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Differential case-marking

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Differential case-marking: Syntactic descriptions and pragmatic explanations[1]

Abstract: In this paper, we argue for an approach to grammatical case that treats case-marking not as the passive realisation of other morpho-syntactic properties of a construction, but as bringing its own independent contribution to the construal of a clause, through inference over possibly underspecified semantic content of a case-marker in context. We take as case studies two instances of Differential Case-Marking: the partitive alternation in Estonian and differential uses of the marker ko in Hindi/Urdu. For Estonian, it is argued that the partitive case is semantically partitive even in alternation in grammatical contexts with nominative and genitive. From this assumption, we derive the various construals of the partitive as indicating indefinite quantity or imperfective aspect and show how other uses of the case, including after negation, may be traced to the basic partitive interpretation. We also argue that the completive interpretations of nominative and genitive derive from contrast with the partitive reading, rather than as being encoded in the case marking itself. With Hindi/Urdu 'dative' maker ko, we argue how pragmatic inference can operate also over grammatical levels to explain the uses of the marker with human direct objects, to specify definiteness of inanimate direct objects and, in alternation with ergative ne, deontic modality.

Keywords: inferential pragmatics; partitive alternation; dative alternation

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1 Introduction

Differential Case Marking (henceforth DCM) constructions have provided a rich source of data for researchers interested in the interaction of morphology, syntax and semantics (see Malchukov and Swart 2009 for an overview). DCM (also known as case alternation or case diathesis) is one of a class of constructions involving arguments that may appear in two or more forms or in different structural positions, such as the 'dative alternation' in English where the goal argument may be realised after the theme argument marked by the preposition *to* (1) or unmarked before the theme (2).

(1) Kim gave a book to Lou.

(2) Kim gave Lou a book.

Such alternations often give rise to differences in interpretation that may be quite subtle. For example, in the dative alternation construction, it is argued that the prepositional variant involves a notion of movement of theme to goal while the double object construction involves a relationship of possession between the goal and theme. Hence, we find that prepositional variants with abstract or inalienable direct objects (3) and double object variants with a first object that cannot easily stand in a possession relation to the second (4) are both strongly marked (although not fully ungrammatical in all contexts: see Krifka 2004, *inter alia multa*).

(3) #Kim gave a bad headache to Lou./Kim gave Lou a bad headache.

(4) #Kim sent London a package./Kim sent a package to London.

    Discussions of DCM principally concern constructions in different languages where there is variation in morphological case-marking of grammatical subjects (Differential Subject Marking) or objects (Differential Object Marking). The effects of DCM and the specific cases involved range significantly across languages, variously involving: the interpretation of the case-marked noun phrase, such as definiteness or agentivity; the interpretation of the predicate, such as aspect or modality; some discourse function, such as focus or emphasis; or, indeed, there may be no obvious interpretive effect at all, the variation in case apparently only signifying a stylistic variation or some grammatical dependency on another expression in a clause.

    By way of example, in a number of languages, such as Hindi, Tibetan, and Manipuri amongst others, the subject of an intransitive verb may be marked by

ergative case or be left unmarked. The unmarked form is (often, but not always) neutral in interpretation whereas the ergative marking indicates volitionality or agentivity on the part of the subject. (5) and (6) illustrate this type of what de Hoop and Malchukov (2007) term 'fluid DCM' from Hindi:[2]

(5) *ram   khãs-a*
     Ram.M.NOM   cough-PERF.M.SG
     'Ram coughed.'

(6) *ram=ne   khãs-a*
     Ram.M=ERG   cough-PERF.M.SG
     'Ram coughed (purposefully).'

Another type of alternation is found in Estonian and other Finnic languages. Here, the variation between genitive marking on the direct object in (7) and partitive in (8) signifies a difference either in the amount of the object affected by the verbal action or the grammatical aspect of that action:[3]

(7) *Poiss   sõi   supi   (ära)*
     boy.NOM.SG   eat.PST.3SG   soup.GEN.SG   up
     'The boy ate the soup (up).'

(8) *Poiss   sõi   suppi*
     boy.NOM.SG   eat.PST.3SG   soup.PART.SG
     i. 'The boy was eating soup.'
     ii. 'The boy ate (some) soup.'

Yet another type of alternation is shown in Hindi/Urdu (and other Indo-Aryan languages) where the interpretation of the object is not affected, but one of its intrinsic semantic properties, i.e. humanness, determines whether the marker *-ko* appears or not (9, 10).[4]

(9) *Nadya   kitab   xarid-e-g-i*
     Nadya.F.SG.NOM   book.F.SG.NOM   buy-3SG-FUT-F.SG
     'Nadya will buy a/the book.'

