

THE GRAMMAR OF ACCUSATIVE CASE IN KANNADA

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This article examines the distribution of accusative case morphology in Kannada, detailing the syntactic, semantic, and morphological factors that contribute to its occurrence. Accusative case morphology is optional on inanimate direct objects. When optional, its presence indicates a specific reading, which I argue is best modeled as a choice function. The specific readings due to morphological form are distinct from specific readings that arise from syntactic position. Positional specificity is detectable only on morphologically noncasemarked object NPs. When the accusative case morpheme is obligatory, specificity effects are positional and not due to the presence of the morpheme. In this situation, additional morphology is required to achieve an inherently specific interpretation, suggesting a separation between morphological signals and meaning.*

1. INTRODUCTION. Languages very often use morphological means to distinguish two types of direct objects, marking some direct objects with morphological case and leaving others unmarked or, in some instances, marked with a different case (Comrie 1979, Croft 1988, de Hoop 1996, Kiparsky 1998, Torrego 1998, Aissen 2004). Such marking generally distinguishes objects on the basis of factors like animacy, definiteness, and specificity, though it has been widely observed that it is rare to find two languages that draw precisely the same semantic distinctions with morphological marking. Relatedly, languages are also found to use syntactic position to distinguish interpretations of indefinites (Holmberg 1986, Mahajan 1990, Diesing 1992), with some researchers positing a connection between syntactic position and morphological case (e.g. de Hoop 1996). In this article, I examine the distribution of accusative case morphology in Kannada, detailing the precise syntactic, semantic, and morphological factors that contribute to its occurrence. Rather than attempting to determine where in a predetermined scale of animacy or definiteness Kannada draws its morphological boundaries, I instead give a detailed analysis of the syntactic and semantic factors that contribute to the use of morphological case in this language. In this regard, I aim in this article to contribute to a richer characterization of the ingredients of object marking and object interpretation, to our understanding of the syntax and semantics of specificity, and to the development of a restrictive theory of case in natural language.

Understanding the conditions under which accusative case is morphologically realized in Kannada is not entirely straightforward because its distribution arises from an interaction of syntactic, semantic, and morphological properties of the structures in which they occur. I therefore take a divide-and-conquer strategy here, discussing the semantics, syntax, and morphology independently. First, I provide a brief description of the interpretive properties of two kinds of direct objects in Kannada, those that

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are morphologically marked with accusative case and those that have no overt case morphology. I then examine the syntactic differences between these two kinds of object NPs. Here we see that both casemarked and noncasemarked object NPs can occur in the same set of syntactic environments but that the interpretive properties of the noncasemarked NPs depend on their syntactic position. Casemarked NPs, by contrast, have the same interpretation regardless of position. Next, I give a semantic account of the differences between casemarked and noncasemarked object NPs, demonstrating that apparent wide-scope readings of various indefinite direct objects are derived in two fashions. Some wide-scope readings are a consequence of syntactic position, while others are due to the use of CHOICE FUNCTIONS (Reinhart 1997, Kratzer 1998) and hence are independent of the syntactic scope of the relevant NP. Finally, I show that morphological casemarking does not directly encode a single semantic property, but rather that the accusative morpheme is parasitic on certain kinds of syntactic structure. While the feature responsible for this morpheme is generated on a head NP, it is only in certain configurations that this feature is allowed to remain in the derivation. In other configurations, this feature does not have a host and so it deletes. In sum, the descriptive goals of the article not only lead us to a novel understanding of the syntax and semantics of indefinites, but also provide further evidence for a model of morphology that takes syntactic structures as input.

2. ACCUSATIVE CASEMARKING IN KANNADA.¹ Let us begin by examining the distribution of morphological case on direct objects in Kannada. Inanimate direct object NPs are casemarked only optionally.²

- (1) a. Naanu **pustaka** huDuk-utt-idd-eene.
I.NOM book look.for-NPST-be-1s
'I am looking for a book.'
- b. Naanu **pustaka-vannu** huDuk-utt-idd-eene.
I.NOM book-ACC look.for-NPST-be-1s
'I am looking for a book.'

Animate direct object NPs, by contrast, are obligatorily casemarked.

- (2) a. *Naanu **sekretari** huDuk-utt-idd-eene.
I.NOM secretary look.for-NPST-be-1s
'I am looking for a secretary.'
- b. Naanu **sekretari-yannu** huDuk-utt-idd-eene.
I.NOM secretary-ACC look.for-NPST-be-1s
'I am looking for a secretary.'

2.1. INTERPRETATION AND OPTIONAL CASEMARKING. Although the casemarking is morphologically optional in 1, its presence has semantic consequences. The sentence in 1a has more interpretations than the one in 1b. While 1a is ambiguous between a specific (de re) and a nonspecific (de dicto) interpretation, 1b has only the specific (de re) interpretation. That is, 1b can only mean that there is a specific book that I am looking

¹ Kannada data was collected in 1998 and 1999 from K. V. Tirumalesh, R. Amritavalli, S. Chandrashekar, and S. Vedantam unless noted otherwise. The transcription scheme follows standard Kannada practices in using <v>/<y> for the glides [w]/[j], respectively, and in using capital letters to represent retroflex consonants.

² The following abbreviations are used in the glosses: ACC: accusative, DAT: dative, EMPH: emphatic, F: feminine, GER: gerund, INF: infinitive, M: masculine, NEG: negative, NOM: nominative, NPST: nonpast, PL: plural, PPL: participle, PROG: progressive, PST: past, RED: reduplicated, RP: relative particle, S: singular.

for, whereas 1a has the additional reading that I am trying to find something to read, but I don't care what.³

On the basis of these data, we might think that the accusative morpheme carries with it some feature that blocks a nonspecific interpretation. This characterization would be inaccurate, however. Animates, which are obligatorily casemarked, can be interpreted as either specific or nonspecific. In other words, 2b has both interpretive options (like 1a), but is morphologically marked.

We can conclude from this little bit of data that the accusative morpheme does not have a unified meaning/semantic function. Since only some NPs that are marked with the accusative morpheme are restricted to be *de re*, the accusative morpheme by itself cannot be uniquely responsible for the lack of *de dicto* interpretation in 1b. These data are summarized in Table 1.

| | | |
|------------|----------------|----------------|
| | ANIMATE | INANIMATE |
| CASEMARKED | de dicto/de re | de re |
| BARE | * | de dicto/de re |

TABLE 1. Interpretations of accusatives.

I put off discussion of the mapping between meaning and morphological form in the full data set until after I have examined a broader range of environments in which accusative casemarking is optional and given an analysis of the role of this morphology when it is optional.

SCOPE WITH RESPECT TO NEGATION. Returning now to the cases in which accusative casemarking is optional, consider the following.

- (3) a. Naanu **pustaka** ood-al-illa.
 I.NOM book read-INF-NEG
 'I didn't read a book.'
- b. Naanu **pustaka-vannu** ood-al-illa.
 I.NOM book-ACC read-INF-NEG
 'I didn't read a book.'

Just as we found with the intensional predicate in 1, the bare NP in 3a has two readings but the casemarked NP in 3b has only one. In 3a, the NP can be interpreted within the scope of negation, yielding the interpretation that I did not read any books. This NP can also be interpreted outside of the scope of negation, yielding the interpretation that there is a particular book that I did not read. The morphologically casemarked NP in 3b, however, allows only the latter reading. These facts are summarized in 4.

