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Editor

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Osmania Papers in Linguistics

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Editorial

The department of Linguistics has been publishing a peer reviewed journal 'Osmania Papers in Linguistics' (OPiL) since 1975, and it my pleasure to bring to you the 40th volume. This journal has witnessed publication of articles ranging from Core Linguistics to Applied Linguistics to proposal of new theories.The present issue has ten articles, three theoretical proposals and one book review article. The articles cover both Dravidian and Indo-Aryan languages. Among the Dravidian – Telugu, Tamil and Malayalam are covered, whereas Assemese and Odia are covered under Indo-Aryan.

Based on the description of the richly glossed data **Sreekumar**'s paper gives a descriptive and typological study of the structure and type of Imperatives Constructions (IMC) in Malayalam. It was found that the canonical IMC in Malayalam were unmarked for gender, number and person. IMC can be embedded and reported without altering the imperative content in reported speech. As per the study, there are definite and indefinite seeking types of Wh-imperatives in Malayalam, while constructions with more than one verb can be included as suffixes to the main verb only. Negative IMC were formed by changes in lexical word and negative clitics.

Prema discusses the conversation strategy – repair, with respect to Malayalam Language. For the first time a typological analysis has been attempted on others-initiated repairs (OIR). It was noted that apart from general cross-linguistic features, Malayalam uses negation and imperatives as OIR strategies.

Acquisition of consonants in typically developing Tamil speaking children was the topic of study of **Perumal** et al. Error analysis was done using Percentage of Consonants Correct. Results revealed that nasals, stops, alveolar and palatal laterals were acquired first followed by velar and retroflex stops, semivowels, affricates and fricatives, while retroflex laterals and flaps (trills) were the last to be acquired.

Mittal and Sankar's study was successful in setting norms for the development of pragmatics in Tamil speaking preschool children using semi structured play activities. While, it was observed that the pragmatic skills were acquired by both the genders in a developmental progression, the children with language disorders showed limited or lack of use of various pragmatic skills.

Discussing how development of reading and writing skills are not as natural as speech, **Swathi and Kavitha**, analyse the errors in spelling in primary school going Telugu speaking children. They attributed these errors to mismatch between phonological and orthographic syllable along with inadequate training and language exposure.

An interactive and affective characteristic of conversation in its written state using SMS text allows users to abbreviate words without losing any meaning. **Anjaneyulu** collected and analysed data of five hundred SMS texts in English taken from 10 graduate students. Common features seen were vowel deletion, consonant deletion and degemination.

Telugu is in contrast with English where the vowel in its original orthographic form is added and realised in different ways phonemically.

Venkanna compared the syllable structure of these two languages and made some interesting observations.

Growing preference for English medium schools in comparison with Vernacular medium schools has led to the prestige and status associated with English education. Study conducted by **Garima and Sheelpa** looked at various aspects to bridge the gap between English and Odia medium schools, taking the case study of Cuttack district in Odisha. The study found some interesting points of divergence and convergence in the two types of schools. Such a study would enable the improvement of the pedagogical practices and strategies.

Humera makes an interesting observation about the use of errors in language teaching using Contrastive Analysis. Using this method the language teachers can predict the likely errors of a given group of language learners. Discussing the concept of 'positive', 'negative' and 'nil' transfer, she notes how learning a foreign language gets influenced by mother tongue.

The three theoretical issues that have been taken up in this journal are – **Optimality theory and two new theories in the Semantic and Pragmatic domain**.

Applying the **principles of Optimality theory, Hemangu** has discussed the syllable structure of Assemese Language. While, the paper by **Per Aage Brandt focuses on general architecture of language based on 'word'**. According to him Words have Phonetic, Syntactic (function), Semantic (word class), Discursive and Enunciative properties, but they

still resist reduction to any of these structural domains of Langauge. From enunciation to pronunciation, these are modelled as forming a non-closed ring, a spiral around the word and its Lexical morphology. Based on the principles of Ancient Indian Tradition and merging these with the current era of **cognitive – pragmatic domain, Bhuvaneshwar**, discusses the application of Karmic Linguistic Theory on word formation processes of English.

Last but not the least an interesting **book review** has been done **by Rajnath Bhat** on 'Origin and Development of Modern Linguistics' written by Namboodiri. Bhat noted that the book provides a brief but focused outlines of the Traditional European grammar-models, 20th century [American] Bloomfieldian-Structuralist model, 20th century [American] Chomskian- Generative model and the Paninian model of the Sanskrit [India].

I hope the readers enjoy reading this edition of the journal, as much as I have learnt and worked in editing it.

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IMPERATIVES IN MALAYALAM: STRUCTURE, TYPOLOGY AND RELATIONS

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Abstract

This paper is a descriptive and typological study of the structure and type of imperative constructions (henceforth IMC) in Malayalam. Based on the description of the rich glossed data it found that that the canonical IMC in Malayalam is unmarked for gender, number and person. The root forms of the verb with and without lengthening of the final vowel is the morphological realisation of imperative. The gendered vocative particle is copied towards the post verbal position in IMC. Verb initial constructions are found in the IMC of Malayalam against the general word order of SOV in Malayalam. IMC in Malayalam can be embedded and it can be reported without altering the imperative content in reported speech. There are definite seeking and indefinite seeking types of Wh- imperative in Malayalam. More than one verb can be included in IMC with imperative suffix only on the main verb. Negative IMC is formed by lexical word and negative clitics. The subject of IMC in Malayalam can be in nominative, accusative, dative, genitive and vocative cases.

Keywords: Typology, Imperatives, Malayalam

1. Introduction

Imperative is a speech act with directive meaning. It is the mood of a sentence expresses by the verb. Imperative conveys an intention of the speaker to the addressee. The addressee should perform the action which the speaker intended. The intended action is expressed as the main verb in the imperative sentence. The imperative verb variably marked across languages with silent subject, overt subject, pronominal, negation, tense, subject agreement, clitics, topics, and focus etc. Despite of this structural richness of imperative

construction (*henceforth IMC*), imperative is relatively one of an underexplored grammatical element of languages across the world except the case of English. Dravidian family of languages is not an exception for this lacuna. Structure and types of IMC in Malayalam (*henceforth Mal*), and its relation of with other grammatical categories have examined in this paper.

First part of the paper gives a brief profile of IMC in Dravidian language followed by a discussion on the structure and type of IMC in Mal. Third part discusses the relation of IMC with other grammatical categories. Based on the described data and discussion I have reached few conclusions about the IMC in Mal which can be further examined in the other languages in the Dravidian family.

1.1. Imperative in Dravidian: Root form of the verb in Dravidian is in imperative singular mood intrinsically refers to non-past time and its distribution in an imperative construction is unmarked (Caldwell 1856: 588-91, Krishnamurti 2003: 357-61, Schiffman 1983: 122-23, Krishnamurti & Gwynn 1985: 163-66, Asher 1991:32-36). Therefore, it is generally observed that verb base itself functions as the imperative in Dravidian languages (Subrahmanyam, 1971: 453-503, 2013:597-613). As advancement to this standard view, this study demonstrates that such generalization is not enough to deal the diversified structural and functional evidence of the imperatives in Mal.

Most descriptive grammar treat imperative as a verbal mood in Morphology. However, in the recent studies, imperative has been treated as clause and a sentence type in syntax (Sadock & Zwicky 1985, Xrakovskij 2001, Aikhenvald 2010, 2014, 2015, Johan van der Auwera 2013, Alcazar and Mario 2014).

The recent advancement of Dravidian languages also treated imperative only up to the level of morphology (Subrahmanyam 2013: 597-613). Therefore, this study is advancing the present view on imperative in Dravidian family of languages based on Malayalam.

2. Structure and Type: Different types of IMC in Mal have been given below followed by discussion on each structure.

2.1. Gendered construction:

1 *nī* *iviṭe* *Vā*
you Here come.imp
'You come here'

The sentence (1) is a canonical form of IMC in Mal with second person as the subject and imperative at the end of the sentence. Imperative in Mal is unmarked for number, gender and person. Even then, there observed instances of pronominal copying of gender of the subject to the imperative verb (2&3).

2 nī *iviṭe* *vā-ṭī*
you here come.imp-fem
'You come here'

3 nī *iviṭe* *vā-ṭā*
you here come.imp-mas
'You (masculine) come here'

In (2&3) the gender of the subject is expressed with the verb, *-ṭā* for masculine and *-ṭī* for feminine. This is a peculiar evidence of expression of gender of second person on verb in Mal. against the fact there is no gender agreement in Mal. The same expression of gender observed in the sentence initial imperative in too (4&5).

4 *vā-ṭā* *nī* *iviṭe*
come.imp.mas you here
'You (masculine) come here'

5 vā-ṭī *nī* *iviṭe*
come.imp.fem. you here
'You (fimine) come here'

2.2: Sentence initial IMC: Asher (1991:32) observed that "the unmarked position for an imperative form, whatever the length of the sentence, is sentence final". However, see the below expression (6);

6 *vā* *nī* *iviṭe*
come.imp you here
'You (feminine) come here'

On the contrary to the above observation, in the sentence (6) imperative form *vā* "come" is at the sentence initial position. This phenomena of post verbal subject is against the general pattern of word order in Mal i.e. VSO instead of SOV.

7 *aṭi* *nī* *avaṉ-e*
beat.imp you he-acc
'You beat him'

The above sentence is a (V)erb initial (S)ubject medial and (O)bject final imperative construction. Therefore, it can be argued that IMC in Mal. can be verb initial.

2.3. Subject dropping without agreement: Subject dropping is a generally observed feature in IMC in languages with rich verbal agreement (Bennis 2006). However, in Mal subject in an IMC can be dropped without agreement on verb.

8 *nī* *iviṭe* *vā*
you here come.imp
'You come here'

9 *iviṭe* *vā*
here come.imp
'(You) come here'

10 *iviṭe* *vā* *nī*
here come.imp you
'(You) come here'

11 *iviṭe* *Vā*
here come.imp
'(You) come here'

Subject can be dropped in IMC in Mal irrespective of the position; see (9&11). It should be specially emphasized that the pro-drop phenomena occur in Mal without inflectional features of gender, number and person in verb. The absence of lexical subject does not imply that the subject is absent. The non realized subject is the addressee. Whenever it is necessary to be emphasized, the addressee the subject will be realized.

12 *nāḷe* *ṭōkio* *lēkku* *pōk-ū*
tomorrow Tokyo loc.dir go-imp
'Go to Tokyo tomorrow'

2.4. Embedded imperative: IMC in Mal can be embedded and transformed into reported speech.

13 *jōṇ* *innale* *mēri-* *ōṭə* *paṛa-* *ňňu*
John yesterday Mary- soc say- pst
ṭōkyō- *lēkku* *pōk-ū* *ennə*
Tokyo loc.dir go.imp qp
John told Marry yesterday - 'to go to Tokyo'

Here the imperative sentence (12) can be reported as present tense in an embedded clause with a QP *ennə* (13)

14 *vīṭṭ-ilēkkə* *pōk-āṇ* *paṛaňňa* *ta*
house-loc.dir go-noml say-pst- Pp
'I have told him to go to home'

The above expression (14) is reported imperative by the first person itself. This construction is the restating of the stated imperative. Therefore, these types of imperative can be called restated imperative.

2.5. Wh imperative: Two types of wh- imperatives have identified. They are definite seeking type and indefinite type. The (15&16) are definite seeking type.

15 *etṛa* *vila* *āṇ-ennə* *paṛ-(y)ū*
how much price be-qp say-imp
'Tell how much price'

16 *paṛ-(y)ū* *etṛa* *vila*
say-imp how much price
'Tell how much price?'

Wh-imperative may be verb initial or verb final. This construction is often used as an alternate to interrogative;

17 *vila* *etṛa?*
price how much
'How much the price?'

18 paṛ-(y)ū *vila* *etṛa-* *ennə*
say-imp price how much- qp
'Tell how much price?'

By choosing the imperative for interrogative it can be specially been observed that the addressee is directed to tell the price instead of been asked the price. This alternation can be possible only for Wh imperative. Whereas, the below expression (19&20) are indefinite seeking type;

19 *āreŋkilum* *var-ū*
some one come-imp
'Come someone'

20 *enteŋkilum* *tar-ū*
some thing give-imp
'Give something'

2.6. Verb sequence imperative: There are IMCs in Mal which direct the addressee to more than one action.

21 *pō-(y)iṭṭə* *Vā*
go-pp come.imp
'Go and come back'

22 *eṭu-ttu* *koṇṭə* *Pō*
take-pp carry-pp go.imp
'Take and go'

23 *pō* *eṭuttu* *koṇṭə*
go.imp carry-pp carry
'Take and go'

Here in (21, 22&23) the addressee is directed to perform more than one action. The imperative is marked only with the main verb.

24 *pō-(y)i* *kiṭa-nnə* *uṟaŋŋ-ū*
go-pst lay-pp sleep-imp
'Go, lay and sleep'

Here in (24) there are three imperative verbs. Imperative is marked only for the final verb.

2.7. Negative imperative: Imperative can be negated by adding lexical word arutu and negative particle kūṭā as expressed in (25& 26).

25 *nī* *Pōkarutə*
you go-neg.imp
'You should '

26 *nī* *atə* *cey-tə* *kūṭā*
you that do-pp neg
'You should not do that'

3. Relations: Relation of IMC with other grammatical categories like, case, person and etc is examined in this section.

3.1. Third person subject/addressee

27 avaṛ *pōk-āṉ* *paṛa*
they go-nom say.imp
'Tell them to go'

Here in (27) two verbs are expressed in this construction. The first verb *pōk-āṉ* "to go" is directed not to the second person as usual in IMC. On the contrary, the third person is the potential actor of the carried verb. Therefore, two types of verb can be distinguished in an IMC with third person. Those are directed verb and the carried verb. The *paṛa* "tell" is the directed verb and the pōk-*āṉ* "to go" is the carried verb. In such construction the NP is 3rd person and its referent excludes both speaker(s) and the addressees (s).

3.2. Case assignment: Subject of the IMC can be assigned for nominative (28), accusative (29), dative (30) and genitive cases (31).

28 Nī *aṭikkə*
you-NOM take.imp
'You beat'

29 *ava-ṉe* *aṭikkə*
he-acc beat.imp
'Beat him'

30 *niṉa-kkə* *eṭukk-ū*
you-dat take-imp
'Take for you'

31 *niṉ-ṟe* *eṭukk-ū*
you-gen take-imp
'Take yours'

3.3. Pseudo-imperatives: There observed other type of constructions in Mal which appears to be function as imperatives (32). The subjects of such construction are 1st person plural. These are not IMC by structure. Therefore, these constructions are called pseudo imperatives.

32 *namu-kkə* *pōk-ām*
we-dat go-hort
'Let us go'

Here the addresser and addressee of the command is 1st person plural. Such construction is pseudo imperatives and belongs to hortative in construction.

3.4. Vocative subject: The subject of the IMC in Mal can be a vocative subject (33).

33 *rāma-ā* *iviṭe* *vā*
Rama-voc here comc.imp
'Rama, come here'

Therefore, in an IMC, subject can be replaced by a vocative subject in Mal.

3.5. Reduplication: Imperative in Mal is reduplicated as in Bengali to intensify the forcefulness of the direction (34).

34	pō pō	*Vēgam*	*pō*
	go,go-voc	Fast	go.imp
	'Go, go fast'		

3.6. Variants of imperative: IMCs vary according to the addressee. In the (35&36) imperative is expressed *āl-um* "conditional- fut" and *aṇam* which are considered as honorific or polite imperative.

35	*tāŋkaḷ*	*vann-āl-um*
	you.pl	come-cond-conj
	(honorific)	
	'You, please come'	

36	*tāŋkaḷ*	*var-aṇ-am*
	you.pl	come-imp-pol
	(honorific)	
	'You, please come'	

4. Conclusion: The above description and discussion evidenced that a canonical IMC in Mal. is unmarked for gender, number and person. The root forms of the verb with the final long vowel as it is often functioning as the imperative. Otherwise, the imperative is marked by vowel length of -ə, ū, um and -am suffixes. Copying of gender vocative particle towards the post- verbal position is a peculiarity observed in the IMC in Mal. There observed verb- initial constructions against the general word order of SOV of Mal. The subject often dropped. IMC in Mal can be embedded and it can be

reported without altering the imperative content in reported speech. There are definite seeking and indefinite seeking types of Wh-imperative in Mal. An interrogative of seeking definite answer can be expressed by definite seeking wh-IMC. More than one verb can be included in IMC with imperative suffix only on the main verb. Negative IMC is formed by lexical word and negative clitics. The subject of IMC in Mal. can be in nominative, accusative, dative and genitive cases. Subject in IMC can be in vocative. The imperative suffix is reduplicated for intensification of the forcefulness of the direction and it varies according to the addressee.

Note: The system used in this paper for glossing vocabulary corresponds to the Leipzig Glossing Rules. A list of abbreviations is given below.

Abbreviations: acc: accusative, cond: conditional, con: conjunct, dat: dative, dir: directive, fem. feminine, gen: genitive, noml: nominalising suffix, hort: hortative, imp: imperative, loc: locative, mas: masculine, neg: negation, nom: nominative, pol: polite, pst: past, qp: quotative particle, pp: past participle, soc: sociative, voc: vocative.

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OTHERS-INITIATED REPAIR IN MALAYALAM

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Abstract

We correct our speech while we speak. This is a conversational strategy known as repair. This paper is the first attempt to observe the other-initiated repair (OIR) in an Indian language. Ten strategies OIR in Malayalam are identified at first followed by a typological analysis of each in the second part. Based on the typological analysis the paper concludes that in addition to the generally observed cross linguistic features of OIR, Malayalam uses negation and imperative as OIR strategies.

Keywords: Conversational Strategy, Others-Initiated Repairs, Malayalam

1. Introduction

Recent developments in the field of conversational analysis and linguistic typology has led towards an unprecedented interest in the study of conversational strategies. Researchers have shown an increasing interest in repair as a potential conversational phenomenon to be studied across languages (Zhang 1999, Kim 1999, Enfield and Dingemanse 2015: 96-118, Benjamin 2013). Repair is a conversational strategy made by speaker or addressee to solve the problems in speaking, hearing and understanding. Self-repair, other-repair, self- initiated repair and other- initiated repair are the generally observed types of repairs observed across languages (Schegloff, Jefferson and Sacks 1977: 361-82).

Little attention has been paid to this phenomenon in South Asia languages especially in Indian languages. This paper is to identify, classify, and generalize the other-initiated speech repair

(henceforth OIR) in Malayalam. In addition to the identification of generally observed features of repair across languages in Malayalam, negation and imperative has been identified as the additional types of OIR in Malayalam.

The paper begins by presenting ten sets of conversational data to demonstrate how OIR is reflected in Malayalam. It will then go on the typological analysis of OIR in Malayalam in the second part. Finally, the paper reaching towards few conclusions based on the identification of the additional OIR features in Malayalam.

2. Others initiated repairs in Malayalam:

Eg-1: Two friends Fathima and Sita are speaking in a casual setup.

Fathima: *ḍī revi-um muntāsum kallyāṇam kaḷikkāṉ pōkuṉṉeṉṉə*
"Hai, Ravi and Munthas are going to marry".
Sita: pō-ḍi "go(informal)"
Fathima: *miniyā ennōṭu paṛaññatə*
"Mini told me that"
Sita: *appo śari āyirikkum*
"Then it must be right"

Fathima tells to Sita that Ravi and Munthas are going to marry. Sita wants to conform it again. Therefore, Sita initiated a repair on what Fathima has already stated by *pōdi* "go (informal way to address a girl)"; it is an imperative with feminine marker. Here the *pōdi* functions as an initiation to conform further what stated by Fathima. This is a primary illustration of repair and it belongs to OIR in Malayalam. A sequence of OIR consists of three turns in general; a trouble source which causes the comprehension problem (T-1); a repair initiation which signals there is problem (T- 0) and a repair solution which fixes the problem (T+1) This can be represented as below as Table 1.

Table-1 : A sequence of OIR turns

T-1: Trouble source:	Fathima: *ḍī reviyum muntāsum kallyāṇam kaḻikkāṉ pōkuṉṉeṉṉə.* "Ravi and Munthas are going to marry"
T-0: Initiation of repair:	Sita: *pōḍi* "go - informal way to address a girl"
T+1: Repair solution:	Fathima: *miniyā paṛaññatə* "Mini told it"

Eg -2: Another instance of a conversation between a father and son:

Father: Anil, nī innale eviṭeyāṇə vīṇatə?
"Anil where did you fall down yesterday" (T-1)
Son: entā?
"what?" (T-0)
Father: innale nī eviṭeyā vīṇateṉṉə?
"Where did you fall down yesterday" (T+1)
Son: ō atho?
"Oh that....".

Here the son 'Anil' fails to hear father's question. Therefore, he initiated a repair by an interrogative *entā?*. Then the father repairs it by repeating the question and the problem of comprehension between them has been solved. Here an interrogative *entā?* "what?" is functioning as Turn Construction Unit (henceforth TCU).

Eg-3: See another instance of a conversation between a teacher and student:

Teacher: *vēgata eṉṉatə āpēkṣikam āṇeṉṉāṇə āpēkṣikata sidhāntham paṛyunnatə*
"The theory of relativity states that speed is relative"
Student: *eṉṉu veccāl?*
"that means?"
Teacher: *atāyatə*.....

"that means" (then teacher explained)

The statement made by the teacher is not comprehensible to the student. Therefore, student initiated a repair by *eṉṉu veccāl* "that means". TCU is a quotative phrase which resulted the further explanation by the teacher.

Eg.4. Another instance of a conversation between two friends:

Afzal:	*avaṉ nāṭə viṭṭu*	
	"he left the country"	(T-1)
Raman:	*ēyi*	
	"No....."	(T-0)
Afzal:	*śarikkum avan pōyi*	
	"definitely he left"	(T+1)

Here the statement made by Afzal has been repaired by Raman by using an emphatic clitic *ēyi* "No" which is a negation. In response on that, Afzal conformed it by an emphasize of *śarikkum* "right-conjunctive marker". Here a negative particle *ēyi* "no....." is functioning as the TCU.

Eg.5: Another instances of a conversation between two friends

Raman:	*namukkə pōyālō?*	
	"Shall we go"	(T-1)
Afzal:	*ūhm....*	
	[interjection]	(T-0)
Raman:	*namukku pōkām*	
	"Shall we go"	(T+1)

Here the expressed imperative sentence was not comprehensible to the addressee at the first expression. Therefore, an initiation has been made by the addressee to repair it and eventually lead a solution of a hortative sentence. Here an interjection '*ūhm*' is functioning as a TCU.

Eg.6: An another instance of a conversation

Raman: *iṉṉale avaṉ naṉṉāyi pāṭi*
"Yesterday he sang well" (T-1)

Afsal: *ārə?*
"who" (T-0)

Raman: *aṉil*
"Anil" (T+1)

Here the information about the subject is missing in the first sentence expressed by Raman. Afsal is initiating a repair and in response of Afzal Anil repair it by specifying who sang. TCU is an interrogative pronoun.

Eg.7: Another instance of a shopping of rice.

Costumer: *ari vēṇam*
"need rice" (T-1)

Shopper: *etṛa?*
"how much" (T-0)

Customer: *añcu kilō ari*
" Five kilo rice" (T+1)

Here the quantity of rice required to the customer is not expressed in the customer's casual request. Therefore, the shopper initiated a repair and the customer repair it with the information on quantity. The interrogative *etṛa* is the TCU.

Eg.8: An instance of mother interrogates a child.

Mother: *enthā itə?*
"what is this?" (T-1)

Son: *ētə?*
"which" (T-0)

Mother: *ī pustakam ārā kīṛiyatə?*
"Who tired this book?" (T+1)

Son: *ñānalla avaṉā*
"not me, he".

Mother's question is not specified linguistically. Therefore, the son initiates a repair by using an interrogative *ētə?* "which" . Then the mother is specifying what she was interrogating. TCU is in interrogative here.

Eg.9: Another instance of an informal conversation.

Anil:	*remaṇikku felōṣippə kiṭṭi*	
	"Ramani got fellowship"	(T-1)
Afsal:	*ramaṇikkō?*	
	"Does Ramani?"	(T-0)
Anil:	*ate ramaṇikkə*	
	"Yes, to Ramani"	(T+1)

Here the statement of Anil about Ramini's achievement of fellowship has not been believable to Afsal. Therefore, he initiate a repair and Anil responded it with an emphasize of conformation. An interrogative phrase ramaṇi-kk-ō? "Does Ramani?" formed by a noun, case marker and an interrogative functions as a TCU here in 2.9.

Eg.10: An instance of a sequence of OIR can be seen in the following example.

Anil:	atenthāyālum avanu koḷḷām	
	"Whatever it is, it is good for him"	(T-1)
Afsal:	āruṭe kāryavā paṛayuṉṉatə?	
	"About whom you are speaking?"	(T-0)
Anil:	biju ve	
	"About Biju"	(T+1)
Afsal:	bijuvinə entāṉṉə?	
	"What about 'of' Biju?"	(T-0)
Anil:	bijuvinə transfer	
	"Transfer of Biju"	(T+1)

Afsal: eṅṅōṭṭə?
"Where to" (T-0)
Anil: iviṭōṭṭə
"Here to" (T+1)
Afsal: ō gud
"Oh Good"

Here sequences of trouble have been occurred in this conversion and each resulted in an initiation from the side of Anil and Afsal responded on each with a repair. There are two OIR in this conversion an interrogative sentence *āruṭe kāryavā paṛayuṉṉatə*? "About whom you are speaking?" and an interrogative word *eṅṅōṭṭə*? "Where to".

3. Discussion

The following generalization can be drawn from the above presented sentences of conversations. (1) Diverse strategies followed in Malayalam for OIR right from interjections to interrogative sentence. (2) Interjection, interrogative words, phrases and sentences, negative clitics are the commonly used TCU in Malayalam. (3). Repetition with additional information and emphatic word is generally observed repair in Malayalam. As it has been generally observed across languages, OIR in Malayalam point back to a trouble in prior turn T-1. The T-0 requires a repair in the T-1. The type of repair may be open type repair initiators which signals some problem in previous expression and but leaves open what or which it is, and the restricted type which points to some trouble in the T-1. This classification of OIR into open type and restricted type is based on retrospective aspect of the repair. These two types are distinctly observed in Malayalam like many other languages across the world.

4. Conclusion

Based on the forgoing discussion and the typology, OIR in Malayalam can be represented as in Table: 2 below.

Table-2 :Type of OIR and TCU

Type of OIR	Type of TCU	
Open Type: Open type repair initiators are requests- that indicate some problem with prior the prior information while leaving open the problem as it is.	TCU	Examples in Malayalam
	a. Interjection: An interjection with questioning intonation	*um* (5)
	b. Question word: An item from the larger paradigm of question words in the language, usually an interrogative.	*ennu veccāl*? (3)
	c. Imperative	*pōḍi* (1)
Restricted Type: Restricted type initiators restrict the problem space in various ways by locating or characterizing the problem in more detail.	a. Request type: (asking for specification /clarification). Typically done by content question-words, often in combination with partial repetition.	*enthā*? (2) *ārə*? (6) *eṭṛā*? , *ēṭə*? (8)
	b. Offer type: (asking for conformation): Typically done by a repletion or rephrasing all or part of T- 1	
	c. Negation:	*eyi* (4)

Only OIR has been treated in this paper. Primary types of OIR in Malayalam have been identified and explained to a certain extent. It was found that OIR in Malayalam was in terms of cross linguistic

typology. Negation and imperative have been identified as the additional types of OIR in Malayalam. The present study is limited in terms of data. Hence, more research is needed with extensive fieldwork towards a comprehensive understanding of OIR in Malayalam.

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ACQUISITION OF CONSONANTS IN TYPICALLY DEVELOPING 2 TO 4 YEAR OLD CHILDREN SPEAKING TAMIL

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Abstract

Purpose of the study was to determine the age of acquisition of consonants in typically developing 2 to 4 year old children speaking Tamil. 300 typically developing children participated in the study. They were sub grouped in 6 months age interval a) 2;0 to 2;5, b) 2;6 to 2;11, c) 3;0 to 3;5, d) 3.6 to 3;11 years. A 43 picture words list containing 24 consonants represented in possible CV combinations and word positions was developed. Spontaneous picture naming task was employed to elicit speech samples. Speech samples were audio recorded and were subjected for phonetic transcription. Error analysis was carried out to determine percentage of correct production of consonants to profile the speech sound acquisition within each age group. A consonant was considered to be acquired only if the consonant was produced correctly by 90% of children in a specified age group. Results of the study revealed that nasals, stops, alveolar and palatal laterals were acquired as early between 2;5 and 3;0 years in Tamil followed by velar and retroflex stops, semivowels, affricates, fricatives between 3;0 and 3;5 years. Retroflex laterals and flaps/trills were not acquired till 4 years of age in the current study. Percentage of Consonant Correct (PCC) increased as a factor of age.

Keywords: Consonant acquisition, PCC, Tamil

1. Introduction

Speech Language Pathologists (SLPs) often meet with clinical dilemmas in diagnosing speech sound disorders vs. typical speech language development in children. Literature evidence and knowledge of speech sound acquisition guide SLPs in this decision making process. Speech sound acquisition in children is a complex process and follows a developmental sequence. Percentage Consonant Correct (PCC) is one of the indices of estimating speech sound acquisition. PCC is estimated for a age group based on number of consonants produced correctly in that age group divided by total number of consonants in the language multiplied by hundred. PCC increases as the children's age advances (Watson & Scukanec (1997b), as cited in McLeod, 2009).

The only study (Usha, 1986) in Tamil speech sound acquisition till date has reported norms for children above the age of three based on percentage of correct production of consonants. 180 children in the age range between 3 and 6 years had participated in this study. They were sub grouped in 6 months age interval. Children were instructed to spontaneously name the pictures of words in the Test of Articulation in Tamil developed by the investigator. The speech sounds were analysed in limited consonant- vowel combinations and positions. The responses were audio recorded and were analysed for correct production, Substitution, Distortion and Omission of sounds. The sound was considered to be acquired for an age only when 90% of children of that particular age group articulated correctly.

In general a significant difference was observed between the genders. Performance between the age groups was not significantly different. The articulation score was directly proportional to the age in that scores increased as age advanced. It was generally observed that all the vowels and most of the consonants except /s/, /ɭ/, /ʎ/ and /r/ were acquired by the age of 3 years.

Exploration of speech sound acquisition norms is more relevant in the younger age group as early as 2 years (Prather et al, 1975). They also emphasize on studying speech sounds in different context as it is

an important factor which will influence speech sound production. Currently SLPs in Tamil Nadu are still referring to the Tamil speech sound acquisition norms reported in mid 1980s for clinical judgement of speech sound productions in Tamil speaking children. The norms reported in the 80's, need to be reviewed and validated for the present day children as there has been noticeable changes in teaching methods (such as Montessori schools, increased emphasis on phonics, etc) incorporated by pre-schools and play schools for infants and toddlers. Further, it is more than general wisdom that one really cannot discount the rapid changes in the socio-cultural aspects of the society (such as family size & structure, vocation and education levels of parents of young children, etc) evidenced over the last few decades. For the above reasons it is reasonable to revisit the concept idea of speech sound acquisition in children of the current era.