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2 Examples taken from Tuite et al. (1985: 264).
3 All Estonian data in this paper is taken from Miljan (2009), unless otherwise indicated.
4 Unless otherwise indicated all Hindi/Urdu data comes from Butt and Ahmed (2010) or Ahmed (2006). (10) is from Mohanan (1994: 104).

(10) *Ilaa=ne   bacce=**ko**   (*baccaa)   uTaayaa*
     Ila=ERG   child=ACC   (*child.NOM)   lift.PERF
     'Ila lifted a/the child'

However, while human objects require the presence of the marker, when it appears with a non-human object it indicates specificity or definiteness:

(11) *Nadya*   *kitab=**ko***   *xarid-e-g-i*
     Nadya.F.SG.NOM   book.F.SG=ACC   buy-3SG-FUT-F.SG
     'Nadya will buy a particular book/the book.'

There are many other types of effect associated with DCM, and argument alternation in general, and these often vary according to what other case-markers are involved. Indeed, just within the Indo-Aryan subfamily of languages the range of cases that alternate involves nominative, accusative, ergative, dative and genitive and the different interpretational effects cover definiteness, modality, sentience, agency and affectedness. And even within a single language, the range of effects associated with an alternating case may be wide. So, in Estonian, the partitive case in alternation with genitive and nominative signals not only the quantity of object ('some') or imperfectivity, but also straightforward partitive interpretations ('some of') and what may be thought of as strictly syntactic differences such as appearing on arguments after negation as in (12).

(12) *Ta*   *ei*   *kallanud*   *vett*   *klaasi.*
     3SG.NOM   NEG   pour.PTCP   water.PART.SG   glass.ILLAT.SG
     'S/he did not pour water into a glass.'

Given the variation in DCM in the types of alternating cases and their interpretive effects, both cross linguistically and within a single language, it is hard to see how unitary explanations of all the different instantiations of DCM could be established. Of course, there are many theoretical analyses proposed to explain various types of DCM from various theoretical perspectives. Most of these analyses tackle the constructions from a primarily syntactic perspective, often invoking concepts of abstract case, and variously postulate lexical linking rules (Kiparsky 2001), the projection of functional categories of various sorts with differential movement positions (Nelson 1998, Ritter and Rosen 2001, Svenonius 2002), sensitivity to phase types (Carnie 2005), competition in constraint rankings in

Optimality Theory (de Hoop and Malchukov 2007) and so on.[5] Despite the great variation in approaches to the phenomena of DCM, one property that is common to most, if not all, such syntactic descriptions or explanations is that grammatical case marking is the passive realisation of other morpho-syntactic properties of the construction, rather than something that contributes independent information to its containing clause.

This assumption, which follows the Graeco-Roman grammatical tradition, is a consequence of the sharp distinction typically made in theoretical and much descriptive linguistics between grammatical uses of cases and their adjunctlike, semantic uses. Most syntactically based theoretical approaches to the issue of case make a sharp distinction between these two types of case, despite the fact that the forms shown by the case-marked phrases are the same in both uses and often engage in the same sorts of grammatical constructions, such as the passivisation of certain accusative spatial adverbials in Sanskrit (13, 14).

(13) *Ratho   grāmam   gacchati.*
     Cart.NOM   village.ACC   go.3SG.PRS.ACT
     'The cart is going to the village.'

(14) *Rathēna   grāmo   gamyate.*
     Cart.INST   village.NOM   go.3SG.PRS.PASS
     'The cart is going to the village.' (Lit. 'The village is being gone to by the cart.')

It has, however, been noted time and again over the years and, in more recent times more vocally, that such a strong differentiation between grammatical and semantic uses of cases is too simplistic. Not only does it imply a treatment of case-forms as homonyms, but also obscures the relations that may be found between grammatical and independent uses of particular cases and the fact that an apparently grammatical use of a case may have subtle interpretive effects on a construction in which it is used. Following Nordlinger (1998), there has been an increasing amount of research that questions the traditional approach by giving greater credence to the information carried by individual case-makers, and the possibility of using semantic properties of case-marking as the basis of explanations for a range of both independent and grammatical uses.[6] Within these

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5 Note that all references are selective. We are aware of the vast literature on this subject and the many variations in analysis that exist.

6 Especially Miriam Butt and colleagues (e.g. Butt 2006) and those working in linguistic typology (Croft 2003, Haspelmath 2007 etc.).

various approaches, there are also a number of people who are looking at the importance of pragmatics to explain certain uses of case (e.g. Leonetti 2008 with respect to the marking of human direct objects in Romance). The current paper provides a contribution to this endeavour. It adopts the hypothesis that case-marking should be taken seriously as directly providing information that determines the interpretation of clauses in which they appear, and discusses how this can explain puzzling factors of case alternations.

