DOM in Kodava takk: a complex interaction among multiple factors

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ABSTRACT

This paper presents novel data from Kodava takk (Dravidian), also known as Coorgi, which exhibits the well-attested syntactic phenomenon of Differential Object Marking (DOM). Crosslinguistically, objects which are differentially marked tend to be associated with features such as specificity and/or definiteness, humanness, animacy, or a combination of these. Well-known examples of specificity-driven DOM include Turkish (von Heusinger and Kornfilt 2005) and Senaya (Kalin 2018), whereas direct objects in Spanish (Ormazabal & Romero 2013) and Hindi (Dayal 2011, Bhatt & Anagnostopolou 1996) receive differential marking on the grounds of animacy/humanness and specificity. As will be illustrated, this phenomenon is most definitely present in Coorgi, as the accusative case-marker does not always appear on direct objects. However, on the surface, there is no clear-cut featural split between objects which do and do not receive this case-marker. Instead, this differential marking is triggered by a complex interaction of multiple factors: animacy, specificity, number, humanness, and inherent lexical properties of verbs. This paper outlines the interactions which derive Differential Object Marking in Coorgi and offers a formal analysis to capture the empirical facts, which modifies Kalin's (2018) account where DOM is a result of nominal licensing. This paper not only provides complex novel data from an understudied and endangered language, but also deepens our understanding of this crosslinguistic phenomenon, and calls into question the role grammatical Number plays in Differential Object Marking.

1 Introduction

In this paper, we offer novel data pertaining to Differential Object Marking (DOM) as it appears in the understudied Dravidian language of Kodava takk, also known as Coorgi.[1] To gather this data, guided interviews and elicitation sessions were held with a native speaker consultant. Over the course of the interviews, it became apparent that DOM was present in this language, as the accusative case-marker was not obligatorily present on every direct object. However, there was no single link between any given feature and the presence/absence of the accusative case-marker. Instead, the appearance of the accusative case-marker appeared to be conditioned by the interaction between multiple factors: specificity, animacy, humanness, and grammatical Number. Furthermore, a handful of verbs appeared to override any other factors and dictate the case-marking of their objects. This paper will clearly set out how these factors interact and give rise to the presence or absence of the accusative case-marker on direct objects in Coorgi.

Differential Object Marking (DOM), a term introduced by Bossong (1985), is a crosslinguistic syntactic phenomenon whereby direct objects in a given language are marked differently. This can have syntactic or semantic motivations, and it can manifest in several different ways. In Kannada Turkish (von Heusinger & Kornfilt 2005), DOM is conditioned by specificity and there is a split between specific/definite objects which receive overt morphological case-marking (see 1), and

[1] Our native speaker consultant voiced her preference for this language to be referred to either as Coorgi or Kodava takk, and we will use Coorgi for the remainder of this paper.

non-specific objects which do not (see 2).

(1) ben bir kitab-ı oku-du-m.
I a book-ACC read-PST-1SG
'I read a certain book.' [von Heusinger and Kornfilt 2005:5]

(2) ben bir kitap oku-du-m.
I a book read-PST-1SG
'I read a book.' [von Heusinger and Kornfilt 2005:5]

Morphological case-marking affixes are not the only way in which DOM manifests. In Senaya (Kalin 2018), this object marking takes the form of agreement markers on the verb; in Spanish, certain (usually human and specific) direct objects are marked with the preposition *a* (Rodriguez-Mondoñedo 2005, Ormazabal & Romero 2013).

As a well-attested crosslinguistic phenomenon, DOM has naturally been subject to a great deal of formal analyses. Traditionally, these have focused on DOM as a result of syntactic height or raising of the object (López 2012, Diesing 1992, Bhatt & Anagnostopolou 1996), pseudo-incorporation of unmarked objects (Dayal 2011, Mohanan 1995), or semantic features such as affectedness (von Heusinger & Kaiser 2011, Tsunoda 1985, Fleuschhauer 2018). The relative merits and shortfalls of these approaches will be discussed in detail; this paper proposes that a modified version of Kalin's (2018) nominal licensing framework can best capture the empirical facts in Coorgi.

Section 2 will give a brief morphosyntactic background to the language of Coorgi and offer novel data displaying the phenomenon of DOM at work, outlining the five major factors – animacy, humanness, specificity, grammatical Number, and verb semantics – and presenting a number of empirical observations which can be gleaned from the novel data. Section 3 compares and contrasts existing theoretical frameworks (raising, pseudo noun incorporation) and to what extent these can be applied to the Coorgi data. In Section 4, a modified version of Kalin's (2018) nominal licensing analysis is proposed to account for the empirical facts presented in Section 2. Finally, Section 5 offers a conclusion and discusses the implications of this analysis.

