking. It is a common feature of rhetorical speech and literary writings. According to Anderson (1992 & 2006) 'Structural Analogy' implies that to all things being equal, linguistic components and levels have similar structural properties.Linguistic parallelism in words, phrases and sentence patterns within the same language in different literary writers is a common linguistic phenomenon.

It has attracted the attention of many scholars in recent times. Linguistic parallelism, which is the tendency of using similar forms together within a continuous discourse, has been discussed from different perspectives. According to Sankoff (1978), for instance, linguistic parallelism works on several levels: discourse, clause phrase and word level.

The present study is unique because it goes beyond the language boundaries and is aimed at making a comparative study of Relli, linguistic parallelism with Odiya and Telugu. To point out the basic differences in the underlying structures of these languages on one side, and the possible commonalities in the selection of words in Relli folk song.

#### **Importance of the study**

The Relli people speak the Relli language which may be the dialect of Oriya language. Due to migration of these people from Orissa to other states their language has been affected by the local languages. The primary observation of the Relli language speakers speech in A.P and Telangana reveals the fact that their language has been influenced by the Telugu, due to their coexistence with the Telugu people since decades. In course of time, the Relli language might have been influenced by the Telugu language. In the present language situation of Relli we can observe that, they use Telugu lexical items while they speak Relli, this may be due language contact. Sometimes they mix the codes and also switch from one code to another. The interesting fact is that the social stigma of the educated younger generation of this community, showing their disinterest to use their mother tongue in public domains when two or more Relli people meet each other in social gatherings. If the same social stigma continues for further generations, eventually this language will become an endangered language. This language has to be

documented before it becomes an endangered language. Keeping in view of these primary facts and information about the Relli language, the study aimed to find out the linguistic parallelism with Odiya and Telugu, particularly focusing on the lexical and grammatical changes that took place in Relli language over a period of time, due to language contact.

### **Methodology**

The methodology includes the study of one of the Relli folk songs, from the book (Rellid̄ za:napaḍḍ age:ja:lu) collected and compiled by Chenna Sannyaasi Rao. For this study only one Rellifolk song name (aṣṭa:ḥemṃa:) has been analyzed, focusing on the borrowed lexical forms and grammatical markers. The name (aṣṭa:ḥemṃa) refers to the village traditional game. However the song doesn't reflect the game as the name suggests.

### **Data Analysis**

In the following sections the Relli song and its translation into Telugu has been described.

Relli Song : 'aṣṭa:ḥemṃa:'

Transliteration and Meaning: ( Relli folk song)

కాయనె పింజానె  
/ka:ya:nepind̄ za:ne/

Meaning: When ripen and a green unripen fruits (used in a romantic sense referring to a young woman )

కదలాడి తన్నెమా  
/kaḍḍ ala:d̄ṭṭaṇṇema:/

Meaning: Which are swaying like fruits  
మామర సుఖో సారద

/ma:marasuk<sup>h</sup>ho: sorad /

Meaning: Uncle's playful and pleasure

దిగిల దాత కేసెమా

/d̪̪ igilad̪̪ a:take:sema:/

Meaning: Who will satisfy?

ఏ అష్టచెమ్మయే

/e: aṣṭa:çem̪ma:je:/

Meaning: e:astaachemma (name of the game with vocative expression /e:-/)

ఏ మట్టి బొమ్మయే

/e: mat̪ṭibom̪ma:je:/

Meaning: e: my clay doll

(/ e:/ is the vocative expression)

దాలమ్మ గుడి బిత్తరే

/d̪̪ a:lam̪magudibitt̪are:/

Meaning: In the Dalamma temple  
(local deity temple)

దాగి జెమ్మయే....

/d̪̪ a:gid̪̪ ʒem̪ma:je:/....

Meaning: shall we hide

తో నొట్టారె అచ్చిమా

/t̪̪o: not̪toreaçima:/

Meaning: It is on your forehead

పట్టెడట్ట బొట్టుమా

/pattedaṭṭa//bottu/ma:/

Meaning: a big saffron blob

నామాల రంభ బొలి

/na:ma:laramb<sup>h</sup>boli/

Meaning: As you are my Mala rambha

తెతె నమ్మిగిన్ని.....తీ

/tētenam̐giniṅni....tī:/

Meaning: I trust in you

మో అష్టచెమ్మయే

/mo: aṣṭa:ṣhem̐ma:je:/

Meaning: mo: astachemma(name of the game with vocative expression /mo:-/)

మోమట్టి బొమ్మయే

/mo: matṭibom̐ma:je:/

Meaning: mo: my clay doll( /mo:/ is the vocative expression)

ఆజి కల్లర పనిబొరొసుకు

/a:ḍ̣i kallaṛapaniborosuku/

Meaning: In yesterday's rainfall

మామ నేలతీ.

/ma:mane:laṭṭi: /

Meaning: uncle (mama) is not present

### Telugu Translation

కాయాలు పిందెలు

/ka:ya:nepind̐ ṣa:ne/

Meaning: When ripen and a green unripen fruits (used in a romantic sense referring to a young woman )

కద ❖❖❖❖  
/kadala:ɖutunʃenu/

Meaning: Which are swaying like fruits

మ యసర  
/ma:majjasarada:lu/

Meaning: Uncle's playful and pleasure

వ ....  
t:irʃe wa:reware/

Meaning: Who will satisfy?

ఓ .....అష  
/o na:ʃta:çhemʃma/

Meaning: e:astaachemma (name of the game with vocative expression /e:-/)

ఓ ...మ  
/o namaʃʃibomʃma/

Meaning: e: my clay doll  
(/ e:/ is the vocative expression)

ల మన  
/da:lamʃmaguɖilona/

Meaning: In the Dalamma temple  
(local deity temple)

డొం ....  
/dagiundama: /

Meaning: shall we hide

◆◆◆ ఉండమ

/ne nudu[au]damma/

Meaning: It is on your forehead

ప డంత ట మ

/pa[eda]ntabo[ama]/

Meaning: a big saffron blob

ల రంభవ

/na ma:laramb<sup>h</sup>awani/

Meaning: As you are my Mala rambha

న....

/namukor<sup>n</sup>nane ..... /

Meaning: I trust in you

ఓ .... అష

/o: na:as<sup>h</sup>a:chemma/

Meaning: mo: astachemma(name of the game with vocative expression /mo:-/)

ఓ....మ

/o: na:majibom<sup>n</sup>ma/

Meaning: mo: my clay doll( /mo:/ is the vocative expression)

ఈ శ న వ

/e we[ti]ni<sup>n</sup>na<sup>n</sup>tiwar<sup>n</sup>aniki/

Meaning: In yesterday's rainfall

◆◆ క ◆◆◆....

mamale:kapo:jaḍe:

Meaning: uncle (mama) is not present

As can be seen from the above description Relli folk songs have some of the lexical forms which are borrowed from the Telugu language are affixed with the Relli plural suffix. The lyrics of the Relli folk song (aṣṭa:ḥeṃma) are exemplified as below.

### A. Grammatical Markers

Relli Language

/ka:ya:ne//pind̄ ʒa:ne/

Telugu Language

/ka:yalu//piṅḍ elu/

/-ne/ Which is a plural suffix in Relli language attached to the borrowed Telugu lexical form to make the lexical form into plural, replacing the Telugu plural suffix /-lu/ in the above folk song. It is observed that phonological modifications are also found in lexical stem while the forms are borrowed from Telugu to Relli, for example in the above lexical form /piṅḍ e/ (unripen fruit) is not borrowed as it is, the /-ḍ e/ sound in the lexical stem has been changed with /d̄ ʒa:/ in Relly. This phonological modification is due to its close contact with Telugu language.

### B. Vocative Expressions

Relli Language

1. /e:aṣṭa:ḥeṃma:je:/

2. /e:matt̄ibom̄ma:je:/

3. /mo:aṣṭa:ḥeṃma:je:/

4. /mo:matt̄ibom̄ma:je:/

Telugu Language

/o:.....na: aṣṭa:ḥeṃma:/

/o:....na:matt̄ibom̄ma:/

/o:.....na: aṣṭa:ḥeṃma:/

/o:....na: aṣṭa:ḥeṃma:/

In the above examples Relli vocative forms are attached to the



Linguistic Parallelism with Odiya and Telugu' is due to language contact.

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## Voice Impersonation and Forensic Speaker Identification: A Review

**Grace Suneetha Didla**

*The English and Foreign  
Languages University,  
Hyderabad, Telangana, India.*

**Sri Lakshmi Niharika**

*The English and Foreign  
Languages University,  
Hyderabad, Telangana, India.*

### **Abstract**

*Voice Impersonation is the act of manipulating one's voice (by mimicking) and pretending to be someone else. It is a form of voice disguise employed for the purpose of entertainment or fraud. The focus of this paper is to probe the nature of voice impersonation and its detrimental effects in the context of crime. Voice impersonation is usually executed in crimes such as hoax calls, threats, extortion etc. More recently, it is being used in sophisticated cyber crimes that involve gaining access to security systems which run on automated voice recognition. Resolving a voice related crime can be challenging if the criminal employs impersonation with a certain degree of precision. The other challenge is to resolve cases where someone denies the ownership of their voice and claims that it is the work of an expert impersonator. Finally, with the unprecedented increase in the use of voice technology, forensic experts are confronted with this new dimension of voice related crimes using artificial intelligence. In view of this, it is imperative to understand and establish the various factors that contribute to the successful imitation of voice. This paper presents an overview of the act of voice impersonation in the forensic phonetic context and reviews the relevant research carried out thus far in this area.*

**Keywords:** Voice Impersonation, Voice Disguise, Forensic Phonetics, Artificial Intelligence

## **Introduction**

Voice impersonation, which is otherwise called ‘identity theft’, is the act of concealing one’s identity and trying to approximate his/her speech to someone else’s by imitation. It is a form of voice disguise which could be employed for the purpose of entertainment or deception. The focus of this study is on the latter intention i.e. impersonation with a criminal motive. Voice impersonation is a technique whereby the impersonator copies the speech and voice characteristics and approximates them as close as possible to the target voice. The quality of impersonation depends on successful imitation of the several phonetic features such as segmental and suprasegmental features, rate of speech, style of speech, voice quality and so forth. While it is widely believed that voice impersonation is an innate ability, there are, however, arguments that claim otherwise.

In more recent times, however, a significant issue has been the formidable presence of voice impersonation in the cyber world. Voice impersonation using artificial intelligence – a subset of ‘vishing’ (voice-phishing) crimes -- has infiltrated the digital world and are posing to be a major cause of concern.

## **Voice Impersonation: Prevalence And Challenges**

Voice imitation, undoubtedly, can be classified as an emerging class of threats. One of the freak incidents that shook everyone back in 2012 was a prank call made by two radio jockeys impersonating Queen Elizabeth and Prince Charles to the hospital where Kate Middleton was admitted. Unaware that it was a prank, the nurse (Jacintha) transferred it to the main nurse who divulged details about Kate’s condition. Days later, on learning about the hoax call and having fallen prey to it, the nurse committed suicide owing to mental pressure (Thompson, 2012). This unfortunate event went viral and caught everyone’s

attention. While the aforementioned case was executed with a motive to derive fun, unfortunately, it ended on a tragic note.

The other challenge is to resolve cases where someone denies the ownership of their voice and claims that it is the work of an expert impersonator. In a well-known example, Amitabh Bachchan, the famous bollywood actor, filed a case against a gutka company accusing them of using a fake copy of his voice to promote their product without the actor's consent (Arora, 2010).

While it is acknowledged in the literature (Kunzel, 1987) that there are very few cases of fraud reported using human voice impersonation, however, its presence in the cyberworld is increasing at an alarming rate. Vishing is estimated to account for just about 1% of phishing attacks; however, its use in cybercrime has surged by over 350% since 2013<sup>1</sup>. This unprecedented rise in cases could be linked to a spike in the voice conversion software that are freely accessible online. According to a recent research by Israel's National Cyber Directorate, a software currently exists that can accurately replicate someone's speech after a few minutes of listening<sup>2</sup>.

Given the free availability of AI software and its efficacy in producing near-perfect impersonations, fraudsters can potentially exploit these software to scam their victims. Recently, the Wall street journal reported a scam where criminals used artificial intelligence-based software to impersonate a chief executive's voice and demanded a fraudulent transfer of €220,000. The voice-spoofing attack, according to some officials, is the first cybercrime they have heard of in which AI was explicitly used

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<sup>1</sup> <https://www.securitymagazine.com/articles/89432-voice-fraud-climbs-350>

<sup>2</sup> <https://www.cybersecurity-insiders.com/israel-issues-warning-on-ai-cyber-attacks>

(Stupp, 2019).

### **Literature Review On Voice Impersonation**

Given its prevalence and its imminent threat in the world of crime, it becomes imperative to probe and understand the act of voice impersonation. This paper attempts to give an overview of voice impersonation in the forensic phonetic context. This review employs a two-pronged approach (i.e): human impersonation vs. machine impersonation. Human impersonation entails imitation using human vocal tracts while machine impersonation refers to the use of artificial intelligence to mimic human voices. Human impersonation can further be bifurcated into naïve (untrained or lay people) and professional (trained mimicry artists and trained phoneticians) categories. Each of these categories is reviewed from both production and perception points of view.

### **Human Voice Impersonation**

#### **Naïve production**

Speech production is undoubtedly a complex phenomenon which involves multiple systems and stages. Researchers have always been fascinated by the array of things that humans can do with their voices -- ranging from modal voice to various disguises such as accent change and mimicking. Mimicry has long been an integral part of our social entertainment milieu. However, its spread to the world of crime is a disturbing offshoot. In this context, there have been several questions that have long engaged the researchers such as: 'Is everyone capable of carrying out voice impersonation?' If so, how successful are they? Does training help to mimic better? and so forth.

In an attempt to answer these issues, it is interesting to observe that there are many sources online where several enthusiastic people claim to teach mimicry (voice impersonation) for

entertainment/commercial purpose. These experts argue that mimicry is merely a skill and can be acquired through training. Although the resultant impressions of the students who have attended voice impressions tutorials have not been found, there is evidence of training affecting impersonation (Rachel, 2021). To probe if training helps to mimic better, Elenius (2001) carried out a study to recognise the ability of naive speakers and one professional impersonator to train their voices to a randomly chosen target speaker. The subjects in this study were able to improve their imitation by listening to repetitions of the target speaker and their own voice, as well as receiving feedback from a speaker verification system. According to the findings, the false acceptance rate was substantially higher with training. While it may be true that training helps to enhance one's mimicking skills, Reiterer et al. (2013) claim that some people are naturally adept at vocal imitation and interestingly make a living mimicking dialects, speech characteristics, and foreign accents.

Neurological studies on voice impersonation add a new dimension to the existing research. One such is a study carried out by a team of researchers at the Institute of Cognitive Neuroscience, UCL, who observed the neural activity during voice impersonation and normal speech. For this purpose, 23 adult speakers were recruited and their voice samples were collected in three different speaking conditions: normal voice, impersonating individuals, and impersonating regional and foreign accents of English. Researchers used functional magnetic resonance imaging (fMRI) experiment to study the neural correlates of controlled voice change. The study revealed that there was increased neural activity in the speech production areas of the brain when participants talked in different accents and when they impersonated a person's voice, compared to when they spoke normally (McGettigan et al., 2013).

## **Naïve**

## **perception**

The anatomy and physiology of hearing is yet another complex but fascinating area of human behaviour. Speech perception involves hearing sounds of a language, interpreting and comprehending them. Although research in human perception has made exciting strides, it is still fraught with many issues of which the most important problem is the lack of acoustic–phonetic invariance in speech. Another issue is to do with perceptual normalization of the speech signal. Despite several years of research, investigators have failed in identifying acoustic segments and properties of the speech waveform that uniquely match the units derived from perceptual analysis (Pisoni, 1985). With a more sophisticated ongoing research on human perception, it is hoped that these concerns would be addressed soon.

In a forensic phonetic context, exploring the ability of a naïve listener to identify a perpetrator’s voice is of great significance. There are several crimes where the victim or the witness has heard the voice but has not seen the perpetrator. In such contexts, it is important to know if the victim can accurately identify the perpetrator’s voice. In such cases, a voice lineup (otherwise termed earwitness testimony) is set up to assist the victim identify the perpetrator’s voice. Typically, a voice lineup includes a group of voices including the suspect’s voice, and the victim is asked to pick the voice that was heard during the commission of crime.

There are several factors that are known to influence the ability of naïve listeners in identifying voices such as: familiarity with the speaker and the language, innate ability of the listener, the distinctiveness of the perpetrator’s voice, and so forth.

One of the challenges in naïve speech perception is the

identification of an impersonated voice. A rather useful study by Sullivan and Schlichting (1997) was carried out to see if listeners were able to identify a familiar speaker's voice in a lineup consisting of the original voice of the speaker and impressions made by professional and amateur impersonators. The results have shown that naïve listeners could correctly identify the original voice among the fake ones only half of the time. However, this ability should be treated with caution as the listeners' ability to distinguish fake from real voices deteriorated when the original voice of the impersonator was included in the line-up.

Another comparative study was made with two professional impersonators and an amateur. It was found that although the professional imitators did a better job at voice approximation than the amateur, the listeners were able to recognize the imitated voices of both categories (Zetterholm, 2006). Finally, An intriguing study was carried out to probe if the neural activity showed any difference when listeners were made to hear original and fake voices. The study concluded that there were no statistically significant differences (Neupane et al., 2019).

### **Professional production**

It is a well established notion in the phonetic literature that each of our voices is unique. What renders our voices distinct is an interplay of our anatomical, physiological, environmental and habitual factors. However, some innately gifted impersonators possess flexible and dynamic voices that allow them to imitate other people's voices with consummate ease. These impersonators certainly pose a challenge for the forensic phonetic experts and speaker identification systems. In this direction, it is essential to understand the phonetic and voice features that contribute to a successful imitation of voice. This knowledge can greatly assist

the forensic experts in identifying the impersonator.

There are several questions that hover around the factors that contribute to a successful imitation of voice: Is it sufficient if the impersonator imitates just the voice quality and sound like the target? Do the segmental features of speech have to necessarily match with those of the target's voice? How important are the prosodic features such as word stress, rhythm and intonation in producing a convincing impersonation? What role do speech tempo and pauses play in achieving the desired result? Is the auditory impression very different from the acoustic measures? Most of the research thus far has been directed in probing the questions hitherto mentioned.

Undoubtedly, for a precise and convincing imitation, the impersonator has to be aware of the speech and voice characteristics of the target's voice. However, an interesting observation has been made by Zetterholm (1997) where she claims that although 'bull's-eyes' are necessary for a successful impersonation some 'undershoots' and some 'overshoots' can exist. One cannot help but agree with this statement as no voice can ever be replicated to the fullest.