In the next two sections, we discuss two instances of differential case-marking that have already been introduced: the partitive case alternation in Estonian and the use of the case-marker -*ko* in Hindi/Urdu and show how inferential effects from the semantic properties of a case-marker in interaction with its linguistic context and from its interactions with other case-markers in paradigmatic alternations can provide explanations of otherwise puzzling syntactic facts, without resorting to homonymy or complex syntactic machinery.[7]

2 The partitive alternation in Estonian

As noted above, Estonian, as other Finnic languages, displays a number of case alternations with core participants, notably between the partitive case and the genitive, objective case in transitive constructions and with nominative, subjective, case in intransitive ones. The interpretation of the partitive marked noun phrase depends not only on the meaning of the host nominal but also the semantic properties of the predicate, as well as other contextual factors.

Thus, with mass terms as transitive objects, the genitive signals that some specific amount of the NP denotation has been affected by the event, while the partitive signals either that (only) some of a particular portion of something has been affected or that the event is ongoing (imperfective) as already seen in examples (7) and (8) above. Plurals behave in a similar way, with variability in interpreting a clause with a partitive argument as involving only a partially affected object or imperfectivity of the verb. The examples in (15) and (16) involve an alternation between nominative and partitive subject with an intransitive (activity) verb: the nominative giving rise to a perfective reading and the partitive to an imperfective or partially affected reading.

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7 The discussion below is necessarily non-technical as providing a full theory of case and semantic/pragmatic interaction is not possible in a short paper.

(15) *Külalised   saabusid.*
     guest.NOM.PL   arrive.PST.3PL
     'The guests (have) arrived'

(16) *Külalisi   saabus*
     guest.PART.PL   arrive.PST.3SG
     'Some guests arrived' / 'Guests were arriving'

With singular count terms, the acceptability of partitive marking is variable depending on whether the natural atomicity of the nominal can be reinterpreted in a non-atomic way. So in (17) a partitive subject is highly marked and, without further context, liable to be rejected by native speakers as ungrammatical.[8]

(17) *Laual   oli   raamat/#raamatut*
     table.AD.SG   be.PST.3SG   book.NOM.SG/book.PART.SG
     'There was a book /#some book on the table.'

With certain transitive verbs, overriding natural atomicity in singular count nouns is easily done through the lexical properties of the verb itself which enable an interpretation of incompleteness of event or process reading of an event, as in (18).

(18) *Peeter   luges   raamatut.*
     Peter.NOM.SG   read.PST.3SG   book.PART.SG
     'Peter was reading a book.'

However, transitive verbs that describe instantaneous events which are accompanied by a change of state (i.e. culminations in Moens and Steedman 1988, achievements in Vendler 1967) do not give rise to this inference, as in (19).[9]

(19) *Ta   leidis   #sõrmust/sõrmuse.*
     3SG.NOM   find.PST.3SG   ring.PART.SG/ring.GEN.SG
     'S/he found a ring.'

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8 We will tend to be conservative in this paper about claiming that some forms are ungrammatical and will normally use the hash (#) symbol to indicate degraded acceptability.
9 Culminating events are those that have an inherent termination point such as achievements which involve a change of state (e.g. *arrive, reach, recognise*) and accomplishments which involve a process and a result state (e.g. *bake, write something*).

Singular count nouns do appear in the partitive with accomplishment verbs, where the use of a genitive object signifies perfective (20), and partitive, imperfective (21). With plurals, as might be expected, we find the variability in interpretation between an NP and a VP centred interpretation (22), as evidenced above for intransitives in (16).

(20) *Mari   ehitas   suvila   aastaga.*
Mari.NOM   build.PST.3SG   cottage.GEN.SG   year.COM.SG
'Mary built a/the cottage in a year.'

(21) *Mari   ehitas   suvilat   terve   aasta.*
Mari.NOM   build.PST.3SG   cottage.PART.SG   whole.GEN.SG   year.GEN.SG
'Mari was building a/the cottage for a whole year.'

(22) *Mari   ehitas   suvilaid   terve   aasta.*
Mari.NOM   build.PST.3SG   cottage.PART.PL   whole.GEN.SG   year.GEN.SG
i.   'Mari built cottages for a whole year.'
ii. 'Mari was building cottages for a whole year.'

Semantic coercion may also enhance acceptability of singular count nouns appearing as partitive arguments. So, for example, if it is possible to coerce a singular count noun to a mass (23) or type (24) reading, then the examples with singular count nouns become fully acceptable.[10]

(23) *Seda   tomatit   olid   kõik   kohad   täis.*
this.PART   tomato.PART.SG   be.PST.3PL   all.NOM   place.NOM.PL   full
'This tomato was everywhere.' / 'All places were full of this tomato.'

(24) *Aednik   istutas   seda   roosi*
gardener.NOM.SG   plant.PST.3SG   this.PART   rose.PART.SG
kõikjale.
everywhere.ALL
'The gardener planted this rose everywhere.'

