

# The Case of Aspect: Towards an account of aspect-case correlations\*

Bronwyn M. Bjorkman  
*Queen's University*

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## 1 Introduction

Widely known instances of case and viewpoint aspect being **linked**, e.g.:

- splits in ergative alignment often conditioned by viewpoint aspect
- case on internal argument dependent on imperfectivity
- suggested links between antipassive and the imperfective

This is **surprising**, or should be:

- Viewpoint aspect is about relations between *times* (or between an event and a time).
- Case is about nominal arguments, and their structural relation to the clause (...or maybe their structural/semantic relation to an event/predicate).

Nonetheless, we don't just find correlations, the correlations are stable across languages:

- **Perfectives** (and perfects) often involve prepositional/oblique/inherent case on **external arguments** or **subjects**.
- **Imperfectives** (and progressives) often involve prepositional/oblique/inherent case on **internal arguments** or **objects**.

**However:** we might ask whether this is really significant, or just accidental historical confluence.

- Perfectives can grammaticalize from perfects, which often grammaticalize from possession, which often involves oblique subjects.
- Imperfectives can grammaticalize from non-telic constructions, which often involve oblique/partitive objects (cf. the conative alternation).

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### Goal for today:

1. Establish that there's an interesting generalization, deeper than historical accident.
2. Talk about two ways this generalization could be understood:
  - In terms of collapsing Asp<sup>0</sup> with Voice<sup>0</sup> (cf. Anand and Nevins 2006, Cowper and Hall 2012)
  - In terms of an overexuberant morphological expression of the abstract relations involved in aspect (cf. insights in Coon 2013)

## 2 Establishing the generalization

### What are we looking for?

→ Oblique (/prepositional/inherent/“marked”) case on an argument that appears to be conditioned by the aspectual interpretation of the clause.

The case morphology may or may not co-occur with specific inflectional morphology on the verb itself (i.e. an identifiably imperfective verb form).

#### **Imperfective:** oblique **objects**.

Possible cases:

- Finnish / Estonian (Kiparsky, 1998, Craioveanu, 2014, and references cited therein)
- Georgian (and other Kartvelian languages) (Comrie, 1978)
- Kalkatungu, Galgadungu (and other Australian languages) (Blake, 1977)
- Berber (Galand 1985, cited in Lazard, 1989)
- Antipassive in Inuktitut (Spreng, 2010, 2012), Yucatec Mayan (Krämer and Wunderlich, 1999; Victoria Bricker, 1978)

#### **Perfective/Perfect:** oblique **subjects**.

- Estonian possessive perfect (Lindström and Tragel, 2010)
- North Russian possessive perfect: (Timberlake, 1974; Lavine, 2000; Jung, 2011; Seržant, 2012)
- Mingrelian (Kartvelian) perfectives (Tuite, 1998; Harris, 1985)
- And possibly a subset of perfective-linked ergative marking (e.g. in Hindi-Urdu, Georgian).

**Before we go on:** languages with **ergative** alignment in case marking are well represented on both lists—and indeed, Coon's (2013) makes use of this in her analysis of aspectually split ergativity.

Note, however, that there's a residue of non-ergative languages with oblique subjects in the perfective or the perfect, which don't fall within the scope of Coon's analysis.

(There's also an outstanding question of how case assignment to an internal argument should work in imperfective clauses, a point we will return to in section 4.)

## 2.1 Imperfective and oblique objects

- The association between Imperfective aspect and broadly “locative” morphosyntax is well established in the typological literature (Comrie, 1976; Dahl, 1985; Bybee et al., 1994).
- This association can take several different forms:
  - Locative / positional auxiliaries (e.g. *sit, stand*, etc.)
  - Prepositional / locative / oblique marking on the predicate (e.g. *I am **in** walking.*)
  - Prepositional / locative / oblique marking on an internal argument.
- It is the **last** case that is of interest to us here, as the most compositionally puzzling.

### A preliminary note on viewpoint aspect vs. Aktionsart:

- We are only concerned with locative/oblique objects required in **imperfective (viewpoint) aspect**.

But locative/oblique objects also occur to express **non-telic Aktionsart** (aka *situation aspect*), e.g. in so-called “conative alternations” in languages like English and German:

- (1) a. I shot the bear. (accusative = telic)  
b. I shot at the bear. (prepositional = atelic)
- (2) a. Sie hat tagelang Fausthandschuhe gestrickt.  
She has for.days mittens-ACC knit.  
“She knit mittens for days.”  
b. Sie hat tagelang an Fausthandschuhen gestrickt.  
She has for.days at mittens-DAT knit.  
“She was knitting mittens for days.”