To answer the question if an impersonator would be successful if he just imitates the voice quality, primarily, one needs to define what voice quality is. Sundberg (1987) interestingly quips, "Everyone knows what voice is until they try to pin it down..." According to Rose (2002) voice quality is what we hear when someone is speaking behind a closed door, but exactly cannot listen to what they are saying. It is the quasi-permanent auditory quality of one's voice in the absence of phonetic quality. In this regard, Zetterholm (2006) tried to probe how a professional impersonator approximated to the voice quality of a politician

(the target voice). The study concluded that the impersonator tried to trick the listeners when he exaggerated some characteristic features, but did not change his articulatory, supralaryngeal or the phonatory settings. The imitation of the prosody is so good that the undershoots in the voice quality seem unimportant for the audience. Another part of this study involved a professional imitator who was asked to make impressions of 12 famous target voices. A perceptual evaluation of the various recordings was conducted by three Swedish well-trained phoneticians, who were familiar with the target voices. They have concluded that the impersonator was successful in imitating the different voice qualities (nasal voice, creaky, tense voice etc.) associated with the target speakers.

The same study also probed if the impersonator could efficiently copy the segmental features of the target voices. For this purpose, the listeners (trained phoneticians) were asked to transcribe a select word ‘mobilsvar’, which was captured in all the recordings of the different voice imitations; and these were compared with the original voice of the impersonator. Results indicate that the impersonator captured the different Swedish dialects very well with respect to different pronunciation of the sound segments; the r-segment, the s-segment as well as vowels. However, it was observed that specific individual features were exaggerated in some of the imitations.

A closer look at the acoustic features revealed that professional impersonators are able to adjust their source characteristics (i.e) the fundamental frequency according to their target voice (Kitamura 2008; Zetterholm et al., 2005) and have a greater flexibility compared to an amateur with regard to mean F0 (Zetterholm, 2006). The professional impersonators were also adept at manipulating the filter characteristics: the shape of speech

spectra, formants (F1, F3, and F4) (Kitamura, 2008). In fact it is interesting to note that, in the former study aforementioned, the acoustic values of the impersonation are closer to the values of the target speaker's voice than to the impersonator's own voice.

In yet another study (Zetterholm, 1997) which included just one impersonator and one target, the uvular [R] is one of the most important characteristic features of the target speaker and the impersonator seemed to have exaggerated the [R]. With regard to vowel quality, while both shortened their vowels, however, in the articulation of the vowels / $\epsilon$ / and / $\emptyset$ /, the impersonator made them more open than the target speaker. This study further investigated the prosodic features and concluded that the impersonator convincingly adopted the rhythmic patterns, accentuation of focal words and pitch levels to match the target. However, the placement of duration and pauses did not match but that seemed to be an insignificant aspect.

### **Professional perception**

To define who a professional is, one is confounded with two alternatives. From a forensic phonetic point of view, a professional or an expert listener is a trained phonetician. Nevertheless, in the context of voice impersonation, a professional voice impersonator (mimicry artist) may also be categorised as an expert listener.

Forensic phonetic analysis of an incriminating speech sample is usually carried out by a phonetic expert using auditory and acoustic measures. There are a few factors which influence the analysis such as the length of the speech sample, quality of recording, familiarity with the language, distinctiveness of the perpetrator's voice and so forth. In a study conducted by Schiller and Köster (1998), it was reported that listeners trained

in phonetics outdid the untrained ones in identifying a (German) speaker. Naturally, phonetic training does aid in more accurate voice identification.

Having said that, there seems to be a dearth of research on how voice impersonation is perceived by expert listeners. The question of how well an expert impersonator can detect impersonated speech by other impersonators has never been explored. Given the uncanny ability of a professional impersonator to absorb the speech and voice quality of the target speaker, it is but natural that he/she may have superior skills in detecting an impersonation. Surprisingly, there are no insights on the ability of trained phoneticians as well in the identification of impersonated voices.

## **Machine Voice Impersonation**

### **Machine production**

The sophisticated voice technology using Artificial intelligence (AI) has made inroads into the electronic world today, making life easier and more comfortable. For instance, smart phones are equipped with voice-based applications that enable the users to give voice commands successfully. With even more recent advances in voice-recognition technology, voice biometrics seems to be the new password to gain access to the banks, credit card companies and many government organisations. The said technology is based on the premise that human voices are unique and are saturated with speaker specific features. As impressive as they may appear, these galloping advances are a great cause of concern as unregulated growth can lead to potential cybercrime. For instance, if the attacker defeats the vocal biometrics with morphed voices, he/she might use the authentication capability to get unrestricted access to the security system.

A preliminary research carried out at the University of Alabama showed that voice conversion poses a serious threat in voice recognition. It also stated that attacks against human-based speaker verification may grow more successful in the future as voice conversion/synthesis quality improves .

Voice impersonation using AI is a reality today. The internet is inundated with voice-based applications that promise to clone one's voice in a short span of time. In recent years, researchers at the Carnegie Mellon University developed a neural network-based software called the VoiceGAN, which successfully generated very convincing samples of impersonated speech. Based on spectrographic representations of the source and the target's voice, this model mimics the voice quality and style, and effectively transfers these features from one speaker to another (Gao et al., 2018).

Yet another Montreal-based artificial voice company, Lyrebird, was launched with a goal to use AI to “create the most realistic artificial voices in the world.” The software does a meticulous impersonation of the target voice with just a short snippet of audio sample. What is more fascinating is its ability to produce any amount of speech based on a short audio sample<sup>4</sup>.

In yet another interesting experiment on voice-impersonation attack, voice samples of celebrities Oprah Winfrey and Morgan Freeman were gathered from the internet and two speakers were asked to reproduce the same sentences in two speaking conditions: 1) in their own voice and 2) by impersonating the select celebrities' speaking style, pace and emotion. These samples were fed through CMU Festvox

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<sup>4</sup> <https://www.wired.com/brandlab/2018/10/lyrebird-uses-ai-find-artificial-voice>

voice converter which generated morphed versions of the voices of Oprah and Morgan. The morphed speech samples along with the original voices of the celebrities were played to the listeners and they were asked to identify the real and fake voices of the victim speakers. Results indicated that the original voices were identified correctly 82% of the time. The impersonated voices, on the other hand, were mistakenly identified as the genuine victim's voice 58% of the time. However, when the speakers used their own voice which was morphed by the machine to approximate the target's voice, they were mistakenly identified as the actual victim's voice 33% of the time. The failure of users in detecting such attacks demonstrates a vulnerability of numerous real-world scenarios that rely (implicitly) on human speaker verification (Neupane et al., 2019).

### **Machine perception**

Most Natural language processing (NLP) systems were built on extensive sets of hand-written rules until the 1980s. Consequently, with the development of machine learning algorithms, NLP underwent a revolution, owing to constant increase in computational capacity and gradual decline in Chomskyan linguistic theories' supremacy. In the recent times, machine learning is gravitating a lot towards unsupervised and semi-supervised learning methods. These algorithms use deep learning to produce voice clones that can accurately alter accents, styles of speech and even switch the gender of the voice. Deep learning is a technology that is driving the current AI boom and can train machines to become masters. For instance, using deep learning, Lyrebird engineers are able to train its algorithms to perform a number of voice-detection tasks. These algorithms have learnt to detect the uniqueness of a voice. For instance,

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<sup>5</sup> <https://www.wired.com/brandlab/2018/10/lyrebird-uses-ai-find-artificial-voice>

if Lyrebird employees present the algorithm with two voice recordings, the computer can detect that they are different<sup>5</sup>. Yet another break-through in voice recognition is the fact that google is able to split a recording of two people speaking over each other into two neatly perfect separate audio files (Marr, 2019).

In a recent study carried out at the University of Eastern Finland, one among their many other studies tried to explore if the speaker identification systems were vulnerable to spoofing attacks. For this purpose, two professional impersonators were employed and were asked to mimic the voices of 8 public figures. Results indicated that the automatic speaker recognition system was fooled by the impersonators as these systems are not effective in distinguishing speech alterations<sup>6</sup>. The vulnerability of the Speaker recognition systems raises serious security issues. Consequently, this issue urges the researchers to improve the robustness of speaker recognition against human-induced voice modifications.

Most of our gadgets these days use voice-based audio commands to carry out actions which adds to our convenience, but the flip side to this is that voice is recorded and stored by most of these gadgets. There is a high potential that criminals can misuse these stored voice samples to create voice impersonations, which in turn can be used against the victim. While better and robust software for voice impersonation continue to be generated, there are also groups that are working on the detection of artificially impersonated voices. One such is a proposed software developed by Chen et al. (2017) at the University of Buffalo. This software is custom-made for handy gadgets like smartphones and smartwatches and uses magnetic field of the speakerphones to identify machine-based voice impersonation attacks. The

<sup>6</sup> <https://www.biometricupdate.com/201711/researchers-find-voice-recognition-systems-easily-tricked-by-impersonators>

researchers are confident from their experiments with this model that a vast majority of impersonated voice samples can be easily identified.

## **CONCLUSION**

Voice impersonation is indeed a fascinating area of study. The most impressive aspect is the plasticity of human voice to perform wide repertoire of voice impersonations, especially by professional artists. Although voice impersonation calls for a great genre of entertainment, its potential misuse in fraud and deception is a great cause of concern. This review addresses some of the phonetic-acoustic issues plaguing human voice impersonation and the challenges it throws at the forensic phonetic experts. Although ample research has been conducted in the areas of speech production and perception of voice impersonation by amateurs, there is a serious dearth of research in the area of perception of voice impersonation by professionals.

Yet another dimension to voice impersonation is the machine-generated voice clones. In the past few decades, a significant addition to voice research has been in machine learning using artificial intelligence. Since speech is the easiest and the most natural aspect of our lives, there has been an unprecedented upsurge in voice-based applications based on AI. This has incidentally given rise to voice-based cybercrimes such as voice morphing, fake news, reputation damage and so forth. This review briefly summarises the advances in the research related to voice morphing and its detrimental effects on voice recognition. The silver lining is that giants in voice-based technology like Google are investing heavily to put countermeasures in place so that its misuse is thwarted.

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## **Agreement in Modern Standard Arabic in the Context of Coordination: A Case Study**

**Mohd Mughirah**

*Research Scholar  
Department of Linguistics,  
Aligarh Muslim University,  
Aligarh.*

**M J Warsi**

*Professor  
Department of Linguistics,  
Aligarh Muslim University,  
Aligarh.*

### **Abstract**

*This article deals about the agreement in Arabic in the context of coordination. Agreement is a prevalent phenomenon observed across languages. It helps us to identify which elements in the sentence are linked or should be interpreted together (Bock et al 1999). This property of agreement may imply that the PF would always be faithful to syntax/ LF, i.e. it would always show features of the element with which syntax establishes agreement relationship. But the case is not the same in the context of coordination. Agreement behaves differently in coordinated sentences. In this article I will try to find out the answers of various questions like, what is the pattern of agreement in the context of coordination. Whether it considers either the DPs together or only one? If it deals with only one DP, which DP it considers? In which case it occurs according to both of the DPs? How it behaves when the one DP is nominal and the other one is pronominal? These are the questions regarding the agreement in the context of coordination, about which I will try to provide a satisfactory answer.*

**Keywords:** Agreement, Arabic, Coordination, Nominal, Pronominal, LF, PF.

### **Introduction**

Agreement is a fascinating phenomenon. In many languages it is evident in almost every sentence and involves several different linguistic components. Agreement is a relational feature obtaining between members of different phrases and clauses. Within the Standard Arabic verbal paradigm, for example, verbs agree with subjects in three features: gender, person, and number. This is illustrated in sentences (1), (2), and (3).

- (1) a. akal-a            al-walad-u  
      ate.3.s.m        the.boy.nom.s  
      ‘The boy ate’  
      b. akal-at            al-bint-u  
      ate.3.s.f        the.girl.nom.s  
      ‘The girl slept’
- (2) a. ?ana            akal-tu  
      I.s.m/f        slept.1.s.m/f  
      ‘I ate’  
      b. ?anta            akal-ta  
      you.s.m        slept-2.s.m  
      ‘You ate’  
      c. huwa            akal-a  
      he.s.m        ate-3.s.m  
      ‘He ate’
- (3) a. ?anta            akal-ta  
      you.s.m        ate.2.s.m  
      ‘You ate’  
      b. ?antumà        akal-tumà  
      you.d.m/f    ate-2.d.m/f  
      ‘You (two) boys and girls ate’  
      c. ?antum        akal-tum  
      you.p.m        ate.2.p.m  
      ‘You (all boys) ate’

The example in (1) shows different agreement morphology on the verb according to whether the subject is masculine or feminine. While the verb in (1a) shows a masculine suffix /-a/, (1b) exhibits a feminine suffix /-at/. In (2), the different suffixal morphology on the verbs is due to the change of person: 1st person in (2a), 2nd person in (2b), and 3rd person in (2c). As for the verbs in (3a), (3b), and (3c), they clearly show different suffixes that are sensitive to the number feature. Thus, the suffix /-ta/ in (3a) marks the singular feature, /-tuma/ in (3b) marks the dual feature, and /tum/ in (3c) marks the plural feature. The Arabic verbal agreement paradigms in perfect and imperfect forms are summarized in Tables 1 and 2.

Table1. Morphophonemic shapes of the Perfect agreement morphemes

	Singular		Dual		Plural	
	Masculine	Feminine	Masculine	Feminine	Masculin	Feminine
3rd pers.	/-a/	/-at/	/-aa/	/-ata/	/-u/	/-na/
2nd pers.	/-ta/	/-ti/	/-tuma/	/-tuma/	/-tum/	/-tunna/
1st pers.	/-tu/	/-tu/	/-naa/	/-naa/	/-naa/	/-naa/

Table2. Morphophonemic shapes of the Imperfect agreement morphemes

	Singular		Dual		Plural	
	Masculine	Feminine	Masculine	Feminine	Masculine	Feminine
3rd pers.	/y-/_-u/	/t-/_/u/	/y-/_-ani/	/t-/_-ani/	/y-/_-una/	/t-/_-na/
2nd pers. ^t-/_-u/	/t-/_/ina/	/t-/_/-ani/	/t-/_-ani/	/t-/_-una /	/t-/_-na /	
1st pers.	/ ?-/_-u/	/?-/_-u/	/n-/_-u/	/n-/_-u/	/n-/_-u/	/n-/_-u/

While agreement morphology within the perfect paradigm is prefixal, the imperfect paradigm combines prefixes and suffixes resulting in discontinuous morphemes, as shown above and

illustrated below in (4), (5), and (6) for person, gender, and number respectively.

- (4) a. ?ana           ?-anaam-u  
I.s.m/f       1.m/f.sleep.s  
‘I sleep/ I am sleeping’  
b. ?anta           t-anaam-u  
you.s.m       2.m.sleep.s  
‘You sleep/ you are sleeping’  
c. huwa           y-anaam-u  
he.s.m       3.m.sleep.s  
‘He sleeps/ he is sleeping’
- (5) a. ?anta           t-adhak-u  
you.s.m       2.m.laugh.s  
‘you laugh/You are laughing’  
b. ?ant           t-adhak-iina  
you.s.f       2.m.laugh.f  
‘you laugh/You are laughing’
- (6) a. huwa           y-akul-u  
he.s.m       3.m.s.eat  
‘he eats/He is eating’  
b. huma           y-akul-aani  
they.d.m       3.m.d.eat  
‘they (two male) eat/They (two male) are eating’  
c. hum           y-akul-uuna  
they.p.m       3.m-study-p  
‘they (all male) eat/They(all male) are eating’

The generalizations in (7a), (7b), and (7c) below clearly summarize the distribution of nominal agreement morphology on the verb.

- (7)  
a. person morphology (1st, 2nd, 3rd) is constantly encoded in the prefix;

- b. number morphology (singular, dual, plural) is encoded in the suffix, except for the 1st person;
- c. gender morphology (masculine, feminine) appears on the suffix in the plural and on the prefix in the singular, except for the 1st person;

Following this brief summary of subject agreement morphology as it is spelled out on verbs, the remaining part of this entry focuses on a number of agreement discrepancies. First, it examines the contexts under which these agreement inconsistencies are achieved; second, it highlights the major analyses; finally, it provides an analysis which accounts for the observed phenomena and extends to similar agreement discrepancies within the Arabic morphological system. Subject agreement morphology on the verb is sensitive to the subject position in the sentence. As such, if the subject precedes the verb, all agreement morphemes (person, gender, and number) are realized on the verb. If the subject follows the verb, person and gender are realized, while number agreement is not observed. This asymmetry between preverbal and postverbal subjects in Arabic is illustrated by the contrast between (8a) and (8b).

- (8) a. ?akal-a      (\*?akal-ù)      l-?awlad-u      (VS)  
ate.3.m.s      (ate.3.m.p)      the-boy-nom  
‘The boys ate’
- b. al-?awlad-u      ?akal-ù      (\*nam-a)      (SV)  
the.boys.nom.p      ate.3.p.m      (ate.3.m.s)  
‘The boys ate’

In (8a) the verb ?akal-a ‘ate’ carries singular morphology, as indicated by the suffix /-a/, while the subject al-?awladu ‘the boys’ is plural as indicated by the plural form of the noun (walad

[sg.], ?awlad [pl.]). In (8b), however, the verb akal-ù ‘ate’ carries plural morphology, as indicated by the suffix /-u/, whereas the subject al-?awladu ‘the boys’ is in the same plural form.

This asymmetry is further supported by the ungrammaticality of the plural form of the verb in (8a) and singular form of the verb in (8b). In short, Arabic verbs agree in number with preverbal but not postverbal subjects. The examples in (8) with a masculine plural subject and the ones in (9) with a feminine dual show that postverbal subjects, as well as preverbal subjects, control agreement on the verb with respect to the features of gender and person.

- (9) a. ?akal-at            (\*?akal-atà)            al-bint-aani    (VS)  
      ate.3.s.f            (ate.3.d.f)            the.girls.d  
      ‘The (two) girls ate’
- b. al-bint-ani            ?akal-atà            (\*?akal-at)    (SV)  
      the-girls.d            ate.3.d.f            (ate.3.s.f)  
      ‘The (two) girls ate’

The above agreement asymmetry whereby subject verb agreement obtains in the SV order with all pronominal features of gender, number, and person, while partial agreement, i.e. gender and person only, obtains in VS order has been discussed and analyzed within the investigation of the syntax of clauses and functional categories in Universal Grammar (UG).

### **The Problem of Agreement in the Context of Coordination**

To suggest the significance of agreement in natural human language, Bock et al (1999) state that languages around the world use agreement in number, grammatical gender, animacy and other features to signal which constituents in an utterance are linked (/should be interpreted together) irrespective of whether they appear together or apart. This is illustrated through

the following examples, borrowed from Bock et al (1999).

