

Economy Constraints on Phrasal Causatives

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1. Introduction¹

Economy considerations lie at the core of linguistic theorising, with the system favouring expressions with the *Least Effort* flavour, i.e., derivations with less computational/representational costs (see Chomsky (1995) *et seq*). The Strong Minimalist Thesis rules out *true optionality* where two or more PF forms co-exist with the same LF representation (though, see Biberauer and Richards (2006) for exceptions). In this paper, we show that minimally different PF forms can co-exist with a single meaning, and they are ranked from good to marginal. This gradation, we show, is based on costs incurred on semantic computations and equivalence at LF (following Reinhart (1998)). Our inquiry is directed at Bangla (a.k.a. Bengali; an Eastern Indo-Aryan language) morphological and phrasal causatives, with the former scoring a higher rank than the latter.

The paper is arranged as follows: Section 2 presents a brief on three types of causatives in Bangla, i.e., lexical, morphological, and phrasal causatives. Section 3 lays out details of a survey conducted by the authors, the methodology used, and the results regarding the distribution patterns of phrasal causatives. Section 4 summarises two existing proposals for comparing derivations, while Section 5 elaborates on the syntactic and semantic representations for both morphological and phrasal causatives. This is where we also show that the semantic representations for the two are considered for comparison, and the phrasal causatives are ranked lower than morphological causatives because of the extra computational costs that the former incur at LF. Section 6 concludes with some theoretical implications for theories adopting pan-derivational comparisons at the semantic interface.

2. Three types of Bangla Causatives

Bangla has two primary kinds of causatives: lexical and morphological. As illustrated through the contrast in (1a-b), the lexical causative (LC) form of a verb such as *poraa* ‘fall’ is *phello*. In morphological causatives (MC), on the other hand, there is a separate causative morpheme *-waa* that is attached to the verbal root. Relevant examples are shown in (2a-b), where the verb *khaa* ‘eat’ is causativised as *khaa-waa*.

- | | |
|---|----------------------------|
| <p>(1) a. <i>Raam porlo.</i>
Ram fall.PST.3
'Ram fell down.'</p> <p>b. <i>Sitaa Raam-ke phello.</i>
Sita Ram-ACC throw.PST.3
'Sita threw Ram.' (lit. pushed Ram to the floor)</p> | <p>(Lexical Causative)</p> |
|---|----------------------------|

¹ We thank our Bangla informants for sharing their linguistic judgements with us. We are also grateful to Rajesh Bhatt, Roberta D'Alessandro, Hamida Demirdache and Caterina Donati for very insightful comments on the paper, and to Victor Junan Pan, Zetao Xu and other organisers of GLOW in Asia XIV for their kind hospitality.

- (2) a. *aami khaabaar khe-laam.* (Morphological Causative)²
 I food eat-PST.1
 ‘I ate food.’
- b. *aami Raam-ke khaabaar khaa-waa-laam.*
 I Ram-ACC food eat-CAUS-PST.1
 ‘I fed Ram.’

Lexical causatives are mostly seen with unaccusatives such as ‘fall’, ‘go’, ‘come’ etc. Table 1 lists some examples (also, see Dasgupta (2007)).

Table 1: Lexical Causatives with Unaccusatives

Unaccusatives	Causatives
<i>poraa</i> ‘fall’	<i>phela</i> ‘throw’
<i>jaawaa</i> ‘go’	<i>pnouche dewaa</i> ‘make someone reach’
<i>aashaa</i> ‘come’	<i>aanaa</i> ‘bring’
<i>mora</i> ‘die’	<i>maaraa</i> ‘kill’
<i>ghum theke otha</i> ‘get up’	<i>ghum theke tolaa</i> ‘wake someone up’
<i>thaakaa</i> ‘stay’	<i>raakhaa</i> ‘keep’
<i>chola</i> ‘go’	<i>chaalaano</i> ‘drive’/‘make something run’

Not every unaccusative, however, can be lexically causativised; verbs such as *dobaa* ‘sink’, *golaa* ‘melt’, *photaa* ‘bloom’, *pochaa* ‘rot’ instead have morphological causative forms (*dobaano* ‘to cause to drown’, *golaano* ‘to cause to melt’, *photoano* ‘to cause to bloom’, *pochaano* ‘to cause to rot’). Morphological causatives with unaccusatives are also not very common; one cannot use **poraano* ‘to cause to fall’, **jaawaano* ‘to cause to go’, **aashaano* ‘to cause to come’, **moraano* ‘to cause to die’, **ghum theke othaano* ‘to cause to get up’, **thaakaano* ‘to cause to stay’, **cholaano* ‘to cause to go/run’, etc. MCs are most productive with unergatives and (di)transitives, as shown in Table 2 below.