[*German: Kratzer, 2004*]

- This is relevant because we have some idea of how non-telic interpretations should arise compositionally from partitive or oblique objects. . .
  - cf. a literature going back at least to Verkuyl’s (1972) observation that Aktionsart is a property of the VP as a whole, and more recently concrete semantic proposals including Kratzer (2004).
- . . . but no reasonable understanding of how partitive or oblique objects could influence the semantics of viewpoint aspect, which is not only structurally higher than Aktionsart but also involves a relationship between **times**, not DP arguments.

**In the remainder of this section:** Several specific instances of oblique case in imperfective environments.

### 2.1.1 Georgian

- The aspect-case interactions in Georgian are fairly well known, and provides a useful starting point. Like most related Kartvelian languages, Georgian exhibits an aspectually split case system with ergative alignment.

- Verbal inflection in Georgian is traditionally divided into three “series” or “screeves”.
  - In Series I (broadly imperfective verb forms), external arguments are absolutive (with no overt case morphology), while internal arguments are (morphologically) **dative**.
  - In Series II, which includes the aorist (= perfective past), by contrast, external arguments are ergative while internal arguments are absolutive.
  - In Series III, which consists of the perfect and the pluperfect, the subject is dative while the object is absolutive.

- (3) a. Student-i ceril-s cers.  
 student-ABS letter-DAT writes  
 “The student writes the letter.”  
 b. Student-i midis.  
 student-ABS goes  
 “The student goes.” [Georgian: Comrie 1978]

- (4) a. Student-ma ceril-i dacera.  
 student-ERG letter-ABS wrote  
 “The student wrote the letter.”  
 b. Student-i mivida.  
 student-ABS went  
 “The student went.” [Georgian: Comrie 1978]

- Notice that viewpoint aspect in Georgian is **also** expressed by morphology on the main verb.

### 2.1.2 Kalkatungu

- Blake (1977) describes a similar alternation in Kalkatungu (Pama-Nyungan), formerly spoken in Queensland, Australia.
- Kalkatungu exhibits ergative alignment in the perfective (past), but the object is dative (and the subject bare/absolutive) in the imperfective (present):

- (5) a. Pa-i iti-i ucan ijcii-ṅa.  
 that-ERG man wood chop-PAST  
 ‘That man chopped wood.’  
 b. Kupajuru-fu caá kalpin lai-na.  
 old.man-ERG here young.man hit-PAST  
 ‘The old man hit the young man.’ [Kalkatungu: Blake 1977]

- (6) a. Paa juru ijcii-manṅi ucan-ku.  
 there man chop-IMPF wood-DAT  
 ‘That man is chopping wood.’  
 b. Kupajuru caa kalpin-ku lai-mina.  
 old.man here young.man-DAT hit-IMPF  
 ‘The old man is hitting the young man.’ [Kalkatungu: Blake 1977]

- Hopper and Thompson (1980) discuss this as an example of *reduced transitivity* in imperfective contexts—but while there are some progressive events that are intuitively “less transitive” than their perfective counterparts (e.g. *writing a letter*), this is less clear for iterative predicates like those in (5) and (6).<sup>1</sup>

<sup>1</sup>This point is also made in relation to Kalkatungu by Malchukov and de Hoop (2011).

### 2.1.3 Finnish and Estonian

- Finnish and Estonian exhibit a complex alternation between accusative and partitive case on internal arguments.
- Simplifying somewhat, an internal object surfaces with partitive case if one of the following conditions holds ((Kiparsky, 1998), Craioveanu, 2014, and references cited therein):
  - The object is semantically partitive (i.e. “some of the milk” = milk-PART)
  - The object is not totally affected by the event (i.e. non-telic Aktionsart)
  - **The clause expresses imperfective viewpoint aspect.**
  - The clause is negative.
- There is no verbal morphology corresponding to imperfective vs. perfective interpretations in either Finnish or Estonian.
- Nonetheless, the role of partitive case in forcing imperfective interpretations can be seen using various tests for viewpoint aspect.

The following examples give data from Estonian; note that the distinction between partitive and accusative is expressed solely through a contrast in vowel length.

1. Partitive objects give rise to **simultaneous** interpretations in clause sequences; accusative objects give rise to **sequential** interpretations.