- (10) a. Descriptions of the massacre that were discovered yesterday  
b. Descriptions of the massacre that was discovered yesterday

Looking at the agreement on the verb “be” in the above two sentences, we can say that the verb in (10a) refers to the discovery of descriptions, whereas the verb in (10b) refers to the discovery of the massacre. I also agree with Bock et al in that the frequency with which agreement is required in speech (virtually every sentence) further enhances its significance in the language. Both of these factors (the use of agreement as a clue for linking various constituents (or interpreting them together), as well as its high frequency) mark the problem I am focusing on here also as important.

In this article, I examine the phenomenon of agreement in the context of coordination. In this context, we expect the agreeing element (e.g. the verb) to show resolved agreement features of the coordinated probe, as is shown in (11) below. The verb in (11a) appears in a form that denotes the plural subject, whereas the verbs in (11b) and (11c) appear in a form that denotes a singular subject in English.

- (11) a. A boy [SG] and a girl [SG] go [PL] to school every day.  
b. A boy [SG] goes [SG] to school every day.  
c. A girl [SG] goes [SG] to school every day.

However the resolved agreement pattern is available in the context of coordination. In some languages we also observe another pattern of agreement where the features of only one conjunct

appear on the agreeing element. Arabic language is one of them, about which I will discuss in this article. While discussing about Arabic language, I will use the term first conjunct agreement (FCA), because the agreement pattern in case of coordination is completely different from English language.

The phenomenon of first conjunct agreement (FCA) poses a challenge to a uniform theory of subject-verb agreement in minimalist syntax. The verb shows different pattern of agreement with a conjunction phrase depending on two factors: (1) word order, since modern standard Arabic allows two basic word order, i. e., VSO, and SVO. In case of VSO, the verb partially agrees with subject, in case of SVO it behaves differently. (2) The type of DPs that are conjoined, it means that whether the DPs are nominal or pronominal. A conjunction of two DPs shows a pattern of agreement that does not depend on the infiltration of the grammatical features on either of the two nouns to determine properties of agreement. Instead, a conjunction phrase contains two nouns, neither of which is particularly in control of agreement, and if agreement operates with the conjunction phrase as a whole, there has to be a resolution process to compute the agreement properties of the two nouns (Badecker, 2007).

Various mechanism have been proposed to deal with (FCA) in generative grammar. The old GB notion of government could not account for the asymmetrical behavior of the agreement pattern in FCA contexts and the early minimalist spec-head relation did not resolve the problem either. With the advent of the 'agree' theory in relation to minimalism, establishes agreement at a distance, there have been efforts to devise a mechanism through which FCA facts can be accounted for, under a uniform theory of agreement.

### FCA facts in Standard Arabic

FCA phenomenon arises in standard Arabic, when the conjoined subject follows the verb, i.e., in VS order as below:

- (12) a. naam-a      al-ʔawlaad-u      wa al-banaat-u  
Slept.3.s.m the.boys.p.m.nom and the.girls.p.f.nom  
'the boys and the girls slept'
- b. naam-at      al-banaat-u      wa      al-ʔawlaad-u  
slept.3.f.s the.girls.p.f.nom and the.boys.p.m.nom  
'the girls and the boys slept'
- c. \*naam-aa      hamid      wa      maryam  
slept.3.d.m      hamid      and      maryam  
'Hamid and Maryam slept'

It is to be noticed from the above examples that when the subject follows the verb, and the subject is nominal DP, there is partial agreement (i.e. agreement in person and gender only) between verb and subject. The number feature on the verb is set to a default singular value. Full agreement is not possible between them, that is why the ungrammaticality of the sentence (12c).

However, when the verb precedes the subjects and the subject is pronominal DP, there is full agreement between verb and first conjunct as in the examples below:

- (13) a. dhahab-u      hum      wa      ʔaxawaat-u-      hum  
Went.3.p.m they.m.p and sisters.p.f.nom their  
'they and their sisters went'
- b. \*dhahab-a      hum      wa      ʔaxawaat-u      hum  
went.3.s.m they.p.m and sisters.p.f.nom their  
'they and their sisters went'
- (14) a. dhahab-na      hunna      wa      ummahaat-u      hunna  
Went.3.p.f they.f.p and mothers.p.f.nom their

‘they and their mothers went’

- b. \*dhahab-at hunna wa ummahaat-u hunna  
went.3.s.f they.f.p and mothers.p.f.nom their  
‘they and their mothers went’

From the above examples it is clear that when the first conjunct DP is pronominal, the verb will agree in all features. That is why the example in (13b) and (14b) is ungrammatical, because they are showing partial agreement to the subject.

On the other hand when the conjoined DPs precede the verb in VS order, there is full agreement between subject and verb, whether the subject is nominal or pronominal.

- (15) a. al-ʔawlaad-u wa al-banaat-u naam-u  
the.boys.p.m.nom and the.girls.p.f.nom Slept.3.p.m  
‘the boys and the girls slept’  
b. \* al-ʔawlaad-u wa al-banaat-u naam-aa  
the.boys.p.m.nom and the.girls.p.f.nom Slept.3.d.m  
‘the boys and the girls slept’
- (16) a. hum wa ʔaxawaat-u- hum dhahab-u  
they.m.p and sisters.p.f.nom their Went.3.p.  
‘they and their sisters went’  
b. \* hum wa ʔaxawaat-u- hum dhahab-aa  
they.m.p and sisters.p.f.nom their Went.3.d.m  
‘they and their sisters went’

It is clear from the above example that the sentence in (15a) and (16a) is grammatical, because there is full agreement between first conjunct subject and verb. The sentence in (15b) and (16b) is ungrammatical, because the agreement between first conjunct and verb is not appropriate.

Generally, when the conjunction phrase precedes the verb, it acts like a single constituent and its phi-features are computed by certain rules, e.g., first person+ second person= first person; dual + singular= plural; masculine + feminine= masculine... etc. (Corbett, 1983).

### Order of DPs in conjunction phrase

In modern standard Arabic, the order of conjunct phrases and their agreement with the verb is quite challenging. The questions that is being asked, while discussing the conjunct phrases and their agreement with verb, (i) which conjunct will come first? (ii) To whom the verb will agree? (iii) What will be the case in preverbal and post verbal conjunct phrases? These are the issues that are being tackled in the following sections. I have tried to solve these problems with the help of Arabic data.

### Conjunction of nominal DPs

It is a rule in modern standard Arabic to form a conjunction phrase by combining two nominal DP together by a conjunct. In this case if one noun is masculine gender and the other one is feminine gender, the masculine gender will precedes the feminine one. In this language, there seems to be a feature hierarchy governing the order of nominal DPs inside the conjunction phrase:

- (17) qara?-a al-talib-u wa al-talib-at-u al-dars-a  
read.3p.dual.m the.student.sg.m.nom and the.girl.sg.f.nom the.lesson.acc  
'the boy and the girl read the lesson'  
(18) al-talib-u wa al-talib-at-u qara?-aa al-dars-a  
the.student.sg.m.nom and the.student.sg.f.nom read.3p.dual.m the.lesson.acc  
'the boy and the girl read the book'

### Gender

In modern standard Arabic there are two genders, i. e. masculine and feminine. Both the genders have different case marker;

- (19) qara?-a al-taalib-u wa al-taalib-at-u al-dars-a  
 read.3p.sg.m. the.student.sg.m.nom and the.student.f.nom the.lesson.acc  
 the boy and the girl read the lesson
- (20) qara?-at al-taalib-at-u wa al-taalib-u al-dars-a  
 read.3p.sg.f. the.student.f.sg.nom and the.student.sg.m.nom the.lesson.acc  
 the girl and the boy read the lesson
- (21) al-taalib-u wa al-taalib-at-u qara?-aa al-dars-a  
 the.student.m.sg.nom and the.student.f.sg.nom read.3p.dual.m the.lesson.  
 the boy and the girl read the lesson
- (22) al-taalib-at-u wa al-taalib-u katab-at-aa al-dars-a  
 the.student.f.sg.nom and the.student.m.sg.nom read.3p.dual.f the.lesson.ac  
 the girl and the boy read the lesson

It is clearly to be noticed from the above examples that masculine DPs are usually precede the feminine DPs in conjunction phrases.

### Number

Modern standard Arabic has three grammatical numbers, i. e. singular, dual, and plural. They are realized morphologically on the nominal DP. A conjunct phrase with similar DPs and similar grammatical number does not have any effect on the ordering of both conjunct. Following are the examples of conjunct phrase in both word orders:

- (23) Jaa?-a al-mudarris-u wa al-tilmiiz-u  
 came.3p.sg.m the.teacher.m.sg.nom and the.student.m.sg.nom  
 'the teacher and the student came'
- (24) Jaa?-a t-tilmiiz-u wa al-mudaarris-u  
 came.3p.sg.m the.student.sg.m.nom and the.teacher.sg.m.nom  
 'the student and the teacher came'
- (25) al-mudarris-u wa al-tilmiiz-u jaa?-aa  
 the.teacher.sg.m.nom and the.student.sg.m.nom came.3p.dual.m  
 'the student and the teacher came'
- (26) al-tilmiiz-u wa al-mudarris-u jaa?-aa  
 the.student.sg.m.nom and the.teacher.sg.m.nom came.3p.dual.m

In modern standard Arabic the singular DPs is quite freely ordered in the conjunct phrase. The same pattern will apply in case of dual and plural DPs. Therefore, I am looking for another possible combination:

(27) \*jaa?-a                      al-tilmiiz-u                      wa                      al-mudarris-aan  
came.3p.sg.m                      the.student.sg.m.nom                      and                      the.teachers.dual.m.nom  
'the student and (two) teachers came'

(28) Jaa?-a                      al-mudarris-aan                      wa                      al-tilmiiz-u  
Came.3p.sg.m                      the.teaches.dual.m.nom                      and                      the.student.sg.m.nom  
'the(two) teachers and student came'

(29) \*at-tilmiiz-u                      wa                      al-mudarris-aan                      jaa?-aa  
the.student.sg.m.nom                      and                      the.teachers.dual.m.nom                      came.3p.dual.m  
'the student and the (two) teachers came'

(30) al-mudarris-aan                      wa                      al-tilmiiz-u                      aa?aa  
'the teachers.dual.m.nom and the.student.sg.m.nom came.3p.dual.m.nom  
'the (two) teachers and student came'

It is clear from the above examples that when the singular DP and dual DP conjoined together, the dual DP usually precedes the singular.

Following are the examples of singular DP conjoined with plural DP:

(31) \*jaa?-a                      al-tilmiiz-u                      wa                      al-mudarris-uun  
came.3p.sg.m                      the.student.sg.m.nom                      and                      the.teachers.pl.m.nom  
'the student and the teachers came'

(32) Jaa?-a                      al-mudarris-uun                      wa                      al-tilmiiz-u  
Came.3p.sg.m                      the.teachers.pl.m.nom                      and                      the.student.sg.m.nom  
'the teachers and the student came'

(33) \*al-tilmiiz-u                      wa                      al-mudarris-uun                      jaa?uun  
the.student.sg.m.nom                      and                      the.teachers.pl.m.nom                      came.3p.pl.m  
'the student and the teachers came'

- (34) al-mudarris-uun            wa    al-tilmiiz-u            jaa?-uu  
the.teachers.pl.m.nom    and    the.student.sg.m.nom    came.3p.pl.m  
'the teachers and the student came'

The above examples clearly indicate that when the singular and plural DPs conjoined together, the plural DP precedes the singular one. Before reaching any conclusive remark we can see one more possible combination in the following examples, i. e. dual and plural conjunct combination:

- (35) \*jaa?-a            al-tilmiiz-aan            wa    al-mudarris-uun  
came.3p.sg.m    the.students.dual.m,nom    and    the.teachers.pl.m.nom  
'the (two) students and teachers came'

- (36) Jaa?-a            al-mudarris-uun            wa    al-tilmiiz-aan  
came.3p.sg.m    the.teachers.pl.m.nom    and    the.students.dual.m.nom  
'the teachers and the students came'

- (37) \*al-tilmiiz-aan            wa    al-mudarris-uun            jaa?-aa  
the.students.dual.m.nom    and    the.teachers.pl.m.nom    came.dual.3p.m  
'the (two) student and the teachers came'

- (38) al-mudarris-uun            wa    al-tilmiiz-aan            jaa?-uu  
the.teachers.pl.m.nom    and    the.students.dual.m.nom    came.3p.pl.m  
'the teachers and the (two) students came'

By now it is clear that there is a hierarchy within the number features also which affects the ordering of DPs in conjunction phrases. This hierarchy can be summarized as:

- (39) plural  $\rightarrow$  dual  $\rightarrow$  singular

Obviously, plural DPs precede dual and singular DPs in conjunction phrases, and dual DPS precede singular ones. Thus, when the two nominal DPs are joined, there is a hierarchy between them to decide their order in conjunction phrase.

### Conjunction of Pronominal DPs

Modern standard Arabic also deals with pronominals in conjunction phrase. Since, modern standard Arabic is a null

subject language; therefore, when the subject is pronominal it usually gets dropped. However, the verb always shows full agreement with the null subject. The same case also happens when the subject of a conjunction phrase is two pronominal DPs. Following is the example of conjoined pronominal DPs occurs overtly:

(40) ?ana           wa           hiya           akal-naa           al-xubz-a  
I.m/f           and           she           ate.1p.dual.m/f           the.bread.acc  
'she and I ate the bread'

(41) \*akal-tu                   ?ana           wa           hiya           al-xubz-a  
ate.1p.m           the bread.m           I.m/f           and           she           the.bread.acc  
'she and I ate the bread'

Like conjunction phrase in nominal DPs, the order of conjunction phrase in pronominal DPs, in modern standard Arabic, also controlled by a set of features which includes person and gender. The ordering of pronominal DPs in a conjunction phrase is governed by two features, i. e. person and gender. It is to be noticed that there is a clear hierarchy among these features, so the person precedes gender:

(42) person  $\gg$  gender

### Person

In modern standard Arabic, person features play an important role in deciding the order of the two pronominal DPs in a conjunction phrase. A conjunction phrase with two pronominal DPs of the same person feature is unusual in standard Arabic, e. g. ?anta 'you/sg' wa ?antum 'you/pl', since we can refer both of them with ?antum 'you/pl'. However, two pronominal DPs with different person features are acceptable. Following is the example of a combination of first person DP and second person DP:

(43) ?ana           wa           ?anta           sharib-naa           al-haliib-a  
I.m/f.sg           and           you.sg.m           drank.1p.dual.m/f           the.milk.acc  
'you and I drank the milk'

- (44) \*?anta wa ?ana sharib-naa al-haliib-a  
you.sg.m and I.m/f.sg drank.1p.dual.m/f the.milk.acc  
'you and I drank the milk'

The above examples show that when there is a combination of first person and second person DP, first person precedes the second person in a conjunction phrase. It is also noticed that two pronominal DPs always show full agreement with verb, and both of them always occur preverbally. Following are the examples of first person and third person DP:

- (45) ?ana wa hum sharib-naa al-haliib-a  
I.m/fsg and they.m.pl drank.1p.dual.m/f the.milk.acc  
'They and I drank the milk'

- (46) \*hum wa ?ana sharib-naa al-haliib-a  
they.pl.m and I.m/f.sg drank.1p.pl.m/f the.milk.acc  
'they and I drank the milk'

In the above examples the sentence in (45) is grammatical, while in (46) is ungrammatical. The ungrammaticality of the sentence (46) shows that when there is a combination of first person and third person DP, the first person DP always precedes to the third one. Following is another combination of second person DP with third person DP:

- (47) ?anta wa hum sharib-tum al-haliib-a  
You.sg.m and they.pl.m drank.2p.pl.m the.milk.acc  
'they and you drank the milk'

- (48) \*hum wa ?anta sharib-tum al-haliib-a  
They.pl.m and you.m.sg drank.2p.pl.m the.milk.acc  
'they and you drank the milk'

The examples above show the possible combination of second person DP and third person DP. When the combination of second person and third person DPs, the second person DP always

precedes and the agreements will be according to them. Thus, the person feature hierarchy will be in the following manner:

(49) First person ---> second person ---> third person

### Gender

Gender also plays an important role in pronominal conjunction phrase. When two pronominal DPs with the same person but different gender features are conjoined together, the masculine gender DP will precedes the feminine one:

- (50) Huwa wa hiya akal-aa al-tuffah-a  
He.m.sg and she.f.sg ate.3p.dual.m the.apple.acc  
he and she ate the apple
- (51) \*Hiya wa huwa akal-aa al-tuffah-a  
She.sg.f and he.m.sg ate.3p.dual.m the.apple.acc  
she and he ate the apple

From the above example it is clear that when there is two pronominal DPs but with different gender occur in a conjunction phrase, the masculine gender will precede the feminine one. That is why the example in (51) is ungrammatical.

### Conclusion

It is a rule in modern standard Arabic to form a conjunction phrase by combining two nominal DP together by a conjunct. In this case if one noun is masculine gender and the other one is feminine gender, the masculine gender will precedes the feminine one. In this language, there seems to be a feature hierarchy governing the order of nominal DPs inside the conjunction phrase. In modern standard Arabic the singular DPs is quite freely ordered in the conjunct phrase. The same pattern will apply in case of dual and plural DPs. When the singular DP and dual DP are conjoined together, the dual DP will precede the singular one. When the singular and plural DPs conjoined

together, the plural DP precedes the singular one. Like nominal DPs, Same case happens with pronominal DPs.

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## Acoustic Study of some Persian Sounds in Bangla Loans

*Tanushree Sarkar*

*Assistant Professor,*

*Maturi Venkata Subba Rao Engineering College,  
Hyderabad*

### **Abstract**

*The paper aims to acoustically study and find the changes that take place in some consonants of Persian during the process of loanword adaptation from Persian to Bangla by using PRAAT. The literature survey explores both Persian and Bangla phonetics in detail. The sound system of both the languages are compared. When a lexical loan is first introduced into a language, some of its sounds may be modified and some are even deleted to suit the phonology of the borrowing language. When Persian words came into Bangla, they went through some phonetic changes. Some of the Persian sounds were substituted by some other sounds of Bangla, some even got deleted. One native speaker of <sup>1</sup>Persian and one native speaker of Bangla were taken, to produce the words from the data. For the recordings, the multi-speech and CSL systems, which are windows-based programs, have been used. CSL is a hardware and software system for the acquisition, acoustic analysis, display, and playback of speech signals. PRAAT, a software was used for acoustic analysis of the consonants. Both articulatory and acoustic changes have been studied in detail and explanations for most of the changes have also been given. The analysis and result show that native Bangla speakers pronounce the sounds of Persian, which are unavailable in the Bangla Phonology differently. They either substitute the sound with a similar Bangla sound or simply delete the sound*

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<sup>1</sup> The Persian speaker speaks Dari Persian

*to suit the Bangla Phonology. In this way, we find that during the process of loanword adaptation from Persian to Bangla, the native sounds (Bangla) substitute or delete the foreign sounds (Persian) which are unavailable in the native sounds inventory.*

**Keywords:** Acoustics, Articulation, Loanwords, Bangla, Persian

### **Introduction**

Persian is an Iranian language within the Indo-Iranian branch of the Indo-European languages. It is widely spoken in Iran, Afghanistan, Tajikistan, Uzbekistan and to some extent in Armenia, Iraq, Pakistan, India, Bahrain, and Oman. For five centuries prior to the British colonization, Persian was widely used as a second language in the Indian subcontinent. It took prominence as the language of culture and education in several Muslim courts in South Asia and became the sole "official language" under the Mughal emperors. Bengali or Bangla, on the other hand is an eastern Indo-Aryan language. It is native to the region of eastern South Asia known as Bengal, which comprises present day Bangladesh, the Indian state of West Bengal, and parts of the Indian states of Tripura and Assam.

