

Bangla Compound Verbs and Their Reverse Constructions: An Analysis in Head-driven Phrase Structure Grammar

Mona Sinha Mahapatra

Ph.D. Research Scholar
The English and Foreign Languages University,
Hyderabad- 500007
msmpatra@gmail.com

Abstract

Bangla compound verbs serve as an interesting domain of study especially in terms of its phrasal representation. Reversing these compound verbs in Bangla show differences in terms of structure which necessitate a different analysis. Such Reverse constructions do not show the expected ‘verbal cluster’. Rather, the Reverse constructions take a VP complement. In comparing the Bangla compound verbs to other Indian languages like Hindi, there appears a clear demarcation as Hindi presents both the compound verbs and reverse compound verbs as verbal clusters by not allowing the object (DO) to intervene. This study aims to primarily look at the structural differences between the Bangla compound verbs and their reverse constructions within the framework of Head-driven Phrase Structure Grammar (HPSG).

Keywords: Bangla compound verbs, Reverse constructions, verbal cluster, HPSG

1. Introduction

Complex predicates are one of the distinguishing areal features across South Asian languages. They are multi-headed constructions, consisting of two grammatical elements which may consist of morphemes or words. They have been widely studied and their analyses range from debates on their lexical/phrasal status (Bonami and Samvelian, 2010), argument structure (Butt 1994; Mohanan 2006; Poornima 2012), compositionality (Paul, 2003), cline of grammaticalization of the light verbs (Hopper and Traugott, 1993), etc. Compound verbs consist of polar verbs bearing the predicative weight followed by light verbs which are semantically bleached. Complex predicates are monoclausal and refer to a singular event (Butt,

2003). Semantic weight within the compound verbs is borne by the main verb and remains in its bare form (does not bear inflection). The morphological realization of tense, aspect, mood is borne by the light verb that follows the main verb. The light verbs introduce notions of perfectivity, directionality or modality within the compound verb constructions. Complex predicates in Bangla include compound verbs (V-V) and conjunct verbs (Adj-V, N-V).

Compound verbs in Bangla have the polar verb in the conjunctive participle form [-e/ye] or the infinitive form [-te] followed by the light verb which bears agreement and takes account of case. In Bangla, the compound verbs are deemed to bear ‘unity of structure’ (Dasgupta, 2009). Investigating this phenomenon by reversing the Bangla compound verbs gives interesting insights. This paper considers the Bangla compound verbs and their reverse constructions. Section 2 elucidates a comprehensive view of the theoretical background including the idea of ‘argument composition’ and a relevant binary feature - [LIGHT]. The data in section 3 elaborates on Bangla compound verbs and their reverse constructions while deliberating on some constituency tests. Analysing the data in section 3.2, a phrasal representation of the compound verb along the lines of verbal cluster and the reverse construction as a light verb subcategorizing for a VP complement are undertaken.

2. Theoretical Background

Complex predicates are often analysed as a cluster which functions as a constituent or a topological unit. The complements of the compound verbs can scramble in languages with free constituent language (Müller, 2006). The notion of verbal cluster presumes that the compound consists of two predicates that form a singular syntactic constituent. The verbal cluster is another kind of head-complements-phrase in HPSG. In HPSG, complex predicates are posited as constructions with one of the predicates acting as a head of the construction which takes the syntactic arguments of the other predicate. Thus, it takes the other predicate’s complements and possibly its subject (Godard and Samvelian, 2021). This has been a widely accepted view of complex predicates within the framework Head-driven Phrase Structure Grammar. Argument composition or argument inheritance is used as a means of explaining the argument structure of compound verbs within Head-driven Phrase Structure Grammar (HPSG). Hinrichs and Nakazawa (1994) propose the idea of argument composition within their study of German

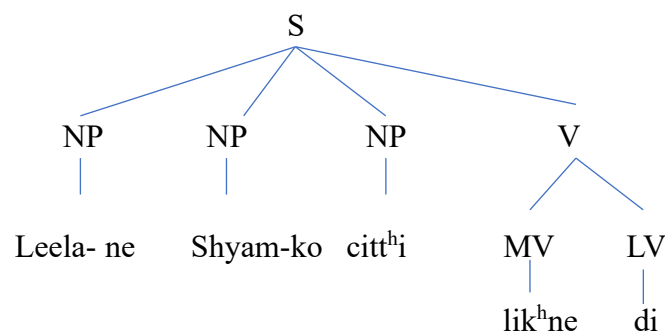
auxiliaries which has also been undertaken for Italian restructuring verbs (Monachesi, 1998) and complex predicates in French (Abeille et. al, 1997).