- (7) a. Kui Priit saabus, Õie sõi õu-na.  
 When P. arrive.PAST.3SG O. eat.PAST.3SG apple.PART  
 “When P arrived, O was eating an apple.”
- b. Kui Priit saabus, Õie sõi õuna.  
 When P. arrive.PAST.3SG O. eat.PAST.3SG apple.ACC  
 “When P arrived, O ate an apple.” [*Estonian: Craioveanu 2014:19 ex 32*]

2. Partitive objects are compatible with present interpretations (or with semantically partitive futurate interpretations); accusative objects are compatible only with futurate interpretations.

- (8) a. Söön õu-na  
 eat.1SG apple.PART  
 “I am eating an / the apple.”  
 “I will eat [at/some of the] apple.”
- b. Söön õuna  
 eat.1SG apple.ACC  
 “I will eat an / the apple.” [*Estonian: Craioveanu 2014:19 ex 32*]

- (Parallel data are available for Finnish; I include the Estonian as it is less widely discussed.)

### 2.1.4 Inuktitut

- The antipassive (Silverstein, 1976, et seq.) is a construction typically associated with ergative case alignment, in which the object of a transitive verb is “demoted”. The object occurs with oblique case (and is often only optionally expressed), while the subject surfaces as absolutive, and the verb generally shows intransitive agreement with the subject (if applicable).

- It’s been widely observed, however, that antipassives are often associated with imperfective interpretations—Spreng (2012) develops this argument for Inuktitut (especially North Baffin and South Baffin varieties).
- Inuktitut exhibits default ergative-absolutive alignment, illustrated in (9):

(9) anguti-up arnaq            kunik-taa  
 man-ERG woman(ABS) kiss-PTCP.3SG/3SG  
 ‘The man kissed the woman.’ [Mittimatalik: Spreng 2012:28]

- The antipassive in Inuktitut indeed looks on the surface like an argument structural operation: the internal argument becomes optional (marked with oblique *-mik* if it does occur), and the remaining subject appears in the unmarked absolutive.

(10) anguti    kunik-si-vuq    (arna-mik)  
 man(ABS) kiss-AP-IND.3SG woman-MIK  
 ‘The man is kissing (a woman)/someone.’ [Mittimatalik: Spreng 2012:28]

- Some verbs, like the one in (10), also exhibit special morphology in the antipassive (*-si* or *-saq*).
- Other verbs can appear with the case pattern typical of the antipassive, but with no special verbal morphology:

(11) a. uniaq-tara            qamuti  
 pull-PTCP.1SG/3SG sled(ABS)  
 ‘I just pulled a sled’  
 b. uniaq-tunga    qamiuti-mit  
 pull-PTCP.1SG sled-MIK  
 ‘I am pulling a sled’

- Spreng’s argument that the “antipassive” should be reanalyzed as an imperfective is motivated by two initial considerations:
  1. The antipassive markers are homophonous with independently-occurring aspectual morphemes (inceptive *-si* and iterative *-saq*).
  2. The verbs that take the “zero” antipassive are all **durative**.
- Building on Bohnemeyer and Swift (2004), Spreng argues that imperfective viewpoint aspect in Inuktitut is marked only if it is different from the *default* interpretation a clause would receive, based on the Aktionsart of the main predicate.<sup>2</sup>

	<i>durative</i>	<i>non-durative</i>
PFV	A-ERG S/O-ABS	(A-ERG) S/O-ABS
IMPF	A/S-ABS O-MIK	A/S-ABS O-MIK <b>V-impf</b>

- The presence of imperfective/“antipassive” morphology on the main verb, imperfective interpretations seem to systematically correlate with the presence of oblique marking on internal arguments.

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<sup>2</sup>The situation is slightly more complex, because Spreng argues that the durativity of a predicate in Inuktitut is directly linked to whether it has an obligatory internal argument, so that all unergative verbs are durative and all unaccusative verbs are non-durative.

## 2.2 Perfective and oblique subjects

- The converse of oblique objects in the imperfective is oblique subjects in the perfective or the perfect.
- In this case it is not necessary to distinguish viewpoint aspect from Aktionsart—there is no well established relation between subject case marking and telicity or durativity.
- Though the perfect and the perfective are semantically distinct relations, their shared properties cannot explain either’s association with oblique subject marking. For this reason, both are discussed in this section.