The interpretation of a partitive marked object thus appears to be dependent on the semantics of both predicate and host noun. The question is what determines the alternations and interpretations noted above. We take the position here

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10 Even the example in (17) with the partitive marking improves considerably if the preceding context has to do with (for example) the fact that a dog has just been chewing at the book in question, leaving parts of the book in different places.

that the above patterns can be attributed to the meaning of the partitive case itself in interaction with inferential pragmatics, using ideas from Relevance Theory (Sperber and Wilson 1986/1995).

We begin our discussion with the meaning of the partitive case in Estonian. It is commonplace amongst Estonian linguists to assume that the partitive expresses an 'indefinite or unspecified quantity' of whatever its head noun denotes. In this way, the indefinite readings in (8) and (16) and the peculiarities of uses with singular verbs in (17), (19) etc. seem to be straightforwardly derived. It is also assumed that this meaning can account for aspectual readings. However, we believe there are problems with this approach which we will note below and instead adopt the hypothesis that 'partitive' means '(proper) part of'. This interpretation can be directly seen in noun phrases such as (25) and (26).

(25) *tükk   kooki*
     piece.NOM.SG   cake.PART.SG
     'a piece of cake'

(26) *osa   külalisi/vett*
     part.NOM.SG   guest.PART.PL/water.PART.SG
     'some of (the) guests/water'

Mass terms and plurals, as we have seen, also take on an 'indefinite quantity' reading in certain contexts:

(27) *Anul   on   suurepäraseid   üliõpilasi.*
     Anu.AD   have.PRS.3   brilliant.PART.PL   student.PART.PL
     'Anu has (some) brilliant students.'

(28) *Maitsesin   maasikaid.*
     taste.PST.1SG   strawberry.PART.PL
     'I tasted (some) strawberries.'

Assuming that partitive case-marking semantically gives a partitive reading for a noun phrase, the indefinite quantity reading for plurals follows straightforwardly, since 'part of' some collection of objects entails 'some (but not all) of' that collection. It may be objected what the strawberries in (28) or the students in (27) are part of is unclear.[11] We believe that the use of the elative in such constructions provides a clue to what is happening here. (29) differs from (28) only in the elative

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11 We are grateful to Helle Metslang for querying this point with us.

case-marking of the word for strawberries. The interpretation now is that there is
some defined set of strawberries that I tasted some of:

(29) *Maitsesin   maasikatest   vaid   mõnda.*
    taste.PST.1SG   strawberry.PL.ELAT   only   some.PART.PL
    'I tasted only some of the strawberries.'

We can infer that if the elative identifies a specific set from which something is
selected, the partitive selects from the generic set, the kind or, extensionally, the
set of all strawberries that might be available to buy. Such a construction is
not unknown in other languages and is particularly obvious in certain Romance
languages like French where indefinite reference to mass terms and plurals is
encoded as a partitive/genitive construction in conjunction with the generic-
denoting definite article. So *J'ai bu du vin* 'I drank some wine' is 'I drank some of
wine (in general)'[12]. The use of the partitive in the plural in Estonian appears to
be exactly the same. So, we hypothesize that the partitive reading of an entity that
can be specifically identified gives a strict proper subpart of that entity whereas
non-specific partitives denote a proper subpart of the kind (or all entities that
satisfy the description). Note that on this interpretation, the coercion example in
(24), repeated below, is easily accommodated.

(30) *Aednik   istutas   seda   roosi*
    gardener.NOM.SG   plant.PST.3SG   this.PART   rose.PART.SG
    kõikjale.
    everywhere.ALL
    'The gardener planted this rose everywhere.'

We have an apparent specific partitive *seda roosi* 'this rose', but this yields the
bizarre interpretation that the gardener randomly planted bits of a particular rose
everywhere, not something that a rational gardener would do. The fact that the
partitive may yield a 'part of kind' reading with indefinites allows a straightfor-
ward inference to 'part of the kind of this rose'.

    In support of our basic hypothesis about the meaning of the partitive, we note
that it is hard to see how 'indefinite quantity' reading of the partitive can induce
a 'proper part of' reading.[13] An indefinite quantity does not exclude the possibil-

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12 See Lyons (1999: 100–103) for some discussion with reference to French and Finnish.
13 We also note that 'proper part of' has a straightforward semantic definition, while
'indefinite quantity' does not.

ity of picking out the whole quantity of something: a whole cake is still an indefinite quantity of cake and of the cake itself but it is not a proper part of that cake. Indeed, as far as we can tell, advocates of this interpretation covertly assume a partitive reading in such circumstances, because they must treat the indefinite quantity meaning 'indefinite quantity but not all', i.e. a *proper* subpart of – the partitive reading.