2.1 Argument Composition

The analysis of argument sharing has also been posited in Indian languages like Hindi (Poornima and Koenig, 2009) where analyses for both compound verbs and reverse compound verbs are undertaken. Poornima (2012) and Poornima and Koenig (2009) show that Hindi compound verbs act like verbal clusters where the light verb is the head owing to the case and agreement marking done by the light verb. The Reverse compound verbs in Hindi are posited with a head-modifier analysis. In both these constructions, however, the DO does not intervene between the main verb and the light verb and thus both are assumed as verbal clusters. The Reverse compound verbs in Hindi take the main verb as the head.¹ Poornima (2012) further states that permissives in Hindi may preclude both the analyses - that of verbal cluster (Fig. 1) for sentence 1 or they may assume the structure of a light verb selecting an embedded VP (Fig. 2) for sentence 2.

1. Leela neⁱ Shyam ko citt^{hi} lik^hne di
 Leela ERG Shyam-Acc letter write-INF give-PRST
 Leela let Shyam write a letter.

2. Leela ne di Shyam ko citt^{hi} lik^hne
 Leela ERG give-PRST Shyam Acc letter write-INF
 Leela let Shyam write a letter.



¹ The agreement is borne by light verbs in Hindi compound verbs whereas the Reverse Compound verbs have the main verb as the syntactic head owing to the fact that the V2 position in both the compounds show agreement and assign case.

Fig.1

(Poornima 2012:158)

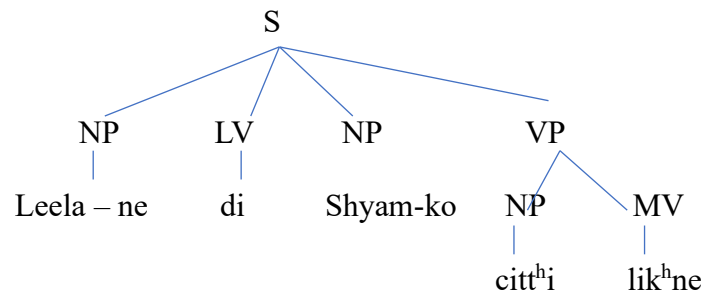


Fig.2

(Poornima 2012:159)

Bangla compound verbs also anticipate the idea of argument sharing (as well as structure sharing) within HPSG (Paul, 2003). The thematic elements assumed within the feature structure THEM are the arguments borne by the main verb. Semantic compatibility between main verb and light verb should be established before the semantic principle of compounding may be initiated. Paul (2003) ideates that both the main verb and light verb are essentially contentful and both contribute to forming the semantic structure of the resultant compound verbs in Bangla. The structure consisting of full XPs is mapped onto another structure which shows that the arguments of the embedded heads (main verbs) may scramble with respect to arguments of higher heads (Muller 2006, Wurmbrand, 2001).

2.2 The Binary Feature [LIGHT]

The binary feature LIGHT (Bonami and Webelhuth, 2012) proposes the notions expressed by the WEIGHT feature (Abeille and Godard, 2000) as well as the LEX feature used in the study of auxiliary flip in German verbal clusters (Hinrichs and Nakazawa 1989, 1994). The auxiliary flip occurs amongst the verbal cluster in German subordinate clauses and thus [NPCOMPS] binary feature was introduced along with LEX feature. Thus, [NPCOMPS-] and [LEX+] would show ‘auxiliary flip’ amongst the verbal cluster and that no NP complement is introduced during such auxiliary flip. The binary feature [WEIGHT] expresses lexical items or phrases as ‘lite’ or ‘non-lite’. The WEIGHT feature also expresses word order constraints. “A verbal constituent itself is lite but any XPs preceding the verbal constituent are non-lite.” (Poornima, 2012). Thus, LIGHT feature, essentially expresses ideas of constituency, phrasal/lexical structure and word order.