2 Differential Object Marking in Coorgi

Coorgi is an understudied and endangered language spoken in the Coorg region of Karnataka, India. It is a Subject-Object-Verb language with a nominative-accusative case alignment. Nouns can take a variety of morphological affixes including the demonstrative prefixes *a* (distal) and *i* (proximal), the plural suffix *ya* and its allomorphs, and Case-marking suffixes which follow any plural-marking morphology. Cases in Coorgi include the nominative (null-marked), accusative, (*na* or *tna,* allomorphically *La* in the plural), dative (*əkə*), genitive (*ra,* allomorphically *Da*), instrumental/locative (*lə*), and ablative (*ənjə*). Their uses are illustrated in (3)-(8) below:

(3) John pustaka(tna) oodəchi
John book(ACC) read.PST.3SG
'John read (a) book'

(4) John meji-ra koDi-lə pustaka(tna) bechchatə
John table-GEN top-LOC book(ACC) keep.PST.3SG
'John kept (a) book on top of the table'

(5) aṽa taanDa manæ-ənje pocchi
3SG 3SG(RFLX).GEN[2] house-ABL leave.PST.3SG
'He left his house'

(6) John Mary- əkə pustaka(tna) koDətatə
John Mary-DAT book(ACC) give.PST.3SG
'John gave Mary (a) book'

(7) John Bill-na kondatə *-(na)
John Bill-ACC kill.PST.3SG
'John killed Bill'

(8) John nai-na noTəchi *-(na)
John dog-ACC see.PST.3SG
'John saw a dog'

Some verbs may take an object marked with the dative as opposed to the accusative, as shown in (9); per the native speaker, these can be used interchangeably.

(9)

a. John Bill-na kaDchatə *-(na)
John Bill-ACC bite.PST.3SG
'John bit Bill'

b. John Bill- əkə kaDchatə *-(əkə)
John Bill-DAT bite.PST.3SG
'John bit Bill'

Looking at the above data, it is already apparent that the accusative case-marker is not always mandatorily present on direct objects in Coorgi. Per our native speaker, (3) was considered perfectly grammatically correct with or without the accusative case-marker. Examples (7)- (9), however, were considered grammatically incorrect if the direct object was not case-marked. In other words, Coorgi clearly exhibits DOM. Furthermore, looking at the difference between the direct objects, it would seem at first brush that this is DOM conditioned by animacy. However, even animate nouns are not always required to be accusatively case-marked; (10)-(11) below were considered acceptable per our speaker if there was a generic or habitual interpretation sought, such as that John were a dog-washer for a living.

[2] RFLX = Reflexive

(10) John nai kattuva
John dog wash.NonPST.3SG
'John washes dogs (he's a dog washer)'

(11) John nai katto-injatə
John dog wash.ANT-Be.PST.3SG
'John used to wash dogs (it was his job)'

Furthermore, even though the direct object *pustaka* ('book') in (3) and (6) is clearly inanimate, it can optionally be case-marked without leading to the interpretation that the book is somehow animate. In other words, accusative case-marking is not linked solely to animacy. However, marking of the direct object did lead to a change in available interpretations. If the direct object *pustaka* ('book') was left bare, it could be interpreted as singular or plural; however, if the direct object marker *na* were used, the book could only be interpreted as singular. Here, we see a clear link between grammatical number and the presence of the accusative case-marker.

2.1 Number and Differential Object Marking

Bare nouns in Coorgi are number-neutral, and can be interpreted as singular or plural:

(12) John mangæ kattuva
John mango wash.NonPST.3SG
'John washes mango(es)'

However, this ambiguity disappears with the presence of the accusative case-marker. A nominal case-marked with *na,* as below, can only be interpreted as singular, suggesting that the singular is marked with a null morpheme as follows:

(13) naanə pustaka-Ø-tna oodiye
1SG book-SG-ACC read.PERF
'I have read a book'

(14) naanə nai-Ø-na chowTit-uLLə
1SG dog-SG-ACC kick.Ant-Be.NonPST.1SG
'I have kicked a dog'

In a similar vein, an object which is marked with plural morphology can only be interpreted as plural; furthermore, as (15) exhibits, it must be accusatively case-marked:

(15) John nai-ya-La kattuva *-(La)
John dog-PL-ACC wash.NonPST.3SG
'John washes dogs'

Examples (10)-(11) above, lacking the plural marker and any case morphology, were glossed as plural ('dogs') as the closest possible English translation for something approximating 'dog-washer'. However, we argue that this bare noun is still technically number neutral; on any given

day, a dog-washer may wash one dog or multiple dogs. A parallel can be drawn to expressing in English that someone 'reads books' does not necessarily imply that the person reads more than one book on any day or multiple books at once; the nominal remains, semantically, unquantized, and instead forms part of a collective. For examples (10)-(11), as soon as the intended meaning is singular, referring to one dog, the accusative case-marker is required. The same can be said for (16), which our native speaker consultant advised was not clearly singular or plural. Overt plural marking morphology, or the accusative case-maker, would be required to disambiguate the grammatical number of the nominal *nai* ('dog') below:

(16) John nai kolluva
John dog kill.NonPST.3SG
'John kills dogs'

Furthermore, looking at (8) and (10)-(11), it is further clear that this habitual/generic interpretation is not always possible, but rather is dependent on compatibility with the verb. The construction in (8) is simple past tense, referring to a single point in time - a telic construction. Examples (10), (11), and (16), however, are atelic/unbounded and compatible with multiple instances. We posit that this difference is key in explaining the differing case-marking requirements between (8) and the other examples.