Table 2: Morphological Causatives with Unergatives and (Di)transitives

Unergatives	Morphological Causatives
<i>naachaa</i> ‘dance’	<i>naach-aa-no</i> ‘make someone dance’

² Bangla also has morphological double causatives, where no additional morphology is required other than *-waa*; in (i), ‘I’ is the first causer, and ‘Ram’ is the second causer.

(i) *aami Raam-ke diye goru-ke khaabaar khaa-waa-laam.*
 I Ram-OBJ by cow-ACC food eat-CAUS-PST.1
 ‘I made Ram feed the cow.’

<i>knaadaa</i> ‘cry’	<i>knaad-aa-no</i> ‘make someone cry’
(Di)transitives	Morphological Causatives
<i>bolaa</i> ‘tell’	<i>bol-aa-no</i> ‘make someone tell’
<i>dewaa</i> ‘give’	<i>de-waa-no</i> ‘make someone give’
<i>khaawaa</i> ‘eat’	<i>kha-waa-no</i> ‘feed’
<i>dekhaa</i> ‘see’	<i>dekh-aa-no</i> ‘show’

A clear-cut pattern that can be seen from the above-presented data is, that if a verb has undergone lexical causativisation, it does not go with morphological causativisation. But in general, lexical causative forms are few, and many verbs instead end up with morphological causative forms.

Bangla has a third type of causative - the phrasal causative, which is the primary topic of our investigation here. These are briefly reported in the literature (Dasgupta 2007), but they are not explored further as very few speakers of Standard (Kolkata) Bangla use them. They are constructed with an additional *karaa* ‘do’ that is causativised (3a-b). Dasgupta reports them as non-standard variants.

- (3) a. *Jitu Rinaake diye dutxo saarxi kaacaa kar-aa-be.*
 Jitu Rina-OBJ by two saris to-wash will-cause-to-do
 ‘Jitu will make Rina wash two saris.’ (Dasgupta 2007: pp 219)
- b. *aami Raam-ke khaabaar khaawaa kar-aa-laam.*
 I Ram-ACC food eat do-CAUS-PST.1
 ‘I fed Ram.’

In this paper, we ask two questions concerning phrasal causatives: the first is about their distributional patterns, and the second concerns their non-preferential status. More specifically, do phrasal causatives occur with different kinds of verbs, or are they restricted to a few verb classes? Second, what explains their degraded status vis-a-vis morphological causatives?³

3. Experimental Survey and Results

Previous literature on Bangla morphological causatives has already established their wide acceptability among native speakers for all verbs except for intransitives such as ‘fall’, ‘die’, etc (see Dasgupta (2007)).⁴ However, there is currently no existing work that talks extensively about phrasal causatives. We therefore conducted a survey trying to fill in this lacuna.

³ Rajesh Bhatt (personal communication) directs our attention to Hindi structures with ‘steal’ which have both morphological causative and phrasal causative forms (*churvaayi* ‘steal-cause’ and *chori karvaayi* ‘steal do-cause’). However, we believe that the latter may not be instances of phrasal causatives since the base/default form of ‘steal’ in Hindi is *chorii-karna* ‘steal-do’, which means that no extra ‘do’ is added to an existing verb.

⁴ Dasgupta (2007) also mentions that morphologically, only *sarcastic causatives* can be formed with these verbs, but not the regular causatives.

Our methodology involved circulating a feedback form (testing comprehension) containing 20 phrasal causatives among 20 native speakers in the age range of 23-35 years. All informants are native speakers of Bangla residing in the city of Kolkata (West Bengal, India). Phrasal causatives with (di)transitives (e.g., ‘eat’, ‘tell’), unergatives (e.g., ‘dance’), and unaccusatives (e.g., ‘fall’) were intermixed with fillers (non-causative sentences). Respondents were asked to judge the sentences on a three-point scale: good/acceptable (=yes), bad/unacceptable (=no), and marginal. Below, we present the results of the survey. Consider the graph below for results on unaccusative verbs.