- (4) a. $\neg [\exists x [\text{book}(x)] \wedge [\text{read}(I, x)]] = 3a$
 b. $[\exists x [\text{book}(x)] \wedge \neg [\text{read}(I, x)]] = 3a \text{ or } 3b$

³ Sridhar (1990:161) claims that 'the presence of accusative case marking regularly denotes definite reference'. It is not clear, however, what notion of definiteness he is referring to. If we assume that definiteness refers to familiarity (Heim 1982), then Sridhar's statement is not accurate because an accusative-marked NP can introduce a discourse referent. But if Sridhar intends definiteness to mean that the speaker has a particular referent in mind, then his statement seems to be accurate. This is not to say, however, that the accusatives cannot be interpreted as definites (i.e. familiar or discourse-old). Quite the contrary, the accusatives are ambiguous between a definite and a specific indefinite reading. Indeed, morphologically unmarked objects also allow definite readings. In this article, the specific indefinites are distinguished from the definites in that in all of the cases described here, the specific reading is possible even when the referent of the NP is not in the common ground (i.e. it is not familiar). I return to this issue in §5.4. See also Spenser 1914:55, Bright 1958:35ff.

SCOPE WITH RESPECT TO THE SUBJECT. If we add a quantificational subject to the kinds of sentences that we have been considering, the number of potential readings grows. Consider the following.

- (5) a. Pratiyobba vidyaarathi **pustaka** huDuk-utt-idd-aane.
 every student book look.for-NPST-be-3S.M
 ‘Every student is looking for a book.’
 b. Pratiyobba vidyaarathi **pustaka-vannu** huDuk-utt-idd-aane.
 every student book-ACC look.for-NPST-be-3S.M
 ‘Every student is looking for a book.’

In the sentences in 5, there are three potentially relevant readings. We could interpret the object NP as having narrow scope with respect to both the intensional predicate and with respect to the subject (i.e. as *de dicto*). On this interpretation, every student is looking for something to read, but none of them has anything in mind. Alternatively, we could interpret the object NP as having wide scope with respect to the intensional predicate but narrow scope with respect to the subject. On this interpretation, each student has a particular book that he is looking for, but that book varies from student to student. Finally, we could interpret the object NP as having the widest scope. On this interpretation, there is a particular book that all of the students are looking for. In point of fact, each sentence has only two of these interpretations. The unmarked object allows only the narrow and intermediate scopes while the casemarked object allows the intermediate and wide scopes. These facts are summarized in 6.

- (6) a. $\forall x$ [student(x) \rightarrow [try(x, $\hat{\exists}y$ [book(y) \wedge find(x, y)])]] = 5a
 b. $\forall x$ [student(x) $\rightarrow \exists y$ [book(y)] \wedge [try(x, $\hat{\text{find}}$ (x, y))]] = 5a, 5b
 c. $\exists y$ [book(y)] $\wedge \forall x$ [student(x) \rightarrow [try(x, $\hat{\text{find}}$ (x, y))]] = 5b

The narrow and intermediate readings are not surprising in this context, since we saw above in 1 that a bare direct object could have scope either above or below an intensional predicate and that a casemarked direct object could have scope only above an intensional predicate. What is new here is that only the casemarked direct object can take further scope above a quantificational subject.

We find the same pattern of facts in a negated sentence with a quantificational subject.⁴

- (7) a. Pratiyobba vidyaarathi pustaka ood-al-illa.
 every student book read-INF-NEG
 ‘Every student didn’t read a book.’
 b. Pratiyobba vidyaarathi pustaka-vannu ood-al-illa.
 every student book-ACC read-INF-NEG
 ‘Every student didn’t read a book.’

Here again, the unmarked object can take scope either above or below negation, but it must be interpreted as having scope below the subject. The casemarked object, by contrast, can take scope either above or below the subject, but it must take scope above negation. These facts are summarized in 8.

⁴ There was some debate in the 1970s concerning English-speakers’ abilities to identify both readings of scopally ambiguous sentences involving universal quantifiers in subject position and negation (Carden 1973, Baltin 1977). However, more recent work in which these kinds of sentences were presented under controlled experimental conditions reveals very little variability in adult English- or Kannada-speakers’ abilities to generate the relevant readings (Musolino et al. 2001, Lidz & Musolino 2002, 2005; Musolino & Lidz 2003, 2006).

nonspecific readings are due to the NP's being interpreted in the low position. Alternatively, there could be no relationship between position and interpretation whereas there is a relationship between position and morphology. That is, it could be that all noncase-marked NPs are assigned case in the low position and all casemarked NPs are assigned case in the high position, independent of interpretation.

Because the word order of Kannada is SOV, we cannot tell on the basis of simple sentences what position an object NP is in with respect to the VP. That is, without anything else between the subject and the verb, there is no way to tell where the object NP is. Certain adverbials diagnose a VP boundary, however. So we can tell whether an NP is within the VP or outside of the VP on the basis of its position with respect to such adverbs.

Both casemarked and noncasemarked NPs can follow a VP adverb.

(12) S adv O V

- a. Rashmi **matte-matte** pustaka koND-aLu.
Rashmi repeatedly book buy.PST-3S.F
'Rashmi repeatedly bought books.' (multiple book-buying events, not the same book)
- b. Rashmi **matte-matte** pustaka-vannu koND-aLu.
Rashmi repeatedly book-ACC buy.PST-3S.F
'Rashmi repeatedly bought a book.' (the same book over and over)

(13) S adv O V

- a. Naanu **cheenagi** pustaka ood-id-e.
I.NOM well book read-PST-1s
'I enjoyed book-reading.' (multiple reading events, not the same book)
- b. Naanu **cheenagi** pustaka-vannu ood-id-e.
I.NOM well book-ACC read-PST-1s
'I enjoyed reading a book.' (single book)

Note that the interpretation of the noncasemarked (a) cases of 12–13 differs from that of the casemarked (b) cases. In the (a) cases, we have only a nonspecific reading of the direct object, whereas in the (b) cases, we get only a specific reading of the direct object.

Both casemarked and noncasemarked NPs can also precede a VP adverb.

(14) S O adv V

- a. Rashmi pustaka **matte-matte** koND-aLu.
Rashmi book repeatedly buy.PST-3S.F
'Rashmi repeatedly bought a book.' (the same book over and over)
- b. Rashmi pustaka-vannu **matte-matte** koND-aLu.
Rashmi book-ACC repeatedly buy.PST-3S.F
'Rashmi repeatedly bought a book.' (the same book over and over)

(15) S O adv V

- a. Naanu pustaka **cheenagi** ood-id-e.
I.NOM book well read-PST-1s
'I enjoyed reading a book.' (single book)
- b. Naanu pustaka-vannu **cheenagi** ood-id-e.
I.NOM book-ACC well read-PST-1s
'I enjoyed reading a book.' (single book)

Here, however, the (a) and (b) cases appear to have the same interpretations. All of the sentences in 14 and 15 require a specific reading for the direct object.

So we can see that syntactic position does not determine morphological casemarking properties; either morphological case can occur in either position. There is an effect

of position on interpretation for the noncasemarked NPs, however. Whereas the case-marked NPs are interpreted as specific independent of their syntactic position, the noncasemarked NPs do show an effect of position. When a noncasemarked NP occurs inside the VP, it has a nonspecific interpretation. When such an NP occurs outside of the VP, however, it has a specific interpretation, taking scope above the adverbial. Thus, both morphological case and the high syntactic position can give rise to a specific interpretation independently.