3. Compound Verbs in Bangla

The main verb in Bangla which is responsible for predication is followed by the light verb in Bangla compound verbs as is clear in 3. Sentence 5 presents us with an exemplar of reverse constructions of compound verbs in Bangla. ²

3. Prithvi maliker čorone **poře gelo.** [Compound verb]
Prithvi-Nom owner-Gen feet-Loc fall-CP go-PRST
Prithvi fell at the owner's feet.

4. Prithvi maliker čorone **gie pořlo.** [Conjunctive Participle]
Prithvi-Nom owner-Gen feet-Loc go-CP fall-PRST
Prithvi walked and fell at the owner's feet.

5. Prithvi maliker čorone **gelo poře.** [Reverse Constructions]
Prithvi-Nom owner-Gen feet-Loc go-PRST fall-CP
Prithvi fell at the owner's feet.

Reverse constructions (for e.g., [gelo poře] in sentence 5) add pragmatic notions when compared to compound verbs (sentence 3). Das (2015) in his analysis of reverse compound verbs in Hindi relates to such constructions - notions of suddenness, volitionality, intentionality, uncontrolled activity etc. These pragmatic underpinnings are also present in the Reverse constructions in Bangla. [gelo poře] in sentence 5. presents similar notions on the part of the referent's (of the subject) action as 'sudden' or 'unexpected'. Thus, reverse constructions in Bangla within HPSG will always specify the particular pragmatic underpinnings in the feature BGRND (CONTEXT | BACKGROUND). However, while Hindi presents both its compound verbs and reverse compound verbs as 'verbal cluster' and hence both constructions are compounds, Bangla presents an interesting case where the compound verbs act as verbal clusters but the reverse constructions require a different analysis. This is most evident when we

² Sentence 4 presents an exemplar of the idea that Bangla does not follow any positional constraint in terms of agreement. The light verb always agrees with the Subject in both Compound verbs and their reverse constructions and is the syntactic head in both constructions. Since serial verbs are not within the scope of the paper's discussion, it is not discussed any further.

consider cases of a fully saturated compound verb and its reverse constructions (considered in sentences 6-8).

6. Navin Akash ke guli **kore dilo** [Tr + Tr]
Navin-Nom Akash Dat bullet do-CP give-PRST
Navin shot a bullet at Akash.

7. *Navin Akash ke guli **dilo kore.**
Navin-Nom Akash Acc bullet give-PRST do-CP
Navin shot a bullet at Akash. [Intended]

8. Navin Akash ke dilo **guli kore.** [Tr + Tr]
Navin-Nom Akash Acc give-PRST bullet do-CP [volitional/anger]
Navin shot a bullet at Akash.

3.1 Constituent Analysis for Compound Verbs and Reverse Constructions

We look at the following data to analyse possible constituency for V+V constructions. Scrambling, coordination and adverbial modification provide interesting insight into the structural representation of compound verbs.

For Compound verbs (V+V) we observe the following while considering scrambling

9.a. Ram Akash ke guli **mere dilo.**
Ram-Nom Akash Acc bullet hit-CP give-PRST
Ram shot a bullet at Akash.

9.b. Akash ke Ram guli **mere dilo**
Akash Acc Ram-Nom bullet hit-CP give-PRST
Ram shot a bullet at Akash.

9.c. Akash ke , guli Ram hoTat kore **mere dilo**
Akash Acc bullet Ram-Nom suddenly kill-CP give-PRST
Ram shot a bullet at Akash suddenly.

The following sentences provide evidence of compound verbs being unable to show coordination and do not allow adverbial insertion between the two elements. These tests reveal similar outcomes as Butt (1997) finds in Urdu compound verbs and Poornima (2012) finds in Hindi compound verbs.

