

Partitive Case and Aspect

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1 Partitive case as a syntactic and semantic problem

Current theories make a distinction between two types of case, STRUCTURAL case and INHERENT (or LEXICAL) case (Chomsky 1981), similar to the older distinction between GRAMMATICAL and SEMANTIC case (Kuryłowicz 1964).¹ Structural case is assumed to be assigned at S-structure in a purely configurational way, whereas inherent case is assigned at D-structure in possible dependence on the governing predicates's lexical properties. It is well known that not all cases fall cleanly into this typology. In particular, there is a class of cases that pattern syntactically with the structural cases, but are semantically conditioned. These cases however depend on different semantic conditions than inherent cases do: instead of being sensitive to the thematic relation that the NP bears to the verbal predicate, they are sensitive to the NP's definiteness, animacy, or quantificational properties, or to the aspectual character of the VP, or to some combination of these factors. The Finnish partitive is a particularly clear instance of this apparently hybrid category of semantically conditioned structural case.²

The interest of partitive case goes beyond the fact that it poses an apparent puzzle for case theory. The combination of conditioning factors governing the partitive raises semantic questions as well. In its aspectual function, partitive case is assigned to the objects of verbs which denote an *unbounded* event, in a sense to be made clear below. In its NP-related function, partitive case is assigned to *quantitatively indeterminate* NPs (including indefinite bare plurals and mass nouns), even if the verb denotes a bounded event. Moreover, in Slavic, the distinction between perfective and imperfective aspect has the very same two functions (among others). How can these functions

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²For evidence that partitive case is a structural case, see section 3, and Vainikka 1993, who argues that the partitive is the default case assigned to obligatory complements of verbs, prepositions, comparative adjectives, caseless numerals, and certain quantifiers. See also Nikanne 1990 and Maling 1993. The present paper is concerned only with the partitive as the case of the object of verbs, the only function in which it alternates with the accusative according to the semantic conditions investigated here.

be unified? And how can case, a nominal category, express the same meanings as the *verbal* category of aspect?

From a typological perspective, the accusative/partitive case alternation in Finnish is intriguing because its aspectual side resembles the so-called conative case alternation between accusative and dative objects found in Australian and Polynesian languages, among others (Hale 1982, Laughren 1988, Simpson 1991). The semantic effect of the two case alternations, and the class of verbs that participate in them, are also similar. And the conative dative also seems to straddle the distinction between structural and inherent case. The dative object is syntactically transitive in many respects, yet the conative has been argued to be a kind of antipassive construction, attributed by some linguists to NP-movement in the syntax, by others to the operation of a lexical rule at the level of argument structure.

Finally, there is a historical aspect to the problem, which has been the subject of much debate among Finno-Ugrists. Partitive case originated as a purely adverbial local case with the meaning “from”. It developed first its NP-related functions, in several stages. The aspectual function was the last to emerge. How is this stepwise extension of the partitive’s uses related to its shift from a semantic case to a structural case?

In this paper I put forward an analysis of the Finnish partitive which sheds some light on each of these issues. The function of partitive case is to license unboundedness at the VP level. This unifies the aspectual and NP-related functions of the partitive at the level of the VP, and appropriately generalizes to the conative constructions. By separating the configurational assignment of structural case at S-structure from its semantic conditioning, we preserve the spirit of the distinction between structural and semantic case. The origin of the structural partitive can then be seen as a grammaticalization process of the classic type.

2 The semantics of partitive case

The Finnish partitive has two functions, which can be termed ASPECTUAL and NP-RELATED. The aspectual function, which Finnish linguists have characterized in terms of resultativity (Itkonen 1976, Hakulinen and Karlsson 1979:183, Larjavaara 1991) or boundedness (Ikola 1961, Heinämäki 1984, Leino 1991), is illustrated in the sentences of (1) with the verb meaning “to shoot”. It belongs to a class of verbs which assign case to their objects in two different ways, with a different aspectual interpretation.³

- (1) a. Ammu-i-n karhu-a / kah-ta karhu-a / karhu-j-a
shoot-Pst-1Sg bear-**Part** / two-**Part** bear-Part / bear-Pl-**Part**
‘I shot at the (a) bear / at (the) two bears / at (the) bears’

³The relevant object case markings are glossed in boldface. Thus, in (1a) and in (4b), in *kaksi karhua* ‘two bears’, the case of the object is accusative, marked on the head *kaksi*, which in turn assigns partitive to *karhua* internally to the object.

- b. Ammu-i-n karhu-n / kaksi karhu-a / karhu-t
 shoot-Pst-1Sg bear-Acc / two-Acc bear-Part / bear-PlAcc
 ‘I shot the (a) bear / two bears / the bears’

In the aspectually irresultative, unbounded version (1a), the verb has a partitive object, and denotes an activity (in Vendler’s sense), “to shoot at”. In the aspectually resultative, bounded version (1b), it has an accusative object, and denotes an accomplishment, “to shoot dead”.⁴ In contrast, the unbounded version (1a) is non-committal as to what happened to the bear, and its use conversationally implicates that the shot(s) missed.

In addition to verbs like “shoot”, Finnish has verbs which are intrinsically unbounded, such as “love”, “seek”, and “touch”, and verbs which are intrinsically bounded, such as “kill”, “get”, “find”. The majority of Finnish verbs, in fact, belong to one of these two classes.

To illustrate the NP-related function of partitive case, consider an intrinsically bounded verb such as *saada* “get”. The objects of such verbs are partitive when they are quantitatively indeterminate (in particular, when they are indefinite bare plurals or mass nouns), otherwise accusative:

- (2) a. saa-n #karhu-a / #kah-ta karhu-a / karhu-j-a
 get-1Sg bear-Part / two-Part bear-Part / bear-Pl-Part
 ‘I’ll get the (a) bear / (the) two bears / bears’
 b. saa-n karhu-n / kaksi karhu-a / karhu-t
 get-1Sg bear-Acc / two-Acc bear-Part / bear-PlAcc
 ‘I’ll get the (a) bear / two bears / the bears’

Here the partitive in effect marks the indefiniteness of bare plural or mass noun objects (a more precise formulation will be given later).

Aspectually unbounded verbs, on the other hand, assign partitive case to ALL their objects. With such a verb, a partitive bare plural object is ambiguous between a definite reading and an indefinite reading:

- (3) a. etsi-n karhu-a / kah-ta karhu-a / karhu-j-a
 seek-1Sg bear-Part / two-Part bear-Part / bear-Pl-Part
 ‘I’m looking for the (a) bear / (the) two bears / (the) bears’
 b. etsi-n #karhu-n / #kaksi karhu-a / #karhu-t
 seek-1Sg bear-Acc / two-Acc bear-Part / bear-PlAcc
 ‘I’m looking for the (a) bear / two bears / the bears’

For example, *etsin karhuja* can mean “I looked for the bears” (aspectual partitivity), or “I looked for bears” (both aspectual partitivity and NP-related partitivity).⁵

⁴Barring special contextual information, (1b) is understood to mean that I killed the bear, its English counterpart simply that my bullet hit the mark, with possibly but not necessarily fatal results. Contextual information can yield the English-type interpretation in Finnish (Heinämäki 1984), and it seems that it can also yield the Finnish-type interpretation in English.

⁵But in the resultative meaning, *etsiä* can take accusative objects; the dictionary *Nykysuomen Sanakirja* cites the example (presumably from a math problem) *Etsi luvun alkutekijät* (Acc.pl.) “Determine the prime factors of the number”.

The property of verbs such as *ampua* “shoot, shoot at” is that they share both of these patterns. With such a verb, a partitive bare plural object therefore yields a three-way ambiguity: *ammuin karhuja* (see (1b)) can mean “I shot at the bears” (aspectual partitivity), “I shot bears” (NP-related partitivity), or “I shot at bears” (both).

In the examples cited so far, boundedness coincides with resultativity. One might be led to the conclusion that bounded predicates are simply those that denote an accomplishment or achievement, and unbounded predicates are those that denote states and activities (processes). A closer look shows that resultativity is not the decisive criterion. A class of bounded irresultative verbs, such as *omistaa* “own”, *nähdä* “see”, assign case like resultative verbs:⁶

- (4) a. *omista-n #karhu-a / #kah-ta karhu-a / karhu-j-a*
 own-1Sg bear-**Part** / two-**Part** bear-Part / bear-Pl-**Part**
 ‘I own the (a) bear / (the) two bears / bears’
- b. *omista-n karhu-n / kaksi karhu-a / karhu-t*
 own-1Sg bear-**Acc** / two-**Acc** bear-Part / bear-Pl**Acc**
 ‘I own the (a) bear / two bears / the bears’

Even though “own” is non-resultative like “seek”, it assigns case like achievement/accomplishment predicates such as “get”.

The following diagnostic is helpful for building an intuition about the category of boundedness which determines the case marking of the object in Finnish. A predicate is *intrinsically unbounded* if it can be modified by degree adverbs such as (*some*) *more*, *a lot*, *very much*, *a bit*, *somewhat less*, *considerably*, *slightly*, referring to the *extent of a single eventuality*. What is relevant is the *gradability* of the event: bounded predicates, whether telic or atelic, admit of no degree. However, bounded predicates can still receive an unbounded interpretation as a result of a durative/iterative reading induced by adverbs or other means. Such readings can also induce partitive case (e.g. reading (3) of (11b) below, and section 6).

- (5) *Unbounded verbal predicates:*
- a. The sportsman shot at a bear some more.
 - b. I looked for the key a lot.
 - c. Mary wanted the book very much.
 - d. The customer touched the vase a bit.
 - e. John modified the password radically.
 - f. How much did you study the theorem?
 - g. Mary loved Bill up to a point.
 - h. Fred used the book somewhat.

⁶The first version in (4a) (like (2a) *saan karhua*) is OK with ‘bear’ understood as a mass noun, referring perhaps to a quantity of bear meat, viz. ‘I own bear’. See section 6 on the circumstances under which boundedness can be coerced.

- i. I expected this present less than Alice did.
- j. The box protects the necklace considerably.

Contrast the verbal predicates in (6), which are bounded (abstracting away from temporal unboundedness).⁷

- (6) *Bounded verbal predicates:*
- a. #The sportsman killed a bear some more.
 - b. #I found the key a lot.
 - c. #Mary owned the book very much.
 - d. #The customer bought the vase a bit.
 - e. #John recalled the password radically.
 - f. #How much did you prove the theorem?
 - g. #Mary married Bill up to a point.
 - h. #Fred finished the book somewhat.
 - i. #I got this present less than than Alice did.
 - j. #The box contains the necklace considerably.

The same diagnostic also picks out the class of unbounded quantitative indeterminate NPs that get NP-related partitive case in Finnish:

- (7)
- a. *Unbounded NP predicates:* A lot of bears, a lot of coffee.
 - b. *Bounded NP predicates:* #A lot of bear, #a lot of the bear, #a lot of a bear, #a lot of two bears, #a lot of many bears.

The NP contrast at stake does not correspond exactly to definiteness or to any other familiar determiner feature. Formally indefinite bare plural or mass nouns do not always get assigned partitive case with verbs like “get” or “seek”. They do so only if they have a *quantitatively indeterminate* denotation. The examples in (8) illustrate how even indefinite bare plurals and mass nouns get accusative case if they denote a conventionally delimited set (of known or unknown cardinality).