As a brief interim summary, bare animate nouns are permittable only when intended in a vague, habitual context. As soon as this is not the intended interpretation, and the speaker wishes to refer to an event with a quantized object (i.e. one, or more than one), the plural marker or the accusative case-marker will be used. Either option will necessarily result in the overt accusative case-marking of the object. However, unlike animate nouns, inanimate nouns resist plural marking. Per our native speaker consultant, adding the plural marker to the direct object 'house' in (17) below is semantically off, and adding the plural marker to inanimate objects gives the impression that they are somehow animate. Instead, to yield a plural interpretation, it is preferred to use a quantifier such as 'many', as in example (18). Importantly, however, the case-marking requirement still holds over (17); if a plural morpheme is forced, the case-marker will obligatorily appear.

(17) ?John manæ-ya-La noTəchi
John house-PL-ACC see.PST.3SG
Intended: 'John saw many houses '

(18) John sumaar manæ noTəchi
John many house see.PST.3SG
'John saw many houses'

Comparing the above, we see two different requirements for plurality. Inanimate nominals resist plural marking, whereas animate nominals will almost always be specified for number either via the accusative case-marker (if singular) or via plural morphology (which will then introduce the accusative case-marker). We propose that animate nominals are by default marked for number, carrying the feature (+num) and projecting Num(ber)P within the nominal structure. However, +num is not present on animates only in limited scenarios – habit-like or generic occurrences where the nominal does not need to be quantized – such as (19) below:

(19) John nai katto-injatə
John dog wash.ANT-Be.PST.3SG
'John used to wash dogs (it was his job)'

Inanimate nominals are number-neutral by default, lacking +num and not projecting NumP. However, in limited scenarios, these nominals are quantized and will project NumP – for examples, in the causatives like (20) below. However, the object actually receives an 'animate' interpretation, which then naturally projects a NumP.

(20) John seb-na/seb-ua-La paar-chiTTatə *-(na)/-(La)
John apple-ACC/ apple-PL-ACC fly-cause.PST.3SG
'John made the apple/ the apples fly'

Already, we see an interaction between two factors: animacy and number. In addition to this, Coorgi also has DOM conditioned by specificity.

2.2 Specificity

Looking at (21) and (22) below, the animate direct object *nai* ('dog') can be interpreted as specific or nonspecific. In (23), however, a specific reading is not available; as in (19) above, the absence of the accusative case-marker is permitted only in deliberately vague and habit-like occurrences, and the direct object can only be interpreted as nonspecific.

(21) John nai-na katəchi *-(na)
John dog-ACC wash.PST.3SG
'John washed a (certain) dog'

(22) John nai-ya-La kattuva *-(La)
John dog-PL-ACC wash.NonPST.3SG
'John washes (certain) dogs'

(23) John nai kattuva
John dog wash.NonPST.2SG
'John washes dogs' (he's a dogwasher)

Inanimate objects have a similar pattern, albeit with more reliance on verb semantics. The inanimate direct object *seb* ('apple') in examples (24) and (25), lacking the accusative case-marker, can only be interpreted as nonspecific. With the addition of the accusative case-marker in (25), the available readings are specific or nonspecific. Interestingly, though, whilst (25) can be interpreted as specific or nonspecific, (27) can be interpreted as specific only.

(24) John seb katəchi
John apple wash.PST.3SG
'John washed apple/s'

(25) John seb-na katəchi
John apple-ACC wash.PST.3SG.
'John washed a (certain) apple'

(26) John seb tindatə
John apple eat.PST.3SG
'John ate apple/s'

(27) John seb-na tindatə
John apple-ACC eat.PST.3SG
'John ate a certain apple'

The speaker offered their opinion that perhaps this is due to the compatibility of the verbs 'eat' and 'wash' with animate/inanimate objects; wash could be equally used with animate or inanimate objects, whereas 'eat' would tend to be associated more with inanimate objects. This is an interesting point; however, as will be discussed later, the relative animacy of verbs in Coorgi is a complex issue that is not necessarily responsible for the case-marking of its objects.

Overall, some empirical generalisations can be made when taking into account both inanimate and animate direct objects. Objects that are accusatively case-marked can be interpreted as specific or nonspecific (with the exception of 'eat', as discussed above), and objects which lack accusative case-marking can only be interpreted as nonspecific. This can be simplified as a single statement: all specific objects in Coorgi must be overtly case-marked.

2.3 Humanness

As the above sections make clear, there is definitely an animacy split in Coorgi. However, there appears to be a three-way distinction between inanimate objects, nonhuman animate objects, and human objects. Whilst animate nonhuman objects are generally marked for case except when in habitual contexts, human objects cannot escape this case-licensing requirement and must always be overtly case-marked.

(28) John Bill-na chowTchi *-(na)
John Bill-ACC kick.PST.3SG
'John kicked Bill'

(29) John ponn-a-La chowTuva *-(La)
John woman-PL-ACC kick.NonPST.3SG
'John kicks women (as a hobby)'

Even where a habitual/generic context was forced for (29), such that John were a serial abuser who kicked women as a habit or a hobby (apologies for this terrible scenario), the direct object would be obligatorily case-marked and quantized. Therefore, we can generalise that all human objects in Coorgi must be case-marked.

2.4 Verb Semantics

In summary, there are a number of factors which play a role in differential object marking in Coorgi. There is one final complicating factor, which has been briefly touched upon in earlier sections: namely, the semantics of each verb.