What of the other, predicate related, readings of those sentences? These, we suggest, arise via two inferences. The first is a shift in perspective from 'some of' to 'not all of', the latter being an entailment of 'proper part of'. So in (16), repeated below, we have a shift from focussing on those guests that have arrived to those who have not: from 'Some guests have arrived' to 'Not every guest has arrived'. This pragmatic shift then interacts with the semantics of the predicate. Since *saabus* [arrive] is inherently culminative, it has internal event structure consisting of an initial part and a result state. Where there are multiple arrivals (as potentially with a plural subject) that initial part of the event can be interpreted as a process (Rothstein 2004) consisting of individual events of arriving and the result state as the complete state of all arrivals now having taken place (hence a type of accomplishment).

(31) *Külalisi*   *saabus*
     guest.PART.PL   arrive.PST.3SG
     'Some guests arrived' / 'Guests were arriving'

Since (31) explicitly encodes that only some, but not all, the guests, have arrived (via the partitive reading), then clearly the whole event of the guests arriving has not yet been concluded and so it must be the case that the sentence focusses on the ongoing process of individual arrivals and an imperfective reading is thereby obtained. This hypothesis explains also the behaviour of singular count nouns with respect to the partitive alternation. The activity of Peter's reading 'some of the book' in (18) entails Peter's having read 'not all of the book' and so the activity/process of reading the book is ongoing and the interpretation again imperfective. The same applies to the necessary imperfective readings of accomplishments with singular count nouns in the partitive: if not all of the cottage that Mari is building is built, then Mari is (still) building that cottage. Again, it is not clear that these interpretive effects are easily derivable from the reading of the partitive as 'indefinite quantity' without strengthening it to 'proper subpart of'.

In the coercion example in (23), repeated below, the same sort of inferential effects over eventualities can be observed, but because we are dealing with a

predicate that does not have an inherent culmination, *täis* 'full', we get a different interpretation.

(32) *Seda　　tomatit　　olid　　kõik　　kohad　　täis.*
　　this.PART　tomato.PART.SG　be.PST.3PL　all.NOM　place.NOM.PL　full
　　'This tomato was everywhere.' / 'All places were full of this tomato.'

The literal reading of this sentence under our assumptions is 'All places are full of a proper subpart of this tomato'. It is, of course, impossible for a bit of a tomato to be everywhere (even in a limited space larger than a tomato), so we get an inference over the complete state that 'these places are' to substates in which there is a bit of the specified tomato, with the implication that all (relevant) subdomains of 'these places' support a judgement of there being a state of a bit of this tomato being in it. So that the whole domain can be described as 'full' of these substates. Like example (16), the resolution of the interpretation involves drilling down into subparts of the eventuality denoted by the predicate.

　　A question that must arise in this context is: if imperfectivity and indefinite quantity readings derive from the meaning of the partitive case, what, if anything, are the semantic contributions of the genitive and nominative? And why do the latter behave in the same way in indicating perfectivity and completeness? It is possible, of course, that these properties are built directly into the semantics of these case forms. However, it would be hard then to explain why both an objective and non-objective case would have the same interpretations and yet behave otherwise in quite different ways.

　　Again inferential pragmatics provides an explanation with respect to the diachronic development of the paradigmatic contrast that results from the extended uses of the partitive case. In Gricean and neo-Gricean pragmatics, the choice between use and non-use of some content expression in an utterance may give rise to implicatures or other forms of inference. Extending this idea to case-marking, we may hypothesize that the partitive meaning 'some of' sets up a potential contrast with 'all of'. So even though the genitive or nominative might be the default or grammatically determined case in a particular construction, without any associated semantic effects, once the partitive starts being used in the same contexts giving rise to specific interpretations involving partitivity, its *non-use* in a particular situation signals an implicit semantic contrast with the partitive reading that becomes associated with the alternating cases. Hence, the contrasting concept 'all of' becomes associated with the non-use of the partitive, i.e. with the basic non-subjective and subjective cases, genitive and nominative. Such a move then automatically predicts perfective aspect in those contexts in which partitive yields an imperfective reading, since the focus now shifts to com-

pletion of the complex event denoted by the predicate. Thus, we maintain that certain pragmatic extensions of meaning of morpho-syntactic elements derive, not directly from their intrinsic meaning or use, but from the meanings of forms with which they contrast.[14]

An interesting corroboration of our hypothesis comes from transitive examples where partitive and genitive are in free variation such as (33) and (34).