A thorough literature search for speech acquisition norms in Tamil (Usha, 1986) and other Indian languages Banu (1977) Kannada, Padmaja (1988) Telugu, Banik (1988) Bengali, Maya (1990), Malayalam, Prathima and Sreedevi (2009) Kannada revealed a clear cut lacuna in the area. In order to void this gap and to provide clinically useful information on speech sound acquisition and phonological pattern in Tamil the current study was planned.

A comprehensive phonological analysis material in Tamil language was required to profile the emerging sound acquisition pattern in children. Thus, the material developed and the findings from this study will help SLPs in the assessment, analysis, diagnosis and intervention of articulatory/phonological skills in children speaking Tamil.

The aim was to determine the age of acquisition of consonants in native Tamil speaking children between 2 and 4 years of age.

2. Method

2.1: Subjects

Three hundred typically developing children ranging in the age from 2;0 to 3;11 years participated in this study. They were sub grouped in 6 months age interval i.e a) 2;0 to 2;5, b) 2;6 to 2;11, c) 3;0 to 3;5, d) 3.6 to 3;11. Seventy five children in each age group participated in the study. All participants were native speakers of Tamil language and used Tamil as the language of communication at home. All participants were screened for any delay or deviance in cognition, language, hearing, motor and sensory development. Data was collected in school setting with the consent from child's care taker. The institutional ethics clearance was obtained before the commencement of the study (Ref:IEC-NI/11/FEB/21/08).

2.2: Material

A list consisting of 88 true words was prepared in Tamil language in consultation with a linguist. Words were prepared to suit the vocabulary levels of children in the age group under study. All speech sounds in Tamil language were represented in possible CV combinations and word positions in the list. These 88 words were verified for content and suitability to use (picture form of the word list) for children through a familiarity testing (criterion: 60% correct identification).

A total of twenty children, in addition to study subjects (five in each age group) participated in the familiarity testing. The final word list had 43 picture words consisting of 24 consonants (see Table 1) in Tamil in plausible CV combinations and word positions. Consonant (h) was not included as it is not used frequently in spoken form in Tamil language.

2.3: Procedure

A picture naming task was used to elicit the speech sample. The samples were recorded using Sony digital voice recorder ICD-UX533F. Prompts and cues were provided to elicit the target word when children were unable to name the picture spontaneously. Narrow phonetic transcription of recorded speech samples was carried out by the first author.10% of speech samples were randomly picked from each group and were subjected for narrow transcription by a qualified speech language pathologist to ensure reliability of transcription.

2.4: Data Analysis

Error analysis was carried out by the first author. Score of 1 was provided for correct production of sound and 0 for incorrect production of sound. Percentage of consonants correct (PCC) was estimated employing Watson and Scukanec (1997b) formula, as cited in McLeod, 2009 for each age group is

$$\text{Percentage of consonants correct (PCC)} = \frac{\text{No. of consonants produced correctly}}{\text{No. of consonants produced correctly+ Incorrectly}} \times 100$$

A Speech sound was considered to be acquired only if the sound was produced correctly by 90% of children in a specified age group. The data were analysed with IBM.SPSS statistics software 23.0 Version. Mean percentage of correct production for each sound was estimated to profile the speech sound acquisition within each age group. Inter-rater agreement of transcribed speech samples were estimated as follows,

$$\text{Percentage of Agreement} = \frac{\text{No of agreements}}{\text{No of agreements + Disagreements}} \times 100$$

Table 1: Consonants in Tamil Language

	Bilabial	Dental	Alveolar	Retroflex	Palatal	Velar	Glottal
Stops	p [b]	t̪ [d̪]		ʈ ɖ		k [g]	
Nasal	m	[n̪]	n	ɳ	[ɲ]	[ŋ]	
Fricative			s				[h]
Affricate					tS [dZ]		
Flap/ Trill			r	ɽ			
Laterals			l	ɭ	ʎ		
Semi-vowels	w				j		

(Consonants within bracket are allophones)

3. Results and Discussion

Results of the current study are discussed below. It was noted that inter-rater percentage of agreement of transcribed samples was 90.6 % which revealed a good reliability of transcription.

3.1 : Nasals

Majority of nasals in Tamil were acquired by 2;0 to 2;5 years except /ɳ/ [ɲ] and [ŋ] as can be seen from table-2 below. In Tamil [n̪], [ɲ], [ŋ] occurs in the word medial position followed by homorganic voiced plosives or affricates (Eg. *Pan̪du* 'ball', *maɲdzaʌ* 'yellow', *saŋgu* 'conch"), whereas /ɳ/ is not restricted to a fixed context and occurs independently in Tamil (Eg. *paɳam* 'money', *taɳɳi* 'water', *vaɳdi* 'cart'). This could be a possible reason for lesser percentage of production in case of /ɳ/ when compared to other nasal sounds.

Table 2: Percentage of correct production of Nasals

Age	N	/m/	[n̪]	/n/	/ɳ/	[ɲ]	[ŋ]
2;0 – 2;5	75	100	95	100	55	85	87
2;6 – 2;11	75	100	100	100	91	95	95
3;0 – 3;5	75	100	100	100	97	100	98
3;6 – 3;11	75	100	100	100	97	100	99

Current finding is comparable to earlier acquisition studies carried out in Indian languages by Banu (1977), Usha (1986), Padmaja (1988), Banik (1988), Maya (1990), Prathima and Sreedevi (2010) which reported that all nasal sounds are acquired by the age of 3 years.

3.2: Stops

All the stop consonant are acquired by the age of 2;5 years except retroflex /ʈ /, [ɖ] and velar stops /k/ and [g] which are acquired between 3;0 and 3;6 years. This is in concurrence with the findings of Usha (1986).

Table 3: Percentage of correct production of Stops

Age	N	/p/	[b]	/t/	[d]	/ʈ/	[ɖ]	/k/	[g]
2;0 – 2;5	75	98	93	97	80	74	73	86	89
2;6 – 2;11	75	99	97	96	82	89	92	85	95
3;0 – 3;5	75	100	97	96	91	91	93	92	98
3;6 – 3;11	75	100	97	96	91	91	93	96	98

Retroflex /ʈ /, [ɖ] were produced correctly only by 74% and 73% of children respectively in 2;0 to 2;5 years group. This could be attributed to the frequency of occurrence and sound position of /ʈ /and [ɖ] in a word. Frequency of occurrence of /ʈ /and [ɖ] is less when compared to other stop sounds and their occurrence in the word initial position is very limited hence children in the younger age group would not have had adequate opportunity to master the production of these sounds. Moreover the visibility of production of middle and back sounds are lesser when compared to the front sounds. This could have led to the early acquisition of front sounds.

3.3 : Semi Vowels

Semivowels in Tamil are acquired by the age of 3 years. On analysis of production of /j/ it was noticed that only 69% and 85% of children could produce /j/ correctly in 2;0 to 2;5 years and 2;6 to 2;11 years age group respectively. The table below shows the correct production of semi vowels.

Table 4: Percentage of correct production of Semi vowels

Age	N	/w/	/j/
2;0 – 2;5	75	82	69
2;6 – 2;11	75	96	85
3;0 – 3;5	75	99	95
3;6 – 3;11	75	100	93

This could be because of the complexity of production for /j/ which involves gliding nature and relatively may be difficult for younger

children to articulate when compared to /w/. Besides /w/ is anterior sound and visual clue could have facilitated early acquisition of this sound.

3.4: Affricates

It was interesting to note that, only 38% and 61% of children could produce voiced palatal affricate (dz) correctly in 2;0 to 2;5 and 2;6 to 2;11 years group respectively. Percentage of correct production of /dz/ improved in older group children. However on the other hand, voiceless palatal affricate /ʧ/ was produced correctly by more than 90% of children signifying acquisition of affricate /ʧ/ by 3 years.

Table 5: Percentage of correct production of Affricates

Age	N	/ʧ/	[dz]
2;0 – 2;5	75	88	38
2;6 – 2;11	75	95	61
3;0 – 3;5	75	100	95
3;6 – 3;11	75	99	99

The difference in the acquisition between [dz] and / ʧ / across the age group may be owing to greater frequency of occurrence of / ʧ / over [dz]. Moreover it was observed that younger children articulated voiceless sounds easier than voiced sounds which is in line with Prathima and Sreedevi (2009) who had reported acquisition of voiced sounds only at the age of 3;6 to 4;0 years in Kannada speaking children.

3.5: Fricatives

Percentage of correct production of /s/ was 37.22% and 86% in 2;0 to 2;5 and 2;6 to 2;11 age groups respectively indicating that fricative has not acquired till 3 years of age. 99% of children in older age groups articulated the fricative sound correctly.

Table 6: Percentage of correct production of Fricatives

Age	N	/s/
2;0 – 2;5	75	37
2;6 – 2;11	75	86
3;0 – 3;5	75	99
3;6 – 3;11	75	99

This is in line with study by Usha (1986), Prathima and Sreedevi (2009) who also had reported acquisition of fricatives by 3;0 to 3;6 years.

3.6: Laterals

Among the laterals, greater percentage of children in 2;0 to 2;5 years produced /l/ as in *talaj* 'head' correctly than /ɻ/ as in *puɻi* 'tamarind' and /ɭ / as in koːɭi 'hen'. Since production of /l/ is acoustically and perceptually distinct from /ɻ/ and /ɭ / in Tamil, this ease of perception could have facilitated the better production of /l/ in 2 to 2;5 years group.

Table 7: Percentage of correct production of Laterals

Age	N	/l/	/ɻ/	/ɭ/
2;0 – 2;5	75	89	33	25
2;6 – 2;11	75	98	96	67
3;0 – 3;5	75	98	100	73
3;6 – 3;11	75	97	100	78

It is evident from the table 7 that, /l/ and /ɻ/ are acquired by 3 years of age and /ɭ / has not acquired even at the age of 4 years. This could be attributed to the complexity of production of /ɭ/ over /l/ and /ɻ/.This is in agreement with findings of Usha (1986) who reported acquisition of retroflex /ɭ / only at the age of 5 years.

3.7: Flap and Trill

Analysis of Flap /r/ and Trill /ɽ/ revealed that they have not been acquired till 4 years. Usha (1986) had also reported acquisition of flap /r/ only at the age of 6 years and Trill /ɽ/ at 4;6 years.

Table 8: Percentage of correct production of Flap /r/ and Trill /ɽ/

Age	N	/r/	/ɽ/
2;0 – 2;5	75	32	37
2;6 – 2;11	75	57	72
3;0 – 3;5	75	73	76
3;6 – 3;11	75	78	89

4. Conclusion

This finding is in accordance with Shriberg (1993) who created a profile of consonant mastery based on the average Percentage Consonant Correct. According to him speech sounds are acquired in 3 stages, Early 8 (/m/,/b/,/j/,/n/,/w/,/d/,/p/,/h/), Middle 8 (/t/,/ʧ/,/k/,/g/,/f/,/v/,/t,/ᶯ,/ʤ/) and Late 8 (/s/,/z/,/l/,/r/,/ʃ/,/ɵ/,/ʒ/,/ð/). Results of the study support earlier Western studies on speech sound acquisition such as Stoel-Gammon (1985), Smit et al (1990), Porter and Hodson (2001) as well as Indian studies like Banu (1977), Usha (1986), Padmaja (1988), Banik (1988), Maya (1990), Prathima and Sreedevi (2010) which reported that majority of consonants are acquired by the age of 3 to 4 years except laterals and trills. It is evident from the results of the study that nasals, stops, alveolar and palatal laterals were acquired as early between 2;5 and 3;0 years in Tamil followed by velar and retroflex stops, semivowels, affricates, fricatives between 3;0 and 3;5 years. Retroflex laterals and flaps/trills were not acquired till 4 years of age in the current study.

Table 9: Percentage of correct production of consonants within each age group

Age	P	b	t	d	ʈ	ɖ	k	g	m	(n)	n	ŋ	(ɲ)	ɳ	s	ʧ	dz	r	(r)	l	ɭ	ʎ	w	j
2;0 – 2;5	98	93	97	80	74	73	86	89	*	95	*	87	85	55	37	88	38	32	37	89	25	33	82	69
2;6 – 2;11	99	97	96	82	89	92	85	95	*	*	*	95	95	91	86	95	61	57	72	98	67	96	96	85
3;0 – 3;5	*	97	96	91	91	93	92	98	*	*	*	98	*	97	99	*	95	73	76	98	73	*	99	95
3;6 – 3;11	*	97	96	91	91	93	96	98	*	*	*	99	*	97	99	99	99	78	89	97	78	*	*	93

* 100% correct

Current study had adopted 90% correct production for a speech sound to be acquired in the age group. Thus Percentage of Consonant Correct estimated were as follows,

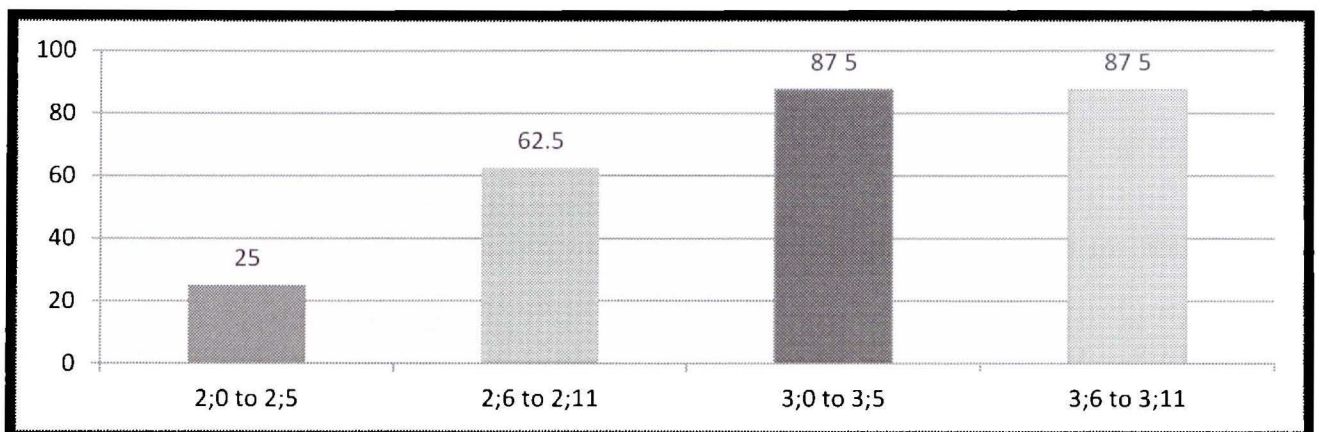
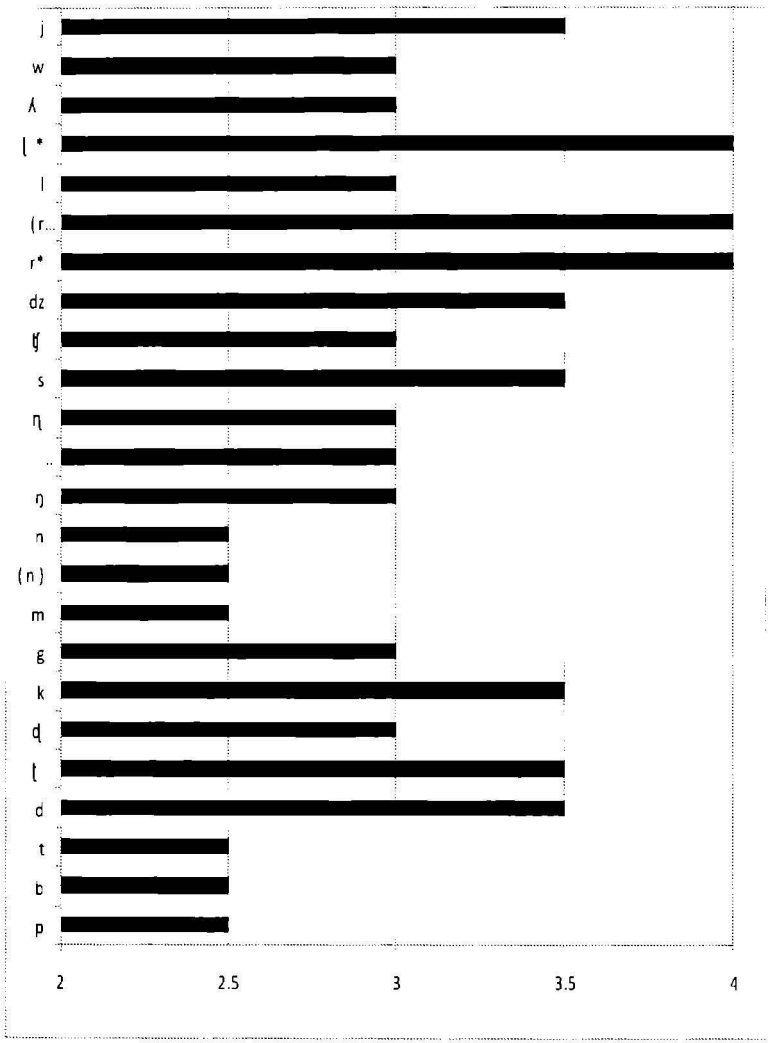


Fig 1: Percentage of Consonant Correct



(*consonants not yet acquired by age of 4 years)

Fig 2: Age of speech sound acquisition

Fitting the findings of the current in Tamil language to that of the 3 stages suggested by Shriberg (1993) it can be noted that, 12 consonants are acquired in the early stage - /m/,[n̪], /n/, /ɳ/, [ɲ], (ŋ) /p/, [b] /t/, [d], /l/, /ʎ/ followed by 9 consonants in the middle stage - /ʈ/, [ɖ], /k/,[g],/w/, /j/ /ʧ/,[dz],/s/, while 3 consonants in the late stage - /ɭ/ /r/ /ɽ/. It is also evident from Fig 1 that Percentage of Consonant Correct (PCC) increased as factor of age.

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EARLY PRAGMATIC SKILLS IN TYPICALLY DEVELOPING TAMIL SPEAKING CHILDREN

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Abstract

The study focused on profiling the development of pragmatics from 2;6 to 4 years, using 39 probe questions in Tamil. We profiled the early pragmatic skills and emotions on 60 typically developing Tamil speaking preschool children using semi structured play activity. It was observed that most of the pragmatic skills were acquired at an earlier age in a developmental progression. It is also interesting to note that there is no gender difference among Indian preschoolers. Children with language disorders have limited or lack of usage of various pragmatic skills. Thus, creating a norm in a particular language for various pragmatic components would be effective in the evaluation process. The development of early pragmatic skills contributes to screening and early detection of language disorders in preschool children.

Key Words: Pragmatic development, emotions, preschool children

1. Introduction

Pragmatic comprehension and language development is a complex process and relatively less is known about development of pragmatics. Pragmatic behaviours in children are studied using various methods such as ethnographic approaches, questionnaires, checklists and standardized tests. The most common method for

assessing pragmatics skills in children is spontaneous language sampling and analysis. However, it is noted that many pragmatic skills do not occur naturally in a particular conversational situation. Thus, it is necessary to create a situation where in a child can use a particular communicative intent. Pragmatic functions do not preferably correlate with lexical and syntactic forms; a formal classification will not be helpful in analysis of pragmatic skills (De Villiers & De Villiers 1978). Thus, there has been a dearth of knowledge of understanding evaluation system for pragmatics till date.

Several authors attempted to study the acquisition of early pragmatic skills in children. Woolfolk and Lynch (1982) traced development of pragmatics since birth. As children grow, their use of language in social situation becomes accurate. They understand and process the inferential meaning with reference to the context. At preschool age, children communicate appropriately to social situation.

Carpenter and Strong (1988) studied on the development of twenty three pragmatic skills using play activity and a drawing activity in 3 to 5 year old children. The pragmatic behaviours found were commenting on objects and actions, making choices, answering, volunteering to communicate, acknowledging, and attending to speaker. Requesting objects and turn taking were observed to be developed earlier. Pragmatic skills which were emerging were denial, hypothesizing and giving reasons. It was also noted that nonverbal skills such as greeting, request for action, information or object, and turn taking were developed earlier than verbal skills. The cultural factors get reflected on the use of language rather than the structure or content of language.

Aukrust (2004) analyzed children's use of language from two communities namely Oslo and Cambridge and found that there were differences in the pattern of conversation. Oslo families spoke more often about language, typically consisted of question and answer

form. Oslo families had narratives whereas Cambridge families had more of explanations.

Context plays a major role in comprehending what is said and it assists listeners in interpreting the speakers' message. Similarly, cultural factor has an impact on communicative skills. Also, there is insufficient data on the development of pragmatic language functions in Tamil speaking children. Thus, it is essential how comprehension and expression of pragmatic functions develops in children and to understand how to asses and document the early pragmatic functions in our population.

2. Aim

The aim of the study was to profile the early pragmatic language skills in typically developing Tamil speaking preschool children in the age range of 2.6 to 4 years. Further, the study explored if there was any gender difference relating to a particular pragmatic skill.

3. Method

3.1 Participants

Pre and primary schools in and around Chennai were contacted and permission from school heads/principals was obtained. The data was collected from 60 Tamil speaking children in three age groups (Group I: 2;6 - 3 years, Group II: 3;1 - 3;6 years and Group III:3;7 - 4years). All these children were native Tamil speakers. Informed consent was obtained from parents of these children. An information sheet was also given to the parents to obtain details regarding individual child's speech and language development, reading and writing skills, social skills and overall performance of the child at school.

Along with this, Assessment of Language Development (ALD) given by Lakkanna, Venkatesh, & Bhat (2007) was administered for assessing the language age. All the children were considered from

middle socioeconomic status which was assessed using Modified Udai Pareek Scale. The details of selected participants are given below as in Table 1.

Table1. Details of participants

Group	Age Range (in years)	Mean Age (in years)	SD
I	2;6 – 3;0	2;62	0.33
II	3;1 – 3;5	3;34	0.15
III	3;6 – 4;0	3;66	0.36

3.2 Materials and procedure

Thirty nine probe questions and expected answers were developed in Tamil. The questions were kept grammatically simple and selected based on vocabulary of children in the age range of 2; 6 to 4 years. These questions were given to two experienced Speech Language Pathologists and a Linguist to check for linguistic complexity, and content of the material. The questions were later modified based on their suggestions.

Thirty questions were used in a structured play activity which was initiated using doctor set and kitchen set toys. Nine other questions were framed using a theme from a famous social story. A mother and her two children volunteered to pose for various sequences of the story which was shot using Sony digital camera (Model: DSC-W530). These pictures were used as stimulus for social story in Tamil. In structured play, the following pragmatic skills were assessed as given in Table 2. In social story activity, four emotions such as happy, sad, anger and fear were assessed.

Table 2. Different pragmatic language skills and their description

S.No.	Pragmatic Skill	Description*
1.	Greeting	Identification, imitation or returning a social situation
2.	Request	Indication of a preference of a particular object or action
3.	Turn Taking	Interactional behavior that is manifested nonverbally
4.	Labeling	Identification of agent, object and action.
5.	Description	Giving information about an object, agent or situation with the use of adjective, preposition or adverb in a phrase
6.	Personal	Internal feeling or emotion
7.	Affirmation	Confirming when a choice question is asked
8.	Negation	Denying when a choice question is asked
9.	Revision	Semantic or syntactic change in a utterance

Note. *Klecan-Aker and Swank (1988)

Each child was assessed individually in a quiet room at their school premises. The child was seated opposite to the investigator and the conversation was initiated by greeting the child. Initially kitchen set toys were given to the child followed by an activity with doctor set toys. During play activity, 30 probe questions for structured play were asked. Later, a social story was narrated along with the picture stimuli during which 9 probe questions were asked. If the child did not respond appropriately then each question was repeated only once. A thirty to forty minute video recording was carried out using a Sony digital video camera (Model: DSC-W530) mounted on a tripod stand.

3.3 Analysis

The analysis was carried out by three experienced Speech Language Pathologists (SLPs) in the area of child language. All SLPs were given orientation regarding familiarization and clarification on definition of nine pragmatic skills and four emotions. The responses were analyzed and scored as (1) for appropriate and (0) for inappropriate responses. The reliability of all the three raters was calculated using Cronbach's Alpha. The collected data was analyzed using IBM SPSS 9.3 version Statistical Software. Different statistical methods for analysis include One-way Analysis of Variance (ANOVA) followed by post-test comparison to compare the occurrence of pragmatic skills across three age groups, Independent t-test, to compare the performance of pragmatic skills between male and female children in each age group, Friedman test, for ranking of pragmatic skills based on performance and Multivariate Analysis of Variance (MANOVA) was performed to check for group performance.

4. Results and Discussion

The Inter rater agreement for three raters was calculated for all sixty samples which revealed good reliability with a score of 0.825.

4.1 Difference in performance of children between 2;6 to 4 years of age

Pragmatic skills of three age groups were compared across 2;6 to 4 years of age. Figure 1 represents the mean occurrence of pragmatic skills for three age groups. Most of the pragmatic skills such as greeting, turn taking, labelling, description, affirmation, negation and personal did not show a significant difference across the three age groups. Skills such as request ($p = 0.002$) and revision ($p = 0.001$) revealed significant difference between group I when compared to groups II & III. Revisions were performed better by children in group 3 when compared to group I and II. Thus, it is evident that the occurrence of revisions increased with increase in age.

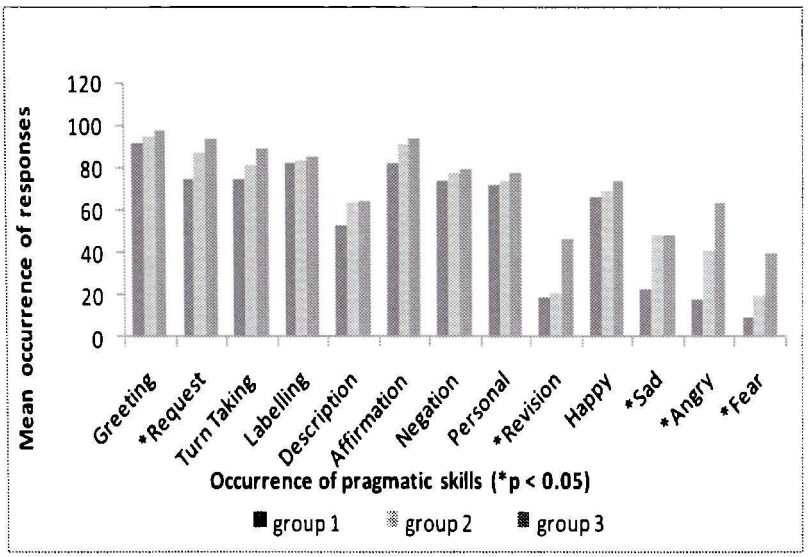

Figure 1. Pragmatic skills across the three age groups

Most of the pragmatic skills did not show a significant difference across the three age groups, as these skills acquired at early preschool years. Bruner (1975) claimed that 'request' is one of the very early pragmatic skills. Therefore, there is a trend observed in the use of request across the age range in these children. Occurrence of request

was greater for older group than for the younger group. Also, it is noted that the younger group had the lowest mean scores and as age increases, the occurrence of 'revisions' also increased. The results of this study is similar to the findings of Klecan-Aker and Swank (1988), which revealed that "requests", stabilized at the age of 2;6 to 3;0 years.

Emotions such as "anger" and "fear" were significant between the three groups. Group III children performed these skills better than the other two groups. There was a significant difference between Group I and III, whereas there was no significant difference between group II and III. In expressing the emotion 'anger', significant difference was found between all the three age groups ($p<0.05$). For the emotion 'fear', there was a significant difference ($p<0.05$) observed in group III than group I and II, but no significant difference was observed between the group I and II. These findings were in par with Kundoo and Tutoo (2007), that children differentiate 'anger' and 'fear' at three to six years of age. The emotion such as 'happy' was found to be differentiated at around one year of age and the emotion 'sad' can be differentiated at one year six months of age. Thus, the results revealed that a pattern of acquisition is seen in the development of various pragmatic functions across ages.

4.2 Gender difference across the pragmatic skills

The difference in gender during the performance of pragmatic skills and emotions were computed using Student t – test. The results revealed that there was no gender difference in performance between male and female children. Figure 2 below illustrates the comparison of overall performance of males and females.

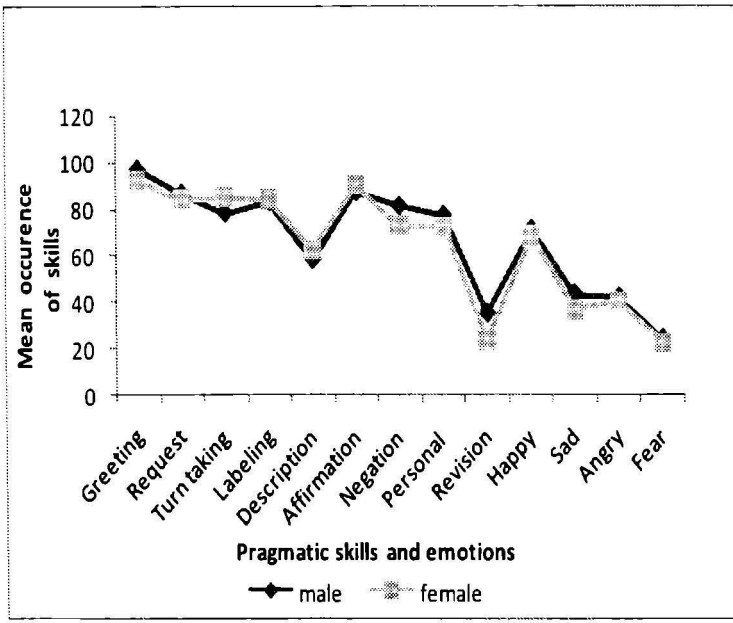

Figure 2. Gender difference in pragmatic functions of children

Both boys and girls in all the three age groups did not show any significant difference. Thus, the results revealed that males and females performed similarly for all pragmatic skills and emotions. According to Klecan-Aker and Swank, (1988) girls performed better than boys, whereas in the present study the performance of males and females did not differ. This can be attributed that pragmatics differs across cultures.

4.3 Profiling of pragmatic skills and emotions

The early pragmatic skills and emotions were profiled based on the responses of various probe questions used in structured play and social story. Friedman's test was used to compare these skills. Figure 3 indicates that all these children showed a significant difference ($p \leq 0.05$) in the performance of various skills.

