Viewpoint aspect without inflectional aspect marking: in-progress and perfect readings in the Bangla conditional antecedent

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Abstract

Temporal reference in conditionals has been of great interest in linguistics and philosophy, but the contribution of aspect is less understood. In Bangla, indicative *jodi* 'if' conditionals disallow progressive and perfect inflectional markers in the antecedent. However, certain present-tensed clauses can have in-progress and perfect interpretations. How do these readings emerge in the absence of inflectional morphology? I propose that viewpoint aspect distinctions in this environment result from the interaction of conditional semantics, lexical aspect, and general interpretative strategies, and differ in telling ways from their aspect-inflected counterparts in unembedded clauses. I use this to argue that the restrictions on the Bangla conditional are narrower than a global ban against in-progress or perfect *meanings*, but deeper than a ban against the morphological *forms* that instantiate the progressive or perfect. This highlights the role of lexical aspect and inferential strategies in determining temporal reference in a modal environment.

1 Introduction

Following a renewed interest in the interaction of temporal and modal meaning, there has been a lot of research on how temporal reference is composed in modal environments, including the antecedent and consequent of conditionals. Much of this work focuses on tense and consciously abstracts away from the contribution of aspect (Crouch, 1993; Kaufmann, 2005; Rumberg & Lauer, 2023, a.o.), which is nonetheless an important facet of temporal meaning. This paper examines aspectual distinctions in the antecedent of indicative conditionals. The connective *jodi* 'if' in Bangla imposes temporal restrictions such that inflectional progressive and perfect markers are disallowed in the antecedent:

(1) jodi mini ga-ϕ-e /??gai-ch-ϕ-e /??ge-ech-ϕ-e, ami khuSi hObo
if mini sing-PRS-3 /??sing-PROG-PRS-3 /??sing-PRF-PRS-3, I happy be.FUT.1
Intended: If Mini sings/ is singing/ has sung, I will be happy

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However, certain present-tensed antecedents can have 'in-progress' and 'perfect' readings, which are typically identified with the viewpoint aspect categories of Progressive and Perfect. This paper addresses the following question: how do these aspectual interpretations emerge in the absence of the relevant inflectional morphology? The simplest hypothesis is that the absence of inflectional marking is merely morphological; these antecedent clauses have the same underlying LF as their aspect-inflected counterparts. However, I will argue that this is not empirically adequate. Grammatical aspect markers are usually treated as the overt realization of viewpoint operators, which modify verbal predicates and impose restrictions on their instantiation. This has prompted researchers to identify certain properties that characterize these operators, explaining the strong similarities in aspectual meaning across languages (Comrie, 1976; Deo, 2006).[1] A closer look at the Bangla data shows that although *jodi* antecedents can have in-progress and perfect readings in certain contexts, there are systematic distributional and semantic differences between these and their aspect-inflected counterparts in unembedded clauses, suggesting that they lack certain properties usually attributed to the progressive and perfect. Based on these, I argue that the LFs of these antecedents lack a progressive or perfect operator. Instead, in-progress and perfect readings under *jodi* are composed from a combination of lexical aspect, general interpretative strategies, and their interaction with the conditional environment. This not only derives the attested readings in the antecedent, but also accounts for the ways in which they differ from their aspect-inflected counterparts. This bears on a separate but related question raised by (1): what about the antecedents in (1) makes them unacceptable under *jodi*? I have argued elsewhere that *jodi* restricts the temporal configuration of the clause under it, rather than its morphological form. Establishing that these antecedents are not morphological alternatives of aspect-inflected clauses provides support for such an account.

The following sections examine two types of present-tensed antecedents: (i) clauses with the copular auxiliary *thak* e.g. *jodi o V thake* 'if (s)he V *thak*-PRES', which has a perfect reading when V is eventive and an 'ongoing' reading when V is stative; (ii) simple present antecedents with the adverbial *now* e.g. *jodi o ekhon kaaj kOre* 'if (s)he now work-PRES', which can have an in-progress reading in certain contexts. For each construction, I first describe the possible interpretations in the conditional antecedent, highlighting the relevant differences from their aspect-inflected counterparts, and then outline an analysis for how these come about. While the analyses in sections 2 and 3 are largely independent of each other (barring baseline assumptions about the semantics of conditionals), they converge in highlighting how lexical aspect and interpretative strategies contribute to the composition of viewpoint aspect in the conditional antecedent.