(33) *Teet   tellis   seapraadi / seaprae.*
     Teet.NOM   order.PST.3SG   roast.pork.PART.SG/roast.pork.GEN.SG
     'Teet ordered roast pork.'   (Rajandi & Metslang 1979)

(34) *Korrigeerisime   maksegraafikut/maksegraafiku.*
     correct.PST.1PL   paying.schedule.PART.SG/GEN.SG
     'We corrected the paying schedule'.   (Erelt et al. 2007: 474)

In these instances the derived inferences noted above do not provide strong semantic effects, yielding environments where the case alternation is in free variation. So the semantic differences between 'Teet ordered some roast pork' and 'Teet ordered the roast pork' (in a restaurant setting) have exactly the same truth conditions. Similarly for (34) the difference between correcting all of the paying schedule and some of it is unlikely to be significant in the past tense, unless there is a discourse focus on whether or not the schedule is fully corrected or not. This free variation in objective case tends to happen with verbs whose properties do not determine the denoted event type straightforwardly, as in (33) and (34); or with verbs for which the contrast expressed by the partitive alternation is irrelevant from the communicative point of view (e.g. verbs such as expressing wish, will or intention) (Erelt et al. 2007: 475); or with nouns whose mass and count properties are irrelevant. Not all choices for case are thus made grammar-internally, bolstering the hypotheses that case-marking contributes independently to a construction and is not merely the passive realisation of conditions imposed by other expressions in a construction. Interestingly, even with verbs that typically show no preference for object case, the addition of an adjunct can force a particular case to appear. For example, extending the sentence in (34) with a durative adjunct determines that the object must be partitive because an imperfective reading is thereby forced (35); while extending it with a different

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14 Interestingly, this argument points to an explanation of the apparent psychological importance of morphological paradigms as an effect of a basic cognitive process of pragmatic inference.

adjunct that induces a terminative reading determines that the partitive cannot appear (36).

(35) *Korrigeerisime*   *maksegraafikut/*maksegraafiku*   *pool*
     correct.PST.1PL   paying.schedule.PART.SG/*GEN.SG   half.NOM.SG
     päeva.
     day.PART.SG
     'We were correcting the paying schedule for half a day.'

(36) *Korrigeerisime*   *maksegraafiku/*maksegraafikut*   *poole*
     correct.PST.1PL   paying.schedule.GEN.SG/*PART.SG   half.GEN.SG
     päevaga
     day.COM.SG
     'We corrected the paying schedule in half a day.'

We have seen that the partitive alternation can be explained by the semantics of the case-marking itself in interaction with pragmatic inference over this in context to yield different interpretations in different contexts. How then do we explain its use in negation contexts as in (37), which appears to be an entirely arbitrary syntactic fact?

(37) *Ta*   *ei*   *kallanud*   *vett*   *klaasi.*
     3SG.NOM   NEG   pour.PTCP   water.PART.SG   glass.ILLAT.SG
     'S/he did not pour water into a glass.'

Although we cannot get away from the basic conclusion that this *is* a synchronic syntactic fact,[15] we can again appeal to pragmatic inference as an explanation for why this grammatical usage has evolved. It has been noted with respect to certain Australian aboriginal languages that case-markers, such as ergative, may develop discourse effects of emphasis or focus (McGregor 1998, Pensalfini 1999). Although the topic of the interaction of case-marking and discourse has not yet been extensively studied (although see the papers in Barðdal and Chelliah 2009), we believe that there is a discourse motivation for the use of partitive in negation contexts. In particular, we hypothesise that the use of the partitive in negation contexts developed from an emphasis or focus on the negation itself. So, by not using the expected objective genitive, but the partitive, focus is on part of whatever the object denotes. For (37), because of the kind or generic reading construed for the noun 'water' through the use of the partitive (see above), we get a reading 'S/he did not

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15 Possibly also a result of language contact with neighbouring Slavic languages.

pour part of the kind 'water' into the glass' entailing that no water was poured into the glass. This could also be construed as 'S/he didn't pour (even) a drop of water into the glass'. For plural count nouns, we would get the same sort of effect. So in (38), the construal would be, 'I didn't taste part of the kind 'strawberry'' extended to 'I didn't taste even one instance of strawberry'.[16]

(38) *Ma   ei   maitsnud   maasikaid.*
    1SG.NOM   NEG   taste.PTCP   strawberry.PART.PL
    'I didn't taste any strawberries.'

In support of this hypothesis, is the pattern of case-marking in contrastive negation contexts. As (39) shows when the existence of a direct object is not being denied, it appears in the neutral object case, the genitive.

(39) *Ta   ei   ostnud   mitte maasturi   vaid*
    3SG.NOM   NEG   buy.PTCP   NEG   off.road.vehicle.GEN.SG   but
    paadi.
    boat.GEN.SG
    'S/he did not buy an off-road vehicle but a boat.'   (Erelt et al. 2007: 473)

From such central examples, we hypothesize the use of the partitive under negation has developed through normal grammaticalisation, extending its domain until it becomes an (arbitrary) syntactic fact about Estonian (and other contact languages) that the partitive case must be used after negation.[17]

In this section, we have shown that by treating the partitive case as having a proper partitive meaning we can provide an explanation for the patterns of partitive case alternation in Estonian involving pragmatic extension of this basic meaning and further inference to derive event and discourse related meanings, driven by the interaction of the meanings of the host nominal, its case-marking and the main predicate. We have also argued that the paradigmatic alternations with nominative and genitive serve to imbue their use with meanings of completeness without requiring such meanings to be inherent in these case-markers themselves.