### 2.2.1 Perfective in Mingrelian

- Mingrelian is a Kartvelian language related to Georgian.
- Like Georgian, Mingrelian exhibits a split in case marking between Series I (imperfective), Series II (perfective) and Series III (perfect).
- Unlike Georgian, however, Mingrelian no longer exhibits any ergative alignment: what was historically the historical marker now occurs on all perfective subjects, regardless of transitivity (Harris, 1985; Tuite, 1998).

- (12) a. k’oč-k doyuru  
man-“ERG” die.II.3SG(SUBJ)  
‘The man died.’
- b. ʒyabi-k (ko)szap’u  
girl-“ERG” dance.II.3SG(SUBJ)  
‘The girl danced.’
- c. muma-k cxen-i (ki)meču skua-s  
father-“ERG” horse-NOM give.II.3SG(SUBJ).3SG(OBJ).3SG(IO) child-DAT  
‘The father gave a horse to the child.’ [Mingrelian: Harris 1985:56-7]

- The aspectual split is preserved, however, as Mingrelian maintains dative marking on all transitive objects in Series I (and dative subjects in Series III, not shown here).

- (13) a. koč-i yuru  
man-NOM die.I.3SG(SUBJ)  
‘The man dies.’
- b. ʒyab-i tli dyas mušens  
girl-NOM whole day work.I.3SG(SUBJ)  
‘The girl works all day.’
- c. muma arʒens cxen-s skua-s  
father.NOM give.I.3SG(SUBJ).3SG(OBJ).3SG(IO) horse-DAT child-DAT  
‘The father gives a horse to his child.’ [Mingrelian: Harris 1985:55-6]

- What is interesting about Mingrelian is that we see a “marked” case associated with subjects in the perfective, independent of ergativity/grammatical role.

### 2.2.2 Possessive Perfect in North Russian

- North Russian varieties have been described as exhibiting a perfect construction in which the subject occurs within a prepositional phrase.
- This is the same prepositional phrase used for possessors (Russian being a BE-possession language), and so the construction has been referred to as the *possessive perfect*.

- (14) a. Eto u avtomobilja ideno  
 that at automobile.GEN gone.PTCP.N.SG  
 “That was a car that went by.”  
 b. U traktora tut proexano.  
 at tractor.GEN here passed.by.PTCP.N.SG  
 “A tractor has passed by here.” [North Russian: Lavine 2000, citing Matveenko 1961, Kuznecov 1954]

- Lavine (2000) and Jung (2011) both discuss evidence that the prepositional phrase is syntactically a subject in these contexts (in contrast, e.g., to English *by*-phrases).
  - The oblique subject can bind a reflexive.
  - The oblique subject can control PRO.
  - The oblique subject allows parallelism with nominative subjects in coordination.

- (15) a. U Šrki privedeno svoja staraja nevesta.  
 at Šrka.GEN bring.PTCP.N.SG[own old fiancée].NOM.SG.F  
 “Šrka has brought his own old fiancée.” [Kuz’mina and Nemčenko, 1971, 35]  
 b. U babki naverno [ PRO kosit’ ujdeno ].  
 at grandma.GEN probably [ mow.INF left.PTCP.N.SG  
 “Grandma has probably left to mow.” [Lavine, 2000, citing Matveenko 1961, 123]  
 c. U menja eto ne zakončeno, no pojdu poguljat’  
 at me.GEN this not finished.PTCP.N.SGbut go.FUT.1SG take a walk.INF  
 “I have not finished this but will go to take a walk.” [Jung 2011:115, citing Zh. Glushan p.c.]

- The fact that the subject is in the same form used for possessors suggests a parallel to languages where *have* is used as a perfect auxiliary—though unlike *have*, oblique subject marking isn’t easily understood as the realization of an inflectional functional head.

### 2.2.3 Possessive Perfect in Estonian

- Lindström and Trigel (2010) report a new construction in Estonian, very similar to the one seen in North Russian.
- Estonian does have a morphological perfect, but is reportedly developing a possessive perfect construction with auxiliary BE and a subject marked with adessive case (again the same marking found on possessors in BE-possession).

- (16) a. Mu-l on auto pes-tud.  
 I-ADE be.3SG car wash-PASS.PTCP  
 ‘My car is/has been washed.’/‘I have washed the car.’



- b. Mu-l on juba maga-tud.  
 I-ADE be.3SGalready sleep-PASS.PTCP  
 ‘I have already slept.’

[*Estonian: Lindström and Tragel 2010, 372,381*]

- This construction appears to be more restricted than its counterpart in North Russian: possibly restricted from occurring with unaccusative verbs (Mark Norris p.c.).
- Nonetheless, not a simple passive construction: unergatives are possible, as in (16).