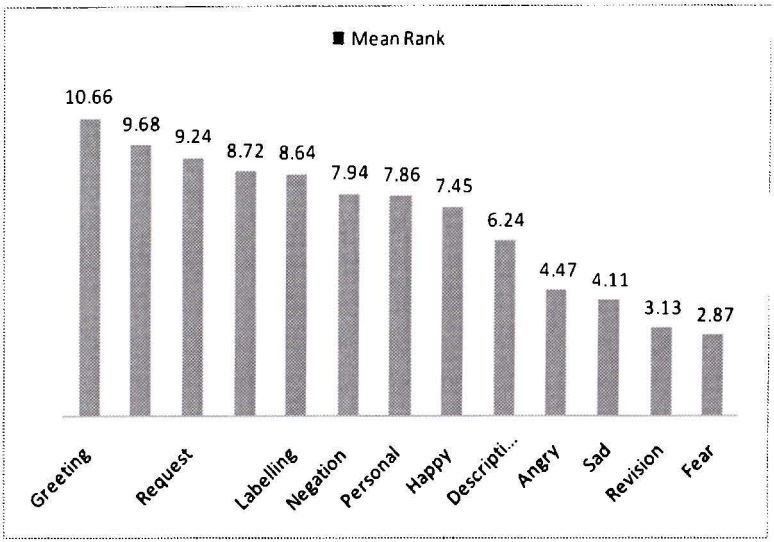

Figure 3. Profiling of pragmatic skills and emotions

The mean rank of various pragmatic skills and emotions skills were observed, and except for revisions all other pragmatic skills received greatest mean ranks than emotions. Among the pragmatic skills, 'greeting' (mean rank: 10.66) had the highest mean rank and 'revision' had the lowest mean rank (mean rank: 2.87). In emotions, 'happy' had the highest mean rank (mean rank: 7.45) and 'fear' had the lowest mean rank (mean rank: 2.87). The usage of different pragmatic skills varied across ages. This indicated that pragmatic skills that had higher scores would have acquired much earlier as most of the children were able to use them effectively during conversation. Thus, it can be inferred that these pragmatic functions are mastered at early preschool years.

Western studies in the past revealed that 'turn taking' and 'request' were the early pragmatic skills which were present nonverbally and then verbally. Turn taking ability and request stabilizes at 2;6-3;0 years of age. Description and affirmation were mastered at the age of 3;1 year. In one of the Indian study by Dheepa (2005) has reported

that nonverbal turn taking occurred as early as 10 to 16 months of age and conversational turn taking at the age of eighteen to thirty months. Turn taking is completely acquired by one and two years of age. Greeting and request for action, object and information was reported to be acquired by the age of 1.1 to 2.0 years in Indian children.

4.4 Effect of age and gender in the performance of use of skills

A multivariate analysis of the data was performed with age and gender, serving as classification variables and nine pragmatic skills and four emotions, as the criterion variables. Each criterion variable consisted of occurrence of appropriate responses from every child for the probe questions. The results indicated that there was no significant relationship with age and gender. Thus, age and gender did not influence on the occurrence of the pragmatic skills as well as emotions. Follow up univariate tests were performed on each response variable indicated that all response variables differentiated between the age levels ($p \leq 0.05$) but there was no significant difference observed between males and females, on each variable. Wilk's Lamda was performed in MANOVA to test whether there are any significant difference between the pragmatic skills and emotions with effect of age and gender. It is interesting to note that the gender variable did not have any significant difference, whereas there was a significant difference with respect to age factor ($p \leq 0.05$) since it is observed that as age increases, children's performance over these pragmatic functions also increases. This is because children perform differently across cultures.

In India, cultural factors also affect some areas of communication. This finding was in line with the results of Ryder and Leinonen (2003), that there was a developmental pattern seen in the use of contextual information in English and Italian children and English and Italian speaking children perform differently in referential communication skills (Camaioni and Ercolani (1995).

5. Summary

The primary purpose of this study was to profile early pragmatic language skills in Tamil speaking children in the age range of 2;6 to 4;0 years. In this study. pragmatic development has been documented through the use of thirty nine probe questions that elicited pragmatic skills and emotions. The results revealed that the performance of occurrence of responses for various pragmatic skills increased with age. The older group performed better than younger group. Pragmatic skills such as greetings, request, turn taking, affirmation, negation, personal, labelling and description were found to be present in all the age groups but the performance level of each skill differed. Pragmatic skills such as greeting, turn taking, request, affirmation, labelling, personal, and negation were found to have higher mean rank, whereas description and revision had the lower mean ranks in all the age groups. In emotions, happy had the higher rank whereas sad, angry and fear were found to be minimal. It was observed that male and female performed equally in all age groups for most of the skills.

6. Conclusion

The development of the early pragmatic skills contributes to screening and early detection of language disorders. Awareness regarding the typical development, normal variation, and red flags needs to be included during developmental screening. Thus, pragmatic language use may be informative in understanding social difficulties among children with Autism and Attention Deficit Hyperactivity Disorders, who exhibit behaviours such as hyperactivity, inattention and poor peer relationship. Pragmatic language impairment is common and is increasing in preschool children as well as school going children in India. Therefore, a protocol should be designed that profiles developmental pragmatic functions, which is helpful in setting up goals for different stages of treatment.

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SPELLING ERRORS IN PRIMARY SCHOOL GOING CHILDREN: A PSYCHOLINGUISTIC STUDY

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Abstract

Development of reading and writing skills are not as natural as the speech. They need to be learnt, processed and stored differently. There are different writing systems in the world, in which the degree to which the phonological representation happens, varies (Goswamy, 1990). In this regard the writing systems of India, are much more transparent. But the situation is complicated by the use of complex visual symbols. A child acquiring to read and write in these languages hence makes many errors. Thus, the aim of the current study was to note the spelling errors in Telugu collecting the data from 50 written samples of primary school going students enrolled in an English medium school with Telugu as their second language, though these children's L1 was Telugu, using a written naming task. An analysis of errors established that 'mixed errors' constituted the highest proportion of errors whereas transpositions were the least. Spelling errors were also related to wrong usage of short and long vowels, wrong positioning of secondary forms, confusions with similar visual forms, and cluster reductions in addition to the above 5 types. The findings suggest that spelling errors were mainly due to the lack of training and mismatch between the phonological and orthographic syllabic representations. Such studies have both theoretical and clinical implications.

Key words: Spelling Errors, Phonological and Orthographic Syllable, Telugu

1. Introduction

Reading and writing skills are not as natural as the speech, they need to be developed, learnt, processed and stored differently. For their retrieval, not only the motor activity (hand for writing and eye movements for reading) is required but also visual representation plays a major role. There are different writing systems in the world, in which the degree to which the phonological representation happens, varies (Goswamy, 1990). In English and other alphabetic writing systems, a linear sequencing of letter occurs with vowels and consonants occurring side by side. Whereas, in alpha-syllabic writing systems like in Telugu, the vowels and consonants are either superscripted or subscripted or both. This creates a composite visual symbol. Another factor is with regard to the mismatch between the phonological and the orthographic syllabic representations. Hence, a child acquiring the reading and writing skills of Telugu makes many errors.

Telugu Orthography

Telugu script is an abugida consisting of 56 symbols, 12 vowels and 44 consonants. It is written from left to right, consisting of sequencing of simple and complex characters. It also has 17 markers (gunintalu) for each consonant. The vowel part is indicated orthographically using a 'matra', which are very different from the shapes of the corresponding vowels.

For e.g.: /k/ - 'క' and /kh/ - 'ఖ' are written with their vowel matras as follows:

క కా కి కీ కు కూ కృ కౄ కె కే కై కొ కో కౌ కం కః

ఖ ఖా ఖి ఖీ ఖు ఖూ ఖృ ఖౄ ఖె ఖే ఖై ఖొ ఖో ఖౌ ఖం ఖః

Gemination in Telugu script is represented in two forms. The secondary form can be written same as the primary form as in (b), or for some consonants it can also be written in its secondary form as in (a).

For example: a) /kk/ - /క్క/ (here the primary and secondary forms are different)

b) /ʤʤ/ - /జ్జ/ (here the primary and secondary forms are the same)

There is also a mismatch between phonological and orthographic syllable in Telugu. Here the primary consonant is written in full form and pronounced in half form, while the secondary consonant is written in its complete form but pronounced half. In the examples below the mismatch between phonological syllable and its counterpart orthographic syllable can be seen:

Word	Phono.Syllable	Ortho.Syllable
a) shaunak [శౌనక్]	shau.nak	shau.na.k [శౌ.న.క్]
b) chellaanaa [చల్లానా]	chel laa naa	che llaa naa [చ.ల్లా.నా]
c) buddha [బుద్ధా]	bud dha	bu ddha [బు.ద్ధా]
d) arjun [అర్జున్]	ar jun	a rju n [అ.ర్జు.న్]
e) chandramauli [చంద్రమౌళి]	chan dra mau li	cha ndra mau li [చంద్ర.మౌ.ళి]

Hence, it can be seen that children may make errors in writing these forms in Telugu.

The aim of the study was thus, (i) To note the type and percentage of spelling errors. (ii) To note how the mismatch between phonological and orthographic syllable exhibits as an error.

2. Review of Literature

Spurt of research on acquisition of reading & reading disorders in Indian languages & scripts was seen during 1980s. Karanth (1981, 1983), Puroshothama (1988), Prakash & Joshi (1989) studied the orthographic features of Kannada script , along with reference to reading. During 1990s the focus of Indian studies shifted from script features to the metaphonological skills in reading abilities Tests for reading in Indian languages (Devi 1978; Ramaa, 1985; Mohanty, Sahoo & Sahoo, 1985; Puroshothama, 1991; Sonali Nag, 2007;

Vasanta, 2004, 2011) were developed. These tests measured reading speed & accuracy, visual discrimination, auditory discrimination, letter/ word knowledge & sentence comprehension etc. From 2000 onwards research on structural and functional neuroimaging findings to more recent, investigating neural correlates of reading and reading-related tasks (work going on at NBRC, CBCS, etc.) were seen.

It is very true that the ability to read and write alone are not sufficient for learning to spell, many other factors like attention, memory, the method of teaching, visual processing etc. play a major role. Hughes and Searle (1997) noted that -

'While it's true that we learn a lot of what we know about spelling from reading and writing, I think we now know that for many children spelling is not caught-it must be taught. Certainly, we know from research and from experience in the classroom that for many children reading and writing alone are not sufficient for learning to spell.'

Early spelling emerges in developmental stages. It is very natural for the emerging speller to go through a "babbling" stage of spelling (APPPLE for apple), a stage of abbreviated spelling (CT for cat), a stage of spelling by ear (EGL for eagle), and a stage of spelling by eye (FRIDE for fried) (Gentry, 1996).

Apperin (2008) studied native Spanish – speaking children learning to spell in English, this transition from a shallow to a deep orthography could potentially cause difficulties. They examined whether the spelling of English vowel sounds was particularly difficult for native Spanish speaking children, and whether the errors are consistent with Spanish orthographic rules. Twenty six native Spanish speaking and 53 native English speaking children in grades 2 were given real word and pseudo-word spelling tasks in English that included words containing four vowels that have different

spellings between Spanish and English. Results supported our hypothesis – native Spanish speaking children committed significantly more vowel spelling where Spanish orthography did not differ. These findings suggest that orthographic properties of the children's native language influence their spelling of nonnative language.

Winsknel, and Lemwathong (2010) studied the alphabetic orthographic system of Thai language. Sixty Thai children (7 to 9 years 8 months) from grades 1, 2 and 3 participated in the study. A lexicality effect was found for both reading and spelling. Spelling lagged behind reading in the grade 1 children. Development rapidly increased between the youngest grade 1 children and the older 2 and 3 children for word reading. There were significantly more lexical errors than phonological errors. Beginning readers appear to predominantly use a larger lexico– syllabic grain size to read Thai.

Spelling errors were also studied in some of the Indian languages: Hindi language - Kumar (2001), Punjabi language - Lehal and Bhagat (2004), Malayalam language - Gafoor (2013) etc. In all of these studies, for beginners, both vowel signs and diacritic signs were substituted to a large extent, whereas omission were seen to a lesser extent. Shailaja (1997, 98, 99) studied oral segmentation task in English –Telugu bilinguals. The results showed that the bilinguals segmented based on the phonological representation rather than the orthographic system.

For example:

bhak.ti preferred over bha.kti - /భక్తి/

gam.pa preferred over ga.mpa - / గంప/

Vasanta (2004) noted that in the early stages phonological syllable predominates, where as in the later stages, it becomes orthographic syllable (coding of phonology in script)

3. Methodology

The data used in the analysis for this study is part of the data collected for dissertation work of the second author. A written naming task was used in which the children were asked to list items belonging to five categories that were chosen from the Batting and Montegue (1990) list within one minute time duration. These were – Animals (Ani), Fruits (Fru), Vegetables (Veg), Colors (Col) and Body Parts (Bp) . There were 50 children, 25 from grade III (age range 7-9yrs) and 25 from grade V (age range 10-12yrs).

All responses were hand written in Telugu. Two groups were chosen to note if the types and percentages of errors were different as the exposure to Telugu language in written form increased. The error description was done into four types - Insertion, deletion, Substitution, and Transposition, according to Cook's classification. The fifth type of errors were classified as the 'mixed errors' - which showed 2 or more type of the above errors.

4. Results and discussion

The aim of the current study was to note if the number, type and percentage of error varied with the number of years of exposure to Telugu. While the second aim of the study was note how the mismatch between the phonological and orthographic syllable exhibited as the type of error.

(i) The number, type and percentage of spelling errors

The following table lists the overall number of responses given by Grade III and V along with the total number of errors.

Table 1: Total number of errors per Grade

S.No.	Grade	Total Items	Total Errors	Percentage (%)
1	III	342	221	64.61
2	V	784	380	48.46
3	Total	1126	601	

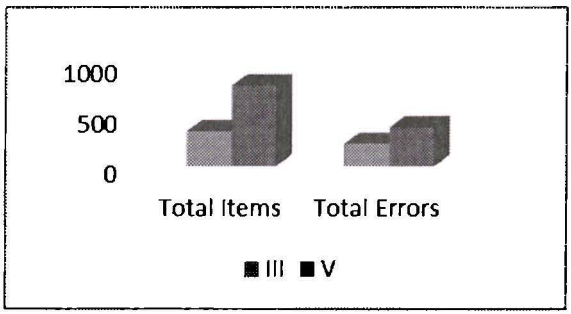

Fig 1: Total number of errors per Grade

From the above table it can be noted that the number of errors produced by V graders (380 errors out of 784 items) was higher than III grades (221 errors out of 342 items) however in terms of percentage, the III graders produced higher errors than the V graders (64% vs 48%).

The total number of errors produced for the five categories by both grades is listed in Table:2 below.

Table 2: Number of Errors per Grade per Category

S. No.	Grade	Ani	Fru	Veg	Col	Bp	Total
1	III	36	41	37	40	67	221
2	V	54	55	99	32	140	380
3	Total	90	96	136	72	207	601

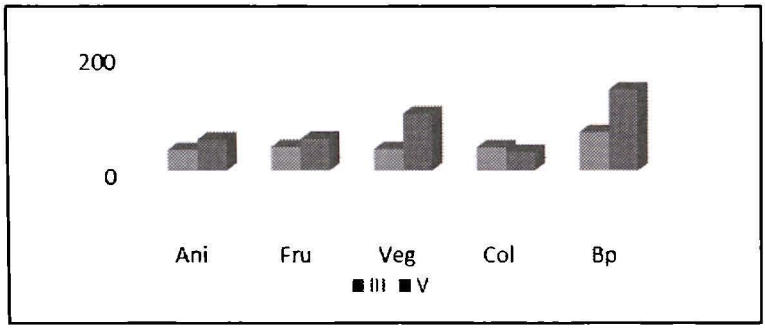

Fig 2: Number of Errors per Grade per Category

In grade III the highest errors were obtained for body parts i.e. 67, whereas least errors were obtained for animals i.e. 36. In grade V the highest errors were obtained for body parts i.e. 140 whereas least were obtained for color i.e.32.

Analysis of errors was also done qualitatively into four categories according to Cook's Classification (1999): omission (omis), substitution (subs), insertion (inser), and transposition (trans). In addition to these, the errors were also classified as 'mixed' errors (mixed).

The table below lists the type and occurrence of each error in both the grades.

Table - 3: Type of error in each Grade

S. No.	Grade	Omis	Subs	Inser	Trans	Mixed	Total
1	III	88	24	12	4	103	221
2	V	138	33	41	2	166	380
3	Total	226	57	53	6	269	601

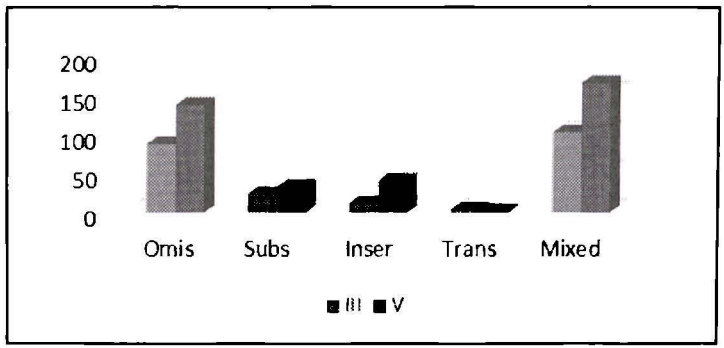

Fig - 3: Type of error in each grade

From the above table it can be noted that both in grade III and grade V, the highest errors were obtained for mixed errors, whereas least errors were for transpositions. The order of occurrence of error in grade III was – mixed > omission > substitution > insertion > transposition. In grade V the order of occurrence of error was – mixed > omission > insertion > substitution > transposition.

Errors of Omission

Omission errors seen in the data, can be attributed to the distinction found between English and Telugu. There is a high potential for errors in producing accurate spellings in the English language system, which is far more complex mainly due to the lack of patterns

in spelling and articulation. Telugu, on the other hand, is a language which is written the way it is articulated except in the instances of blends and clusters. Thus, these errors occurred on the secondary forms of both the vowels and consonants, nasals and cluster reductions. The following examples illustrate the errors of omission -

i. /నక్క/ –> / నక / 'fox'
ii. /కుందేలు/ -> /కుందెలు/ 'rabbit'
iii. /చెప్పులు/ –> /చెపలు/ 'slippers'
iv. /పంది/ –> /పది/ 'pig'
v. /పచ్చరంగు/ – > /పచ్చరగు/ 'green color'
vi. /సింహం/ - > /సింహ/ 'lion'

In the above examples the secondary forms of the consonants were omitted in examples (i), where as in (ii) and (iii), the errors occurred in vowel representations. In (iv), (v) and (vi) the nasal marker was omitted.

Possible reasons for these errors could be due to not articulating the geminate forms correctly and hence even in the written form such errors are visible. The second reason could be due to lack of orthographic knowledge. Beginner writers, at an early stage of spelling and writing, depend heavily on their 'phonemic awareness and orthographic knowledge to spell' (Kelman & Apel, 2004).

It was also noted that in many instances the ending vowels of a words are omitted. Whether this could be attributed to the fact that these children are also exposed to English as they are learning Telugu and that influenced the Telugu spelling, cannot be ruled out. This fact can be clarified if further testing of the children was done.

Production of nasal in written context is very complicated in Telugu. Due to influence of multilingualism, the correctness of pronunciation has been lost. The children were probably aware of its orthographic

representation but their knowledge to use it in the correct context was limited hence, many errors of nasal omission could be seen.

Omission errors also occurred in production of Gemination in Telugu in both the primary and the secondary forms. A possible reason for this could be due to representing the spontaneous running speech in orthographic form. That is, when we articulate in running speech we do not given enough time for the articulator to geminate but we move very fast and hence this gets represented in the written form also. The examples below represent this error

vii. /చెయ్యి/ –> /చెయి/ 'hand'
viii. /బోక్కలు/ –> /బోకలు/ 'bones'

Errors of substitution

Two types of substitution errors could be seen – visual orthographic errors and articulatory errors. The Visual orthographic errors were seen in consonants that closely represent each other (example (xi) - /సు/- 'su' was substituted with /ను/ - 'nu'). In (x) and (ix) an articulatory error can be seen as the retroflex was substituted by the lateral and the geminate was substituted by the aspirated form.

ix. /పోట్ట/ –> /పోఠ/ 'stomach'
x. /కాళ్ళు/ –> /కాల్లు/ 'eyes'
xi. /పసుపు/ -> /పనుపు/ 'yellow'

Sterling (1983) also underscores that such errors as 'not incorrect spellings of the correct sounds but rather correct spelling of incorrect sounds'

Errors of insertion

The errors of insertion that were seen in both grade III and V are listed below -

xii. /ఎరుపు/ - > /ఎర్రుపు/ 'red'
xiii. /టమాట/ – > /టామాట/ 'tomato'
xiv. /యాపిల్/ –> /యంపిల్/ 'apple'
xv. /నక్క/ –> /నక్కు/ 'fox'
xvi. /సింహం / –> /సింహ్యామ్/ 'lion'
xvii. /దోసకాయ/ –> /దోసక్య/ 'a variety of bottle guard'
xviii. /వంకాయ/ –> /వంకాయం/ 'brinjal'
xix. /తల/ –> /తుల/ 'head'

In all of the above examples Insertion errors occurred mainly because of the addition of redundant phoneme(s) in a word also in some instances the nasal consonants were added. Example xvii was interesting, here the child formed a cluster instead of two separate consonants /కాయ/ –> /క్య/. As discussed earlier these errors could have resulted due to competence deficits.

Errors of Transposition

Errors of transposition, or mis-ordering, were the least frequently appearing some of these were

xx. /కుక్క/ –> /క్కకు/ 'dog'
xxi. /కన్ను/ -> /న్నుక/ 'eye'
xxii. /తల/ –> /లత/ 'head'
xxiii. /ఎరుపు/ –> /రుఎపు/ 'red'

Cook (1999) also noted transposition errors in English data, for example - 'freind' for 'friend', 'thier' for 'their', and 'quite' for 'quiet'.

Errors of Mixed Type

Mixed errors were the most frequent errors seen in both grade III and V, the following examples illustrate these errors.

xxiv. /దానిమ్మ/ –> /గనియ/ 'pomagranete'
xxv. /అరటిపండ్లు/ –> /అపల్లు/ 'banana fruit'
xxvi. /ఆలుగడ్డ/ –> /అలుగడ/ 'potato'
xxvii. /దోండకాయ/ –> /దుడుకయ/ 'a variety of beans'

All the mixed errors had two or three type of errors occurring simultaneously. In example-xxv the omission and substitution of consonants could possibly be due to, this form being used in motheres during the processes of language acquisition and the child has continued to use the same form in written context. Vowel errors were a common feature in many errors along with consonantal errors.

(ii) Mismatch between Phonological and Orthographic syllable

xxviii. /ద్రాక్ష/ - > /దరశ/ 'grapes'

In the formation of Cluster as seen in example above, the child did a scaffolding error and also reduced the cluster. A possible reason could be due to mismatch between the phonological and orthographic syllable. That is in the above example, the first consonant /da/ is written in its complete form, whereas it is pronounced half. On the other hand, the second consonant of the cluster /ra/, was written in its secondary form, but pronounced in complete form. Thus, the child has written both the consonants side by side as the child was awareness of the phonemes was present. In this example the second syllable also has a blend of /k/ and /sh/, here the child omitted /k/ but wrote one of the constituents i.e. /sh/ of the blend. A psycholinguistic perspective could probably account for these errors.

5. Conclusion

Errors in spelling may also be attributed either to overgeneralization of representing or/and a competence deficit. The main contention was that whether the participants made errors because they had insufficient knowledge to spell the words accurately, or whether the

performance errors were made due to a temporary lapse in attention or confusion. Native speakers generally make performance errors that are characterized by mistyping or omission, substitution, insertion, or transposition of a single letter or two. On the contrary, as non-native writers do not have adequate knowledge of the target language, they usually make competence errors. Apel and Masterson (2001) noted that in order to spell words accurately, students should have developed 'mental graphemic representations (MGR) - which refers to the images of words, syllables, and morphemes in the students' memory'.

Despite the importance of spelling in producing meaningful written texts, language teachers mostly focus on teaching listening, speaking, reading, writing, vocabulary building, grammar etc. and often neglect spelling instructions. The aim of this study was thus to note the frequency and type of spelling errors occurring in writing Telugu Language by English medium primary school going children. Two grades were considered – III and V, to know if longer exposure to Telugu would make a difference in the type of errors produced. The current study did not reveal any such difference, i.e. same type and pattern of errors were seen in both the groups.

It also revealed that the most frequent errors were that of 'mixed' in nature in both the grades. Overall results of the study were that the number of lexical items produced by V graders was higher than III graders. However, in terms of percentage the III graders produced higher errors than the V graders. The order of error occurrence in grade III was – Mixed >> omission >> substitution >> insertion >> transposition, while for grade V was – Mixed >> omission >> insertion >> substitution >> transposition. Vowel errors were a common feature in many errors along with consonantal errors. The long forms were substituted by its short form in many instances but in a few the vise-versa was also seen. Substituting one vowel in place of other was also seen but such errors were less common.

Multiple reasons can be attributed to these results, in general, the patterns showed a strong correlation between the articulation and the spelling of words, while these variables could have contributed to the omission, substitution and insertion and transposition errors, the occurrence of mixed errors showed another angle to the problem of spelling, i.e. lack of training and constant drilling.

Thus, it can be seen that such studies have both theoretical and clinical implications. The theoretical issues deal with the representation of phonology in orthography, orthographic knowledge, visual representation of secondary forms etc. Whereas the clinical implications could be, if these errors occur in normal school going children, then how are they different in Telugu dyslexic children?

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LINGUISTIC ANALYSIS OF ENGLISH IN SHORT MESSAGE SERVICES (SMS) TEXT USED BY TELUGU NATIVE SPEAKERS

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Abstract

SMS is the technology that allows text messages to be received and sent over mobile devices. The most understandable way users create written characteristics in their language is through usage of standard spelling, punctuation and capitalization in order to make their messages recognizable as entire sentences. This can also show however, interactive and affective characteristics of conversation even in its written state. SMS also allows users to abbreviate words without losing any meaning e.g. October and November can be shortened to 'Oct/Nov' etc. Users often take advantage of the presence of both written and spoken aspects of SMS. One way a text message might reflect this would be to combine features of a written medium with features of a spoken medium, but this combination is usually not intentional. Five hundred SMS data was collected from Graduate students. Analysis of data revealed that vowel deletion, consonant deletions, gemination and determination rules of vowel as well as of consonants. In fact, this research paper is interested in defining what type of language SMS language is.

Keywords: SMS text, Vowel duration, Vowel deletion, Degemination

1. Introduction

SMS (Short Message Service) Text is a Computer Mediated Communication (CMC) that allows the sending of short text messages. It is a technology that enables the sending and receiving of messages between mobile phones. SMS first appeared in Europe in 1992. SMS text messaging supports the languages internationally.

SMS is successful all over the world. The number of SMS messages exchanged everyday is enormous. The individual messages are called text messages. SMS messages over the wireless network, trapped in an incredibly boring meeting. Today, technology is moving towards the future of the wireless web. People want these devices to do everything from accessing their e-mail accounts, to utilize the internet, to access personal and corporate information, Whatsapp etc.

The paper deals with an important and yet less researched phenomenon, i.e. the use of SMS short forms. Indeed, it is a very interesting area of research. Very few researches have been done in this area if any at all. In general, SMS service has developed rapidly since its introduction and is very popular throughout the world. In 2001, more than 250 billion SMS were sent, comparing to the 16 billion sent in 2000. It is particularly popular amongst young urbanites as it allows for voiceless communication, useful in noisy environments, for instance, markets that would defeat a voice conversation, and also buffered communication since the message the sender wants to convey can be accessed by the receiver any time. Because of the limited message lengths and tiny user interface of mobile phones, SMS users commonly make extensive use of abbreviations and short forms, particularly the use of numbers for words, for example, "4" in place of the word "for", and the omission of vowels, as in the phrase "txt msg" which actually stands for "text message". This causes SMS to be credited with creating a language. Daily Telegraph, a newspaper in England once reported in 2003, 'Girl writes English essay in phone text shorthand'. While predictive text software that attempts to guess words or letters reduces the labor of time-consuming input, abbreviations of words are still popular, especially with the younger users where SMS short forms a part of their culture.

The challenge of the small screen size and its limited character space has motivated the evolution of an even more abbreviated language than that which emerged in chat rooms and virtual worlds before.

The composition of the language of text messages shows an expressive facet of mobile telephony, specifically the use of slang or newly manufactured words. This within a small peer group underpins group membership and also serves to exclude those who are not competent with the slang. This is an aspect of the identity formation of teenagers and thus, 'those outside the group will either not understand the content of the slang, or will appear inept when trying to use it.

The Purpose of Using SMS Short forms:

If we look at the small size screen, we will certainly find that it permits us to send messages up to 160 letters. So, if we need to write longer messages, we cannot according to the space provided by this screen. And before the human mind nothing is impossible. In fact, among the many reasons behind using SMS and the most widely spread of which are the following:

1. Economy in space. In the sense that since the screen allows us to write only a limited number of words, SMS short form allows us to write many words as stated above.
2. Saving time. In fact, the world we are living in is the era of speed in every sense of the world and so composing in SMS saves our time.
3. Economy in efforts. To write many words needs effort and by using SMS short form, we spend little effort.
4. To cope with who are around you. In the sense that you can not avoid using these SMS short form while people around you are using it.

However, it is a fact that the spread of using SMS short forms in India is to some extent late to that in the west. Almost five-to-ten years, this phenomenon has spread in India. Indians being influenced by the west, the stated to use these forms. It is also important to mention here that very few studies have been done in this area of research.

2. Review of Literature

Halliday, (1976) in his inaugural address talked about how people understand language. In this article first, he talks about folk linguistics and deviation of meaning in language with the concepts of saying and naming-meaning; reflection and action about activity. The discussion of ideas about language, it is important not to suggest that these ideas can be isolated from ideas about everything else. Our picture of language is part of our picture of the world. In specifically, it is part of our picture of the world of meanings; and the value of the semiotic interpretation is that it shows us how the world of meanings is structured and what its constants are. they started with the child, so let us end with the child. Before he can talk about meaning, a child is engaging in acts of meaning; before he has a mother tongue, he is using his own child tongue to organize his view of the world (and of himself), and to interact with the people around him. By the age of eight or ten months a child already has a rich idea of what he will be able to achieve through learning language. As he learns language, he learns through language, and as he learns through language, he learns about language; on these foundations he constructs his view of the world.

Crystal (2001) in his book Language and Internet as stated above focused on the notion of "Netspeak" to describe the many forms of language that shows up on the Internet. He considered other terms such as "netlish," "weblish," and "cyberspeak", but later simply settled on "computer-mediated communication" (CMC) or "electronic discourse." Crystal described language use and language change within "Internet situations" such as, (i) e-mail, (ii) synchronous chat groups and, (iii) asynchronous "chat groups" and the World Wide Web. Within each Internet situation, he explicated the development of new graphic conventions such as emoticons and abbreviations, Internet-derived neologisms, and features of communicative activity that could only have emerged through electronic media (e.g., forms of interaction in synchronous chat, and

"message intercalation" in e-mail. Crystal reminds us that the Internet is less a technological fact than a social fact, and "its chief stock-in-trade is language".

