

Semantic contrasts in the four-copula system of Bangla

Formal analyses often treat copular expressions as semantically empty (e.g. $is=\lambda P.P$). Languages with multiple copulas challenge this, as the choice of copula in a clause is restricted by, and influences, the interpretation of the subject/predicate. Many South Asian languages have multi-copula systems with contrasts that have not yet been well studied (but see Deo (2024); Mahapatra (2002)). I present data from ongoing work on the 4-copula system of Bangla (hO , $thak$, ach , and a null strategy (ϕ)) addressing two questions: (i) What semantic contrasts are encoded and how (i.e. do the copulas contribute presuppositions, truth-conditional meaning, implicatures?); (ii) How do these contrasts interact with the rest of the tense-aspect-mood system? I focus on presenting the pattern and drawing generalizations, and sketch an outline for a potential account without presenting a formal analysis.

Data: What subjects and predicates can each copula combine with, and what interpretations do the resulting clauses have? I examine predicational clauses, with subject NPs that lack overt quantifiers (*Mini*, *the worker*; but not *some giraffes*), and two predicate types: typically individual-level (ILP; *tall/smart*) vs typically stage-level (SLP; *busy/sick*). Nominals in Bangla can be bare, or attach with classifiers *-ta/-gulo/-ra*. I take names (*Mini*, *Boston*) and *N-ta/N-gulo* nominals to denote definite singular/plural entities, and follow Saha (2023) in assuming that a bare nominal *N* denotes a singular kind entity, with *N-ra* denoting the plurality (mereological sum) consisting of members of the kind. The simple present paradigm is presented in tables 1,2,3 below, grouped by the interpretation of the subject NP.

Contrasts: The distribution is sensitive to both subject and predicate properties. Several patterns emerge, showing semantic contrasts that have been independently well-studied:

1. Episodic vs characterizing claims: ϕ/ach vs $hO/thak$ encode this contrast: *The child is tired (now)* vs *The child is tired (in the evenings)*. This mirrors the two-copula system of Marathi (Deo, 2024).
2. Temporary vs permanent properties: $thak/ach$ vs hO/ϕ encode the following contrast: *The child is sick (now)* vs *The child is sickly*. Both inferences are cancelable.
3. Referential vs non-referential subject: While $hO/thak$ allow both interpretations of a definite subject NP: *The workers (in this room) are tall* vs *The workers (who get hired to operate this machine) are tall*, ϕ/ach only allow the former, regardless of the predicate.
4. Current (accidental) vs general (non-accidental) property of members of a kind: with kind subjects, hO vs ϕ encodes this contrast: *Giraffes are tall* (at any time, any entity that is a giraffe then is tall then); paraphrasable as *A giraffe is tall*, vs *LLMs are popular* (at present, all the entities that are LLMs now are popular now) c.f. $\#$ *An LLM is popular*

Towards understanding how these contrasts come about, I now examine the contribution of each copula and its interaction with the inflectional tense-aspect system.

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’. Present tense is morphologically null. Simple present clauses express habitual-generic meanings and I assume that this involves a covert imperfective aspect operator IMPF. There are two past-markers: perfective *-l-* and imperfective *-t-*, and a dedicated future-marker *-b-*. Viewpoint aspect is marked by an inflectional system comprising of the progressive (PROG: *-ch-*), perfect (PERF: *-ech-*), and imperfective (IMPF: null with present tense; *-t-* with past tense), with auxiliaries enabling further distinctions. In predicational clauses, the copula verb can be inflected with these aspect markers.

Contribution of the copulas: Tables 1,2,3 show that simple present $hO/thak$ -clauses can express iterating/characterizing meanings, whereas ϕ/ach -clauses do not. Examining predicational clauses with inflectional aspect marking and the past-tense paradigm reveals two additional facts: (i) $hO/thak$ -clauses do not retain characterizing meanings with progressive, perfect, or perfective-past marking. (ii) In the past paradigm, ach -clauses can be inflected with the perfective-past *-l-*, but not with the imperfective-past *-t-*. (The null strategy is not retained in the past). Together I take these as evidence that: (i) the characterizing meaning in $hO/thak$ clauses is always contributed by IMPF; and (ii) ϕ/ach -clauses cannot combine with IMPF, which precludes characterizing meanings. Contribution of copulas in a clause with subject x and predicate P:

- *hO*: When *x* denotes a kind, *P* is an ILP, and aspect is imperfective: expresses that *P* is a general property of the kind. Elsewhere: the property denoted by *become-P* holds of *x* (inchoative).
- *thak*: The property denoted by *P* holds of *x* throughout the relevant interval (and not beyond).
- ϕ : The property denoted by *P* holds of *x*.
- *ach*: The property denoted by *P* holds of *x* throughout the relevant interval (and not beyond).