10. *Jodu Ravi ke mach kine aar diye dilo.
 Jodu-Nom Ravi Acc fish buy-CP and give-CP give-PRST
 Jodu bought and gave a fish to Ravi. (Intended)

11. a. Trishna Ravi ke hoTat kore t^happoṭ mere dilo.
 Trishna-Nom Ravi Acc suddenly slap hit-CP give-PRST
 Trishna slapped Ravi suddenly.

11.b. Trishna Ravi ke t^happoṭ hoTat kore mere dilo.
 Trishna-Nom Ravi-Acc slap suddenly hit-CP give-PRST
 Trishna slapped Ravi suddenly.

11.c. *Trishna Ravi ke t^happoṭ mere hoTat kore dilo.
 Trishna-Nom Ravi Acc slap hit-CP suddenly give-PRST
 Trishna slapped Ravi suddenly. (Intended)

Considering the DO+V in the reverse constructions, we look at the phenomenon of scrambling, adverbial modification and coordination to test for constituency.

12.a. Jatin Naskar ke dilo guli mere.
 Jatin Naskar Acc give-PRST bullet hit-CP
 Jatin shot a bullet at Naskar .

12.b. Jatin dilo Naskar ke guli mere.
 Jatin give Naskar Acc bullet hit-CP
 Jatin shot a bullet at Naskar.

12.c. Dilo Jatin Naskar ke guli mere!

Give-PRST Jatin Naskar Acc bullet hit-CP

Jatin shot a bullet at Naskar!

13. Mahima dilo meyeTa ke **make-up lagiye** aar **jama poriyे**.

Mahima give-PRST girl-CL Acc make up put-CP and clothes wear-CP

Mahima put make up (on the girl) and clothe her.

14. Kartik dilo Prithvi ke hoTat kore **guli mere**.

Kartik give-PRST Prithvi Acc suddenly bullet hit-CP

Kartik suddenly shot a bullet at Prithvi.

15. *Kartik dilo Prithvi ke guli joldi/ hoTat kore mere.

Kartik give-PRST Prithvi Acc guli quickly/ suddenly hit-CP

Kartik quickly/ suddenly shot a bullet at Prithvi.

Sentences 9.a to 9.c. present evidence of scrambling supporting that the main verb and light verb act as a constituent. Sentence 10. shows that the complement of the main verb cannot be shared with another coordinated main verb. 11.a. and 11.b. show that adverbs which are generally [LIGHT-] precede the verbal cluster. Allowing a [LIGHT-] element in between the [LIGHT+] verbal cluster would make it [LIGHT-]. Similarly, the reverse constructions produce evidence that the VP that the light verb selects also acts as a constituent. Sentences 12.a. to 12.c. provide scrambling data in reverse constructions where the VP acts like a constituent. Sentence 13 uses coordination test to show that the VP acts like a constituent. The adverbs always precede the VP constructions and do not intervene in between the direct object and main verb (sentences 14 and 15).

Briefly considering a few more sentences for Reverse constructions below, we find:

16.a. Diechilo Prithvi ekTa chor Pavitra ke mere!

give-PRST Prithvi one-CL slap Pavitra Acc hit-CP

Prithvi had given a slap to Pavitra.

16.b. Diechilo chorTa Prithvi Pavitra ke mere!

Give-PRST slap-CL Prithvi Pavitra Acc hit-CP

Prithvi had given a slap to Pavitra.

In the course of the paper, the reverse constructions primarily look at bare nominals as the direct object. Bare nominals as DO in the VP complements are [LIGHT +] as they resist separation from the main verb. Considering nominals that are specific or definite show greater scrambling possibilities and would not give a VP constituent in reverse constructions. The scrambling properties would also suggest that the nominal marked for specificity or definiteness would be [LIGHT -].

3.2 Analysis

The verbal cluster in Bangla compound verb has as its head the light verb. The constituency tests for the Bangla compound verbs show that the idea of argument composition is a plausible means of explanation within HPSG. The argument composition analysis in the Bangla compound verbs allows the light verb to take the argument structure of the preceding verb (i.e. the main verb). The light verb in the compound verbs in Bangla subcategorizes both the main verb and its complements. Since the verb following the main verb – light verbs in Bangla compound verbs – inherit the preceding verb and its argument structure, such structures show union at the clausal level. Such verbal clusters that show argument composition require the selectional restrictions of the light verb to be compatible with the main verb.