These facts suggest that specificity is not linked directly to position since casemarked NPs can get a specific interpretation even when they occur inside the VP. Rather, it seems that there are two kinds of specificity. One, evident in the noncasemarked NPs whose behavior is as predicted by the movement analysis, we call *POSITIONAL SPECIFICITY*. The other, evident in the casemarked NPs, whose interpretation is independent of position, we call *INHERENT SPECIFICITY*.

As support for the conclusion that positional specificity has different properties from inherent specificity, we can see that only the latter allows scope out of syntactic islands. This suggests that the specific interpretation found with casemarked NPs does not derive from their syntactic position (Fodor & Sag 1982, Reinhart 1997, Kratzer 1998), whereas the specific reading found with noncasemarked NPs does.⁶

3.1. RELATIVE CLAUSE ISLAND. That relative clauses form an island for syntactic movement in Kannada is illustrated in 16 in which we relativize the NP *pustaka* ‘book’ from inside the relative clause headed by the NP *vidyaarathi* ‘student’.

- (16) *Hari ood-id-a vidyaarathi huduk-id-a pustaka tumba volleya.
 Hari read-PST-RP student look.for-PST-RP book very good
 Int. ‘The book such that Hari was looking for a student who read that book is very good.’

In 17a we see that accusative casemarked direct objects can take scope out of a relative clause, whereas in 17b we see that a noncasemarked direct object cannot.

- (17) a. Hari pustaka-vannu ood-id-a vidyaarathi hudukuttiddaane.
 Hari book-ACC read-PST-RP student look.for.PROG.be.3S.M
 ‘Hari is looking for the student who read a (certain) book.’ (There is a particular book such that Hari is looking for the student who read that book.)
 b. Hari pustaka ood-id-a vidyaarathi hudukuttiddaane.
 Hari book read-PST-RP student look.for.PROG.be.3S.M
 ‘Hari is looking for the student who read a book.’ (*There is a particular book such that Hari is looking for the student who read that book.)

3.2. COMPLEX NP ISLAND. Noun complement clauses also form islands for syntactic movement in Kannada, as illustrated in 18.

- (18) *Prat'yobba meestru Hari oodida emba vadaniti-yannu nambutta
 every teacher Hari read that rumor-ACC believe.NPST.RP
 pustaka tumba volleya.
 book very good
 Int. ‘The book such that every teacher believes the rumor that Hari read that book is very good.’

⁶ Note that the island facts also militate against an analysis in which the casemarked NPs in the low position move covertly into the high position at LF.

Accusative-marked direct objects can scope out of a complex NP island, whereas noncasemarked direct objects cannot.

- (19) a. Pratiyobba meestru Hari pustaka-vannu ood-id-a emba
 every teacher Hari book-ACC read-PST-3S.M that
 vadaniti-yannu namb-utt-aane.
 rumor-ACC believe-NPST-3S.M
 ‘Every teacher believes the rumor that Hari read a book.’ (There is a
 book such that every teacher believes the rumor that Hari read it.)
- b. Pratiyobba meestru Hari pustaka ood-id-a emba vadaniti-yannu
 every teacher Hari book read-PST-3S.M that rumor-ACC
 namb-utt-aane.
 believe-NPST-3S.M
 ‘Every teacher believes the rumor that Hari read a book.’ (*There is
 a book such that every teacher believes the rumor that Hari read it.)

3.3. CONDITIONAL ISLAND. Conditional clauses also form islands for syntactic movement, as illustrated in 20.

- (20) *Vijuani himalaya-dalli hidiyare, pratiyobba vaidya haaDutta
 scientist Himalaya-LOC find.COND every doctor sing.NPST.RP
 aushadhi tumba volleya.
 medicine very good
 Int. ‘The medicine such that every doctor will sing if the scientist finds it
 in the Himalayas is very good.’

Here again, we see that accusative-marked direct objects can scope out of conditional clauses whereas noncasemarked direct objects cannot.

- (21) a. Vijuani himalaya-dalli aushadhi hidiyare, pratiyobba vaidya
 scientist Himalaya-LOC medicine find.COND every doctor
 haaD-utt-aane.
 sing-NPST-3S.M
 ‘Every doctor will sing if the scientist finds medicine in the Himalayas.’
- b. Vijuani himalaya-dalli aushadhi-yannu hidiyare, pratiyobba vaidya
 scientist Himalaya-LOC medicine-ACC find.COND every doctor
 haaD-utt-aane.
 sing-NPST-3S.M
 ‘Every doctor will sing if the scientist finds a certain medicine in the
 Himalayas.’

That is, in the scenario described by 21a, every doctor will sing provided that the scientist finds any medicine at all in the Himalayas. In 21b, by contrast, every doctor will sing only if the scientist finds a particular medicine (say, the cure for malaria).

We can conclude, then, that only a piece of the movement analysis of specificity effects can be maintained. In particular, we see that with noncasemarked indefinites, syntactic position does correspond in a one-to-one fashion with semantic interpretation. The overt manifestation of accusative case, however, is independent of syntactic position. Moreover, the semantic effects of syntactic position do not arise on casemarked indefinites because the kind of specificity found with these NPs is different from the kind found on the noncasemarked NPs in the high position. This leaves us with three issues to address. First, what is the nature of positional specificity? Second, what is the meaning of the NPs illustrating inherent specificity? Third, how is the connection between morphological case and semantic interpretation established? I address these questions in turn.

4. POSITIONAL SPECIFICITY. Recall the contrast in 22.

- (22) a. Naanu **cheenagi** pustaka ood-id-e.
 I.NOM well book read-PST-1s
 ‘I enjoyed book-reading.’ (multiple reading events, not the same book)
- b. Naanu pustaka **cheenagi** ood-id-e.
 I.NOM book well read-PST-1s
 ‘I enjoyed reading a book.’ (single book)

We have seen that 22a forces a nonspecific reading of the object, whereas 22b forces a specific reading of the object. The two readings of a noncasemarked object are based on surface position. If the NP is outside of the VP, then it is interpreted as specific. If the NP is inside of the VP, then it is interpreted as nonspecific. This is illustrated schematically in 23. In 23a, the object NP has moved out of the VP and receives a specific interpretation. In 23b, the object NP has remained in situ and so receives a nonspecific interpretation.

- (23) a. [_{IP} NP_{subj} [_{NP}_{obj} [_{VP} t_{obj} V]]] = specific
 b. [_{IP} NP_{subj} [_{VP} NP_{obj} V]] = nonspecific

We can ask at this point what the source of positional specificity effects is. I consider two possibilities. First, it is possible that the nonspecific readings are derived by incorporating the VP-internal object into the verb (Baker 1985, Mohanan 1995, Lidz 1996). Alternatively, it is possible that these facts instantiate support for Diesing’s mapping hypothesis whereby VP-external indefinites are interpreted presuppositionally and VP-internal indefinites are variables bound by existential closure inside the VP. I consider these hypotheses in turn.

4.1. THE INCORPORATION HYPOTHESIS. Only when the noncasemarked direct object occurs inside the VP, adjacent to the verb, does it have a nonspecific reading. The observation that nonspecific readings of direct object NPs often require adjacency to the verb has led some to posit that these readings are derived from syntactic incorporation (Mohanan 1995, Lidz 1996). As originally observed by Sapir (1911), in many incorporating languages incorporation leads to nonspecific/nonreferential readings of the incorporated NP (cf. Postal 1969, Sadock 1980, Hopper & Thompson 1984, Baker 1985). So, the argument goes, nonspecific readings that require adjacency to the verb must also involve incorporation. In what follows, I show that the incorporation analysis cannot be maintained for the Kannada facts.