2 *thak*

Verbal clauses in Bangla have the following sequence of morphemes: [verb-aspect-tense-agreement], e.g. *kor-ch-il-am*: do-PROG-PAST-1 'I was doing'. I will omit agreement in the

[1] Some examples of well-studied generalizations are: the progressive operator PROG does not combine with lexically stative predicates (Comrie, 1976; Deo, 2006; Dowty, 1979), the imperfective operator IMPF combines with episodic predicates to return an iteration over episodes (Cipria & Roberts, 2000; Deo, 2009), etc.

schematic representations that follow. Present tense is morphologically null (ϕ). When present, the auxiliary carries the tense-aspect-agreement inflection and the main verb is in a non-finite form. As is cross-linguistically common, simple present eventive antecedents in Bangla typically have future reference:

(2) jodi mini phOl kha-ϕ-e, or ma khuSi hObe
if mini fruit eat-PRS-3, her mother happy be.FUT.3
If Mini eats the fruit, her mother will be happy

Now consider a parallel construction with the copular auxiliary *thak*:

(3) jodi mini phOl khey-e thak-ϕ-e, or ma khuSi hObe
if mini fruit eat-*e* thak-PRS-3, her mother happy be.FUT.3
If Mini has eaten fruit, her mother will be happy

Just like its English translation, the Bangla antecedent above can be interpreted as either a present perfect (the eating happens before the utterance time UT) or future perfect (the eating happens before a salient future reference time, but after UT). The corresponding sentence in an unembedded clause would be expressed using the inflectional perfect marker *-ech*, which is disallowed under *jodi* as noted in (1):

(4) Mini phOl khe-ech-ϕ-e
mini fruit eat-PRF-PRS-3
Mini has eaten fruit

However, while *-ech* always expresses perfection of the VP it modifies, *thak* in the antecedent can additionally express ongoing-ness when the embedded predicate is interpreted as stative:

(5) jodi mini ghumiy-e thake, tahole ...
if mini sleep-*e* thak-PRS-3 then ...
If Mini has slept/is asleep, then ...

Thus, present-tensed *thak* clauses can express a wider range of aspectual meanings than the inflectional perfect morpheme. This is the first, semantic, difference between *thak* and *-ech*, making it unlikely that they are simply allomorphs. What does *thak* contribute to the temporal interpretation of the antecedent?

Bangla has a multi-copula system, with a null-copula strategy and three overt copular verbs (*ach, thak, hO*). In verbal clauses, these function as auxiliaries and encode a complex set of semantic contrasts: the choice of auxiliary is both constrained by, and influences the interpretation of, the embedded VP. Moreover, *thak* does not combine directly with the main verb; a morpheme *-e* intervenes. Since neither *thak* nor *e* are unique to this construction or to perfect aspect, understanding how the perfect reading comes about requires disentangling the contribution of these different elements. Existing work on the multi-copula systems of Indo-Aryan languages is largely descriptive.[2] The most semantically-inclined account of a four-copula system is of Odia, a closely related language, in two works by B.B. Mahapatra (2002; 2015). These focus on classifying the copulas in terms of semantic features to identify

[2] Although see Deo (2019) for a formal account of the two-copula system of Marathi.

the dimensions along which they vary, rather than providing a compositional formal analysis. I will draw on the descriptive and analytical insights from these works throughout this section, and attempt to formalize some of the insights. The following are the ingredients for composing perfect meaning in the conditional antecedent:

1. **Conditional semantics:** I assume that simple present antecedents of indicative conditionals in Bangla have the following LF: [$_{\text{TP}}$ PRES [$_{\text{AspP}}$ F [$_{\text{vP}}$ VP]]], where F is a future-shifting operator akin to prospective aspect (Kratzer, 2011; Matthewson, 2012; Matthewson et al., 2022) and is responsible for future reference in the antecedent. I have argued for this elsewhere and will assume this structure without further justification in this paper.

