Response-stance Predicates with Two Types of Finite Clauses in Bangla

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Abstract
Cattell's (1978) notion of ‘stance’ verbs classifies verbs like deny, accept, agree, etc. as response stance verbs whose complements are familiar to discourse, but not necessarily true in actual reality. That their complements refer to familiar discourse referents can be dubbed as the familiarity criterion associated with this class of verbs. This paper investigates the compositional nitty-gritty of how ‘response stance predicates’ (henceforth, RSPs) select two types of finite clauses in Bangla (a.k.a. Bengali; Indo-Aryan). Bangla RSPs can take two types of finite clauses, viz. nominal-like clauses and adverbial-like clauses. In this paper, we provide detailed compositional analyses of these two types of clausal selection by Bangla RSPs, where the familiarity criterion is reflected in the combinatorics at syntax-semantics interface.
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1 Introduction

Cattell’s (1978) notion of ‘stance’ verbs classifies verbs like deny, accept, agree, etc. as response stance verbs whose complements are familiar to discourse, but not necessarily true in actual reality. That their complements refer to familiar discourse referents can be dubbed as the familiarity criterion associated with this class of verbs. This paper investigates the compositional nitty-gritty of how ‘response stance predicates’ (henceforth, RSPs) select two types of finite clauses in Bangla (a.k.a. Bengali; Indo-Aryan). Bangla RSPs can take two types of finite clauses, viz. nominal-like clauses and adverbial-like clauses. In this paper, we provide detailed compositional analyses of these two types of clausal selection by Bangla RSPs, where the familiarity criterion is reflected in the combinatorics at syntax-semantics interface.

The next section builds up the empirical background of our paper. Section 3 discusses two types of Bangla finite subordinate clauses, along with the syntax-semantics of them. Section 4 deals with Bangla RSPs semantically. Section 5 sheds light on the semantic compositions between RSPs and these two types of clauses. Lastly, Section 6 concludes the paper.

2 Empirical Landscape

Consider the following Bangla sentences where RSPs select two different types of finite clauses with different complementizers:

(1) robi [ onu ðofí bol-e] ñfikar kore[t]/e. mene [ di ]e. Anu guilty say-PTCP deny do.PRF.PRS.3 accept take.PRF.PRS.3
‘Rabi has denied/accepted that Anu is guilty.’

(2) robi ñfikar kore[t]/e. mene [ di ]e. Anu guilty [ ñfì ]e. that Anu guilty
‘Rabi has denied/accepted that Anu is guilty.’

On one hand, the subordinate clause in (1) carries a complementizer which looks like the adverbial form of the verb ‘say’ (i.e., the verbal root bol- ‘say’ and the participle -e). On the other hand, the embedded CP in (2) bears a complementizer which is homophonous to the nominal relativizer. But both instantiate such complements which are familiar to discourse, though not necessarily true in the actual world. This is why (3) sounds odd after both of them, while (4) sounds acceptable after both.

(3) kinþ, keu age robi-ke bol-e ni ñfì onu ðofí. but no one before Rabi-ACC tell.3 PRF.PST.NEG that Anu guilty
‘But, no one told Rabi before that Anu is guilty.’ [# after (1, 2)]

(4) ar emmîte/ kinþ, onu ñkebarei ðofí nòi. and anyway/ but Anu at all guilty NEG
‘And anyway (with deny), Anu is not guilty at all.’ [✓ after (1, 2)]

It validates the claim that the Bangla RSPs like ñfikar kør- ‘deny’, mene newa ‘accept’ are pointers towards familiar discourse referents. But, they are not factive necessarily.

With these data insights at hand, we delve into the next section in discussing these two types of Bangla finite clauses exemplified in (1) and (2).