TEST 1: EMPHATIC VERB FORMATION. In Kannada, a verb can be made ‘emphatic’ by affixing an emphatic morpheme to the verb in its past participle form, then repeating the verb and inflecting it (Sridhar 1990:257ff., Amritavalli 1998). This is illustrated in 24b.

- (24) a. Hari bar-utt-aane.
 Hari come-NPST-3S.M
 ‘Hari will come.’
- b. Hari band-ee-bar-utt-aane.
 Hari come.PP-EMPH-COME-NPST-3S.M
 ‘Hari will too come.’

Now, if a noncasemarked direct object is incorporated into the verb, then we expect it to copy with the verb in emphatics. That is, assuming that the rule of emphatic formation targets a V^o and that the result of incorporation is also a V^o (Baker 1985),

it follows that the emphatic rule will apply to both the verb and its incorporated object. This prediction is not borne out.

- (25) a. *Naanu pustaka-ood-ee-pustaka-ood-id-e.
 I.NOM book-read-EMPH-book-read-PST-1s
 'I did too read a book.'
- b. Naanu pustaka ood-ee-ood-id-e.
 I.NOM book read-EMPH-read-PST-1s
 'I did too read a book.'
- (26) a. *Naanu mane-nood-ee-mane-nooD-id-e.
 I.NOM house-see-EMPH-house-see-PST-1s
 'I did too see a house.'
- b. Naanu mane nooD-ee-nooD-id-e.
 I.NOM house see-EMPH-see-PST-1s
 'I did too see a house.'

Rather, the noncasemarked NP patterns with the casemarked NP in not being targeted by the emphatic rule.

- (27) a. *Naanu pustaka-vannu-ood-ee-pustaka-vannu-ood-id-e.
 I.NOM book-ACC-read-EMPH-book-ACC-read-PST-1s
 'I did too read a book.'
- b. Naanu pustaka-vannu ood-ee-ood-id-e.
 I.NOM book-ACC read-EMPH-read-PST-1s
 'I did too read a book.'

We can conclude, then, that the emphatic facts do not support the incorporation hypothesis.

TEST 2: GLIDE INSERTION. Another possible test for incorporation concerns two rules of glide insertion in Kannada. One of these rules applies word-internally whereas the other applies at a word boundary. The former is stated in 28 with examples given in 29. The latter is stated in 30 with examples given in 31.⁷

- (28) Intervocalic glide insertion: $\emptyset \rightarrow [j] / V_{[-back]} \text{ — } V$
 $\emptyset \rightarrow [w] / V_{[+back]} \text{ — } V$
- (29) a. mane 'house' mane[j]annu 'house.ACC'
 b. magu 'child' magu[w]annu 'child.ACC'
- (30) Word-initial glide insertion: $\emptyset \rightarrow [j] / \# \text{ — } V_{[-low, -back]}$
 $\emptyset \rightarrow [w] / \# \text{ — } V_{[-low, +back]}$
- (31) a. [j]ereda 'he poured'
 b. [w]oleda 'he swung'

So, given a noncasemarked object that ends in a vowel of different 'backness' than the vowel beginning the verb that follows, we can tell whether the object is part of the same phonological word as the verb-initial vowel. In other words, if incorporation has applied, making a single phonological word out of the direct object and the verb, then we expect intervocalic glide insertion to apply. If incorporation has not applied, then we expect the direct object and the verb to behave as two separate words and so word-initial glide insertion should apply, as it does in examples like 32 in which the verb is immediately preceded by the subject or an adverbial.

⁷ These rules should be taken as purely descriptive. It is well beyond my expertise to make theoretical claims about Kannada phonology.

- (32) a. Avanu [j]ere-d-a. (*avanu [w]ereda)
 he pour-PST-3S.M
 'He poured.'
- b. Avanu matte-matte [w]ole-d-a. (*avanu matte-matte [j]oleda)
 he repeatedly swing-PST-3S.M
 'He repeatedly swung.'

In the case of noncasemarked direct objects adjacent to the verb, word-initial glide insertion applies, indicating that the beginning of the verb counts as the beginning of a word and hence that there is no incorporation of the direct object.

- (33) a. Mane [w]oDeda. (*mane[j]odeda)
 house break.PST.3S.M
 'He broke down a house.'
- b. Magu [j]ettida. (*magu[w]ettida)
 child lift.PST.3S.M
 'He lifted a child.'

We can conclude, then, that there is no syntactic or phonological evidence that a noncasemarked direct object in the low position is incorporated into the verb. We might say that incorporation takes place at LF or that it takes place only in the semantic component (van Geenhoven 1995, Farkas & de Swart 2003, Chung & Ladusaw 2004). While such an analysis may turn out to be correct, in the absence of independent evidence, such a solution merely restates the fact that there is a semantic distinction between indefinites occurring in the low position and indefinites occurring in the high position.

4.2. THE MAPPING HYPOTHESIS. An alternative to the incorporation hypothesis is Diesing's (1992) MAPPING HYPOTHESIS. On this account, the VP-internal direct object is bound by existential closure inside the VP, accounting for its obligatory narrow scope, whereas the VP-external direct object has a presuppositional interpretation. On the face of things, this analysis seems to accurately reflect the facts since, as we have seen, the position of the object does determine its interpretation.⁸ It is important to note, however, that the mapping hypothesis is successful only with regard to noncasemarked direct object NPs. As we have seen, casemarked NPs receive a specific interpretation independent of syntactic position. Moreover, the kind of specificity found with casemarked NPs is of a different type than the kind of specificity found with VP-external noncasemarked NPs. As we have seen, only the former can scope out of syntactic islands. Thus, the meaning we assign to the casemarked NPs must be insensitive to the effects of the mapping hypothesis. That is, it must be that the casemarked NPs have a meaning that is ignored by the mechanisms of the mapping hypothesis. In the next section I examine the meaning of the morphologically casemarked direct object NPs.

5. INHERENT SPECIFICITY. I now address the meaning of the morphologically casemarked direct object NPs. I propose that these are best handled as choice functions

⁸ The mapping hypothesis makes essentially the same predictions as de Hoop's theory of case and a theory of semantic incorporation (e.g. Zimmerman 1993, van Geenhoven 1995, Farkas & de Swart 2003, Chung & Ladusaw 2004). Under any of these approaches, a VP-external indefinite is interpreted quantificationally and a VP-internal indefinite is not. Distinguishing between Diesing's view that the VP-internal indefinite is a free variable bound by existential closure, de Hoop's view that the VP-internal indefinite is treated as a predicate modifier, and the semantic incorporation view treating the VP-internal indefinite as a property would take us too far afield. Suffice it to say that one of these approaches is correct and is to be preferred to an analysis with morphosyntactic incorporation.

(Reinhart 1997, Kratzer 1998) and, in particular, that an analysis that allows choice-function variables to be bound by existential closure only at the root (Kratzer 1998, Matthewson 1999) is superior to one in which existential closure can be freely generated at any height in the tree (Reinhart 1997).

5.1. CHOICE FUNCTIONS. A large literature has grown up around the question of why the scope of indefinites is not limited in the same ways that the scope of other quantifiers is. In particular, indefinites in many languages are not clause-bounded in their scopes and do not respect syntactic islands (Fodor & Sag 1982). Reinhart (1997) and Kratzer (1998) account for the free scope of indefinites by proposing that indefinites are optionally interpreted as choice functions. On this view, an indefinite NP can be interpreted as specific without undergoing movement.