Thurlow and Poff (2011) reviewed a number of studies conducted on code adaptations in text messages in multilingual cultures, predominantly, English in contact with some local language of South Africa, a bilingual country. The authors observed the text messaging research done in Finland, Sweden, Norway, Denmark, France, Germany, Greece, Italy, South Africa, Nigeria, New Zealand, Kuwait, Malaysia, Japan, Korea, China, Taiwan and Hong Kong, as well as the UK and USA. They noted that pragmatically-oriented studies have begun to address, amongst other things, turn-taking, code-switching, openings and closings, and general communicative intent. They also considered explicitly, the pragmatic implications of message length, textual complexity, grammar and punctuation, spelling and orthography, and the use of emoticons. In every case, studies typically situate pragmalinguistic phenomena with a view to broaden cultural and interactional variations, which has important implications for any gross generalization about the uniform nature of texting.

3. Methodology

The participants of the current study were 10 (5male and 5female) bilingual Telugu-English undergraduate students studying at a University having an age range is between 18-24years. The 'Language Use history' questionnaire developed for the purpose of this research was used along with a 'Mobile Phone Use' Questionnaire to gather information about the mobile phone use. The data for this research was part of the data collected for the PhD work of the author. In the current article SMS texts exchanged during a ten day period were analyzed and are presented in the following section.

4. Data Collection and Analysis

The data consisted of five hundred SMS messages in English that were sent from their Mobile phone during the ten day period. This data is analyzed in terms of vowel deletion, consonant deletion, gemination and degemination of vowel as well as of consonants in various contexts.

Data Analysis

The data is classified as i) Vowel deletion , ii) Consonant deletion, iii) Degemination of vowel and iv) Degemination of consonants. It is presented below with examples for each.

4.1: Vowel deletions

Vowel deletions were seen to occur in initial, medial and final positions. Also in some of the words complete absence of the vowels was seen. In all the below examples the form (may be words or not) used in the SMS text has been shown followed by the intended word (as understood based on the context). The Vowel deletions about 68% were deleted in various level, like initial, medial and finally.

4.1.1: Initial, Medial and Final Vowel deletions

In the following examples deletion of vowels in the word in different positions can be seen.

Eg.

ftr	–	after	
nd,n		-	and
abt	-	about	
abl	-	able	
bak	-	bake	

4.1.2: All Vowels are deleted

Eg.

ftr	-	after
bck	-	back
cl	-	call

4.2: Consonant Deletions

Interestingly in SMS script, people used only the consonants of the word, instead of full words. Generally in English, words cannot be realized without any vowels but in SMS this is frequent.

Initial Consonants deleted

Eg:

ur - your
uth - youth

Most of the initial consonants were deleted and in some instances a letter for one letter were substituted for another letter. The letter changes occurred only in relation to consonants.

Eg:

v - we
den - then

Middle consonant deleted

Eg:

aciv - achieve
nytin - anything

Interestingly during this kind of deletion, it is found that the deleted consonants are generally silent in the word or its deletion is not strikingly noticeable.

Final Consonant deleted

Eg:

n - nd
boro - borrow

In this kind of deletion, either the deleted letter is clearly understood in the context of usage or involves a deletion of a generally unpronounced letter(s).

4.3: Degemination

Vowel Degemination

Degemination of Vowels as well as vowel deletion:

Eg:	ee > e	agreement	-	agremnt
	ee > i	meeting	-	mitng
	oo > u	book	-	buk
	oo > Ø	ook	-	bk

As shown above, vowels are not degeminated in SMS Degemination of Vowels like, aa, ii, uu, are not available in English.

Consonant Degemination

Consonant Degemination was done in a highly context bound environment where some abbreviations cannot be understood and are sometimes ambiguous.

For.eg.:

cc > c	accurate	-	acuret
	occupy	-	ocupy
dd > d	add	-	ad
	addition	-	adistn
ff > f	affix	-	afx
	afford	-	afrd
ll > l	all	-	al
	call	-	cl ,kal
mm > m	command	-	comnd
	commit	-	comit
nn > n	dinner	-	dnr
oo > o	book	-	bk
rr > r	carry	-	cari
	arrest	-	arst
tt > t	cassette	-	caset kset
	letter	-	letr

4.4: Sound and other Changes

Some of the other changes that have occurred in the data are listed below -

Vowel >Vowel.	o > u	love	-	luv
Vowel > Consonant	i > y	like	-	lyk
		night	-	nyt
Consonant > Consonant.		academic	-	akdmic
		bycot	-	bykt
Consonant > Vowel		any	-	ne
		carry	-	cari
		day	-	de
Number Word > Number		ate	-	8
		for	-	4
Word > Letters+ Number		any one	-	ny1
		activate	-	actv8
		before	-	b4
Abbreviation		account	-	a/c
		example	-	ex
		see	-	c

Such a case of abbreviations are useful also in forming new words in the general spoken conversation of SMS users as well as those who have no access to the exact words.Despite the various features of written language one can find in text messages, SMS cannot be considered as 'written'. In fact, this research paper is interested in defining what type of language SMS language is. how certain lettered words become numbers and some others letters and numbers both, example: for you become '4u',

5. Conclusion

SMS is created in a written medium and has some features of casual printed communication. The most understandable way users create

written characteristics in their language is through usage of standard spelling, punctuation and capitalization in order to make their messages recognizable as entire sentences. This can also show however, interactive and affective characteristics of conversation even in its written state. SMS also allows users to abbreviate words without losing any meaning e.g. October and November can be shortened to 'Oct/Nov' etc. Similarly, punctuation, such as the full stop, is often unnecessary, as the end of a line will signify the end of an utterance.

The resourceful use of punctuation, 'constructing paralinguistic markers quite ingeniously as well as breaking orthographical conventions in an inventive manner', appears to be a personal stylistic choice. Users often take advantage of the presence of both written and spoken aspects of SMS. One way a text message might reflect this would be to combine features of a written medium with features of a spoken medium, but this combination is usually not intentional

Results showed that vowel deletion, consonant deletions, germination and determination rules of vowel as well as of consonants occurred in a systematic ways. The deletion can be in initial, medial and final position. It can also be of complete vowel deletion. Vowels were also sometimes replaced by consonants or vowels and consonants are replaced completely.
Consonants were also deleted in initial, medial and final position. Moreover, sometimes consonants were totally deleted. Whole words were also replaced by numbers. There was also partial replacement of words or letters by numbers.

Thus, future work could be devoted to fine-tuning to capture the rules for human short form creation and in turn, infer the rules for short form decoding. The present corpus of SMS short forms can also be extended to facilitate future research.

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A COMPARATIVE STUDY OF TELUGU AND ENGLISH SYLLABLES

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Abstract

Telugu is in contrast with English where the vowel in its original orthographic form is added and realised in different ways phonemically and every word ends in a vowel sound integrated into the final letter of the word. English has complex onsets and codas, having a maximum of three consonants before the vowel and four consonants after the vowel. There is no one to one correspondence between the Telugu and English syllabic possibilities, because for nineteen in English there are only three in Telugu. The aim of the present study is to compare possible syllable structures of Telugu and English. The entire samples are taken from CP Brown's Telugu-English Dictionary, a Telugu to English Dictionary by chronological order. Syllable is the base for word accent, utterances and intonation. A study of the syllables of languages and a comparative study as the present one are beneficial to understand the problems that the speakers of one language encounter in learning the other. The focus of this paper is the syllables that occur in English and Telugu languages.

Keywords: Syllable, Onset, Rhyme, Telugu

1. Introduction

The acquisition of a good command over the global language, English, is essential for all the nations; for a country like India, English is not only an International language; it is also an Intra national language due to the multi-linguistic setting of the country. Each language has a unique structure of its own. While learning a foreign language (L2), one tends to hear and speak on the basis of the system of one's own exposure of one's

mother tongue (L1). Knowledge of syllable structure of the target language helps the learning process. Syllable is the basis for accent and intonation in English. It is needed for rhythm and clarity of speech. A comparison between the possible syllables of Telugu and English is attempted here.

Telugu is one of the major languages of India. It has the second largest number of speakers chiefly concentrated in South India. It is the official language of Telangana and Andhra Pradesh and second widely spoken language in Tamilnadu and Karnataka. There are a number of Telugu language speakers have migrated across the world.

Telugu is a syllabic language. It has fifty six letters in the alphabet, of which sixteen are vowels and forty consonants. Vowel modifiers added to the basic consonant sound provide the needed type of phonemic sound; and this can be done for every consonant of the alphabet. English has 19 possible syllable types. Syllabifying English polysyllabic words into several individual syllables makes it easier to process and recall those long English words. The traditional components of the syllable are the onset and the rhyme. The rhyme is further divided into nucleus (vowel) and coda. Thus, the onset, the nucleus, and the coda are three main elements of a syllable. Telugu allows no more than two consonants in an onset, and there is no coda; hence, every word ends in a vowel.

English has complex onsets and codas, having at most three consonants before the vowel and four consonants after the vowel (c+ c+ c) v (c+ c+ c+ c+ c), according to Abercrombie. In Telugu, Vowel (at the beginning of the word as an independent form), c+ v (consonant+ vowel) and c+ c+ v (consonant+ consonant+ vowel) as syllabic forms. The features of syllables in Telugu and English are a completely untrodden field. This makes the present study not only desirable, but also essential. Taking the time constraint into consideration, the present study is restricted to the educated people located in the districts of Telangana. The analysis has been done following the phonemic and phonetic framework since the

study has got pedagogical implications. The data is confined to the syllable and transcription of the test material.

2. Review of literature

A few studies that have looked into the syllable structure of Telugu and other languages have been reviewed here.

Vijayakrishnan (1982) noted the metrical structure of Tamil. Several phonological as well as non-phonological arguments were put forward in favor of the specific syllable structure proposed by Tamil. The problem of vowel epenthesis in Tamil and speculates on the obligatory nature of both the onset and the rime in Tamil. He noted that such studies have relevance to pedagogy.

Anuradha (1991) pointed out in her thesis the acquisition of morpho-phonological rules including rules of syllabification within and across words in Telugu and Telugu-English. It is observed that obligatory rules, as opposed to optional rules, are acquired early by the children.

Srinivas (1992) observed the stress patterns in Telugu and the influence of these patterns on the English spoken by Telugu speakers. It also dealt with a detailed analysis of Telugu data according to the number of syllables, words ending in particular suffixes and a contrastive analysis of stress patterns of Telugu-English and native English.

Sharma (2006) attempted to study the internal structure of syllables in Standard Assamese and constraints operate within them along with some syllable based generalizations of the language, viz. Vowel Lengthening, Vowel Shortening and Compensatory Lengthening with acoustic evidences as cues for bimoraic Word Minimalistic requirement in SA. Moreover, Assamese English speakers adopt, to simplify some English clusters.

3. Methodology

The entire samples are taken from Brown's *Telugu-English Dictionary* (Gwynn Oxford University Press, Oxford) by chronological order. How the Telugu syllable is and how it is used in spoken and written Telugu has been established with the help of a Telugu dictionary. Its use in Telugu English and English has been observed.

4. Results and Discussion

The following observations have been done in relation to Telugu syllable structure -

CV Initial: In the case of word 'palamu',/ pa/ is initial syllable (cv)./p/ is a consonant, occupies onset and optional and /a/ is a vowel, occupies peak, obligatory, open syllable and non-branching rhyme.

CV Medial: In the case of word 'ikkada',/ ka/ is medial syllable (cv)./k/ is a consonant, occupies onset and optional and /a/ is a vowel, occupies peak, obligatory, open syllable and non-branching rhyme.

CV Final: In the case of word 'idi',/ di/ is final syllable (cv)./d/ is a consonant, occupies onset and optional and /i/ is a vowel, occupies peak, obligatory, open syllable and non branching rhyme.

CCV Initial: In the case of word 'pranamu',/ pra/ is inicial syllable (ccv)./pr/ is a consonant cluster, occupies onset and optional and /a/ is a vowel, occupies peak, obligatory, open syllable and non-branching rhyme.

CCV Medial: In the case of word 'akramamu',/ kra/ is medial syllable (ccv)./kr/ is a consonant cluster, occupies onset and optional and /a/ is a vowel, occupies peak, obligatory, open syllable and non-branching rhyme.

CCV Final: In the case of word 'antlu',/ tlu/ is final syllable (ccv). /tlu/ is a consonant cluster, occupies onset and optional and /u/ is a

vowel, occupies peak, obligatory, open syllable and non-branching rhyme.

V: In the case of phonemic sound 'a:' , it occupies peak, obligatory, open syllable and non-branching rhyme.

From the data and a few examples given above the possibilities in onset are C1=/ k/, /g/,/ ts/, /dZ/, /t/, /d/, /n/,/ p/,/ b/,/ m/,/ j/, /r/, /l/, /v/ / s/, /s/,/ h/, /ks/ and aspirated[kh], [γh], [tsh], [dZh], [T], [Δ],[ph], [bh] and consonant clusters C2= pr, kr ,tr. *Nucleus* is formed by / a/, /a:/, /I/,/ i/:,/ u/, /u:/, /e/, /o:/ and diphthongs /au/ before the coda. There is no coda in Telugu language. In the above data the syllable is divided into onset and rime, rime divided into nucleus and coda. In Telugu, two consonants are possible before vowel whereas in English four consonants are possible. Telugu and English have nucleus. English has coda but Telugu doesn't.

It was demonstrated that very general insertion processes like glide insertion can best be seen as the filling of empty position. We saw that the concept of a tri positional syllable is crucial to the understanding of the nature of the syllabically conditioned alternation processes in Telugu. The onset is composed of non-syllabic segments. All occurrences of post-vocalic non-syllabic segments are structured under the following onset. The non-syllabic glide of the surface diphthong is dominated by the following onset. The rime is composed of syllabic segments only. Only homorganic sequences of syllabic segments can comprise a rime.

5. Conclusion

This paper explores the structure of Telugu and English syllables. As there is one to one correspondence between the Telugu and English, out of nineteen in English, Telugu is four. It suggests guidelines, by comparing the two types of syllabification. Telugu people are managing English only with four possibilities .That's why they are struggling a lot while speaking English.

Onset and coda are optional elements. These are usually consonants. Nucleus is the basic and essential component of a syllable. It is typically filled by vowels.

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THE CONCEPT OF 'JA:TI' AND 'VYAKTI' IN VA:KYAPADI:YAM

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Abstract

Bhartṛhari's magnum opus 'Vākyapadīyam' is a comprehensive treatise on language analysis and philosophy of language. It deals with sentence and word, which has three Kāṇḍas. Under the Pāṇinisūtra 'Kutsite (5-3-74)', Patañjali discusses the concept of 'Pañcakam prātipadikārthaḥ' i.e. a Prātipadika (Noun/stem) which expresses five meanings which are: Svārthaḥ (Jāti), Dravyam (Vyakti), Liṅgam, Vacanam (Samkhyā) and Vibhaktiḥ (Kārakam). The present article is a descriptive analysis of the concepts of 'Ja:ti' and 'Vyakti', discussed in 'Vākyapaḍīyam'. Specifically the concepts are dealt with by taking cues from Pada, Va:kya and Pramana Shastras.

Keywords: Ja:ti, Vyakti, Va:kyapadi:yam

Introduction to Bhartṛhari's Vākyapadīyam

Bhartṛhari's view is a completely new way of looking at the concept of language and his interest is not confined to the rules and forms of language. Rather, he aims at a depth – analysis of the concepts of language and meaning. In short, Bhartṛhari's Vākyapadīyam is a comprehensive treatise on language analysis and philosophy of language.

Bhartṛhari's magnum opus Vākyapadīyam deals with sentence and word that are discussed in three Kāṇḍas:

1) Brahmakāṇḍa or Gama kāṇḍa /Gama samuccaya: It consists of 165 verses. The identity of Śabda and Brahma, the authority of Vedas, attaining Mokṣa are chiefly discussed in this chapter.

2) Vākya kāṇḍa: The definition of a sentence, discussions related to the definitions, theories of other systemists, indivisible sentence

and its meanings, Vākyasphoṭa as the very Śabda. The defects of Padavādins etc., are discussed in that chapter.

3) Pada kāṇḍa or Prakīrṇa kāṇḍa: There are 14 Samuddeśas (Sub-chapters) in this Kāṇḍa. Each Samuddeśa deals with a different subject and the total number of Verses is 1323. Here under is a breakup-

1. Jāti samuddeśa (106 Verses)
2. Dravya samuddeśa (18)
3. Sambandha samuddeśa (28)
4. Bhūyodravya samuddeśa (3)
5. Guṇa samuddeśa (9)
6. Dik samuddeśa (28)
7. Sādhana samuddeśa (167)
8. Kriyā samuddeśa (64)
9. Kāla samuddeś (114)
10. Puruṣa samuddeśa (9)
11. Samkhya samuddeśa (32)
12. Upagraha samuddeśa (27)
13. Liṅga samuddeśa (31)
14. Vṛttisamuddeśa (627).

The concept of Jāti (Class)

Under the *Pāṇinisūtra "Kutsite* (5-3-74)", *Patañjali* discusses the concept of *'Pañcakam prātipadikārthaḥ'* i.e. a *Prātipadika* expresses five meanings –

1) *Svārthaḥ (Jāti),* 2) *Dravyam (Vyakti),* 3) *Liṅgam,* 4) *Vacanam* (*Samkhyā*), 5) *Vibhaktiḥ* (*Kārakam*).

For the present purpose of the paper first two concepts have been discussed here.

The *Svārtha* can be of many types i.e, *Jāti* (class), *Guṇa* (property), *Kriyā*, *Sambandha*, *Svarūpa*, the following one are the examples respectively –

Gauh (Cow), *Śukla* (White), *Pācakas* (Cook), *Rājapuruṣaḥ* (King's servent), and *Ḍittaḥ* (Name of person), example for *Dravyam* is *Gauḥ*, it may be noted that the *Jāti* and *Dravya (Vyakti)* are inseparable and depending on the context either has to be taken as important and the other as un important. The aspect of inseparability is expressed by *Patañjali* by the term *'Samavāya'*. Under the *Pāṇinisūtra 'Bhāve (3-3-18)'* also *Patañjali* says that there is *Nāntarīyakata* between *Jāti* and *Dravya* (or *Vyakti*).

Under the *Pāṇini sūtra 'samarthaḥ padavidhiḥ*(2-1-1)', Pata*ñjali* discusses the importance of *Jāti and Vyakti.*

The *Nyāyasūtra "jātyākṛti vyaktayastu padārthāḥ* (2-2-67)" says that a noun expresses one of the three meanings i.e. *Jāti* (Class), *Ākṛti* (Form), and *Vyakti* (Individual). In the sentence "*Gaurnahantavya*" a cow should not be killed the word *Gauḥ* means *Jāti* i.e. all the cow individuals on the earth are not a *Govyakti* (A single cow).

The example for *Ākṛti* is *Mṛnmayīgauḥ* (The cow made of clay) here the *Ākṛti* (Form) of the cow only is known.

In the sentence '*Gāmānaya*' (Fetch a cow) the word *Gām* means a *Govyakti* (A single cow) rather than *Jāti* (All the cows on the earth).

As the time passed on, systemists of Indian philosophy had concluded that, since *Ākṛti* can be included in *Jāti*, there can be only two meanings - *Jāti* and *Vyakti.*

"jātimevākṛtim prāhuranekavyakti samśrayān"

(*Kumārilabhaṭṭa* in *Ślokavārtika* says that the *Jāti* itself that has got so many *Vyaktis* as its resort as is called *Ākṛti*).

Patañjali at the outset of *Mahābhāṣya* (In *Paspaśa*) employed the word *Ākṛti* in the sense of *Jāti.*

Mīmāmsakas hold that *Jāti* is expressed by the word '*Paśunā'* in the sentence '*Paśunāyajeta'* but since it is not possible to have *Jāti* in a concrete form, the inseparable *Vyakti* is taken up for the sacrifices, some other systemists accept *Vyakti* as the primary meaning, *Jāti* as the secondary meaning.

Patañjali in *Paspaśa* takes up the question of whether *Pāṇini* followed the *Jātivāda* or the *Vyaktivāda* and answers that both are taken up in the construction of *Aṣṭādhyāyi* as the following *Sūtras* vouch-

"Jātyākyāyam ekasmin bahuvacanam anyatarasyāyām"

On the other hand, *Bhartṛhari* in *Jātisamuddeśa&Dravyasamuddeśa* of *Padakāṇḍa* widely discusses the concept of *Jāti* and *Dravya* and here are some important aspects.

At the outset of *Jātisamuddeśa, Bhartṛhari* says that the words are separated from a sentence just like *Prakṛti, Pratyaya* etc. are divided as two, four and five.

Bhartṛhari was referring to *Pāṇini* when he said words are divided into two following i.e. *Nāma, Ākhyāta.* The *sūtra* – "*suptiṅgantam padam*" (1-4-14). *Nipātas* qualify meaning of *Nāma* and therefore are included in *Subantas.* Whereas *Upasargas* like *Pra, Para, Apa,* etc. and *Karmapravacanīyas* qualify the verb and therefore they included in *Tiṅgantas.*

Some people argue that the *Nipātas* and *Upasargas* no doubt qualify the *Nāma* and *Ākhyāta* respectively and simply for this reason one can't include them in *Subanta* and *Tiṅganta* therefore it is proper to say that words are of four types – *Nāma, Ākhyāta, Upasarga* and *Nipāta.* Rather, they also hold that *Karmapravacaniyas* are connected with *Ākhyāta* in one way or the other; they need not be considered as separately.

Still some other opine that the four fold division of words, *Nāma, Ākhyāta, Upasarga, Nipāta,* no doubt stands as it is but the *Karmapravacanīyas* can't directly qualify the *Ākhyāta* and therefore instead of including them in *Ākhyātas*, better be considered as fifth category.

dvidha kaiścit padam bhinnam caturthā pañcadhāpiva|

apoddhṛtyaivavākyebhyaḥ prakṛti pratyayādivat||

(Jāti samuddeśa, 1)

Vyāḍi, an *Ācārya* said that all the *Śabdas* express *Dravya* only whereas *Vajapyāyana*, another *Ācārya* felt that all the *Śabdas* express *Jāti* only.

Rather, *Pāṇini* followed the *Siddhānta* (Theory) that a *Śabda* expresses both *Jāti* as well as *Dravya* and he constructed *Aṣṭādhyāyi* on these lines. (2nd śloka, Ma.bhā)

Further, *Bhartṛhari* summarizes *Jāti*, *Vyaktivada* in the following verse -

padārthānāmapoddhāre jātirvā dravyamevavā|

padārthau sarva śabdānām nityā vevopavarṇitau||

(Jāti samuddeśa - 2)

After *Apoddhara* (Artificial separation) of *Padas* from an individual sentence, it is described that either *Jāti* or *Dravya* or both will be the meaning of all *Śabdas*.

Vājapyāyana felt that *Jāti* would be the meaning of all the *Śabdas*, as has already been mentioned the gamut of *Śabdas* can be put under four headings *Jāti*, *Guṇa*, *Kriyā*, and *Samjña*. Here according to *Vājapyāyana*, words like *Ghaṭa*, *Paṭa*, denote the *Jāti* i.e. *Ghaṭatva* and *Paṭatva*, *Śukla* etc. express *Jāti* like *Śuklatva* that is there in *Kriyā* such as *Pāka* and *Samjñas* like *Ḍittha* etc. denote the *Jāti* like *Ḍithatva*, it may be noted that the *Jāti* requires a resort i.e. *Dravya* but *Dravya* per se is not denoted.

Contrary to this, *Vyāḍi* a renowned scholar strongly felt that all the *Śabdas* denote *Dravya* only. Here *Dravya* means '*Nirguṇādvayabramha*'. Rather, things like *Ghaṭa* and *Paṭa*. *Hari* discusses both these *Dravyas* in *Dravyasamuddeśa* of *Padakāṇḍa*.

On the other hand, the system of *Pāṇini* accepts that both *Jāti* and *Dravya* can be denoted by a *Śabda* and the relation between both of them is *Viśeṣaṇa*, *Viśeṣya bhāva* or qualifier and qualified. *Kātyāyana* and *Patañjali* described both the *Jāti* and *Dravya* as immutable –

"*siddhe śabdārtha sambandhe lokato#rtha prayukte śabdaprayoge śāstreṇa dharma niyamaḥ*"

It may be noted that all the systems and schools of Indian philosophy had conceded the immutability (*Nityatva*) of *Jāti*.

Upaniṣads preach that in case *Bramha* is considered as *Dravya* it will be *Nitya*, if *Vyakti* is considered as *Dravya* then *Vyaktis* would have *Nityata* following *Pravāhanityata* (The immutability of a stream). These aspects are widely discussed in the introductory part of *Mahābhāṣya*, *Paspaśanhika* by *Kātyāyana* and *Patañjali*.

When all the *Upādhis* are considered as the forms of *Parabramha*, how come there is difference of *Jāti* and *Vyakti* –

Bhartṛhari responds to this question -

satyāsatyau tu yau bhāgau pratibhāvam vyavasthitau|

satyam yattatra sā jātirasatyā vyaktayḥ smṛtāḥ||

(Jāti samuddeśa - 32)

In everything there are two parts, the real and unreal. Between the two, the real part is *Jāti* and the unreal part is *Vyakti*.

Bhartṛhari suggests that unless and until the *Advaitasiddhānta* is digested the concept of *Satya* and *Asatya* or *Jāti* and *Vyakti* can't be understood.

Different kinds of ornaments are made out of gold. The ornaments may lose their form, as they are *Vyaktis* that is unreal. Whereas the gold per se i.e. *Jāti* which is real, doesn't undergo any change or decay.

Further *Bhartṛhari* elaborates the concepts of *Jāti* in connection with *Vyākaraṇa* –

sambandhi bhedāt sattaiva bhidyamānā gavādiṣu|

jātirityuccyate tasyām sarve śabdāḥ vyavasthitāḥ||

(Jāti samuddeśa - 33)

According to *Advaita siddhānta* the real thing is *Jāti* and the same is called *Mahāsatta*. It is in the form of *Parabrahma* and the same

transforms into *Gotva*, *Ghaṭatvā*, *Paṭatva* etc. following this only the transaction takes place. The same *Mahāsatta* depending on the difference in the resort differs and called *Jāti*, such as *Gotva*, *Ghaṭatvā* etc. all the *Śabdas* express the *Jāti* positively.

Bhartṛhari further clarifies the concept by the following verse -

tām prātipadikārtham ca dhātvartham ca pracakṣyate|

sā nityā sā mahānātmā tāmāhustvatalādayaḥ|| (Jā.sa - 34)

Pāṇini compiled the following *Sūtra* for *Prātipadika* and *Dhātu*, in line with his two-fold division of *Padam* a *Subanta* and *Tiṅganta* ("*suptiṅantam padam*" (1-4-14)).

arthavadadhāturapratyaḥ prātipadikam (1-2-45),

kṛttaddhitasamāsāsca (1-2-46), dhātoḥ (3-1-91).

Prātipadikam is the root of *Subantas* or nouns. Whereas *Dhātu* is the root of *Kriyā* or *Tiṅganta*. *Hari* asserts that the meaning of *Prātipadika* and *Dhātu* is described by scholars as *Sattā* or *Jāti*, the same is *Nitya* (immutable) and the same is called *Mahān* and the same is *Ātmā* - this is expressed by suffixes like *-tva*, *-tal* etc.

Scholars say "*prātipadikārthaḥ sattā*" which means the primary meaning of *Prātipadika* is *Sattā* only and the same *Sattā* is also considered as the primary meaning of *Dhātu*, following the derivation "*kriyājanakatvam kārakatvam*", all the *Kārakas* generate *Kriyā* and in all the *Kriyās* there is *Jāti* and therefore such a *Jāti* is expressed by *Dhātus*.

Such a *Sattā* is *Nitya* i.e. it doesn't possess two properties i.e. generation and destruction.

Such a *Sattā* is all pervading *Paramātma* and the six *Bhāvavikārās* viz. *Jāyate* (Is born), *Asti* (Does exist), *Vardhate* (Develops), *Vipariṇamate* (Transforms), *Apakṣīyate* (Degenarates), *Vinaśyati* (Perishes), enumerated in *Niruktam* (1st chapter) of *yāska* are nothing

but the different forms of *Paramātma* only. The same *Sattā* is expressed by suffixes like - *tva*, - *tal*, - *gañ*, etc.

Under the '*Adhikārasūtra- taddhitāḥ(4-1-76)*', *Paṇini instituted -tva and-tal pratyayas*. In the sense of *bhāva by the sūtra-"tasya bhāvastatalau* (5-1-119)" here the term *Bhāva* means *Pravṛttinimitta* (The cause of behavior) and it is nothing but *Sattā – Gotvam, Gota*, are example.

Under '*kartarikṛt* (3-4-67)' *Pāṇini* instituted the suffix -ghañ on *Dhātu* (*dhātoḥ*, 3-1-91)) in the sense of *Bhāva* (*pākaḥ* is an example).

Here the term *Bhāva* refers to the meaning of a *Dhātu*. This is clearly mentioned by *Bhartṛhari* in *Kriyāsamuddeśa* of *Padakāṇḍa* of *Vākyapadīyam* (verse -23) -

antyevā atmani yā sattā sā kriyā kaiscidiṣyate|

bhāva eva hi dhātvartha ityavicchinna āgamaḥ ||

(Kriyā samuddeśa - 23)

(The *Sattā* that is there in the final part of *Vyāpāra* is considered as a *Kriyā* by some people, rather the uninterrupted tradition says that *Bhāva* or *Sattā* only is the meaning of *Dhātu*).

The word *Nitya* can be taken as a reference to *Nyāya* and *Vaiśeṣikadarśanas*, while *Mahān* to *Sāmkhya*, while *Ātmā* to *Vedānta*.

Helarāja a commentator on *Vākyapadīyam*, explined the case of *Mahān* only. Rather, it may be taken that *Hari* was trying to explore chemistry of all the *Darśanas* in proposing *Jāti* or *Mahāsattā* or *Sattā* or *Mahasāmānyam*.

The concept of Vyakti or Dravyam (Individual)

Dravyam is the second factor that is expressed by a *Nāma*.

In *Dravyasamuddeśa* of *Padakāṇḍa* (verse - 4) *Hari* explines the concept of *Dravya* by offering analogy -

Suvarṇādi yathā bhinnam svairākārai rapāyibhiḥ|

rucakādyabhidhānānām śuddhamevaiti vācyatām||

(Dra.sa - 4)

Bangles, rings etc. ornaments are made of gold; rather the form is neither invariable nor has got anything to do with gold.