2. **Semantics and position of *thak***: as examples (3, 5) show, conditional antecedents with *thak* can have two types of interpretation— perfect with eventive predicates, ongoing with stative predicates. In unembedded constructions, present-tensed *thak* clauses express characterizing meanings with stative predicates:

(6) buRi-ta sob somoy okhane bosh-e thak-ϕ-e
old.woman-CLF all time there sit-*e* thak-PRS-3
The old woman always sits (remains seated) there

With eventive predicates, such clauses express a habitual meaning and some degree of non-volition, but have limited acceptability which is modulated by the meaning of the predicate:

(7) a. ? mini praye-i nech-e thak-ϕ-e
? mini often-EMPH dance-*e* thak-PRS-3
Mini often dances (ends up dancing)
b. mini praye-i drink kor-e thak-ϕ-e
mini often-EMPH drink do-*e* thak-PRS-3
Mini often ends up drinking/ being drunk

The use of *thak* is more acceptable with eventive predicates that have a salient result state, e.g. *drink*→*be drunk* (c.f.*dance*→ ?). This suggests that the semantic contribution of *thak* might involve stativity in some way. Although the empirical details are not identical, Mahapatra (2015) labels the corresponding *tha:* copula in Odia as [-dynamic]. Building on these intuitions, I will propose that *thak* requires it's embedded predicate to be stative. When forced to modify an eventive predicate, this triggers coercion, invoking a result state through the mechanisms sketched in the formal analysis below.
Perhaps owing to its association with characterizing meanings in unembedded clauses, *thak* has been glossed as a habitual marker some in earlier work (e.g. Bhattacharya, 1998; Rácová, 2010). However, note that (i) habitual readings can obtain even in the absence of *thak*:

(8) o praye-i okhane bOsh-ϕ-e / nach-ϕ-e / drink kOr-ϕ-e
she often-EMPH there sit-PRS-3 / dance-PRS-3 / drink do-PRS-3
She often sits there/ dances/ drinks

and (ii) habitual interpretations can fail to obtain even in the presence of *thak*, e.g. in the conditional antecedent (examples 3, 5). The default aspect in Bangla is imperfective, and

simple present clauses have characterizing readings. I argue that the characterizing readings in (8) *as well as* (6,7) are contributed by the imperfective aspect operator IMPF. Rather than treating *thak* as a habitual marker, therefore, a better interpretation of the facts in (6,7) is that in unembedded clauses, *thak* can co-occur with IMPF. This provides an important clue about its position in the verbal structure: since Bangla does not allow for stacking (co-occurrence) of aspect operators in general, it suggests that *thak* does not occur in AspP. This coheres with the fact that (i) the characterizing reading disappears when *thak* is in the conditional antecedent, where AspP is occupied by the future-operator F. Instead, such antecedents can have *future* perfect readings, suggesting that *thak* can also co-occur with F; and (ii) the inflectional aspect marker *-ech* (which presumably occupies AspP and therefore cannot co-occur with IMPF) never produces characterizing readings. Since *thak* is modified by the element in AspP, I propose that it occurs lower than AspP, and is positioned inside the vP: [$_{\text{TP}}$ PRES [$_{\text{AspP}}$ [$_{\text{vP}}$ *thak* V]]]. This constitutes a second, positional, difference between *thak* and *-ech*.

3. **Semantics of *-e***: the morpheme *-e* which attaches as a suffix to the lexical verb modified by *thak* is a widespread areal feature of Indo-Aryan languages, occurring in a variety of constructions involving verb sequences. Earlier works have variously described it as a conjunctive particle, perfect marker, grammatically vacuous, etc (Dwarikesh, 1971; Masica, 1976, 1993; Sahoo, 2001). What does *e* contribute to the interpretation of *thak* antecedents? It's meaning cannot be specific to *thak*-clauses, since *e* also intervenes when a verb is modified by certain other (non-copular) auxiliaries, e.g. *kor-e phael*: do-*e* throw 'finish doing', *kor-e ja*: do-*e* go 'keep doing', as well as by another lexical verb, e.g. *goR-e ash*: roll-*e* come 'come rolling', *poR-e bhang*: fall-*e* break 'fall and break'. Moreover, it does not appear to directly specify a temporal configuration, since the constructions above involve different temporal relations between the two verbs. As Mahapatra (2015) notes, this makes it unlikely that *e* is a perfect marker. Moreover, note that in the latter set of examples, the verb suffixed with *e* can bear a range of semantic relations to the main verb: manner, cause, etc. Any semantics for *e* must be able to account for this flexibility. Another clue to the contribution of *e* in *thak* clauses specifically, comes from the behavior of *thak* with non-verbal stative predicates: with these, *thak* can combine without an intervening *e*: *byasto thak*: busy *thak* 'be busy'. This suggests that *e* might contribute in some way to making verbal predicates like *dance* more similar to non-verbal stative predicates like *busy*. The formal analysis draws on these ideas.