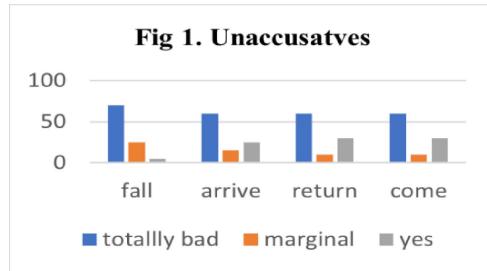


Fig 1: Acceptability of phrasal causatives with Bangla unaccusative verbs

Speakers ruled out phrasal causatives with unaccusatives. We performed a χ^2 -test for independence to check whether the complete rejection of phrasal causatives is independent of the use of unaccusative verbs like ‘fall’, ‘arrive’, ‘return’, and ‘come’. The result is as follows: $\chi^2(df = 6)$ -value = 30.088, p-value = 0.00003 < 0.05, H_0 = complete rejection of phrasal causatives is independent of the use of unaccusative verbs. Thus, we note a statistically significant result where the use of unaccusatives strongly lowers the acceptability of phrasal causative structures in Bangla.

On the other hand, the formation of phrasal causatives is deemed possible with (di)transitives. However, not all transitive phrasal causatives are equally acceptable. See Fig 2 below.

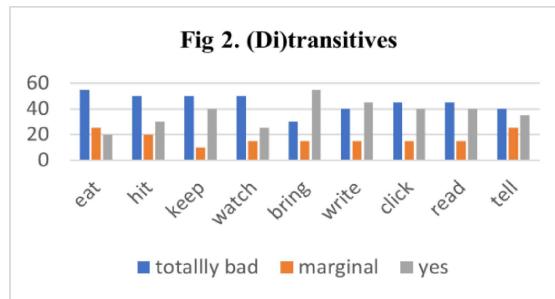


Fig 2: Acceptability of phrasal causatives with Bangla (di)transitive verbs

With transitives like ‘eat’, ‘hit’, ‘keep’, and ‘watch’, most informants find it odd to form a phrasal causative structure ($\chi^2(df = 3)$ -value = 14.02, p-value= 0.029 < 0.05, H_0 = complete rejection of phrasal causatives is independent of the use of these transitive verbs), while with ‘bring’, ‘write’, ‘read’, ‘click’, and ‘tell’, phrasal causative formation is more acceptable ($\chi^2(df = 8)$ -value = 13.80, p-value = 0.086 > 0.05, H_0 = complete rejection of phrasal causatives is not sensitive to the use of these transitive verbs).

Finally, turning to unergative intransitives, the following figure evinces the acceptability pattern of phrasal causatives containing this predicate type:

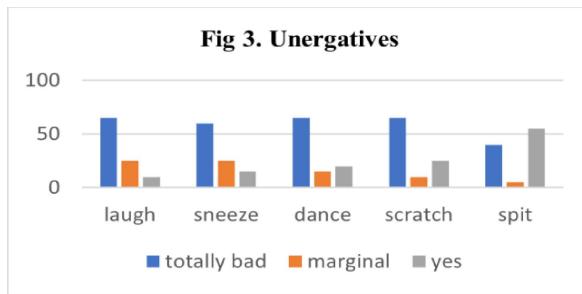


Fig 3: Acceptability of phrasal causatives with Bangla unergative verbs

Verbs such as ‘laugh’, ‘sneeze’, ‘dance’, and ‘scratch’ are bad in phrasal causative constructions ($\chi^2(df = 6)$ -value = 16.43, p-value = 0.011 < 0.05, H_0 = complete rejection of phrasal causatives is independent of the use of these unergative verbs), while ‘spit’ is comparatively good, with many respondents opting for the “totally good” option.

