A unified syntax-semantics interface account for Kannada bare existential singulars

In this paper, I propose a syntax-semantics interface account for bare singulars in Kannada (Dravidian) that receive existential interpretations. I first introduce the core data demonstrating the key properties of these items that need to be explained, then describe the proposal, followed by a brief comparison with previous accounts for similar data across languages. For space reasons, all examples and formal definitions referenced in the text below are shown on pg. 3.

Core data. It has been recently shown that existential readings of Kannada bare nominals are restricted to narrow-scope interpretations (Srinivas & Rawlins 2021) – patterning in this regard with English bare plurals, bare nouns in Hindi (Dayal 2004), Mandarin (Yang 2001), and semantically incorporated nominals in West Greenlandic (van Geenhoven 1998), Chamorro (Chung & Ladusaw 2004) *i.a.* For example, in (1)-(2) containing negation and intensional *wish* respectively, the bare singular must scope under these operators, no matter whether it is a subject or object, Case-marked or unmarked. (1)-(2) also speak to the productivity of existential readings in these items – in particular, Case-marked and subject bare nouns are not restricted to definite readings alone. There is however one case where an existential interpretation is precluded: namely, when the bare noun appears as a sentence-initial subject, as in (3). In this case, the bare noun must receive a definite interpretation in (non-contrastive) episodic contexts.

Further, we can observe that bare existential, morphologically singular nominals can lend themselves to non-singular 'number-neutral' readings when they appear as non-case-marked direct objects, but not elsewhere – see the non-case-marked object in (4) *vs.* the subject in (5). This is observed primarily in atelic contexts: replacing *for an hour* in (4) with *in an hour* does not retain a number-neutral interpretation. However, in some cases, number-neutrality can arise in telic contexts as well, as seen in (6). (7) further shows that the number-neutrality in (6) can't be attributed to *seere* ('saree') being generally *mass-y*, contra Dayal (2011). If so, we should observe number-neutrality everywhere – but we don't when the noun is Case-marked or when the verb-object combination does not denote a typical, culturally well-established activity.

These data raise some key questions that an account of Kannada bare singulars must address: (i) Why the narrow-scope restriction in existential readings?, (ii) Why are bare singulars in non-case-marked object positions alone interpreted number-neutrally?, and (iii) Why do they differ in whether number-neutrality arises only in atelic contexts–e.g.,(4), or everywhere (6)?

Analysis. Following a common assumption in the bare noun literature, I take Kannada bare nouns to instantiate a base predicative meaning $\langle$e,t$\rangle$. I propose that their existential readings arise by composition through Predicate Restriction or *Restrict* (formulated by Chung & Ladusaw 2003 to account for narrow-scope existential meanings in Chamorro incorporated nouns), which is a non-saturating operation defined as in (8) following Rawlins (2013). Informally, the $\langle$e,t$\rangle$ property B in (8) restricts the domain of the predicate A to entities that satisfy B. The narrow-scope restriction is explained, as the $\exists$-closure of the unsaturated argument x must occur at or below the event (vP) level, while other scopal operators are composed beyond it.

Next, to explain the number-neutrality patterns in (4)-(7), this idea is supplemented with finer-grained details on the Kannada verbal functional architecture. Specifically, non-case-marked bare singular objects are taken to compose lower at LF compared to subjects/case-marked objects, so that the former alone scope under certain distributive verb plurality operators, leading to number-neutrality. The LF structure is shown on the next page as Fig. 1, containing two pluractionality operators: a covert frequentative operator FREQ present in atelic contexts (Lasersohn 1995), and a cumulativity operator $\star$ present in all contexts (Krifka 1998). $\star$ explains the possible plural/distributive readings in (9), despite no plural marking on the verb. Following Henderson (2012), $\star$ is a compositional operator, defined in (10), where the meta-language operator $*$ denotes the cumulative closure of predicate P (Krifka 1989). Informally,

(10) denotes the verbal event e is non-atomic, containing a plurality of sub-events e' of type P. The verb may be separated from $\star$ by intervening elements (such as position 2 in the tree).

On the other hand, FREQ is associated with special iterative semantics, unavailable in telic contexts that are generally incompatible with iterative readings. Informally, FREQ applies to an event property P to return an iterative plurality of P-ing sub-events, where all sub-events in the iteration are necessarily non-overlapping. Further Kannada-specific arguments provide support for treating iterative pluractionality as distinct from cumulativity in the language. For instance, Kannada allows optional overt realization of FREQ by way of verbal reduplication: see (11) – where reduplication forces an iterative interpretation of the ball-throwing event, showing that the iterative meaning exists in its semantic grammar separately from cumulativity.

Case-marked direct objects are generated VP-internally, moving to specifier of little vP for accusative Case. Agentive subjects also move to spec-vP (multiple specifiers; Chomsky 1995). Given the possibility of NOM objects (and dative subjects) in Kannada, Itake NOM Case-checking to proceed via long-distance *Agree* with finite T (see Ura 1999 who reaches a similar conclusion for Japanese/Korean). As such, subjects need not overtly move to spec-TP for Case. I assume that EPP must be overtly satisfied in the language.