Due to centuries of contact with Europeans, Mughals, Arabs, Turks, Persians, Afghans, and East Asians, Bengali has incorporated many words from foreign languages. The most common borrowings from foreign languages come from three different kinds of contact. Close contact with neighboring people facilitated the borrowing of words from Hindi, Assamese and several indigenous Austroasiatic languages of Bengal. After centuries of invasions from Persia and the Middle East, numerous Persian, Arabic, Turkish, and Pashtun words were absorbed into Bengali. Portuguese, French, Dutch and English words were later additions during the colonial period.

### Persian and Bangla Sound Inventory

In the following sections the speech sounds inventory for both the languages of this study have been presented.

#### Persian Sound Inventory: Vowels

In Dari Persian, there are sixteen vowel sounds made up of eight pure vowels and eight vowel glides(diphthongs).

Eight pure vowels are:

1. /i:/-Front close unrounded vowel.
2. /e:/-Front unrounded vowel below half-close position.
3. /ɛ/- Front unrounded vowel above half-open position.
4. /a/- Front unrounded vowel just above open position.
5. /ɒ:/-Back open unrounded vowel.
6. /u/- Back rounded vowel above half-open position.
7. /o:/- Back rounded vowel below half-close position.
8. /u:/- Back rounded vowel close position.

#### Persian Sound Inventory: Consonants

Persian has 26 consonants, which are given in a <sup>2</sup>tabular form below.

Table 1: Persian Sound Inventory: Consonants

	Labial	Alveolar	Palatalo-alveolar	Palatal	Velar	Uvular	Glottal
Nasal	m	n			[ŋ]		
Plosive	p b	t d			k g	ɢ	[ʔ]
Affricate			tʃ dʒ				
Fricative	f v	s z	ʃ ʒ		x ɣ		h
Tap		r					
Trill		[r]					
Approximant		l		j			

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<sup>2</sup> The table has been taken from .<http://www.wikipedia.org/>

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**Bangla Sound Inventory: Vowels**

Bangla has 8 vowels, which are given in a tabular form below.

Table 2: Bangla Sound Inventory: Vowels

Vowels			
	Front	Central	Back
Close	i		u
Close-mid	e		o
Open-mid	æ		ɔ
Open		a	ɒ

**Bangla Sound Inventory: Consonants**

The phonemic inventory of Bangla consists of 29 consonants, which are listed below in a <sup>3</sup> table:

Table 3 : Bangla Sound Inventory: Consonants

Consonants							
	Labial	Dental/ Alveolar	Retroflex	Alveolo -palatal	Velar	Glottal	
Nasal	m	n			ŋ		
Plosive/ Affricates (te, te <sup>h</sup> , dz, dz <sup>h</sup> )	voiceless	p	t̪	ʈ	tɕ	k	
	aspirated	p <sup>h</sup>	t̪ <sup>h</sup>	ʈ <sup>h</sup>	tɕ <sup>h</sup>	k <sup>h</sup>	
	voiced	b	d̪	ɖ	dʒ	g	
	aspirated	b <sup>h</sup>	d̪ <sup>h</sup>	ɖ <sup>h</sup>	dʒ <sup>h</sup>	g <sup>h</sup>	
	Fricative	f		ʂ	ɕʃ		ɦ
	Approximant		l				
	Rhotic		r	ɽ			

**Aim and Objectives**

When a lexical loan is first introduced into a language, some of

<sup>3</sup>The table has been taken from <http://www.wikipedia.org/>, with some changes.

its sounds may be modified and some are even deleted to suit the phonology of the borrowing language.

When Persian words came into Bangla, they went through some phonetic changes. Some of the Persian sounds were substituted by some other sounds of Bangla, some even got deleted.

In this paper, I will look at some of the Persian consonants, which were substituted or deleted in Bangla loans. This paper aims at giving an acoustic analysis of the changes that took place in some consonants of Persian while borrowing into Bangla, with the help of PRAAT.

### **Methodology**

The data consists of 18 words, 9 Persian words in original and their loaned counterparts in Bangla. Some consonants were taken from these words, to account for the changes, acoustically. One native speaker of <sup>4</sup>Persian and 1 native speaker of Bangla were taken, to produce the words from the data. For the recordings, the multi-speech and CSL systems, which are windows-based programs, have been used. CSL is a hardware and software system for the acquisition, acoustic analysis, display, and playback of speech signals. PRAAT, software was used for acoustic analysis of the consonants. The speakers were given handouts of the consonants; Persian speaker was given Persian data, and the Bangla speaker was given Bangla data. The recording was done in the Phonetics Laboratory of The English and Foreign Languages University, using the CSL software. After the recordings, the recorded sounds were carefully listened, and the words were transcribed. Then the changes were noted.

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<sup>4</sup>The Persian speaker speaks Dari Persian.

## Results and Discussion

### LOANWORDS and the TARGET CONSONANTS

We have seen in the above section how Bangla has borrowed Persian words during the Mughal period. Its vocabulary is filled with Persian words. Persian words underwent a lot of changes during the process of borrowing. In this paper I will look at some of the consonants of Persian, which changed when incorporated into Bangla vocabulary. These consonants are:

1. /q/ becomes /k/ in the word medial position.  
/baqi:/ ->/baki/ ‘remaining’
2. /h/ changes to /ɦ/ in the word initial position.  
/hazm/ -> /ɦɔdzom/ ‘digestion’
3. /x/ becomes /k<sup>h</sup>/ in the word medial position.  
/baxʃiʃ/ - > /bok<sup>h</sup>ʃiʃ/ ‘largesse’
4. /ɣ/ becomes /g/ in the word medial position.  
/daroyah/ -> /ɔ̃ arogah/ ‘police officer’
5. /s/ becomes /ʃ/ in the word medial position.  
/resi:t/ -> /roʃiɔ̃ / ‘receipt’
6. /z/ becomes /dz/ in the word medial position.  
/nezar/ -> /nɔdzor/ ‘sight’
7. /v/ becomes /b/ in the word medial position.  
/dʒɛvab/ -> /dʒɔbab/ ‘answer’
8. /ʔ/ gets deleted in the word initial position.  
/ʔalahi:ɔ̃ a/ -> /alaɔ̃ a/ ‘separate, different’
9. /j/ gets deleted in the word medial position.  
/dari:ja/ -> /ɔ̃ oria/ ‘river’

### PHONETIC FEATURES:

In this section we will see the articulatory and acoustic features of the target consonants.

/q/ and /k/

/q/- Voiceless uvular plosive

**a. Articulatory features:**

It is a voiceless sound, which means it is produced without vibrations of the vocal cords and being a plosive, is produced by obstructing airflow in the vocal tract and a sudden release. In regards to the uvular stop /q/, McCarthy, (The Phonetics and Phonology of Semitic Pharyngeals, 1994), considers this sound as the emphatic version of /k/. This claim means that /q/ is the only non-coronal emphatic.

**b. Acoustic features:**

Giannini & Pettorino ( "The emphatic consonants in Arabic", Speech laboratory report 4, 1982) found that F1 and F2 loci next to /q/ are at 500 Hz and 1400 Hz, respectively. Al-Ani ("Arabic Phonology; an acoustical and physiological investigation", 1970) reports that, the coarticulatory effect exhibited by /q/ is strong : F2 onset values were 1600 Hz, 1150-1200 Hz, and 900 Hz next to /i/, /a/ and /u/, respectively. Major energy in the burst of the stop consonant is lower for /q/ than /k/, (Peter Ladefoged and Ian Maddieson, 1996).

/k/- Voiceless velar plosive

**a. Articulatory features:**

It is a voiceless sound, it is produced without vibrations of the vocal cords as the vocal cords are wide apart and being a plosive, is produced by obstructing airflow in the vocal tract and a sudden release. It is articulated when the back of the tongue touches the soft palate.

**b. Acoustic features:**

It is an aperiodic sound, commencing abruptly with a burst.

During the burst of noise, energy is spread widely over the spectrum but peaks of energy tend to occur at different frequency regions, according to the place of articulation. According to D.B. Fry, (“The Physics of Speech”, 1979), “For velars it is in the region of 1800-2000Hz.”/k/, has a common locus for F2 & F3 in the preceding or the following vowel, as observed by Peter Ladefoged, (“A Course in Phonetics”)

/ʔ/- Glottal stop

**a. Articulatory features:**

A glottal stop is a speech sound articulated by a momentary, complete closing of the glottis in the back of the throat. It is a guttural sound, pronounced rather back in the <sup>5</sup>buccal cavity. It is termed as a laryngeal sound as it is pronounced in the larynx. <sup>6</sup>Sibawayh (“Bulaq”, 1898) describes the two laryngeals /h/ and /ʔ/(along with the vowel /a/) as “The sounds whose point of articulation is the furthest (down the throat).

**b. Acoustic features:**

Al-Ani (1970) described, the spectral shape of the glottal stop /ʔ/ varies: when single, /ʔ/ appears as a series of glottal pulses that look somewhat like formants and are more widely spaced than the glottal pulses one sees in vowels. When geminated, it appears as a long silent gap.

/h/ and /ħ/

/h/ - Voiceless glottal fricative

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<sup>5</sup> It marks the beginning of the digestive system. Starting at the lips, it consists of the oral cavity, tongue, jaw, and throat. While digestion is its primary function, it also plays an equally important role in communication, through the development of sounds and speech

<sup>6</sup> It is one of the three books, of Sibawayh’s trilogy.

**a. Articulatory features:**

It is a laryngeal sound. Al-Ani (1970) described this sound as an oral voiceless fricative. It has oral configurations, when co-articulated with the neighbouring vowels. Configurations vary as per the kind of vowel it precedes or follows. /h/ is articulated with an open glottis. It is produced with a transitional state of the glottis, with no manner of articulation other than its phonation type. Because there is no other constriction to produce friction in the vocal tract in the languages they are familiar with, many phoneticians no longer consider /h/ to be a fricative. However, the term "fricative" is generally retained for historical reasons.

**b. Acoustic features:**

/h/ appears as a noise whose starting frequency depends largely on the vowel context. Al-Ani (1970) described /h/ acoustically as noise whose starting frequency depends on the adjacent vowel: 2000-2700 Hz next to /i/, 1500-2000 Hz next to /a/, and 1200 Hz next to /u/.? /h/ appears as aperiodic noise.

/fi/ - Voiced glottal fricative

**a. Articulatory features:**

Its articulatory features are almost same as /h/, except that it is voiced (vocal cords are held closely, air passes with vibrations), unlike /h/.

**b. Acoustic features:**

/fi/ appears as a noise whose starting frequency depends largely on the vowel context. We can see the presence of voice bar, in the spectrogram.

/x/ and /k<sup>h</sup>/

/x/ - Voiceless velar fricative

**a. Articulatory features:**

It is produced by constriction of air flow through a narrow channel at the place of articulation, causing turbulence, without vibration of the vocal cords. It is articulated with the back of the tongue at the soft palate.

**b. Acoustic features:**

It has a spectral peak that decreases in frequency as the place of articulation approaches from the alveolar region to the glottis, and we can also see additional peaks in the higher part of the spectrum. (Peter Ladefoged and Ian Maddieson, 1996).

According to D.B. Fry,(1979), for velars the burst should be around the region of 1800-2000Hz.

/k<sup>h</sup>/ – Aspirated voiceless velar plosive:

It has the same articulatory and acoustic features like /k/, but being an aspirated consonant, strong burst of air that accompanies during the release. Aspiration occurs when the vocal cords remain open after a consonant is released.

/ɣ/ and /g/

[ɣ]- Voiced velar fricative

**a. Articulatory features:**

It is the voiced counterpart of /x/. (see section 5.4.1.). Being a voiced sound, there is vibration of the vocal cords, during its production.

**b. Acoustic features:**

There is a presence of a voice bar. Other features are same as /x/.

/g/ – Voiced velar plosive.

**a. Articulatory features:**

Its articulatory features are almost same as /k/ (see section 5.4.1.), except that it is voiced (vocal cords are held closely, air passes with vibrations), unlike /k/.

**b. Acoustic features:**

Its acoustic features are almost same as /k/, except that there is a presence of voice bar.

/s/ and /ʃ/

/s/ – Voiceless alveolar fricative.

**a. Articulatory features:**

It is articulated with either the tip or the blade of the tongue against the alveolar ridge. It is produced by constriction of air flow through a narrow channel at the place of articulation, causing turbulence, without vibration of the vocal cords.

**b. Acoustic features:**

According to Peter Ladefoged, “The noise in /s/ is centred at a high frequency, between 5,000 and 6,000 Hz.....large acoustic intensity and hence produce darker patterns”. There is gradual increase in the aperiodic patterns.

/ʃ/ – Voiceless palato-alveolar fricative

**a. Articulatory features:**

Palatal refers to the roof of the mouth behind the alveolar ridge but in front of the velum. The tongue touches the palate in producing the sound/ʃ/. It is produced by directing air flow through a groove in the tongue at the place of articulation and

directing it over the sharp edge of the teeth, causing high-frequency turbulence.

**b. Acoustic features:**

According to Peter Ladefoged, in, “The noise in /ʃ/ is centred at a high frequency, of about 2500Hz.....large acoustic intensity and hence produce darker patterns”. There is gradual increase in the aperiodic patterns.

*z/ and /dz/*

*/z/ - Voiced alveolar fricative*

**a. Articulatory features:**

Its articulation is same like that of /s/, only as it is a voiced sound, therefore the vocal cords vibrate during the articulation.

**b. Acoustic features:**

There is presence of a faint voice bar, indicating voicing. It has patterns similar to /s/, except the presence of voice bar.

*/dz/ - Voiced alveolo-palatal affricate*

**a. Articulatory features:**

According to D.B. Fry, (1979), “The articulation of an affricate consists in making a complete closure of the vocal tract at some point, and the production of a friction noise at the point where the release occurs”. It is articulated with the front of the tongue behind the alveolar ridge, and the middle of the tongue raised toward the palate and there is vibration of the vocal cords.

**b. Acoustic features:**

Its appearance is intermediate between the stops and fricatives. D.B. Fry(1979), says, “The duration of the stop in the affricates tends to be about the same as for a simple plosive in

similar position but, the friction lasts very much longer than the burst of noise that marks the release of a plosive” The presence of a voice bar, indicates voicing.

/v/ and /b/

/v/ - Voiced labiodental fricative

**a. Articulatory features:**

It is produced by constricting air flow through a narrow channel at the place of articulation, causing turbulence. It is articulated with the lower lips and the upper teeth. There is vibration of the vocal cords.

**b. Acoustic features:**

According to D.B. Fry, (1979), “It has the main noise energy in the high-frequency band from about 6000-8,000 Hz”. The presence of a voice bar, indicates voicing. There is gradual increase in the aperiodic patterns, and weak friction.

/b/ – Voiceless bilabial plosive

**a. Articulatory features:**

It is produced by obstruction of the airflow in the vocal tract and sudden release. It is articulated with both lips, produced without vibrations of the vocal cords.

**b. Acoustic features:**

In /b/, as it is a bilabial sound, so there is lowering of all the formants in the preceding or the following vowel, locus of the second and the third formants comparatively low. There is gap in the aperiodic pattern, followed by sharp beginning of formant structure. The presence of a voice bar indicates voicing.

**/j/ - Voiced palatal approximant**

**a. Articulatory features:**

It is produced by narrowing the vocal tract at the place of articulation, without turbulence. It is articulated with the middle or back part of the tongue raised towards the hard palate. It is produced without vibrations of the vocal cords.

**b. Acoustic features:**

It is a glide from the formant disposition for the vowel /i/, towards the formant disposition for a following vowel. (D.B. Fry, 1979). It has simple periodic pattern, weaker in intensity than the vowel but rising smoothly to the vowel intensity over several glottal cycles during the consonant vowel transition.

**Findings**

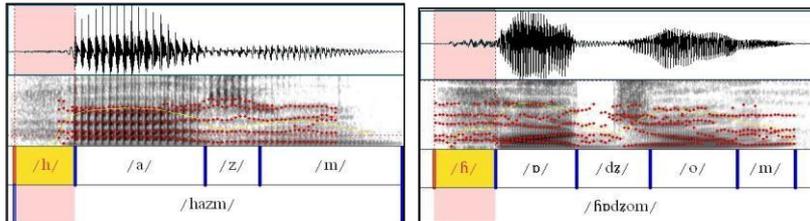
The recorded sounds were acoustically analysed with the help of PRAAT. The changes that take place in some consonants of Persian, while borrowed into Bangla, were examined.

/h / becomes /ɦ/ in the word medial position.

Acoustic difference between the two sounds has been shown below:

/hazm/ and /ɦɔdzom/	
<p>Persian:</p> <ul style="list-style-type: none"> <li>• Absence of voice bar.</li> <li>• [h] appears as aperiodic noise.</li> <li>• Very less energy.</li> <li>• [h] release from a very low frequency, 850 and above.</li> </ul>	<p>Bangla:</p> <ul style="list-style-type: none"> <li>• Presence of faint voice bar.</li> <li>• [ɦ] appears as aperiodic noise.</li> <li>• Very less energy.</li> <li>• release from a very low frequency, 850 and</li> </ul>

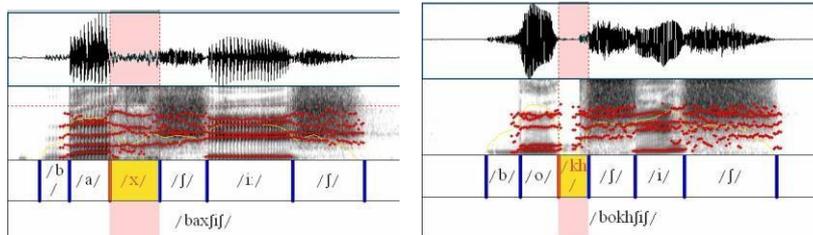
Acoustic Study of some Persian Sounds in Bangla Loans



/x/ becomes /k<sup>h</sup>/ in the word medial position.