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3 Two Types of Bangla Finite Subordinate Clauses: Pre-verbal and Post-verbal

Bangla shows a hybrid complementizer system where it instantiates both clause-initial and clause-final complementizers (Singh 1980, Bayer 1996, 1999, 2001, Bayer et al. 2005). It has দে as the clause initial C, while the clause-final counterpart is বলে. According to Bayer (2001), final complementizers are all VERBAL DICENDI and are called QUOTATIVES (QUOT) because they set the previous discourse in quotes. On the other hand, Bayer mentions that initial complementizers in Indo-European languages are mostly degenerate operators (OP). In languages like Bangla, Oriya, Hindi, etc. these are ki ‘what’, দে/জে (relativizer ‘which’). Below is the list consisting of the C-system of some selected South Asian Languages, taken from Bayer (2001:13):

<table>
<thead>
<tr>
<th>Language</th>
<th>Final complementizer</th>
<th>Initial complementizer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telugu</td>
<td>ani (QUOT)</td>
<td>-</td>
</tr>
<tr>
<td>Tamil</td>
<td>anru (QUOT)</td>
<td>-</td>
</tr>
<tr>
<td>Kannada</td>
<td>anta (QUOT)</td>
<td>-</td>
</tr>
<tr>
<td>Malayalam</td>
<td>ennu (QUOT)</td>
<td>-</td>
</tr>
<tr>
<td>Bengali</td>
<td>bole (QUOT)</td>
<td>জে (OP)</td>
</tr>
<tr>
<td>Oriya</td>
<td>boli (QUOT)</td>
<td>জে (OP)</td>
</tr>
<tr>
<td>Assamese</td>
<td>buli (QUOT)</td>
<td>জে (OP)</td>
</tr>
<tr>
<td>Marathi</td>
<td>mhaNUn (QUOT), asa (‘thus’, QUOT), te (pronominal)</td>
<td>কি (OP)</td>
</tr>
<tr>
<td>Dakhini H-U.</td>
<td>bolke (QUOT), কি (OP)</td>
<td>-</td>
</tr>
</tbody>
</table>

As it is clear from the chart, languages with Dravidian lineage only retain the clause-final complementizer, while the Indo-Aryan languages retain a mixed complementizer system. The quotative complementizer (QC) is formed by a verbal root which corresponds to ‘say’, followed by participles like -e/-i, etc. It preserves a lot of its lexical source, say. On the other side, the clause-initial দে or কি has operator ancestor. But, দে has lost its operator status and should be viewed as a C₀ element. Should it be an operator, it would be slotted in [Spec,CP] position, but this is not the case. Bayer discusses the following two examples from Bangla and Oriya, arguing for the non-operator status of জে (our দে):

(5) (Bayer 1996: 258)

a. তুমি [কি ওসুক-এ], হাঁচো [জে এ, রাম মরা গ্যেচে]?
   you which illness-LOC think-2 COMP Ram die go-PTS3
   Of which illness do you think that Ram died?

b. কি, তুমি হাঁচো [জে এ, রাম মরা সাহাজিয়া করিবার]?
   who you are-thinking COMP Ram help will-do
   Who do you think will help Ram? (from Bal 1990)

Bayer mentions that these two data point towards the fact that it is impossible to license the intermediate traces of the extracted wh-phrases in the lower [Spec,CP] position, should জে/লে be an operator and occupy the specifier slot of the embedded CP. But, the above examples are totally grammatical. Therefore জে/লে can be viewed as complementizer, nothing else. Bayer (1996) also states that Bangla জে can be historically related to a relativizing operator, but that does not guarantee its operator status. In support of it, he takes into account other languages like Germanic, Romance, Slavic, modern Greek whose complementizers are related to various XP elements like deictic pronouns, wh-operators that became reanalyzed as complementizer heads. The same process of reanalysis happened in cases of Bangla, Oriya, Assamese, etc.

On the other hand, the complementizer বলে is a quotative one. As mentioned earlier, it is a clause-final complementizer which is a verbal dicendi. Not in this language alone, there are several

1 See Balusu (2020) to get an idea of the polyfunctional nature of Dravidian quotative complementizer.
reports on conversion of verbs of saying into quotative complementizers in various languages (Lord 1976, Crowley 1989, Klamer 2000, a.o.). Let us now see if there is any difference between these two types of embedded clauses. We show that there are two major lines of difference between these two.

Firstly, the post-verbal ðe-e clause formations exhibit only the narrow scope reading of wh-items (Bayer 1996, Simpson and Bhattacharya 2003), while the pre-verbal bole-clause instantiates only the wide scope readings of them (Datta 2018). Consider the following examples:

(6)  ðe-ke aSbe

they who come.FUT.3

✓ ‘They have heard who will come.’

(7)  bole-say.

say.PRT

✓ ‘Who have they heard will come?’

The wide scope reading of wh in (7) argues for the vP-adjunction of the finite bole-clause (Kidwai 2014), while the ðe-P, we argue, is complementation to matrix V.