#### 2.2.4 Perfective-linked Ergative in Hindi-Urdu

- Hindi-Urdu, like many languages with ergative-absolutive case alignment, exhibits a split between the imperfective and the perfective.
- The result of this is that ergative case—argued by Mahajan (1997) and others to be adpositional—occurs only in the perfective, not in the imperfective.

- (17) a. Raam-ne Ravii-ko piṭṭaa.  
 Ram-ERG Ravii-OBJ beat-PFV  
 “Ram beat Ravi.”  
 b. Raam-ne Ravii-ko piṭṭaa hai.  
 Ram-ERG Ravii-OBJ beat-PFV BE.PRES  
 “Ram has beaten Ravi.”  
 c. Raam Ravii-ko piṭṭaa hai.  
 Ram-ERG Ravii-OBJ beat-IMPF BE.PRES  
 “Ram beats Ravi.”

[*Hindi-Urdu: (Mohanani, 1994, 70)*]

- Ergative alignment in the Hindi-Urdu perfective is in fact a “split intransitive” or “split S” system: the ergative marker *-ne* also occurs on agentive subjects of intransitive verbs.

- (18) a. Raam-ne nahaayaa  
 Ram-ERG bathe.PFV  
 “Ram bathed.”  
 b. \*Raam nahaayaa

[*Hindi-Urdu: (Mohanani, 1994, 71)*]

- (19) a. Raam giraa  
 Ram fall.PFV  
 “Ram fell.”  
 b. \*Raam-ne giraa

[*Hindi-Urdu: (Mohanani, 1994, 71)*]

- To the extent that we are justified in treating the ergative as an oblique or prepositional case in Hindi-Urdu, and perhaps in other ergative-absolutive languages as well, these languages provide another set of cases where the perfective is associated with oblique subjects.

### 3 Synchronic justification vs. historical accident

- So far we’ve seen evidence of a cross-linguistic association between viewpoint aspect and oblique marking on a core argument.

**imperfective** is associated with oblique **internal arguments**  
**perfective** is associated with oblique **external arguments**

- One possibility is that these patterns of case are fundamentally arbitrary—the distribution of “marked” cases is the result of strong tendencies in grammaticalization
  - Imperfectives can arise from partitive/atelic constructions (oblique *patients*).
  - Perfectives can arise from possessive or passive constructions (oblique *agents*).

→ though case might be involved in the semantics of these origin constructions, in viewpoint aspect it’s been *bleached* of its original contribution.

- But even given plausible historical origins, the association of core argument case with aspect should be **surprising** from a synchronic perspective.

From the perspective of work on **aspect**:

- Viewpoint aspect composes relatively high in the tree, above the domain of argument structure.
- To the extent that oblique or prepositional marking has semantic content, it contributes at best indirectly to the semantics of viewpoint aspect.

From the perspective of work on **case**:

- Given the position of viewpoint aspect, should be too high to license “inherent” case on arguments, if inherent case can only be assigned in an argument’s first position.
- The more interesting—and synchronically plausible—possibility is that these patterns tell us something interesting about how aspectual contrasts are formally represented.

→not how they *have* to be represented, but perhaps limits on how they *can* be.

**Next two sections:** Two ways of thinking about aspect-case interactions.

1. Morphosemantic iconicity: case marking of core arguments *reflect* the relationship between times expressed by viewpoint aspect.
2. Syntactic collapse of voice and aspect: viewpoint aspect involves oblique/inherent case in some languages because in those languages aspect is semantically associated with the syntactic head that introduces the external argument, Voice<sup>0</sup> (Anand and Nevins, 2006; Cowper and Hall, 2012).

## 4 Morphosemantic iconicity

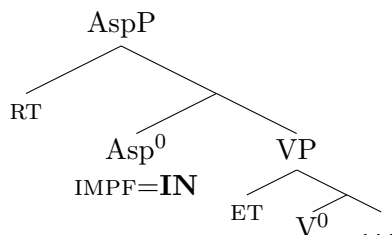
- A first path of analysis: we see oblique/locative case in viewpoint aspect because aspect is **relationally similar** to contexts where we would usually expect to see oblique/locative case.
- This idea has usually been explored with respect to the imperfective:
  1. by focusing on the connection between partitive case and (a)telicity (e.g. Kratzer, 2004).
  2. by linking both imperfectivity and obliqueness of core arguments to “reduced transitivity” (e.g. Hopper and Thompson, 1980)
  3. by linking imperfectives (and progressives) to a universally more complex locative/prepositional structure (e.g. Coon, 2013).
- Of these, the most promising is Coon (2013)—but her analysis doesn’t extend to non-ergative oblique subjects in perfective or perfect contexts.