As is clear from the difference in available interpretations for examples (25) and (27), it appears that verbs in Coorgi carry inherent lexical information which plays an important role in whether an object will be marked with accusative case. Furthermore, this can take priority over other features such as animacy or specificity. Roughly speaking, verbs in Coorgi can be categorised by whether the case-marking of their direct objects is obligatory, preferred, optional, or not preferred.

Verbs like 'hit', 'hug', and the causative verb require their direct objects to be case-marked, regardless of animacy.

(30) John seb-na pojjatə *-(na)
John apple-ACC hit.PST.3SG
'John hit an apple

(31) John seb-na paar-chiTTatə *-(na)
John apple-ACC fly-causative.PST.3SG
'John made an apple fly'

(32) John mangae-na tabbəchi *-(na)
John mango-ACC hug.PST.3SG
'John hugged a mango'

With verbs such as 'wash', 'bite', or 'smash', the accusative case-marker is optional but preferred for direct objects, regardless of animacy.

(33) John seb(na) kaDchatə
John apple(ACC) bite.PST.3SG
'John bit (an) apple'

(34) John seb(na) baDəchatə
John apple(ACC) smash.PST.3SG
'John smashed (an) apple'

On the other hand, verbs like 'read' will have their direct object optionally marked with accusative case; for these verbs, accusative case-marking is much more dependent on the other factors like specificity, number, and animacy. This is best shown in (36)-(37), where the direct object Tolstoy is optionally marked if referring to Tolstoy's written works (which would be inanimate), but obligatorily so if referring to the man himself as an animate direct object (in a metaphorical or psychoanalytical sense).

(35) John pustaka(tna) oodəchi
John book(ACC) read.PST.3SG

‘John read a book’

(36) John Tolstoy(na) oodəchi
John Tolstoy(ACC) read.PST.3SG
‘John read Tolstoy(‘s work)’

(37) John Tolstoy-na oodəchi *-(na)
John Tolstoy-ACC read.PST.3SG
‘John read Tolstoy(‘s mind)’

Finally, as illustrated prior, the verb ‘eat’ is entirely dependent on other factors in order to yield accusative case-marking; more specifically, if the direct object is not specific or animate/human, marking it was considered ‘odd’ or unnecessary.

(38) John mangæ tindatə
John mango eat.PST.3SG
‘John ate a mango’

Our native speaker consultant offered up an interesting point of discussion for the role that verb semantics plays in the distribution of the accusative case-marker and suggested that the reasoning behind these different case-marking requirements could be due to the supposed animacy of their direct objects, similar to a ‘scale of preferred animacy’ (such as that proposed by von Heusinger and Kaiser, 2007). This kind of native speaker intuition is valuable and should not be discounted; however, (39)-(40) provide a problematic counterpoint for an animacy-based analysis. Working from a von Heusinger and Kaiser’s (2007) scale of preferred animacy, the verbs ‘kick’ and ‘hit’ should theoretically both be Class 1 (+human) verbs; however, whilst ‘hit’ requires its objects to be case-marked, ‘kick’ does not.

(39) John mangæ-na pojjatə *-(na)
John mango-ACC hit.PST.3SG
‘John hit a mango’

(40) John mangæ(na) chowTchi
John mango(ACC) kick.PST.3SG
‘John kicked (a) mango’

Therefore, it appears that animacy cannot fully account for the difference in case-marking preference of these verbs. Another semantic option would be affectedness, as was considered by von Heuseinger & Kaiser (2011) to be a compelling factor in their study of diachronic change in Spanish DOM; this was based on Tsunoda’s (1985) Affectedness Scale, as outlined below:

EFFECTIVE ACTION >> PERCEPTION >> PURSUIT >> KNOWLEDGE >> FEELING >> RELATION >> ABILITY

[Tsunoda 1985:388]

However, an analysis of verb semantics based on affectedness falls short on two main points. Firstly, 'affectedness' as a notion in itself is far vaguer than animacy; whilst animacy is a clear, definable, bivalent (+/-) feature, affectedness is traditionally analysed as more gradable, and its definition varies. Whilst Naess (2004) analysed affectedness as having links to animacy, definiteness, and saliency, von Heusinger & Kaiser (2011:593) defined affectedness as 'a change in the direct object that is imposed by the main predicate'. Beaver (2010) proposed an alternative that ranked verbs based on quantized change (e.g. 'kill'), non-quantified change e.g. ('widen'), potential for change (e.g. 'hit', 'kick'), and unspecified for change (e.g. 'wait'). This ranking system shows the second problem with an affectedness-based analysis. With either Tsunoda's (1985) or Beavers' (2010) affectedness hierarchies, both 'hit' and 'kick' would occupy the same slot yet have different case-marking requirements in Coorgi. Furthermore, a verb such as 'eat', which results in the disappearance of the direct object, should be high on Beavers' (2010) scale, yet prefers not to take a marked inanimate direct object in Coorgi. In summary, although both animacy and affectedness may play a role in object-marking preference, a more in-depth survey of a wider range of verbs would be needed to form a complete ranking system and establish any links to animacy, affectedness, or some other feature.