Secondly, Bayer et al. (2005:95) exhibit that ðe-clauses can be modified by nominals, whereas bole-clauses cannot get so.

(8)  (Bayer et al. 2005:95)

a.  c^h-ele-ua (e kOt^h)a fune-c^h-e  [ðe or baba aS-be].

boy-CL this news heard-has that his father come-will

‘The boy heard (it) that his father will come.’

b.  [[or baba aS-be] bole e c^h-ele-ua (*e kOt^h)a fune-c^h-e].

his father come-FUT say.PRT boy-CL this news heard-has

‘That his father will come] the boy has heard.’

Though a ðe-CP modifies an NP in (8a), the grammatically licensed structure is where the ðe-clause that modifies the noun is extraposed. In a pre-verbal position, it does not sound okay to the native speakers. See the following in (9):

(9)  (Bayer 1996: 258)

??chele-Ta [e kOtha] [je baba aS-be] jan-e na.

boy-CF this talk COMP father come-FUT know-3 not

As mentioned in Bayer (1996), (9) turns out to be completely ungrammatical when the NP e kOtha is replaced by an empty pronoun.

(10)  *chele-Ta pro [je baba aS-be] jan-e na.  (ibid.)

Thus, the claim that a ðe-clause is licensed by a null DP does not get justification. In this paper, we argue that a bole-clause only modifies the eventuality argument of the matrix RSP, whereas a ðe-clause restricts the internal argument or Theme of the matrix RSP.

3.1 Semantics of ðe-clause and Bole-clause

While viewing Bangla subordinate clauses, we base ourselves on the CP Predicate Hypothesis (Moulton 2009, Kratzer 2013, Moulton 2013, 2015), according to which complementizers turn a clause into predicates of various semantic types rather than arguments. C introduces the Content function as is defined below, given a world w and an assignment function g:

2Though Bayer (1996: 273) mentions that pre-verbal bole-clause shows scope ambiguity with wh in it, we do not agree with this claim. We argue that ora [ke aSbe bole] funeche gives us the only the reading like ‘Who have they heard will come?’, but never something as ‘They have heard who will come.’
It takes a proposition and returns the set of contentful individuals such that the Content of them is identical to the proposition which is complement to C. This is a partial function, because not every individual is contentful. Individuals such as story, rumor, fact, etc., are contentful; they have propositions as their content. On the other hand, individuals like the man, John do not have any propositional content. Following Kratzer (2006), Hacquard (2006) and Moulton (2009, 2015), Elliott (2017) assumed that not only the abstract objects like facts, theories, etc., but also the eventualities such as saying events, belief states are contentful too. The Content function is dubbed under CONTENT MODALITY in Kratzer (2013). It is a domain fixing function which is defined for entities that determine intentional content. For any \( a \) in the domain of Content: \( \text{Content}(a) = \{ w \mid w \text{ is compatible with the intentional content determined by } a \} \).

We follow Moulton (2019) in assuming that the \( \xi e \)-clause in (2) refers to the predicate of contentful individuals. The anatomy of the embedded \( \xi e \)-clause is shown in (2):

\[
(12) \quad \xi e P \quad \lambda w' \quad \text{TP} \quad \text{Anu is guilty in } w'
\]

We assume that the TP holds true in \( w' \) iff Anu is guilty in \( w' \). Now, the world-abstraction is applied on this \( t \)-type TP in order to make it a proposition of type \( \langle s, t \rangle \). It then combines with the complementizer by Intensional Functional Application, resulting in the following interpretation of the embedded \( \xi e P \):

\[
(13) \quad [\xi e P]_{w,s} = \lambda x_e. \text{Content}_w(x) = \lambda w'. \text{Anu is guilty in } w'
\]

As per the above denotation, the embedded clause denotes the set of contentful individuals whose Content is the proposition that Anu is guilty. A \( \xi e \)-clause denotes an \( \langle e, t \rangle \)-type predicate like English that-clause.\(^4\) The Content function is introduced by the clause-initial \( \xi e \) which is built on contentful individuals just like the complementizer that in English.

