Ergative as Perfective Oblique[*]
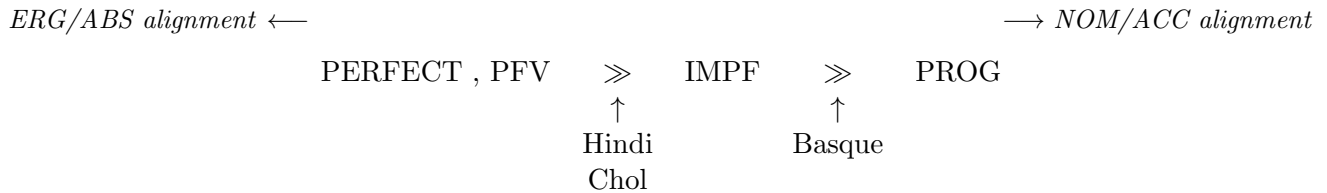
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1   Introduction

Ergative systems often exhibit **splits** in alignment.

- Such splits are often based on **viewpoint aspect** (Silverstein, 1976; Moravcsik, 1978; Dixon, 1979).

- The direction of aspectual splits is consistent across languages:

    - Perfective (and perfect) aspect is associated with ergative alignment.

    - Imperfective (or progressive) aspect is associated with "nominative" alignment.

- This defines a hierarchy along which different languages make splits at different points:

ERG/ABS alignment ⟵   ⟶ *NOM/ACC alignment*

$$\text{PERFECT , PFV} \quad \gg \quad \text{IMPF} \quad \gg \quad \text{PROG}$$

↑	↑	
Hindi	Basque	
Chol		

The puzzle: What accounts for the existence of aspectual splits, and for their consistent direction?

Two broad families of (syntactic) explanations:

1. The **imperfective** is special (Laka, 2006; Coon, 2010, 2013a)

    - Ergative alignment is an independent property of a language's case and/or agreement system.

    - This alignment surfaces undisrupted in the perfective.

    - The structure of imperfective syntax is such that (in some languages) it disrupts ergative alignment.

2. The **perfective** is special (Mahajan, 1997; Anand and Nevins, 2006)

    - The basic alignment of languages with aspectual splits is accusative (or at least not ergative).

- Perfective syntax contains a special source for ergative case.

Goal today: Argue that in at least some languages, ergative case is directly licensed by perfective aspect (Asp^0_{perf}) .

Focusing on aspectual split found in **Hindi-Urdu**.

- An **advantage** of this approach will be that it unifies aspectual splits with a broader typology of perfective morphosyntax.

- A **disadvantage** is that it results in a non-unified picture of aspectual splits, and of ergativity more generally.

Plan for the talk:

- **Section 2:** Background on the aspectual split in Hindi-Urdu.

- **Section 3:** Preview of the analysis.

- **Section 4:** Comparative evidence for the proposal.

- **Section 5:** Detailed discussion of the analysis.

- **Section 6:** Against a "marked imperfective" approach to aspectual splits.

- **Section 7:** Conclusion.

2 Ergativity in Hindi-Urdu

The empirical focus of this talk is on the aspectual split in Hindi-Urdu.

- The ergative marker *-ne* appears on subjects only in the perfective and the perfect.

(1)   a.   Raam-ne Ravii-ko   piiṭaa.
          Ram-ERG Ravii-OBJ beat-PFV
          "Ram beat Ravi."
      b.   Raam-ne Ravii-ko   piiṭaa   hai.
          Ram-ERG Ravii-OBJ beat-PFV BE.PRES
          "Ram has beaten Ravi."   *(Mohanan, 1994, 70)*

- In the imperfective the subject has no overt case marking.[1]

(2)   Raam Ravii-ko piiṭṭaa   hai
      Raam Ravi-OBJ beat-IMPF be.PRES
      "Raam used to read those books."   *(Mohanan, 1994, 70)*

Hindi-Urdu has a "split intransitive" system in the perfective, which is crucial to the proposal to be developed here.

- Subjects of unaccusative verbs cannot be marked ergative:

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[1]This null case is variously referred to as "nominative" or "absolutive" (non-specific inanimate objects are similarly bare). Here I leave it unglossed.