Rather, the pure *Dravya* is being denoted by *Śabdas* like *Rucaka, Kaṭaka, Kamkaṇa, Kuṇḍala*, etc.

Having established that all the words like *Ghaṭa* denote *Dravya* and the same is seen all pervading (*Sārvartrikam*). *Hari* responds the question as to how can *Dravya* be certified as *Sārvartrika*. When there are certain *Śabdas* like *Samsthāna* and *Sanniveśa;* which denote a *Dharma* called assembly of different parts and also the same won't denote *Dravya*.

Teṣvākāreṣu yaśśabdastathā bhūteṣu vartate|

tattvātmakatvāttenāpi nityamevabhidhīyate| (Dr.sa - 6)

In such forms, where in *Upādhi* only is the *Svabhāva* (Nature) in such forms (Assemblies of different parts) is denote by *Śabdas* like *Samsthāna* and *Sanniveśa*, there also the immutable *Dravya* only is expressed as the form is nothing but *Dravya* only.

Since *Upādhis* are artificial they are mutable (just like a *Ghaṭa*) rather their actual form is nothing other than *Dravya. Dravya* is never seen in the form of an *Upādhi.* On the other hand, since upādis got amalgamated in dravya which is root, they can't be considered separately; rather it is due to bramha satta that the *upādhis* have attained a concrete form.

Bhartṛhari further clarifies the following doubt –

Scholars have decided that the *Akāram* (Form) is mutable and *Dravya* is immutable. In such a situation if it is accepted that even *Dharmas*, in a different state or seen in the form of *Dharmi* only, it amounts to accepting that the *Dharmas* are also immutable. And this contradicts the above said decision of scholars (*ākṛtiranityāt, dravyam tu nityam – Paspaśa*) - (*Siddheśabdārthasambandhe*).

Natattvātattvayorbheda iti vṛddhebhya āgamaḥ|

atattvamiti manyante tattvamevā ऽvicāritam||
(Dr.sa - 7)

The uninterrupted tradition inherited from the elders is that there is no, as a matter of fact, any difference, what so ever, between *Tatva* and *Atatva*. Rather, since the matter is not thoroughly discussed the *Tatva* itself is misunderstood as *Atatva*.

As far as the Indian philosophy is concerned there are no two things -

Satya (Real one), *Asatya* (The one that is illusionary one). There is in conclusion, only one '*Pāramārthikatatva*' and it is nothing but *Parabramha*.

The thing that is *Satya* only seems to be *Asatya* having different forms due to *Avidya* that has been there since time immemorial. Rather, the *Asatyapadārtha* can't stand for ever separately from *Satyapadārtha*. As long as the *Avidya* is there, and the difference is felt, once the *Avidya* perishes there will be *Satyapadārtha* only that remains.

Bhartṛhari at the outset of his work, in *Bramhakāṇḍa* (Verse - 9) declared the very thesis in the following words -

Satyāviśuddhi statroktā vidyai vaika padāgamā|

yuktā praṇavarūpeṇa sarvādā virodhinī|| (Br.ka - 9)

Summary

It can be summarized that 'Ja:ti' and 'Vyakti' (Dravya) are inseparable and depending on the context either has to be taken as important and the other as unimportant. The meaning of Śabda is either 'Ja:ti' or 'Vyakti' Dravyam or Both. Both are immutable can be denoted by *Śabda* and the relation between both of them is qualifier and qualified. The concepts of Ja:ti and Dravyam are highly philosophical and can be applied to all languages.

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PERCEPTION OF ENGLISH TEACHERS' BELIEF AND PRACTICES IN ODISHA

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Abstract

The prestige and status associated with English education and the anticipation of social mobility facilitated by it has led to a growi preference for English medium schools in comparison wi Vernacular medium schools. Even though Educationists and linguis agree upon the usage of mother tongue as a medium of instruction the primary level of education, for a better cognitive development the child, there has been a spurt in the growth of English mediu schools in every nook and corner of the country. Hence, it imperative to analyse the differences in the educational environme of the various schools. This study proposes to look at these aspects bridge the gap between the English medium schools and Vernacul medium schools. Taking the case study of Cuttack district in Odish a parallel has been drawn between the classroom dynamics in t English medium and Odia medium schools. The focus is to analy the current differences, in the beliefs of the English teacher towar language teaching. The main aim of the study is to bring forth t points of divergence and convergence in the two types of scho Such study enables the improvement of the pedagogical practices and strategies which are in demand.

Keywords: Perception, English Teachers, Belief and Practices, Odisha

1. Introduction

The knowledge of English has emerged as a yardstick facilitating mobility upward in class structure in India. It is a marker of prestige and status in the Indian society. Owing to the pervading influence of English in this society, many private English medium schools have mushroomed throughout the country. The burden of admittance in these schools, which claim to teach and educate the student to have a successful command over the language, is quite high. The high demand for such private schools which cater to these requirements shows the influence of English in the Indian psyche.

2. Literature review

English medium schools have emerged as the first choice of preference in the society. Education, as a subject of administration, falls under the concurrent list of the Indian Constitution. To accommodate this growing demand the state education boards have acceded to the early introduction of English in the state governed schools. Thus, many private and state funded schools have mushroomed in various regions of the country. These schools vary on account of their medium of instruction i. e. English. This study focuses on the differences in the belief and practices followed by English teachers in private and state funded schools in Cuttack, Odisha.

In a study by Mori (1999) on the epistemological beliefs of second language learner, it was observed that belief and prejudices of learners towards the nature of language learning influence their learning strategies. A similar work can be credited to McAlpine et al. (1996) who studied the teacher's belief in Mohawk classroom and established the relationship between the cultural beliefs and classroom dynamics. The present paper is an attempt to understand the beliefs and views of

the English teachers of Odia medium and English medium schools in Cuttack district of Odisha.

Theories of Language Learning: Views and Perspectives

Theories of language learning are based on the interpretations of the nature of language. According to Richard and Rodgers (2001, 16), there are three views about the nature of language.

- The Structural View of Language.
- The Functional View of Language.
- The Interactive View of Language.

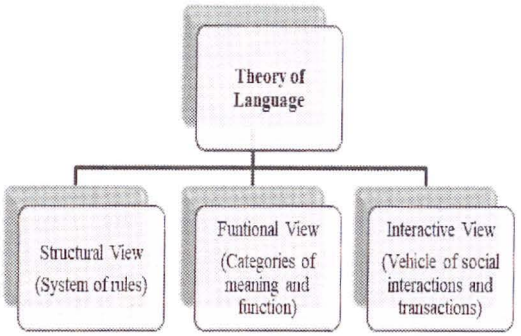

Figure 1. Theory of Language

According to the structural view, language is a systematic arrangement of elements whose primary purpose is to encode meaning. Following this view about language, the target of language learning is to learn the elements of language. Thus, the structural view of language entails that language learning involves learning of sounds, words, and grammar of a language. On the other hand, the functional view of language views language as a medium for the fulfilment of a certain function. It accords language the position of a vehicle to express functional meaning. It also emphasises the need to learn the semantic and communicative aspects of language over the grammar rules. The third view of language, i.e. the

interactive view observes languages as a tool for establishing and fulfilling interpersonal relationships. Figure 1. presents a diagrammatic representation of the views about language.

Language Learning: Methods and Approaches

The general principles of language teaching constitute of the theoretical framework of language learning and the set of teaching procedures. The theoretical framework for language learning consists of viewpoints about the structure of language and learning principles. The teaching methods include the choices and selections made by the teacher regarding the aspects of teaching such as materials and content; syllabus structure; and staging and sequencing of content and testing tools.

The relationship between theory and practice can be explained by the terms Method and Approach. The association between Approach and Method was first explained by American linguist Edward Anthony (1963 as cited in Richard and Rodgers 2001, 15). He identified three levels of conceptualization and organisation in language teaching. The three levels are Approach, Method, and Technique. The approach towards language learning constitutes the view about the nature of language, the method is the application of the theoretical framework of pedagogical practices, and the technique is the actualisation of the practices in a classroom setting.

To put forth this in a model, Approach is the level consisting of beliefs and perspectives towards the structure of language in general and language learning in particular. The method is the degree of amalgamation of the belief system and practical choices. It consists of the materials and content picked up to implement the said belief about the language teaching procedure. The third level in the model is the techniques which

consist of the manner in which the procedures are laid in the classroom in actuality.

3. Methodology

This study is a qualitative research consisting of a guided discussion and interview with the English teachers as its test instrument. The interview designed for this research included open-ended questions on their general belief about language and language learning. It also explored their belief under following broad categories namely Conglomeration of grammatical rules; Adoption of a cluster of habits and behaviour; Communicative system; and Language as a tool to function in the society. The interview sample consisted of two groups of twenty-five English teachers, each from English medium and Odia medium schools in Cuttack district of Odisha. The teachers were interviewed regarding their belief about the nature of language and language learning.

The idea was to get their thoughts and see if they would comply with the findings in the literature. The data elicited, and tabulated from the two group of teachers was then compared to infer the results. A frequency distribution of the responses was tabulated to draw a parallel between the responses of the participants from each school. The research adhered to the norms of ethics by maintaining the anonymity of the research participants. Thus, an Informed Consent was obtained from the participants before their participation in the study.

4. Results and Discussion

It was observed that majority of the Odia medium school teachers espoused their view in the structural nature of the language. They believed that language is a system of rules which encodes meaning into the structure. This leads to inferences about the pedagogical practices used by them in the classroom teaching. The belief in the structural nature of the languages entails the use of methods like

Grammar Translation and Audio Lingual Method in the classroom. However, the English medium teachers opted for the interactionist and functional view about the language. The differences in the bar height depict the differential distribution of the responses. The percentage distribution of the data has been tabulated in Table 1. A comparative frequency count of the responses of the teachers can be seen in the histogram below (Figure 2).

Table 1. Percentage wise distribution of the results

Teachers	Cong. of grammatical rules	Adoptg cluster of habits and behaviour	Comm system	Tool to function in the society
English Medium	12%	12%	44%	32%
Odia Medium	48%	32%	8%	12%

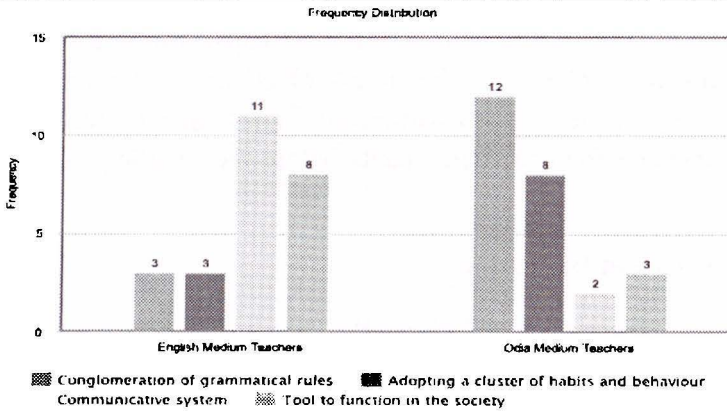

Figure 2. Frequency Distribution of the responses of the participants

(The numbers at the top of each bar represents the frequency count of the responses)

As is evident from the data, an overwhelming 48% of the Odia medium school teachers espouse their belief in language as a system of grammatical rules while only12% of the English medium teachers opted for this option. This belief in the nature of language coincides in the structural views about language. The results of the English Medium teachers, on the other hand, present a distributed opinion. 44% of the teachers believed that language is strictly a communicative system and 32% of them espoused their belief on language as a functional system.

The option "adapting a cluster of habits and behaviour" was aimed to judge the inclination of the teacher's belief towards the behaviouristic theories of learning. As the results point out, 32% of the Odia medium teachers opted for this choice whereas only 12% of the English medium teachers agreed to this view point. This response enables us to get an insight into the first level of language pedagogy which is the belief and views about language. This belief later transforms in the methods and practices that a teacher ventures to realise in the classroom.

Further, most of the Odia medium teachers view language as a conglomeration of grammatical rules. This entails their belief in the structural nature of the language. Thus, it can be inferred that Odia medium teachers use a structure based language pedagogy in the classroom. In the case of English medium teachers, it was observed that majority of the teachers embraced language as a communicative system. It leads to the inference that their pedagogical practice aligns with the communicative method of language teaching.

5. Conclusion

Research in the field of English Language Teaching has shown that much can be learnt from the ways English teachers execute their lesson by studying the teachers' approaches and beliefs about language in general and language learning in particular. Their belief and approach towards language learning primarily influence the actual classroom practice and behaviour of these teachers. It has become an accepted norm that teachers' beliefs play a significant role in shaping teachers' characteristic patterns of instructional behaviour. In the present research, it can be seen that the English medium school teachers believe in the functional view of the language. They further believe that language learning should aim to imbibe communicative competence in the learners. On the other hand, Odia medium teachers believe in grammatical accuracy and acquisition of structure. There was a significant difference in the belief and approach of the teachers in the different schools. Thus, it can be concluded that the beliefs of the Odia medium teachers are inclined towards the structural view about language while the English medium teachers carry a functional and interactive view about language.

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USING ERRORS IN LANGUAGE TEACHING – A CONTRASTIVE ANALYSIS

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The most likely errors of vocabulary in our sentences are probably caused by wrong collocations. Where English people *pay* visits, many other language groups *make* visits, and they are inclined to use this expression when speaking English. There is no special reason why we should in English call the building in which old people live together a *home,* rather than a *residence, house, hotel, hall* or *hostel,* all of which may denote inhabited buildings. The fact is that none of these alternatives would be acceptable. Given the apparent choice, the learner could well make a mistake by simply selecting wrongly from among the alternatives that English seems to offer. The actual error may or may not be related to the mother-tongue. A French speaker would be more than likely to use *house* because an equivalent French phrase is *maison de retraite* and in most contexts *house* is indeed the translation of *maison.*

How far someone speaking a foreign language, uses words with the meanings that they have in that language and how far they use them with meanings derived from mother-tongue equivalents may not always be apparent. What a person means by a phrase like *old people* when he comes from a society where life expectancy is no more than forty-five is liable to be different from what is meant by such an expression in a country where people work until they are sixty- five and expect to live past seventy. The difference may not be noticeable unless the situation makes it clear. If a French speaker uses the English word *hotel* to refer to a large private house or a public building, we know that he is using *hotel* with the denotative meaning of the French word *hôtel.* Mother-language *connotations* will be even more difficult to distinguish. A word like *wife* is bound

to carry connotations derived from the relative status of men and women and from the nature of marriage. These of course may differ widely from country to country. However well one may understand these differences intellectually, it remains very difficult to use a lexical item in the matrix of the second-language culture.

This is but a solitary example in which a person's mother-tongue impacts his foreign language performance. There are many more cases at the levels of language, and one could extend the discussion further by considering stylistic choices. In grammatical features of continuous writing, phonological and grammatical characteristics of conversation and the ways in which languages convey the same meanings, but do it by employing different levels of language. The observation of any language learning situation or any bilingual communication situation would provide a host of such examples.

Contrastive analysis

This evidence is quite enough to show how widespread influence of the mother-tongue is. As evidence it is not new. Most of such examples could be cited that are familiar to practising teachers. What is new is the recognition of the extent of the phenomena and the effort that has been made to make systematic use of this information in language teaching. A significant proportion of language learning theory has been based upon evidence. A whole field of interest, usually called 'contrastive analysis' has grown up and become a major preoccupation of linguists and applied linguists. For many people applied linguistics *is* contrastive analysis. Large scale projects have been set up for the comparative study of languages with the justification that the results will prove significant and valuable for language teaching.

The stimulus to all this activity was provided in 1957 by the publication of Robert Lado's *Linguistics Across Cultures* (Ann Arbor: 1987)[1] a book that brought together a large quantity of

evidence on whose basis developed a view of language learning that has dominated the linguistic study of language teaching for fifteen years. The importance of contrastive analysis as stated initially by Lado and subsequently taken up by others is as follows. The errors and difficulties that occur in our learning and use of a foreign language are caused by the interference of our mother-tongue. Wherever the structure of the foreign language differs from that of the mother-tongue we can expect both difficulty in learning and error in performance. Learning a foreign language is essentially learning to overcome these difficulties. Where the structures of the two languages are the same, no difficulty is anticipated and teaching is not necessary. Simple exposure to the language will be enough. Teaching will be directed at those points where there are structural differences. By and large, the bigger the differences between the languages, the greater the difficulties will be. It follows that the difficulties of various groups of people learning, say, English as a foreign language will vary according to their mother-tongue, and since teaching is to be directed at the differences between languages, the teaching itself will vary according to the mother-tongue of the learners.

If a comparative study – a contrastive analysis – of the target language and the mother- tongue is carried out, the differences between the languages can be discovered and it becomes possible to predict the difficulties that the learners will have. This in turn determines what the learners have to learn and what the teacher has to teach. The results of the contrastive analysis are therefore built into language teaching materials, syllabuses, tests and research. Different text-books will have to be produced for each language group. In summary, the function of contrastive analysis is to predict the likely errors of a given group of learners and thereby to provide the linguistic input to language teaching materials.

Some of these notions can also be expressed in Lado's own words. He says that 'the fundamental assumption of this book' is

'that individuals tend to *transfer* the forms and meanings and the distribution of forms and meanings of their native language and culture to the foreign language and culture — both productively when attempting to speak the language and act in the culture, and receptively when attempting to grasp and understand the language and the culture as practised by natives.'[2] (*Ibid.*) Elsewhere he says, 'Problems are those units and patterns that show structure differences between the first language and the second ... The structurally analogous units between languages need not be taught: mere presentation in meaningful situations will suffice ... Different emphases in teaching are required for the different language backgrounds,'[3] (Lado: 1964 p. 52) and 'A comparison tells us what we should test and what we should not test'.[4] (*Ibid.)*

In the first quotation above the word *transfer* occurred. It is a term used by psychologists in their account of the way in which present learning is affected by past learning. Faced with a new learning task, an organism will make use of what knowledge or skills it already possesses to ease the process of acquisition. It is a process which has a wider significance for language learning than the point under discussion here.[5] (W.M. Rivers: 1960 pp. 126-9)

When learning a foreign language an individual already knows his mother-tongue, and it is this which he attempts to transfer. The transfer may prove to be justified because the structure of the two languages is similar—in that case we get 'positive transfer' or 'facilitation'— or it may prove unjustified because the structures of the two languages are different — in that case we get 'negative transfer' or interference'. In either case there must be some reason why the learner has been led to identify the forms of the two languages in the first place. Some element of similarity must exist. Presumably, for example, a learner will not try and use a preposition from his mother-tongue as a verb in the target language. They are grammatically so distinct that any transfer is most unlikely. This would be a case of 'nil transfer'.

Notes :

1. Lado. R, *Linguistics Across Cultures, (*Ann Arbor, University of Michigan), p. 2.
2. *ibid.*
3. Lado, R. *Linguistics Across Cultures* (Ann Arbor, University of Michigan), p. 52.
4. *ibid.* p. 67.
5. Rivers W.M., *The Psychologist and the Foreign Language Teacher* (Chicago, Chicago University Press, 1964 p. 74).

REVISITING SONORITY WITH REFERENCE TO BINDING PRINCIPLE AND OT CONSTRAINTS: EVIDENCE FROM CONSONANT CLUSTERS IN ASSAMESE

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Abstract

*This paper examines the notion of sonority from the perspective of onset well formedness constraints of Optimality theory (prince and Smolensky 1993) and binding principles embedded within Government phonology (Bures 1989) with reference to the data pertaining to onset branching in initial consonant clusters drawn from Assamese, an Indo Aryan Language. Assamese phonotactics governing consonant cluster in word initial position follows the ranking schemata: *σ[sonorant > obstruent] >>.....>> σ*[stop > Nasal]>>...>>σ* [stop > Liquid] This research work also reflects on the unpermissible cluster comprising of liquids and obstruents the justification of which lies in Government phonology that claims that liquids can't govern obstruents by virtue of their complexity. In addition the binding principle governing homorganicity illustrates in an adequate manner as why two coronal segments fail to constitute a permissible word initial cluster in Assamese phonotactics in particular.*

Keywords: Sonority, Binding Principle, Optimality, Government Phonology

1. Introduction

The principle of Sonority and its relevance pertaining to the organization of syllables has been widely reported in literature ranging from the early works of Vennemann (1972), Kiparsky (1979, 1981), Steriade (1982) and Kenstowicz (1994). Sonority of a segment is generally represented by means of a scale that corresponds to an ordering of segments ranging from those which

have higher sonority value, i.e. vowels, to those which have lower sonority value, i.e. stops, as displayed below (Clements 1990):
However, till up now a satisfactory phonetic definition of sonority in these parameters has been surprisingly elusive. However it can be argued in the perspective of Clements (1990) that sonority can not be correlated to any unitary physical property but can be viewed as a cover term for a collection of independent acoustic properties that contribute to an overall dimension of perceptibility or auditory perceptual salience.

This notion of sonority can be addressed in the light of constraint based approach of Optimality theory (Prince and Smolensky 1993).These constraints on sonority distance may impose restrictions on the rise or fall in sonority which go beyond the minimal requirements of SSG. This is proposed by Prince and Smolensky's (2004) natural hierarchy of margins, which is the mirror image of the peak hierarchy. The best margins are crosslinguistically found to be obstruents, followed by nasals amd liquids, with vowels being the worst margin candidates. Below is given the sonority hierarchy of onsets

Hierarchy of onsets: ONS/O > ONS/N>ONS/L

2. **Branching onsets in initial consonant clusters in Assamese**

Now in this section consider the instances of branching onsets permitted in Assamese phonotactics in word initial position. The data are collected from Goswami (1966).
Consider the following Assamese words:

(1) Stop + Liquid

/pr/	pran	'life'
/pl/	plawɔn	'shower'
/br/	brɔhmandɔ	'universe'
/bʰr/	bʰrɒm	'illusion'
/bl/	blauz	'blouse'
/tr/	tritijɔ	'thirteenth'
/dr/	drɔbjɔ	'substance'

/kr/	krɔm	'serial'
/kl/	klantɔ	'tired'
/gr/	grismɔ	'summer'
/gl/	glani	'repentance'
/g^{h}r/	g^{h}ran	'smell'
/tj/	tjag	'sacrifice'
/gj/	gjan	'knowledge'

The unpermitted initial consonant cluster comprising of stop and liquid are */tl/ and */dl/ although they conform to the principle of sonority hierarchy.

(2) Nasal +Liquid

/mr/	mrityu	'death'
/ml/	mlan	'pale'
/ŋj/	ŋjai	'justice'

In Assamese phonotactics the alveolar and velar nasal can not constitute the cluster with liquid in initial onset position of a syllable. So the prohibited patterns are */nr/, */nl/, */ŋr/ and */ŋl/.

(3) Fricative + Liquid

/sr/	sristi	'creation'
/hr/	hridɒi	'heart'

In Assamese phonotactics there are only two fricatives /s/ and /h/ which can function as the initial member of a cluster comprising of fricative and liquid.

The prohibited patterns are: */zr/, */zl/, */hl/

(4) Fricative + Stop

/ st/	stɑti	'prayer'
/st^{h}/	st^{h}an	'place'
sp/	spɒrxɒ	'touch'
/sp^{h}/	sp^{h}ʊliŋɔ	'ashes'
/sk/	skrin	'screen'
/sk^{h}/	sk^{h}ɔlɔn	'degradation'

This is the special property of the Assamese post alveolar fricative /s/ that can function as the initial member of a consonant cluster followed by voiceless stops. But it cannot make cluster with the voiced plosives of Assamese. So, the prohibited shapes in Assamese consonant cluster phonotactics are: */sd/, */sb/, */sg/

(5) Fricative + Nasal

/sm/	smɒxam	'graveyard'
/sn/	snan	'bathe'

The post alveolar fricative /s/ can form consonant cluster with bilabial and alveolar nasal as initial member of the consonant cluster. The velar nasal /ŋ/ never becomes the member of any consonant cluster. What is interesting to note that other ficative sounds /z/ and /h/ are not allowed in Assamese phonotactics to be the members of a consonant cluster with nasals. Hence the prohibited consonant clusters are : */sŋ/, */zm/, */zn/,*/zŋ/, */hm/, */hn/, */hŋ/

In Assamese phonotactics, obstruents and sonorants combine quite freely to constitute two member onsets within the limits set by the universal sonority sequencing principle. Word initial clusters such as /pl, gl, pr, tr, dr, gr/ are found but such as */lp, rt/, etc, where the sonority relations are reversed, are not present in the phonotactics of Assamese.

The data presented in 1, 2 and 5 conform to the principle in sonority hierarchy. It is interesting to show here in this context that in a hierarchy of complex onset cluster obstruent clusters are the least marked and the liquid clusters are the most marked. In Assamese word initial syllables cannot begin with liquids and nasals. This phenomenon is supported by cross linguistic evidence in the world languages. It can be represented in the following schemata:

The set of onset sonority constraints, with fixed rankings, makes obstruents onsets the least marked, and liquid onsets the most

marked. This hierarchy of onsets yield markedness constraints on onset sonority, as proposed in de Lacy (2001) :

*ONS/L >> *ONS/N>>*ONS/O

In the next section I am going to address the phonotactic patterns of word initial clusters in Assamese in the framework of complexity condition, Binding parameter and Optimality theory. Here an attempt is made to provide a justification as why stops and nasals can function as the word initial cluster whereas liquids fail to be the first member of a word initial cluster in the backdrop of segmental complexity involved in governing relations.

3. Analysis of Onset clusters in Assamese in the framework of Complexity conditions and OT

Word initial onset cluster in Assamese can be formed by combining either stop + liquid or nasal+liquid. But liquid does not have the potential to be the initial member of the onset cluster. As, for instance the following are not the onset cluster in Assamese permitted by the phonotactic constraints in Assamese: *rp, *rt, *lp, *rk, *rm, *lm

The ungrammaticality associated with these above onset clusters can be addressed in the light of constituent government relationship (Harris 1990). As we have already discussed, constituent government is characterized by Directionality and Strict Locality Condition. The syllabification of adjacent segments is determined by the governing relations and it is the constituent government which determines what constitutes a well formed branching constituent. In the examples stated above the stops and nasals are functioning as governors and the liquids as governees. As, for illustration consider the following onset branching:

pr, ml

Here in this onset cluster the approximant is governed by the stop and in the latter the liquid by the nasal. In these examples, a downward complexity slope is enforced between a governor and a governee. The reasons as why p governs r can be answered from the

internal make up of the two segments. Whereas the voiceless bilabial stop has two internal elements constituting its structure the approximant possess only one internal component, as is evident from the representation below:

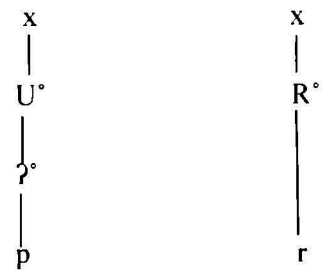

Figure – 1: Representation of internal make up of 'p' and 'r'

In the same way, from the analysis of the onset branching in initial position in Assamese, it is observed that nasals can precede liquids but not vice versa. This distributional asymmetry is instrumental in providing explicitly the ability of the nasal to govern the liquid. The asymmetry here is motivated by the Complexity Condition: nasals containing three elements have priority over liquids, which contain two or sometimes only one element.

As we have seen in the above illustration of Assamese data plosives govern liquids on the ground that plosives are more complex than liquids in terms of internal components involved in representation.

According to Harris (1990) the more sonorant a segment, the less complex its representation. But Rice (1992) has argued that greater sonority implies greater complexity.

i) Harris (1990) interpretation:

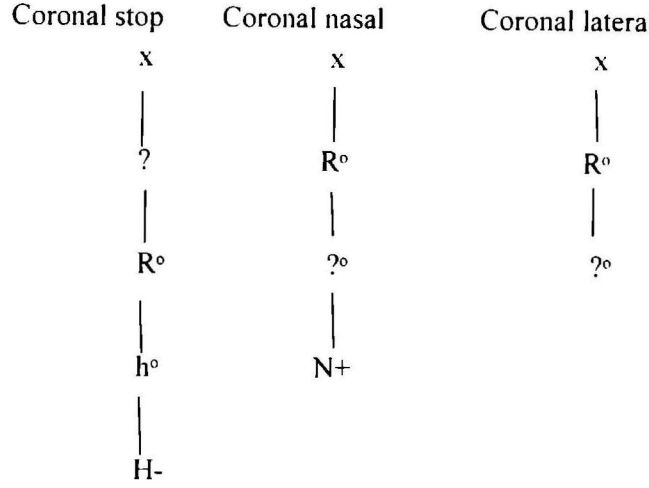

Figure-2: Representation of coronal stop, nasal and lateral in the framework of Harris(1990) (Here, ? = occlusion ; R° = coronal; h°= noise and H- = stiff vocal cords)

ii) Rice (1992) interpretation:

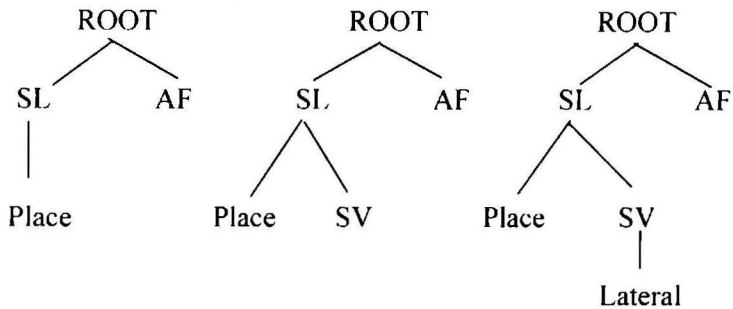

Figure-3 : Representation of coronal stop, nasal and lateral in the framework of Rice(1992) (Here, SL= Supralaryngeal ; AF= Air Flow; SV= Sonorant Voice)

From the above representation it is evident that laterals have more SV structure than nasals and in that scale stops can be placed at the bottom in terms of the number of SV structure. Thus the sonority profile within an onset is thus met only if the second consonant has

more SV structure than the first. For convenience consider the following representation:

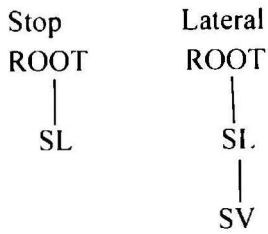

Figure-4: Representation of stop and lateral

This issue can also be analyzed within the framework of syllable based approach couched within OT framework. Here I am taking the instance of the split margin approach to syllable structure which takes in to consideration Margin hierarchy of Prince and Smolensky (1993) that gives preference to segments of low sonority. This constraint is applicable to singleton onsets or to the first member of an onset cluster and it is known as M1 hierarchy.

In the same way, the M2 hierarchy applies both to the second member of an onset and a singleton coda. It differs from M1 hierarchy in the sense that it gives preference to consonants of high sonority.