Mahapatra (2015) ascribes a purely syntactic function to *e* on grounds of the apparent multiplicity of its meanings: "it must be obvious that the morpheme [*e*] does not have any single semantic sense. Thus, its function seems to be more general and syntactic". One consequence of this treatment is the insightful observation that "the different aspectual functions ascribed to [*e*] in the descriptive studies follow from the inherent aspectual nature of the verbs and the sequences they form", which recognizes the role of lexical aspect and its interaction with general interpretative strategies. However, he does not attempt to spell out how these ingredients combine. I suggest that the basic insight of Mahapatra (2015) can be preserved and made concrete by treating *e* as a modifier of predicates with a semantic contribution that is flexible, but not vacuous. I will then show that its interaction with the meaning of *thak* derives the right range of readings both in unembedded clauses (characterizing with stative

predicates, habitual and non-volitional with eventive predicates) and conditional antecedents (perfect with eventive predicates, ongoing-ness with stative predicates).

2.1 Formal analysis

I use a framework with situations (type <s>), which can be understood as partial worlds with spatial and temporal coordinates (Arregui, 2009; Kratzer, 1989, 2002, 2007), partially ordered by the 'part-of' relation $\leq$. Possible worlds are maximal situations. Propositions are properties of situations (<s,t>): p(s)=1 iff s is a p-situation. When s contains nothing irrelevant to the truth of p, s is an *exemplifying situation* for p: $\downarrow$p(s). Following Cipria & Roberts (2000); Kratzer (2007); Mirrazi (2022), exemplifying situations are equated with Davidsonian eventualities, which can be sorted into events and states (Maienborn, 2019). I assume that VPs are specified as eventive (p$\in \mathcal{E}$) or stative (p$\in \mathcal{S}$) depending on whether their exemplifying situations are events or states. The smallest linguistic units of analysis are sentence radicals (VPs with a saturated subject argument; <s,t>). Aspect operators and auxiliaries are modifiers of VPs (<st,st>) and introduce constraints on their exemplifying situations. For any s, τ(s) gives the time of s, and $\preceq$ is a linear ordering over times.

The copula 'be' is usually treated as semantically vacuous. I likewise assume that copular auxiliaries make no truth conditional contribution. However, they contribute aspectual meaning, modeled as presuppositional restrictions on the properties of the predicates they modify. This way of modeling the semantic import of multi-copula systems has precedence in the literature (Deo, 2019; Deo et al., 2016). I propose the following semantics for *thak* (ignoring additional inferences about the temporal contingence of the VP, which are orthogonal to the current analysis):

(9) $[\![thak_{<st,st>}]\!] = \lambda p \lambda s\text{: } p \in \mathcal{S} \text{ . } p$

thak presupposes that the predicate it modifies is stative.
e is a modifier of VPs and weakens their truth conditions. It combines with a predicate p and returns a new predicate Rel-p, which is true of only those situations that bear a specific, contextually salient, relation to p. Some possibilities (though not the only ones) are: following, overlapping, or being identical to, a p-situation. Thus, an exemplifying Rel-p situation need not also *be* a p-situation, but must involve p somehow. Since each Rel-p situation must bear the same relation to p, the truth conditions are not lax enough to be trivial. But since *e* does not specify the exact relation between p and Rel-p, the truth conditions are flexible enough to accommodate the observed multiplicity of uses. Essentially, *e* facilitates the reinterpretation of the embedded VP as required by it's linguistic/non-linguistic context.

(10) $[\![e_{<st,st>}]\!] = \lambda p \lambda s.\ \downarrow$Rel-p (s)

As mentioned previously, I assume that simple present antecedents contain a prospective aspect operator F which shifts the evaluation time of the embedded VP forward:

(11) $[\![F_{<st,st>}]\!] = \lambda p \lambda s.\ \exists s'$ s.t. $\tau(s) \prec \tau(s')$ and $\downarrow p(s')$

The present tense is deictic on the utterance time (UT) and simply instantiates the embedded proposition at UT, which I assume is available from the context:

(12) $[\![\text{PRES}_{<\text{st,st}>}]\!] = \lambda p \lambda s.\ \tau(s) = \text{UT and } P(s)$