(3)   Unaccusative verb = Bare (NOM/ABS) Subject

    a.   Raam giraa
         Ram   fall.PFV
         "Ram fell."

    b.   Raam-ne giraa   *(Mohanan, 1994, 71)*

- Subjects of unergative verbs require ergative marking in the perfective:

(4)   Unergative verb = Ergative Subject

    a.   Raam-ne nahaayaa
         Ram-ERG bathe.PFV
         "Ram bathed."

    b.   *Raam nahaayaa   *(Mohanan, 1994, 71)*

- For a subset of intransitive verbs, ergative marking is optional, but triggers an agentive interpretation of the subject:

(5)   Optional Ergative = Correlation with Agentivity

    a.   Raam-ko acaanak šer   dikhaa.   vah   / *us-ne cillaayaa
         Ram-DAT suddenly lion.NOM appear-PFV he.NOM   he-ERG scream-PFV
         "Ram suddenly saw a lion. He screamed."

    b.   us-ne   / *vah   jaan buujhkar cillaayaa
         he-ERG   he.NOM deliberately   shout-PFV
         "He shouted deliberately."   *(Mohanan, 1994, 71)*

A Note on Agreement:

- Finite agreement in Hindi-Urdu is uniformly with the structurally highest nominative/absolutive (i.e. bare) DP.

- In the absence of any such DP, the verb appears with third-person singular masculine agreement morphology.

- This agreement pattern is complicated by the existence of Differential Object Marking (DOM) on specific animate direct objects (Mohanan, 1994; Bhatt and Anagnostopoulou, 1996).

  Not being bare, DOM-marked objects do not trigger agreement.[2]

- This talk will not further address the question of why finite agreement targets only "unmarked" DPs. I assume that the overt cases in Hindi are all oblique, and consequently insulate DPs from φ-agreement probes.

3   Preview: Perfective aspect as a source for ergative case

A very simple idea: if ergative case appears only in the perfective, it should be linked to some syntactic element that also occurs only in the perfective.

[2]The mechanism underlying this assignment of specific marking to direct objects is not relevant here – the reader is referred to Aissen (2003) and subsequent work for more discussion of DOM cross-linguistically – what is relevant is that it can prevent object DPs from triggering agreement even in perfective transitive clauses.

- Work on the semantics of aspect widely assumes the presence of a dedicated projection Asp^0, e.g.: Tenny (1987); Smith (1991); Klein (1994); Giorgi and Pianesi (1997); Kratzer (1998); Kusumoto (1999); Demirdache and Uribe-Etxebarria (2000) (among many others).

- Less widely assumed in syntax, but a reasonable proposal for languages with a robust perfective/imperfective contrast in viewpoint aspect – like Hindi-Urdu.

Core of the proposal: ergative case in Hindi-Urdu is an oblique case assigned by Asp^0_{perf} to a DP that has moved into its specifier.

- Perfective Asp^0 – but not its imperfective counterpart – attracts a DP into its specifier, and licenses oblique case on this argument.

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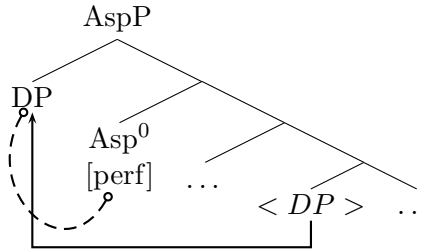
- This proposal makes Asp^0_{perf} **applicative-like**: it licenses a DP in its specifier, though it does not introduce that argument.

  (Cf. proposal by Bjorkman and Cowper (2014) that the possessive modality construction in Hindi-Urdu (Bhatt, 1997) involves a similar applicative-like head.)

- Ergative alignment arises due to a **locality** effect:

  - Asp^0_{perf} is not able to attract a DP from within VP.

  - Because internal argument DPs cannot be attracted to Spec-Asp, they are never assigned perfective-linked oblique, and so surface without overt case morphology:

(7)
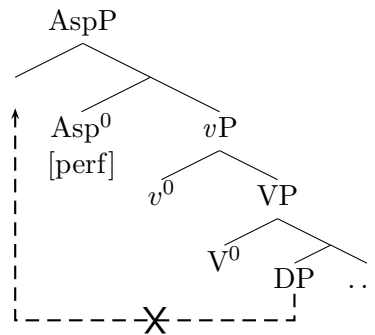
Two central components of this analysis:

1. perfective aspect is able to license oblique subject case

2. and that the morphosyntactic expression of perfective aspect can be sensitive to transitivity.

Next section: comparative evidence for both these claims.

Each occurs independently in the perfective in other languages.

3.1 Aside: perfective vs. perfect

Aspectual splits are determined by **viewpoint aspect**.

The 3-time model of temporal semantics: (Reichenbach, 1947, et seq.)

- Tense does not directly order the time of an event and the utterance/evaluation time.