M1 hierarchy (preference given to consonants of low sonority)

*M1/r >> *M1/ l >> *M1/ Nas >> *M1/obs

M2 hierarchy (preference given to consonants of high sonority)

*M2/ obs >> *M2/ Nasal >> *M2/l >> *M2/r

These constraints stated above have bearings upon the functionally grounded onset sonority implications. Crosslinguistically it is observed that word initial onsets prefer segments of low sonority value. The instances of Assamese data adhere to the crosslinguistic preference for low sonority onsets which has been documented in literature. This preference is clearly discerned when a choice has to be made between two different available onsets. Steriade (1982), McCarthy and Prince (1986) have shown that in Sanskrit reduplication, it is the lowest sonority member of the onset cluster

that is reduplicated. Moreover, in Assamese phonotactics it has been seen that oral stop clusters are not seen in onset position, but stop or sonorant clusters are present.

Under a sonority account it can be attributed to a preference for a greater sonority distance between the two members of a cluster. This pattern exhibited in Assamese phonotactics is in consonance with the cross linguistic observation which confirms that clusters of oral stops are more marked than fricative stop or sonorant stop clusters. This can be justified on the basis of perceptual cue based approach of Ohala (1992).

Although it has been observed that in Assamese lateral and rhotic onsets are allowed in word initial position, they don't have the potential to be the first member of the consonant cluster. But nasals can be the member of such clusters. Such observation can be implemented within Optimality theoretical framework in the following way:

a) *ONS-L >> IDENT-I0 [approx] insures that liquid onsets as the first member of a consonant cluster will be eliminated.

b) Word initial consonant clusters in Assamese are allowed to begin with nasal consonants. It can be shown by the following ranking of the OT constraints:
IDENT-IO [approx] >>*ONS/N

4. **Coronality in onset clusters in Assamese, Binding principle and OCP constraint**:
In Assamese phonotactics we have observed that some clusters are not permitted to occur in word initial position. The cluster types are */tl/, */dl/, */sl/, */zr/, */zl/, etc. Cross linguistically these clusters have been found marked although these homorganic sequences with their rising sonority make good onset clusters and hence sonority account would have to give way to any alternative that managed to

subsume these place based restrictions under some general analysis of cluster phonotactics. However, it is to be noted in this context that while there is a general agreement about the role of sonority in determining syllabification of consonants, the restriction imposed by the place of articulation is subject to controversy. Steriade (1982), Selkirk (1984) have claimed that the feature [coronal] can form part of the sonority scale.

Clements (1990a:313) argues that place is not a part of the sonority dimension, as in a single language coronals appear to be both higher and lower in sonority than other places of articulation. As discussed in this paper Assamese allows tautosyllabic syllabification of /pr, pl, br, bl, b^hr, tr, dr, kr, gl, gr, g^hr/ These clusters satisfy the sonority profile of an onset as the second consonant of the sequence has more sonorant structure than the first. However, there are some constraints against consonants sharing place of articulation: tautosyllabic */tl,dl.zr,zl/ sequences are not allowed in Assamese. This observation is applicable in almost all the languages of the world.

Given the sonority dimension alone, these clusters should have been permitted as the first consonant has less SV structure than the second one. Hence the cause of the exclusion of such clusters can not be attributed to Government in terms of sonority, but follows from constraints on place restrictions. Tautosyllabic clusters such as */tl,dl/ adhere to the principle of sonority sequencing and thus can not be excluded by sonority constraints. Instead they are excluded because they have identical Place structure. Following Bures (1989) I am going to use the Binding principles in order to deal with the issue of place restriction in the consonant cluster of Assamese phonotactics.

Binding can be defined in the following fashion:

A bound consonant contains dependent structure. i.e. identical Place structure to the consonant that binds it or no Place structure. Binding is not allowed within an onset (i.e. a consonant can not be

syllabified into an onset if it shares place with the adjacent syllabified consonant. A consonant must be bound for Place heterosyllabically (i.e. a consonant may be syllabified into a rhyme if it is non distinct in Place from the following onset).

The cause for the non occurrence of coronal cluster in Assamese phonotactics can be explained with regards to both government and binding principles. Following Rice (1992) I would like to argue that an onset cluster comprising of stop followed by lateral is syllabifibale as it adheres to the principle of government as well as binding. As, for instance, consider the Assamese cluster : /pl/

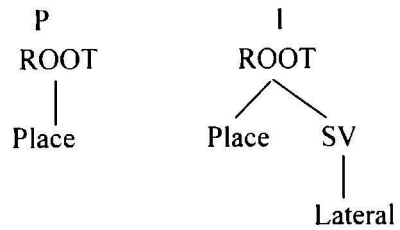

Figure-5: Internal structure of the cluster /pl/

The internal structure of the above consonant cluster suffices to the requirements imposed by the conditions of government within sonority profile and the binding principle.

Kaye et al (1985) while discussing on the issue of syllabification of adjacent consonants, defines government as a relation in which a consonant A governs an adjacent consonant B if A has less SV structure than B. It can be formulated in the way: A can govern B in an onset if and only if A and B differ by α SV type nodes. Between syllables, A governs B if B has more SV structure than A or A has no more than α-β steps more SV structure than B, where $\alpha > \beta$; $\beta > \Theta$.

By taking into consideration these two principles of government and binding the consonant cluster /pl/ is well formed as far as the phonotactic rules of Assamese are concerned.

If we interpret the internal mechanism of /pl/
Government: OK as /l/ has more Sv structure than /p/ and thus is governed.
Binding: /p/ and /l/ differ in place of articulation, and thus /l/ is not bound.
Hence, the syllabification is well formed.
But the prohibited consonant cluster such as */dl/ can be accounted for in the light of binding principles.

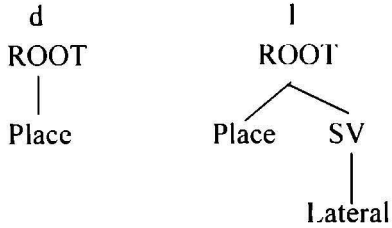

Figure-6: Internal structure of the cluster /dl/

This cluster under consideration adheres to the criteria of government as the second consonant has more SV structure than the first one. But /l/ shares the place of articulation with /d/ and therefore it is bound and thereby violating the binding principle. The reason for the non occurrence of these sorts of clusters can be assigned to OCP coronal constraint within Optimality theoretical module:

OCP-COR constraint implies that two segments having coronal and continuancy values cannot occur in adjacent position.

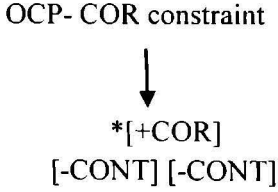

Figure-7: OCP-COR constraint

The dispreference for coronal onset cluster cross linguistically cannot be explained by sonority conditioning. Coronal clusters such as /tl/ and /dl/ are marked and the reason does not lie in articulatory difficulty but related perhaps to homorganicity. The basic reason

seems to be that the members of each of these pairs are perceptually too similar (Ohala,1992).

5. Conclusion

Sonority and segment sequencing in Assamese onset consonant cluster provides a new impetus to the issue of cross linguistic design of the arrangement of segments with special reference to the concepts such as onset well formedness conditions, syllable contact law and Margin hierarchy approach etc. Which onsets a particular language tolerates will be determined by the ranking of the Onset Well formedness (OWF) constraints with respect to faithfulness constraints or to a constraint against syllable codas, or to a constraint against rising sonority across a syllable boundary. In Assamese phonotactics, σ[stop>Liquid] clusters are permitted, but the constraints σ*[stop > Nasal] and *σ[sonorant > obstruent] are strictly maintained. Thus in Assamese phonotactics of consonant cluster in word initial position the ranking of the constraints can be represented in the following fashion:

σ[sonorant > obstruent] >>.....>> σ[stop > Nasal] >>...>>σ* [stop > Liquid]

In this paper, I have discussed the unpermissible cluster comprising of liquids and obstruents the justification of which is given in the framework of government phonology. In addition the binding principle shows adequately as why two coronal segments fail to constitute a permissible word initial cluster in Assamese phonotactics which is also addressed in the background of coronality constraint within Optimality theoretic module.

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WORD, LANGUAGE, AND THOUGHT – A NEW LINGUISTIC MODEL

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Abstract

This article proposes a new account of the general architecture of language, this time based on the word and on the processual unity of Saussurean parole and langue in the dynamical cognitive reality of language. A literary example, from Félix Fénéon, is offered. For reasons of brevity, this presentation omits criticism of the host of linguistic theories that do not ground their view on the multiple dimensions and properties of the word as such. Offering a viable alternative may be as useful as theoretical criticism, or may usefully precede it.

Keywords: word, stemmatic syntax, semantic schemas, discourse semantics, enunciation, Félix Fénéon.

1. The structures of language

The problem I will address in this article is the following: in languages, we find several components that fiercely resist reduction to a simpler representation as parts of one holistic, coherent Structure that could define language and *a* language (in Saussure' sense, une *langue*). We find a *phonetic* component, including phonology and prosody, which can of course never be identified with syntax, despite the importance of certain phono-tactic regularities; *syntactic* structures create forms such as transitive, double-transitive, passive, impersonal, reflexive etc. constructions, and introduce dependency networks that do inform sentence prosody but differ categorically from phonemic and syllabic networks. *Semantic* structures in their turn certainly inform

syntactic constructions, but again cannot be merged with these; so for example, metaphorical, metonymical and other semantic forms use the same syntactic formulae as literal semantic forms, and the cognitive schemas that are active in the semantics of sentences are generally not directly represented in syntax at all. Beyond sentence semantics, there is a *discourse-semantic* component responsible for narrative, argumentative, descriptive, and performative functions that are necessary in the textual organisation of language, and in dialogue; it contains encyclopedic meaning relations ('knowledge', including affective beliefs) and cognitive frame networks ('thinking') without which coherent speech and writing would not be possible. And finally, there is a region of language that organises the deictic, intersubjective, emotional, and referential relations in what has come to be called *enunciative* structures. From enunciation to pronunciation, there is evidently a gap or a 'jump', but also a close relationship, so these five instances – *phonetics*, *syntax*, sentence *semantics*, *discourse semantics*, and *enunciation* – may be modeled as forming a non-closed ring, a spiral[1], around the most important entity in language: the *word* itself, and its lexical morphology. Words indeed have *phonetic* properties, *syntactic* properties (functions), *semantic* (word class) properties, *discursive* properties, and *enunciative* properties[2], but they still resist reduction

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[1] The idea of describing the architecture of language in this way comes from my inspiring colleague Lene Fogsgaard (2000), who in turn refers to Culioli (1968).

[2] *Enunciation*, in French *l'énonciation*, is Émile Benveniste's (1966) term for the grammatical presence, in language, of markers of speaker and hearer roles and properties, including personhood, status, deixis, referential indicators. See Brandt (2016). The concept of enunciation and its communicative importance in cognitive linguistics are discussed in L. Brandt (2013).

to any of these structural domains in language.[3] Instead of representing language, and *a* language, as one holistic and quasi-logical Structure, we therefore have to propose an architecture as follows (fig. 1).

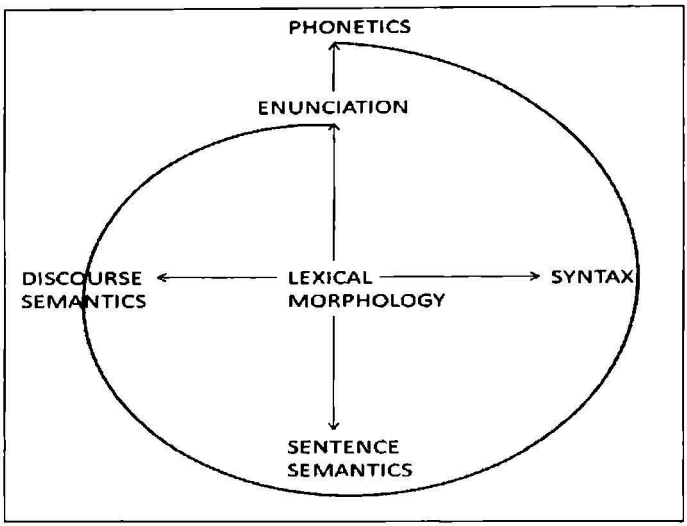

Fig. 1: Architecture of language

Any *word*, or lexeme, whether of a closed class or of an open class[4], has a phonetic and a semantic 'filling', as Ferdinand de Saussure said: a constitutive biplanary format, *signifier* over *signified*. Or as Louis Hjelmslev said: form of *expression* over form of *content*. This rather obvious biplanarity corresponds to the vertical axis in the

[3] Here is where current linguistic theories may deserve fierce criticism, especially the so-called 'construction grammars'. But we will not be fierce.

[4] On *closed-class semantics* and the general importance of the distinction between open and closed word classes, see Talmy (2000), chap. 1, "The Relation of Grammar to Cognition".

model (fig. 1). But the word also fills syntactic functions in phrase structure, since there would be no phrases without words as their parts. And the final meaning of a word in an utterance is a much more complex discourse-dependent effect, furthermore dependent on the personalized use of it in the emotionally based performative and rhetorical addressing of a hearer or a reader through the deictic enunciative instance. Thus, the word can safely be considered a central instance in the architecture of language. *Lexical morphology* – the unfolding of roots and flexives taking on syntactic, sentence-semantic or discourse-semantic meanings – is the very center of this complex of instances and is in itself distinct from all of them.[5]

The spiral organisation, that is, the neuro-cognitive networks corresponding to it in brain and mind, may have evolved from primitive (*I–you–this*-structure, personal, deictic) enunciation, which originally could have carried musical[6] or gestural expressions (dance) and ritual contents, and which probably first sedimented proper names, mainly used for calling on or announcing persons. Names became nouns or shaped nominal phonetics, and inspired the articulation of word classes, giving rise to class-combining phrases, and then to sentences with propositional, predicative semantics.

The Saussurean distinction between language use and language structure, *parole* versus *langue*, will have to be strongly modified in this new perspective. Since there is no unified *langue*, we will have to understand how speech and writing affect each of the autonomously structured instances of this spiral architecture in every moment of 'use'. The spiral itself is a representation of the

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[5] See, on this point, the account of multi-functional morphology in Brandt (2015).

[6] See Bjorn Merker's remarkable article, "Seven Theses on the Biology of Music and Language", in *Signata* 2016.

way the actual processes feed into each other in *parole*, that is, in production and reception of language. The 'unification' of structures happens in the *use* of language, rather than in a *langue*.

Both production and reception of language originate in speaker's or hearer's attention to the word. We pick up the other's words and then try to unfold 'their' structures of meaning in the context; we do not consciously think of syntax when we speak but we do attend to words (namely those to use or to avoid using with specific others), and then the structures automatically grow around them.

If we consider syntax as an autonomous instance underlying phonetics, and again propositional semantics as an autonomous cognitive instance underlying syntax, then discourse semantics must again 'underlie' sentence semantics, and finally, enunciation must 'underlie' encyclopedic, discursive semantics, because the domains and frames selected and activated in our personal 'encyclopedia' depend on the present enunciational situation. But structured enunciation is equally directly presupposed by *pro*nunciation or, in general, the materialization of signifiers uttered and recognized as such. The result is a model in which structures are neither 'deep' nor pertaining to a 'surface', since the maximal 'depth' is to be found where the 'surface' would be – that is, in the architecture of the spiral model, where the open gap between enunciation and phonetics is located. The processing of language, in production and reception (often simultaneously, as in dialogue), must immediately activate all involved, yet autonomous, instances at once. Otherwise we would not experience such a wonderfully instantaneous coherence between sound, grammar, meaning, thought, feeling, and personal voice, for example when reading good poetry. This experience can even leave us momentarily speechless – because we do no longer attend to any specific word within the coherent whole, or on the contrary, because one word suddenly seems to concentrate in or around itself an entire universe of meaning, created in a text.

2. The word and its connections to the autonomous structures of language

2. a. Enunciation

As mentioned, a word can be considered a biplanary entity (expression over content) that is likely to become hard-wired in the mind and the memory of a person speaking the language *of* the word in question. When a word of an open class (nouns, verbs, adjectives and their derivations) is memorized, it often carries with it, in the mind of the subject, the memory of what its particular content, reference, and meaning is or was to some person, and of what its expression sounded like in the mouth, pen or hand of some person, not necessarily the same. In this way, the word links us to other persons, and to the domains of experience we share. The difficulty of learning words in foreign languages is that without such links to specific others, words are not readily memorized. The reason for this is that words are then frozen as abstract phono-semantic units, whereas they have to become, be and stay connected to enunciation, which is a semiotic structure involving persons in communicative contact. (Though their frozen format may help the mind use words for neutral, impersonal thinking).

Enunciation is a structure that allows us to be signified as speakers (in the first person, P1), as hearers (in the second person, P2) and as communicating beings prepared to 'do things with words'.[7] The core form is the deictic *giving* stance: *I* (P1) give *you*

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[7] Austin's formula (1975) refers to the specific phenomenon of speech acts, but the very fact of addressing the other in speech or writing is already to be conceived as an act: a presupposed act of *giving* one's voice and words to the other and thereby promising the other something hopefully both true and helpful.

(P2) *this* signifier (O=P3), which (P3–> P1) will give *you* (P2) a content (O=P3) to interpret. The interpretation importantly depends on a pre-understanding of the entity that informed P1 in the first place, as an epistemic and evidential source and authority (A) in

some field (R) relevant to the ongoing communication. The word is firstly represented by its phonetic signifier (*Sa*) and then, when the signifier is acknowledged as such, in a specific language, and as part of a relevant common ground, R, given to the speaker by what he feels is a shared culture or immaterial reality, as communicating a signified content (*Sé*).

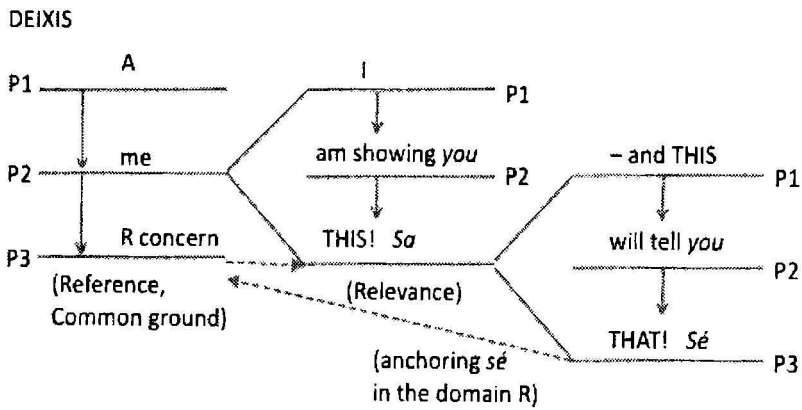

Fig. 2. Enunciation as a deictic structure

The model says: I, endowed by A with the concern R, am showing you THIS (signifier), in order for THIS (signifier) to tell you That (signified).

The semantic domain of R, under the authority of some A, makes sense of the word content *Sé*.[8] The deictic enunciational structure shows the speaker, *I*, in two roles, as P2 and then as P1; and the hearer, *you*, as P2 in two instances.[9]

A word of open classes (approx. noun, verb, adjective) refers to categories, i.e. to things, states or events, in the semantic domains that our minds know of.[10] When a word is used while referring to a semantic domain (R) of which the referent of the word is known as a part (culturally), it is used 'literally'. Otherwise, it is used 'metaphorically'. Words of closed classes, such as prepositions, determiners, core or satellite adverbs (*in, out, up, down...*), are used in all semantic domains without difference in meaning, since their meaning is *schematic*, reflecting the relational *conceptual schemas* by which the mind organizes its experiences and thoughts.

Things, states, events, and acts, that is, the main open-class *categories* of a domain, can be modified in many directions, as to number, gender, status, time, aspectual style of occurrence, epistemic value, etc., and such variations are often expressed by the *flexives* of the (extremely variable) lexical morphology of the

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[8] A speaker communicates what he is, according to himself, 'authorized' to share. As a specialist in some field, for example, he is 'informed' by the authority, the 'spirit', the methodology, or the rationality, of that field. The French philosopher Michel Foucault used to ask, "Where are you speaking *from*?". The subject of enunciation (P1) is always speaking 'from' some A. The ultimate version of A is quite simply: the truth, of interest to Humanity – or the respect for truth we call Reason.

[9] The pronoun *we* can be analysed as P1 + A, where A is either inclusive or exclusive of P2.

[10] On semantic domains, see Brandt 2004.

language in question. Words are universally identified by their 'roots', which are basic concepts signified by certain phonetic invariants, from a couple of consonants to a series of syllables, surrounded or filled by variants, obtained by flexives, expressing syntactic or semantic modifications. In principle, flexives have *schematic* (relational) meanings, whereas roots have *categorial* (classificatory) meaning. The flexo-lexical result is a word with both categorial and schematic meaning. The linear order of flexives is more strict than the syntactic word order; probably because it belongs to the lexical instance and is really a matter of the inner phono-articulation of the word, characteristic of the language in question.

2.b : Syntax

Words feed into phrases and sentences: syntax. Lexical morphology readily indicates the syntactic functions of words. The syntactic organization of words, when we speak, takes place within a time span of a few seconds, and the resulting constellation of phrases and clauses, sealed by a pause that makes the syntactic whole into a sentence (whether finished or not), works as a *structured mental space*, rather than as a memorized linear and additive sequence of accumulating elements of possible grammatical meaning. Meaning notably occurs at once, when this syntactic space is somehow saturated and closed (again: whether finished or not). Word 'order' is primarily a matter of relative distance between connected words, not a matter of direct linear contact: spatial closeness expresses structural connection but only relatively.

Connections are established by something quite different from word-to-word contact. They obtain between words (and groups of already thus connected words) through the operations of a canonical mechanism that activates a series of proto-semantic *nodes*, whereby words are combined to build elementary scenarios corresponding to various syntactic constructions. In the view of this theory, the mechanism itself, and the series of nodes activated, remains the

same for different constructions; it consists of a maximal set of possible phrase and sentence complement types, or proto-semantically informed cases, a subset of which is used for each construction.[11]

Apart from offering a certain construction, a sentence is facultatively specified by epistemic or modal adverbials, spatio-temporal complements, and other specifiers – indicating causality, finality, instrumentality, etc.[12] Since the point here is not to argue thoroughly in favor of a particular syntactic model, but rather to present a global view of the architecture of language, I shall only venture a short demonstration of the sort of sentence analysis that would suit this view.

Here is a random sentence from Fénéon's *Novels in Three Lines*[13] :

(1) **In a café on Rue Fontaine, Vautour, Lenoir, and Atanis exchanged a few bullets regarding their wives, who were not present.**

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[11] By proto-semantic nodes I mean connectors that connect meaningfully. The verbal node for *transitivity*, for example (notated C3 below) carries the schematic meaning of /change/, whereby the agentive form of transitivity confers change to the object, and apperceptive transitivity confers change to the subject: Peter helps Mary, versus Peter sees Mary.

[12] I gave a first account of this particular view and model of syntax in Brandt (1973), then in Brandt (2004). This *'stemmatic'* model is a sort of case grammar in Fillmore's sense, but instead of an infnity of frames it uses a canonical set of case nodes with very 'vague', proto-semantic contents.

[13] The quoted sentence constitutes the entire story. Félix Fénéon, *Nouvelles en trois lignes*, 1906, translated by Luc Sante, New York Review Books, 2007.

The stemmatic node structure[14] integrates substructures with verbal and nominal heads (Fig. 2).

The linearized version (1) of the syntactic stemma of the sentence is obtained by a series of projections from the (in this model, binary) phrase nodes to the phonetic string, where prosody is added accordingly. Several linearizations of the same stemma are often possible, but prosody must signal the meaningful phrasal parts of the sentence. To read a sentence, or to grasp its meaning from heard speech, is to immediately set up the *global sentence scenario*,

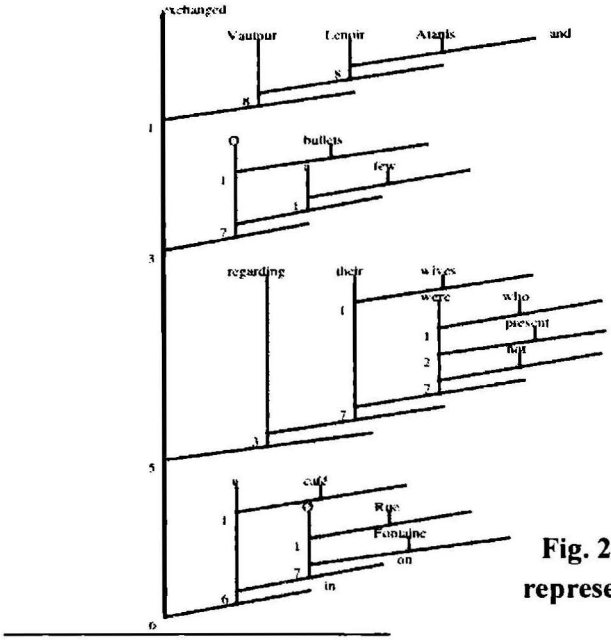

Fig. 2. Stemmatic representation of (1)

[14] *Stemmatic* structures are recursive cascades of schematizing nodes running from 1 to 8. *Grosso modo*: Head: verb or determiner. Complement 1: subject. C2: predicate. C3: object. C4: directive (indirect object). C5: projective (ground or cause). C6: locative. C7: epistemic adverb, quantifier, or name. C8: conjunction. The complement Cx nodes each contribute a schematic aspect of the meaning scenario of the integrated constructions; not all have to be filled, but their stemmatic order stays identical.

here a scenario containing three male characters in a café who shoot at each other after discussing their respective wives.

2.c: Semantics

The proper names, we have to imagine, refer to male customers seated at a table in the café and having a conversation concerning their respective wives. We must further imagine that the conversation becomes a rather vehement debate involving offensive comments on the ladies. The verbal *exchange* then becomes violent, and since the three gentlemen are armed, it goes from niceties to less polite verbal provocations, and then to gunfight. The semantics of the concept of 'exchange' displays its full range from positive to negative. In conversations, we mainly offer friendly comments on the world, each other and ourselves, but teasing can be *offensive*, trigger *anger* and escalate into *violence*. We do not know what these gentlemen were drinking, but the degenerative course of events may invite suggestions.

The semantic schematizer of the situation is thus that of exchange, in the positive sense of reciprocation and of its negative, retaliation. Speaking and shooting illustrate the extremes. Between the extremes, exchange implies the idea of *equivalence* of the entities that circulate among the agents, but also the idea of instability and possible imbalance characterising the playful aspect of many informal exchanges, where responses therefore easily escalate. Male comments on women would be a privileged category of occasions for such developments from respect to disrespect, and thus from equilibrium to extremism.[15] In an exchange relation

[15] Especially so since *three* agents are involved. The exchange is asymmetrical. But here we will just consider the minimal dual version S1 <–> S2. There are three of these involved in the given situation S1–S2–S3.

between S1 and S2, where the response to O1 from S1 is O2 from S2, the unstable equivalence E can radically change the value of the Os on a scale from good to evil (Fig. 3):

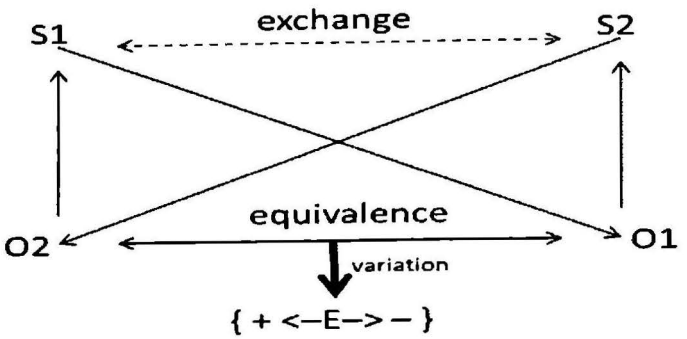

Fig. 3. Unstable exchange.

Fénéon's very short 'story' consisting of one sentence activates a semantic awareness of this aspect of our intersubjective condition, which can readily be recognized in many contexts and at different historical scales.

2.d. Discourse semantics

Nouvelles en trois lignes (News in three lines) was really the name of a column that appeared in newspapers of the beginning of the century, such as *Le Matin*, where the author, the writer and editor Félix Fénéon, worked for some months in 1906 and wrote 1220 of those before finding another job. As his translator Luc Sante reminds us in his preface to the English translation of the book (2007), newspapers were the immensely important new media at that time and also marked modern art profoundly, as their appearance in cubist paintings illustrate. The format of the *fait-*

divers, the laconic anecdote, reduces the citizen to a ridiculous or tragic miniature figure, mainly bound for statistics. Fénéon was an art critic and a literary editor who had worked for Thadée Nathanson's famous *Revue blanche* for eight years, and had edited Rimbaud's *Illuminations* as well as Lautréamont's *Chants de Maldoror*. His personal publishing house later published the first French translation of James Joyce, *Dédale* (1924). A disciple of Mallarmé, Fénéon was famously exercising "his considérable talents for compression, distillation, and skeletal evocation, making the items something like haikai. He managed to engineer the most minimal, Swiss-watch examples of suspense (making them a special challenge for the translator, since word order is often crucial)."[16] Here are three examples of his *nouvelles*:

(2) Responding to a call at night, M. Sirvent, café owner of Caissargues, Gard, opened his window; a rifle shot destroyed his face.

(3) Mme Fournier, M. Vouin, M. Septeuil, of Sucy, Tripleval, Septeuil, hanged themselves; neurasthenia, cancer, unemployment.

(4) On the bowling lawn a stroke leveled M. André, 75, of Levallois. While his ball was still rolling he was no more.

This is the sort of almost silent prose that forms the context of our syntactic example (1). Remember that 1905 had been a turbulent year in France and elsewhere; separation of Church and State; failed Russian revolution; roaring declamations and hyperbolic discourse filled the public spaces as well as the newspapers (while the radio and the cinema were not yet socially present and operative).

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[16] Luc Sante, op. cit. p. XXIV.

As the examples show, the semantic core of the 'stories' is often the theme of death. The lethal events are framed by very salient schematisms, such as the inverse transitivities: passively looking *out*, actively shooting *in* (2); suicidal despair (3) caused by mind, body, and society, as if these three instances were of the same kind, all just being fatal circumstances: neurasthenia = cancer = unemployment. Capitalist economy, lethal illness, madness: intransitivity (it just happens) =/≠ transitivity (the system does this to you), causality 'is' chance.[17] M. André, in (4), throws his ball and dies; the ball runs for some time, and he dies *within* that time span, not knowing where the ball goes: durative (rolling) and aoristic (dying) aspects are superimposed; what you do has life-indifferent temporal consequences and effects, erratic or goal-directed, that you will never know.

The minimalistic writing of Fénéon foregrounds schemas like these and point to an overarching aesthetic sensitivity that lets silence vibrate metaphysically, so to speak. The absence of a reassuring narrator's voice becomes a question addressing the world as experienced from within – within the three news-column lines of each anecdote. The universe is as silent as the narrator. As marquis de Sade had stated a century earlier, horrible crimes abound, as well as good deeds, and the sky stays blue, empty, indifferent.