These ideas in place, we can now explain the data in (4)-(6). Kannada subject bare singulars and ACC-marked objects in spec-vP don't exhibit number-neutrality anywhere, as they scope over both plural operators FREQ and $\star$, thus escaping covariation by sub-events. As for direct objects that do not exhibit overt ACC marking, I suggest these may be base-generated without further movement in position 1 between FREQ and $\star$, or in position 2 below $\star$. In the former case, e.g., (4), number-neutral interpretations of the bare singular arise in atelic, iterative contexts alone, by scoping under FREQ. In the latter case, like in (6), the nominal scopes under $\star$ and thus co-varies by atomic sub-events, leading to number-neutrality in all contexts. Finally, the sentence-initial subject in (3) is beyond the vP level at spec-TP – where it has moved to check EPP, and is therefore incompatible with composing via *Restrict* + subsequent existential closure altogether (which must occur at/below vP). It can thus only receive a definite reading.

Conclusion. The proposed syntax-semantics interface analysis explains the narrow-scope restriction in all instances of Kannada bare singular existentials via the same compositional means, while still allowing for variation along another dimension (syntactic height) which accounts for the contrasts in number-neutrality. In its coverage of the Kannada data (1)-(7), this surpasses existing proposals for similar items across languages. van Geenhoven (1998) and Chung & Ladusaw (2004) analyze the narrow-scope restriction among incorporated nouns in W. Greenlandic and Chamorro respectively, but they don't specifically discuss number-neutrality. More broadly, most existing accounts of semantic incorporation predict number-neutrality in all cases – but do not notice differential behaviors of the bare nouns sensitive to telicity. An exception is Dayal (2011), who was the first to point out dependence of number-neutrality on telicity. That proposal can't however be extended to Kannada, since it does not anticipate **(i)** number-neutrality of count nouns in telic contexts, like in (6), and **(ii)** existential readings in subject or Case-marked object bare singulars: (1)-(2). The current account also differs from Dayal's in its unified compositional treatment of the bare existential singulars.

In the current account, arguments in VP-internal positions 1 or 2 at LF are both considered to be incorporated. In this sense, Kannada exhibits graded incorporation (cf. Levy-Forsythe & Kagan 2018). Finally, I suggest that whether a given object nominal is generated in position 1 or 2 depends on *name-worthiness* (Mithun 1984) or typicality of the activity denoted by the N+V combination: greater the name-worthiness, closer the base-generated position to V. Future work must explore the nature and limits of name-worthiness that determine these base-generated positions, and their relationship to incorporated items crosslinguistically.

(1) Room-alli **ili** illa.
Room-in mouse not.
'There isn't any mouse in the room.'

(2) Alli **huli(-annu)** nooDalu bayasuttiini.
there tiger(-ACC) to.see wish
'I wish to see a (non-specific) tiger there.'

(3) **Ili** room-alli illa.
mouse room-in not.
'The mouse is not in the room.'

(4) Anu ondu ganTe tanaka **chitra** biDisidaLu.
Anu one hour till picture.**SG** drew
'Anu drew **picture(s)** for an hour.'

(5) Ondu ganTe tanaka **ili** ooDaaDutittu.
one hour till mouse.**SG** roaming
'**A mouse** was roaming for an hr.'

(6) Anu 1 ganTe tanaka/-alli **seere** konDukonDaLu.
Anu 1 hr till/-in saree.**SG** bought
'Anu bought **saree(s)** for/in an hr.'

(7) Anu **seere-anna** konDukonDaLu/ **seere(-anna)** esedaLu.
Anu saree.**SG**-ACC bought/ saree.**SG**(-ACC) threw
'Anu bought/threw **a saree**.'

(8) ***Restrict***($A_{\langle e,\langle\beta_1\langle..\langle\beta_n,t\rangle\rangle\rangle}$, $B_{\langle e,t\rangle}$) = $\lambda x \in D_e.\lambda y_1 \in D_{\beta_1}..\lambda y_{n\beta_n}$. A(x)(y_1)..(y_n) $\wedge$ B(x)

(9) Anu matte Avi kurchi ettidaru.
Anu and Avi chair lifted
'Anu & Avi lifted the chair (together/separately).'

(10) $[\![\star]\!] = \lambda P_{\langle v,t\rangle}.\lambda e[e \in *\lambda e'[P(e')]]$

(11) Naanu aa chenDu esedu-esedu iTTe.
I that ball throw-REDUP COP
'Anu threw that ball again and again.'

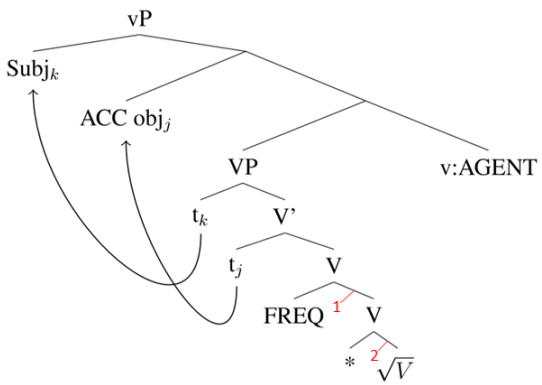

Figure 1: Kannada verbal structure

Selected References. Chung & Ladusaw 2004. *Restriction and Saturation*. van Geenhoven 1998. *Semantic Incorporation and Indef Descriptions*. Dayal 2004. *Number marking and (in) definiteness in kind terms*. Srinivas & Rawlins 2021. *On the indefinite readings of Kannada bare nominals*. Henderson 2012. *Ways of pluralizing events*. Ura 1999. *Checking theory and dative subject constructions in Japanese and Korean*.