  It instead locates an intermediate time: the "reference time" (Reichenbach, 1947) or "topic time" (Klein, 1992, 1994).

  - Present: TT overlaps with UT
  - Past: TT preceeds UT

- It's the job of aspect to locate the time of an event relative to the topic time.

  Central contrast: **perfective** vs. **imperfective**.

  - Perfective: ET is contained within TT ("viewing the event as a whole")
  - Imperfective: TT is contained within ET ("viewing the event from within")

- Some languages morphologically distinguish **progressive** from general imperfective.

  The progressive is a **subtype** of the imperfective – other uses of the imperfective are to express habituals and generics.

The perfect: a wrench in the system

- General consensus that the perfect is **not part** of the basic viewpoint aspect system.
  (Iatridou et al., 2003; Alexiadou et al., 2003; Reed, 2011; Stowell, 2007, 2008; Pancheva, 2003; Pancheva and von Stechow, 2004, among many others)

- Lots of debate about the denotation of the perfect, but general agreement that it expresses some kind of **anteriority**:

  - Because the perfect can co-occur with viewpoint aspect in many languages, some suggest that the perfect instead introduces a fourth compositional time, and locates the TT prior to that (Pancheva and von Stechow, 2004), or that it involves a second layer of simple past (Stowell, 2007; Cowper, 2010).

  - Authors such as (Iatridou et al., 2003), Pancheva (2003), and Reed (2011) suggest a somewhat more complex meaning for the perfect, involving the introduction of a Perfect Time *Span*, within which the TT is located.

- Whatever its denotation: **perfect ≠ perfective**

However. . .

- Many languages do not morphologically distinguish the two, and they are often related diachronically (Comrie, 1976; Bybee et al., 1994, a.o.).

- Though perfects in some languages can compose with other aspects (e.g. Bulgarian, Pancheva, 2003; English *have been writing*), in others perfects are more rigidly associated with the perfective (e.g. Greek).

And further. . .

- All aspectual splits I know of treat perfects and perfectives together – no language exhibits ergativity in one but not in the other.

On this basis, in what follows I discuss perfects and perfectives together – "perfective aspect" is used to refer to either perfective or perfect aspect.

- The link between them absolutely needs more attention – but importantly, in the languages under discussion there is no viewpoint aspect alternation in the perfect, so that perfects are always (at least morphologically) perfective.

4   The (distributively) ergative typology of the perfective

As outlined in section 3: the proposal here is that the aspectual split in Hindi-Urdu arises from two basic properties of perfective aspect.

- It licenses oblique subject case.

- Its behaviour is sensitive to argument structure.

This section demonstrates that each of these properties is found independent of "ergative" alignment in perfective contexts in other languages:

- Languages with uniform oblique subject case in the perfective demonstrate that the source of this case cannot be uniquely ergative.

- Languages where the realization of the perfective auxiliary is sensitive to argument structure (i.e. auxiliary selection) demonstrate that the realization of perfective Asp^0 itself can be sensitive to argument structure.

4.1   Oblique subject case in the perfective

- If the syntax of perfective aspect is the source of aspectually split ergative, we expect in principle to find languages where the perfective is *uniformly* associated with oblique subject marking.

Exactly this link between aspect and uniformly oblique subjects is what we find in so-called "possessive perfect" constructions in North Russian (Jung, 2011; Lavine, 2000; Timberlake, 1974) and Estonian (Lindström and Tragel, 2010), as well as in case marking patterns in the Kartvelian dialect of Mingrelian (Tuite, 1998).

- Neither Estonian nor Russian exhibits a possessive verb HAVE, instead expressing possession with the verb BE together with oblique marking on the possessor.

(8)   U menja   est'   kniga
       at me.GEN be.1SG book
       "I have a book."   *(Jung, 2011, 2)*

(9)   Mu-l on   uus auto.
       I-ADE BE.3SG new car
       "I have a new car."   *(Lindström and Tragel, 2010, 374)*

Both North Russian dialects and contemporary Estonian have developed a perfect construction that resembles their respective predicative possession constructions.

- Jung (2011) describes the relevant construction in North Russian dialects as involving dative case on the subject together with a passive participle verb form (the "-n/-t" participle).

  The oblique subject case appears not only with transitive verbs, but also with intransitives, regardless of argument structure.