A choice function is a function from a set of individuals to a particular member of that set. Because a choice function picks out an individual, we can get a specific reading of an indefinite without making reference to syntactic scope.

To illustrate what a choice function is, we can contrast a choice function with a superlative function, like ‘oldest’, which takes a set and returns a new set containing only the member of the original set with the relevant property (in this case, the property of being the oldest member of that set). Let us say that we have the set of books given in 34a.

- (34) a. book = {*Huck Finn*, *Gravity’s rainbow*, *War and peace*}
 b. oldest(book) = {*War and peace*}

The function ‘oldest’ applied to that set will return a singleton set containing the oldest book, namely *War and peace*. If we were to apply the same function to a different set, say the set of living American presidents given in 35a, then it would return (a singleton set containing) the oldest member of that set, namely Ford.

- (35) a. living_president = {Ford, Carter, Bush-I, Clinton, Bush-II}
 b. oldest(living_president) = {Ford}

A choice function, rather than mapping to a singleton set, maps directly to an individual member of the domain. So in a sentence like 36 the apparent wide-scope reading is due to the interpretation of the indefinite *a book* as a choice function as in 37.

- (36) Every professor rewarded every student who read a book I reviewed.
 (37) $\exists f \forall y$ [professor(y) \wedge $\forall x$ [(student(x) \wedge read(x, f(book)) \rightarrow reward(y, x)]]

It says in 37 that there is a function such that every professor will reward every student who reads the book selected by that function, say *Gravity’s rainbow*. The appearance of wide scope is not due to quantifier raising (QR), but rather to the fact that the function picks out a particular book.

5.2. INHERENT SPECIFICITY AS A CHOICE FUNCTION. The choice function notation gives us a ready explanation for the interpretive properties of casemarked direct objects. As we have seen, these NPs exhibit unbounded scope, precisely what we expect from NPs interpreted as choice functions.

- (38) a. Pratiyobba vidyarthi **pustaka-vannu** huduk-utt-idd-aane.
 every student book-ACC look.for-PPL-PROG-3S.M
 ‘Every student is looking for a (particular) book.’
 b. Hari **pustaka-vannu** ood-id-a vidyaarthis hudukuttiddaane.
 Hari book-ACC read-PST-RP student look.for.PROG.be.3S.M
 ‘Hari is looking for a student who read a (particular) book.’ (There is a particular book such that Hari is looking for a student who read that book.)

The apparent wide-scope readings of 38 are given in 39.

- (39) a. $\exists f \forall x$ [student(x) \rightarrow try(x, $\hat{\text{find}}(x, f(\text{book}))$)]
 b. $\exists f \exists x$ [[student(x) \wedge read(x, f(book))] \wedge try(Hari, $\hat{\text{find}}(\text{Hari}, x)$)]

In 39, the function variable is bound by the existential operator over choice functions, giving us the appearance of widest scope, independent of the syntactic position of the NP. Because the choice function picks out an individual book, we cannot interpret the NP as *de dicto*.

5.3. CHOICE FUNCTIONS AND INTERMEDIATE SCOPE. AS we have seen, accusative-marked direct objects can appear to take scope not only above all other scope-bearing elements but also below the subject. If the widest-scope reading is derived from treating the accusative-marked direct object as a choice function, how is it that such elements can take scope below any operators at all? Two hypotheses have been advanced in the indefinites literature to address this type of problem. On one view, existential closure over function variables takes place only at the root, and the function variable is skolemized (i.e. relativized) so that it can be dependent on some other quantifier occurring between it and the existential.⁹ On the other view, existential closure over function variables can take place at any height in the tree, allowing narrower scope than would be expected if existential closure was possible only at the root.

Taking the first option, we can skolemize the function variable so that it is dependent on the subject quantifier, as in 40, giving us the ‘intermediate scope’ reading (Engdahl 1986, Hintikka 1986, Ruys 1992, Kratzer 1998, Steedman 2004). Here, the function variable is assigned an index associated with the universal quantifier, thereby making the function variable bound by both the existential operator and the universal quantifier.

- (40) $\exists f \forall x$ [student(x) \rightarrow try(x, $\hat{\text{find}}(x, f_i(\text{book}))$)]

The appearance of intermediate scope is due to the dependency of the function on the value chosen by the universal quantifier. In other words, the function chooses for each student the book appropriately related to that student.

The approach advanced by Reinhart (1997) allows choice-function variables introduced by indefinites to be bound by freely inserted existential closure operators. She says:

Existential closure of the function variable is a purely interpretive procedure applying arbitrarily far away, so there is no reason why not to introduce this existential also in the scope of another quantifier . . . (377). The default assumption is that closure can apply freely anywhere. If it needs to be further restricted, this would require some special restriction posed by the computational system, since it could not follow from logic. But this does not seem necessary . . . (379)

According to this position, the intermediate-scope reading arises from inserting the existential operator below the universal quantifier. Thus, the representation of the intermediate scope of 5b is as in 41b. However, this approach would also allow us to insert the existential operator inside the scope of the intensional operator introduced by the predicate ‘look for’ in 5b, giving the narrowest-scope reading shown in 41c.

⁹ Skolemization, a procedure named for the Norwegian mathematician Thoralf Albert Skolem (1887–1963), takes a variable bound by an existential quantifier and replaces it with a constant whose value is determined by a universal quantifier in whose scope the original variable is found. In the example below, the choice-function variable is made to be dependent on the universal quantifier in subject position (see Steedman 2004 for discussion).

- (5b) Pratiyobba vidyaarhi **pustaka-vannu** huDuk-utt-idd-aane.
 every student book-ACC look.for-NPST-be-3s.M
 ‘Every student is looking for a book’.

In other words, on Reinhart’s view, we predict the three representations in 41.

- (41) a. $\exists f \forall x$ [student(x) \rightarrow try(x, $\hat{\text{find}}(x, f(\text{book}))$)] (wide scope)
 b. $\forall x \exists f$ [student(x) \rightarrow try(x, $\hat{\text{find}}(x, f(\text{book}))$)] (intermediate scope)
 c. $\forall x$ [student(x) \rightarrow try(x, $\hat{[\exists f \wedge \text{find}(x, f(\text{book}))]}$)] (narrow scope)

However, the sentence does not have the narrow-scope reading in 41c. This reading would be one in which the existence of a choice function is asserted inside the intensional operator introduced by *look for* and so leads us to expect a de dicto reading of the object. This reading is not available. Thus, we can reject Reinhart’s proposal that existential closure can apply anywhere.¹⁰

The alternative view of choice functions proposed by Kratzer has the function variable bound by context or by an existential operator at the root. If we take the view that existential closure applies only at the root (see also Matthewson 1999), then we predict the lack of narrow scope. On this view, there is simply no way to get the choice function to be dependent on the intensional predicate.¹¹

The wide-scope reading is derived straightforwardly, as in 41a. The intermediate-scope reading is derived by skolemizing the function variable, as we saw above in 40.

5.4. A NOTE ON DEFINITENESS AND INHERENT SPECIFICITY. Dayal (2004) claims that determinerless noun phrases in Hindi are definite. This brings up the possibility that the noun phrases we have identified as inherently specific in Kannada are in fact definite, since these also lack a determiner. If that were the case, then my analysis of inherent specificity as a choice function would be called into question. However, there are several reasons to think that these noun phrases should not be treated as definites.