Acoustic difference between the two sounds has been shown below:

/baxfɪf/ and /bok <sup>h</sup> fɪf/	
<p>Persian:</p> <ul style="list-style-type: none"> <li>• Burst of noise, below 850 Hz.</li> <li>• It has a spectral peak that decreases in frequency as the place of articulation approaches from the alveolar region to the glottis, and we can also see additional peaks in the higher part of the spectrum.</li> <li>• More energy is required for the production of [x], than</li> </ul>	<p>Bangla:</p> <ul style="list-style-type: none"> <li>• Burst of noise, 850 Hz and above.</li> <li>• There is a common locus for both F2 and F3 in the preceding vowel.</li> <li>• Less energy is required for the production of [k<sup>h</sup>], than [x], lighter patterns for [k<sup>h</sup>].</li> </ul>



/ɣ/ becomes /g/ in the word medial position.

Acoustic difference between the two sounds has been shown below:

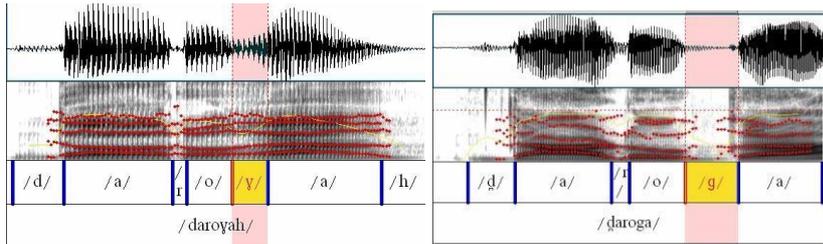
/darɔɣah/ and /ɖarogah/

**Persian:**

- /ɣ/ release from 550 Hz and above; higher than the /g/ release
- It has a spectral peak that decreases in frequency as the place of articulation approaches from the alveolar region to the glottis, and we can also see additional peaks in the higher part of the spectrum.

**Bangla:**

- /g/ release from below 550 Hz; much lower than the /ɣ / release
- Common locus for F2 & F3 in the following vowel
- Presence of a vice bar. Less energy is required for the production of /g/ , than [ɣ], lighter patterns for /g/.

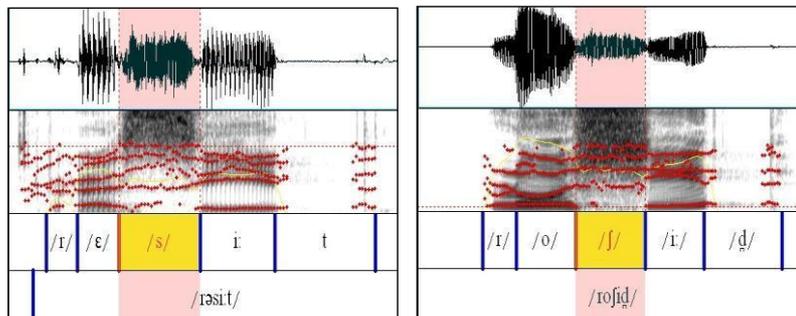


/s/ becomes /ʃ/ in the word medial position.

Acoustic difference between the two sounds has been shown below:

/rɛsi:t/ and /roʃid/

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• <b>Persian:</b></li> <li>• Noise is centred at a high frequency, 4000Hz and above.</li> <li>• Gradually, there is an increase in the aperiodic pattern of the sound.</li> <li>• Intense friction.</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Bangla:</b></li> <li>• Noise is centred at a low frequency, extending down to about 2500 Hz.</li> <li>• Gradually, there is an increase in the aperiodic pattern of the sound.</li> <li>• Intense friction.</li> </ul> |
|---|--|



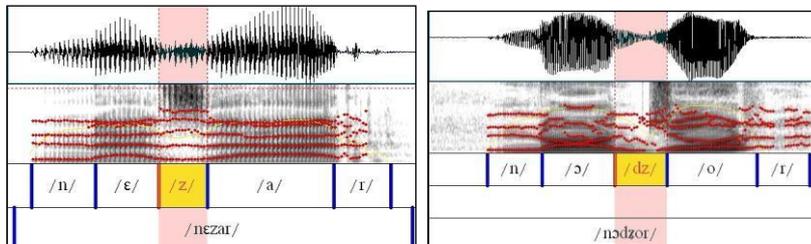
/z/ becomes /dz/ in the word medial position.

Acoustic difference between the two sounds has been shown below:

*/nezar/ and /ndzor/*

- Persian:
- Noise is centred at a high frequency, between 4,000 and 5,000 Hz.
- Mixture of aperiodicity and periodicity.
- Weak aspiration phase.
- Presence of faint voice bar.

- Bangla:
- Burst 3500 Hz and above.
- After the burst of noise, we can see that there is gap in pattern of the formants, Aperiodic sound pattern.
- Strong aspiration phase.

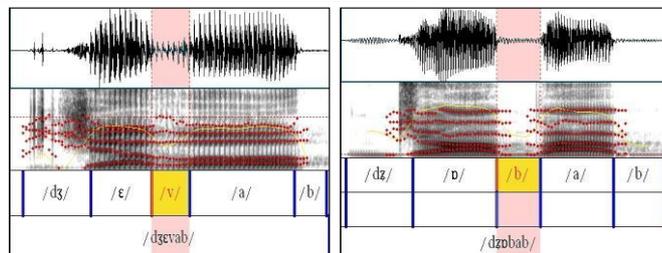


*/v/* becomes */b/* in the word medial position.

Acoustic difference between the two sounds has been shown below:

Acoustic Study of some Persian Sounds in Bangla Loans

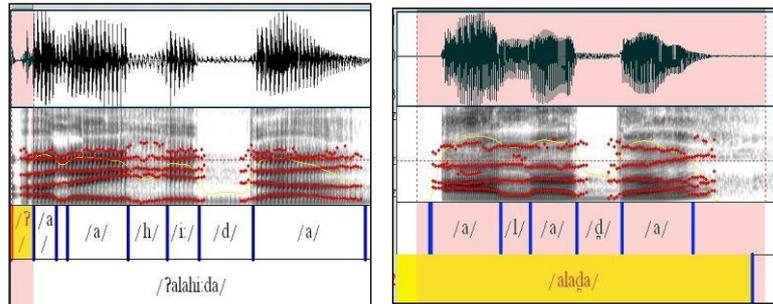
/dʒɛvab/ and /dʒɔbab/	
<ul style="list-style-type: none"> <li>• Persian:</li> <li>• The locus of the second formant transition increases at the beginning, then it goes down into the following vowel.</li> <li>• The third formant in the preceding and the following vowel show almost steady formant transitions.</li> <li>• Faint patterns show less acoustic energy.</li> <li>• Presence of a voice bar.</li> </ul>	<ul style="list-style-type: none"> <li>• Bangla:</li> <li>• Lowering of all the formants in the preceding and the following vowels.</li> <li>• Intensity of [b] burst is low, hardly any evidence of sharp spike.</li> <li>• Presence of a voice bar.</li> </ul>



/ʔ/ gets deleted in the word initial position.

Acoustic difference between the two sounds has been shown below:

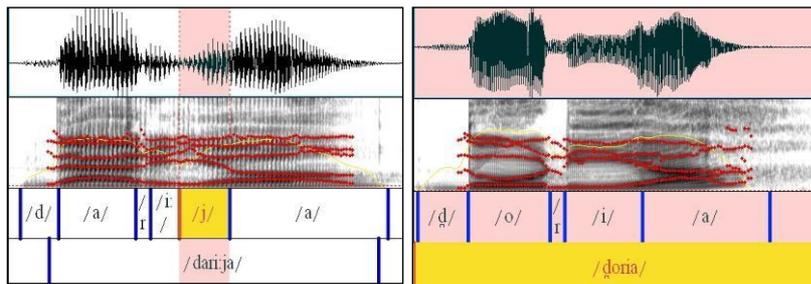
/ʔalahi:q a/ and /alaq a/	
<ul style="list-style-type: none"> <li>• Persian:</li> <li>• Absence of voice bar.</li> <li>• /ʔ/ appears as glottal pulses, wider than the vowels.</li> <li>• Very less energy.</li> <li>• /ʔ/ release from 764 Hz and</li> </ul>	<ul style="list-style-type: none"> <li>• Bangla:</li> <li>• Deletion of /ʔ/, the word begins with clear formants for /a/.</li> </ul>



[j] gets deleted in the word initial position.  
Acoustic difference between the two sounds has been shown below:

/dari:ja/ and /d̪oria/

<ul style="list-style-type: none"> <li>• Persian:</li> <li>• There is a glide from the formant disposition for the vowel /i/, towards the formant disposition for a following vowel /a/.</li> <li>• Presence of a faint voice bar.</li> <li>• Very low acoustic energy shown by the lighter patterns.</li> </ul>	<ul style="list-style-type: none"> <li>• Bangla: •</li> <li>Deletion of /j/.</li> <li>There are formants for /i/ and /a/, there is no glide.</li> </ul>
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### **Conclusion**

In this paper, I have mapped out the various sound changes that occur when Persian words are borrowed into Bangla with the help of PRAAT, I have shown how the Persian consonants get changed in terms of articulatory and acoustic features, when borrowed into Bangla. The acoustic changes have been observed with the help of PRAAT, pictures have been put and the changes have been discussed. Explanations for most of the changes have also been given. More research needs to be done to account for all the changes and do a thorough analysis.

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## **Dialect Corpus and Research Methodology: Two Major Issues in Language Documentation**

*Niladri Sekhar Dash*  
*Linguistic Research Unit,*  
*Indian Statistical Institute,*  
*Kolkata.*

### **Abstract**

*In this small conceptual paper, I have attempted to understand the basic concepts of dialect corpus and research methodology that are normally considered essential in language documentation, a wider scheme that desires to operate on multiple levels to represent a language on a wider spectrum of dialectology and community development. I have tried to understand how the age-old concept of dialectology has undergone a conceptual change in recent times; how dialect data has become useful in different academic and commercial activities; what kind of people are engaged in dialect data collection and analysis; what are the steps followed in data elicitation; what types of language data are collected from the informants of dialect communities; how we construct a digital dialect corpus; and how dialect data is used as an essential input in language documentation and community profile development.*

**Keywords:** Dialect, Documentation, Culture, Informant, Field Workers, Elicitation, Processing, Free Discourse Texts

### **Introduction**

Language documentation, in principle, refers to the act of collecting language data and information from some minority languages, analyzing linguistic features and properties of these languages, and developing some linguistic resources for the

development of the languages and their speakers (Newman and Ratliff 2001: 132). In the present global context of linguistic imperialism, cultural aggression, and marginalization of minority languages, the activities relating to digitization and documentation of minority languages are issues of great national interest, since the proper restoration of nearly extinct and endangered languages is linked with the preservation of culture, history, heritage and knowledge of these languages. In a country like India, where thousands of minority languages are gasping for life and survival, it is necessary to develop methods and strategies for their documentation and preservation. Through the application of advanced processes language documentation (mostly in a digital form), we shall not only collect indigenous language data but also knowledge and information relating to life, culture, history, heritage, customs, ethnicity, and mythology of the minority languages. Moreover, we shall be able to preserve and utilize these materials as valuable resources in activities like language promotion, language planning, and community development. Due to these advantages, language documentation is visualized here as an integrated part of our social responsibility and we must commit our time, knowledge, and energy to the growth and advancement of minor Indian languages and their speakers.

### **Change in Concept of Dialectology**

In recent times, the traditional concept of dialectology is modified to a great extent to include many new features, goals, and functionalities within its modern version (Francis 1980, Petyt 1983, Chambers and Trudgill 1998).

Besides including the goals and missions of traditional dialectology, the modern concept of language documentation proposes to carry out, besides other activities, the following tasks:

DialectCorpus& ResearchMethodology:TwoMajor Issues...

- (a) Collection of language data and language-related information in digital form directly from different endangered language communities.
- (b) Storage of collected language data and information in digital archives with extratextual and intratextual annotation.
- (c) Processing of language data to make these usable in various works by man and machine.
- (d) Analysis of language data by using traditional and modern computational techniques.
- (e) Deduction of inference of various kinds from analysis of data and information.
- (f) Development of linguistic materials and resources for target language communities.
- (g) Utilization of linguistic resources for restoration and preservation of languages and cultures.
- (h) Supplying linguistic data and information for corpus planning and language revival.

These tasks are carried out with an exhaustive analysis of large and varied corpora developed with real-life language data elicited from endangered languages. In the case of traditional dialectology, the language investigators mostly depend on data elicited in a controlled manner by way of collecting the responses made by a group of informants who are usually randomly selected from the target community (Dash 2005). The responses are mostly generated against a few questions asked to the informants (Kibrik 1977, Payne 1997). In this method, the issue of selection of informants is not much rigorous, and therefore, any normal speaker is considered eligible to be an informant (Milroy and Gordon 2003). Moreover, the informants

are never allowed to generate free and uncontrolled texts in any form, style, and genre depending on the discourse of their life, living, society, and culture without any interference of any kind from the data collectors (Crowley 2007).

The modern techniques that are used in language documentation are characteristically different from the methods used in traditional dialectology (Bower 2008, Austin and Sallabank 2011). Here we use advanced instruments, tools, and techniques to overcome problems of asymmetry in informant representation, data elicitation, data storage and maintenance, data processing, and data analysis (Dash and Ramamoorthy 2019). With the help of advanced technology, we can reliably do all these works with ample opportunities for regular monitoring and verification of every stage of language documentation and digitization.

#### **Utility of Dialect Data**

There are several reasons behind developing a large corpus with dialect data and related information from endangered language communities. The data collected in a corpus has a feature of multiple uses in various works relating to the study of a dialect, life, culture, and heritage of a community. A well representative corpus is useful in supplying authentic data and examples for understanding the general and special linguistic phenomena of a dialect. Due to wide and varied composition, a dialect corpus is used as a reliable repository of rare and common, authentic and obsolete, general and specific uses of linguistic elements. Therefore, a digital collection of dialect data on usages and examples in the form of a corpus is of great value in language documentation (Nikolaus 1998). Dialect data are utilized in many works. They are analyzed for information on variations to develop dialectology as a separate discipline; understand the concept of 'language universal' with reference to general and special

aspects of dialects; provide insightful linguistic descriptions on regional varieties; investigate linguistic behaviours of speakers; explore other aspects of life of community members, and register separate linguistic identity of dialects with regard to standard varieties and geographical locations.

Dialect corpora have functional relevance in linguistic resource generation. These are used to develop general and special lexicon; write descriptive grammars; produce textbooks; carry out phonological, morphological, semantic, syntactic, and discourse analysis; produce grammars of spoken texts; compile dictionaries and word books, and for status and corpus planning. By supplying diverse data and information, dialect corpora also contribute to other branches of social science (e.g., sociology, anthropology, ethnology, economics, demography, history, culture studies, psychology, ecology, etc.). Data and information taken from a dialect corpus are used for developing technology for dialect identification, speech detection, speaker identification, global marketing, community development, language digitization, e-learning, and community profile development. Moreover, a dialect corpus is utilized in digital dialect archives, promoting minority languages, producing linguistic resources, and documenting dialect varieties of a country. The multipurpose application of a dialect corpus may be visualized from the following diagram (Fig. 1).

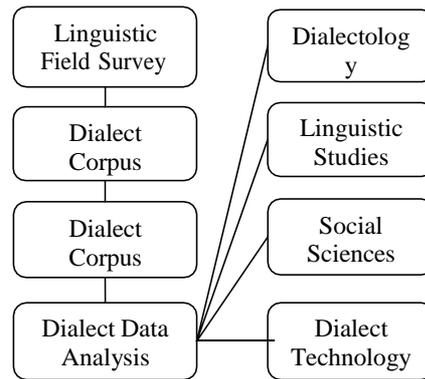


Fig. 1: Utilization of digital dialect corpus

### People Engaged in Linguistic Survey

#### Data Collectors

This group consists of a set of people who are interested in collection of language data to be used in various research and development activities. It is not true that all the people of this group are good linguists or well-versed in all the intricate issues and aspects of field linguistics. In reality, while only the Principal Investigator (PI) and some other people are actually aware of the intricacies of field linguistics; the field workers and others, who work under the PI, are sufficiently trained and guided in activities relating to linguistic field survey, language data collection, storage, management, and data processing. In essence, this group comprises one (rarely more) PI, some field workers, technicians, audio and videographers, data processors, data analysts, and a few experts of other related disciplines.

#### Data Providers

On the other hand, this group is meant for providing language data and related information to the PI and his team. This

group includes a set of people carefully selected from a dialect community to supply data based on a specific goal(s) of a particular linguistic field survey. This group of people, in general, is called the 'Informants'. The conceptual classification of people who are involved in linguistic field surveys may be drawn in the following manner (Fig. 2).

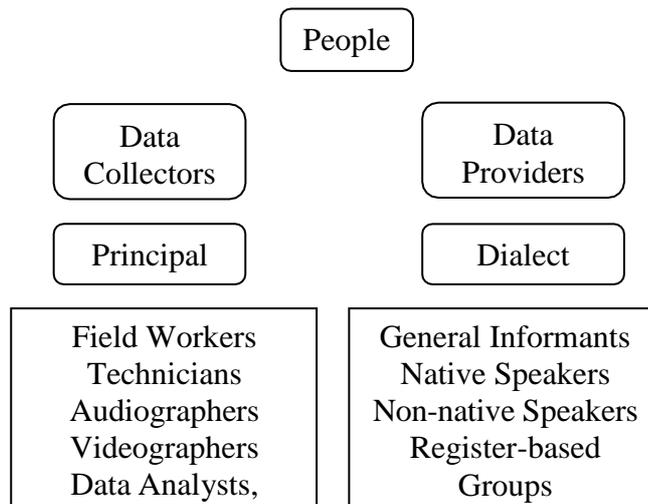


Fig. 2: Classification of people involved in linguistic field survey

### Steps in Data Collection

For the convenience of understanding, let us assume that we want to develop a good speech corpus from a dialect variety. Let us also assume that the data that we want to generate will preserve all the important features considered indispensable for developing a speech corpus of the dialect. It will be used as a reliable, authentic, and representative speech sample

of the dialect community from which it is designed and developed. The speech samples stored in the dialect corpus must be multidimensional, balanced, and non-skewed. Now the question is—how we can develop such a corpus of spoken texts. The steps proposed below can be applied successfully with necessary modification and customization. There are at least five broad stages that we need to follow for linguistic field survey and dialect data collection. They include the stages of preparation, execution, processing, analysis, and reporting. Each stage is further sub-divided into several short steps as cited below. When we try to collect data from a dialect community located far away from our present place of work, we have to follow all five stages carefully.

The preparation stage includes the following sub-stages: defining the goal of a particular linguistic field survey, planning for execution of the goal; making necessary budgetary provision for the survey; identifying instruments and devices to be used in recording; collecting instruments needed for the survey; building a survey team with trained manpower; preparing a questionnaire for obtaining linguistic data; selecting the most appropriate locality or region where the survey will be conducted; fixing time (days and nights) to be spent for the survey; solving logistic issues relating to preparation for the field trip; selecting locations for halts and night stays; preparing a full calendar for the execution of actual on-spot interviews.