The head in both the compound verbs and their reverse constructions in Bangla is the finite light verb. Since Bangla is an SOV language, argument composition within the verbal cluster found in the compound verbs can account for the light verb taking the main verb and its complements as complements. However, argument composition would be difficult to explain in the reverse constructions where the finite light verb precedes the main verb since argument composition in SOV languages should occur from left to right. The reverse constructions where the light verb selects VP as an argument will not be able to fall under the analysis of argument composition.

17. [SYNSEM $\boxed{1}$] < V [COMPS <..., $\boxed{1}$,...>] → verbal cluster (Bangla Compound verbs)

The above constraints capture the word order expected in the Bangla compound verbs. 17. presents the constraint that shows that the light verb which selects the main verb as its complement always follows it since it is an SOV language. Argument composition is evidently not possible for Reverse constructions as the non-finite VP complement in the reverse constructions also appear as a constituent. When the light verb subcategorizes for the VP complement, the formation of a constituent of the DO with the main verb will not allow argument composition as a result of which there will not be clausal union in such constructions. The formation of a constituent also anticipates issues regarding the light verb agreement with the DO of the embedded VP in split ergative languages like Hindi (Andrew and Manning, 1999). Poornima (2012) posits agreement within Head feature of the main verb (and to the VP) in HPSG to alleviate the dilemma of agreement in Hindi permissives within the framework of HPSG.

The following figures illustrate the phrasal representation of these constructions. Owing to the constituency tests and scrambling data, a flat structure appeals as a plausible representation. Thus, under such an analysis, the Bangla compound verbs have the arguments or complements as sisters (except for the verbal cluster). The Reverse constructions show an embedded VP (DO and main verb) structure.