- (8)
- a. Anu-lla on loistava-t oppilaa-t
Anu-Adess be-3Sg brilliant-PlAcc student-PlAcc
'Anu has brilliant students'
 - b. Anu-lla on loistav-i-a oppila-i-ta
Anu-Adess be-3Sg brilliant-PlPart student-PlPart
'Anu has (some) brilliant students'
 - c. Aki-lla on iso-t silmä-t / viikse-t
Aki-Adess have-3Sg big-PlAcc eyes-PlAcc / mustache-PlAcc
'Aki has big eyes / a mustache'

⁷The imaginative reader will find unbounded construals of some of these verbal predicates. To just that extent, they should also allow degree adverbs in English, and partitive objects in Finnish.

- d. Aki-lla on iso-j-a silm-i-ä / viiksi-ä
 Aki-Adess have-3Sg big-PIPart eyes-PIPart / mustache-PIPart
 ‘Aki has big eyes / mustaches in his possession’
- e. Vauva-lla on pitkä-t hiukse-t
 Baby-Adess have-3Sg long-PlAcc hair-PlAcc
 ‘The/a baby’s hair is long’
- f. Vauva-lla on pitk-i-ä hiuks-i-a
 Baby-Adess have-3Sg long-PIPart hair-PIPart
 ‘The/a baby has (some) long strands of hair’ (on its head, in its hand, etc.)

(8a) means that all of Anu’s students are brilliant, and implicates that everyone in some relevant comparison set has students. (8b) is indeterminate in both these respects.⁸ In [8c], the use of accusative case in effect implies inalienable possession: the eyes must be Aki’s own two eyes and the mustache his own mustache (the latter a *plurale tantum* in Finnish).⁹ In contrast, [8d] suggests an indeterminate number of alienably possessed objects, such as glass eyes or anatomical samples in a vat, false mustaches (of which there must now be several), etc. (8e) refers only to the totality of the baby’s own hair, (8f) could be about part of the baby’s own hair, or about an indeterminate number of loose strands it has in its possession.

Conversely, a singular or definite NP gets the NP-related partitive if it is generic. In (9), ‘this rose’ is partitive because it means “roses of this particular kind”:

- (9) Puutarhuri istutt-i kaikkialle tätä ruusu-a.
 gardener plant-Past3Sg everywhere this-Part rose-Part
 ‘The gardener planted this rose everywhere.’

Summarizing, we can say that an object is partitive either if it governed by one of a class of unbounded verbal predicates (the aspectual condition), or if it is quantitatively indeterminate (the NP-related condition). There has been much dispute among Finnish linguists about the question whether it is possible to unify these conditions. Some claim that the aspectual and NP-related functions of the partitive are fundamentally distinct (Itkonen 1976, Larjavaara 1991). Others argue that unboundedness is the common denominator of both (Heinämäki 1984, Leino 1991). There are probably two reasons why the latter, unified analysis has not been more generally accepted: the lack of a precise definition of the central concept of (un)boundedness, and the fact that there are languages in which the partitive (or another oblique case) has either just the aspectual function or just the NP-related function. In this paper I attempt to overcome both these obstacles, by providing a definition of (un)boundedness that covers the full range of accusative/partitive contrasts in Finnish, and by showing how the difference in the role this feature plays in Finnish and in the other languages can be systematically characterized.

⁸The contrast is approximately that of “Her students are brilliant” vs. “She has some brilliant students”. Another possible English rendering would be “She has a brilliant group of students” vs. “She has a group of brilliant students.”

⁹If we imagine that Aki has more than one head, then [8c] can of course refer collectively to all the pairs of eyes and to all the mustaches which he may have on those heads.

It has been known for a long time that the partitive vs. accusative case contrast in Finnish shares some of its functions with the aspect contrast in Russian and some of the other Slavic languages. In fact, the concept of boundedness (Russian *predel'nost'*) is standard in Slavic aspectology. This parallelism has been emphasized notably by Dahl and Karlsson (1976) and by Dahl (1985). They point out that if either the verb is atelic (does not denote a completed event), or the object is an indefinite bare plural, then Russian in general requires imperfective aspect, and Finnish requires partitive case (see (10a)). Thus, in (10a) perfective aspect (in Russian) and accusative case (in Finnish) require both that the verb is telic, and that the object is plural and definite. The same sentences with imperfective aspect and partitive case, respectively, are 3 ways ambiguous (see (10b)):

- (10) a. On napisa-l (**Perf.**) pis'm-a (Russian)
 He write-PstM3Sg letter-PIAcc
- Hän kirjoitt-i kirje-t (Finnish)
 He/she write-PstM3Sg letter-PIAcc
- 'He wrote the letters' (. . . and left) (telic V, def. NP)
- b. On pisa-l (**Imperf.**) pis'm-a (Russian)
 He write-PstM3Sg letter-PIAcc
- Hän kirjoitt-i kirje-i-tä (Finnish)
 He/she write-PstM3Sg letter-Pl-**Part**
- (1) 'He wrote (some) letters' (. . . and left) (telic V, indef. NP)
 (2) 'He was writing letters (. . . when I came) (atelic V, indef. NP)
 (3) 'He was writing the letters (. . . when I came) (atelic V, def. NP)

The contexts appended in parentheses to the translations show one characteristic use of the aspectual opposition, that of marking progressive versus completed events. However, the opposition marked by object case in Finnish and by aspect in Russian has a much wider range of interpretations, which again are often parallel in the two languages. Consider the example "He opened the window" in (11). The atelic imperfective/partitive version in (11b) can have, in addition to its progressive-type meaning "He was opening the window (. . . as John walked in)", several other senses of temporal delimitation or incompleteness: "He opened the window for a while" (it remained open for a limited time only), or "He opened the window a bit" (it was not fully opened), or "He kept opening the window" (iterative).¹⁰

- (11) a. Russian: On otkry-l (**Perf.**) okno
 He open-PstM3Sg window-Acc
- Finnish: Hän avas-i ikkuna-n
 He open-Past3Sg window-Acc

¹⁰Not *all* these secondary uses of the imperfective in Russian have counterparts in the Finnish partitive, and vice versa; in section 6 below I argue that the verbal or nominal status of the category largely predicts which ones occur.

‘He opened the window’ (in two seconds)

b. Russian: On otkry-va-l (**Imperf.**) okno
He open-Imperf-M3Sg window-Acc

Finnish: Hän avas-i ikkuna-a
He open-Past3Sg window-**Part**

- (1) ‘He was opening the window’ (as John entered)
- (2) ‘He opened the window’ (for a while)
- (3) ‘He opened the window’ (partly)
- (4) ‘He opened the window’ (again and again)

Note that in English “He opened the window some more” allows each of the readings corresponding to (2), (3), and (4).

What ties these aspectual functions of partitive case and imperfective aspect together? And how do they jointly relate to the NP-related function? Before attempting to answer these questions let us take a look at two recent theories of partitive case marking.

3 De Hoop: partitive as weak structural case

In an influential thesis, de Hoop (1992) proposed to resolve the puzzle of the status of the partitive by enriching the typology of structural case. In addition to structural case of the traditionally recognized type, such as accusative case, which she dubbed STRONG structural case, de Hoop proposed a category of WEAK structural case, of which the Finnish partitive is an instantiation. Weak structural cases are default cases, configurationally licensed at D-structure. But (unlike strong structural cases), they are not configurationally licensed by *all* transitive verbs but only by a subclass of them.

Syntactically, weak structural case in de Hoop’s theory is configurationally licensed at D-structure. Its special syntactic property is that it can only be licensed in their basic D-structure position. In consequence, NPs bearing weak structural case do not undergo scrambling (which de Hoop assumes to be A-movement). Semantically, weak structural case has the property that it induces an existential reading on the NP that bears it. According to de Hoop, NPs that bear weak structural case are predicate modifiers, which are assumed to combine semantically with the verbal predicate, restricting its denotation in the manner of adverbial modifiers. NPs that bear strong case, on the other hand, are arguments, interpreted as generalized quantifiers.

De Hoop’s account constitutes a pioneering attempt to connect the syntactic and semantic properties of partitive case in a principled way. However, it does not go far enough. On the semantic side, it posits no intrinsic connection between verb classes and NP properties, thereby leaving the relation between case and aspect unexplained. And on the syntactic side, it glosses over the fundamental differences between the

Finnish partitive case and the other putative instances of “weak” case, such as the Turkish bare accusative, or the Inuit absolutive. These have to do with specificity — not quantitative indeterminacy — and unlike the Finnish partitive have the same distribution in singular and plural NPs. Also, while (according to de Hoop) weak case in those languages blocks scrambling, in Finnish partitive objects can scramble exactly like accusative objects. For example, in (12) the object *karhuja* “(the) bears” and the adverbials *usein* “often”, *Lapissa* “in Lapland”, and *haulikolla* “with the/a shotgun” can be in any of the 24 possible mutual orders, regardless of definiteness and telicity:

- (12) *Matti ampu-u usein Lapi-ssa hauliko-lla karhu-j-a*
 Matti shoot-3Sg often Lapland-Iness shotgun-Adess bear-Pl-**Part**
 ‘Matti often shoots (at) (the) bears with a shotgun in Lapland.’

Thus, although the Finnish partitive is supposed to be the prototypical weak case, it actually does not conform to the alleged syndrome of weak case properties identified by de Hoop.

Other than the false prediction about scrambling, it is not clear what consequences de Hoop’s theory has for the syntax of partitive case in Finnish. Even the basic distribution of the partitive seems to be a problem for it. As explained in section 1, partitive is assigned by any transitive verb to quantitatively indeterminate objects (the NP-related partitive), and by a proper subclass of transitive verbs to any object (the aspectual partitive). De Hoop proposes to account for the former by her principle (p. 90 ff.) that objects bearing strong and weak case have strong and weak readings, respectively (i.e. referential vs. existential readings). But even indefinite NPs with accusative case can have existential readings, so this cannot be the relevant condition for NP-related partitive case. To account for the aspectual function of the partitive, de Hoop proposes that “a partitive object can be regarded primarily as part of a predicate rather than as an independent argument” (p. 98), and that objects of atelic verbs are really predicate modifiers, licensed by weak case at D-structure (p. 111). Short of an account of how predicate modifiers, or NPs with weak case, come by their two interpretations (NP-related and aspectual), this is hardly more than a restatement of the generalization to be explained.

In any case, the idea that partitive objects are predicate modifiers falls afoul of the fact that they can be conjoined with accusative objects. In such structures as (13), it is hard to see how the object in the second conjunct, the partitive ‘books’, could be analyzed as a predicate modifier which restricts the denotation of the verbal predicate ‘buy’, rather than as an argument of it, parallel to the accusative object of the first conjunct, the accusative ‘newspaper’.

- (13) *Ost-i-n lehde-n ja kirjo-j-a.*
 buy-Pst-1Sg newspaper-SgAcc and book-Pl-**Part**
 ‘I bought the/a newspaper and books’

The status of partitive objects as arguments is confirmed by an important generalization of Finnish syntax known as Siro’s Law, which states that a simple clause can

have at most one object.¹¹ This generalization holds regardless of what the case of the object is. However, a clause can have an object (whether accusative or partitive) together with a predicate modifier, in fact with any number of predicate modifiers. Thus, a partitive object is structurally parallel to an accusative object and not structurally parallel to a predicate modifier.