First, while it is true that both casemarked and noncasemarked direct objects can be used as anaphoric definites, as in 42, it is also the case that both types can introduce a discourse referent, as in 43.

- (42) Rashmi naan-age pustaka koTTaLu. Naale naanu pustaka-(vannu)
 Rashmi I-DAT book give.PST.3s.F tomorrow I book-ACC
 ooD-utt-eene.
 read-NPST-1s

‘Rashmi gave me a book. Tomorrow I will read that book.’

- (43) a. Rashmi pustaka-(vannu) koNDaLu. Aadu meejin-a meelee.
 Rashmi book-ACC bought it table-GEN on
 ‘Rashmi bought a book. It is on the table.’
 b. Rashmi pustaka-(vannu) koND-al-illa. Aadu meejin-a meelee.
 Rashmi book-ACC buy-INF-NEG it table-GEN on
 ‘There’s a book that Rashmi didn’t buy. It is on the table.’

If we take familiarity to be one of the core properties of definites (Heim 1982), then we can see that neither casemarked nor noncasemarked direct objects are definite, since nei-

¹⁰ Of course, Reinhart is correct in saying that the restriction on free existential closure should be motivated by syntactic considerations, since logic has nothing to say on the matter. So, even though the facts of Kannada argue against what Reinhart takes to be the default position, we still are left with the task of explaining the origin of these facts. I leave this question for future research.

¹¹ Function variables must not be allowed to be relativized to worlds introduced by intensional predicates. If they were, then a de dicto reading would become available.

ther shows familiarity requirements. Now, Dayal proposes that familiarity is not actually a necessary property of definiteness and says that only uniqueness is required. This brings us to the second argument against treating casemarked direct objects solely as definites.

The uniqueness presupposition associated with definiteness is typically rigid with respect to other quantifiers. That is, 44 does not allow a reading in which the definite covaries with the value of the subject. Rather, this must be interpreted as meaning that there is a unique book such that every boy read it.¹²

(44) Every boy read the book.

As we have seen in several cases above, neither casemarked nor noncasemarked determinerless direct objects show this kind of rigidity, as illustrated again in 45.

- (45) a. Pratiyobba vidyaarathi mane kaTTis-id-a.
 every student house build-PST-3S.M
 ‘Every student built a house.’ (∀ >> house)
 b. Pratiyobba vidyaarathi mane-yannu kaTTis-id-a.
 every student house-ACC build-PST-3S.M
 ‘Every student built a house.’ (∀ >> house OR house >> ∀)

Thus, the specific readings that we have identified do not show the behavior that we would expect if they were really definites.¹³

A third argument against treating inherent specificity as definiteness concerns the availability of definite readings more generally. As noted above, both casemarked and noncasemarked direct objects can be used as anaphoric definites. Thus, any differences we find between the two types of direct objects cannot be attributed to one’s being definite and the other not. More generally, because we have identified two different types of specificity effects (i.e. positional vs. inherent specificity) for morphologically noncasemarked and morphologically casemarked direct object NPs, both of which allow definite readings, it follows that the specificity effects we observe cannot be characterized as definiteness.

A referee suggests that the ability to be used in partitive contexts might be a good test for indefiniteness. If an NP can be used to pick out an unfamiliar member of a previously introduced set, then that would be unambiguous evidence for the indefinite status of that NP. In Kannada, like Hindi (Dayal 2004), determinerless NPs cannot be used in such partitive contexts, as shown by the obligatoriness of the numeral determiner (independent of casemarking) in 46b.

¹² Indeed, it is this rigidity that Dayal used as her argument for the definite status of bare singulars in Hindi. In (i) there is no interpretation in which the subject is within the scope of the temporal adverbial.

- (i) #CaroN taraf cuuha hai.
 four ways mouse is
 ‘The mouse/A particular mouse (the same one) is everywhere.’

The conclusion that this example reveals the definiteness of the bare singular is suspect, however. The same fact holds in English with an indefinite subject, suggesting that the effect has more to do with the interpretation of indefinites in subject position than with definiteness per se.

- (ii) #A mouse is everywhere. (= one mouse only)

¹³ One might try to maintain Dayal’s analysis for Kannada by saying that the determinerless NPs in object position are semantically incorporated, leading to the appearance of nonrigidity. Indeed, Dayal (2004) does not consider object NPs in her analysis of Hindi determinerless nominals so that this problem can be averted (but see Dayal 2003). However, the fact that determinerless object NPs in Kannada, independent of morphological case, can take scope over some operators, but under others, as in 5 and 7, indicates that a semantic incorporation analysis cannot explain the nonrigidity of determinerless NPs in this language.

- (46) a. Rashmi meejin-a meele kelavu pustaka-gistaka-gaL-annu itt-aLu.
 Rashmi table-GEN on some book-RED-PL-ACC put.PST-3S.F
 ‘Rashmi put some reading material on the table.’
 b. Naanu adar-alli ood-uvud-akke *(ondu) pustaka-(vannu) tekkoND-e.
 I it-from read-GER-DAT *(one) book-ACC pick.up.PST-1s
 ‘I picked up a book in order to read from it.’

However, the lack of partitive readings found on determinerless NPs does not indicate that these NPs are not indefinite. Rather, it indicates that specific indefinites can be divided into at least three types: scopal, epistemic, and partitive, as discussed by Farkas (1995). What we have seen here is that scopal specificity is instantiated in Kannada by syntactic position, that epistemic specificity is instantiated by morphological case (with epistemic specificity represented as a choice function in the semantics), and that partitive specificity requires a determiner (see also Enç 1991).

In sum, determinerless object NPs show neither obligatory familiarity requirements nor obligatory uniqueness presuppositions. Moreover, while both types of direct objects are compatible with definite readings, we still find differences in the range of specific readings they allow, suggesting that these differences lie outside the domain of definiteness. Thus, we can conclude that these NPs are not unambiguously definite and hence that the choice-function analysis of inherent specificity is appropriate.

6. MORPHOLOGICAL COMPLICATIONS. We observed at the start of this article that the interpretive effects of accusative casemarking do not hold with animate direct objects, which are obligatorily casemarked. The observation is repeated here in 47.

- (47) a. *Naanu **sekretari** huDuk-utt-idd-eene.
 I.NOM secretary look.for-NPST-be-1s
 ‘I am looking for a secretary.’
 b. Naanu **sekretari-yannu** huDuk-utt-idd-eene.
 I.NOM secretary-ACC look.for-NPST-be-1s
 ‘I am looking for a secretary.’ (ambiguous)

We find the same lack of semantic consequence with plural direct objects. If an object NP is marked plural, it must also be marked accusative (Sridhar 1990:160).

- (48) a. *Pratiyobba vidyaarathi **eraDu pustaka-gaLu** huDuk-utt-idd-aane.
 every student two book-PL look.for-NPST-be-3S.M
 ‘Every student is looking for two books.’
 b. Pratiyobba vidyaarathi **eraDu pustaka-gaL-annu**
 every student two book-PL-ACC
 huDuk-utt-idd-aane.
 look.for-NPST-be-3S.M
 ‘Every student is looking for two books.’

However, the accusative-marked plural is missing a reading that is present on its singular casemarked counterpart. The object NP in 48b can only be interpreted as having narrow or intermediate scope, but not as having the widest scope.