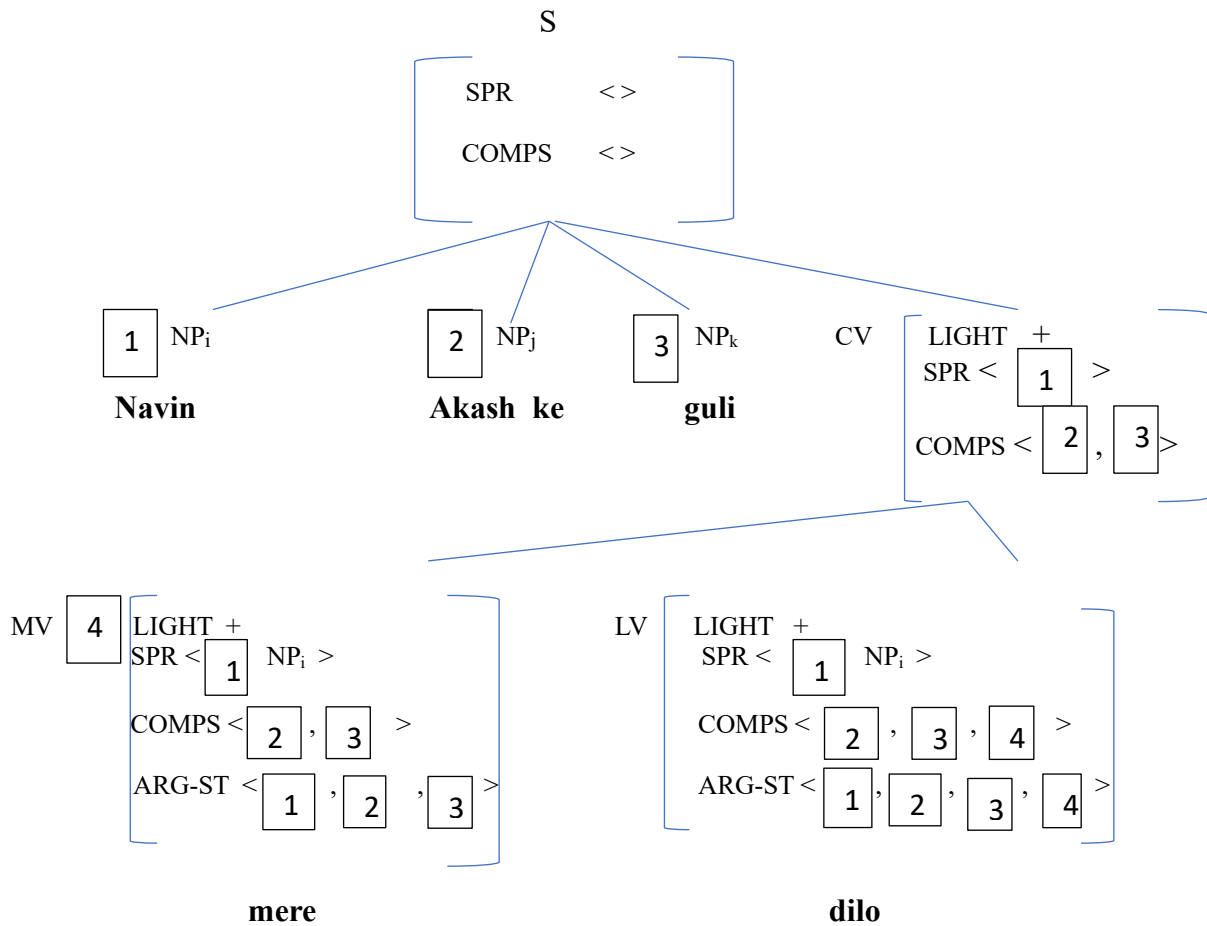


Fig. 3

Fig. 3 represents the phrasal structural representation of Bangla compound verbs while accounting for the compound verb (CV) through argument composition. The figure above shows the structural representation of Bangla compound verb [mere dilo] meaning ‘to hit’ in sentence 9.a.. The main verb (MV) and its complements along with the subject are copied within the argument structure (ARG-ST) of the light verb (LV) following it. The verbal cluster consists of two [LIGHT+] elements and thus the CV is also [LIGHT+]. The figure above represents a flat structure with a saturated mother node.

Having looked at the constituency tests for the Reverse constructions in Bangla, we posit the following structure (Fig. 4) corresponding to sentence 12.b. The scrambling data (12a to 12c) provide the idea that these constructions should also allow a flat structure but with a VP structure (under the head-complement rule in HPSG) that resists separation and acts as a constituent once the light verb flips over it.