Moreover, partitive objects, like accusative objects, cannot be freely omitted, whereas predicate modifiers can.

- (14) a. *Matti koskett-i kirja-a*
 Matti touch-Pst3Sg book-**Part**
 ‘Matti touched the/a book.’
 b. **Matti koskett-i.*
 Matti touch-Pst3Sg
 ‘Matti touched.’

Partitive objects (like accusative objects) can be subjects of predication, predicate modifiers can’t.

- (15) a. *Käytä-n sohva-a sänky-nä.*
 use-1Sg sofa-Sg**Part** bed-Ess
 ‘I use the sofa as a bed.’
 b. **Nuku-n sohva-lla sänky-nä.*
 sleep-1Sg sofa-Adess bed-Ess
 ‘I sleep on the sofa as a bed’.

Partitive objects antecede bound anaphors under the same conditions as accusative objects. Predicate modifiers never do.

- (16) a. *Ve-i-n vieraa-n huonee-see-nsa.*
 bring-Pst-1Sg guest-Sg**Acc**_i room-*Illat*-3Sg_i
 ‘I brought the guest into his/her room.’
 b. *Ve-i-n viera-i-ta huone-i-sii-nsa.*
 bring-Pst-1Sg guest-Pl-**Part**_i room-Pl-*Illat*-3Pl_i
 ‘I brought guests into their rooms.’
 c. **Roiskut-i-n kylpyhuonee-ssa seinä-lle-en*
 splash-Pst-1Sg bathroom-*Iness*_i wall-SgAll-3Sg_i
 ‘I splashed in the bathroom onto its walls.’

The last two grammatical facts constitute evidence that the Finnish partitive is a structural case. de Hoop indeed recognizes the structural status of the partitive on the basis of the evidence adduced by Vainikka 1993. But the fact that the partitive is a structural case would seem to undermine her claim that the partitive is a predicate modifier. Structurally, partitive objects are completely analogous to accusative objects, and different from adverbial modifiers or oblique objects. The distinction between “weak”

¹¹More generally, a VP can have only one direct argument (see section 7).

and “strong” structural case, and the assignment of NPs bearing “weak” structural case to the category of predicate modifiers, might be expected to have some syntactic consequences. But as far as I can tell, it has none.

I conclude that de Hoop’s theory of case does not account for the distribution or interpretation of partitive case in Finnish. The idea that the partitive is a “weak” structural case does not shed any light on its grammar. It has neither the semantic properties expected on that analysis, nor any syntactic properties that would show that it is anything more or less than a direct object.

4 Krifka: a unified semantics for partitive case

A different perspective on the Finnish partitive is opened up by Krifka 1992. While he does not address the syntactic aspects of the problem, he formulates, for the first time, an explicit semantic analysis which unifies the meanings of partitive case and imperfective aspect (his “progressive”), or at least the meanings of some important uses of them.

The essence of Krifka’s proposal is that partitive case and imperfective aspect are predicate modifiers that mean “part of”:

- (17) 1. PART = $\lambda P \lambda x' \exists x [P(x) \wedge x' \sqsubseteq x]$
 2. PROG = $\lambda P \lambda e' \exists e [P(e) \wedge e' \sqsubseteq e]$

Thus, Part(Pred) and Prog(Pred) denote the set of entities that are parts of entities that have the property Pred.

Krifka shows that, at the VP level, partitive object marking is equivalent to imperfective V marking provided that certain additional conditions hold. First, V must denote a predicate with DIVISIVE REFERENCE:¹²

- (18) P has DIVISIVE REFERENCE iff $\forall x \forall y [P(x) \wedge y \sqsubseteq x \rightarrow P(y)]$

That is, P is closed under the subpart relation. For example, *write* has divisive reference because any part of an event of writing is also an event of writing.¹³

Secondly, the thematic relation R between an object in the denotation of the nominal predicate and an event in the denotation of V must have the properties in (19). This conjunction of properties characterizes verbs of creation (such as *write*) and verbs of consumption and destruction (such as *eat*).

- (19) a. UNIQUENESS OF OBJECTS: $\forall e, x, x' [R(e, x) \wedge R(e, x') \rightarrow x = x']$
 (there can be no two distinct objects which bear R to the same event)

¹²Nominal predicates as well as verbs can have divisive reference or not: for example, *gold* has divisive reference (for any part of gold is also gold), but *the gold* or *a book* does not have divisive reference (for part of the gold is not the gold, and part of a book is not a book).

¹³We set aside here the so-called minimal parts problem, that an event cannot in fact be subdivided ad infinitum.

- b. UNIQUENESS OF EVENTS: $\forall e, e', x[R(e, x) \wedge R(e', x) \rightarrow e = e']$
(there can be no two distinct events which bear R to the same object)
- c. MAPPING TO OBJECTS: $\forall e, e', x[R(e, x) \wedge e' \sqsubseteq e \rightarrow \exists x'[x' \sqsubseteq x \wedge R(e', x')]$
(if an event bears R to an object, any subpart of the event bears R to some subpart of the object)
- d. MAPPING TO EVENTS: $\forall e, x, x'[R(e, x) \wedge x' \sqsubseteq x \rightarrow \exists e'[e' \sqsubseteq e \wedge R(e', x')]$
(if an event bears R to an object, any subpart of the object bears R to some subpart of the event)

In order to get the partitive to yield the progressive reading, Krifka 1992:48 supplements the two mapping properties [19c,d] with an additional assumption which he states as follows:

- (20) If an event bears R to an object, then the whole object is eventually subjected to the event.

This is in fact a problematic assumption, as Krifka himself points out, since “John was writing a letter” (or its counterpart in Finnish) in no way implies that John actually finished writing the whole letter.

An example of a verb that has the properties in (19) is *write*, in the “authorial” sense. It satisfies the uniqueness of objects property [19a]: writing a letter and writing the first line of the letter are different events. It satisfies the uniqueness of events property [19b], provided we assume that you can’t author the same letter twice (whereas you can clearly “write” the same letter twice in other senses, for example, if you are sending the identical message to two people, or if you are a professional copyist).¹⁴ And it clearly satisfies the two mapping properties [19c,d]. Let us furthermore assume that it also satisfies the property [20] (setting aside the abovementioned objection). By Krifka’s theorem it then follows that an event of writing part of an object is part of an event of writing the object, and conversely. The equivalence in (10) is thus a consequence of Krifka’s theory, at least for the verb *write*.

But as Krifka points out, his account does not generalize to other classes of verbs (such as (1), (4), (21)), which lack one or more of the properties in (19). Thus, verbs like *prove* and *buy* do not have divisive reference: part of a proving or buying event is not necessarily itself a proving or buying event. *Kiss*, *touch*, and *shoot at* lack the uniqueness of objects property: kissing Mary and kissing Mary’s lips can be the same event. And all these verbs (as well as such verbs as *want*, *love*, *read*, and *write* in many of its senses) do not have the uniqueness of events property: you can do these

¹⁴In truth, it is even possible to *author* the same letter twice, at least because two texts that you compose could accidentally turn out identical. Thus the uniqueness properties are problematic. However, this may be unimportant because the only role they play in Krifka’s proof (1992:48) is to insure that the subpart relation in (19c) is not trivially satisfied by the case $x' = x$. But presumably the required proper part relation could be obtained by weaker means.

things twice to the same object. Nevertheless, the equivalence between partitive and imperfective is valid for such verbs as well. We have already seen it for “shoot” in (1). It holds for “write”, not just in the authorial sense, but in all senses, as documented in [10]. In general, partitive case can be used in Finnish for objects of numerous verbs, such as “buy”, “eat”, “read”, and it must be used for others, such as “kiss”, which fail to meet one or more of the requisite conditions in [18]-[19], as the examples in (21) attest:

- (21) a. Matti ost-i maito-a (tunni-n)
 Matti-SgNom buy-Pst3Sg milk-Sg**Part** (hour-Acc)
 ‘Matti bought milk (for an hour)’
- b. Matti ost-i maido-n (tunni-ssa)
 Matti-SgNom buy-Pst3Sg milk-Sg**Acc** (hour-Iness)
 ‘Matti bought the milk (in an hour)’
- c. Matti luk-i kirjo-j-a (tunni-n)
 Matti-SgNom read-Pst3Sg book-Pl-**Part** (hour-Acc)
 ‘Matti read books (for an hour)’
- d. Matti luk-i kirja-t (tunni-ssa)
 Matti-SgNom read-Pst3Sg book-Pl-**Part** (hour-Iness)
 ‘Matti read the books (in an hour)’
- e. Anu suutel-i Esa-a / #Esa-n (tunni-n / #tunni-ssa)
 Anu kiss-Pst3Sg Esa-**Part** / #Esa-**Acc** (hour-Acc / hour-Iness)
 ‘Anu kissed Esa (for an hour / #in an hour)’

Krifka (1992, 48) suggests that partitives like those in [21] are analogical extensions of the cases in (10). This could mean several different things, depending on how we understand the ambiguous term “analogy”. What Krifka probably meant is that they are idiosyncratic usages which have arisen historically by analogy to the semantically motivated core cases in [10]. Another view, more consonant with the idea that analogy is structural optimization, including in particular the projection of a grammatical regularity to new cases, would be that the innovations are systematic usages within a new grammar of Finnish that has arisen by a generalization in the rules of case assignment. On this view, the cases in [21] and the cases in (10) are equally regular usages, which would mean that Krifka’s analysis is not correct for the current state of the language (although it might have been for an earlier stage). I believe the Finnish system is an “analogical” innovation only in this latter sense, and will present some evidence in favor of that position in section 8.

Krifka’s analysis represents an idealization which misses some systematic aspects of Finnish partitive case assignment. Nevertheless it is quite illuminating, and indeed comes remarkably close to characterizing the partitive usage of another Finno-Ugric language, which represents an ancestral stage in the evolution of partitive case. In what follows I will first present an alternative account of Finnish, and then (section 8) sketch out the path and causes of its evolution from the original system.

5 Boundedness

We can understand how the nominal category of partitive case can have an aspectual function, and how the verbal category of aspect can have an NP-related function, if we think of them both as licensed by the unboundedness of the VP predicate. This idea is not new. In the Finnish tradition, Leino 1991 has emphasized that boundedness is a property of situations and not just of individual predicates in isolation. Verkuyl 1972 argues explicitly that properties of the direct object influence the aspect of the predicate, and that the opposition between imperfective and perfective aspect is not a matter of the lexical category itself. Instead, aspect is constructed by the combination of the verb and its object (the VP) and subsequently of the VP and its subject. Verkuyl's (1989) categories "terminative" and "durative" are very similar to "bounded" and "unbounded" used here.

As a first approximation, we can say that if a VP denotes an unbounded event, then its object is partitive in Finnish, and its verb is imperfective in Russian, and if it denotes a bounded event, they are accusative and perfective, respectively. In both languages, the VP can have this *semantic* property either in virtue of its head V or in virtue of a nominal dependent. But the *morphological* marking associated with this semantic property is uniformly nominal in Finnish, and uniformly verbal in Russian. For example, by the criterion of boundedness mentioned in the first section, that only unbounded predicates are modifiable by adverbs of degree such as *a lot*, the VP predicates in [22] are unbounded, and the VP predicates in [23] are bounded. In (22a), the unboundedness comes from the verbal predicate *hate* (inducing the "aspectual partitive" in Finnish), and in (22b), the unboundedness comes from the NP predicate *bombs*, with quantitatively indeterminate reference (inducing the "NP-related" partitive in Finnish).