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16 Notice the similarity here with the emphatic negation marked by particular lexical items like 'drop', 'bit' etc. as in the development of the modern French negative *(ne)* . . . *pas* from late Latin *ne passuum* 'not a step' or dialectal French *ne* . . . *mie* from *ne mica* 'not a drop'.
17 Notice further that it is very hard to see how this use could have developed from a partitive case meaning 'indefinite quantity'.

3 The Hindi/Urdu marker 'ko'

We now turn to a rather different set of data in our exploration of the pragmatic effects of case-marking. The case-marker -*ko* (however analysed morphologically) has a range of uses in modern Hindi/Urdu which Ahmed (2006) lists as marking: temporal, spatial and purpose adverbials; certain clauses; dative subjects and objects; accusative causees; and accusative objects. Butt and Ahmed (2010) trace dative and accusative uses of -*ko* to the 13ᵗʰ century and give the following examples from Old Urdu to illustrate use as a dative (indirect object) marker (40), as object of the verb 'seek' (41), and dative experiencer (42):

(40) *jɪmdu **kũ** samjʰaɪ*   Old Urdu/Punjabi
     life   ACC/DAT   teaches
     '(it) teaches to life' (Verse 1, from Khan 2001, 142)

(41) *ḍhʊnd:en ḍɪye sʊhag **kũ***   Old Urdu/Punjabi
     seek   give husband ACC/DAT
     '(you) are seeking a husband . . .' (Verse 114, from Khan 2001, 263)

(42) *farɪd mẽ janya dʊkʰ mʊjʰ **ko***
     Farid I know grief/pain I.OBL ACC/DAT
     'Farid, I know I have grief . . . (lit. grief is to/at me)'   Old Urdu/Punjabi
     (Verse 81, from Khan 2001: 226)

Following Ahmed (2006), Butt and Ahmed suggest that -*ko* indicates a, possibly unattained or abstract, endpoint marker, pointing to examples like those in (43), (44) as evidence:[18]

(43) *ek vilayat **mẽ** poãce*
     one city in reached
     'reached a city'   Old Urdu

(44) *ɪs manzɪl **ko** kab poãco-ge*
     this destination ACC/DAT when reach.2-FUT.PL
     'When will (you) reach this destination?'   Old Urdu

Ahmed (2006) uses this meaning as the basis for exploring and explaining the extensions of the use of -*ko* in Modern Hindi/Urdu to express spatial and temporal location, indirect object uses, experiencer subjects, affected agents in caus-

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18 Examples (43, 44) in Butt and Ahmed (2010), taken from Dehalvi (1804).

ative constructions and purpose. His semantic explanations for these uses seem to us to be both interesting and robust. However, as he readily admits there are uses that do not seem amenable to such a semantic account. As noted above, *-ko* must be used with all human direct objects as in (45) and with non-human direct objects, the marker indicates specificity or definiteness (46, 47):

(45) *anjum=ne   saddaf(=ko)   dekhaa.*
   Anjum=Erg   Saddaf=ACC   see.PERF.M.SG
   'Anjum saw Saddaf.'

(46) *anjum=ne   kashtii   dekhii.*
   Anjum=ERG   boat.F.SG   see.PERF.F.SG
   'Anjum saw a/the boat.'

(47) *anjum=ne   kashtii=ko   dekhii.*
   Anjum=ERG   boat.F.SG=ACC   see. PERF.F.SG
   'Anjum saw the boat.'

While we agree that it is not at all obvious how an interpretation of '(potential) endpoint' can be extended to these uses, nevertheless we believe that they can still be explained by pragmatic inference, not however inference over specific semantic content, but over the grammatical system itself. Consider the system of *-ko* marked arguments that has developed in the modern languages with the semantic extensions of the use of *-ko*: indirect object marker, experiencer subject and affected agents of causatives. All of these arguments may be considered to be 'peculiar' in some way: indirect objects are 'unusual objects' in that they are (typically) additional to a direct object and are not proto-patients (Dowty 1991); experiencer subjects are 'unusual subjects' in that they are not fully agentive and typically not volitional or active in the event; and affected agents of a causative are 'unusual arguments' as they have agentive properties with respect to the caused event but patientlike ones with respect to the causation. We suggest that the use of *-ko* with direct objects derives from a pragmatic extension of the use of the marker to indicate an argument that is unusual or unexpected in some way. In other words, in addition to the meanings of the specific uses of the marker, *-ko* also takes on the meaning 'unusual or marked argument', derived from the patterns of usage that have developed.