Proposal: The contrasts encode variation along two dimensions: plurality and temporal contingency. I assume that predicate denotations contain both singular and plural eventualities (Kratzer, 2007). While events can be singular or plural, states are uncountable (mass-like). The copula takes a small-clause argument; the result is optionally modified by inflectional aspect, and then tense: TENSE(ASP(COP(*Mini tall*))). I assume a semantics for the imperfective based on Ferreira (2016), such that IMPF and PROG differ only in mereological properties: both instantiate the embedded predicate at an interval containing the reference time at a relevant set of worlds, but while IMPF only operates over the plural or mass eventualities in the predicate denotation, PROG only operates over singular eventualities. The tentative proposal about the contribution of ϕ and *ach* is that regardless of their argument, they return a predicate that is singular-denoting. This precludes combining with IMPF, and moreover might explain why *ach* is incorporated in the inflectional paradigm for PROG (*-ch-*). Following recent proposals (Guerrini, 2025), I assume that kind predication can involve either generic quantification leading to a law-like claim (given by IMPF, and therefore absent in ϕ -clauses) or distributive predication with a plural subject, leading to an ‘accidental’ claim restricted to current members of the kind in the evaluation world (available in both *hO* and ϕ -clauses), explaining the contrast in interpretation with kind subjects. *thak* and *ach* further specify that the property denoted by the predicate holds throughout the relevant evaluation interval, implicating that it does not hold beyond. This leads to unacceptability or additional pragmatic inferences with ILPs. Finally, I assume that the inchoative interpretation of the predicate with *hO*-clauses results from coercion (Dölling, 2014), but leave as an open question what semantic contribution of *hO* is responsible.

Def-ref subject (Mini, N-ta/gulo)	<i>hO</i>	<i>thak</i>	ϕ	<i>ach</i>
SLP	generalization over become-P (inchoative) episodes Mini becomes sick (often); this gate closes at 9	generalization over P-states across time Mini remains busy on Mondays	single P-episode in actual world at UT Mini is busy; the gate is closed	single P-episode in actual world at UT (inference: temporary) Mini is busy now; the gate is closed now
ILP	odd # Mini (generally/regularly) becomes tall	odd # Mini (generally/regularly) remains tall	property in actual world Mini is tall/ the gate is large	property in actual world Mini is tall (inference: relevant to current discourse context)

Table 1: Copula distribution with definite-referential subjects (names, *N-ta/gulo*)

Kind subject N-ra	<i>hO</i>	<i>thak</i>	ϕ	<i>ach</i>
SLP	generalization over become-P episodes involving kind-instances giraffes become sick/tired (in general)	generalization over P-states involving kind-instances workers (in general) remain busy (in general)	single episode involving members of the kind in the actual world at UT workers are tired/dissatisfied (now)	? degraded
ILP	general property of the kind giraffes are tall; a tree has roots; a dog barks	odd # giraffes (generally/regularly) remain tall	property of members of the kind in the actual world at UT (talking about evolution) giraffes are tall (now); LLMs are popular	? degraded

Table 2: Copula distribution with kind subjects (*N-ra*)

Non-ref subject (N-ta/gulo)	<i>hO</i>	<i>thak</i>	ϕ	<i>ach</i>
SLP	generalization over become-P episodes (variable NP referent) the workers (who get hired here) become sick/tired (repeatedly)	generalization over P-states across time The workers (who get hired here) remain busy on Mondays	-	-
ILP	generalization over properties of individuals across time (variable NP referent) the workers (who get hired here) are tall/intelligent	odd # the workers (who get hired here) (generally/regularly) remain tall	-	-

Table 3: Copula distribution with definite non-referential interpretation of subject nominal (*N-ta/gulo*)

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