- (22) a. They hated the bombs a lot.
b. They dropped bombs a lot.

In (23), both the verbal predicate nor the NP predicate are bounded, and the partitive

- (23) a. #They dropped the bombs a lot.¹⁵
b. #They dropped many bombs a lot.

The majority of telic verbs, such as those in (24), are bounded, and assign accusative case to their objects (unless, of course, these objects are quantitatively indeterminate, in which case they get the NP-related partitive):

- (24) *ostaa* 'buy', *ottaa* 'take', *pudottaa* 'drop', *suorittaa* 'carry out', *kadottaa*, *menettää*, *hukata* 'lose (possession)', *hävitä* 'lose (game, fight)', *löytää* 'find', *hyväksyä* 'accept', *panna*, *asettaa* 'put', *tappaa* 'kill', *antaa*, *lahjoittaa* 'give', *kaataa* 'fell', *mainita* 'mention', *siepata* 'catch', *omaksua* 'appropriate', *ripustaa* 'hang', *istuttaa* 'plant'.

¹⁵This is fine on an iterative reading, but recall from section 2 that purely temporal unboundedness generally does not suffice for the partitive.

and the majority of atelic verbs, such as those in (25), are unbounded and assign partitive case to all their objects regardless of the latter's type:

- (25) a. Psychological states, attitudes: *halveksia* 'despise', *ihailta* 'admire', *ikävöidä* 'yearn for', *harrastaa* 'be interested in (as a hobby)', *huvittaa* 'amuse', *ikävystyttää* 'bore', *inhota* 'feel revulsion towards', *kadehtia* 'envy', *karttaa* 'avoid', *kehua*, *ylistää* 'praise', *kiinnostaa* 'interest', *kiittää* 'thank', *kunnioittaa* 'honor', *moittaa* 'blame, reprimand', *onnitella* 'congratulate', *pelätä* 'fear', *rakastaa* 'love', *sietää* 'tolerate', *siunata* 'bless', *toivoa* 'hope for', *valittaa* 'complain about', *vihata* 'hate', *väsyttää* 'tire'.
- b. Various intensional verbs: *koettaa*, *yrittää* 'try', *pyytää* 'ask for', *merkitä*, *tarkoittaa* 'mean', *ajatella*, *pohtia* 'think about', *harkita* 'consider', *matkia* 'imitate', *paeta* 'flee', *kysyä* 'ask for'.
- c. Continuous motion or contact: *heiluttaa* 'swing back and forth', *ravistaa* 'shake', *keinuttaa* 'rock', *nyökyttää* 'nod', *suudella* 'kiss', *hyväillä* 'caress', *koskettaa* 'touch', *nussia* 'fuck', *hieroa* 'massage'.

Verbs which take both partitive and accusative objects depending on the VP's boundedness include verbs of creation and destruction (such as those in (26a)), other verbs denoting events whose progress is mapped out into the parts of the object ((26b)), and a number of verbs with different lexical meanings depending on the case of the object ((26c)).

- (26) a. *syödä* 'eat' (partitive: *söi piirakkaa* 'ate pie, some of the pie', accusative: *söi piirakan* 'ate a/the pie'), *leikata* 'cut', *kaivaa* 'dig', *kirjoittaa* 'write'.
- b. *lukea* 'read' (partitive: 'read (at least part of)', accusative: 'read up to some point', usually 'finish reading'), *tutkia* 'investigate', *siirtää* 'move', *sekoittaa* 'mix'.
- c. *lyödä* 'beat' (partitive: 'beat or hit (at) someone', accusative: 'beat someone at something'), *nimittää* 'name' (partitive: 'call (by a name)', accusative: 'nominate'), *muistaa* 'remember' (partitive: 'commemorate', 'remember someone with a gift or greeting on a special occasion', accusative: 'recall').

The following contrasts are telling (Itkonen 1976:180, Hakulinen & Karlsson 1979:225 ff. Leino 1991, Ch. 8,9, Larjavaara 1991):

- (27) a. Muoti lyhensi hameenhelma-a
fashion shorten-Past3Sg hemline-Part
'Fashion shortened the hemline.' [made it shorter]
- b. Muoti lyhensi hameenhelma-n
Fashion shorten-Past3Sg hemline-Acc
[made it short]
- (28) a. Siirsi-n isoäiti-ä
move-Past1Sg grandma-Part
'I moved grandma.' [around, a ways]

- b. Siirsi-n isoäidi-n
 move-Past1Sg grandma-Acc
 ‘I moved grandma.’ [to another place]

Temporal extent (duration or frequency of iteration) suffices to make an intrinsically bounded predicate unbounded; see reading (4) of example (11), or the following contrast:

- (29) a. Matti lainas-i kello-a
 Matti borrow-Past3Sg watch-Part
 ‘Matti borrowed a watch.’ [temporarily]
- b. Matti lainas-i kello-n
 Matti borrow-Past3Sg watch-Acc
 ‘Matti borrowed a watch.’

To summarize: the verbs in [24] take partitive objects just when the NP is quantitatively indeterminate (the ‘NP-related’ partitive). The verbs in [25] take partitive objects regardless of the nature of the object (the ‘aspectual’ partitive). The verbs in [26] work in both ways depending on the meaning, e.g. ‘eat (at) the sausage’ (partitive), ‘eat (up) the sausage’ (accusative). When telic, the verbs in [26] work like the verbs in [24], such as ‘kill’ (their object is accusative unless it is an indefinite bare plural or mass noun). When atelic, the verbs in [26] work like the verbs in [25], such as ‘touch’ (their object is partitive regardless of its inherent properties).

Although telicity (or resultativity) by and large correlates with boundedness, it is not exactly the right semantic criterion for characterizing the conditions under which objects are accusative. There is both a class of bounded atelic verbs whose object is accusative (unless it is quantitatively indeterminate), and a class of unbounded telic (resultative) verbs whose object is partitive regardless of the NP’s nature.

With verbs of the first class, the partitive shows only its NP-related side, in spite of their atelic character. Itkonen 1976 calls such verbs “quasi-resultative”:

- (30) *omistaa* ‘own’, *sisältää* ‘contain’, *käsittää* ‘comprise’, *muistaa* ‘remember’, *tietää* ‘know’ (‘savoir’), *tuntea* ‘know’ (‘connaître’), *ymmärtää* ‘understand’ (something), *myöntää* ‘acknowledge’, *katsoa* ‘regard, consider’, *oivaltaa* ‘realize’, *uskoa* ‘believe’ (something), and such perception verbs as *nähdä* ‘see’, *kuulla* ‘hear’, *huomata*, *havaita*, *keksiä* ‘notice’.¹⁶
- (31) a. Omist-i-t nämä talo-t vuode-n (*vuode-ssa).
 Own-2Sg theseAcc house-PlAcc year-Acc (year-Iness)
 ‘You owned these houses for a year (*in a year).’
- b. Omista-t talo-j-a.
 Own-2Sg house-Pl-Part.
 ‘You own houses.’

¹⁶Many of these verbs take partitive objects in related uses, eg. *ymmärtää* ‘understand someone’, *uskoa* ‘believe someone’ *katsoa* ‘look at’, and of course all of them take partitive objects when the object is unbounded, e.g. *laatikko sisältää suklaata* (Partitive) ‘the box contains chocolate’.

- c. Näe-n häne-t.
See-1Sg himAcc
'I see him/her.'
- d. Näe-n hän-tä.
See-1Sg himPart
'I'm seeing him/her, I see a bit of him/her.'

And conversely, some telic verbs take partitive objects, irrespectively of the object's NP level properties. E.g. *rangaista* "punish", denoting what would appear to be a telic event¹⁷ take partitive objects just as "love" and "touch" do, as would be expected given that they occur freely with degree adverbs:

- (32) Rankais-i-t he-i-tä.
insult-Past-2Sg they-Pl-Part
'You punished them.'

Leino 1991:166 ff. proposes the generalization that verbs denoting states take accusative objects. This covers the quasi-resultatives in (30), which include verbs denoting relations like "own", "contain" and verbs of knowing and perceiving. But it wrongly extends to verbs of emotion, which take partitive objects (see (25)). Leino suggests that Finnish treats emotions as atelic activities rather than as states. This could not be a peculiarity of Finnish, for on the standard tests (e.g. Dowty 1979, Ch. 2) these verbs behave exactly as do their English counterparts.¹⁸ The distinction is however consonant with gradability, in that one can hate, admire, and fear something more or less, whereas one normally either owns, contains, knows, or sees something or not.¹⁹

- (33) a. Trump likes New York a lot.
b. Fred admires Mary very much.
- (34) a. #Trump owns New York a lot.
b. #John knows Mary very much.

To capture the notion of unboundedness for verbal and nominal predicates, we use the properties of DIVISIVENESS and CUMULATIVITY, redefined as in (36a,b), and DIVERSITY:

- (35) a. P is DIVISIVE iff $\forall x[P(x) \wedge \neg atom(x) \rightarrow \exists y[y \sqsubset x \wedge P(y)]]$
b. P is CUMULATIVE iff $\forall x[P(x) \wedge \neg sup(x, P) \rightarrow \exists y[x \sqsubset y \wedge P(y)]]$
c. P is DIVERSE iff $\forall x \forall y[P(x) \wedge P(y) \wedge x \neq y \rightarrow \neg x \sqsubset y \wedge \neg y \sqsubset x]$

¹⁷It passed the standard accomplishment diagnostics: *John punished the child in an hour, John finished punishing the child.*

¹⁸For example, verbs like "hate", "admire", "fear" do not felicitously combine with agentive adverbials such as "carefully", or embed under verbs like "force" in Finnish any more than they do in English.

¹⁹Of course, one may own, contain, know, or see larger or smaller *parts* of something, which simply means that these verbs can take NP-related partitive objects. And in so far as as these states *are* matter of degree, the verbs denoting them do allow partitive, cf. (31d).

(36) A predicate P is UNBOUNDED iff it is divisive and cumulative and not diverse.

In (36a,b) the requirement that x not be the maximal element (the supremum) or a minimal (atomic) element ensures that, for example, an event of painting a house may be unbounded (with the object *house* in the partitive) even if the whole house or the smallest part of it was in fact painted.²⁰ The diversity condition (36c) ensures that predicates that have *only* atomic elements (such as *Fred*), and predicates none of whose elements are related to each other by the subpart relation are bounded (even though they satisfy (36a,b)).

The definition in (36) characterizes quantitatively indeterminate plurals and mass nouns as unbounded. Quantitatively indeterminate count nouns and indefinite nouns with a cardinality predicate are bounded. Certain morphological elements affect the boundedness of verbal predicates by changing their quantitative determination. In English, the particle *at* makes unbounded predicates, and Finnish suffixes such as *-ais-* and Russian prefixes such as *po-* make bounded predicates.