To summarise, phrasal causatives are ruled out with unaccusatives, as shown in Fig 1, while phrasal causatives are possible with some (di)transitive and unergative verbs though the possibility is not statistically significant ($F = 4.769 > F(0.95, 13, 3) = 0.293$, p-value = 0.8879 > 0.05, left-tailed test). The data do not show a complete rejection of the phrasal causatives; the (di)transitives and the unergatives are more acceptable than the accusatives. But this kind of statistical insignificance tells us that speakers are mostly avoiding phrasal causatives, irrespective of the verb types.

4. Comparing Derivations

Preference for one construction over another calls for pan-derivational comparison, also known as global economy. The notion of comparing derivations doesn’t align too well with minimalist ideals, where decisions regarding costs are taken locally, at different points of constructing a single derivation. Comparing derivations, on the other hand, implies that the system should, additionally, have the resources to compare two representations that are stored in two separate derivational workspaces. If separate derivations are compared and rated against each other, it implies that principles such as parsimony and economy apply both globally and locally. Below we talk about two approaches that have been proposed to compare derivations.

One popular approach is to compare constructions that constitute a *reference set*. There are several different viewpoints on what constitutes a reference set. Under one account, if derivations D1 and D2 are both convergent and start from the same *Numeration*, they are part of the same reference set and hence comparable (see Chomsky’s (1992) *Shortest Movement Requirement*). This is illustrated with the following sentences from English:

(4) Who e bought what?

(5) *What did who buy e?

(4) moves the higher wh-item ‘who’ to the sentence periphery, whereas in (5), it is the lower wh-item ‘what’ that is moved. Object movement in the second sentence incurs more cost, as it is a longer movement. Since another derivation can be concurrently created from the same

numeration ($\{\text{who}, \text{buy}, \text{what}, \text{T}, \text{C}, \text{v}\}$), the system, upon comparing the two derivations, rules out the one with the longer (object) movement in (5).

The challenge for this approach, however, comes from derivations that emerge from the same numeration, with distinct computations, and yet, are not ruled out in favour of one another. Consider the following constructions in (6)-(7), both of which are grammatical despite the latter hosting a longer movement (what-movement to spec, embedded CP) than the former.

- (6) Who e knows who e bought what?

- (7) Who e knows what who bought e?

Reinhart (1998) explains that these two derivations, despite sharing the numeration, do not end up competing with each other because they have distinct semantics. In the former, where the ‘who’ has moved to the embedded CP, the question is asked of the wh-in situ ‘what’ (8), whereas in the latter, the ‘what’ has moved to the embedded CP, the question is asked of the wh-in situ ‘who’ (9).

- (8) For which $\langle x, z \rangle$, x knows who bought z .

- (9) For which $\langle x, y \rangle$, x knows what y bought.

(8) and (9) are not identical representations at LF, and therefore they do not compete against each other. These cases fail to provide the ground to implement the global economy constraint and hence both derivations are equally possible (see Golan (1993)) for the original conception of locality in these terms). Building on these observations, Reinhart (1998) resets global economy as an interface strategy that applies at the stage when syntactic forms are translated into semantic representations (also see Reinhart and Reuland (1993) for a similar observation on the application of Condition B). At that stage, if there is a semantically equivalent derivation D1 with less cost, it blocks the more expensive D2 with the same semantic representation. This is formally stated by Reinhart in (10). Thus, comparison at the level of semantics is considered (cf. Fox 1995).

- (10) D' blocks D unless their translations are not equivalent. (pp. 50)

5. Comparing Phrasal and Morphological Causatives

As discussed, morphological and phrasal causatives are minimally different in that the latter has an extra ‘do’ morpheme. The following sentences show the contrast:

- (11) *aami raam-ke diye mishti aan-aa-laam.*
I Ram-OBJ by sweets bring-CAUS-PST.1
'I had Ram bring the sweets.'

- (12) *aami raam-ke diye mishti aan-aa kor-aa-laam.*
I Ram-OBJ by sweets bring-NMLZ do-CAUS-PST.1
'I had Ram bring the sweets.'

The sentences are different in their choice of lexical items. While the morphological causative in (11) has the causative morpheme attached to the lexical verb, the phrasal causative in (12) has an extra ‘do’ morpheme to which the causative morpheme is attached. The other difference is that the phrasal causative also has a nominalised verb. The *-aa* marker attached to the verbal *aan-* root in (12) is a nominaliser, though it is homophonous to the causative morpheme in the inflected form of ‘do’. More evidence for *-aa* used as a nominaliser comes from (13), where the nominalised form *aan-aa* constitutes an event.