As the example shows, discourse semantics can add a wider semantic resonance to what is literally present in a sentence: words that build scenarios also build different kinds of significant silence around themselves, reflecting the *discursive resonance* they create in the universe of politics, aesthetics, metaphysics, ideology, and general attitudes of the informed mind to the experiential world.

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[17] Fénéon was an active political anarchist and very critical against the cynical bourgois society he felt he had served as a ministerial clerk in his early days.

This is due to the specific structure of discourse semantics: the micro-narrative texts of our examples are not integrated into a macro-*narrative* form, a real 'story', but instead into a *descriptive* format that conveys each micro-text the status of a verse in a long poetic list, the book.[18] This long 'poem' is in turn interpretable as an *argumentative* whole, in which the episodic elements are premises and a certain human condition is the implicit conclusion. Semiotically speaking, discourse is in fact organised by either *narrative*, *descriptive* or *argumentative* linkings of sentence-semantic elements. *Narratives* are temporally and agentively linked aggregations of situational spaces under a narrator's voice. *Descriptions* are spatio-temporally linked aggregations of observations, 'data', under an observer's gaze. *Argumentations* are finally sets of arguments (whether narrative or descriptive) serving as orienting vectors in a space of interrogation. The three discursive principles, and the three overarching subjects, the narrator, the observer, and the thinker, are cognitive operators guiding the mind toward some overarching meaning. Knowledge is thus constituted by more complex uses of these principles: *historical* knowledge is mainly narrative and descriptive; *science* in general is mainly descriptive and argumentative; and *philosophy* is narrative and argumentative. Religious and ideological discourse seem to be narrative and anti-argumentative, using sets of arguments as disorienting vectors in interrogative space; the result is their focus on the subjective attitude, rather than on reality; the emotional subject becomes its own disoriented reality. However, in all cases, the discursive subject will potentially be a subject of enunciation (a first person, P1).

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[18] Published posthumously by Jean Paulhan, in 1948. The author died in 1944.

2. e: Returning to enunciation.

Reading a text or listening to someone's speech implies activating a feeling of 'where it comes from', an attempt to find the common ground and the sort of authority (that is, genre of truth) that is active behind the voice, imagined or perceived, of the enunciator. The deepest level of discursive-semantic resonance of the literal meaning apperceived will invest this basic and grounding instance of enunciation and orient the receptive attention, as well as it will determine the subsequent *response* of hearer or reader. In a sense, starting to write or to speak is always responding to some package of language, recent or remote, perceived or remembered with a sufficient degree of saliency to trigger word-based cognitive activity.

The spiral model (fig. 1) situates the moment of speech initiation in the hiatus spanning from pre-speech enunciation to actual phonation or digital expression. In that moment, a second or third person becomes a first person, and an intention to continue or discontinue the thought of an other person, or several, naturally becomes an urge to participate in the common project of 'saying what (we think) there is' – the shared project that follows from sharing words, that is, from being part of a linguistic community: *Say what has to be said!* This is what words are for, what they call for; their meaning lets us and urges us to *speak up* – we can therefore even sometimes suffer a sort of speech compulsion, and experience the difficulty of 'holding our tongue'. By contrast, as we have seen, there also exists an emotional need *not* to speak but instead to mentally inspect the words that present themselves to us as candidates for triggering an outburst of language: a critique of available language that can lead to irony, poetry, or a preference for silence, as our example has shown. Fénéon said: *J'aspire au silence* (I aspire to silence). This 'anti-prose' attitude is apparently, maybe universally, obtained through an intense attention paid to words themselves. They make

us speak, when the mind lets them be transparent[19], as windows toward the world, and they can silence us, when we turn our attention to their own strange and linguistic existence.

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[19] Louis Hjelmslev interestingly observed that "language does not want to be seen".

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THE LINGUITECTURE OF WFPS IN ENGLISH: EVIDENCE FOR KA:RMIK LINGUISTIC THEORY

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Abstract

Word-formation processes (WFPs) in languages exhibit certain combinations and permutations in their formation. According to Ka:rmik Linguistic Theory, these combinations and permutations are dispositionally generated-chosen-specified-directed-materialized (GCSDMed) in their variety-range-depth according to the Principle of Language Creation and Application (PLCA) which states that "When we live, we language the world for living in a context and live the world by languageing in a context through dispositional action as ka:rmik action", and the Principle of Dispositional Discrete Permutation (PDDP) which states that "When we live, we language the world in and by its experience through limited uses of limited means in (un)limited (open-ended) combinations and permutations" among other principles. In this paper, an attempt has been made to show how these two principles are made use of in the linguitecture of English word-formation processes at the macro-language level of word-formation.

KeyWords: word-formation processes, Ka:rmik Linguistic Theory, Principle of Language Creation and Application (PLCA), Principle of Dispositional Discrete Permutation (PDDP), macro-language level

1. Introduction

English word-formation processes (WFPs) have been described and analyzed in detail by observing and analyzing the various types and classes in rich taxonomies (see Quirk, et al 1986 for such details). However, these analyses have not been motivated from a macro-level of word-formation in terms of broad concepts and principles and networks. Such analysis is useful in knowing how language is conceptualized by dispositionally discrete choices and patterned and

structured in the linguistic system. Therefore, in this paper, an attempt has been made to motivate the linguitecture of English word-formation to show how the principles of KLT operate in its design.

2. Literature Review

Word-formation processes have been motivated in different linguistic models. In traditional grammars, a word, syllable, or sentence is created by following all the principles related to it without any competition or violation among them as proposed in OT. In functional linguistics and cognitive linguistics, word-formation processes can be motivated from their functional and cognitive linguistic perspectives.

Accordng to Halliday and Matthiessen (2004: 31), *"functionality is intrinsic to language, that is to say, the entire architecture of language is arranged along functional lines. Language is as it is because of the functions in which it has evolved in the human species"*. This, I consider an extreme functional perspective on the relationship between function and form. Let us closely examine this issue from different perspectives of the relationship between function, and form, meaning, choice, and human disposition.

1. According to Lamarck, the functions associated with use will decide the anatomy of animals as in the case of giraffes being taller to reach the leaves of trees. However, this is contradicted by Darwin's theory of evolution according to which small variations in form *precede* function as determined by selection as in saltation of a bird's feathers. So Halliday is a Lamarckian in his view of function – it is also the same in architecture: *Form ever follows function (Louis Sullivan)*. But from a Darwinian evolution perspective, it is the form that leads to better function.

2. When we give primary importance to 'function', form is constrained severely by its utility, and factors such as aesthetic appeal, and personal tastes are set aside.

3. Now let us come back to language and word-formation processes in general and see whether function rules supreme in their formation.

3. 1. Function – Form Relation in Language: The relationship between form and function is not that straight forward as in biological or physical sciences for the simple reason that the medium of language is sound (in speech) and ink marks on paper in writing, not any other material substance. This difference is crucial in deciding the function-form relation: the shape of the sounds need not conform to the functions they perform if we consider function as 'what something does'. For example, the word *sky* is a monosyllabic, triphonemic word and it performs the function of referring to or meaning an infinite expanse above earth and a similar monosyllabic word *ant* refers to a tiny creature on earth. Here form does not follow meaning at all: *virtually, any form can be used to express any type of meaning by (dispositional) creativity.* In a similar way, the same word *strike* can be used to perform the function of a noun and at the same time as a verb also. Here different functions are performed by the choice of the same form. Therefore, these words are formed out of their own rules of creation in language and not by any strict correspondence with their form.

3. 1. 1. One Function – Different Forms: Both in the animal world and in language, we have different forms (also called structures) to perform the same function. For example, the function of digestion by grinding up food can be performed by the teeth and the gizzard of a bird in the animal kingdom. Even if we justify this on functional grounds, it is difficult in the case of languages: different words, and different structures may perform the same function. For example, eDa:ri, sahara, re:gista:n, all mean the same 'desert'; SOV in Telugu, SVO in English, OVS in Hixkaryana, and V(S)O in Arabic perform the same function of an assertion. The point is the *architecture* of these languages – *linguitecture,* as I call it – is NOT arranged along functional lines as claimed in the Hallidayan quote; it is arranged

according to the dispositional cognition of the form for the same function.

3. 1. 2. One Form – Different Functions: The trunk of an elephant is used for eating as well as uprooting trees. Here we can say that the form is made according to its functions, but look at a word 'invite' which is used as a verb becoming a noun after its creation for the specific function of being a verb – here, the form precedes the function and is used to create a new function for the same word in the direction of verb-to-noun but *editor* to *edit* in the opposite noun-to-verb direction; a word 'silly' meaning something before (blessed) meaning something else now (funny); the word 'good' extending its meaning to many other meanings from being ethical to nice, useful and beautiful.

3. 1. 3. One form – Extended Functions: Sometimes the form may be used to perform many functions in a context. For example, the same word may perform different functions in a sentence as the subject or object: *Mangoes (S) are sweet vs I gave him mangoes (O).*

3. 1. 4. Dispositional Creativity and Novelty: There are many words which are not created to perform any real function as such except the function of being novel: backwords (naming by reverse spelling) for American towns; on the other hand, an affixation process such as transfixation in Arabic is a feat of dispositional creativity.

3. 1. 5. Free Will vs Compulsion: In architecture, function controlling form may be all right, but in day to day life, it is not the rule: many historical changes are not functionally decided but dispositionally altered: Sound loss in languages is not functional but dispositionally created by such factors as laziness, carelessness, and imitation. So also in the case of typological choices in word-formation processes: Kyrgyz prefers mainly suffixation and no affixation is available (personal communication Shakhriza 2016), Mandarin Chinese is preponderantly moving towards compounds – because of disyllabic

words (personal communication with Tsao Meng Yao 2016); Xavante has 48 clicks whereas Indian languages have no phonemic clicks in words; and even in syntax, Telugu prefers adjectival phrases in the unmarked case and adjectival clauses in the marked case whereas in English adjectival clauses are unmarked.

3. 2. Function – Meaning Relation in Language: there is no strict correspondence between function and meaning in language. The same function can be performed by different meanings (propositions in the exclamations to mean sarcasm). For example, 'And Brutus is an honourable man!'. Here, a new function of sarcasm is derived from form by repetition. In addition, the equivalent of a word used in a language to perform a certain function may or may not be used in another language: the absence of case markers is a case in point – English has three case markers but Hungarian sixteen.

3. 3. Function – Choice Relation in Language: There is always the possibility of ***choosing*** *different forms by* ***dispositional cognition*** *to perform the same function as shown by the typological variation in languages: S* V* O : SVO, SOV, OVS, OSV, VSO, VOS. In the field of word-formation processes, variation in the formation of words and their processes does not really affect the functions they perform. Whether the words are formed by mainly compounding (as in Mandarin Chinese), or mainly suffixation (as in Kyrgyz), or mainly transfixation (as in Arabic); or by isolation or agglutination, the functions are not affected.*

Most importantly, ***a linguistic function (to be realized by a form) has to be first and foremost discovered or created and then chosen*** *to become a function in language. Without that prerequisite, no function can exist in language. If the people have not discovered and chosen the function of asking questions by a question marker, that question marker will never come into existence in that language (e.g., the absence of plural forms in Chinese – ge is used to indicate number; the absence of numbers in Piraha; the presence of different numerals for different types as in Pingelapese; the absence of gender in the*

first person in many languages; the absence of question markers in the American language Hixkaryana (?)). Hence, dispositional (cognition and choice and its implementation) are supreme in any linguistic system. This itself offers a major reason for rejecting the functionalist position as cited earlier.

3.4. Function – Disposition Relation in Language: In fact, disposition, dispositional cognition, dispositional choice rule supreme in generating-choosing-specifying-directing-materializing (GCSDM) all lingual action as will be shown in this paper.

*3. 5. Function – Karma Relation in Language: According to Ka:rmik Linguistic Theory, Karma (**Karma** (with a capital K) means the principle of cause-effect experientiality derived from previous actions) while karma (with a small k) refers to 'action') decides the individual and collective svabha:vam of the individuals from where all lingual action is GCSDMed. Hence it is the ultimate cause of all lingual activity, including its functionality. Therefore, in such a view, it is atomic and simplistic to think that linguitecture (architecture of language as per Halliday) is functional.*

On the whole, the idea that function decides linguitecture has to be critically re-examined.

Pavol Štekauer's *onomasiological approach to word-formation* is another important theory of word-formation. In his model, the word-formation process is divided into: *conceptual, semantic, onomasiological, onomatological, and phonological* levels (see Stekauer 2001: 11). Even though it is better than the formal models in the sense that there is an inclusion of the cognitive component into the model and division of the process into conceptualization, meaning assignment, selection of the semiotic components (onomasiological and onomatological), and the formal (phonological) component, such a division is not dispositional, sociocognitively comprehensive and systematic. In a word-formation process, there are three basic stages: 1. Choice; 2. I-I-Iing NwN; and 3. (Material Form) Realization. *First,*

the *form* that is *realized* embodies *a pattern and its structure* (arrangement) (P&S) and this P&S embodies its *concept of form* which is *dispositionally chosen and cognized.* To illustrate, the word *examination* - as an assemblage of its 11 phonemes as sounds - is its material form. A P&S has been superimposed on this material form (sound energy) as this and that phoneme to be so and so phoneme (i, g, z, ae, m, i, n, ɛɪ, ʃ, ↔, n) in such and such manner [into four or five syllables in that order of arrangement of phonemes into syllables: ig.zæ.mi.nɛɪ.ʃ(ə)n]. This P&S level is critical in identifying the variety-range-depth of the phonological processes involved in the formation and structuration of words, in fact, any linguistic phenomenon. This *P&S of the form* further embodies its *concept of form* and this *concept of form is impelled from dispositional knowledge by cogneme cognition as shown in the Ka:rmik Linguistic Theory Conceptuality Graph (see Bhuvaneswar 2013b, c)* - and the *concept of meaning* can also be motivated in this graph. This concept of the form furthermore embodies *meaning (concept of meaning)* that P where P is *examination.*

Again, the concept of meaning (that P) will also have a *P&S of its concept of meaning* as this and that meaning (a process) to be so and so meaning (an examination) in such and such a form of meaning (an abstract process realized by a physical process and classified as an abstract noun) has been superimposed on this material form (sound energy). Hence, the material form serves as a common base for both the material form of the word and the meaning of the word. As such, there are *two* simultaneous superimpositions of *concepts* (of meaning and form) and *P&Ss* (of meaning and form) on to *a single* material form of the word for its realization. This entire process cannot be achieved without *a choice* of the concepts, P&Ss, and the material (sound) form of the word *examination.*

Second, in addition, these two levels of concepts of form and meaning function as two distinct networks in a linear process; and also have P&S, and material form as their sub-networks. What is more, these

two networks with their sub-networks are interconnected-interrelated-interdependent (I-I-I) in forming the word. [This networking is neatly captured in the *Principles of Networks-within-Networks* and *I-I-Iing Networks in radial networks* in the Ka:rmik Linguistic Theory.

Third, what is cognized to be this and that to be so and so in such and such form is *realized* (materially manifested as a sound form, semiotically representing meaning) by the *Principle of Material Form Realization*. In Stekauer's approach, the cognitive processing is not captured comprehensively even though he mentions the conceptual level and the phonological level. In KLT, there is the *concept-pattern and structure-material form* level motivated from *disposition-desire-effort-action-result-experience process* by *disposition-dispositional bias-response bias-choice-variation-result-experience* processing of action by *gradual evolution.*

This is done by establishing a route from the
i. Universal Sciences of [Action-Living-Lingual action] of supracosm- macrocosm-microcosm – ***to*** –
ii. the Individual/Collective [Intuitive Understanding of a Phenomenon (IPU) – Troubleshooting – Problem Solving Strategies (PSS) – Solution] by Exploration of Variables – ***through*** –
iii. [Exploration of Contextual Variables (ECV) – Productive Extension of Variables (PEV) – Creation of New Variables (CNV) – Deletion of Variables (DV)] – **by** –
iv. Networking networks and *networks-within-networks* (NwN) – **in** –
v. an Interconnected-Interrelated- Interdependent (I-I-I) and Atomic-(W)holistic framework.

Therefore, according to KLT, all these approaches are not holistic and they cannot provide a comprehensive description of the word-formation processes (see Bhuvaneswar 2013a for more details on the

atomicity of these approaches). Hence, there is a need to make such a holistic motivation of the word-formation processes in English and other languages in general.

3. Motivation of the Major English Word-formation Processes in KLT

The Ka:rmik Linguistic Theory evolved in a bottom-up process of IUP (intuitive understanding of a phenomenon), TS (troubleshooting), and developing PSS (problem solving strategies) and dispositional creatively discovering or creating a solution to the concerned problem – later on, it becomes *top-down* and finally *radial*. In the process of finding solutions, the procedure is linear and involves the following five stages:

1. IUP and TS and Data Collection; 2. Patterning and Structuration of the Data by Descriptive Classification; 3. Discovery of Concepts and Principles by Analyticity and Reversal of Ordering by Effect-to-Cause Logic; 4. Developing Choice Networks and Procedure Confirmation by dispositionalization through intensive induction and transduction; and 5. Causal Motivation and Experientialization by Karma.

A five stage procedure as outlined in the standard KLT Procedure will be followed to motivate WFPs in English.

1. KLT Procedure

Ka:rmik Linguistic Theory has a procedure to conduct linguistic analysis and consists of the following five stages in addition to the Stage 0: Approaches to Living Stage.

1. First, by **data collection** (which gives us the WHAT of language in question for analysis);

2. Second, **patterning and structuring** the data into clearly identifiable categories, types, and classes (which gives the HOW of language in terms of its Organization);

3. Third, discovering **concepts and principles** from the patterned and structured data

(Which gives the HOW of language in terms of its Principles for Organization);
4. Fourth, developing **systemic choice networks** for the system (which gives the HOW of language in terms of its Dispositional Conceptualization); and
5. Fifth, motivating systemic choices from disposition and building up the **language as a dispositional sociocognitive linguistic system** created and used for the **construction of ka:rmik reality via dispositional reality via actional reality.**

They are applied to conduct an analysis of the linguitecture of WFPs in English to show how it offers evidence for Ka:rmik Linguistic Theory.

Stage 1. Data Collection
The data chosen here has already been collected by Quirk, et al (1986) in their Comprehensive Grammar of Modern English. This gives us the WHAT of language, namely, the words for knowing the word-formation processes in question for analysis.

Stage 2: Patterning and Structuring the Collected Data (by Induction, Comprehensive Induction)
This part is also done by Quirk, et al (1986) in their Comprehensive Grammar of Modern English. They have arranged the data of words formed in English into clearly identifiable categories, types, and classes as follows:
1. Affixation; 2. Conversion; [3. Back-formation, 4. Backwords]; [5. Reduplication, 6. Compounding, 7. Blending]; [8. Clipping, 9. Dimunitives]; [10. Acronym, 11. Initialism];
[12. Borrowing, 13. Calque]. [Their detailed analysis is beyond the scope of this paper and the reader is referred to Quirk (ibid) and Bhuvaneswar (2016) for extensive details].
This gives the HOW of language in terms of its Organization.

Stage 3: Underlying Concepts and Principles (by Intensive Induction)

From an observation of the various patterns and their structuration as instantiated in the numerous words in English, the following three important concepts and principles have been discovered:

a. **Mathematical Concept of Computation by the Principles of Addition, Subtraction, and Multiplication:** In affixation, a morpheme is affixed (by *prefixation* (e.g., **a**moral, **de**centralize, **mal**function, **arch**-enemy, **sub**-conscious, **fore**-shadow, **bi**cycle, **auto**biography, **a**sleep, etc.) or *suffixation* (e.g., teach**er,** incred**ible,** two**fold,** specify, quick**ly, etc.)** or *infixation* (e.g., man**un**kind, abso**bloody**lutely, etc.) in a few cases); in *compounding* (e.g., notebook, blueberry, workroom, breastfeed, stir-fry, highlight, breakup, outrun, bittersweet, etc.) two separate words are joined together; and in *blending* (e.g., brunch; motel, etc.) parts of two words are joined together. All these processes involve the mathematical principle of **addition.** In the case of *truncation* (e.g., lab, math, etc.) the principle of **subtraction** is used; and in the case of *reduplication* (e.g., bye-bye, pooh-pooh, etc.) and *triplication* (e.g., no, no, no – rarely productive) **multiplication** is used.

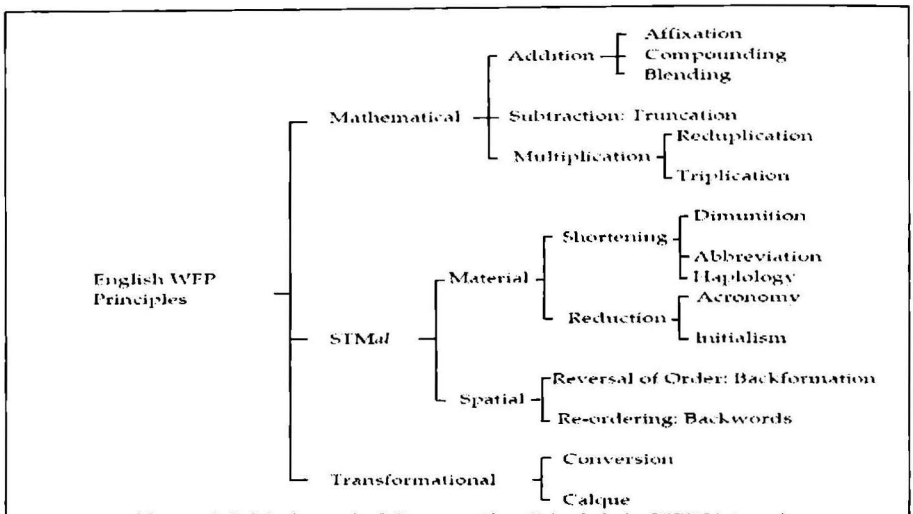
b. Phenomenal Concept of Material Quantification and Spatial Ordering;

In the WFPs of *dimunition* (e.g., **Mike** for Michael, etc.), *abbreviation* (e.g., **N.B.** for nota bene, etc.), and *haplology* (England for Eng**la**land, etc.), there is material (sounds) shortening and in the case of *acronomy* (e.g., UNESCO, etc.) and *initialism* (e.g., B.B.C, etc.), there is material (sounds) reduction. However, in the case of *backformation* (e.g., edit from editor, etc.) and *backwords* (Ekal from lake, etc.), there is spatial ordering.

c. Material Concept of Transformation

Finally, in the case of *conversion* (play (verb) to play (noun), etc.) and *calquing* (e.g., the English 'loanword' from the German 'lehnwort'), there is transformation.

This gives us HOW the language (i.e., English WFPs) is created, developed, and organized in terms of Chosen Principles. They are captured in the following network for a quick reference along with the major types of WFPs generated by them.



Network 3: Mathematical Computation Principle in WFP Network.

Stage 4: Systemic Networks of Choice (by Transduction)

From the development of systemic networks of choice, we come to the conclusion that language is as it is NOT because of what it does from a ***purely functionalist goal*** but it gradually *evolved* to be as it is by its ***dispositional conceptualization*** of lingual **action** as a whole (i.e., form-function-meaning-style-context taken together in an integrated framework) as a *tool* which evolved into a *system* which further evolved into a *resource* in an I-I-I network within networks (N-w-N) in an atomic-(w)holistic functional set-up as explained below.

According to Ka:rmik Linguistic Theory, the ***guNa:s*** *sattva, rajas, and tamas* qualify the cognition of action in their respective ways and colour it accordingly. For example, *tamas* is inertia and its associated

qualities are ***confusion, distortion, simplification, reduction, etc. that spring from inertia.*** Consequently, the STM principles of word-formation arrived at by transduction are a product of *tamas* and hence ***ta:masik***. Sattva is luminosity and is associated with such qualities as ***intelligence, analyticity, equilibrium, balance, correctness, appropriateness, correct order, etc.*** The mathematical principles of word-formation such as addition, subtraction, multiplication require intelligence, analysis and so can be considered products of ***sattva*** and hence ***sa:ttvik.*** *Rajas* is activity and its associated qualities are ***speed, intensity, elaboration, complexity, redundancy, decoration, etc.*** In the case of transformation, there is extension of the process from X to Y but there is also the case of retaining the same form (static) which is a quality of inertia. Hence, we can say that it is a combination of rajas qualified by tamas and hence it is **ta:masik-ra:jasik.**

Since there is no one-to-one correspondence between function and form-meaning-choice, it is difficult to systematically pin down which function causes which form to be constructed and used. For example, in English, the noun *invitation* is left out and the verb *invite* is used instead by choice. WHY? The function cannot motivate this change in choice because the form *invitation* is already there to perform this function of 'inviting'. Therefore, there must be some other outside function that brought about this change, choosing the verb 'invite' dispositionally to function as a noun for the sake of *novelty*. So, we need to motivate the choice of different word-formation processes from a higher level, the level of disposition which GCSDMs all lingual action according to the following equations.

Principle of Action:

Disposition Desire→ Effort→ Action → Result →Experience

Principle of Choice of Action:

Disposition → Dispositional Bias → Response Bias
Choice→ Variation → Action→ Result → Experience

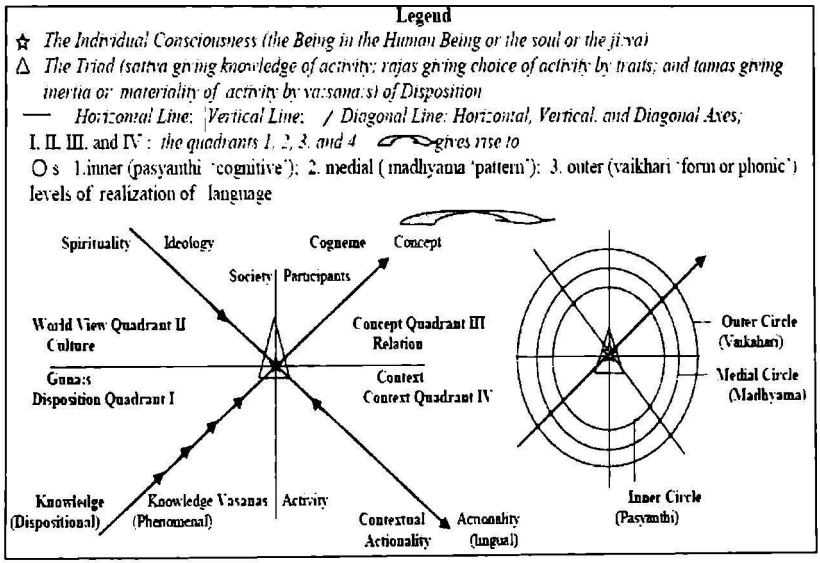
Disposition impels desire (and intention) which leads to effort. Effort leads to action which gives results that are experienced in a context. This is a basic equation of how action is generated. Again, from another angle, disposition generates a dispositional bias towards this and that action to be so and so action in such and such manner, and this *Dispositional Bias* (D.B.) leads to response bias (as understood in psychology). *Response Bias* (R. B.) further leads to *Choice* of Objects/States of Being/Action thus bringing about *Variation* in the performance of action.

This choice is cognized to be *this or that as so and so in such and such manner*. This unit cognition is indicated by the term **cogneme** in Ka:rmik Linguistic Theory. Finally what is dispositionally cognized is realized in the context. Thus we get a word formed in a particular pattern and structure in a particular phonetic form. (see Bhuvaneswar 2013b for a detailed discussion of how QLB Affixation WFP is created and spread). Such a word is standardized by ICCCSA (as already shown in a graph) and stored in the cultural memory of the language community.

Quotational Lexical Bifurcation is a process created in Telugu 'written' journalism (newspapers) in which a word is bifurcated into two words by quotation marks to convey a meaning within a meaning to create a new contextual meaning: *da: ruNa* is a single word which means 'terrible'. However, the form can accommodate another word 'ruNa' within the same word. **This is its *formal* property which became the source for a new function.** The reporter has exploited this formal property to create a word within a word by separating it with quotation marks within the same word: da:**'ruNa'** to imply a new word nested within a word and suggest a new meaning by contextualizing it with an event of farmers taking loans from the banks which could not be repayed and thus which became a terrible burden on them. This process emerged not because of any real functional need for *brevity – in fact the function of brevity is created from the form itself* – but because of a Dispositional Functional Pressure for novelty, which is optional, in the news reporter – this is

so because such a process was never used before for decades. Later on this nelogistic process became a trend and became a pattern and became a WFP in Telugu spilling into English also. A similar procedure also should occur in other types of word-formation in English. For example, the recent intrusion of duplifixation from Hebrew into English is not because of any functional necessity but because of language contact and its influence in the recent times only. This is another problem for functionalists to address – WHY only now and not before?

These processes are succinctly captured by the cognition graphs in KLT given below.



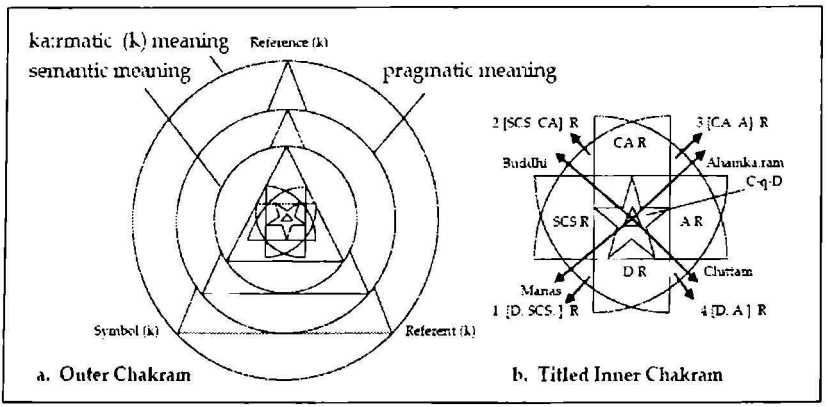
Network 4. Cognition of lingual action process and its Realization Network

In view of the above analysis, it is reasonable to posit a higher level of organization in the taxonomy to motivate choice in the network as follows.

Disposition **Sattva / Rajas / Tamas** **Dispositional Bias** **Response Bias**

CHOICE of X

Consequently, the Network 3 should be redrawn to motivate choice from the level of disposition in the light of the above Equation. Thus, this stage gives the HOW of language in terms of its Dispositional Conceptualization.