Derivations

Truth conditions for present-tensed *thak* antecedents with eventive predicates:

(13) *jodi mini neche thake*: if Mini dance-*e* *thak*-PRES. 'If Mini has danced (already, or at some future time)'

a. antecedent LF: [$_{\text{TP}}$ PRES [$_{\text{AspP}}$ F [$_{\text{vP}}$ thak(e(dance))]]]

b. $[\![e(\text{dance})]\!] = \lambda s.\ \downarrow\text{Rel-dance (s)}$

c. $[\![\text{thak}(e(\text{dance}))]\!] = \lambda s\text{: Rel-dance} \in \mathcal{S}\ .\ \downarrow\text{Rel-dance (s)}$

d. $[\![\text{F}(\text{thak}(e(\text{dance})))]\!] = \lambda s\text{: Rel-dance} \in \mathcal{S}\ .\ \exists s'\text{ s.t. } \tau(s) \prec \tau(s')\text{ and } \downarrow\text{Rel-dance(s')}$

e. $[\![\text{PRES}(\text{F}(\text{thak}(e(\text{dance}))))]\!] = \lambda s\text{: Rel-dance} \in \mathcal{S}\ .\ \tau(s)\text{=UT and } \exists s'\text{ s.t. } \tau(s) \prec \tau(s')\text{ and } \downarrow\text{Rel-dance(s')}$

Truth at UT requires a future situation s' that exemplifies Rel-dance, such that s' is (i) a state, and (ii) systematically related to a situation of Mini dancing. A salient state associated with any event is its *resultant state*, i.e. the state of the event's having taken place (Giorgi & Pianesi, 1997; Kamp & Reyle, 2013; Parsons, 1990).[3] I propose that in most contexts, (i) and (ii) favor an interpretation of Rel-dance as characterizing the resultant state of Mini's dancing. A future resultant state implies the existence of a prior dancing event. Since nothing constrains the time of this event, it could be either before or after UT, giving rise to a present or future perfect reading. Note that the mere presence of *e* does not necessitate this interpretation: there is no resultant-state interpretation of *e*(dance) when it is modified by other auxiliaries or lexical verbs. It is the semantics of *e*, the presupposition of *thak*, and general inferences about how events and states are related, that together generate this reading in the antecedent.

With lexically stative predicates, *thak* combines without the intervention of *e*, and generates a (present or future) ongoing reading:

(14) *jodi mini byasto thake*: if Mini busy *thak*-PRES. 'If Mini is busy (now, or at some future time)'

a. antecedent LF: [$_{\text{TP}}$ PRES [$_{\text{AspP}}$ F [$_{\text{vP}}$ thak(busy)]]]

b. $[\![\text{thak(busy)}]\!] = \lambda s\text{: busy} \in \mathcal{S}\ .\ \text{busy (s)}$

c. $[\![\text{F}(\text{thak(busy}))]\!] = \lambda s\text{: busy} \in \mathcal{S}\ .\ \exists s'\text{ s.t. } \tau(s) \prec \tau(s')\text{ and busy (s')}$

[3]Note that this differs from what Parsons (1990) calls *target state*: the (potentially temporary) situation that obtains upon the culmination of certain telic events (Kratzer, 2000; Sioupi, 2014). E.g. an event of Mini's throwing the ball on the roof might have the associated target state of the ball's being on the roof. The *resultant* state is the state of Mini's having thrown the ball on the roof. This holds indefinitely following the culmination of any eventuality. The term 'result state' has been variously used for both these notions in different works. I use *resultant state* to avoid confusion.

d. $[\![\text{PRES}(\text{F}(\text{thak}(\text{busy})))]\!] = \lambda$s: busy $\in \mathcal{S}$. τ(s) = UT and $\exists$s' s.t. τ(s) $\prec \tau$(s') and busy (s')

Since the presupposition of *thak* is already satisfied by the lexically stative 'busy', it can combine without reinterpretation through *e*. The state of Mini's being busy must hold at some time after UT, giving a ongoing-in-the-future reading. If this future time is close enough to UT, it allows us to infer that the state holds at UT (through general interpretative strategies discussed in section 3), giving the present ongoing reading. However, since the truth conditions require the state to hold in the future, we predict that this cannot be used to express a *past* state of busy-ness (i.e. a situation where Mini was busy but isn't any longer). This is borne out by the data.