- (13) *ekhaane baacchaader aan-aa thik naa.*
 here child.PL bring-NMLZ right NEG
 ‘Bringing children here is not right.’

Clearly, the morphological causative and the phrasal causative have different numerations. This presents a challenge, since according to the first approach discussed above, comparisons between constructions are possible only if they are derived from the same numeration. The concerned structures have different numerations, and yet, they are compared and ranked vis-a-vis each other.

5.1. Comparison at the Interface

An alternative explanation must therefore be sought out. We thus enquire if Reinhart’s proposal of pan-derivational comparison as an interface condition can account for the differential treatment meted out to phrasal causatives in Bangla. For this, we have to look carefully for semantic overlaps in the LF translations of morphological and phrasal causatives. Once an overlap is confirmed, indicating their semantic equivalence, we have an answer for why the two constructions are comparable, despite being associated with different numerations.

Let us delve deeper into the meanings of these two types of causatives. Interestingly, our informants unanimously ascribed two meanings (a-b) to both types of causatives given in (11)-(12):

- a. In one reading, the matrix subject ‘I’ is the causer of the event, and ‘Ram’ is the agent of the resultant event ‘bringing sweets’ – let us call it a ‘single causative’ reading;
- b. In another reading, the matrix subject ‘I’ is the causer of the event, but ‘Ram’ is not the agent of the resultant event ‘bringing sweets’ himself. Instead ‘Ram’ acts as another causer who makes someone else (agent) ‘bring sweets’ – this is a ‘double causative’ reading.

This kind of ambiguity is related to the structural nuances of the constructions. In the literature on causatives (cf. Pylkkänen 2008), two types of languages are identified: *voice bundling* languages and *non-voice bundling* languages. In the former type, which also includes English, the *agent* and the *causer* roles overlap on a functional v head, whereas in the latter, they are hosted on two separate functional heads.⁵ The overlap is illustrated below, where the causative (transitive) verb (15) has the same form *bhaanglo* as the inchoative (intransitive) counterpart (14). The inchoative lacks an external causer/agent, while the causer/agent distinction is clearly made in the transitive. Despite this difference, the verbal morphology is the same, indicating that the causer and the agent roles are carried on the same verb.

⁵ The same is noted for Hindi-Urdu (aka Hindi) (Bhatt and Embick 2017).

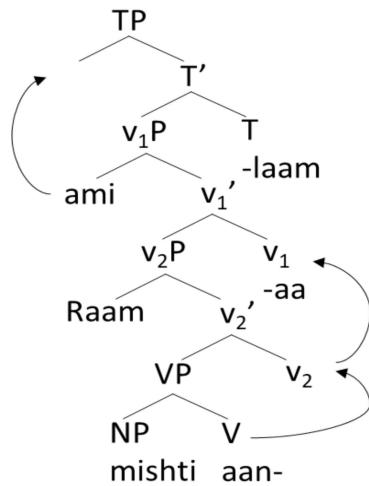
- (14) *jaanlaa-ta bhaanglo*
 window-CLF break.PST.3
 ‘The window broke.’ (Inchoative)
- (15) *Lisaa jaanlaa-ta bhaanglo*
 Lisa window-CLF break.PST.3
 ‘Lisa broke the window.’ (Causative)

In contrast, Japanese and Finnish have a distinct way of introducing the causer. Consider the following pairs to understand the difference. Their transitive verbs are marked with *-ase* and *-tti* respectively to indicate that a causer is present.

- (16) Japanese (Pylkkänen 2008: pp. 81)
- a. *Yasai-ga kusa-tta*
 vegetable-nom rot-past
 ‘The vegetable rotted.’ (Inchoative)
 - b. *Taroo-ga yasai-o kus-ase-ta*
 Taro-nom vegetable-acc rot-cause-past
 ‘Taro caused the vegetable to rot.’ (Causative)
- (17) Finnish (Pylkkänen 2008: pp. 82)
- a. *Ikkuna hajo-si*
 window.nom break-past
 ‘The window broke.’ (Inchoative)
 - b. *liisa hajo-**tt**-i ikkuna-n*
 Lisa.nom break-cause-past window-acc
 ‘Lisa broke the window.’ (Causative)

Since Bangla does not distinguish between inchoatives and transitives as concerns the morpho-syntax of the verb, we infer that it encodes the two semantic roles of the ‘agent’ and the ‘causer’ on a single verb. With that assumption in place, we posit (18) as the structural representation for a morphological causative (see e.g., (11)) with a single causative meaning.