Now, let’s come to the bole-clause in (1). According to Moulton (2019), Bangla bole is similar to Korean ko, Japanese to, and Zulu ukuthi in that it is also built on contentful eventualities, not individuals, like them. The LF of the concerned bole-clause is in (14).

\[
(14) \quad \text{boleP} \quad \lambda w' \quad \text{TP} \quad \text{bole} \quad \text{Anu is guilty in } w'
\]

The semantics of bole is in (15). It takes a proposition \( p \), of type \( \langle s, t \rangle \), and returns the set of \( v \)-type eventualities \( e \) such that \( p \) is the Content of \( e \). By Intensional Functional Application, it combines with the intensional avatar of the TP and yields the result as in (16).

\[
(15) \quad [\text{boleP}]_{w,s} = \lambda p_{\langle s, t \rangle}. \lambda e_v. \text{Content}_w(e) = p
\]
\[
(16) \quad [\text{boleP}]_{w,s} = \lambda e_v. \text{Content}_w(e) = \lambda w'. \text{Anu is guilty in } w'
\]

\(^3\)After the world-abstraction step, the intensional interpretation of the TP will be the following:

(i) \( [\text{TP}]_{w'} = \lambda w'. \text{Anu is guilty in } w' \)

The denotation of \( \xi e \) relative to a world \( w \) looks like (11) where it takes an \( st \)-type propositional argument, which the intensional version of the TP refers to.

\(^4\)A same kind of predicate-like denotation is reported in case of Laz na-clauses (cf. Demirok et al. 2019).
Relative to a world \( w \), the bole-clause refers to the set of contentful eventualities of type \( v \) such that the Content of them in \( w \) is identical to the proposition that Anu is guilty. Thus, both initial and final complementizers in Bangla supply the Content relation; the former imposes it over individuals, whereas the latter does it over eventualities. The type-logical difference between these two types of embedded clause is liable for the grammaticality and ungrammaticality in (8a) and (8b), respectively. The \( \textit{e} \)-clause in (8a) being predicate of \textit{individuals} (of type \( e \)) can be modified by an \( \langle e, t \rangle \)-type nominal \textit{talk} while in (8b), the \( \langle v, t \rangle \)-type bole-clause which is a predicate of \textit{eventualities} (of type \( v \)) cannot get so, leading to a type mismatch (cf. Moulton 2019).

Now in the next section, we will be heading towards how Bangla RSPs can be treated semantically.

4 Viewing Bangla RSPs

We embrace a neo-davidsonian standpoint (Castañeda 1967, Parsons 1990) in viewing the Bangla RSPs as sets of \( v \)-type eventualities. All the arguments are introduced via separate functional heads. We argue that the RSPs in (1,2) always refer to contentful eventualities. Even when they take non-content nouns like daughter-in-law, wife, they denote contentful events. See the following:

(17) g\( ^h \)oSbabu \( \text{tar} \text{putrobôd}^b \text{u-ke/} \text{stri-ke} \text{ôffikar korlen./} \text{mene nilen.} \)  
Ghoshbabu his daughter-in-law-ACC/ wife-ACC deny did.H/ accept did.H

(17) means ‘Ghoshbabu denied/accepted that the individual \( x \) is his daughter-in-law/wife.’ In other words, the content of the RSPs in (17) refers to some proposition. Those non-content nouns, we argue, compose with a content-introducing operator, Kont as in (18):

(18) \( [\text{Kont}] = \lambda y \text{txe}.\text{cont}(x) = \lambda w'.\exists!z[z = y \text{ in } w'] \)

After composing the non-content nouns with Kont, the resultant becomes the unique contentful individual as in (19). This can now compose with the RSPs via their Theme.

(19) \( \text{txe}.\text{content}(x) = \lambda w'.\exists!z[z = y \text{ his daughter-in-law/wife(}y\text{) in } w'] \)

It can also be shown that deny is contentful too in examples like ‘John denied [DP the petitioners]’. In this example, it is meant that John denied the claim of the petitioners. Thus, the DP here can be seen as the source DP of some proposition (Djärv 2019). And, the procedural steps for composition can then be executed along the line of Roberts (2020) who proposes a \textit{Claim} operator that composes with the source DP. After exhibiting that the Bangla RSPs in (1) or (2) are sets of contentful events, we can now propose the following interpretation in (20) which denotes the set of contentful eventualities. And, it is defined if the content of the eventualities is already existing in the Common Ground (CG) (Stalnaker 2002) of the interlocutors. It is well established that the complements of RSPs refer to the already-existent discourse referents in the CG (Kastner 2015).