(37) a. Unbounded predicates:

bombs, food, shoot at, look for, touch, love, want, contemplate, doubt, use, expect, protect

b. Bounded predicates:

a. *few bombs, a little food*, Russian *poplačet'* 'to cry for a while', *počítát'* 'to read a bit of', Finnish *lukaista* 'to read (something) in a short time' (condition (36a) is met but not condition (36b))

b. *many bombs, a lot of food*, Russian *načítát'* 'to read a lot of' (condition (36b) is met but not condition (36a))

c. *a bomb, two bombs, the food, drop, find, kill, lose, marry, own, break, solve, remember, finish, present, contain, own, finish, get*, Russian *probolét'* 'to be ill for a certain amount of time' (perfective!) (neither condition (36a) nor condition (36b) is met)

The unboundedness of a VP predicate is compositionally determined from the unboundedness of its constituents as follows:

(38) A VP predicate is unbounded if it has either an unbounded head, or a unbounded argument.

Presumably this should follow from a compositional system of interpretation, perhaps along the lines of Verkuyl 1972, 1989.

Here are the examples of (22) and (23) again, with the unboundedness of the lexical predicates shown ([−B] = unbounded, [+B] = bounded). Unbounded VP predicates have an unbounded head or object:

(39) a. They hated (−B) the bombs (+B).

²⁰Because the accusative object would imply that the whole house was painted, the use of the partitive carries a defeasible implicature that only part of the house was painted.

- b. They dropped (+B) bombs (-B).

Bounded VP predicates have neither:

- (40) a. They dropped (+B) the bombs (+B).
 b. They dropped (+B) many bombs (+B).

In (39a), the VP predicate is unbounded because its head V *hated* is unbounded, and in (39b) the VP predicate is unbounded because its object NP is unbounded. In (40), on the other hand, neither the head nor the internal argument are unbounded, so the VP is not unbounded.

We can now unify the aspectual and NP-related functions of the Finnish partitive by the following descriptive generalization:

- (41) The object of an unbounded VP is obligatorily partitive.

[38] and [41] together account for the two main conditions for partitive case discussed above, namely that an object is either a quantitatively indeterminate NP (an unbounded nominal predicate), or governed by an atelic verb (an unbounded verbal predicate). If the verb is unbounded, its object must be partitive whether the object is unbounded or bounded. E.g. *touched the/a flower* (part.sg.), *touched (the) flowers* (part.pl.). A partitive object is ungrammatical if the VP is bounded, and an accusative object is ungrammatical if the VP is unbounded. A rule equivalent to (41) applies (together with others) to license imperfective aspect in Russian.

Verbs which are aspectually ambiguous can be treated as unspecified for boundedness; once their boundedness is fixed they are treated in exactly the same way as the aspectually unambiguous verbs in (22a) and (22b); see (1) and (10). Table [42] illustrates this for the Finnish and Russian examples in (10), with the progressive again serving as an (inadequate) shorthand gloss for the entire range of atelic verbal meanings:

- (42)

	[+B] object	[-B] object
[+B] verb (telic)	napisal (perf.) pis'ma kirjoitti kirjeet (Acc.) 'wrote the letters'	pisal (Impf.) pis'ma kirjoitti kirjeitä (Part.) 'wrote letters'
[-B] verb (atelic)	pisal (Impf.) pis'ma kirjoitti kirjeitä (Part.) 'was writing the letters'	pisal (Impf.) pis'ma kirjoitti kirjeitä (Part.) 'was writing letters'

The special cases in [8] also follow from the rule stated in (41); the Finnish accusative/partitive contrast here reflects a semantic distinction between bounded and unbounded reference which in this case is not overtly expressed in English. Suppose that "eyes" in the inalienably possessed sense (e.g. the eyes in my face) is implicitly quantified, perhaps meaning something like "pair of eyes", even though it is formally a bare plural. Then the expression in this sense is bounded, and receives accusative case. In the alienable sense (anatomical samples, glass eyes) the expression is a normal

bare plural, and therefore unbounded. (Note that only in the latter sense is it possible to say *John has some more eyes*, cf. (5) ff.) This shows how the distribution of partitive versus accusative case on the object depends on boundedness, rather than on the morphological features of definiteness and number, or on the presence or absence of an overt quantifier.

The same point can be made for imperfective aspect, one of whose functions is to mark unboundedness at the level of the VP. Consider the abovementioned verbal predicates such as *poplačet'* 'to cry for a while', *počítát'* 'to read a bit of', *načítát'* 'to read a lot of' *probolét'* 'to be ill for a certain amount of time' (see (37)). These verbs are [+B] themselves, and they impose a quantified reading on their complement, which makes it [+B], even if it is morphologically an indefinite bare plural. The resulting VP is therefore [+B] and requires perfective morphology. For example, in the Russian sentence

- (43) nabrali (+B) grybov (+B)
 Pref-gather-PAST-3Pl (Perf) mushrooms-GenPl
 'they picked a lot of mushrooms' (Forsyth 1970:22)

the verbal prefix *na-* combines semantically with the bare plural object *grybov* "mushrooms" ([-B] by itself) to make a quantified (and therefore [+B]) expression "a lot of mushrooms".

The object of a VP complement governed by an unbounded verb is optionally partitive. For example, when "try" and "begin" take a VP complement containing a bounded verb, the object of that verb is optionally partitive:

- (44) a. Matti koett-i tappa-a karhu-n
 Matti try-Pst-3Sg kill-Inf bear-SgAcc
 'Matti tried to kill a/the bear'
 b. Matti koett-i tappa-a karhu-a
 Matti try-Pst-3Sg kill-Inf bear-SgPart
 'Matti tried to kill a/the bear'

This case variation can be obtained by assigning case either at the level of the lower VP or at the level of the higher VP. The lower VP 'kill the bear' is bounded (cf. **kill the bear some more*), if the case rule (41) applies to it the object gets accusative case; the higher VP 'try to kill the bear' is bounded (cf. *try some more to kill the bear*), if the case rule applies to it it assigns partitive case to the object.

Negated verbs assign partitive case to their objects obligatorily (see (45a)), and optionally to certain measure phrases (adverbials of time and extent) which are otherwise accusative (see (45b,c)).

- (45) a. Matti e-i myy-nyt talo-a (#talo-n).
 Matti-SgNom not-3Sg sell-PstPart house-SgPart (house-SgAcc)
 'Matti didn't sell the/a house'

- b. Matti odott-i #tunti-a (tunni-n)
 Matti-SgNom wait-Pst-3Sg hour-Sg**Part** (hour-SgAcc)
 ‘Matti waited an hour’
- c. Matti e-i odotta-nut tunti-a (tunni-n)
 Matti-SgNom not-3Sg wait-PstPrtc hour-Sg**Part** (hour-SgAcc)
 ‘Matti didn’t wait an hour’

The case change “goes down” arbitrarily far into nonfinite complements:

- (46) a. Aki sa-i Jari-n pakotta-ma-an Sake-n lukema-an kirja-n
 Aki(Nom) get-Past(3Sg) Jari-Acc force-Inf-III Sake-Acc read-Inf-III book-Acc
 (loppu-un)
 (end-III)
 ‘Aki got Jari to force Sake read the book (through).’
- b. Aki e-i saa-nut Jari-a pakotta-ma-an Sake-a lukema-an
 Aki(Nom) not-3Sg get-PP Jari-**Part** force-Inf-III Sake-**Part** read-Inf-III
 kirja-a (loppu-un)
 book-**Part** (end-III)
 ‘Aki didn’t get Jari to force Sake to read the book (through).’

It is not only overt negation that selects partitive case. Like a negative polarity item, partitive case can appear in implicitly negative contexts. For example, a speaker expecting a negative answer, or trying to be polite, might prefer (47b) to (47a).

- (47) a. On-ko sinu-lla kynä?
 Be-Q you-Adess pencil-**Nom**
 ‘Do you have a pencil?’
- b. On-ko sinu-lla kynä-ä?
 Be-Q you-Adess pencil-**Part**
 ‘Do you have a pencil?’

6 Coercion

Both partitive and imperfective morphology can mark different semantic variants of unboundedness. Although these run parallel in Finnish and Russian in many cases (recall the discussion around (11)) this is not always the case. Differences in how languages interpret unboundedness result from different *coercion* of bounded expressions into unbounded expressions and vice versa.

We have seen that expressions denoting bounded nonpunctual events (accomplishments such as *shoot the bear*) have unbounded counterparts that denote processes constituting such events (such as *shoot at the bear*). Punctual events (achievements, such as *drop the ball*) are atomic (i.e., not constituted by processes, Piñon 1995, p. 91), so their unbounded counterparts cannot denote such processes. They can, however, denote processes that are *composed* of punctual events. With imperfective aspect or partitive

case on the object, *drop the ball* can thus denote a process of repeated ball-droppings, i.e. an iterative:

- (48) Taitamaton koripalloilija pudott-i jatkuvasti pallo-a.
 unskilled basketball player drop-Past3Sg continually ball-**Part**
 ‘The unskilled basketball player kept dropping the ball.’

Similarly, an intrinsically bounded predicate can get a secondary durative interpretation, as an ongoing activity, again with partitive case on the object:

- (49) a. Tapo-i-n juuri karhu-a.
 kill-Pst1Sg just bear-**Part**
 ‘I was just killing the bear.’
 b. Matti ost-i (juuri) auto-a, (kun...)
 Matti buy-Pst3Sg (just) car-Sg**Part**, (when...)
 ‘Matti was (just) buying a car, (when...)’

In addition to the iterative and durative interpretations, basically bounded predicates can get a range of other unbounded interpretations, depending on whether the language expresses VP unboundedness by aspectual morphology on the verb or by case morphology on the object. The generalization seems to be as follows:

- (50) a. Aspect can coerce shifts in the lexical meanings of verbs.
 b. Case can coerce shifts in the lexical meanings of nouns.

An example of aspectual coercion in the lexical meaning of verbs is that the Russian imperfective *vyigryvat*, like the English progressive *be winning*, can denote (in addition to a sequence of winning events, i.e. the iterative meaning) a progressive state of a process that *precedes* the punctual event of winning, i.e. “be ahead”. Partitive case in Finnish does not induce this meaning: in a VP headed by the corresponding verb *voittaa* “win”, a partitive object cannot coerce the meaning “be ahead”; Finnish requires the progressive verb construction in (51b) “be (in the process of) winning” to convey it.

- (51) a. #Matti voitt-i kilpajuoksu-a.
 Matti win-Past3Sg race-**Part**
 ‘Matti was winning the race.’
 b. Matti ol-i voitta-ma-ssa kilpajuoksu-a.
 Matti was win-Prtppl-Iness race-**Part**
 ‘Matti was winning the race.’