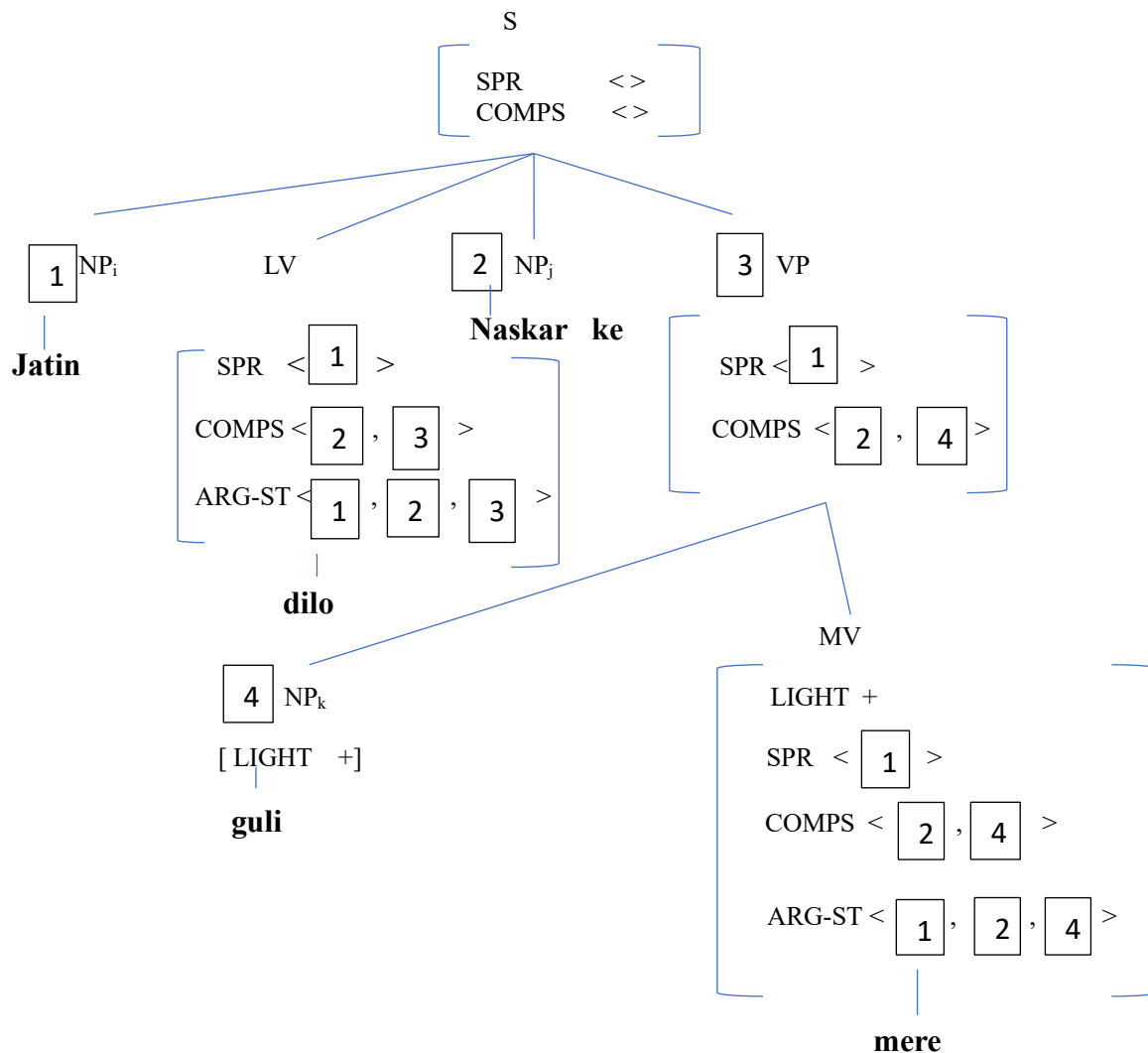


Fig. 4

4.0 Conclusion

This paper seeks to analyse Bangla compound verbs as verbal clusters with the idea of argument composition explaining its argument structure. The reverse constructions allow the DO in between the main verb and light verb erasing any possibility of explanation as a verbal cluster. The intervention of the DO in between main verb and light verb also challenge the notion of ‘compounding’ in the Reverse constructions.

In comparing both the Bangla constructions (compound verbs and their reverse constructions) to Hindi, it appears that Bangla allows the notion of ‘compounding’ in Compound verbs only

whereas Hindi does not differentiate in this manner of ‘compounding’ for both the constructions. Hindi permissives provide an interesting analogy in terms of appearing as both verbal clusters and taking a VP complement although they differ in terms of argument structure. Interestingly enough, although structurally Hindi Reverse Compound verbs and the reverse constructions of Bangla compound verbs differ significantly, the underlying pragmatic ideologies persist in both.

The Reverse constructions of the Bangla compound verbs are worth considering not only because they differ from the Bangla compound verbs with respect to its phrasal structure but also because of its other characteristics. The reverse constructions where the light verb appears at the sentence initial positions (sentence 12.c.) are instances of exclamatives. The auxiliary initial constructions (aux-initial-cxt) within HPSG associates different meanings which range from polar interrogative, negative imperative, exclamatives and conditionals. Fronting the light verb opens a whole host of analysis under exclamatives. Considering this, it is not surprising that the reverse constructions always leverage pragmatic ideas which in the light of the fact that the light verb in these constructions may appear at sentence initial positions as exclamations is an interesting idea to consider.