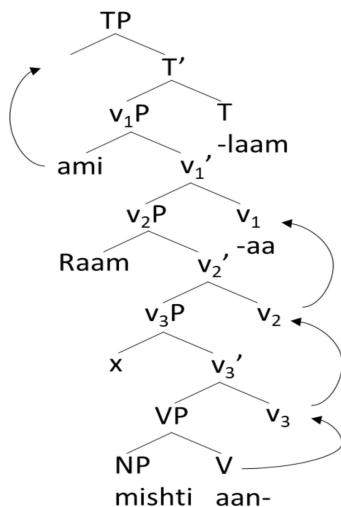
(18)



(18) shows a recursive vP structure (following Bhatt and Embick (2017), with v₁ selecting v₂. The lower v₂ head can only assign an agent theta role to its external argument *Ram*. The higher v₂ head to which the causative morpheme *-aa* is attached simultaneously assigns both causer and agent theta-roles to the external argument *aami*.

On the other hand, the double causative reading associated with the morphological causative requires another recurring vP which accommodates the agent of bringing sweets who is someone else other than *Ram*. Here, *Ram* acts as an intermediate causer ordering/causing someone to bring the sweets. We propose the following representation to account for this kind of reading (19):

(19)

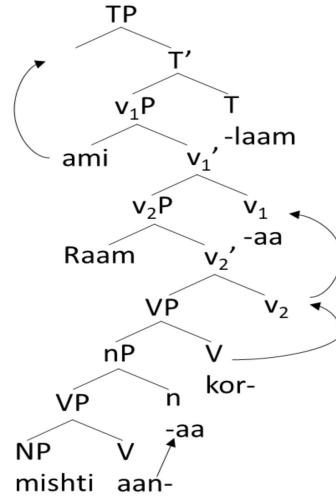


In (19), v₃ assigns only the agent theta-role, whereas the higher functional heads v₂ and v₁ can simultaneously assign both causer and agent theta-roles to their respective external arguments. To elaborate, the x who ‘brings sweets’ is assigned an agent theta-role by v₃, whereas by v₂, *Ram* is assigned theta-roles of a causer (of causing someone else to bring the sweets) and an

agent of the event which causes someone to bring the sweets. Similarly, *aami* is the causer as well as agent of the event that triggers *Ram* to cause *x* to bring sweets.

The same meanings are also available with phrasal causatives including (12). The single causative reading receives the following structural representation:

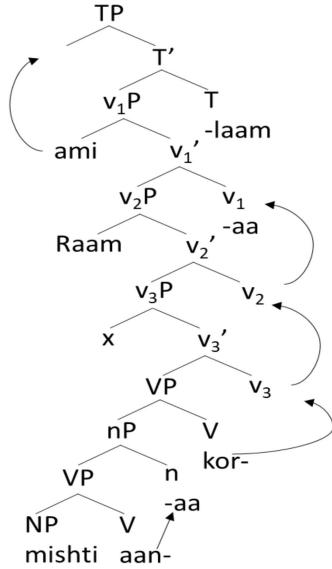
(20)



The phrasal causative has the following distinct features. The first involves the nominalised nP ‘brining sweets’ and the second is the verb *kor-* which is acting as a main verb here. Same as the morphological causative, v2 in (20) also assigns the agent theta-role to *Ram*, whereas v1 assigns both the causer and agent roles to the matrix subject *aami*.

The double causative reading associated with the phrasal causative likewise recurs another layer of vP where the lowest v3 assigns only the agent theta-role to the *x* who brings the sweets. The v2 and v1 heads assign both the causer and agent theta roles to their external arguments. See the following:

(21)



What we have shown till this point is that despite the extra nP and ‘do’, phrasal causatives have the same recurring vP-structure that allows single and double causative readings. However, they must also be shown to have the same translations at LF.