Many verb roots in Bangla can be interpreted either as stative or eventive, e.g. the root *dhOr* 'catch/hold'. I assume that these are lexically unspecified for stativity. With such predicates, *e* is obligatory in order to combine with *thak*. When interpreted as a property of events (catch), the antecedent behaves just like (13) above, and when interpreted as a property of states (hold), it patterns with (14). Again, this highlights that the presence of *e* alone does not guarantee a 'perfect' reading. Thus, the selectional restriction of *thak*, weakening semantics of *e*, and presence of the future operator F in the conditional antecedent together generate the range of interpretations of *thak* clauses in the antecedent, one of which is the perfect reading.

The semantics I assumed for *thak* and *e* were partially motivated by their behavior in unembedded clauses. While a detailed analysis is outside the scope of this work, I highlight how it accounts for the empirical puzzle outlined in 7a and 7b: unembedded *thak* clauses with eventive verbs express some degree of non-volition and have limited acceptability. Consider the LF for 7b: PRES(IMPF(thak(e(drink)))). *thak(e(drink))* invokes the resultant state of Mini's drinking, and IMPF expresses an iteration over such states. This in turn signals the presence of corresponding drinking events. Since the latter could be expressed by the simpler structure PRES(IMPF(drink)), using the more complex *thak*-clause suggests that the speaker is highlighting the state of having drunk over the action of drinking. This leads to an interpretation of non-volition. Arguably, such use is most natural when there is something meaningful/identifiable about the resultant state of the verb that justifies highlighting. Thus, *thak*-clauses are more acceptable with eventive predicates that have a salient result.

3 In-progress readings with the simple present

As noted earlier (2), simple present eventive antecedents in both English and Bangla typically have future reference. However, under *jodi*, simple present antecedents with the adverbial *now* and a certain set of activity verbs (Vendler, 1957) can additionally refer to an ongoing eventuality:

(15) mini jodi Ekhon kaj kor-ϕ-e, tahole ashte par-b-e na
mini if now work do-PRS-3, then come can.FUT.3 NEG
If Mini works/is working now, she won't be able to come

How does this reading emerge? While many languages use the same morphology for range of the meanings associated with the simple present and the progressive (Comrie, 1976; Ryd-

ing, 2005; Tröbs, 2004), it is well-attested that languages which have dedicated progressive morphology (e.g. V+ing in English, *-ch* in Bangla) *do not* use the simple present to talk about ongoing events (Deo, 2006, 2009, 2015). This is borne out in unembedded clauses in English as well as Bangla: 'She can't answer the phone right now; she is working (# works)', and in the conditional antecedent in English: 'If she is working (# works) right now, she must be at the office', but appears not to hold in the Bangla conditional antecedent. This raises the following question Q1: what is the right LF for the antecedent in (15)? Two hypotheses: Q1H1: given the unavailability of the progressive marker under *jodi*, the progressive operator is simply realized by the simple present morphology when it appears in this environment; (15) is ambiguous between the LFs PRES(F(*work*)) (gives future reading) and PRES(PROG(*work*)) (gives in-progress reading). Q1H2: there is no LF ambiguity; the additional reading in (15) results from interpretative strategies applied to an ordinary simple present antecedent PRES(F(*work*)), without an underling progressive operator. I will argue that systematic limitations on the availability of the in-progress reading make a strong case for H2. This raises the second question Q2: how does an in-progress reading emerge from the LF PRES(F(*work*))? I sketch one potential mechanism below, and show that this makes the right predictions about distributional limitations of this reading.

Since the adverbial *now* can felicitously modify a future-referring clause ('If she leaves now, she will reach in an hour'), I take it to invoke a small interval **now** that contains the utterance time UT and extends beyond it. Following Abusch (1998); Condoravdi (2002), I assume that frame adverbials like *now, tomorrow*, etc modify sentence radicals, and have an intersective semantics:

(16) $[\![now_{<st,st>}]\!] = \lambda p\ \lambda s.\ \tau(s)$ overlaps with **now** & $\downarrow P(s)$

Truth-conditions of a simple present antecedent with the adverbial *now*:

(17) a. LF: $[_{TP}$ PRES $[_{AspP}$ F [now $[_{vP}$ work]]]]
b. $[\![now(work)]\!] = \lambda s.\ \tau(s)$ overlaps with **now** & $\downarrow work(s)$
c. $[\![F(now(work))]\!] = \lambda s.\ \exists s'$ s.t. $\tau(s) \prec \tau(s')$ & $\tau(s')$ overlaps with **now** & $\downarrow work(s')$
d. $[\![$ PRES(F(now(work)))$]\!] = \lambda s.\tau(s)$=UT & $\exists s'$ s.t. $\tau(s) \prec \tau(s')$ & $\tau(s')$ overlaps with **now** & $\downarrow work(s')$

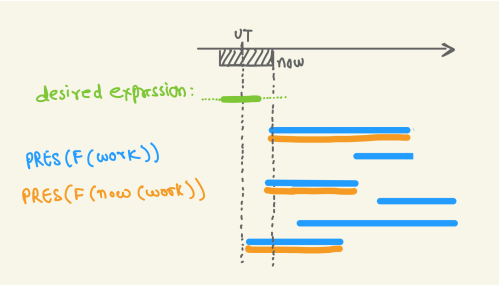

Figure 1: Temporal trace of typical situations denoted by simple present antecedents (blue, orange) and the present progressive (green)

now requires the event time to overlap with **now**, effectively drawing it close to the reference time, UT. Thus, the presence of an (overt or contextually understood) adverbial like *now* restricts the future situations denoted by F to those that are close to UT (near-future situations). Given the typical duration of a working eventuality, one can reasonably infer that most situations that verify *near-future(work)* also verify *at-UT(work)*. In such cases, it is possible to recruit this form to talk about the ongoing eventuality, leading to the 'in-progress' reading of the simple present antecedent. Figure 1 schematizes the set of situations denoted by PRES(F(now(work)))

(orange), and the types of situations for which one typically uses the progressive (green). I propose that given reasonable inferences about the world, the two sets overlap. This predicts that in-progress readings should be unavailable in exactly those scenarios where such inferences are not justified. I consider two types of constructions where this is borne out: (i) antecedents with accomplishment verbs, where the simple present and the progressive access different parts of the eventuality, and (ii) predicates whose typical duration is very short, where it is difficult to infer from *near-future(V)* to *at-UT(V)*. I show that in both cases, simple present antecedents lack the in-progress reading.

Accomplishment verbs

An accomplishment involves a process and a culmination. PROG signals the ongoing-ness of the process while remaining neutral about its culmination: 'she was drawing a circle but never finished', whereas the same tense without the progressive entails the culmination: 'she drew a circle # but never finished' (Dowty, 1979; Nadathur & Siegal, 2022). Thus, the progressive accesses a different part of the eventuality than its PROG-less counterpart. How does this difference play out in conditional constructions? Consider the contrast between the following pair of conditionals, whose consequent negates/denies the result of the antecedent clause:

(18) Context: We need a cake for tonight's dinner party. I hear sounds from the kitchen and guess that someone is baking. Mini is known to be an unpredictable cook.
   a. If *Mini* is baking a cake, there might not be a cake at the end of it.
   b. If *Mini* bakes a cake, # there might not be a cake at the end of it.

Since the progressive in the antecedent of (a) merely signals the existence of a cake-baking process and is therefore non-committal about its completion, the consequent can negate the end result without leading to oddity. In contrast, the simple present antecedent in (b) refers to the future cake-baking eventuality as a whole, signaling the existence of its end result (the cake). Thus when we try to negate this result in the consequent, the resulting sentence is odd. If the simple present in Bangla can truly express progressive aspect in the antecedent, we should predict that the corresponding conditional behaves like (a). However, it behaves like (b) and is infelicitous in this context:

(19) jodi *mini* cake (??banachhe)/ (# banaye), tahole shesh-mesh cake
   if *mini* cake (??make.PROG.PRS.3)/ (# make.PRS.3), then in the end cake
   pawa jabe kina thik nei
   get go.FUT.3 or not sure NEG
   Intended: if *Mini* is baking a cake, there might not be a cake at the end of it

Progressive morphology is unacceptable in the antecedent as expected. Crucially, however, the simple present antecedent is *infelicitous*. This suggests that the simple present in this clause is not really realizing an underlying progressive operator. This asymmetry extends to other conditional constructions involving accomplishment verbs. Consider the following pair of conditionals, which are both acceptable in the given context:

(20) Context: a child is using a geometry kit to make some shapes, you can't see clearly see what she is doing.

a. (I can't see what she is drawing, but) if she is using the compass, she must be drawing a circle.
b. (I can't see what tool she is using, but) if she is drawing a circle, she must be using the compass.