Network 5. Cognition of Cogneme and its Realization Network

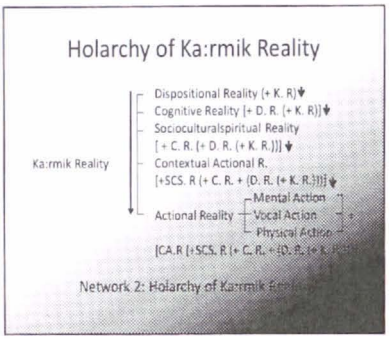
An important point to note is the choice networking in a particular language similar or distinct from another language. For example, there are many (10) known ways of affixation such as *prefixation, suffixation, infixation, circumfixation, interfixation, simulfixation, suprafixation, duplifixation, disfixation, and quotational bifurcation (as in Telugu journalism).* These processes as can be seen clearly are created by ***permutation*** of the affix in the initial, final, medial, etc. positions. In a similar way, there are many word-formation processes as mentioned earlier (see Stage 2). However, English is only ***dispositionally*** inclined towards a few of them such as prefixation,

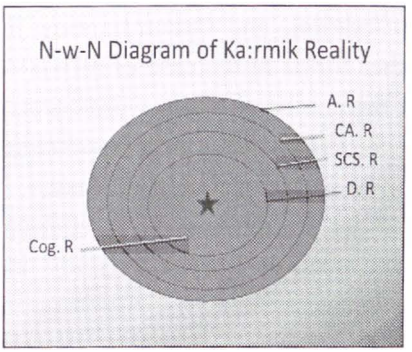
suffixation, and circumfixation in a productive way and discarded other forms in the case of affixation but more creative and productive in the choice of major word-formation processes and their sub-classes such as conversion, compounding, reduplication and even other minor word-formation processes. That is where disposition comes in and we know this by ***transduction*** – a term of logic coined by Bhuvaneswar (2016) to study induction at a global nature across languages.

Stage 5: Motivating Ka:rmik Linguistic Basis

This is only an interpretive stage of how the *dispositional reality* constructed via the *actional reality* becomes the *ka:rmik reality* of the *lingual actor* as the *sociculturalspiritual, contextual lingual actor* as the *dispositional, socioculturalspiritual, contextual actional, lingual actional actor*. Human beings perform action to fulfil their desires for the experience of the results of their action. Words are created dispositionally by various word-formation processes and used dispositionally within *utterances* through Networks-within-Networks of [sentences – phrases – words] within *discourse* within a *context*. However, they are used in an atomic-(w)holistic functional framework to coordinate the coordination of action for the fulfilment of their desires and the experience of the results of their actions, and hence the WFPs are ka:rmik. These processes are captured by the following Holarchy and N-w-N Ka:rmik Reality networks.

In the holarchy of ka:rmik reality network, it is shown how ka:rmik reality is constructed in an a:nushangik manner from dispositional reality (which is the state of affairs obtained at the dispositional level) to cognitive reality (which is the state of affairs obtained at the cognitive level) to SCS Reality (which is the state of affairs obtained at the SCS level) to contextual actional reality (which is the state of affairs obtained at the C. A. level) to lingual actional reality as networks-within-networks shown in the N-w-N Chakram (Diagram) of Ka:rmik Reality.





ICCCSA Networking and Transmission and Retention and Perpetuation

The words which have been created and used are applied in a context and then transmitted-retained-perpetuated according to the Individual-Collective-Contextual-Conjunction and Standardization of Lingual Action as shown in the ICCSA networks of Ka:rmik Linguistics. (see Bhuvaneswar 20013, 2014).

5. Conclusion

In the analysis conducted above, it has been shown how words are created – applied- (transmitted – retained – perpetuated) in the ka:rmik linguistic paradigm which integrates form-function-meaning-cognition-disposition in a unified linguistic framework and shows that language is as it is because it is intended to be like that to do what it does (i.e., of what disposition does).

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A Review Essay

ORIGIN AND DEVELOPMENT OF MODERN LINGUISTICS.

By E.V.N. Namboodiri.
Crescent Publishing Corporation,
New Delhi. 2016.
Pp.xii +227. Price: INR 950/-

Reviewed by: Prof. Rajnath Bhat
Banaras Hindu University

The book under discussion is based upon the life-time experience of a deeply informed scholar [the author] of language science. The author has very intelligently and humbly taken young minds on a historical journey back and forth to enable them to compare Paninian grammatical model of Sanskrit-India with the grammatical models of the ancient as well as modern West. The work provides brief but focused outlines of the Traditional European grammar-models, 20th century [American] Bloomfieldian-Structuralist model, 20th century [American] Chomskian- Generative model and the Paninian model of the Sanskrit-India. He demonstrates that the European Traditional grammar-model, based upon philosophy [meaning], was rightly abandoned by the 20th century Western scholars of grammar and linguistics in favour of the Sanskrit-Indian Paninian model of grammar. The book develops the discussion in incremental-steps to enable the reader [teacher as well as student] to grasp the subtleties of language structure and its explication.

The author mentions the six branches [*shiksha:*=practical phonetics, *vya:karaNa*=grammar, *nirukta*=etymology, *chanda*-s=meter, *jyotish*=astrology, *kalpa*= ceremonial] of the language-study that were prevalent in ancient Indian, of which three branches, namely, phonetics, etymology and grammar are essential areas of modern linguistics. *Shiksha:*, *nirukta,* and *prati-sha:khya* (phonology) are the earliest linguistic studies of the Veda-s [ancient Indian knowledge

texts]. Yaska is considered to be the pioneer *nirukta-kar* [etymologist] of the Vedic words. Yaska preceded Panini by couples of centuries, if not more. EVN Namboodiri, the author of the present volume, places Yaska in the 7-8th century BCE while he places Panini in the 5th century BCE whereas yudhishthir mima:msak & Ra:mna:th Tripa:thi Shastri (2014) in their '*History of Sanskrit grammar*' [Hindi] place Panini at 2900 *pre-vikram* era, that is, around 2950 BCE.

Panini's predecessors in Sanskrit-grammar writing mentioned by Namboodiri are the proponents of the '*pra:ti-sha:khya*' system who in turn come after Brhaspati who is believed to have pioneered teaching of grammar writing, and his prominent disciple, it is believed, is Indra (p.2). Panini's aSTadhya:yi [grammar of Sanskrit in eight chapters] comprises approximately 4000 aphorisms called *su:tra*-s that describe phonology, inflectional & derivational morphology, semantics and syntax of Sanskrit language meticulously and perfectly, immortalizing the model of grammar, the author himself and the language. The 20th century leading linguists L. Bloomfield (1933) and N. Chomsky (1957-65) have been immensely influenced by Panini's model of grammar as shall be demonstrated below.

The oldest European grammar of Greek language, written by Dionysius Thrax in the 2nd century BCE, is an extension of the philosophical schools of Greece whose major concern was to speculate about the origin and history of language; their analysis was thus based upon meaning. Panini's model of grammar is based on the analysis of phonetic form or structure of linguistic output, logic and grammar which has been captured through a systematic rule-formulation and generalizations. The superiority of Sanskrit-Indian scholarship in logic and grammar was recognized during the 18-19th centuries by a host of Western scholars, namely, Wilhelm von Humboldt, Franz Bopp, Theodor Goldstucker, Max-Muller, William D. Whitney, Franz Kielhorn and so on. Kielhorn worked with Sir

Ramakrishna Gopal Bhandarkar at Pune for over a decade and published essays on Panini etc. in '*Indian Antiquary*' during 1876-87 (p.10). Otto Jesperson (1933) observes that 'the discovery of Sanskrit' brought about a great turn in European linguistic thought and analysis. George Cardona and Paul Kiparsky continue to further enrich the understanding of Sanskrit-Indian linguistic thought across the West.

Ferdinand de Sassure (1913) initiated the structural analysis of language in Europe which was introduced in the USA by Sapir (1925). L. Bloomfield (1933) brought precision and systematicity in structural linguistic analysis and acknowledged influence of Panini's grammar on his system. He even adopted Panini's technical terms like 'sandhi' etc. in his framework. Noam Chomsky (1957. 1965 etc.) brought about revolutionary changes in linguistics. "The fundamental ideas of (Chomsky's) generative theory are in most instances explicit and sometimes implicit in Panini's grammar"(p.12). Panini's model of grammar involves formulation of well-defined, comprehensive rules for describing a "whole language", its roots and affixes that carry the principal meaning and the grammatical features respectively and "the derivational processes that describe the actual language forms as derived from their reconstructed underlying forms". Modern linguistics follows this model without exception (p.27-28). Chomsky's concept of 'Universal grammar' refers to the 'properties of grammar shared among a large number of human languages'. Panini pioneered the idea of 'universal grammar' as follows: He formulates six types of *sutra*-s [rules], namely definition [*sanjna*], interpretation [*paribha:sha:*], governance [*adhika:ra*], prescription [*vidhi*], restriction [*niyama*], and extension [*atidesha*]. The first '*sanjna*' [definition of technical terms- sentence, word, root, affix, morphophonemic processes, grammatical relations etc.] are clearly substantive universals; and the 2nd and third, the meta-rules, and grammatical relations are 'formal universals of language'. The last three, '*vidhi, niyama,* and *atidesha*' rules, describe Sanskrit

structures [obligatory [*nitya*] rules followed by exceptional [*anitya*]] in minute details that make aSTa:dhya:yi a grammar that continues to be unsurpassed even after 2600 [Western estimates] or 5000 years [Indian estimates] of its formulation.

Following Panini, Bloomfield and Chomsky describe a language or a dialect synchronically, independent of history and comparison. Panini pioneered the study of language as a generative system and sought to formulate sets of rules that describe the sets of sentences of a language. Chomsky (1965-75) defines 'grammar as a device that generates sentences'. A 'generative grammar' describes structure of well-formed sentences of a language in terms of well-defined rules so that a user's intelligence or intuition plays no role in 'sentence generation' in that language. Descriptive grammar of the [Bloomfieldian] Structuralist model, however, presents an inventory of elements that make up a sentence/string of words. The Descriptive grammar is corpus-bound like the pre-Paninian '*pra:ti-sha:khya*-s' (p. 34). Bloomfield, like Panini, initiates language analysis [grammar writing] with the study of phonology. Phonetics is considered as a peripheral aspect of linguistics because the variation in sound-production is quite wide. The 14th century grammar of Malayalam '*le:la:thilakam*' and the 19th century '*ka:shmi:rashabda:mrtam*' –a grammar of Kashmiri stand testimony to the fact that the Panini's model of grammar continued to influence Indian minds for millennia. In '*le:la:thilakam*', Malayalam phonemes [*varna*-s] have been identified with the help of 'minimal pairs' (p.42].

Bloomfield states that a meaningful 'phonetic-form' is a 'linguistic-form' For Panini, grammar (*shabda:nusha:sana*) must describe all the 'linguistic-forms' of a language. The '*shiva-sutra*-s' in Panini's aSTa:dhya:yi introduce phonemic alphabet (writing system) of Sanskrit comprising 34 consonants, and 9 vowels; he does not include *anusva:ra* and *visarga* among the Sanskrit alphabet (letters), although both the 'morpho-phonemes' have been described. Panini's '*guna*' and '*vrddhi*' *sutra*-s describe Sanskrit phonetic laws whereby

vowels shift place/height and gain a *matra*/mora (*guna*) or they get diphthongized (*vrddhi*) (p.44).

i >*e* (*guna*) > *ai* (*vrddhi*)

Panini has identified four major types of phonological processes, namely, *a:desha* (substitution), *lopa* (deletion), *a:gama* (addition), and *dvitva* (reduplication). Contemporary linguistics identifies identical processes. Assimilation, as we understand it in modern linguistics, has been termed as '*savarNa*' by Panini. Wherever a form occurs as both nominal stem and verbal root, Panini derives nominal stem from the corresponding verbal root by the addition of a suffix – *v* which is naturally 'deleted'; hence it is always represented by '*zero*'. Hockett (1954) employed the 'zero' affix proposed by Panini to represent 'zero morpheme/allomorph' (p. 47). "No modern grammarian has ever attempted to describe the grammar of any language so accurately and correctly as Panini did" for Sanskrit (p. 49).

Modern Linguistics (Bloomfield) identifies morphemes of two types: those that have a lexical-meaning, and those that have a grammatical function. Panini, even Pre-Paninian grammar classifies meaningful elements into nominal-stems [*pra:tipadika*] and verbal-roots [*dha:tu*] and grammatical entities into affixes [*pratyaya*]; the latter [affixes] join the Sanskrit 'stem/root' according to various phonological processes which have been subtly and elaborately described in the *sutra*-s of aSTa:dhyayi. Affixes {*pratyaya*} have been classified/divided into six major classes, three of them [*san-, krt- & tin...*] are suffixed to '*dha:tu*' [verbal-roots] whereas the other three [*taddhita, stri:, & sup...*] are suffixed to nominal stems [*pra:tipadika*}. The *sup...* and *tin...* affixes are obligatorily suffixed to the nominal-stems and verbal roots respectively, other four affixes are optional. The *sup...* and *tin...* affixes are inflectional [word-building or terminal suffixes] whereas other four affixes are derivational or non-terminal suffixes. The sup... affixes denote number and case of a noun; whereas tin... affixes denote person,

tense, mood and aspect. Panini has classified Sanskrit stems according to the stem-final vowel or consonant and the gender [masculine, feminine or neuter] of the stem. "The stem final entity [vowel or consonant] and the gender of the stem determine the case form. 'Case relation' is *ka:raka*. It does not depend on stem final vowel or consonant. 'Case form' (*vibhakti pratyaya*) depends on it. Panini and Chomsky clearly differentiate between deep structural Case relation and surface structural case form. The stem-final entity [vowel or consonant] and the gender of the stem govern the case-realization and 'Sandhi-rules' that derive the acceptable form of the word with all grammatical features provided therein. Exceptions to a rule have been described in the rules that follow (p. 59). '*Sandhi*' denotes "joining-together"; it occurs between two morphemes within a word as 'internal sandhi' (*padamadhya-sandhi*), or between two words as 'external sandhi (*padanta-sandhi*). Sanskrit grammarians also divide '*sandhi*' into *aca-sandhi* (vowel-sandhi) and *hal-sandhi* (consonant-sandhi). For example: *iti+a:di =itya:di*; *sampat+ ti =sampatti*. Panini has given five major rules of vowel-sandhi. The consonant-*sandhi* rules operate in *Sandhi* as well as in other places, e.g. *–c >-k* in *va:c> va:k* [palatal > velar.

Panini analyses the rules that regulate the composition of words (*pada*-s) which are subsequently combined under sentence-formation rules to frame meaningful sentences (*va:kya*-s). Following Panini, Bloomfield divides grammar into 'morphology' and 'syntax'. For Chomsky morphology falls within syntax. Panini formalized the analysis of words neatly into roots and affixes. This is known as *item and arrangement* in modern-linguistics. The traditional European grammar analyzed it as an *'item and process'* phenomenon where a pluralizing process, for instance, adds a plural-marker to a singular form. Panini posited affixes that do not appear in the 'surface-structure'; Bloomfied adopted the "*eminently serviceable device*" in positing a "zero morpheme". Both Panini and Bloomfield consider words like singular 'book' as derived from the root 'book', by the addition of a 'zero affix' [book + o = book]. Hence, unlike traditional

linguists, Panini and Bloomfield consider *book, books* etc. as two different words. A nominal-root in Sanskrit is followed by the terminal '–sup' suffix to denote number [singular, dual, plural] and case [Nom. Acc. Ins. Dat. Abl. Gen. Loc.]. The word-classification is based upon their morphological or syntactical function. Modern linguistics (Gleason, 1981) categorizes nouns, pronouns, adjectives, verbs [into paradigms] on the basis of their morphological function and prepositions/post-positions, interjections, conjunctions on the basis of their syntactical functions.

Panini classifies words into nouns [*na:m*a], verbs [*a:khya:ta*], *pratyaya* (suffixes) and particles [*nipa:ta/ avyaya*]]; the former [*noun & verb*] on the basis of declension/inflection *[-sup/-tin*] and the *avyaya* that do not take affixes [whose affixes do not appear in their surface structure]; suffixes [*pratyaya*] carry grammatical information. Unlike in English, *sarvana:ma* [pronoun] in Sanskrit takes affixes as nouns do, hence they have been placed with 'nouns'. Panini's item and arrangement exhibits the following patterns: 1- Nominal Root + (*taddhita* suffix +[feminine suffix]) +case suffix; 2- Verbal Root + [*sanna:di* suffix] + personal suffix; 3- verbal Root + [sanna:di suffix] + [*krt* suffix] + [feminine suffix] + Case suffix (p. 71). Inflectional suffixes constitute the outer-layer [*bahiranga*] or terminal affixes whereas derivational suffixes constitute the inner-later [*antaranga*] or non-terminal affixes. *sup* suffixes are the terminal affixes of the nominals [*subant/* whereas *–tiN* suffixes terminate verbals [tiNant] (p. 78).

Panini identifies two systems of paradigms in Sanskrit: '*siddha ru:pam'* [obtained-form]. Noun Paradigm, reflecting number and case, consists of 21 forms whereas verb-paradigm consists of 18 forms, 9 transitive and another 9 intransitive forms. Bernard Block (1947) attempted to formulate verb inflectional classes of the analytical English language. Panini has successfully developed inflectional systems for the nouns and verbs of the highly inflectional Sanskrit language, millennia ago. Panini classifies

derivational suffixes into three types: *sanna:di, krt,* and *taddhita:* these suffixes derive verbs from verbs/nouns [*sanna:di*]; nouns from verbs [*krt*]; nouns from nouns [*taddhita*]. Stems combine to form compounds [*sama:sa*] (p. 86). The most difficult derivational '*taddhita*' suffix has been elaborately described in 1115 sutra-s {28 % of the aSTa:dhya:yi:} in "a three-dimensional" format based on 'suffixes, classes of stems, and meanings. (p. 88). Such a detailed description of 'derivational morphology' has never ever been attempted in the context of any other language of the world (p. 90). Traditional European grammar-models followed 'item and process [IP]' or 'word-paradigm [WP]' modes of analysis, Bloomfield, Hockett etc. followed an 'item and arrangement [IA]' model. Panini follows a combination of all three model, it is an 'item, arrangement, and process model' (p. 100-101).
IP = take >took (-ei- >-u-; IA = take + ed = took + 0 =took; WP = take =took =taken= takes= taking;

Noam Chomsky offers a better solution: *take +past –took (p. 100).*
Hockett (1954:389) states that the grammatical pattern of Panini's model "can generate any number of utterances in the (Sanskrit) language". Chomsky (1956:174) opines that 'the paradigmatic analysis can be useful in analyzing inflectional systems and in some cases, it may be useful to separate stems from affixes'. Panini has done just that, separated stems from affixes (p. 103).

Panini does not provide any explicit definition of a sentence as Chomsky does in terms of completeness and significance of sentence- meaning. Descriptive linguistics has made yet another significant contribution to the study of a sentence in proposing IC [immediate constituents] analysis which demonstrates that the individual constituent words in a sentence are variously related with other constituent-words in a sentence. IC analysis also demonstrates that sentences cannot be constituents and morphemes cannot be constitutes (p. 108). Constructions thus become endo-centric or exo-

centric, co-ordinate or subordinate. In his classification of *sama:sa*-s [compounds], Panini's *'tatpuruSa-sama:sa'* is clearly a case of subordinate endo-centric construction and *'dvandva-sama:sa'* is a case of coordinate endo-centric construction (p.110-11). A sentence for Panini consists of a verb and one or more nouns. The grammatical-relation between a noun and a verb is known as *'ka:raka'*. Panini identifies five {major} and three {*sheSa*} 'ka:raka' relations that a noun can assume in relation to a verb. The sixth *vibhakti* 'genitive' is a *vibhakti* [*SaSThi:*], not a *ka:raka* for Panini (p. 111,112). The sixth [sambandh] genitive [under sheSa] holds between two nouns: *Ram's book*. A *vibhakti* suffixed to a noun denotes the noun's *ka:raka* relation with the verb. Hence, *'vibhakti'* is the phonetic form [surface form] that exhibits a noun's grammatical-relationship with the verb. *Ka:raka*-s contributes to the sentence meaning and the *vibhakti*-s represents the phonetic form of noun (p. 118). Panini, thus, identifies syntactic structures at two levels: *'ka:raka-level'*, and *'vibhakti-level'* (p. 122); the former generate meaning [deep-structures] and the latter generate phonetic form [surface-structure] (p.123).

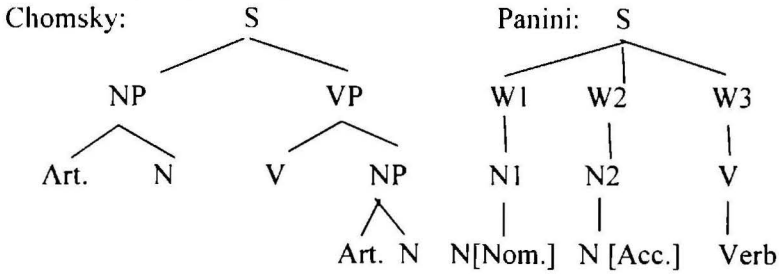
Ka:raka structure----------vibhakti structure [Panini]

Deep structure----------surface structure [Chomsky]

Meaning Phonetic form

In a *Phrase-structure grammar* proposed by Chomsky a sentence S branches into two nodes that represent 'Phrases' that constitute an S, each node then branches into sub-nodes representing the part of speech of the constituents that occupy the sub-node. The sub-nodes are finally replaced by the lexical items which after undergoing phonological, morphological, syntactical processes specific to the language, appear in concrete [surface] form in speech or writing.

A sentence for Panini is a combination of words in succession where the last syllable is invariably lengthened and accented and it is followed by a 'pause' (p. 127).



The 'terminal-strings' in both the cases above undergo transformations, in Chomskian terminology, to arrive at the phonetic [surface] form of the S. Panini identifies *–sup* and *–tin* obligatory suffixes for nouns and verbs respectively which, once added, give the final [surface] form to the constituents of S.

Unlike Chomsky, Panini does not propose a binary division of constituents; Chomsky follows IC analysis in this regard, it seems. IC-analysis, it might be noted, is a bottom-up procedure whereas, binary Tree-diagram branching is a top-down procedure. Chomsky applies transformations to underlying structures [UF] to derive either another layer of UF or surface structures [SF], Panini's 'transformations' are similar in application: UF > UF or UF > SF (p. 136).

A more abstract deep-structure [D-structure] as a base layer below the deep structure and an abstract S-structure beneath surface-structure have been introduced to allow a smooth application of transformations. 'The Base-rules generate abstract phrase-structure representations [D-structure] and the transformational rules move and re-arrange these structures to yield the surface structure' (p. 141). D-structures are directly associated with the 'logical-form'. Chomsky's major revolutionary ideas in Linguistics include the following: 1- linking human mind, cognition and language under

Cognitive Sciences; 2- linking linguistic creativity with grammatical competence; 3- proposing Tree-diagrams and abstract-symbols to represent sentence structures; 4- Expanding horizons of language-science to include phonetics and semantics.

Panini identifies four derivational, optional suffixes and two terminal obligatory suffixes in Sanskrit as follows: *-stri:* [derive feminine gender from Masculine forms], *sanna:di* [derive verb stems from verbs and from nouns], *krt* [derive noun stems from verbs], *taddhita* [derive nouns stems from nouns], and inflectional *-sup* [reflect case of a nominal] and *–tiN* [reflect TAM categories of a verbal]. Hence, the terms *sup-ant* [*subant*] and *tiN-ant* refer to nouns and verbs respectively in Sanskrit grammar. Pre-Paninian Indian grammar has aimed at describing the 'performance' of the speakers but Panini like Chomsky aim to analyze linguistic Competence of an Ideal native speaker [author's native speech]. Grammar aims at describing and formulating rules to generate correct usages/sequences of words of that language.

Panini's grammar is descriptive as well as generative in its orientation (p. 169). Bloomfield (1933:11) remarks that 'Panini's grammar is the only one of such great scholarship that minutely explains every inflection, derivation and syntactic usage of Sanskrit'. The rules formulated apply sequentially, not at random. Panini is thus the pioneer of the concepts cyclic-rules, feeding-rules, bleeding rules described by modern linguistics (p. 172-73). Similarly, Panini pioneers 'filtering/blocking' of ill-formed/unacceptable forms/usages during the course of the application of 'rules'. The application of the rules enables one to generate the final out-put [phonetic-form] of a sequence of meaningful words (K. Kapoor, 2005:55).

Panini's grammar facilitates a sentence to be a sequence of several embedded sentences and infinite number of words. He neatly sets up different levels of analysis as follows: 1. morphology- to segment roots and suffixes; 2. To describe distribution of suffixes/allomorphs;

3. morpho-phonology – to describe phonetic modification of stems and suffixes (p. 183). Unlike English, Indian languages are rich in inflectional categories. Sangal et al (1995) employ Paninian model of sentence-generation to work out the syntax of Indian languages. Uma Maheshwar Rao (2015) has developed a computational grammar of Telugu on the basis of Paninian model. These models consider the verb as the main participant in the formation of a sentence, hence, a Verb > W_1 +W_2 + W_3 where W_1 is the noun + *sup suffix* [Nom./Actor] W_2 is noun + *sup suffix* [Acc./Obj.] and W_3 stands for verb + *tiN* suffix [TAM].

Chomsky proposes three procedures that a theory of grammar may provide: 1- 'Discovery procedure' for constructing a grammar, 'which is difficult to provide'; 2- Decision Procedure to assess the adequacy of a description; and 3- Evaluation Procedure (the weakest) which suggests methods to select a better grammatical model from among a set of models. Chomsky chose the weakest 'evaluation procedure' stating that a grammarian frames 'rules' as invention not as discovery (1975).

The rules must generate grammatical and meaningful sentences of the concerned language. How he frames such rules is immaterial. The moot point is to 'evaluate' whether the 'rules' work out the morpho-syntactic subtleties of the language concerned or not. If they do, one should be appreciative of the model/method. Panini's aSTa:dhya:yi is an invention of a brilliant mind (P. 193).

The author has provided 158 *Su:tra*-s from aSTadhya:yi to enable readers to grasp the subtleties of Paninian model of grammar. The book will be of immense help to young learners as well as teachers of linguistics, grammar and grammatical studies. The work is a gentle reminder to linguists, litterateurs and specialists in language sciences to study and reassess Sanskrit-India's pioneering contribution to knowledge.

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News from the Department in 2014

The department invited the new Permanent, Academic Consultant and Part Time faculty members who have joined the department in January 2014.

Specializations: Dr.C.S.Swathi – Phonetics , Phonology, Psycholinguistics, Neurolinguistics, Semantics
Mr.K.Susheel Kumar – Sociolinguitics, Morphology, Syntax
Mr.K.Balu Naik – Pedagogical Linguistics, Sociolinguistics
Ms.Syeda Humera – Syntax, Morphology, Educational Linguistics
Mr.G.Anjaneyulu – Sociolinguistics, Phonetics, Phonology, Lexicography
Mr.Ch.Bhuvaneshwar – Syntax, Historical Linguistics, Dialectology

Seminars and Workshops

International Students Seminar on '***Linguistics Theories***', 12th & 13thMay, 2014

Second International Student Conference on '***Core Linguistics***' Nov, 2014

Activities, Paper Presentations and Publications in 2014

Prof.D.Vasanta

Freedman, M. Alladi, S., chertkow, H., Bialystok, E., Craik, F.I.M., Phillips, N.A., Duggirala, V., Bapi Raju, S., and Bak, T. H., (2014) Delaying onset of dementia: Are two languages enough?, Behavioral Neurology ID. 808137.

Vasanta,D. Guest Editor (2014) , Clinical applications of phonetics and phonology in Indian Languages, *Journal of Indian Speech and*

Hearing Association of Mysore: ISHA. Vol-14, No.1, ISSN No. 0974-214x

Vasanta, D. Phonological knowledge: Theoretical and clinical issues, Clinical applications of phonetics and phonology in Indian Languages, Journal *of Indian Speech and Hearing Association* of Mysore: ISHA. Vol-14, No.1, 121 158. ISSN No. 0974-214x (Pg 1-47)

On-line course in Psycho-Neurolinguistics as part of UGC-INFLIBNET initiative. Available in UGC website.

Dr.C.S.Swathi

Attended Induction Programme conducted by Vice-Chancellor's office of Osmania University coordinated by Dr.D.Vasanta, Professor, Department of Linguistics, Osmania University.

Attended Orientation Programme conducted by Academic Staff College of Osmania University, Hyderabad.

Attended Workshop on Phonetic Transcription for SLPs on 20-21/11/2014

Swathi, C.S. Clinical co-relates of non-fluent & fluent aphasic syndromes: Illustrative Case Studies. Conference Proceedings at National Seminar on Illustrative Case Studies, Dr.SRCISH, Bangalore, 5-7th Sep.

Swathi, C.S. Phonological Errors in Telugu Aphasics: The Role of Sonority. Clinical Applications of Phonetics and Phonology. *Journal of Indian Speech and Hearing Association* of Mysore: ISHA. Vol-14, No.1, ISSN No. 0974-214x

Mr.K.Susheel Kumar
Attended Induction Programme conducted by Vice-Chancellor's office of Osmania University coordinated by Dr.D.Vasanta, Professor, Department of Linguistics.

Mr.K.Balu Naik

Attended Induction Programme conducted by Vice-Chancellor's office of Osmania University coordinated by Dr.D.Vasanta, Professor, Department of Linguistics.

Dr.V.Madhav Sharma

Sharma, M.V.S., Pradeep Kumar and Bhuvaneswar, Chilukuri (2014). "Individual Freedom: Perspectives on Selected Contemporary British and American Poets". *The Indo Libyan Linguist, Sebha,* Libya, pg.220-266.

V.M. Subramanya Sharma, Modern Telugu Dictionaries, Vamgmai, PS Telugu University.

Mr.Ch.Bhuvaneshwar

Bhuvaneswar, Chilukuri (2014). "The Definition of the Proverb: A Ka:rmik Linguistic Approach". Feschrift to Wolfgang Mieder at 70. (Eds). Christian Randall and John Mckenna. Berlin: Julius Verlag. Germany

Bhuvaneswar, Chilukuri (2014). "Formal, Functional, Cognitive and Ka:rmik Linguistic Theories: A Critique". *Scientific Newsletter.* Voronezh: Voronezh State University of Architecture and Civil Engineering. Russia

Sharma, M.V.S., Pradeep Kumar and Bhuvaneswar, Chilukuri (2014). "Individual Freedom: Perspectives on Selected

Contemporary British and American Poets". *The Indo Libyan Linguist, Sebha,* Libya, pg.220-266.

Mr.G.Anjaneyulu

Anjaneyulu, G., Short Message Service (SMS) Use in second language learners of English in Hyderabad: A Sociolinguistics Analysis, Conference Proceedings, Importance of English Language Laboratory for improving communication at U.G level. Vol 1, ISBN 978-81-922783-5-3, pg 152-156.

Anjaneyulu, G., Importance of English Language and Technology enabled learning for graduate students of vernacular background, Conference Proceedings, Effective Language learning strategies in English, ISBN 978-93-82163-22-0, pg 62-65.

Anjaneyulu, G., Short Message Service (SMS) Use in second language learners of English: A Sociolinguistics Analysis, Conference Proceedings, Strengthening English Language and Learning issues and challenge, .ISBN 9-7893-83-84-25-06, pg 129-131.

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