Another interpretation of imperfectivized punctual telic predicates in Russian, unavailable in English, is *conative* (“try”):

- (52) a. On da-va-l (**Impf.**) mne den’gi, a ja ne vzja-l (**Perf.**)
 He give-Pst3SgM me money, but I not take-Pst3SgM
 ‘He was trying to give me money, but I refused.’ (Leinonen 1984)

- b. Ja vas obman-yva-l (**Impf.**), no mog li obman-u-t' (**Perf**)?
 I you deceive-Pst3SgM, but could-Pst3SgM Q deceive-Inf
 'I tried to deceive you, but could I deceive you?' (Unbegaun 1969)

The conative shades into a variety of other related nuances of incomplete action:

- (53) a. Čto že delal Bel'tov v prodolženie ètix desjati let? Vše ili
 What so did-InfPstM B. in course these ten years? Everything, or
 počti vše. Čto on sdelal? Ničego, ili počti ničego.
 almost everything. What he did-PrfPstM? Nothing, or almost nothing
 'So what did B. do in the course of these ten years? Everything, or al-
 most everything. What did he accomplish? Nothing, or almost nothing.'
 (Forsyth 1970:71)
- b. Kolumb by-l sčastliv ne togda, kogda otkry-l **Prf** Amerik-u, a
 Columbus be-PstM happy not then, when discover-InfPstM America-Acc, but
 kogda otkry-va-l (**Impf**) eë
 when discover-PstM it-Acc
 'Columbus was happy not when he discovered America, but when he was
 about to discover it (in the process of discovering it)' (Unbegaun 1969)

Further, in the past tense the Russian imperfective can also be used to assert the occurrence of a past event, with currently relevant consequences. For example, *On pisa-l pis'm-a* (imperfective) could have roughly the sense of English "He has written the letter (already)". This is the "simple denotation" or "statement of fact" meaning (Forsyth 1970:82, Smith 1991:312).

Such aspectual/temporal meaning shifts induced on verbs by imperfective aspect in Russian have no counterparts in the aspectual use of the Finnish partitive. In Finnish, on the other hand, the accusative/partitive opposition is exploited to yield a range of special NP-related interpretations, which in turn cannot be replicated by aspect in Russian.

Thus, partitive case can coerce a count noun into a mass noun, which is not possible in Russian, in spite of the fact that the distinction between perfective and imperfective aspect can effectively mark the definiteness of NP objects in cases like [10] (Larjavaara 1991:382):²¹

- (54) Sitä käsikirjoitusta oli sāngy-n alla-kin
 That-Part manuscript-Part be-Past3Sg bed-Gen under-even
 '(Parts of) that manuscript were even under the bed.'

A pervasive phenomenon is the coercion of a telic meaning. Boundedness in Finnish can be licensed by resultativity through explicit or implicit locative or resultative predication. For example, *potkaista* "kick" takes a partitive object in the meaning

²¹Larjavaara notes that the corresponding usage is impossible with the Latvian genitive, which otherwise has functions similar to that of the Finnish partitive (bare plural and mass noun objects and objects under negation), or with the French *de*-partitive construction. The Russian partitive (second genitive) also cannot be used in this way.

“kick at”, and an accusative object when a directional complement is added, or even implied. In (55b), the verb “rub”, atelic in (55a), takes an accusative object licensed by the (explicit or implicit) resultative predicate. A particularly creative usage of this kind are (55j), where the atelic intransitive “love” is construed as resultative.²²

- (55) a. Hiero-i-n si-tä
 rub-Pst-1Sg it-**Part**
 ‘I rubbed it’
- b. Hiero-i-n sen pehmeä-ksi
 rub-Pst-1Sg it-**Acc** soft-SgTrnsl
 ‘I kneaded it soft’
- c. Ravist-i-n mato-n (#käde-n)
 shake-Pst-1Sg carpet-Sg**Acc** (hand-Sg**Acc**)
 ‘I shook (out) the carpet (my hand)’
- d. Äiti makas-i lapse-nsa kuoliaa-ksi
 mother-SgN lie-Pst-3Sg child-Sg**Acc**-3Sg dead-SgTrnsl
 ‘The mother lay her child dead (i.e. killed it by lying on top of it)’
- e. Jussi maalas-i talo-n (punaise-ksi)
 Jussi(NOM) paint-Pst3Sg house-**Acc** (red-Transl)
 ‘Jussi painted the (a) [whole] house (red)’
- f. Jussi maalas-i talo-a (punaise-ksi)
 Jussi(NOM) paint-PAST(3SG) house-**Part** (red-Transl)
 ‘Jussi was painting the (a) house (red)’
- g. Luin kirja-n (loppu-un) / (repale-i-ksi)
 read-PAST-1SG book-**Acc** (end-Illat) / (shred-Pl-Transl)
 ‘I read the book (to the end) / (to shreds)’
- h. Luin kirja-a
 read-Pst-1sg book-**Part**
 ‘I was reading the book.’
- i. Rakast-i-n tei-tä
 love-Pst-1Sg you-Pl**Part**
 ‘I loved you’
- j. Rakast-i-n te-i-dä-t rappio-lle
 love-Pst-1Sg you-Pl**Acc** ruin-Adess
 ‘I loved you into ruin’ (Eino Leino)

The upshot is that the aspectual use of partitive case in Finnish, while certainly forming one of its two core functions, is not as richly elaborated as that of the verbal category of aspect in Russian. Conversely, the NP-related use of aspect in Russian is not as richly elaborated as that of the nominal category of case in Finnish. The generalization seems to be that a morphological feature induces extended interpretations on the category on which it is marked.

²²It is a quote from the poet Eino Leino. Example [55c] is from Leino (1991). (55d) is a standard example which appears in Finnish grammars from Setälä 1884 onwards.

If the language possesses corresponding overt morphological distinctions, these extended interpretations will not develop, presumably in consequence of the principle that specific morphological elements block general morphological elements in the overlapping domain. For example, in modern Greek, imperfective aspect seems to have no NP-related function at all, the distinctions in question being expressed directly by means of the choice of the definite or indefinite article, which Russian lacks. Thus, corresponding to the two sentences in [10], of which the second is three ways ambiguous, Greek has the four unambiguous sentences in (56).

- (56)
- | | | |
|----|--|----------------------|
| a. | eγrap-s-e (Perf.) ta γrama-ta
write-Pst.3Sg the letter-PIAcc
'He wrote the letters' (... and left) | (telic V, def. NP) |
| b. | eγrap-s-e (Perf.) (merika) γrama-ta
write-Pst.3Sg (some) letter-PIAcc
'He wrote (some) letters' (... and left) | (telic V, indef. NP) |
| c. | eγraf-e (Imperf.) ta γrama-ta
write-Pst.3Sg the letter-PIAcc
'He was writing the letters (... when I came) | (atelic V, def. NP) |
| d. | eγraf-e (Imperf.) γrama-ta
write-Pst.3Sg letter-PIAcc
'He was writing letters (... when I came) | (telic V, indef. NP) |

Morphological economy (No Vacuous Affixation, Marantz 1984) would preclude redundant aspectual marking by partitive case, and redundant marking of NP-related functions by aspect. In fact, when [-B] is morphologically marked on the verb in Finnish, the object need not be partitive. Thus, frequentative verbs can take accusative objects in Finnish. Even though the VP is [-B] in virtue of the frequentative verb, that feature is licensed by the verbal affix and therefore need not be licensed by the partitive. In this context, the partitive/accusative case-marking distinction reverts to its purely NP-related function:

- (57) Lue-skel-i-n sen kirja-n (loppu-un)
read-freq-Past-1Sg that-Acc book-Acc (end-III)
'I read that book off and on (through).'

By the same token, we would expect that in cases where [-B] is morphologically marked on the noun, the Russian perfective/imperfective distinction would revert to its purely aspectual function. Russian confirms this prediction, but with a curious twist. The evidence comes from the quantificational genitive, a case mostly used with mass nouns, which in certain paradigms is morphologically distinct from the regular genitive. This so-called "second genitive" case has been argued to be a partitive case (Jakobson 1936, Neidle 1988, Franks 1995). Thus Russian has, under certain conditions, two morphological means of marking [-B] at its disposal: imperfective aspect for aspectual functions, and partitive case for NP-related functions. And indeed, in just those cases where the nominal [-B] feature can be marked by partitive case, the verb

appears in the perfective aspect, rather than in the imperfective, as it would with an accusative object (Klenin 1978). The pattern, as I have been able to reconstruct it from the cited discussions, is shown in (58), with the tabular display in (59); these should be respectively contrasted with (10) and with (42), illustrating the pattern without partitive case.

- (58) a. On kupi-l (**Perf.**) čaj (**Acc**)
 He/she buy-PstM3Sg tea-Acc
 ‘He bought the tea’ (... and left) (telic, def.)
- b. On kupi-l (**Imperf.**) čaj-u (**Part**)
 He/she buy-PstM3Sg tea-Part
 ‘He bought (some) tea’ (... and left) (telic, indef.)
- c. On kupi-l (**Imperf.**) čaj (**Acc**)
 He/she buy-PstM3Sg tea-Acc
 (1) ‘He was buying tea (... when I came) (atelic, indef.)
 (2) ‘He was buying the tea (... when I came) (atelic, def.)

(59)

	[+B] object	[-B] object
[+B] verb (telic)	kupil (perf.) čaj (acc.)	kupil (perf.) čaj+u (part.)
[-B] verb (atelic)	pokupal (impf.) čaj (acc.)	

The unexpected wrinkle, however, is that partitive case normally appears just on objects of perfective verbs, not on objects of imperfective verbs (Dahl and Karlsson 1976:44, Klenin 1978).²³ We might have expected the partitive/accusative distinction to be fully exploited to yield a four-way paradigm where unbounded reference in the nominal and verbal domain are separately marked.

The generalization in (50) seems to be confirmed by aspectually interpreted case alternations of Warlpiri and several Polynesian languages.

In Warlpiri, a class of verbs have absolutive (i.e. nominative) objects when they denote a telic event, and dative objects otherwise, in what has been dubbed the conative construction (Hale 1982, Laughren 1988, Simpson 1991):

- (60) a. Ngarrka-ngku ka marlu luwa-rni
 man-Erg Pres kangaroo(Nom) shoot-Nonpast
 ‘The man is shooting the kangaroo’
- b. Ngarrka-ngku ka-rla-jinta marlu-ku luwa-rni
 man-Erg Pres-rla-jinta kangaroo-Dat shoot-Nonpast
 ‘The man is shooting at the kangaroo’

The conative alternation is found with verbs of impact (“strike”, “chop”, “carve”, “cut”, “dig”, “pierce”, “grind”) and with perception verbs (“see” vs. “look for”). There is also a class of verbs with an *inherent* Ergative-Dative case frame and with the expected atelic meaning (“seek, dig for”). This indicates that the meaning should be

²³Except that, mysteriously, imperfective verbs seem to behave like perfectives under negation.

associated with the case frame itself, rather than with a putative derivational process. It seems that this case alternation should be analyzed along the lines of the Finnish partitive/accusative alternation, rather than as a lexical rule²⁴ (Laughren 1988) or by a transformational process in the syntax (Bittner and Hale 1993).²⁵

Tongan and Samoan ‘middle verbs’ (‘describing an event which does not affect the direct object immediately’) mark their objects with a dative prefix (Chung 1978, 47 ff., 216 ff.). They include perception verbs (‘see’, ‘listen to’), verbs of emotion and other psychological states (‘love’, ‘want’, ‘understand’), verbs normally selecting animate direct objects, including some communication verbs (‘meet with’, ‘help’, ‘call’), and verbs such as ‘follow’, ‘wait for’, and ‘visit’.