Now, coming to the semantics corresponding to the ambiguous readings associated with the morphological causative in (11), we follow Pylkkänen’s (2008) insight in defining the interpretation of a v with both causer+agent readings.

$$(22) [[v_{AG+CAUS}]] = \lambda P_{<_v,t>} \lambda x_e \lambda e'_{>_v} \exists e [P(e) \wedge \text{cause}(e', e) \wedge \text{ag}(e') = x]$$

It takes a predicate (of eventualities) P, along with one individual argument x and an event argument e', and it returns true if there exists an event e that is predicated by P and is caused by e' whose agent is x. Now, getting to check how it works in (18) computationally, we see that the event predicate that *-aa* morpheme takes as its argument is v₂P, the interpretation of which is in (23). The consequent compositional steps are the following:

$$(23) [[v_2P]] = \lambda e_v \text{bring(sweets)}(e) \wedge \text{ag}(e) = \text{Ram} \quad (\text{via (i) Event Identification (Kratzer 1996), VP \& v}_2; \text{ and (ii) Function Application (FA), } v_2' \& [[\text{Ram}]])$$

$$(24) [[v_1']] = \lambda x_e \lambda e'_{>_v} \exists e [\text{bring(sweets)}(e) \wedge \text{ag}(e) = \text{Ram} \wedge \text{cause}(e', e) \wedge \text{ag}(e') = x] \\ \qquad \qquad \qquad (\text{via FA, } v_1, v_2P)$$

$$(25) [[v_1P]] = \lambda e'_{>_v} \exists e [\text{bring(sweets)}(e) \wedge \text{ag}(e) = \text{Ram} \wedge \text{cause}(e', e) \wedge \text{ag}(e') = \text{Speaker}] \\ \qquad \qquad \qquad (\text{via FA, } v_1', [[\text{aami}]])$$

The open event argument in (25) is then bound by an existential closure introduced by the finite T head (Kratzer 1996), yielding the following interpretation of the TP:

$$(26) [[TP]] = \exists e' \exists e [\text{bring(sweets)}(e) \wedge \text{ag}(e) = \text{Ram} \wedge \text{cause}(e', e) \wedge \text{ag}(e') = \text{Speaker}]$$

It states that there exist two events e' and e such that e is the event of bringing sweets by Ram and caused by e' whose agent is the speaker in the context. It successfully captures the single causative reading associated with the morphological causative. On almost similar lines, the double causative reading for morphological causatives is derived via the following steps:

- (27) $[[v_3P]] = \lambda e_v. \text{bring}(\text{sweets})(e) \ \& \ \text{ag}(e) = x_i$
- (28) $[[v_2[\text{AG+CAUS}]]] = \lambda P_{\langle v, t \rangle} \lambda x_e \lambda e'_{\langle v \rangle} \exists e [P(e) \ \& \ \text{cause}(e', e) \ \& \ \text{ag}(e') = x]$
- (29) $[[v_2P]] = \lambda e'_{\langle v \rangle} \exists e [\text{bring}(\text{sweets})(e) \ \& \ \text{ag}(e) = x_i \ \& \ \text{cause}(e', e) \ \& \ \text{ag}(e') = \text{Ram}]$
- (30) $[[v_1P]] = \lambda e''_{\langle v \rangle} \exists e' \exists e [\text{bring}(\text{sweets})(e) \ \& \ \text{ag}(e) = x_i \ \& \ \text{cause}(e', e) \ \& \ \text{ag}(e') = \text{Ram} \ \& \ \text{cause}(e'', e') \ \& \ \text{ag}(e'')] = \text{Speaker}$
- (31) $[[TP]] = \exists e'' \exists e' \exists e [\text{bring}(\text{sweets})(e) \ \& \ \text{ag}(e) = x_i \ \& \ \text{cause}(e', e) \ \& \ \text{ag}(e') = \text{Ram} \ \& \ \text{cause}(e'', e') \ \& \ \text{ag}(e'')] = \text{Speaker}$