(10)　U lisicy　uneseno　　　kuročka.
　　　at fox.GEN carried-off-NO chicken.NOM.F
　　　"A fox has carried off a chicken."　　　　　　　*(Kuz'mina and Nemčenko, 1971, 27)*

(11)　a.　Eto u avtomobilja　　ideno
　　　　　that at automobile.GEN gone.PTCP.N.SG
　　　　　"That was a car that went by."　　*(Lavine, 2000, citing Matveenko 1961, 123)*
　　　b.　U traktora　　tut proexano.
　　　　　at tractor.GEN here passed.by.PTCP.N.SG
　　　　　"A tractor has bassed by here."　　*(Lavine, 2000, citing Kuznecov 1954, 96)*

- Jung presents evidence that this is a canonical subject: the genitive DP binds reflexive *svoj* 'own'; controls infinitival PRO; and allows parallelism with nominative subjects.

  In these respects it is unlike other genitive arguments (e.g. benefactives).

(12)　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.)*

- Similar facts are described for Estonian by Lindström and Tragel (2010), though they observe that the Estonian construction is at a relatively early stage of development.[3]

- The new possessive perfect in Estonian involves a subject in adessive case, and the auxiliary verb BE, as with the possessive sentence in (9), with a passive participle form of the main verb.

- With transitive verbs, as in (13a), the result is ambiguous between possessive and perfect interpretations, but with intransitive verbs the interpretation is unambiguously perfect.

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[3]Mark Norris (p.c.) reports that this construction in Estonian remains strongly limited to animate agentive subjects, being potentially unacceptable with another indication that it is not yet fully grammaticalized as a perfect construction. Unlike Russian, which has no other specifically perfect inflection or construction (Paslawska and Von Stechow, 2003), Estonian does have a pre-existing perfect, formed with the auxiliary BE and a past (non-passive) participle:

(i)　Ma olen　kirjutanud ühte　raamatut
　　　I　BE.1SG write.PTCP one.GEN book.GEN
　　　"I have written a book."　　　　　　　　　　　　　　　　(Viitso, 2003, 62)

(13)   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.'   *(Lindström and Tragel, 2010, 381)*

Mingrelian (a dialect of Kartvelian) exhibits similar facts, independently of grammaticalized possession.

- Tuite (1998) discusses the development of non-ergative alignment in the Mingrelian perfective.

- Other Kartvelian varieties exhibit aspectually split ergativity, with ergative case appearing on transitive and unergative subjects in "series II" contexts, a category that includes the perfective (="aorist").

- Mingrelian, by contrast, has lost ergative alignment in the perfective, with the historical ergative marker now appearing on all subjects in perfective contexts, regardless of argument structure:

  "The rule for assigning ERG case in Mingrelian can be summed up as follows: Any constituent that is assigned NOM case in series I (whatever its grammatical role might be) is assigned ERG case in series II." (Tuite 1998, 205)

- This can be seen in the following example, where the subject of the unaccusative verb 'die' appears with ergative case:

(14)   k'oč-k   do-ɣur-u
       man-ERG die-IIp-3SG.SUBJ
       "The man died."   (Tuite 1998:205, citing Harris 1985:57)

In sum:
- The existence of languages where perfective or perfect aspect is uniformly associated with oblique subject marking argues in favour of the idea that aspectual syntax – specifically perfective syntax – can directly control the case assigned to the subject.

- If perfective Asp^0 can license oblique subject case in these languages, moreover, it is also a potential source for "oblique" ergative case in languages with aspectually split ergativity, assuming that an explanation can be found for why this case is only available to external arguments – a point observed by Jung (2011) and Lavine (2000) for the North Russian facts.

4.2   Argument structure sensitivity in the perfective

- Auxiliary selection is an extremely well-studied case where the morphosyntax of perfective aspect is sensitive to argument structure (Perlmutter, 1978, et seq.).

- Auxiliary selection refers to the alternation between auxiliary HAVE and auxiliary BE in Germanic and Romance periphrastic perfect constructions.

  In standard varieties of Dutch, German, Italian, and French, the alternation has been described as primarily tracking argument structure: transitive and unergative verbs require auxiliary HAVE, while unaccusative verbs require BE. (15) illustrates this with examples from Italian.

(15) a. Ha   trovato   quel libro
          HAVE.3SG find.PTCP that book
          "S/he has found that book."
      b. Ha   suonato.
          HAVE.3SG play.PTCP
          "S/he has played."
      c. È   andata
          BE.3SG gone.PTCP.F
          "She has gone."

- Mahajan (1997) first noted the similarities between the aspectual split in Hindi-Urdu and auxiliary selection: the environments that require auxiliary HAVE are precisely those that involve ergative alignment in Hindi-Urdu.

- The parallels continue into what are often regarded as exceptions to this core pattern.