- (62) a. Na’e taa’i ’e Mele ’a Sione.
 Past hit Erg Mary Abs John
 ‘Mary hit John.’
- b. ’Oku manako ia ’i he ta’ahiné.
 Prog like he at the girl.
 ‘He likes the girl.’ Tongan (Chung 1978, 53-54)

Like the Warlpiri conative, the Tongan middle is transitive, and the dative objects in this construction are syntactically full-fledged direct objects, undergoing processes which are restricted to direct objects (incorporation and passivization), or to direct arguments (quantifier float), and that a number of constraints valid for transitive clauses apply to middle clauses as well (Chung, p. 216-234). Chung argues on this basis that

²⁴Laughren proposes that the conative form of the verb (the atelic one, which takes a dative object) is derived by the following rule:

(61) (x produce effect on y) by ((entity come into contact with y) by (x manipulate entity)) → ((x manipulate entity) in order that (entity come into contact with y)) in order that (x produce effect on y).

This rule could be contested on several grounds. First, the conative alternation is not associated with an affix on the verb. (Conceivably it could be one the suffixes on the auxiliary. However, that seems doubtful, as neither of them seems to be special to the conative construction. *-rla* “registers” the presence of any dative object whatever, while *-jinta* marks a third singular dative object (Hale 1982).) We would either have to assume a “spontaneous” lexical derivational process, or postulate a triggering morpheme which is always null (cf. Pesetsky 1995). Secondly, by erasing/respecifying information in lexical conceptual structure, the derivational process in [61] violates a basic property of monotonicity that can otherwise be maintained for lexical processes. In general, derivational rules either add predicates or features to the base (e.g. causatives, diminutives), or specify the way the arguments are syntactically expressed (e.g. passives, antipassives). The proposed lexical rule would not do either of these things. Third, the rule does not express any intrinsic relation between the conative meaning of the “derived” verb and the dative case that it governs.

²⁵Bittner and Hale take the conative construction [60b] to be an antipassive, i.e. an instance of the process usually analyzed as demotion of the direct object. The absence of a morphological trigger is if anything even more of a problem for the antipassive account than it is for the lexical rule account, because “relation-changing” processes almost always depend on diathesis-changing verbal affixes, indeed, as far as I know there are *no* cases of systematic “spontaneous” antipassivization. Moreover, the Warlpiri conative construction is transitive. (The evidence includes the following: (1) the subject bears ergative case, (2) there is object agreement in the AUX (see [60b]), and (3) the dative object can control *-kurra* clauses, which must have an object controller.) But transitive antipassives are otherwise unattested in languages; their absence follows from a principled theory of valency change (demotion and addition of arguments as the only mechanisms).

these ‘middle’ verbs are not antipassives, and proposes a rule which assigns dative case to the object.

The translational equivalents of all Warlpiri conative verbs mentioned by Laughren, Hale, and Simpson, of all Tongan middle verbs listed by Chung (e.g. [62]), take partitive objects in Finnish (with the exception that perception verbs like ‘see’ take accusative objects in Finnish). The converse, of course, is not true: partitive objects are used much more widely in Finnish.

It seems clear that the Warlpiri conative and Tongan middle case alternations are essentially aspectual, and akin to the Finnish partitive/accusative alternation. However, no analog to the Finnish NP-related function of partitive case is reported for these languages, seemingly contradicting (50b).

But in both languages, the NP-related function of the case alternation is arguably *blocked* by explicit morphology, as discussed above. This is clearest in Tongan, where definiteness is morphologically marked by the article *he*. Thus Tongan would be like the Greek case mentioned above under (56). As for Warlpiri, it has a special definite plural suffix *-patu* (Nash 1980:167). This suffix would presumably make the definiteness distinction corresponding to (56a,c) vs. (56b,d).²⁶ Nevertheless, it is not clear to me why the conative case opposition should not distinguish between definite and indefinite readings of singular mass nouns in Warlpiri.²⁷

The material discussed in this section suggests that coercion is in most cases a local accommodation of a V or NP to the respective morphology that it bears (generalization (50)). In this way it differs from the basic determination of boundedness, which is done at the VP level as discussed in earlier sections.

7 Partitive subjects

In addition to partitive objects, Finnish also has what are traditionally called partitive subjects. They show only the NP-related function of partitive case, never the aspectual function. Thus, only bare indefinite plurals and mass nouns can be partitive subjects:²⁸

- (63) a. Karhu kuol-i
 bear-Sg**Nom** die-Pst-3Sg
 ‘The bear died’
 b. #Karhu-a kuol-i
 bear-Sg**Part** die-Pst-3Sg

²⁶Thanks to Mary Laughren and David Nash for pointing out this crucial fact.

²⁷The Scottish Gaelic system studied by Ramchand (1993) is also interesting in this respect. Ramchand argues that Scottish Gaelic uses genitive case to mark both an indefinite object, and a definite postverbal object of an irresultative verb. The genitive thus determines the interpretation of the VP as in Finnish. Unlike Finnish, however, Scottish Gaelic has a morphological distinction between definites and indefinites.

²⁸Allowing again for coercion, as in (54).

- c. Karhu-t kuol-i-vat
bear-PlNom die-Pst-3Pl
'The bears died'
- d. Karhu-j-a kuol-i
bear-PlPart die-Pst-3Sg
'Bears died'

Partitive subjects can be either preverbal or postverbal. Their basic position is VP-internal. They only occur with intransitive verbs (see (64a)), and only with the subclass of so-called PRESENTATIONAL VERBS (EXISTENTIAL VERBS, in the traditional terminology of Finnish grammarians). Thus, “play” (see (64b,c)) is a presentational verb, but “smile” (see (64d,e)) is not a presentational verb.²⁹

- (64) a. #Karhu-j-a sö-i hunaja-a
bear-Pl-Part eat-PAST-3Sg honey-SgPart
'There were bears eating honey' (transitive verb)
- b. Piha-lla leikki-i laps-i-a
courtyard-Adess play-3Sg child-Pl-Part
'There are children playing in the courtyard'
- c. Laps-i-a leikki-i piha-lla
child-Pl-Part play-3Sg courtyard-Adess
'There are children playing in the courtyard'
- d. #Piha-lla hymyile-e laps-i-a
courtyard-Adess smile-3Sg child-Pl-Part
'There are children smiling in the courtyard'
- e. #Laps-i-a hymyile-e piha-lla
child-Pl-Part smile-3Sg courtyard-Adess
'There are children smiling in the courtyard'

Examples of presentational intransitive verbs are listed in (65). All these verbs allow partitive subjects, regardless of whether they are bounded, as in (65a), unbounded, as in (65b), or bounded/unbounded, as in (65c).

- (65) a. [+B]: *kuolla* 'die', *syntyä* 'be born', *ilmaantua* 'appear', *karata* 'escape (run away)', *tunkeutua* 'intrude', *pelastua* 'escape, be saved', *luhistua*, *sortua* 'collapse', *syttyä* 'catch fire', *välähtää* 'flash', *kuoriutua* 'hatch', *hukkua* 'drown', *haaraantua* 'branch', *ehä* 'get (somewhere) on time', *lohjeta*, *katketa* 'break off', *nääntyä* 'die from deprivation', *takertua* 'get stuck', *särkyä* 'break', *pysähtyä* 'stop', *tarttua* 'stick'.
- b. [-B]: *asua* 'dwell', *kasvaa* 'grow', *kiehua* 'boil', *kilpailla* 'compete', *kokoon-tua* 'gather', *lymyillä*, *piillä* 'lurk', *mahtua* 'fit', *opiskella* 'study', *leikkiä* 'play', *riittää* 'suffice', *seistä* 'stand', *tapahtua* 'happen', *tippua* 'drip', *työskennellä* 'work', *vaeltaa* 'wander', *hiipiä* 'sneak', *roikkua*, *riippua* 'hang',

²⁹Presentational verbs are often called “unaccusatives”, but the two classes are quite distinct.

kiehua, ‘boil’, *liikkua* ‘move’, *madella* ‘crawl’, *riittää* ‘suffice’, *sijaita* ‘be located’, *vilkkua*, *välähdellä* ‘flash (repeatedly)’, *puuttua* ‘be lacking’, *istua* ‘sit’, *kellua* ‘float’, *kiipeillä* ‘climb’, *kokoontua* ‘gather’, *vaeltaa* ‘wander’.

- c. [±H]: *kukkia* ‘(come into) blossom’, *hävitä* ‘disappear’, *roiskua* ‘splash’, *aueta* ‘open’, *selvitä* ‘become clear(er)’, *kiivetä* ‘climb’, *hajota* ‘disintegrate’.

Non-presentational intransitives do not take partitive subjects, again whether they are telic, as in (66a), or atelic, as in (66b).

- (66) a. [+B]: *voittaa* ‘win’, *suuttua* ‘get angry’, *tehota* ‘have an effect’, *loppua* ‘end’, *pettyä* ‘get disappointed’, *pelästyä* ‘become scared’.
 b. [-B]: *kelvata* ‘to be good enough’, *hymyillä* ‘smile’, *neuvotella* ‘negotiate’, *naureskella* ‘chuckle’, *jutella*, *keskustella* ‘converse’, *riemuita* ‘rejoice’, *hallita* ‘reign’, *suostua* ‘agree’.
 c. [±H]: *sulaa* ‘melt’, *puhdistua* ‘get clean(er)’, *pienetä* ‘get small(er)’, *lyhetä* ‘get short(er)’, *vanheta* ‘get old(er)’.

Syntactically, partitive subjects (and presentational subjects in general) differ from regular subjects in their word order. They appear either postverbally ((67a,b), contrast (68a,b)), or preverbally in Spec-VP position ((67c,d)). If they are placed postverbally, and the sentence begins with a locative adverbial, the Spec-VP position can be occupied by a clitic pronoun *sitä* ‘it’ in the partitive case ((67e), contrast (68e)).

(67) Presentational intransitives:

- a. Nyt on synty-nyt lapsi (lapsi-a)
 now be-3Sg born-PP child-SgNom (child-PIPart)
 ‘Now a child has been born’
- b. Sytty-i sota
 break out-Pst-3Sg war-SgNom
 ‘War broke out’ (Vilkuna 1989, 165)
- c. Lapsi (lapsi-a) on nyt synty-nyt
 child-SgNom (child-PIPart) now be-3Sg born-PP
 ‘The/a child (children) has (have) been born now’
- d. Sota sytty-i
 war-SgNom break out-Pst-3Sg
 ‘War broke out’
- e. Siellä si-tä synty-y (lapsi-a)
 there that-Part be born-Pst-3Sg child-PIPart
 ‘There children are being born (all the time)’

Non-presentational intransitives:

- (68) a. #Hymyil-i lapsi (lapsi-a)
smile-Pst-3Sg child-SgNom (child-PIPart)
'The/a child (children) smiled'
- b. #Voitt-i ruotsalainen (ruotsalaisia)
#win-Pst-3Sg Swede-SgNom (Swede-PIPart)
- c. Lapsi (#lapsi-a) hymyil-i
child-SgNom (child-PIPart) smile-Pst-3Sg
'The/a child (#children) smiled'
- d. Ruotsalainen (#ruotsalais-i-a) voitt-i
Swede-SgNom (#Swede-PIPart) win-Pst-3Sg
'The/a Swede (#Swedes) won'
- e. #Siellä si-tä hymyile-e laps-i-a
There that-Part smile-3Sg child-SgNom (child-PIPart)
'There children are smiling (away)'

These data can be accounted for on the following assumptions. First, partitive case is assigned only inside VP; NPs in Spec-Infl get nominative case obligatorily. By the basic constraint of Finnish syntax that a VP can contain only a single direct internal NP argument (Siro's Law, see p. 10 above), VP-internal subjects occur only with intransitive verbs. Therefore, partitive subjects are restricted to intransitive verbs.