The execution stage includes the following sub-stages: selecting mediators for negotiations with the members of the community; selecting informants from the target dialect community; selecting spots for conducting interviews; intimating informants about their roles in the interview;

building rapport with informants for proper elicitation; clarifying things to informants for better inputs; providing some training to informants for interviews; recording interviews based on a questionnaire; recording spoken texts in digital tape recorders; recording spoken interactions in videotapes; asking informants to repeat formation if required; recording free texts of various discourse types; verifying data with other informants (if possible); rechecking if all questions are properly responded; fixing slots for next interview; and returning to the halting spot.

The processing stage primarily covers the following sub-stages: authentication of collected data with experts; removing noise from recorded data; transferring data to more reliable storage devices; transcribing spoken data into standard written form; transcribing spoken data into International Phonetic Alphabet (IPA); generating metadata relating to demographic profile of informants; making database ready for analysis; annotating texts with orthographic elements; annotating texts with phonetic properties; annotating texts with grammatical features and properties; annotating texts with demographic data and information; annotating texts with contextual and discourse information; processing database for linguistic analysis and investigation, and preparing data with extralinguistic information relating to texts and discourse (Upton and Widdowson 1996).

The analysis stage typically includes the following stages: phonetic and phonological analysis of texts; morphological analysis; lexicological analysis; semantic analysis; syntactic analysis; discourse and pragmatic analysis; ethnolinguistic analysis; sociolinguistic analysis; anthropolinguistic analysis; ecolinguistic analysis; sociocultural analysis, and other types

of analyses. Each type of analysis, in itself, is a large area of investigation, which is not elaborated here due to paucity of space.

Finally, the reporting stage includes the following activities: preparing a detailed glossary of terms of recorded texts; reporting data and information from different linguistic angles and perspectives; reporting on all common and rare features of the dialect as noted in the corpus; reporting inferences deduced from analysis of data, and preparing an exhaustive report of the survey. It is normally believed that informal and impromptu spoken texts are the most useful variety of all because these have the best possible representation of the core of a dialect. They contain samples of impromptu spoken texts to reveal all the unique and typical characteristic features of a dialect.

#### **Types of Language Data**

Following the proposed process of direct elicitation, we collect data of the following four types from a dialect community: (a) basic vocabulary, (b) multiword expressions, (c) basic sentence types, and (d) free discourse text. The list of basic vocabulary that is collected from informants through interviews should cover all the major aspects of life and living of the dialect community. Also, it should cover, to the maximum possible extent, phonemes and other speech sounds used in the dialect. Based on the suggestions of earlier scholars (Nida 1958, Samarin 1967, Swadesh 1955, Swadesh 1972, Abbi 2001) we can collect basic vocabulary from the following domains of dialect use. The list of domains given below is just a model for a workable corpus. It can be revised based on the goal of a particular survey. Also, it may be compared and augmented with words extracted from written texts, if available. Lexical items collected from other sources may also be added to it for wider representation.

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- (a) Nature (i.e., earth, water, sky, geographical items, astronomical items, directions, winds, weather, seasons, etc.),
- (b) Mankind (e.g., gender, family, familial relationships, body parts, carnal activities, body condition, diseases, and cures, etc.),
- (c) Clothes and adornments (e.g., garments, dresses, apparel, gems, jewelry, stones, cloaks, shoes, caps, accessories, etc.),
- (d) Foods and drinks (e.g., food items, cereals, different types of food and drinks, their methods of preparation, etc.),
- (e) Dwelling and habitats (e.g., parts of a house, furniture, methods of preparing them, different houses, etc.),
- (f) Cooking (e.g., cooking items, utensils, tools, weapons, manners of cooking, etc.),
- (g) Flora (e.g., trees and plants, grasses and weeds, fruits and flowers, seeds and nuts, etc.),
- (h) Fauna (e.g., animals, birds, insects, reptiles, parts of animal anatomy, diseases, cures, etc.),
- (i) Occupations and professions (e.g., primary occupation, various professions, equipment, rituals, and customs connected with them, etc.),
- (j) Roads and transports (e.g., streets, lanes, by-lanes, places, centers, cars, vehicles, surface and water transports, names of the parts of vehicles and transports, etc.),
- (k) Senses and perceptions (e.g., joy, sorrow, pain, anxiety, agony, fear, pleasure, grief, curiosity, courage, laughter, etc.),
- (l) Emotions (e.g., temperament, moods, moralities,

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immoralities, aesthetics, insults, curses, etc.),

- (m) Government (e.g., war, law, orders, circulars, notices, practices, civil laws, punishment, rules and regulation, imprisonment, fights, battles, enmities, etc.),
- (n) Religions (e.g., religious practices, rites, rituals, observations, oaths, etc.),
- (o) Education (e.g., formal education, informal education, graded education primary, education secondary, mass education, advanced education, adult education, literacy, etc.),
- (p) Games and Sports (e.g., amusements, entertainment, music, dance, drama, plays, etc.), Metals, iron, gold, silver, plastic, bronze, and other metals used by the speech community, etc.),
- (q) Numerals and system of enumeration (e.g., manner of counting, cardinal numbers, ordinal numbers, words of multitudes, etc.),
- (r) Measurement (e.g., time, space, volume, weight, and quantity, etc.),
- (s) Culture (e.g., festivals, feasts, rites, rituals, fairs, customs, beliefs, cultural practices, cultural events, convictions, etc.),
- (t) Function words (e.g., including fillers and taggers, classifiers, modifiers, intensifiers, etc.),
- (u) Verb (forms related to various physical works and activities, instruments, fighting, music, dances, motions, occupations, communications, cooking, makeup, stationery, cognition, sensory perception, emotion, and others).

Since each dialect community uses, besides single word units, a wide variety of multiword units in different contexts of their regular spontaneous linguistic exchanges, it is better to collect these lexical items from the informants through interviews. For this purpose, the PI and his team may previously prepare a moderately large list of multiword units and ask informants to provide conceptual cognates from their dialect. The list of multiword units should include the most common and frequently used compounds, reduplicated forms, phrases, idioms, proverbs, collocations, and other expressions. The list may be supplemented with examples collected from different types of discourse texts (e.g., eye-witness accounts, personal narrations, verbal instructions, reminiscences, conversations, quarrels, arguments, dialogues, mimics, mediations, negotiations, and onomatopoeias, etc.)

The questionnaire should contain the basic sentence types which are frequently used in standard languages. These will be asked to informants for producing similar sentences in their dialect. However, this can be extended with the addition of complex and compound constructions if it is noted that such forms of sentences are quite frequent in a dialect. The list of simple sentences should cover all major types of sentences including descriptive, declarative interrogative, imperative, assertive, negative, exclamatory, and other types. Some sentences, as a list of samples, are presented here for ready reference (e.g., This is a house. These are cows. That is a dog. Here are two birds. There are four trees. What are you cooking? Let us go to catch fish. Can you go to the market? Whose cloth is this? I could not sleep last night. May God bless you! Give us rain, oh God! etc.). Sentences of this type may be elicited from informants, based on the situation, topic, and context of interviews.

The Free Discourse Speech will include texts produced by informants in their own ways without controlling their expressions by a data collection team. These discourse texts may be related to all domains and areas of the life of the informants. A general idea may be obtained from the following table (Table 1) about the domains from where free discourse texts are to be elicited from informants.

The characteristic features of Free Discourse Speech are many. It is free from all kinds of external interference; large in amount of data; varied in text types and text genres; natural in setting, situation, and background; spontaneous in actual text generation; uncontrolled in surreptitious expression; non-monitored by data collectors; non-interfered by language investigators or neighbouring stand-by observers; elaborate in narratives and expressions; both synchronic and diachronic in spatio-temporal dimension; multi-directional in texture and orientation; largely representative in text coverage; non-bias in text representation; balanced in maintaining demographic variables (i.e., age, sex, birthplace, ethnicity, education, occupation, economic condition, etc.), and non-skewed in preserving contextual diversities (i.e., all types of variations observed in speech events at different times, spaces, agents, and events). That means, it covers almost all the aspects of life, living, and society of a dialect community with equalun-bias reflection on each aspect based on which a dialect community can establish and confirm its unique individual linguistic identity with regard to other sister communities of the same geographical area as well as with other distant neighbouring communities and languages (Dash and Aman 2015).

Table 1: Areas Related to Free Discourse Speech of a Community

Free Discourse Speech	
Imaginative texts	anecdotes, ballads, legends, folktales, folklore, folk songs, fairy tales, fables, general stories, ghost stories, love stories, oral stories, events, rhymes, riddles, songs, proverbs, idioms, poems, plays, elegies, puzzles, mythology, lullabies, literature, myths, etc.
Informative texts	business and commerce, social life, festivals, history, geography, religion, faiths, cults, rituals, nature, politics, culture, folk science, environment, practice and norms, social rules, systems, tradition, agriculture, customs, feasts, games and sports, health and hygiene, ailment, profession, cultivation, socialization, etc.

There are specific questions that may be asked to informants for elicitation of Free Discourse Speech. The basic argument is that Free Discourse Speech is indispensable for retrieving varied linguistic data and information from a target dialect community (e.g., words, sentences, speech sounds, meaning, grammar, and other socio-cultural information) which cannot be captured from basic word lists and sentences. Free discourse speech should be recorded in audio-visual form and should be processed as a part of the digital speech corpus. Since this is going to be used as the most reliable language data for any kind of linguistic study of the target dialect community, no external monitoring should be done at the time of data collection. The texts should be free from any kind of intervention on the part of the field workers. It should be the natural, normal, and spontaneous speech outputs of the informants in their own natural geo-cultural surroundings. Only then the validity of this kind of data as an authentic

representation of a dialect community will be attested and acknowledged (Dash and Aman 2013).

### **Digital Dialect Corpus**

Building a digital dialect corpus is a difficult and time-consuming task. It requires proper planning, financial support, trained linguists, and good technology. When succeeded, a new dimension is added to the process of dialect documentation. The following flowchart (Fig. 3) presents a model about how linguistic and extralinguistic data and information may be extracted from a dialect and be used in various studies of dialect communities and others. It shows that a dialect corpus (b) is compiled with several small speech texts (a), which contain samples of selected and free discourse speech collected following the norms and methods of dialect corpus building. The dialect corpus is then passed through several stages of processing (e.g., text indexing, noise removal, normalization, transcription, text categorization, lexical division, type-token analysis, frequency count, concordance, lemmatization, annotation, collocation, local word grouping, key-word-in-context, parsing, etc.) to generate a processed corpus (c). The processed corpus is then used to produce a core database (d) consisting of all linguistic and extralinguistic information to be used in dialect study and other activities. Thus we can have a processed dialect corpus from which we can retrieve data and information of various types to address various research goals relating to a dialect community.

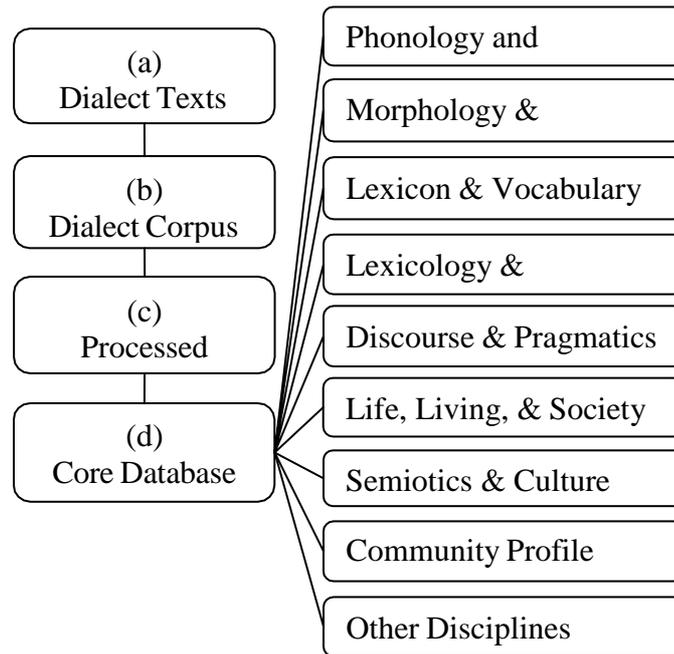


Fig. 3: Utilisation of dialect corpus in various fields

The second most important part is the extraction of relevant information from a dialect corpus to be used in various works. There are several technical issues relating to extraction of appropriate data and information from a dialect corpus for research and application of a dialect. Most of these are done by linguists who are trained in the use of modern tools and techniques of corpus linguistics and language processing. Once the processed data is available, the phoneticians and phonologists collect speech-related properties, morphologists collect morphemes and other word-forming elements; lexicologists collect basic words, idioms, phrases, proverbs, and other lexical items; syntacticians collect phrases and sentences to look into nature and patterns of sentence formation; sociologists collect

information about people and society; descriptive linguists, sociolinguists, and ecolinguists collect data and information from all fields to address their needs for various linguistic and extralinguistic issues relating to life, language, and people (Lindström and Pajusalu 2002). Thus, a dialect corpus provides data and information to fulfill the requirements of all concerned who want data and information relating to a dialect and the community.

### **Contribution of Dialect Corpus**

The dialect corpus developed thus provides unbelievable width and variety of data covering almost all aspects and avenues of a dialect community. The analysis of data reflects on the general nature and patterns of use of dialect by its speakers. The dialect corpus, due to its multidimensional form and content, excels over earlier dialect data that are compiled manually by assembling a few samples suited for a particular study (Ihalainen 1994, Peitsara 1996). Since a dialect corpus is large, varied, and multidimensional, it is suitable to focus on all linguistic and extralinguistic aspects of life and society of speakers. In essence, it represents the overall picture of the dialect and the community at large. Therefore, to know the life and society of a community through the use of dialect as well as identify implicit and explicit traits of difference underlying between the dialects, we should rely on large and representative dialect corpus than on a small amount of data that is collected for object-oriented studies (Gippert, Himmelmann, and Mosel 2006). A dialect corpus contributes to the study of dialect in the following ways:

- It provides necessary data and information for studying sound system and phonological properties of a dialect.
- It supplies data for studying aspects of regular normal speech

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where suprasegmental elements, intonation, accentuation, emotion, etc. play a crucial role in communication.

- It supplies data and information for studying morphology, words, and word-formation processes used in a dialect.
- It supplies data to study formation and usage patterns of idioms, phrases, and multiword units.
- It supplies sentences of Free Discourse Speech that are useful for studying various syntactic forms and structures used in a dialect.
- It provides data for various statistical counts on linguistic properties based on which individual and collective observations are possible to make.
- It allows addressing the usage patterns of words and terms, meanings, pronunciation, grammar, gender, culture, and a host of other topics. These are valuable for understanding a dialect and its speakers.
- It presents authentic conversational texts within a wide socio-cultural spectrum to know life and language of the dialect community.
- It provides elaborate data and information about the grammar of a dialect—an area of keen interest of scholars. Analysis of corpus reveals evidence of divergence and convergence of dialect grammars with grammars of standard varieties.
- It provides data and information to anthropologists, sociologists, psychologists, ecologists, and others to deal with the interface of language and the social life of a dialect community.

Due to the reasons stated above the present global scenario of

community study emphasizes on using dialect corpus, since it provides better solutions to the problems faced by dialect communities (Grenoble and Furbee 2010). Proper representation of various speech types is useful to reflect on a dialect variety under investigation. A dialect corpus thus represents a composite picture of a dialect community taking into account all the major aspects of life and society of the community.

### **Conclusion**

In the present context of dialect documentation, a dialect corpus is indispensable in understanding various issues of dialectology. It is used to know how dialects vary with place and time; how the vocabulary of a dialect increases and decreases with time; how the meaning of words change with events; how dialects differ within the same geographical region; how a particular dialect becomes a standard one from a group of similar dialects; how linguistic properties of a dialect contribute to make it a standard one (Austin and Sallabank 2014). We can address these issues if our studies are based on dialect corpus made with a large amount of speech data elicited from a dialect community. Language documentation is an empirical and applied field. It is largely and primarily based on data. A corpus is used as a database for actual investigation and analysis. A dialect researcher needs a corpus not only to study uniqueness observed in a dialect but also to develop resources (e.g., lexical databases, dictionaries, word books, text materials, reference materials, etc) for language restoration and revival (Hinton, Huss, and Roche 2017). These are different from those of a standard language in the sense that they are archaic and are less open to change. They become useful for studying those linguistic features, which are rare or obsolete in standard varieties. Thus a dialect corpus becomes a valuable linguistic treasure for a dialect and its allied disciplines. Those who study the life, society, and culture of various dialect communities want a dialect corpus as it is a dependable resource

from where they collect necessary linguistic and non-linguistic information to portray a picture of a dialect and its people. In the context of documentation of endangered languages, it is necessary to develop a dialect corpus for each minority language spoken in India. This will help us preserve the total range of dialect varieties with their unique linguistic identities. Moreover, documentation and analysis of dialects will yield new linguistic insights by which the whole nation will benefit linguistically and culturally.

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## **Constructing Modal System in Bangla from the Perspective of Grammaticalization**

***ABM Razaul Karim Faquire***

*Professor of Japanese Language & Culture,  
Director, Institute of Modern Languages,  
University of Dhaka,*

### **Abstract**

*The traditional grammar of Bangla bears a category named mood distinguished into indicative, imperative, optative and subjunctive mood. Mood as a grammatical category has been a focus of interest to the linguists with the advancement of discipline of linguistic semantics. Recent advances on the studies of mood come into being with contribution of the linguists, such as Lyons (1977 and 1995) and Palmer (1986 and 2001). These studies demonstrate that underlying the moods there is a semantic notion to be labelled modality. However, modality is realized with linguistic means which surpass the category moods and encompasses modal auxiliaries and modal particles, etc. Thus, modality as semantic category is realized with various linguistic means ranging from lexical to grammatical means creating a grammatical system called modal system. Therefore, many linguists, such as Palmer (1986) and Matthews (1991) recognize modal system as a cross-linguistic typological category, which they compare to the category of tense. Hence, modality is a semantic category which can be coded with morphosyntactic means called modal system. Lyons (1977 and 1995) identifies some semantic features such as subjectivity, commitment, necessity/possibility, and non-factuality to characterize the semantic notion of 'modality', distinguished into epistemic and deontic modality. Correspondingly, Palmer (1986) describes the realization of modality into a modal system to be the matter of grammaticalization. Given the approach of grammaticalization,*

*I have attempted to formulate a modal system in Bangla. In this attempt, I have accumulated the grammatical means ranging from lexical to grammatical words, e.g. shomvoboto (adverbial), hote pare, mone hoy, ki jani (verbal auxiliaries) for epistemic modality and e.g. kora-uchit, na korlei noy, korte baddhyo, -te hobe, na korle-o cholbe, kora nishedh (verbal suffix) and korun/koro/kor (verbal inflections) for deontic modality. These grammatical means of modality in Bangla get entry in the sentences involving the grammatical rules like insertion, suffixation, collocation, fusion, and subordination, which as a whole depict a modal system of Bangla.*

**Keywords:** Bangla, Grammaticalization, Modality, Grammatical rules and Modal system

### **Introduction**

The aim of this study is to chart the modal system in Bangla in the purview of the functional linguistic theory, i.e. grammaticalization. Modal system is understood as the grammatical system constituted of numerous linguistic means including the traditional category of moods, modal auxiliaries and modal particles. It as a grammatical partially exists in Bangla, which is described to be grammatical category of mood expressed with verbal inflectional forms distinguished into indicative, imperative, optative and subjunctive mood in the traditional grammar (e.g. Chattopadhyay, 1942).