(20) \( [\text{oôffikar kôr-/mene ne-}]^w = \lambda e_x : \text{content}_w(e) \in \text{CG}.\text{deny}_w/\text{accept}_w(e) \)

5 Combining RSPs with \( \textit{e} \)-clause and \textit{Bole}-clause

Let us turn to the example in (1), where the RSPs are taking a bole-clause. Earlier we have mentioned that a bole-clause combines via adjoining to the vP (see Kidwai 2014). Thus, the LF of (1) will be as in what follows:
The \( v \) head, we argue, introduces the external argument, combining with the matrix \( V \) by Event Identification (à la Kratzer 1996). The resultant is as follows:

\[
\lambda x. \lambda e_v : \text{Content}_w(e) \in \text{CG} \land \text{deny}_w(e) \land \text{Exp}_w(e) = x
\]

Now, the external argument gets valued and \( vP \) combines with the \( bole \)-clause by Predicate Conjunction, resulting in the following semantics of higher \( vP \) in \( w' \):

\[
\lambda e_v : \text{Content}_w(e) \in \text{CG} \land \text{deny}_w(e) \land \text{Exp}_w(e) = \text{Rabi} \land \text{Content}_w(e) = \lambda w'. \text{Anu is guilty in } w'
\]

It is clearly shown that the \( bole \)-clause combines via modifying the matrix event. In the semantics, the defining criterion is that the content of the events of denying or accepting is already existent in the CG. This constitutes the familiarity criterion encoded in response-stance attitude reports. Factivity is not all guaranteed because content of an eventuality might not be true in actual world.

Now, let us turn to (2) where a \( \phi e \)-clause is embedded under RSPs. The LF of it will be as in what follows:

As opposed to the previous case, we argue that a \( \phi e \)-clause composes with the RSPs via their Theme or internal argument, because a \( \phi e \)-CP is nominal-like in nature (property of contentful individuals, not events) and nominals can qualify as Themes. The Theme of the RSPs can be interpreted as (25) which encodes the PRE-EXISTENCE PRESUPPOSITION (Bondarenko 2019). It says that the left boundary (LB) of the interval denoting the lifespan of the Theme precedes (\(<\)) the LB of the running time of the event. The function \( \tau \) in (25) refers to the TEMPORAL TRACE FUNCTION (Krička 1989, 1992, 1998) which denotes the lifespan of an individual or an event. Now we argue that the \( \phi e \)-CP restricts (Chung and Ladusaw 2004) the Theme argument \( x \), resulting in (26).

\[
\llbracket \theta_{\text{Th}} \rrbracket^w = \lambda x. \lambda e_v : \text{LB}(\tau(x)) < \text{LB}(\tau(e)) \land \text{Theme}_w(e) = x \land \text{Content}_w(e) \land \text{deny}_w(e) \land \text{Exp}_w(e) = x \land \text{Content}_w(x) = \lambda w'. \text{Anu is guilty in } w'
\]

\[
\llbracket \text{VP} \rrbracket^w = \lambda x. \lambda e_v : \text{LB}(\tau(x)) < \text{LB}(\tau(e)) \begin{cases} \text{deny}_w/e, & \text{if } \text{Content}_w(e) \in \text{CG} \\ \text{undefined}, & \text{otherwise} \end{cases} \land \text{Theme}_w(e) = x \land \text{Content}_w(x) = \lambda w'. \text{Anu is guilty in } w'
\]
In (26), it is presupposed that the Theme of the RSPs refers to an already-existent discourse referent that pre-exists the matrix events. Factivity is not guaranteed even here, because content of an individual also might not be true in reality. Rest of the compositional steps will be like before.

6 Conclusion

In this paper, we provide a complete compositional analyses of Bangla RSPs combining with two types of finite clauses, encoding the familiarity criterion in the combinatorics. We exhibit that the nominal-like ে-clause combines with the matrix attitude RSP by restricting its internal argument, while the adverbial-like bole-clause adjoins the vP, modifying the matrix eventuality. We provide such a semantics for Bangla RSPs, where the familiarity criterion is presupposed in the verbal semantics itself. It is noteworthy that the internal argument of our RSPs also pre-exists the matrix events, which obviously argues in favor of the familiarity condition encoded in response-stance attitude reports.

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