The second assumption to be made is that VP-internal subjects are licensed by locative arguments, which may be explicit or implicit. Verbs which have such locative arguments constitute the class of "presentational verbs". Therefore, VP-internal subjects, and partitive subjects in particular, are restricted to presentational verbs, and can always co-occur with locatives.

The subject of a presentational verb is partitive if it is unbounded:

- (69) a. Poika saapu-i
Boy (Nom) arrive-Pst3Sg
'The/a boy ([+B]) arrived ([+B]).'
- b. Poik-i-a saapu-i
Boy-Pl-Part arrive-Pst3Sg
'Boys ([-B]) arrived ([+B]).'

Partitive subjects differ from partitive objects in one important respect: they do not mark unboundedness at the VP level. Even though the VP in (70) is unbounded, in virtue of the verbal predicate, this does *not* license a partitive subject:

- (70) a. Karhu lymyile-e
Bear (Nom) lurk-3Sg
'A bear ([+B]) is lurking ([-B]).'
- b. *Karhu-a lymyile-e
Bear-Part lurk-3Sg
'A bear ([+B]) is lurking ([-B]).'

On subjects, partitive case marks the unboundedness of the NP itself. In other words, subjects of all presentational intransitives pattern like objects of bounded verbal predicates, in that partitive case on them has only the NP-related function.

8 The evolution of the aspectual partitive

The partitive case was originally a spatial case with separative (“from”) meaning. Its unboundedness-marking functions developed within Balto-Finnic. The original nucleus of the innovation has been thought to be a class of intensional verbs that govern “quirky” lexical partitive in Mordvinian and in certain dialects of Lappish (E. Itkonen 1972, 1973, T. Itkonen 1976). It has also been argued that the uses of the partitive are borrowed from the Baltic genitive (Larsson 1983, 1984). Larjavaara (1991) has proposed a hypothetical scenario of the evolution from separative (“from”) case, via a quantificational meaning (similar to French *de* as in *manger du pain* ‘to eat bread’), to the aspectual function of Finnish and its close relatives.

Outside of the Balto-Finnic subfamily, limited aspectual functions of partitive case are attested in the earliest records of the now extinct Southern dialect of Lappish once spoken in Sweden (E. Itkonen 1972, 1973).³⁰ But by far the most important evidence for the original system comes from Mordvinian (Itkonen 1972:166, Larsson 1983:124).

Mordvinian has a rich system of inflectional categories. Nouns may be inflected for either possession or definiteness. Verbs agree in person and number with the subject, and may agree also with an accusative object (the “objective conjugation”); verbs with inessive and partitive objects (and of course intransitive verbs) show subject agreement only (the “subjective conjugation”). Objects inflected for possession are normally assigned accusative case,³¹ and they show obligatory object agreement.

- (71) Mäsaj́ šimeńdä šapam vinańeń
 Why drink-Past2Sg3Sg strong vodka-AccSg-1Sg
 ‘Why did you drink my strong vodka?’

Objects inflected for definiteness can also get accusative case; if the sentence has a telic (resultative) interpretation, there is then optional object agreement (Itkonen 1972, 166).

- (72) a. vedeńń kand-i-ja
 water-Acc-Def bring-Pst-1SgSubj3Obj
 ‘I brought the water’

³⁰In modern Lappish, the old partitive forms now serve as accusative in the plural; the accusative endings have been retained in the singular (Korhonen 1981:214-215).

³¹Accusative case is morphologically identical with the genitive. In some dialects a possessed object can also be also nominative if it is inanimate and the possessor is third person (Itkonen 1972:167).

- b. vede-ńf kand-i-ń
 water-Acc-Def bring-Pst-1SgSubj
 ‘I brought the water’, ‘I (always) brought water’

Objects which are inflected neither for possession or definiteness do not agree with the verb.³² They are normally accusative, and (if indefinite) can also be nominative.

In addition to accusative and nominative case, objects may also bear partitive case³³ or inessive case. The Mordvinian partitive case ending *-da* is cognate with the Finnish partitive *-ta*, and its syntax offers a glimpse of the ancestral system to which the Finnish uses can be traced. Mordvinian partitive objects can be morphologically and semantically either definite or indefinite, and they do not trigger object agreement. Partitive occurs as a “quirky” case on the objects of certain intensional verbs such as “fear”, “be ashamed”, “mourn”, “see”, “hear”, “listen to”, “notice”, “know”, “need”, “want”, “think about”, “talk about”, “avoid”, “promise”, “escape” (see (73a)). Some, but not all, of these verbs govern partitive case in Finnish as well. As in Finnish, the complement of certain measure phrases is partitive (see (73b)).

- (73) a. íla pele dušman-do-t, šex pel-ť eši-ť pola-do-t
 not-Imper2Sg fear enemy-Part-2Sg, rather fear-Imper2Sg own spouse-Part-2Sg (quirky
 partitive)
 ‘Don’t fear your enemy, rather fear your own spouse.’ (Zorin 220)
- b. tasa lama pęnga-da
 ‘here lot firewood-Part
 ‘there’s a lot of firewood here’

Most revealingly, partitive occurs on indefinite bare plural or mass noun objects of a small class of verbs, most commonly “eat”, “drink”, and “smoke”, less often transfer verbs like “give”, “bring”, “take”, and “steal” (Itkonen 1972:170, Larsson 1983:125 ff.):

- (74) a. jarsa-n kal-do. sima-n veť-fe. mon, ada, sim-ť-fan
 eat-1SgSubj fish-Part drink-1SgSubj water-Part. OK, fine, drink-caus-1SgSubj/2SgObj
 vina-do.
 vodka-Part
 ‘I’m eating fish. I’m drinking water. OK, so I’ll let you drink vodka.’
- b. jarsa-k práka-do-n
 eat-Imp pie-Part-1Sg
 ‘eat some of my pies’
- c. jarsa-ms práka-do-ńf
 eat-Inf pie-PartSg-Def
 ‘to be eating the pie’

³²Except for personal pronouns and proper names, which may remain morphologically indefinite and still show object agreement like definitely inflected nouns (Itkonen 1972:164).

³³Mordvinian grammars call it “ablative” case, though to avoid confusion with the Finnish ablative I will not use that term here.

- d. vana kií saľčíť mon práka-do-n
 look who steals my pie-PartSg-Indef
 ‘Look who’s stealing my pies’

Verbs of the type “eat”, “drink”, and “smoke” have the properties in (18) and (19). They are the prototypical members of the verb class which is privileged by Krifka’s theory of the partitive (section 4). We can in fact say that the Mordvinian partitive has the meaning “part of” as defined in (18a). Accordingly, it has a much more restricted distribution than the Finnish partitive, and in particular is *not* triggered by mere irresultativity (“shot at a bear” gets accusative). As a complement to verbs of the relevant class, it yields an indefinite bare plural or mass object or atelic interpretation (process or iteration).

The distribution of inessive (sometimes called inessive-instrumental) objects contributes another piece to the puzzle. Inessive objects are morphologically indefinite, and do not trigger object agreement, but they are semantically interpreted as definite. They are assigned by the atelic version of verbs that are intrinsically unspecified for telicity, such as “carry”, “hit”, “chew”, “seek”, “read”, “wait for”, “send”, “chide”, “suckle”, “bring”:

- (75) a. šov-ni Vańa-so
 chide-3Sg Ivan-InessSg
 ‘He chides Ivan’
 b. davaj čavmo esnende
 So beat he-InessSg
 ‘So, he began to beat him’

In the telic version, the same verbs assign accusative (or nominative) case to their objects. The corresponding verbs in Finnish alternate between partitive and accusative objects, depending on telicity. This is in effect the Mordvinian instantiation of the conative alternation, involving the aspectual function of object case marking.

The fact that partitive and inessive objects never agree with the verb suggests that unlike the Finnish partitive, which is syntactically a structural case, the Mordvinian partitive and inessive are syntactically inherent (lexical, oblique) cases. They also cannot be subject cases in Mordvinian (unlike what is the case in Finnish).

Thus Mordvinian uses separate lexical cases for the two functions of Finnish partitive case: partitive for the NP-related function, and inessive for the aspectual function, each restricted to a lexical subclass of verbs. The Finnish partitive combines and generalizes the functions of these two Mordvinian lexical cases in a single structural case.

The first stage in the evolution of the Balto-Finnic aspectual partitive object was the partitive’s change in status from a strictly locative (“from”) case to case with quantificational force. This was evidently triggered by the development, early in Finno-Ugric, of a system of six specialized local cases from combinations of essive *-na*, lative *-n*, and partitive *-ta* with *-s-* “inside” and *-l-* “outside”.

	internal	external
(76) place	<i>s+na</i> (Finnish <i>-ssa</i>)	<i>l+na</i> (Finnish <i>-lla</i>)
motion to	<i>s+en</i> (Finnish <i>-hen, -seen</i>)	<i>l+ne</i> (Finnish <i>-lle</i>)
motion from	<i>s+ta</i> (Finnish <i>-sta</i>)	<i>l+ta</i> (Finnish <i>-lta</i>)

The new composite elative and ablative cases took over the local functions of the old partitive *-ta*. It retained only the meaning “part of”, thus becoming a strictly *partitive* case (*ate apples, ate porridge, ate of the porridge*).

Partitive case must have then displaced inessive case as a marker of definite objects of atelic (unbounded) verbs in the conative construction shown for Mordvinian in (75). With this change, the old function of partitive case of marking NPs with unbounded reference became generalized to marking VPs with unbounded reference (carried the firewood (a ways), hit at the man, chewed on the bone).

Now partitive case could be extended to definite and count NPs of atelic verbs in general (*loved the woman, needed a knife, tended the reindeer*). Thus the partitive comes to simply mark unboundedness at the VP level.

Why did the aspectual function of partitive case emerge only in the Balto-Finnic branch? (Elsewhere in Finno-Ugric the conative construction remained unchanged or was simply lost.) Another unique Balto-Finnic development was the grammaticalization of partitive into a structural case.³⁴ It is tempting to make a causal connection between these two changes. Recall that the Finnish partitive licenses unboundedness at the VP level, irrespective of whether the unboundedness comes from the head V or from the object. Let us suppose that a lexical case must be interpreted in a local, compositional fashion. If that is the case, then the Balto-Finnic function of the partitive could not have emerged in the other Finno-Ugric languages. The grammaticalization of partitive case would be a precondition to its development as a marker of unboundedness at the VP level.

9 Conclusion

The common factor of the aspectual and NP-related functions of partitive case and imperfective aspect is marking a VP’s unboundedness. A VP has this property in virtue of having either an unbounded head or an unbounded argument. Historical-comparative evidence suggests that the partitive’s emergence as a structural case is a precondition for the rise of its aspectual function.

³⁴Presumably this development is related to the fact that only the Balto-Finnic branch has partitive subjects; see section 7.

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