Differential Object Marking in Coorgi is a complex system which arises out of a multitude of factors: animacy, humanness, specificity, number, and verb semantics all play a role in the patterning of the accusative case-marker. However, from the data above, some empirical generalisations are clear:

1. An object which is accusatively case-marked is also specified for number (singular or plural).
2. If an object is animate, it must be case-marked except for habitual/generic readings.
3. Inanimate objects resist plural marking.
4. Inanimate objects are not generally case-marked except either when dictated by either verb semantics (making the inanimate object animate) or where a specific interpretation is sought.
5. Regardless of animacy, any specific object is obligatorily case-marked.
6. Human nouns are obligatorily case-marked.

Any formal framework of DOM would need to account for the above generalizations to satisfactorily account for this phenomenon in Coorgi.

3 Previous Theoretical Approaches to DOM

As discussed in earlier sections, analyses based on semantic categories such as 'affectedness' (von Heusinger & Kaiser 2011 for Spanish) or 'animacy' (von Heusinger & Kaiser 2007 for Spanish;

Mohanan 1995 for Hindi) cannot fully explain the Coorgi data. Verbs which should theoretically occupy the same position on the affectedness scale (such as 'hit'/'kick') exhibit non-parallel behaviours with regard to object marking, as shown in (39)-(40). Furthermore, as exhibited by the below examples, in the same environment with the verb 'wash', we see an animate object marked with accusative case, and an inanimate object marked as well. This should be ruled out if animacy alone decided DOM.

(41) John nai-na katəchi (animate) *-(na)
John dog-ACC wash.PST.3SG
'John washed a dog'.

(42) John seb-na katəchi (inanimate)
John apple-ACC wash.PST.3SG
'John washed an apple'.

A theoretical framework based on either semantic category must therefore be discounted. Looking now to other theoretical approaches such as raising and pseudo-noun-incorporation, we see that Coorgi data poses some complications for these as well.

3.1 Against Raising

Under a raising analysis (López 2012, Diesing 1992, Bhatt & Anagnostopolou 1996), there is a correlation between DOM and the syntactic height of the direct object. This may or may not be provoked by features such as specificity; whilst Diesing's (1992) Mapping Hypothesis asserted that only higher objects can be interpreted as specific, López (2012) asserted that this is too strong for Spanish, in which case-marked objects can still be interpreted as nonspecific. Instead, López (2012) presents an alternative in which differentially marked objects have been raised to the specifier position of αP (a functional projection between vP and VP), and follows Dayal (2011) and Massam (2001) in positing that unmarked objects have instead been incorporated into V. The motivation behind this mechanism, per López (2012), is that marked objects are KPs (with K prefixed onto D) and carry uninterpretable Case, rising to Spec αP to receive accusative case from v as is demanded by the Case Filter. Objects which do not project DPs, lacking both K and uninterpretable Case, can incorporate into V without violating the Case Filter. These objects will remain un-case-marked.

A raising-based analysis which more closely parallels Diesing's (1992) Mapping Hypothesis was also posited for Hindi (Bhatt & Anagnostopolou 1996). As the below examples exhibit, Hindi has the same canonical word order as Coorgi, with double-object constructions taking the order S-IO-DO-V:

(43) Ram-ne [$_{VP}$ Anita-ko chitthiii bhej-ii]
Ram-ERG Anita-KO letter.f send-PFV.f
'Ram sent the letter to Anita'. [Bhatt & Anagnostopolou 1996:13]

However, if the direct object *chitthii* above is specific, then it necessarily raises out of the VP and is marked with *ko:*

(44) Ram-ne chitthii-ko [VP Anita-ko bhej-ii]
Ram-ERG letter.f-KO Anita-KO send-PFV.f
'Ram sent the letter to Anita'. [Bhatt & Anagnostopolou 1996:13]

A raising-based analysis, then, would make three predictions for accusative case-marking in Coorgi. Firstly, if following Bhatt & Anagnostopolou (1996) and Diesing (1992), that there should be a correlation between syntactic height and specificity. If taking an analysis more adjacent to López (2012), there should at the very least be a link between object height and the accusative case-marker. Finally, objects which are not accusatively case-marked should be incorporated into V.

Looking at the first two predictions, both fail when confronted with double object constructions in Coorgi. As exhibited in (45)-(46), specific objects can appear before or after the indirect object in Coorgi double object constructions; therefore, there does not appear to be a correlation between syntactic height and specificity.

(45) John Mary-əkə nai-na koDətatə *-(na)
John Mary-DAT dog-ACC give.PST.3SG
'John gave Mary a (certain) dog'

(46) John nai-na Mary-əkə koDətatə *-(na)
John dog-ACC Mary-DAT give.PST.3SG
'John gave Mary a (certain) dog'

Secondly, scrambling of the direct object and prepositional complements is allowed in Coorgi, without any major impact on accusative case-marking. In both (47) and (48), the direct object can be optionally case-marked or left bare, regardless of its height or proximity to the verb.