We now have the task of computing the single and double causative meanings of phrasal causatives. Following Portner (1991, 1992), we assume that the nominalised phrase/gerund denotes sets of events/minimal situations.⁶ The nominaliser (NMLZ) $-aa$ denotes an identity function of type $\langle\langle v, t \rangle, \langle v, t \rangle\rangle$ (Bhadra and Banerjee 2023), as stated in (31). We make an ontological assumption that eventualities are also part of the domain containing individuals, i.e., $D_v \subset D_e$. We also follow the Kratzerian stand to include only internal arguments in the verbal semantics, severing the external one which is supplied by the functional v . So, we view ‘do’ as having the Kratzerian transitive semantics such as $\lambda y_e \lambda e_v. \text{do}(y)(e)$ where the y variable will be saturated by the kind-level eventuality denoted by the nominalised phrase. Now, we compute the semantics of VP, as in (33).

- (32) $[[\text{NMLZ } -aa]] = \lambda P_{\langle v, t \rangle} \lambda e_v. P(e)$
- (33) $[[VP]] = \lambda e_v. \text{do}(\cap [\lambda v. \text{bring}(\text{sweets})(v)])(e) \quad (\text{via FA, } [[\text{kor-}]], [[nP]])$

We follow Portner’s (1992) assumption in viewing verbal nominalisations as entity correlates. This is the reason we use Chierchia’s (1998) ‘ \cap ’ operator to convert a property (in this case, property of eventualities of type $\langle v, t \rangle$) into its entity correlate. Now, the VP will compose with the agent-introducing v_2 head via Event Identification (Kratzer 1996). After that, the causative morpheme $-aa$ in v_1 will introduce the CAUS and AG semantics in it. Eventually, we will get the single causative interpretation of v_1P in (34). It successfully captures the causative meaning where the speaker is causing some *doing* event by *Ram* himself and what is *done* is the event of bringing sweets. As before, \exists -closure now happens to bind the free event variable e' and, consequently, we get a t -type interpretation of the whole TP.

- (34) $[[v_1P]] = \lambda e'_{\langle v \rangle} \exists e. \text{do}(\cap [\lambda v. \text{bring}(\text{sweets})(v)])(e) \ \& \ \text{ag}(e) = \text{Ram} \ \& \ \text{cause}(e', e) \ \& \ \text{ag}(e') = \text{Speaker}$

From our experimental survey in Section 3, we noted that phrasal causatives are bad with unaccusatives. The reason behind this is – ‘do’ necessarily asks for a θ -assigning $v_{[\text{AG}]}$ head just above it. However, in the case of unaccusatives, this kind of $v_{[\text{AG}]}$ projection is absent, therefore also ruling out ‘do’ in the structure. Likewise, the double causative reading of (21)

⁶ Also see Bhadra and Banerjee (2021), Banerjee (2023) for a discussion on the semantics of Bangla gerunds.

can be inferred by introducing an additional layer of causation semantics that can be imported from another v projection. Eventually, the TP in (21) results in having the following double causative interpretation:

$$(35) [[TP]] = \exists e'' \exists e' \exists e. do(\cap[\lambda v. bring(sweets)(v)])(e) \& ag(e) = x_i \& cause(e', e) \& ag(e') = Ram \& cause(e'', e') \& ag(e'') = Speaker$$

To summarise, though morphological and phrasal causatives begin from different numerations, with the latter hosting extra items including an overt verb ‘do’ and a nominalised item, the two eventually translate into the same LF forms. In other words, phrasal causatives do not contribute any extra semantics in comparison to their morphological counterparts. It is at this level that the two are compared, and the phrasal causatives are ranked lower than the morphological causatives because they have extra LF/semantic computations including the conversion of the property of eventualities into entity correlates. The costlier option is therefore syntactically possible, but a less preferred option at the interface.

5. Conclusion

This paper discusses phrasal causatives which are rated lower than morphological causatives by Bangla speakers. As we enquire about the reasons behind this ranking, we understand that pan-derivational constructions are indeed possible with minimally different sentences as long as they share the same semantics. When two derivations with the same semantics are compared, the one that incurs more cost at LF is deemed more expensive and is therefore considered less acceptable. From this viewpoint, pan-derivational comparisons do not occur in the syntactic space where economy and parsimony act on local domains. The semantic interface is different in that it allows comparisons across different derivations.

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