- (49) a. narrow student >> look for >> 2 books = 48b
 b. intermediate student >> 2 books >> look for = 48b
 c. wide 2 books >> student >> look for = *48b

The important observation here is that the plural does not allow the widest-scope reading of the object NP, even though this NP is morphologically casemarked.¹⁴ Thus, although we might be tempted to say that the accusative morpheme is responsible for an object NP's ability to take scope over a quantificational subject in sentences like 5b, 7b, and 9b, we cannot succumb to this temptation because this same morpheme is present on the direct object in 48b, but the reading is blocked.

The widest-scope reading of a plural can be gotten by adding an emphatic morpheme or by adding a demonstrative determiner.

- (50) a. Pratiyobba vidyaarathi **eraDu pustaka-gaL-annu-u** huDuk-utt-idd-aane.
 every student two book-PL-ACC-EMPH look.for-NPST-be-3S.M
 'Every student is looking for two books.' (wide/intermediate scope)
- b. Pratiyobba vidyaarathi **aa pustaka-gaL-annu** huDuk-utt-idd-aane.
 every student those book-PL-ACC look.for-NPST-be-3S.M
 'Every student is looking for those books.'

We can summarize the morphological complication in the following way. When the casemarker is obligatory, the NP has the semantic properties that a \emptyset -marked NP has when casemarking is optional. Casemarking is required on animate direct objects and optional on inanimate direct objects. The animates and the unmarked inanimates display the same interpretive properties. They are ambiguous between a specific and a nonspecific interpretation. Only the casemarked inanimates are required to be specific. Similarly, casemarking is required on plurals but optional on singular inanimates. Here again, the plurals have the same interpretive properties as singular inanimates that are morphologically unmarked. The facts are summarized in Tables 2 and 3.

| SCOPE | INANIMATE | ANIMATE |
|--------|------------------|---------|
| NARROW | \emptyset | acc |
| WIDE | \emptyset /acc | acc |

TABLE 2. Subj Obj V-neg/int.

¹⁴ Note that the presence of a numeral does not force plural morphology on the head noun, allowing for examples like (i).

- (i) Pratiyobba vidyaarathi eraDu pustaka huDukk-utt-idd-aane.
 every student two book look.for-NPST-be-3S.M
 'Every student is looking for two books.'

This sentence has the same set of interpretations as its morphologically plural and casemarked counterpart (46b). A referee therefore brings up the possibility that it is the presence of the numeral and not the obligatoriness of accusative casemarking that is responsible for the lack of widest scope. We can discount this possibility on the basis of three pieces of evidence. First, if it were the numeral determiner that somehow blocked the widest-scope reading, then we would also expect 49a to disallow widest scope, contrary to fact. Second, casemarked plurals with no numeral determiner also fail to exhibit widest scope.

- (ii) Pratiyobba vidyaarathi pustaka-gaL-annu huDukk-utt-idd-aane.
 every student book-PL-ACC look.for-NPST-be-3S.M
 'Every student is looking for (some) books.'
 = student >> look.for >> books
 = student >> books >> look.for
 * books >> student >> look.for

Third, when the accusative morpheme is forced because of animacy, the same scope restrictions hold. Animate singular accusatives with morphological casemarking but no determiner, as in 2, exhibit the same semantic properties as inanimate singulars with no morphology and no determiner. Thus, it is not the interaction of a numeral with casemarking but rather the obligatoriness of this marking that yields the restricted interpretations on plurals/animates.

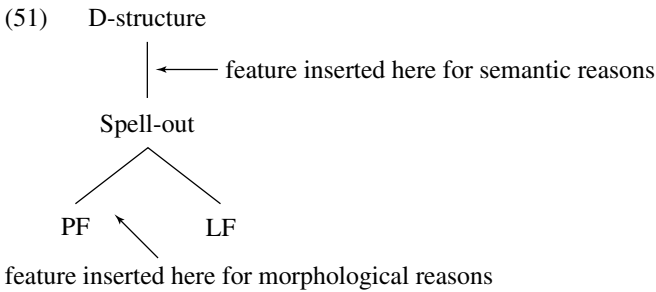
| SCOPE | SINGULAR | PLURAL |
|--------------|----------|--------------|
| NARROW | ∅ | acc |
| INTERMEDIATE | ∅/acc | acc/acc-emph |
| WIDE | acc | acc-emph |

TABLE 3. Quant-subj Obj V-neg/int.

From a theoretical perspective, we can conclude that no theory that posits a one-to-one relationship between morphological form and semantic interpretation can account for these facts. Rather, the range of morphological possibilities interacts with the range of semantic possibilities, suggesting an approach that separates morphological signals from syntactic and semantic content (Anderson 1992, Halle & Marantz 1993, Aronoff 1994, Beard 1995).

In order to capture the generalization that the accusative morpheme carries the choice-function interpretation only when it is optional, we must allow this morpheme to be inserted for two different reasons, one relating to semantics and another relating to the morphosyntactic properties of the NP to which it attaches (animacy, plurality). If we were to say that the meaning is carried directly on the morpheme, then we could not account for the failure of the morpheme to express the choice-function meaning when it occurs on animates and plurals. Instead, we need an explanation that mediates the relationship between the morpheme and the semantics.

6.1. THE DISSOCIATED FEATURE HYPOTHESIS. One possibility is that the morpheme is the morphophonological realization of a syntactic feature that can be inserted for either semantic reasons or for idiosyncratic morphological reasons. Such a feature would be dissociated in the sense of Embick 1997. Importantly, if we insert the feature for morphological reasons, this must take place in a part of the derivation that does not feed the semantics. Schematically, the analysis will have to work as in 51.



On this view, there are two ways to generate the feature [+acc]. One is due to the semantics and the other is due to the morphology. Following the first path, the feature is associated syntactically with the choice-function determiner, and thus is present whenever this determiner is present. Following the second path, we could posit the morphological rules in 52 that insert the accusative feature in a postsyntactic morphological component.

- (52) a. [+animate] → [+animate, +acc]
 b. [+plural] → [+plural, +acc]

Under this analysis, the morpheme occurs sometimes as a consequence of these rules and sometimes as a consequence of the syntax associated with the choice-function semantics.

The dissociated feature hypothesis is problematic for several reasons. First, it does not link the morphological insertion of the accusative feature with any properties of the syntax or semantics. It does not explain why animacy or plurality, as opposed to

any other feature, triggers the insertion of the feature. In principle, the rule could have applied in any environment but it is an accident that it happens to apply in these environments only. We do want a principled explanation for these facts, however, since they seem to have analogs in such unrelated languages as Spanish (Bleam 1999), Hindi (Mahajan 1990), and Swahili (Keach 1995), among others (Aissen 2004).

Second, the dissociated feature hypothesis also predicts that animates/plurals with the accusative case morpheme do allow the choice-function reading. Because the analysis allows two sources for the feature, if both sources were present, we would expect only one piece of morphology. However, in order to get the choice-function reading (as diagnosed by inverse scope with respect to the subject) of an animate/plural, an additional piece of morphology is required.

- (53) a. Pratiyobba vijuanī vidyaarathi-yannu-u nood-id-a.
 every scientist student-ACC-EMPH see-PST-3S.M
 ‘Every scientist saw a student.’
 b. every > student *
 student > every ok

In a derivation with an animate and the choice-function determiner, there would be two reasons to get the [+acc] feature, and so we would expect that animates could have the choice-function reading without any additional morphology, contrary to fact. Instead, when there are two sources for the morphology, two morphological signals surface, one for each source. The dissociated feature hypothesis is therefore rejected.