(47) John meji-ra koDi-lə pustaka(tna) bechchatə
John table-GEN top-LOC book(ACC) keep.PST.3SG
'John kept the book on the top of the table'

(48) John pustaka(tna) meji-ra kodi-lə bechchatə
John book(ACC) table-GEN top-ON keep.PST.3SG
'John kept the book on the top of the table'

That is not to say that word order has no impact on accusative case-marking in Coorgi. If canonical word order is disrupted, it becomes more preferred to mark the direct object. Looking at examples (49)-(51), the direct object is preferentially unmarked in (49), then preferentially marked in (50), and obligatorily marked in (51). However, a raising based analysis predicts that both (50) and (51) should have obligatory case-marking. As the direct object in (50) it is higher than the indirect

object, and separated from the verb, a raising framework would predict that it should take obligatory case-marking; as it does not, this is evidence against a raising analysis.

(49) John Mary-əkə or pustaka(tna) aichatə
John Mary-DAT one book(ACC) send.PST.3SG
'John sent Mary a book'

(50) John or pustaka(tna) Mary-əkə aichatə
John one book Mary-DAT send.PST.3SG
'John sent Mary a book'

(51) pustaka-tna John Mary-əkə aichatə *-(na)
book-ACC John Mary-DAT send.PST.3SG
'John sent a book to Mary'

A more likely explanation for why (51) is obligatorily case-marked is that it is due to the nominative case-marker being null; per our native speaker consultant, if the direct object were not marked, it leads to some confusion about who the subject is.

It is clear that raising makes at least two predictions which are not borne out by the Coorgi data. Following López (2012), the final prediction made by a raising-based analysis is that objects which are not case-marked must be incorporated into V. Furthermore, objects which project DP have uninterpretable Case and cannot incorporate; these should obligatorily be case-marked. In other words, in examples (49)-(50), the direct object *or pustaka* ('a/one book') should be case-marked, but in fact this is only optional, which is contrary to predictions. Similarly, in (52) below, *i-seb* ('this apple') has a demonstrative yet can optionally lack case-marking.

(52) John i-seb(na) kattəchi
John PROX-apple(ACC) wash.PST.3SG
'John washed this apple'

Ultimately, due to the data points above, there is no one-to-one link between either specificity and object height, nor object height and case-marking, nor projection of DP and case-marking. Therefore, a raising analysis must be discarded when formally analysing the distribution of DOM in Coorgi.

3.2 Against Pseudo Noun Incorporation

Pseudo noun incorporation, or PNI, has previously been argued to account for differential object marking in Hindi (Dayal 2011, Mohanan 1995). Much like Coorgi, DOM in Hindi sees an animacy split; in Hindi, whilst inanimate objects have optional case-marking, animate objects only have optional case-marking if a determiner is lacking. If a determiner is present, animate objects are obligatorily case-marked. Objects which are not case-marked have been argued by Dayal (2011) and Mohanan (1995) to be incorporated.

(53) Anu har kitaab/ har kitaab-ko paRhegii

Anu every book/ every book-ACC read-FUT
'Anu will read every book' [Dayal 2011: 127]

(54) Anu *haar bacca/ haar bacce-ko sambhaaltii hai
Anu every child every child-ACC look-after-IMP be-PRS
'Anu looks after every child' [Dayal 2011:127]

At first brush, PNI offers a tempting alternative to raising in that, per Dayal (2011), it has strong links to number neutrality. Dayal (2011) also identifies a link between telicity, aspect, and number neutrality, which we have shown to exist in Coorgi in terms of the habitual interpretations being compatible only with atelic verb constructions. Furthermore, PNI along the lines of Dayal (2011) allows scrambling, which would mean (50) above is not immediately ruled out. However, there are some outstanding issues which remain a problem for a PNI-based analysis.

Firstly, Dayal (2011) notes that there appears to be a split system in place for Hindi. As shown in (53)-(54), whilst inanimate DPs (e.g. *har kitaab* 'every book') do not have to be case-marked and can remain unincorporated, animate DPs must be case-marked and cannot be incorporated. Dayal (2011) proposes that, in order to save a PNI analysis, case-marking for inanimates must be optionally null; this causes some problems as it implies the existence of a null allomorph in free variation with the overt accusative case-marker. It is not clear why this cannot be the case for animate objects as well. In addition to this, whilst human nouns can lack case-marking and be 'incorporated' in Hindi, they are obligatorily case-marked in Coorgi; therefore, in order to properly apply this framework to the Coorgi data, there would need to be a further distinction specifying that human nouns cannot incorporate even when lacking a determiner.

Secondly, per Dayal (2011), the N+V incorporations are not possible for every verb, but rather only for 'prototypical' combinations. For example, one could have *laRkii-DhuunDhnaa* ('girl-finding') but not *laRkii-sulaanaa* ('girl-putting-to-sleep'). This has an advantage when compared to the Coorgi data as it offers a possible explanation for the impact of verb semantics; for example, one could argue that 'dog-washing' is a prototypical activity, which is why (23) can remain unmarked. However, to apply this to Coorgi, one would need to explain why 'dog-killing' in (56) is prototypical (allowing unmarked subjects) whereas 'dog-hitting' in (55) is not.

(55) John nai-na/nai-ya-La poyyuva *-(na)/(La)
John dog-ACC/dog-PL-ACC hit.NonPST.3SG
John hits a dog/dogs'

(56) John nai kolluva
John dog kill.NonPST.3SG
'John kills dogs'

Finally, according to Dayal (2011), Hindi allows plural-marked nouns to incorporate, whereas in Coorgi, any plural-marked direct object must be accusatively case-marked. Overall, as explored

above, a pseudo noun incorporation analysis cannot satisfactorily capture the empirical facts seen in the Coorgi data.