The Bangla counterparts of these conditionals are unacceptable with progressive morphology as expected. But if the simple present can express the progressive operator under *jodi*, we expect to be able to translate these using simple present antecedents. However, we find that this reading of the simple present is limited to sentence (a). (b) is infelicitous:

(21) a. jodi o compass use kOre, tahole nishchoi circle ankchhe
if she compass use do.PRS.3, then likely circle draw.PROG.PRS.3
If she is using the compass, she must be drawing a circle
b. # jodi o circle anke, tahole nishchoi compass use korchhe
if she circle draw.PRS.3, then likely compass use do.PROG.PRS.3
Intended: if she is drawing a circle, she must be using the compass
Only available reading: If she draws a circle (in the future), she must be using a compass (now)

The only relevant difference between (a) and (b) is the aktsionsart of the antecedent verb: *use-a-compass* is an activity, whereas *draw-a-circle* is an accomplishment. The infelicity of (b) shows that with simple present morphology, it is not possible to access the ongoing (process) part of the accomplishment eventuality as one would expect from PROG. Although the contrast is subtle, this pattern of asymmetry is robust and reproducible with a range of such pairs. This suggests that neither antecedent above involves a progressive operator.

Temporally compressed eventualities

Another case where the simple present and the progressive in the antecedent come apart is with predicates whose typical duration is very short, e.g. *fall* (off of a cliff).[4] Unlike with activity predicates such as *work*, it is not possible to get an in-progress reading of simple present antecedents with these predicates. Consider the following scenario:

(22) Context: you are watching a film that I have already seen. The plot is such that at one point, the heroine is hanging off the edge of a cliff and the hero arrives to rescue her just in time. You are in front of the TV and I am in the other room.
You: When does the hero appear?
Me: If she is falling (#falls) off the cliff, the hero is almost there

Given the context, only the progressive antecedent is felicitous in English. The corresponding simple present Bangla antecedent under *jodi* fails to get an in-progress interpretation here. It can only get future reference, making the conditional infelicitous:

[4]Note that this is not an accomplishment verb; it only expresses the event of falling, without entailing its culmination: 'if she falls off, we will catch her before she hits the ground'.

(23) jodi o cliff theke (??poRe jacche) /(# poRe jaye), tahole hero
if she cliff from (??fall.go.PROG.PRS.3) /(# fall.go.PRS.3), then hero
elo bole
come.PST.3.say.INF
Intended: if she is falling off the cliff, the hero is nearly there

Why does the in-progress reading fail to obtain? Given the typical duration of the predicate, it is not possible to infer from *near-future(V)* to *at-UT(V)*: most situations of falling off a cliff in the near future are *not* ones that also involve falling off a cliff at UT. There is no overlap between the set of situations we want to express and those denoted by the simple present antecedent, and we find that the 'in-progress' use is unavailable. Thus at the appropriate level of granularity, the contributions of aspectual operators and inferential rules come apart. This contrast is hard to explain under an account that treats these antecedents as morphological variants of their aspect-inflected counterparts.

4 Conclusion

I discussed two types of simple present antecedent clauses under Bangla conditional connective *jodi* 'if' that generate perfect and in-progress readings, and examined how these viewpoint aspect distinctions come about in the absence of inflectional progressive and perfect marking. I suggested that *thak* carries a presupposition requiring its embedded VP to be stative. Combined with the weakening semantics of the morpheme *e*, this invokes the resultant state of an embedded eventive VP, leading to perfect readings in the antecedent. On the other hand, simple present antecedents modified by the adverbial *now* can be used to describe ongoing eventualities given extra-linguistic inferences about the temporal structure and typical duration of activity verbs. However, systematic differences between these antecedents and their aspect-inflected counterparts in unembedded clauses suggest that these don't contain a progressive or perfect operator, highlighting the role of lexical aspect and inferential strategies in composing viewpoint aspect distinctions in the conditional. Finally, these facts suggest that while the restrictions imposed by *jodi* are narrower than a global ban against in-progress or perfect *meanings* in the antecedent, they are deeper than a ban against the morphological *forms* that instantiate the progressive or perfect.

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