#### (1) Indicative Mood

তারা বাড়ি যাবে।

Tara baRi jabe.

They home go-FUT-F

They will go home.

(2) Imperative Mood

Ekhon baRi ja-o.

এখন বাঁড়

যাও।

Now home go-IMP

Go home now.

(3) Subjunctive Mood

স পেড়ল পাশ করত।

She poRle pash korto.

He read-COND pass do-HYPO

He would pass, if he read (study).

(4) Optative Mood

তামার কলাণ ে হক।

Tomar kollyan houk.

Your welfare happen-HORT

May you have blessings. [May God bless you.]

The traditional grammar of Bangla has received the category of mood from the grammar of classical languages, such as Latin, Greek through English grammar, which (along with other European languages, e.g. German and Italian) now carry the inflectional category of sentential moods: indicative, subjunctive, and imperative, etc. as well as a set of modal auxiliaries, e.g. can, may and must etc. Therefore, many linguists, such as Palmer (1986) finds justification to recognize these means as a cross-linguistic category and deals them under a grammatical category called modal system comparable to the grammatical category of tense and gender. Hence, the grammatical category of mood is a subset of modal system which underlies semantic notion to be called modality. Thus, modality can be a semantic category

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which can be represented by modal system comprising various

means ranging from lexical to grammatical. Palmer (1986: 16) describes modality to be grammaticalization of the speaker's (subjective) attitude and opinion towards the proposition. He, however, in his later work (2001:1) described modality to be the status of proposition that describes the event<sup>1</sup>.

The above-described development on the theory of modality and mood uncovers the shortfall of the traditional category of moods and thus necessitates the reformulation of modal system of Bangla in a broader perspective. Accordingly, I will formulate a modal system of Bangla in the purview of the recently developed theory of modality.

### **Study Framework**

Recent advances on it has come into being informed by the recent works by a number of pioneer linguists, such as Jespersen (1924), Lyons (1977, and 1995) and Palmer (1986, and 2001) and contributed by the empirical studies on the moods and modal auxiliaries in European languages, e.g. English, German and Italian. Jespersen (1924) has come up with the description on the relationship of modality and mood. He in his book of *The Philosophy of Grammar* has shown the relationship between modality and mood as follows:

Modality (semantic notion) = mood (grammatical system)

Based on this formula, Lyons (1977 and 1995) has subsequently formulated a semantic category of modality underlying the grammatical mood. This modality as semantic category has necessitated a grammatical system encompassing the linguistic means ranging from lexical to grammatical means and thus

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There are, however, other formulations on the system of modality such as 'modality pervaded on utterance structure', 'modality with regard to dictum-modus distinction' and 'modality as realis- irrealis distinction'

surpassing the traditional grammatical category of moods. Consequently, the semantic notion of modality is surfaced by various grammatical means can be shown as follows:

Modality (semantic notion) = mood (grammatical system) + modal auxiliaries+ modal particles + other means

### **Methodology of the Study**

The formula on the modality and mood presented in the foregoing section has provided a basis to study the traditional category of mood in a new framework. In this connection, Palmer (1979, 1986 and 2001) has come with a comprehensive framework to dealing with the dichotomy of modality and mood in the premise of grammaticalization and linguistic typology. The premise of grammaticalization posits that modality exists as a semantic notion, which can be represented with various linguistic means ranging from lexical means to grammatical showing as a whole a modal system. On the other hand, the premise of linguistic typology posits that modal system being a cross-linguistic category exists in the languages of the world, each of which can be put in different types.

Hence, the proposed study on the of modal system in Bangla has been a kind of explanatory research involving two tasks as follows.

- i) Delimitation of the semantic feature which [is common to many languages, and
- ii) Identification of the grammatical forms and systems of individual languages with which this semantic aspect of modality can be encoded.

Thus, course of procedure to be followed in formulating the

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modal system in Bangla are as in the following.

- i) Creating semantic notion of modality by making componential analyses of classical categories of moods, modals, modal logics,
- ii) Identifying the grammatical forms and systems of individual languages with which this semantic aspect of modality can be encoded, and
- iii) Encoding the semantic notion of modality with the morphosyntactic means to formulate grammatical system of modality, i.e. modal system.

#### **Creating a Semantic Basis of Modality**

Thus, the first step in the grammaticalization of modality involves delimitation of the semantic notion of modality. Lyons (1977: 452) has key idea 'the speaker's attitude and opinion' to delimit the modality, which is so vague and diffused that it can imply a variety of psychological expressions (Palmer, 1986: 2).

Therefore, linguists draw on the core meaning of i) modal logic, ii) mood and iii) modal auxiliaries to delimit the semantic notion of modality, each of which will be discussed to create a semantic basis of modality.

#### **Mood**

The traditional mood is one of the sources, which set off the present idea of modality. In the normative grammar, mood has been a very common term for centuries. It is a grammatical category distinguishing modality and originally an inflectional category of verbs in Greek and Latin, distinguishing, in particular, into indicative, subjunctive and sometimes into two more categories imperative and optative. Nowadays, other moods sometimes recognized in the languages include conditional, hortative

(urging), dubitative (doubting), optative (wishing), hypothetical and potential.

In the present-day grammar, inflectional moods have been replaced by different kind of new forms and constructions; therefore, mood is given a new illustration in terms of meaning. The indicative mood is used to mean the factual or neutral situations, as in English 'John did his work'. The imperative is used to mean the commands or requests, for example, 'Do your work.' The imperative mood is indicated with the absence of a subject. The functions of the subjunctive mood vary widely across languages. Subjunctive mood is used to mean the doubt, possibility, necessity, and desire. It is worth to mention that nowadays the subjunctive is realized in a new syntactic dimension. It is now found to express by means of lexical attitude verbs involving the subordinate clause.

#### **Modal Auxiliaries**

Modal auxiliaries are a set of auxiliary verbs (such as may and must etc in English), which express the meaning of modality. The set of modal auxiliaries appeared to replace the function of inflectional moods at the extinction of them. Thus, modal auxiliaries have been synonymous to the category of moods. Coates (1983) speculates these set of modal auxiliaries express a number of meaning component of modality in terms possibility or necessity. We know that modal auxiliaries in English, express the meaning of possibility, probability, wishes, offers, obligation, advice, requests, permission, and invitation.

#### **Modal logic**

Modal logic is a system of logic with operators, i.e. necessity and possibility that distinguish modality into various types. Among the various formulation of modality, linguists often refer

to vonWright (1951; in Palmer, 1986), who proposed following types of modality: alethic, epistemic, deontic and existential modalities to be the basic types of modality. These are presented with their corresponding set of modal operators in Table-1.

Table 1: Logical Modalities Along with Their Operators

Types of modality	Operators
Alethic	Necessary, possible, contingent, impossible
Epistemic	Verified, undecided, falsified
Deontic	Obligatory, permitted, indifferent, forbidden
Existential	Universal, existing, empty

Modal logic belongs to the discipline of formal semantics, therefore does not belong to the linguistics. The linguists, e.g. Jespersen (1926) and later Lyons (1977), however, draw on it to create semantic basis of linguistic modality. They derive the meaning of modality from sentence reduced into proposition in terms of ‘logical operators’. They derive meaning of modality with the understanding that both the disciplines of formal semantics and linguistic semantics share notion of modality (Lyons, 1995) given that logic and linguistics differ in the way that they respectively deal with impersonal and personal meanings. The difference between them can be traced from their definitions. It is here worth mention that modality in logic and in linguistics is respectively understood as ‘characteristics of entities or states of affairs described by modal propositions (Palmer, 2001)’, and ‘the attitude and opinion of speaker towards the proposition (Audi, 1995: 499)’.

From the above discussion on modal logic, we came to know

that modal logic has provided with a number of key terms like proposition, epistemic and deontic to the study framework of linguistic modality. Though the epistemic and deontic modality are the category of modal logic, they have been the valid category for linguistics. On the other hand, the proposition appeared to be the counterpart of modality, according to which a sentence can be segregated into proposition and modality.

### **Modality and Their Types**

From the above discussion, we came to know that modality is not a single semantic feature, but a cover term for a number of notions (Palmer, 1994; in: Asher and Simpson, 1994: 2536), including the speaker's attitude and opinion (Lyons, 1977: 452). Lyons (1995: 327–335, 253–257) can be signified with four common semantic features: subjectivity, commitment, necessity/possibility and non-factuality, the first two of which relate to the speaker, while the later two relate to the semanticity of proposition. They are of modality distinguished into epistemic and deontic. Though, modality can be described as being whatever is expressed by mood. In semantics, it is described as the opinion and attitude towards the proposition with reference to the modal logic. Hence, modality can be described as the 'opinion and attitude towards the proposition that the sentence expresses', which can be characterized with the semantic features of subjectivity, commitment, necessity/possibility and, non-factuality and is exclusively confined to the two classical types of modality: epistemicity and deonticity. Linguists nowadays recognize the epistemic and deontic types of modality as main types of modality.

### **Epistemic Modality**

As we come through the discussion on the modal operators of modal logic, epistemic modality can be characterized with the

meaning features: verified, undecided and falsified. However, Lyons (1977: 739) conceived modality in linguistics to be concerned with the matter of the speaker's knowledge and belief on the state of affairs. Similarly, Matthews (1991: 33) describes epistemic modality to be the expressions relating to the speaker's knowledge with regard to truth/factuality of a proposition. Thus, it involves the degree of commitment of the speaker toward what he says (Palmer, 1986: 51).' There are two main types of epistemic modality: Judgment and evidential.

### **Deontic Modality**

As we come through the discussion on the modal operators of modal logic, deontic modality can be characterized with the following meaning features: obligatory, permitted, indifferent and forbidden. However, in linguistics, it is concerned with the necessity or possibility of acts performed by morally responsible agents (Palmer, 1986). Deontic modality, according to Matthews (1991: 87), encompasses the expressions relating to social and moral constraints dependent on some authority. It encompasses the expressions relating to social, and moral constraints dependent on some authority (Matthews, 1991: 87). There are three main types of deontic modality: Directive, Imperative, and Commissive.

### **Creating Formal System of Modality**

According to Matthews (1991), an utterance can be seen as an utterance scheme composed of an illocution (Ill) operating over a Mod, which itself operating over a nucleus (Nuc). Thus, according to this formulation, a modalised utterance can be shown with the following formula:

U: [Ill [Mod [Nuc]]]

Here, Ill specifies the communicative function of an utterance

(which can be described with speech-act theory by Austin and Searle), e.g. asserting, inquiring, requesting, directing, and predicting etc., which respectively gives an utterance its status as a statement, question, request, command or demand and prediction etc. Mod specifies the speaker's conceptualization of or orientation towards the content of the Nuc, while Nuc denotes the situation in the object world i.e. state of affairs (which, of course, need not to be the real world) that are referred to. Thus, both Ill and Mod are treated as operators of Nuc, while Nuc equates a simple clause. Given the above formula of speech act, i.e. Ill, this study will attempt to chart the modal system of Bangla by means of realization of the Mod pervaded on a simple clause with morphosyntactic means. Thus, the Mod is understood a cover term for the semantic notion of modality.

#### Formulating a Modal System with the Morpho-Syntactic Realization of Modality

The modal system is an aggregate of the grammatical forms and systems representing the semantic notion of modality concentrated only on Mod in the U: [Ill [Mod [Nuc]]. Thus, this formula provides a basis for the formulation modal system in Bangla. It requires modality to be realized with the grammatical forms denoted by Modalisers involving a number of grammatical rules.

#### **Set of Modalisers**

The term Modaliser was coined by Whorf (1938: in Athialy, 1987: 12) to refer to the form and constituent from lexical to morpho-syntactic, which represent modality having following characteristics.

- a) It conveys the meaning feature of 'subjectivity', 'commitment', 'possibility /necessity' and 'non-factuality' (as described in section 4.1.).

- b) It modifies the meaning of a proposition under its scope (also described in section 4.1).

The Modalisers are the grammatical means which vary in grammaticality from lexical to grammatical means. Hopper and Traugott (1993: 7) put forward the concept ‘cline of grammaticalization’ for determining grammaticality of the modalisers. It is understood as a continuum of varying degrees of modalisers, in which its leftmost edge is a lexical or content item and in the rightmost edge there is inflectional affix. Therefore, modalisers from left to right on the cline show increasing degrees of grammaticality. The cline of grammaticalization proposed by Hopper and Traugott (1993: 7) is as follows:

Content item> grammatical word>clitic>inflectional affix

For example, modalisers of Bangla in a continuum of cline would show non-grammaticalized items, such as lexical verbs [(e.g. shonbovoto (maybe), at the extreme left end and the highly grammaticalized, such as inflections, e.g. (por)-un at the extreme right. Of the four types of modalisers enumerated by Hopper and Traugott (1993: 7) on their cline of grammaticalization, they regard the last three types: ‘grammatical word’, ‘clitic’ and ‘inflectional affix’ as grammatical forms.

Though, there are a large number of modalisers from less grammaticalized to the highly grammaticalized in each language, of them only a set of modals can be found on which the linguists have consensus to be modalisers.

### **Grammatical**

### **Rules**

Thus, it requires a modal system to incorporate various Modalisers in the sentences, to be called modalized sentences, involving the

grammatical rules like insertion, suffixation, collocation, fusion, cliticization, and subordination, etc.

### **Formulating Modal System in Bangla**

In the following, I will formulate a modal system of Bangla by enumerating the Modalisers and describing the grammatical rules required for the entry of them in the modalised sentences.

### **Modalisers in Bangla**

Bangla has the following two sets of modalisers for epistemic and deontic modality, respectively. There are numerous modalisers which vary in grammaticality. Bhattacharya (2000), Chakraborty (2011) and Chattopadhyay (1942) have provided with several modalisers. Additionally, I have made survey to accumulate such modalisers, which I listed as follows.

### **Epistemic Modalisers**

The epistemic modalisers varying in degree of grammaticality which I accumulated present here as follows.

- i) Lexical modalisers: সবত (shonvoboto)-probably, অবশই (obosshoi)- of course, িসত বেলত (shottyi bolte)- to be honest, আসল (ashole)- in fact, েমন হয়- I think
- ii) Grammatical modalisers: না-িক (na-ki)-is it that or as if, েমন হয় (mone hoy)- I think , হেয়তা (hoyto)- may be, - (য েএত কাে না ভুল নই) je ete kuno bhul nei- it can be said for sure, - ি ক জাি ন (kijani)- may be, -কথা (kotha)- to be , - হেব হেয়তা (hobe hoyto)- maybe, সাবনা েআছ (shombovona ace)- possibilities are there , েসহ েআছ (shondeho ace)-doubt is there, েহলও েআষর ি কিছু নাই (holeo ashchorjer kicu nai)- there is no doubt, েহব না য ি িনিত নয় (hobe na je nishchito noy)-Not sure that won't happen, তমন কথাও ভাবা যায় (temon

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kotha-o bhaba jae)- that is something to think about, ি িনত  
েকর বলা যায়

(nisshchito kore bola jae) can be said for sure,

iii) Inflectional modalisers: none

iv) Particle: to, i.

### **Deontic Modalisers**

The deontic modalisers varying in degree of grammaticality which I accumulated present here as follows.

i) Lexical modalisers: ে য়াজন (proyojon)-require, ঁনেু রাধ (onurodh)-request, ি ঁনষধ (nished)-prohibited

ii) Grammatical modalisers: ি িচত (uchit )-should

iii) Inflectional modalisers: ষা-0/ষা-ঔ/ষা-ন (ja-0/ja-o/ja-n), যাক (ja-k),

iv) Particle: none

### **Grammatical Rules for the Entry of Modalisers in the Modalized Sentences**

Our formulation found the several grammatical rules with which the modalisers enter into the modalised sentence constituents; they are subordination, insertion, suffixation, collocation and fusion. Modal system involving the grammatical rules of insertion, suffixation, collocation, and fusion are realized in the main clause. On the other hand, modal system involving the grammatical rules of subordination is realized in the subordinate clause, where they do not usually indicate the modality in actual sense.

### **Subordination (as a marker of subjunctive)**

The grammatical rule of subordination often expresses the so-called subjunctive mood. Therefore, subordination is considered as the marker of subjunctive mood. However, subjunctive without any kind of modaliser serves simply as kind of a marker of subordination.

Two types of subordinate clause can be identified. First, the

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subordination introduced by a lexical subordinator i.e. attitude verb, which can be interpreted as reporting something that was said or might have been said by the subject of the main clause as in the following sentence.

- (5) িআম চাই যে তুমি আজ রাতে বাড়িতে আস।  
Ami chai je tumi [aj rat-e bari-te asho].  
I want that you [today night-at home-to come-FUT]  
I want you to come my home at night

Secondly, the subordination introduced by the oblique clause which have adverbial or oblique status in relation to the syntax of the main clause as in the following sentence.

- (6) িআম মনে করি যে [আজ বিবে হবে]  
Ami mone-kori je [aj bristi hobe]  
[Verb je subordination]  
I think that [Today rain happen-FUT]  
[Literary means, I think that It will rain today.]

### **Insertion**

The following example shows insertion of adverbial modaliser.

- (7) আজ সম্ভবত বিবে হবে।  
Aj shombovoto bristi hobe.  
Today probably rain happen-FUT  
[Literary means, today it will probably rain.]

### **Suffixation**

The following example shows suffixation

- (8) আজ বিবে পড়বে মনে হয়  
Aj bristi hobe mone hoy.  
Today rain fall-FUT seem-PRES  
Today, it seems to rain.  
It looks like it will rain today.
- (9) আজ বিবে হবে হয়ত  
Aj bristi hobe hoyto.  
Today rain happen-FUT may be

It may rain today.

(10) আজ িব েহব ে েএ কােনা ভুল নই  
য ত

Aj bristi poRbe je ete kuno bhul nei.  
Today, there is no doubt that it will rain today.

(11) যাওয়া িিচিত

joa uchit  
go-VN pointful

[Going is pointful (Literary means, I/you ought to go.)]

(12) তামার যাওয়া িেনষধ।

Tomar joa nished  
Your go-VN prohibited

[Your going is prohibited, Literary meaning You are not allowed to go]

(13) না েেলে চলব

না। Na gele cholbe na.  
no go-COND work-INF not

Not going will not do, literary meaning If I/you do not go, it will not do.

(14) না েেলে -ও চলব।

Na gele -o cholbe  
Not go-COND. even work-FUT

Not going will even do.