It's built on a locative analysis of temporal relations, specifically Demirdache and Uribe-Etxebarria (2000).

#### 4.1 The locative analysis of imperfective aspect

- Coon's proposals concerning oblique objects in the imperfective are part of her broader proposal concerning aspectually split ergativity.
  - The general idea behind this work is that imperfectives disrupt ergativity because they are uniformly associated with extra structure.<sup>3</sup>
  - This extra structure is *locative* in character, and divides the external and internal arguments into separate case domains (thus disrupting the assignment of ergative case to an external argument).
  - The locative character of imperfective syntax is sometimes reflected by the choice of auxiliary, or by locative marking on the predicate as a whole, but sometimes by locative/oblique case on an internal argument.
- The typological association between imperfectivity and locative morphosyntax is well established, as mentioned above (Comrie, 1976; Dahl, 1985; Bybee et al., 1994).
- Coon builds further on Demirdache and Uribe-Etxebarria's (2000) semantic analysis of temporal relations as being literally equivalent to locative relations.
- Assuming a Neo-Reichenbachian framework for temporal semantics, they build on the following equivalencies.
  - Imperfective = TT  $\subset$  ET = TT is **IN** ET
  - Perfective = ET  $\subset$  TT = ET is **IN** TT
- Demirdache and Uribe-Etxebarria (2000, 2007), the representation of imperfective is something like the following:

(20)

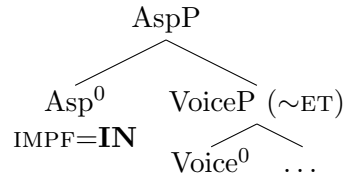



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<sup>3</sup>This general approach to ergative splits is further developed to discuss, e.g., person-based splits by Coon and Preminger (2011, 2015).

- The same relational semantics for  $\text{Asp}^0$  can be maintained without Demirdache and Uribe-Etxebarria’s assumption that not only tense but aspect involves syntactically projected time arguments, and without the need for composition without syntactic sisterhood:<sup>4</sup>

(21)



- Demirdache and Uribe-Etxebarria cite the typological association of aspect with locative morphosyntax in support of this proposal.
- Coon extends this framework into the domain of ergativity, developing Laka’s (2006) analysis of split ergativity in Basque.
- The question for her is why ergative splits are always in same direction: why would the locative character of the imperfective disrupt ergativity, but not the perfective?
- To answer this question, Coon (2013) suggests that **only the imperfective can be associated with locative syntax**.
  - The perfective would correspond to the same structure as in (21), but with a prepositional meaning for  $\text{Asp}^0$  that would be the **reverse** of “in”.
  - Coon suggests that this locative syntax is impossible for the perfective because **no such pronoun exists in any natural language**.

(22) a. A is in B.

meaning:  $\boxed{B \boxed{A}}$

b. A is blip B. (*claimed to be unattested*)

potential meaning:  $\boxed{A \boxed{B}}$

- (Can’t just reverse the syntactic position of TT and ET → ET will always be lower)
- Closest approximation: A is *outside* B → but this is ambiguous.

(23) A is outside B.

meaning:  $\boxed{A \boxed{B}}$  OR  $\boxed{A} \boxed{B}$

## 4.2 Problems for an asymmetric locative analysis of aspect

- Though it provides an elegant analysis of fixed directions of ergative splits, the proposal that **only** the imperfective involves locative structure faces several problems.
  1. Above we’ve seen evidence that perfects and perfectives can involve locative/prepositional structure, though on the subject rather than the internal argument.

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<sup>4</sup>For anyone interested in querying the technical semantic details: I assume that  $\llbracket \text{VoiceP} \rrbracket$  is an unsaturated predicate of events, whose open event argument is existentially closed by  $\text{Asp}^0$ , which it turn states that the runtime of that event (=ET) is a superinterval of another (still open) time interval (=RT). I assume that the open time argument of AspP is, in the normal course of events, existentially closed by  $T^0$ .

More broadly, imperfectives are not universally structurally simpler than their perfective counterparts: cf. French *imparfait* vs. *passé composé*

2. Proposing a locative structure for imperfective aspect doesn't directly address the question of why that locative structure is expressed via case on the internal argument.
3. There may in fact be a relation in natural language that is the reverse of "in" schematized in (23): the **possession** relation.