6.2. THE PARASITIC FEATURE HYPOTHESIS. An alternative analysis pursued here holds that the [+acc] feature that is generated on all NPs is parasitic, in a sense to be made precise below. On this view, the [+acc] feature is generated on the head N but can be realized only in the head of a host functional projection and thus surfaces only with choice functions, animates, and plurals, which share the property of introducing such a functional head.

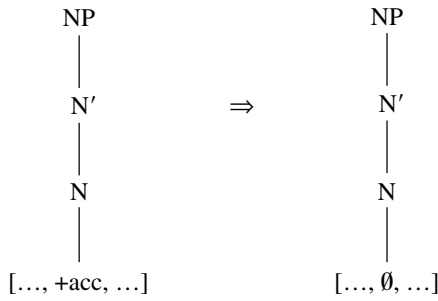
Let us assume first that the feature [+acc] occurs on all direct objects as a matter of syntax.¹⁵ Let us further assume that indefinites are generally NPs, except when they denote choice functions, in which case they are DPs. Finally, suppose that the feature [+acc] has a morphological restriction that requires it to occur inside a functional head in the morphology. Thus, although this feature is generated as part of the feature matrix of the head noun, if the indefinite is not interpreted as a choice function, there is no local functional projection for it to occur in and so it deletes. If, by contrast, the indefinite is a choice function, the feature moves into the D head corresponding to the choice function. Inside the D head, the feature then can be spelled out as [–annu]. The two paths of realization for the [+acc] feature are illustrated in 54.

¹⁵ The precise syntactic configuration under which this feature is licensed, whether these conditions involve government by the verb, being in the checking domain of AgrOP or vP, or some other configurational or lexical-semantic property, is not entirely material to this discussion. What is required is only that wherever accusative case could be licensed, the accusative feature is generated in the NP. Distinguishing transitive contexts in which accusative is licensed from those in which the subject is marked dative and the object nominative, as in (i), is an important piece of any complete syntax of the Kannada case system and of the theory of case more generally, but, in the end, has no bearing on the analysis presented here.

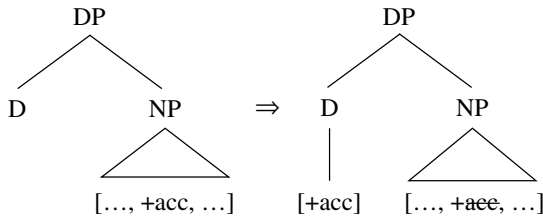
- (i) Hari-ge simha hedar-utt-ade.
 hari-DAT lion fear-NPST-3S.M
 ‘Hari is afraid of the lion.’

See Sridhar 1979, Verma & Mohanan 1990, Arad 1999, *inter alia*, for discussion of dative subject constructions.

(54) a. indefinite with no choice-function determiner

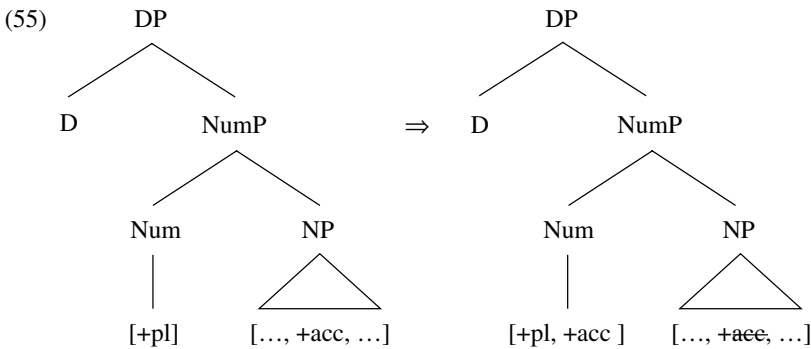


b. indefinite with choice-function determiner



In 54a, the case feature generated on the head noun deletes because there is no functional head to host it. In 54b, however, such a head is generated. Consequently, the accusative case feature moves from N to D.¹⁶

In the plurals/animates, a functional head is also projected, thus providing a site for the feature [+acc] to occur in the absence of the choice-function determiner. If the choice-function determiner is also generated on top of one of these heads, as shown in 55, the accusative feature raises to the closest functional head, leaving the D position unfilled.



¹⁶ A potential complication arises when we consider cases with demonstrative determiners. Here, casemarking on the head noun remains optional.

- (i) Hari aa pustaka ood-id-a.
 Hari that book read-PST-3S.M
 'Hari read that book.'
- (ii) Hari aa pustaka-vannu ood-id-a.
 hari that book-ACC read-PST-3S.M
 'Hari read that book.'

I assume, following Brugé 2002, that demonstrative determiners do not head DPs but rather occur in [Spec, NP]. On this assumption, we expect the presence of a demonstrative not to force casemarking.

In these cases, the choice-function determiner must be spelled out by something, and so some other piece of morphology is inserted into this position.

In sum, on the parasitic feature hypothesis, the accusative case morpheme is not a meaning-bearing element. Rather, it is the morphological realization of a purely syntactic feature. This feature has the unusual property that it can occur only inside a functional head. Consequently, only nominal phrases that project beyond the NP level provide a host position for this feature. Because the projection of functional heads correlates with particular types of interpretations, the accusative case morpheme appears to convey those interpretations. But, as far as the grammar is concerned, this morpheme has no meaning of its own. It is in this sense that the realization of this morpheme is parasitic on properties of the syntax and semantics.

In order for the parasitic feature hypothesis to be fully satisfactory, a number of questions require an answer. First, is there any independent evidence that only plurals and animates project a functional head above NP in Kannada? Second, why is the accusative case feature parasitic? Is there a limit to the kinds of features that can be parasitic or does the parasitic nature of the accusative case feature follow from some other property of the grammar? While these are important questions, I believe that answering them requires significant further investigation and that the current research has reached a stage where leaving them open is not inappropriate. I therefore leave these questions for subsequent research.

7. CONCLUSIONS. In this article, I have examined the syntax, semantics, and morphology of accusative casemarking in Kannada. The Kannada data illustrate that specificity effects associated with syntactic position are distinct from specificity effects associated with morphological form. In particular, we have seen that positional specificity effects are limited in Kannada to morphologically unmarked direct objects. Morphological (inherent) specificity arises independent of syntactic position. We have seen that morphologically casemarked direct objects receive a choice-function interpretation, but only when this morphological marking is optional. When the morphological marking is obligatory, additional morphology is required in order to achieve the choice-function interpretation. I have accounted for this effect by positing that the accusative case feature in Kannada is morphosyntactically parasitic on the presence of a functional head. Non-choice-function indefinites are NPs and thus do not allow the case feature to be morphologically realized. Choice-function indefinites are DPs and thus provide a head in which the accusative case feature can be realized. Importantly, the analysis presented here is possible only within 'realizational' theories of morphology (e.g. Anderson 1992, Halle & Marantz 1993, Beard 1995) in which syntactic structure provides the input to the morphological component and hence can be taken as evidence for this class of theories. The apparent correlation between casemarking and semantics is really a correlation between casemarking and the internal structure of the NP. Specific properties of the accusative case feature make its morphological realization dependent on the presence of functional structure above N. Moreover, because the analysis is cast in terms of the syntactic conditions that license the spell-out of a morphological feature, it follows that it is overt casemarking that correlates with the inherently specific interpretation. This conclusion may point the way toward a general theory of why languages that have variable casemarking properties on direct objects typically choose the morphologically overt form for the specific (or, in some cases, definite) interpretation.

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