4 Nominal Licensing and Number: Proposed Analysis

In discounting the above frameworks, we instead argue that the empirical generalisations in Coorgi are best captured by a nominal-licensing-based analysis, as posited by Kalin (2018) for Senaya. In observing that specific nominals are banned in perfective aspect in Senaya, Kalin (2018) proposed a novel DOM framework based on the concept of nominal licensing. The crux of this nominal licensing framework is that DOM arises from two factors: the types of nominals that need case-licensing, and the location/identity of nominal licensors. Essentially, not all nominals are case-licensed, and nominals can go unlicensed for Case without crashing the derivation. Instead, Kalin (2018) follows Pesetsky & Torrego (2007) in drawing a distinction between unvalued, interpretable Case and unvalued, uninterpretable Case. Only the latter type will cause a crash in the derivation. This uninterpretable Case is introduced by certain features within the nominal structure; for example, in Senaya, this uninterpretable Case comes from the feature +specific. In addition to uninterpretable Case, Kalin (2018) posits two types of case-licensors. Obligatory licensors must license either their closest nominal ('inherent licensing') or the highest nominal which they c-command ('structural licensing'); here, a major advantage of Kalin's (2018) framework is the ability to explain why, in languages like Coorgi, subjects are always licensed for nominative Case, without drawing any distinction between subjects and objects. Secondary licensors, on the other hand, are only activated by the presence of uninterpretable Case, where the derivation would otherwise crash. This is implemented for Senaya (Kalin 2018) in order to explain the ban on specific objects within the so-called 'perfective' aspect by asserting that, whilst the +specific feature introduces uninterpretable Case, only the -perfective Aspect head can act as a secondary licensor; a +perfective Aspect head cannot. Therefore, specific objects in perfective constructions will introduce uninterpretable Case which cannot be licensed, causing a crash in the derivation. Per Kalin (2018), this nominal licensing analysis holds great crosslinguistic applicability as it allows for variation regarding the identity of the obligatory/secondary licensors and the features which introduce uninterpretable Case.

Here, we implement Kalin's (2018) nominal licensing framework, but with some adjustments. We assert that, in Coorgi, the obligatory and secondary licensors are T^0 and v^0 respectively; this accounts for why subjects always receive nominative case regardless of the features of the nominal in question. The features which introduce uninterpretable Case (uCase) are +specific, +human, and +number. Any one of these can introduce uCase, which percolates up to become a feature on the object DP; this will activate v^0 in order to license the nominal and avoid a crash of the derivation. Whilst specificity and humanness seem relatively straightforward as features linked to DOM, the link between number and uninterpretable Case is contra Kalin (2018), and is propsed as a needed modification to the mechanism in Kalin's analysis to capture the Coorgi facts. In Kalin's (2018) analysis, all nominals should project NumP (in Kalin's proposal) and if NumP is associated with uCase, all objects should have uCase and receive case-marking as a result – this is not desired and Kalin thus rules out the possibility of a link between NumP and uCase. However, we have argued Coorgi bare nominals to be number-neutral, and we instead follow Déprez (2005) and Wiltschko (2005) in asserting that the NumP is not always projected in Coorgi nominals; we propose that only nominals with the feature +number will project NumP (thereby introducing uCase). The

animacy split is accounted for by stating that animate nominals will by default have the feature +number; therefore, they will almost always be case-marked regardless of specificity. The exception to this is in habitual/generic constructions, in which the nominals can remain number-neutral and will not be case-marked. Inanimate nominals, on the other hand, will lack +number by default; this not only explains why they are less likely to be case-marked than animates, but also establishes a link between animacy and the plural marker which has already been shown to exist (namely, that it is semantically 'off' to add a plural morpheme to inanimate nominals in Coorgi).

Applying this to the Coorgi data, we see that the empirical generalisations naturally fall out from this approach. In a scenario where the object is +specific, the nominal will have uCase introduced in its nominal structure. This will activate the secondary licensor v^0, which will license the object DP; as a result, this object DP will be differentially marked with the accusative case. This predicts that we should see obligatory DOM with all specific nominals, both -animate and +animate; this prediction is borne out by the Coorgi data. In a scenario where the nominal is animate, it will by default be specified for number; this +number feature will introduce uCase into the nominal structure, activating the secondary licensor and resulting in a case-marked object DP. This predicts that animate objects should receive DOM in specific and nonspecific interpretations – this, again, is borne out. In a habitual construction where the animate object is unquantized, it will lack the feature +number, and nothing will introduce uninterpretable Case or trigger case-licensing. This predicts that animate nominals will not be accusatively marked in habitual contexts; again, this is proven true. When the nominal is inanimate, it will by default be number-neutral. In the absence of other factors such as specificity, it should therefore not introduce uninterpretable Case. In this situation our analysis correctly predicts that these nominals can remain un-case-marked. In cases where the inanimate nominal is marked with the accusative case-marker, its interpretation is set as singular; therefore, in these cases, the nominal has been quantized and specified for number, introducing the feature +number which then introduces uninterpretable Case. The one remaining issue is verb semantics, and the exact nature of the case-marking requirement with certain verbs. We speculate that inanimate objects may not be number-neutral for certain verbs. This, again, requires more in-depth investigation to construct a full paradigm. However, whatever the link may be, what is certain is that these marked nominals have their number interpretation set in stone by the presence of the accusative case-marker: it is therefore clear that these nominals have been quantized, and therefore carry the feature +number, which has introduced uCase and activated the secondary licensor.
Finally, if a nominal is +human, it will have uCase introduced into its structure. This will activate the secondary licensor v^0, and the DP will be marked with the accusative case, regardless of whether it is specific or whether it is in a habitual/generic context. This prediction is borne out.