- (24) a. My sister has green eyes.  
 b. My sister has a bike (with her).

... and possession is commonly expressed precisely by an oblique/locative possessor subject.

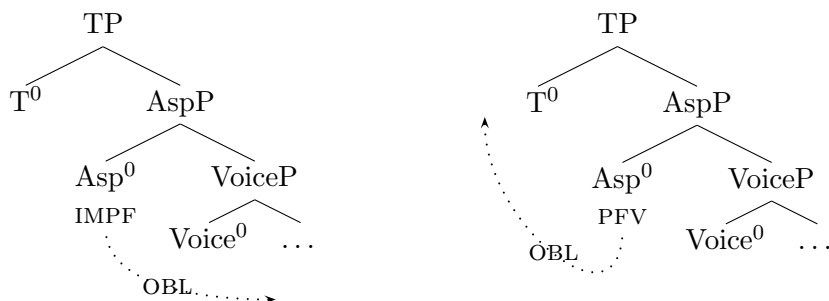
### 4.3 Towards a symmetric locative analysis of aspect

- **Where does this get us?** Can we recast a locative analysis of aspect without the structural asymmetry?
  - The **imperfective** expresses a relation between times that, when it exists between individuals, involves an oblique predicate-internal DP.
  - The **perfective** and the **perfect** express a relation between times that, when it exists between individuals, involves an oblique predicate-external DP.
- *However...*
  - For parallelism to hold, though, we would expect viewpoint aspect to somehow involve oblique-marked *temporal* arguments.

(What would an oblique ET or RT even look like?)

- But instead they involve oblique DP arguments.

- (25) a. Imperfective: oblique DOWN      b. Perfective: oblique UP



- Something like (25b) is what I've recently proposed for perfective-linked ergative/oblique subject case, particularly in Hindi-Urdu (Bjorkman, 2015).
- If we look at (25a) and (25b) together, however, it's less clear that we could give a unified account of how perfective- and imperfective-linked cases work.
  - Imperfective oblique appears to be available only to **objects**; unaccusative subjects don't surface as oblique.

- Perfective oblique is in some cases available to all **subjects** (regardless of agentivity), but in other cases only to **agents** (i.e. ergative subject case).
- If case is **syntactic**, why can perfective  $\text{Asp}^0$  interact with all subjects, but imperfective  $\text{Asp}^0$  assign case only to objects—i.e. after the external argument is out of the way?  
(e.g. Estonian, Mingrelian)
- If case is **post-syntactic**, how can perfective  $\text{Asp}^0$  be sensitive to the agentivity of the subject licensing oblique case?  
(e.g. Hindi-Urdu, Georgian)
- ... and if both systems exist, but in different languages, we seem to be pushed back towards a less unified view of aspect-case interactions.

#### 4.4 Interim summary

- If this is the right general approach to aspect-case interactions, then they are essentially **iconic**.
  - In contrast to semantic proposals about the link between (e.g.) partitive case and imperfectivity, oblique case isn't directly involved in the semantic composition of viewpoint aspect.
  - Aspect expresses the same abstract relation between arguments that is found in locative or possessive constructions.
  - This semantic unity is reflected by Aspect sharing the case licensing properties of the relevant individual-level relation—even though in the case of Aspect, it doesn't relate individual arguments.
- There's a residue, however, in working out exactly how case assignment works, given the structural discontinuity of  $\text{Asp}^0$  and the argument structural domain of the clause.

## 5 Collapsing Voice and Aspect?

- We've seen evidence for consistent interactions between aspect and case—but also problems with having oblique case assigned to core arguments by a head as high as  $\text{Asp}^0$ :
  - Oblique marking is often thought of as “inherent”, widely associated with thematic/first merge positions (Woolford, 2006).
  - Tension in allowing perfective  $\text{Asp}^0$  access to all subjects, while restricting imperfective  $\text{Asp}^0$  to objects.
- A possible path forward: taking seriously the close connection between aspect and **transitivity** suggested by authors such as Hopper and Thompson (1980)
  - but from a somewhat different perspective.
- Where Hopper and Thompson link imperfectivity to reduced transitivity, let us consider a more general—but **syntactically encoded**—connection between viewpoint aspect and argument structure.

Syntactically encoded how? As **identity**.

A **single** head responsible for viewpoint aspect and external argument introduction.