ⁱ Nom-Nominative case; ERG – Ergative case; Acc-Accusative case; INF- Infinitive; PRST – Present Tense; Loc- Locative case; CP- Conjunctive Participle; Gen- Genitive Case; Dat – Dative case; CL-Classifier

References

- Abeille, A, Godard, D., Miller, P.H. and Sag, I.A. 1997. French Bounded Dependencies. In Sergio Balari and Luca Dini (eds.), *Romance in HPSG*, CSLI Lecture Notes, No. 75, pages 1-54, Stanford: CSLI Publications.
- Abeille, A. & Godard, D. 2000. French word order and lexical weight. In Robert D. Borsley (ed.), *The nature and function of syntactic categories (Syntax and Semantics 32)*, 325-360. San Diego, CA: Academic Press. DOI: 10.1163/978184900098_012.
- Andrews, A. & Manning, C.D. 1999. *Complex Predicates and information spreading in LFG* (Stanford Monographs in Linguistics). Stanford, CA: CSLI Publications.
- Butt, M. J. (1994). *The Structure of Complex Predicates in Urdu*. Ph.D. thesis, Stanford University, Stanford, CA.
- Butt, M. 2003. The light verb jungle. *Harvard Working Papers in Linguistics* 9: 1-49
- Bonami, O. & Samvelian, P. 2010. Persian complex predicates: Lexeme formation by itself. In Decembrettes 7. Colloque international de morphologie, 1-5. Paris : CNRS. <https://www.llf.cnrs.fr/fr/node/3496> (10th May, 2024)
- Bonami, O. & Webelhuth. G. 2012. The phrase structural diversity of periphrasis: A lexicalist account. In Marina Chumakina & Greville G. Corbett (eds.) *Periphrasis: The role of syntax and morphology in paradigms (Proceedings of the British Academy 180)*, 141-147. Oxford, UK: Oxford University Press.
- Das, P.K. 2015. Can compound verb be reversed in Hindi? An inquiry of its form and function. *Interdisciplinary Journal of Linguistics* 8. 37–60.
- Dasgupta, P. 2009. Bangla Vector Verbs and Their Selectivities in *Interdisciplinary Journal of Linguistics* 2:41-68
- Godard, D. & Samvelian. P. 2021 Complex predicates. In Stefan Muller, Anne Abeille, Robert D. Borsley & Jean Pierre Koenig (eds.) *Head-driven Phrase Structure Grammar: The handbook*, 419-488. Berlin Language Press
- Hinrichs, E. and Nakazawa T. 1989. Flipped out: AUX in German. In *Papers from the 25th Annual Regional Meeting of the Chicago Linguistic Society*. Chicago Linguistics Society, Chicago, pp 187-202

-
- Hinrichs, E. and Nakazawa T. 1994. Linearizing AUX's in German Verbal Complexes. In *German in Head-driven Phrase Structure Grammar*, Number 46, pp.11-37. Stanford, CA:CSLI Lecture Notes.
- Hopper, J.P. and Traugott, E.C. (1993) *Grammaticalization*. Cambridge: Cambridge University Press
- Mohanan, T. (2007). *Grammatical Verbs* (With Special Reference to Light Verbs). 10.1002/9780470996591.ch31.
- Monachesi, P. 1998. Italian restructuring verbs: A lexical analysis. In E. W. Hinrichs, Andreas Kathol & Tsuneko Nakazawa (eds.), *Complex predicates in nonderivational syntax* (Syntax and Semantics 30), 313-368. San Diego, CA: Academic Press. DOI: 10.1163/9780585492223_009.
- Müller, S. 2006. Complex Predicates in Brown, Keith (ed), *Encyclopedia of Language and Linguistics – 2nd Edition*, Elseiver: Oxford, pgs 697-704
- Paul, S. (2003) Composition of Compound Verbs in Bangla. *Proceedings of the workshop on Multi-Verb constructions Trondheim Summer School*, Trondheim.
- Poornima, S. & Koenig, J.P. 2009. Hindi aspectual complex predicates. In Stefan Müller (ed.), *Proceedings of the 16th International Conference on Head Driven Phrase Structure Grammar*, 276–296. Stanford, CA:CSLI Publications.
- Poornima, S. 2012. *Hindi Complex Predicates at the Syntax-Semantics Interface*. Ph.D. Thesis. University at Buffalo, State University of New York.
- Wurmbrand, S. 2001. *Infinitives. Restructuring and Clause Structure*. Studies in Generative Grammar, No. 55, Mouton de Gruyter.
-