Even you don't go, it will do.

(15) েযত েহব।

jete hobe.  
Go-INF become-FUT

Going becomes.

Literary means (You/I) have to go.

(16) েযত -ই েহব।

Jete -i hobe.  
Go-INF Emp. PART become-FUT  
to go definitely will become

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(I/you) definitely have to go.

- (17) যাওয়া -র দরকার নই।  
Jaoa -r dorkar nei.  
go-VN of need no-NEG  
(I/you) don't need to go.  
Literary meaning No need to go.

### Cliticization

- (18) আজ িব্ৰি পেড়ব - তা।  
Aj bristi poRbe -to.  
Today rain fall-FUT Emp. PART (certainly)  
Today, it will certainly rain.

- (19) আজ িব পেড়ব -ই  
Aj bristi poRbe -i.  
Today rain fall-FUT Empathic PART (certainly)  
It will certainly rain today.

### Fusion

- (20) ত ই য া-ও।  
tui ja  
you-VF go -PRE-VF  
You go. [order to go]

- (21) ত িম য া-ও।  
Tumi jao  
You-F go-PRE-F  
You go. [entreaty to go]

- (22) আপন য া-ন।  
Apni jan  
You-H go-PRE-H  
You go. [request to go]

- (23) যাওয়া য া-ক।  
Go-VN go-HORT  
Let's go.

[Here, FUT=future form of verb, PRE=present form of verb, INF=Infinitive form of verb, HORT=Hortative form of verb, Emp.=Empathic, PART=Particle, VN=Verbal Noun]  
[Here, VF=very familiar, F=familiar, and H=honorific]

### **Conclusion**

The approach of grammaticalization has provided us with a means to revisit the traditional category of grammatical moods and formulate a grammatical system of modality to be called modal system. Accordingly, I have accumulated grammatical means labelled as modalisers varying in degree of grammaticality from lexical to grammatical means and also enumerated grammatical rules of subordination, insertion, suffixation, collocation and fusion through which the modalisers enter into the sentences to constitute modalized sentences. The modalised sentences constituted of the grammatical forms and system as a whole depicting a modal system of Bangla.

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## **Review Article**

### **A review of Aligarh Journal of Linguistics (AJL)**

***Editor-in-Chief: M J Warsi***

Volume No.10, Issues No.1&2, 2020-21

*Department of Linguistics,*

*Aligarh Muslim University,*

*Aligarh.*

### **Reviewer: Noman Tahir**

*Department of Linguistics,*

*Aligarh Muslim University,*

*Aligarh.*

### **Introduction**

The epic corona virus pandemic has set off the biggest shutdown since the World War-II. Nations all around the globe have positively responded to confront significant difficulties and challenges arising out of COVID-19 pandemic which has impacted the educational sector the most, compelling every one of us to adopt alternative mode for all our academic activities. The year 2020 is very special to us as Aligarh Muslim University has completed the hundredth year of its formation (1920-2020). To mark this memorable milestone Department of Linguistics has decided to publish this issue of Aligarh Journal of Linguistics (AJL) as part of Centenary celebrations. The Volume-10, issues 1 and 2 comprises 25 research papers from diverse areas (Phonetics and Phonology, Morpho-Syntax, NLP, Applied Linguistics, Language-Literature-Discourse) including book reviews.

### **Discussion and Interpretation of the Journal**

The issue 1 contain fourteen research papers and one book review

where in the first paper “Pre-editing and text standardization on a Bengali written text corpus”, Niladri Sekhar Dash describes the pre-editing and text standardising process with special reference of Bengali text corpus. It also argue that text normalization is necessary for any text that is arbitrary collected and stored in corpus. Therefore, text normalization solves many problems of spelling, text formatting, word identification, and text reliability (Huang 2007). Paper on “The evolution of Indian Languages and a Scriptological and Linguistic Survey of the World: Prabhat Rainjan Sarkar”, Richard Gauthier describes the evolution of Indian languages from pre-historic times to the present, and the detailed survey of the languages and scripts of the world. In the next paper, “Phonology of Bishnupriya, a contact language”, Nazrin B. Laskar discusses the phonology of Bishnupriya in terms of Language contact where she discussed that Bishnupriya Shares its phonology with Eastern Bengali (Sylheti), Assamese and Meitei. Further, she explains that the general rhythmic structure of Bishnupriya appears to be distinctly closer to Tibeto-Burman than any of the Indo-Aryan Languages involved. In terms segmental phonology Bishnupriya shares many important features with TB. Paper on “Linguistic innovation in Kiran Desai’s fiction: a study of lexical category”, Babu Ray & and Abhinav Kumar Mishra discusses the linguistic analysis of literary text where he describes linguistic innovation of ‘Hullabaloo in the Guava Orchard’ and ‘The Inheritance of Loss’ particularly at the level of lexicons. Through using lexical innovation such as lexical borrowing, reduplication, hybridization, the use of onomatopoeic words, acronyms, abbreviation and collocations in her novels, she has, in fact, nativized the English language and has made it also suitable for the expressions of indigenized or localized thought patterns as depicted in the novels Moreover, Desai’s linguistic innovation such as linguistic one in her novels overall renders a stylistic effect to her to her fiction which makes

her fiction stand different from the fiction of other postcolonial novelist. Next paper entitled “Non-Finite Verbs in Banai”, Gayatri Das, explores the tense agreement features in Banai. It also discusses that Banai does not have any person, number and gender agreement. Banai verbs agree only with the tenses. The non-finite verbs in Banai are of two types- infinitives and participles. Some of these non-finite forms retain the nominal features when used as non-finite affix. It is seen that Banai has some similarities with Indo-Aryan Languages like Assamese and Bangla.

Pangersenla Walling’s paper, ‘Structure of AO relative clause’, deals with the nature of relative clause in AO, a Tibeto-Burman language spoken in Nagaland. In this paper, Pangersenla Walling, has talked about the various features of relative clauses in AO such as- the relative clauses in AO can serve in any syntactic role that can be filled by an ordinary DP, relative clauses can serve as both subject and object, relative clauses in this language are mostly externally headed or headless etc. The relativization in AO is achieved through the nominalization. The morphological markers for relativization and nominalization are same in AO. The occurrence of relative pronoun in AO is very rare rather nominalization suffix(s) are used as relativizer, the usage of relative pronouns could be a result of language contact, highly influenced by Nagamese, Hindi and English. In the paper, “Mey (Shertukpen): Some Grammatical Phenomena”, Bishakha Das, discusses some grammatical feature of Mey language, he exclusively focuses on Personal and Demonstrative pronoun, Existential and Possessive construction, Temporality, Interrogative construction and Negation.

Paper on ‘Analysing Self-Talk: A Systematic Functional Linguistic Approach’, Subhanan Mandal and P. Perumal Samy

chosen Shakespearean dramatic text which is conversational in nature, where he focuses on thought processes, particularly through categorization of mood structures, analysis of the discourse of soliloquy and the manner of self-expression. The mood analysis based on SFL approach describes the interpersonal relationships of the participants in conversation. It helps in understanding the psychological situation, social circumstances and motifs of the participants in any interactional activity. The linguistic analysis of the soliloquy through this approach, thus, provides a better understanding of the mind and character of the protagonist.

Aadil Amin Kak and Sajad Hussain Wani in their paper “Divergence patterns in Kashmiri to English Machine Translation: a study of question type” discusses some of the divergence patterns that one encounters while translating different question types from Kashmiri to English. It was found that divergence in different types of questions arises in a systematic pattern because of the typological differences between Kashmiri and English language. The first divergence pattern arises because of the rich inflectional nature of Kashmiri rather than English which shows the lack of inflectional morphology. Another dominant divergence pattern that is observed in translating questions from Kashmiri to English is due to the free movement of question words in Kashmiri whereas in English question words must come at the beginning. Similarly, another divergence pattern occurs because of the occurrence of reduplicated question words in Kashmiri for which English provides no equivalents, resulting in reduplicated question words divergence.

Paper on ‘Compound Verb Formation in Assamese’ by Diksha Konwar discusses the synthesis of different verbs, forming compound verbs in Assamese. It brings out that the light verb

or vector plays a pivotal role in a compound verb construction. Furthermore, the paper also sheds some light on the reversed compound verb construction in the language and it has been established that reversal of the combination of V1 and V2 in a CV is possible in the language. While analysing the CVs in Assamese, it has been observed that there is correlation between the transitivity of light verbs case marking in Assamese. The morphological criterion for CVs in Assamese is that polar verb or the main verb takes a stem forming morpheme and it occurs in a fixed form across all the instances of compound verbs in Assamese. The Light verb or the vector verb bears the conjugation for tense, aspect and other grammatical information. Paper on “Structural Case Valuation in Adjectives of Modern Standard Arabic in the light of Phase Theory” by Muhammed Salim and Abdul Aziz Khan, deals with the structural case valuation of adjectives of Modern Standard Arabic (MSA). It presents a morpho-syntax account of case in adjectives when occurring in small clauses, zero copular structures and copular constructions. They found that MSA exhibits nominative, accusative and genitive case. There is also accusative-genitive case syncretism. Furthermore, it is proposed that small clauses are originally non phrasal predicative phrases consisting of the string NP and XP. The subject and adjective bears accusative cases, these cases are valued by the multiple agree with light v, which is itself a phrasal head vP. Similarly, the zero copula clauses are non phrasal predicate phrases bearing nominative cases that are valued by multiple agree with T, which acts as probe and locate the noun phrase and adjective phrase as goal.

The Next paper, “Word order of Moyon as an Tibeto-Burman Language” by Naorem Shomorjit Singh and Ch. Yashawanta Singh discusses the comparative analytical study of the constituent orders of Moyon and Manipuri on the sentence level.

Both languages have a set of common features which are typical to OV Tibeto-Burman languages in placing genitive before the head noun, adposition after the noun, relative clause before the head noun, manner adverb before the verb, negatives after the verbs, questions affixes at the end of the sentence, inflectional affixes indicating tense and aspect after the verb. Sagolsem Indra kumar Singh in his paper, “Bisyndetic structure of coordination in Manipuri: logical, Binary and postpositive construction” describes the Manipuri bisyndetic coordination process, the coordination involving morphemic coordinators instead of lexical coordinators in syndetic level as well as asyndetic level, lacking overt coordinators.

Last paper in this issue on “Articulatory production of vowels in children with cochlear implant-an acoustic analysis”, V. Jaya and Lalitha Raja R. describes the variation and compare the acoustic analysis of vowels production in hearing impaired children with cochlear implants and age matched peer groups with normal hearing. Children with severe to profound hearing loss have poor auditory perception skills. Early intervention strategies like amplification devices and cochlear implants help them to gain adequate auditory feedback to achieve acoustically better voice control. This study will help in planning intervention and the treatment strategies for improving speech production, thereby to improve their speech intelligibility. Last section of issue 1 of the journal includes a book review by Noman Tahir. The book by Nathan Badenoch and Nishaant Choksi (2020). “Expressives in the South Asian Linguistic Area” provides a study of wide range of contemporary and theoretical research on “expressive”, a concept widely used in the South Asian from the synchronic diachronic ethnographic, literary and descriptive perspective. Further, this book will be able to cultivate an interest in the study of expressive in the South Asia from the grammatical and semiotic view-point.

The issue 2 of Aligarh Journal of Linguistics (AJL) comprises 11 research papers from diverse discipline, including one book reviews. Where the first paper entitled “Tense in Koracha” Basavaraja Kodagunti analysed the tense system in koracha and the difference developed in second person in the speech variety. This variety shows a feature of having two different tense forms for singular and plural in second person. This difference is not observed in any other variety of Dravidian language family, therefore it may be seen an interesting development in Dravidian language family. Paper on “The role of dramatic games and its sequence in teaching English vocabularies to young learners” by Khosravi A., Younesi M., Rizwan Khan M., Vahabi S., describes the reliable results by relying on other findings as well as detailed observation of classes that use dramatic in their educational methods as audio-visual aids for teaching. The result of the study was the advancement of language learner in learning, particularly in use and application of vocabularies in English. Further, the sequences of the desired dramatic games (i.e. role-playing, simulation, and improvisation) is also notable in this study and have a significant impact on recognizing and reproducing words, creating sense of confidence, creativity and motivation.

Vijay Kumar Kaul, et al. in their paper, “Online teaching of Hindi vocabulary as a foreign language” explore a framework for language teaching Hindi vocabulary as a foreign language by combining NLP tools and others cultural and contextual clues. This paper is an attempt to provide a framework for teaching Hindi vocabulary as a foreign language. In teaching Hindi vocabulary as a foreign language we need to follow: a) dictionary strategies b) contextual clues and c) cultural cues, d) some NLP tools, leading us to adopt a combination of these methods, so that the learners consider it to match their language learning

attitude. Advances in Natural Language Processing (NLP) have enabled rich tagging and annotation of corpus data, essential for their effective use in language acquisition application. Paper on “Phonological analysis of Rampuri Urdu” by Nazish Malik and Shabana Hameed provide a phonological sketch of Urdu as spoken in the city of Rampur, Uttar Pradesh. Where they briefly describe some phonological features, process and pattern, specially aphaeresis, epenthesis, deletion and syllabic structure. Further, the occurrence of frequent germination of consonants, deletion of /h/ in the middle and final position, addition of nasalization in words, shift from monophthong to diphthong, are some significant feature of Rampuri Urdu which make it differ from the standard Urdu.

Zoya Khalid in her paper, “Pronouns and clitic doubling in Asur: a north Munda language” describe the features of Asur pronouns. In this paper, different types of pronouns have been discussed, such as, personal pronouns, demonstratives, reflexive pronouns, reciprocal pronouns, possessive pronouns, interrogative pronouns, and relative pronouns. Further, this paper also discusses the subject and object marker encliticization and the phenomenon of clitic doubling. Asur like other north Munda languages, have enclitic subjects and object markers, the pro drop phenomenon is also frequent in Asur. Aejaz Mohammed Sheikh and Mehnaz Rashid in their paper, “A phonological study of Sheikha Gal” describe the phonological description of Sheikha Gal. It is an unclassified Indo-Aryan Language, has 29 consonants and 12 vowels nasalization is phonemic and consonants gemmination is common phenomenon of this language. The initial clusters are formed by combination of stop and trill consonants, the final clusters are formed by combining nasal and stop consonants.

Paper on “Compound formation in Manipuri” by Nameirakpam Amit and Chungkham Yashawanta Singh, discusses the compounding process in Manipuri (Meitei), a kuki-chin language. This paper analyses the process of compounding of the monosyllabic words in Manipuri and the changes that occur during the process. Further, the disyllabic words drop a syllable while compounding. Hence, monosyllabic words in Manipuri are most likely to form compounds. “Nouns in Wagdi-a mother tongue of Bhil/Bhilodi” by Sibasis Mukherjee, discusses nouns of Wagdi. It has been observed that there are regional variations in Wagdi as spoken by the Bhils in the Wagad region and the variety spoken by the non-Bhils also differ from that of Bhils. These variation describes at the phonological as well as grammatical levels where the voiced aspirates at the initial positions becomes voiceless unaspirated and voiced unaspirated in the medial and final position and vowel gets murmured in the speech of villages (Handidara, Vadka) of Kherwara. Whereas in the speech of Bhils of Dungarpur and Banswara voiced aspirates are there in the initial positions but gets de-aspirates in the medial and final positions.

Sabahuddin Ahmad in his paper, “Morphological errors of Urdu/Hindi speakers learning English” identifies and analyses the error of morphological nature pertaining to the English language. It has been observed that the complex and irregular pattern of plural formation of English creates difficulties in acquisition. Learners also commit errors in the use of possessive case. Learners also commit errors in the use of possessive case. Instances have been found where learners have ignored the rules restriction of possessive, which is used only with animate. Further, the complex and irregular verbal inflection system of English leads to overgeneralization.

Kumari Mamta in her paper, “Numerals system of five Tibeto-Burman languages of India” explains the similarities and variations in numeral system of five Tibeto-Burman Languages namely Meiteilon, Thangal, Thankhul, Bodo and Tinkar Lo. Even though, they belong to the same family, many numerals feature are differ. Among these, it can be said that only Bodo is numeral classifier language. These languages are based on decimal and vigesimal system, but the Tinker Lo has a more complex system including Sexagesimal (60) and Octagesimal (80) system too. It is very interesting that these languages include all four basic arithmetic operations rather than only addition and multiplication, which is common in most of the languages of India. They have rich demonstratives with different forms for proximal and distal as well as for singular and plural. Except Bodo, no language marks plurality with the plural numerals. In Bodo and Tangkhul definiteness is unmarked and rest languages mark it

by distal dem. Quantifiers or Indefinite numerals function as adjectives except for Meiteilon. The less common forms of number building can be found in TB languages. The numeral systems of TB languages are very less reported, they are in verge of extinction as neighbouring languages are having a huge influence on every aspect of these languages.

Last paper on “Light verb Modulation effects on reaction time: an experimental study a Bangla conjunct verbs” by Debmalya Biswas, investigates how reaction time findings, from a self-placed reading experiment that exposes native Bangla speakers to Bangla sentences containing conjunct verbs, can provide cues about the processing such light verb construction. It shows the significance of light verb appropriacy in conjunct verb constructions. It also highlights the choices that speakers make while understanding sentences containing incompatible

light verbs or, contextually ineffective light verbs. The lightverb replacement task results show a great preference for the Bangla light verb *kora* 'do', in most constructions. This issue of AJL also include an excellent book review by Shamim Fatma. The book by Anjani Kumar Sinha (2017) "Essentials of English Language Teaching" is very comprehensive and contains numerous linguistic approaches and theories which make it more useful for a language teacher having little or no background of English. It is surely going to help language teachers to conduct effective classroom teaching.

### **Conclusion**

Overall, AJL Issue 1 and 2 is a valuable addition to Linguistic studies and has a great relevance to present day research. Diverse collection of papers presented in the volumes serve a great purpose in placing many linguistic insights straight. It is difficult not to like the work of the editors with their unpretentious choice of selecting and editing papers for AJL. Nevertheless the Journal provides a valuable and absorbing window into areas of linguistic research that in many way were untouched.

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<sup>I</sup> The dropping of the ACC/DAT marker is not very significant here for the discussion on incorporation as it can be optionally dropped in other structures as well.

<sup>II</sup> Though a productive process, not all nominal objects can be incorporated in Pnar. Only those marking ‘theme’ and ‘goal’ theta roles can be incorporated.

<sup>III</sup> Not all modified nominals can be incorporated. Quantifiers, numerals, demonstratives and relative clauses, which are also nominal modifiers cannot be left stranded, and hence nominal incorporation out of these structures is not permitted.

<sup>IV</sup> A reason for this is also because most Khasian studies have taken standard Khasi structures as representative of the Khasian languages, without focussing on the structures of minor Khasian languages like Pnar, Mnar, War, among others. The minor Khasian languages seem to be more representative of the proto-structures than standard Khasi is.