## 5.1 Previous identifications of Voice and Asp

- This is not the first proposal that viewpoint aspect is encoded by passive voice.
  - Often assumed—though sometimes implicitly—in work on auxiliary selection in Germanic and Romance languages.<sup>5</sup>
- In the domain of ergativity, this proposal is made by Anand and Nevins (2006) for Hindi-Urdu:
  - They suggest that perfectives (and perfects) in Hindi-Urdu involve a syntactically passive  $v^0$  head (following Mahajan, 2000), which is unable to license accusative case on an internal argument.
  - An agent can nonetheless be licensed, they suggest, if it receives inherent (ergative) case.
- But by identifying Voice<sup>0</sup> and Asp<sup>0</sup>, are we really committed to identifying (e.g.) perfective viewpoint aspect with passive voice?
- A different proposal is made by Cowper and Hall (2012), outside the domain of oblique case or ergativity.
  - Cowper and Hall are concerned with the historical English “passival”, illustrated in (26)

- (26) a. Whereas a Brass Foundry is now building at Woolwich. . .  
(London Gazette, 10 July 1716, quoted in OED s.v. brass)
- b. The clock struck ten while the trunks were carrying down. . .  
(*Northanger Abbey* ch. 20, by Jane Austen]

- At the time when the passival was grammatical, the present progressive of modern-day English (e.g. *is being built*, *were being carried down*).
- Cowper and Hall suggest that in this period, voice and aspect involved a single head VAsp<sup>0</sup>. This head could be specified for *voice* as [PASSIVE] or not. It could also be *aspectually* specified as [RESULTATIVE], [PROGRESSIVE], or default.

→ but only the **latter** specification had morphological consequences.

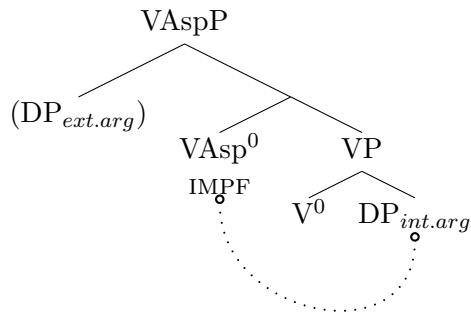
## 5.2 Back to aspect-case interactions

- Does this offer any advantage in terms of accounting for aspect-case interactions?  
**Maybe.**
- If viewpoint aspect is part of the argument structural domain, it makes more sense that it’s implicated in the licensing of core arguments.

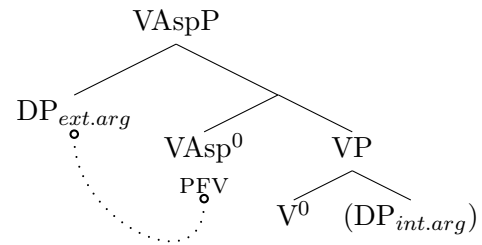
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<sup>5</sup>The assumption is that the perfect participle is *syntactically* passive, and is “retransitivized” by auxiliary *have*.

(27) a. Imperfective VAsp<sup>0</sup>



b. Perfective VAsp<sup>0</sup>



- This could also explain complexities of aspect-argument structure interactions of the type identified for the passival by Cowper and Hall—e.g. of the kind Spreng discusses in Inuktitut.

### 5.3 Remaining issues

- Though the identification of voice and aspect via VAsp<sup>0</sup> suggests a path forward in accounting for some phenomena, it cannot be the whole story.
- In particular, VAsp<sup>0</sup> can provide an explanation of why ergative case is only available to agents in some cases—but does not provide any better explanation of cases where all perfective or perfect subjects occur with the same case.
- And there are reasons to be cautious about collapsing *perfects* together with imperfective and perfective viewpoint aspect so low in the clause.

## 6 Discussion and Conclusions

**Goal today:** to convince you that there's an interesting generalization about aspect and case that we don't currently have an explanation for, and to sketch a direction in which we could account for it.

**Remaining puzzles:** There's still no deep explanation for why a semantic unity of aspect with locative relations would carry over into their patterns of case licensing.

But an important direction for future research: possible support that some of the across-language variation can be explained by identifying voice and aspect with a single projection.

**Another concern:** If some instances of locative or oblique marking to the syntax of **perfective** aspect, the “split domain” analysis of ergative splits developed by Coon (2013) cannot be maintained—at least in its simplest form. If we want to preserve an elegant account of why ergative splits always fall in the same direction, more has to be said about the relationship between perfective and imperfective structures.



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