So, the accretion of the meaning 'unusual or marked argument' means that using *-ko* with an object invites the hearer to identify what is peculiar about the marked argument. In the literature on functional linguistics, it has been noted that human direct objects are less usual than non-human ones, because humans are more likely to be agentives with respect to some event. At the same time,

specific (inanimate) direct objects are less usual than indefinite ones, because objects are less likely to act as the topics of their clauses (Bossong 1985, Silverstein 1976, Filimonova 2005, amongst others). Use of -*ko* with these arguments then is part of a grammaticalization process of extending a 'goal-like' interpretation of the case-marker to other objects that are pragmatically marked or unexpected in some way.[19] The fact that a pragmatic extension inviting hearers to infer a peculiarity with respect to some type of marked object over a grammatical system may itself become grammaticalized and restricted to particular constructions is neither surprising nor syntactically significant.

As noted above, it is not the case that all uses of 'non-goal' -*ko* signal an unusual type of argument in the same way in Hindi/Urdu. For example, in alternation with ergative marking on subjects, -*ko* may signal a difference in modality, as illustrated from Ahmed (2006) in (48) and (49).

(48) *nadya=ne   zu   ja-na   he*
     Nadya.F=ERG   ZOO   go-INF   be.PRS.3SG
     'Nadya wants to go to the zoo.'

(49) *nadya=ko   zu   ja-na   he*
     Nadya.F=DAT   ZOO   go-INF   be.PRS.3SG
     'Nadya has to/wants to go to the zoo.'

It is only recently that the ergative marker -*ne* has been extended from its use marking the transitive subject of a perfective verb, to signalling volition on the part of subjects (see also examples (6) and (7) above). Thus, the ergative in (48) reinforces potential volitionality in the person doing the wanting. By contrast, the -*ko* marking in (49), being the typical experiencer marker, may indicate possibly not strong desire, but not necessarily anything more. However, the paradigmatic opposition to the emerging use of ergative marking leads to an inference along standard Relevance Theoretic (or even Gricean) lines: by not using -*ne* the speaker is inviting the hearer to infer why the ergative has not been used implying non-volitionality which starts to become linked to the previously unmarked use of -*ko* as an indication of an experiencer subject. Such non-volitionality then gives rise to a pragmatic implicature of deontic modality, since non-volition may be accompanied by coercion. So, as with the interpretation of genitive and nominative subjects and objects in Estonian discussed above, the explanation for this modal interpretation of -*ko* derives, not from any intrinsic meaning of the marker

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19 See also Leonetti (2008) for a pragmatic account of the use of the preposition *a* in Spanish and other Romance languages to signify humanness, animacy and specificity.

itself, but pragmatically from a grammatical contrast with a marker whose interpretation is clear.

4 Conclusion

The point of this short excursion into the rich area of differential case-marking is twofold. In the first instance, the arguments given with respect to partitive subjects and objects in Estonian support the contention that differences in case-marking that are linked to differences in interpretation can be derived by treating the relevant case as having semantic content, even in apparently grammatical usage. We can account for apparent disparate phenomena involved in case alternations straightforwardly by assuming some underspecified semantic content associated with the case-marking that interacts with local and extended context to determine a meaning in much the same way as words provide the necessary tools to derive ad hoc concepts in context (Wilson and Carston 2007). Secondly, as seen in both Estonian and Hindi/Urdu, further extensions of the use of a case may arise from pragmatic inference over the grammatical systems that emerge from semantic extensions of use. Such extensions may involve the reinterpretation of a marker as expressing a more general property that links together different grammatical uses, as with Hindi/Urdu -*ko* analysed as marking 'unusual arguments'; or they may involve the development of meaning contrasts through paradigmatic opposition to some other case-marker, as with the ergative/-*ko* alternation or the completive interpretation of genitive and nominative in Estonian.

Hence, while syntactic descriptions of case-marking phenomena may be cast in terms of their being the realisation of properties determined by other collocated elements, explanations of such phenomena may best be provided by taking case-markers as making an independent contribution to a construction and that pragmatic inference plays a large role in the development of case usage (as noted many times with respect to grammaticalization phenomena, see e.g. Hopper and Traugott 1993). In particular, case alternations such as those exhibited in differential case-marking can receive fairly straightforward pragmatic explanations without the need for elaborate grammatical or semantic machinery. Exactly how such processes manifest themselves in particular languages are thus seen as arbitrary facts about those languages that do not require grammatical solutions at any level.

This is not to say that the need for (synchronic) syntactic descriptions is diminished. We are not claiming that speakers of languages continually engage in inferential processing of common constructions: it is hard to see how the competence of a native speaker of Estonian, for example, could continually reconstruct

partitive after negation merely through a pragmatic process of emphasis. However, what this discussion does indicate is that the burden of explanation does not lie in syntax, or complex mapping procedures between lexical semantics and morphosyntactic output, but in the semantics and pragmatics of alternating case-markers and the systems in which they appear.

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