5 Conclusion

Over the course of this paper, we have presented novel data pertaining to DOM as it appears in the understudied and threatened language of Coorgi. We have shown that DOM arises not from one single feature, but from the complex interaction of multiple factors including animacy, specificity, number, humanness, and verb semantics. Due to this complexity, we have shown that previous theoretical approaches such as raising or pseudo noun incorporation, or analyses which rely on semantic categories such as animacy or affectedness, fail to account for the patterning of the

accusative case-marker in Coorgi. However, a modified version of Kalin's (2018) nominal licensing analysis, in which uninterpretable Case is introduced by nominals carrying the features +specific, +human, and +number, can yield the empirical generalisations presented in this paper. The findings presented here not only contribute to our understanding of the crosslinguistic phenomenon of DOM through the presentation of novel empirical data displaying its complexities, but also open up an interesting new avenue of investigation: the link between grammatical Number and DOM. A consideration of DOM as an interaction of multiple factors (for example, animacy and grammatical Number) may hold ramifications for other languages which display complex patterning of DOM and have so far resisted theoretical approaches.

References

Beavers, John. 2010. On affectedness. *Natural Language & Linguistic Theory* 29. 335-370.

Bhatt, Rajesh & Elena Anagnostopolou. 1996. Object shift and specificity: Evidence from ko-phrases in Hindi. *Chicago Linguistics Society* (CLS) 32. 11-22.

Bossong, Georg. 1985. *Empirische universalienforschung: Differentielle Objektmarkierung in den neuiranischen Sprachen*. Tübingen: Gunter Narr Verlag.

Dayal, Veneeta. 2011. Hindi pseudo-incorporation. *Natural Language & Linguistic Theory* 29. 123-167.

Déprez, Viviane. 2005. Morphological number, semantic number and bare nouns. *Lingua* 115. 857-883.

Diesing, Molly. 1992. *Indefinites*. Cambridge: MIT Press.

Fleuschhauer, Jens. 2018. Animacy and affectedness in Germanic languages. *Open Linguistics* 4. 566-588.

Heusinger, Klaus von & Jaklin Kornfilt. 2005. The case of the direct object in Turkish: Semantics, syntax and morphology. *Turkic Languages* 9. 3-44.

Heusinger, Klaus von & Georg A. Kaiser. 2007. Differential object marking and the lexical semantics of verbs in Spanish. In Georg A. Kaiser & Manuel Leonetti (eds.), *Definiteness, Specificity and Animacy in Ibero-Romance Languages*, 85-110. Konstanz: Fachbereich Sprachwissenschaft der Universität Konstanz.

Heusinger, Klaus von & Georg A. Kaiser. 2011. Affectedness and differential object marking in Spanish. *Morphology* 21. 593-617.

Kalin, Laura. 2018. Licensing and differential object marking: The view from Neo-Aramaic. *Syntax* 21(2). 112-159.

Lidz, Jeffrey. 2006. The grammar of accusative case in Kannada. *Language* 82(1). 10-32.

López, Luis. 2012. *Indefinite objects: Scrambling, choice functions, and differential marking*. Cambridge: MIT Press.

Massam, Diane. 2001. Pseudo noun incorporation in Niuean. *Natural Language & Linguistic Theory* 19(1). 153-197.

Mohanan, Tara. 1995. Wordhood and lexicality: Noun incorporation in Hindi. *Natural Language & Linguistic Theory* 13(1). 75-134.

Naess, Åshild. 2004. What markedness marks: The markedness problem with direct objects. *Lingua* 114(9). 1186-1212.

Ormazabal, Javier & Juan Romero. 2013. Differential object marking, case and agreement. *Borealis: An International Journal of Hispanic Linguistics* 2(2). 221-239.

Pesetsky, David & Esther Torrego. 2007. The syntax of valuation and the interpretability of features. In Simon Karimi, Vida Samiian & Wendy K. Wilkins (eds.), *Phrasal and clausal architecture: Syntactic derivation and interpretation*, in honour of Joseph E. Emonds, 262-294. Amsterdam: John Benjamins.

Rodriguez-Mondoñedo, Miguel. 2007. *The syntax of objects: Agree and differential object marking*. Storrs, CT: University of Connecticut dissertation.

Tsunoda, Tasaku. 1985. Remarks on transitivity. *Journal of Linguistics* 21. 385-396.

Wiltschko, Martina. 2008. The syntax of non-inflectional plural marking. *Natural Language & Linguistic Theory* 26. 639-694.