  In Hindi-Urdu, for example, some intransitive verbs show mixed behaviour, allowing ergative case when their subject is interpreted agentively, as was shown in (5) (repeated here):

(5) Optional Ergative = Correlation with Agentivity
     a. Raam-ko acaanak šer   dikhaa.   vah   / *us-ne cillaayaa
         Ram-DAT suddenly lion.NOM appear-PFV he.NOM   he-ERG scream-PFV
         "Ram suddenly saw a lion. He screamed."
     b. us-ne   / *vah   jaan buujhkar cillaayaa
         he-ERG   he.NOM deliberately   shout-PFV
         "He shouted deliberately."   *(Mohanan, 1994, 71)*

- Sorace (2000, 2004) describes a similar correlation with agentivity for some classes of intransitive verbs, particularly in Italian.

  In each case, agentive subjects are associated with a preference for *avere* (HAVE), and non-agentive or inanimate subjects with a preference for *essere* (BE).

(16) Verbs expressing continuation of a state
      a. La guerra e / ?ha durato a   lungo
          the war   is / has lasted for long
          "The war lasted a long time."
      b. Il   presidente e / ha durato in carica due anni
          the president is / has lasted in post   two years
          "The presidentlasted in post for two years."   *(Sorace, 2000, 867-8)*

(17) Verbs expressing controlled affecting processes
      a. Maria ha / *e ceduta alle tue   insistenze
          Maria has / is yielded to   your pressure
          "Mariayielded to your pressure."
      b. Il   pavimento ha / ?e ceduto all'improvviso
          the floor   has / is yielded suddenly
          "The floor suddenlyyielded.'   *(Sorace, 2000, 875)*

(18) Verbs expressing controlled motional processes

    a.   Il   pilota ha / ?e atterrato sulla   pista   di emergenza
         the pilot has / is landed   on the runway of emergency
         "The pilot landed on the emergency runway."

    b.   L'aereo   e / ?ha atterrato sulla   pista   di emergenza
         the plane is / has landed   on the runway of emergency
         "The plane landed on the emergency runway."   *(Sorace, 2000, 876)*

(19)   Verbs expressing nonvolitional processes

    a.   La fede religiosa ha tentennato / ??e tentenna taanche nei piu forti
         the faith religious has wavered   / is   wavered even   in the strongest
         "The religious faith wavered even in the strongest people."

    b.   Paolo ha tentennato / *e tentennatoa lungo   prima di decidersi
         Paolo has wavered   / is wavered   for long before of decide-self
         "Paolo wavered for a long time before he made up his mind."   *(Sorace, 2000, 877)*

- Another exceptional case in Hindi-Urdu involves a small class of transitive predicates that idiosyncratically allow non-ergative subjects in the perfective: *bhuulna* 'forget' and *laanaa* 'bring', as well as *samajhnaa* 'understand', which shows optional ergativity (Keine, 2007).

(20)   a.   Raam šiišaa laayaa
         Ram   mirror bring.PFV
         "Ram brought the mirror."

    b.   *Raam-ne šiišaa laayaa   *(Mohanan, 1994, 72)*

- Again, we find a similar exception in auxiliary selection, this time in Dutch, where a small class of transitive verbs (optionally) allow auxiliary *zijn* (BE) rather than *hebben* (HAVE). These verbs include *naderen* 'approach'; *volgen* 'follow'; *passeren* 'pass'; *verliezen* 'lose'; and (perhaps most strikingly) *vergeten* 'forget' (Lieber and Baayen, 1997, 810-1).

(21)   a.   Ik heb mihn sleutels verloren
         I   have my   keys   lost
         "I've lost my keys."

    b.   Ik ben mihn sleutels verloren
         I   am my   keys   lost
         "I've lost my keys."   *(Lieber and Baayen, 1997, 811)*

In sum:

- The parallels between auxiliary selection and the Hindi-Urdu aspectual split go even beyond what was noted by Mahajan (1997).

- The fact that auxiliary HAVE occurs only in the perfective argues in favour of linking HAVE directly to the representation of perfective aspect – i.e. to perfective Asp^0 – rather than locating it lower in the clause (contra Hoekstra, 1984; Kayne, 1993; Den Dikken, 1994, among others, who all link HAVE more directly to argument licensing).

- What auxiliary selection demonstrates is that the morphological realization of Asp^0 can be sensitive to argument structure, despite it being higher than the v^0 domain.

4.3 Ergativity at the intersection of two typological patterns

What we've seen is that there are two patterns of perfective morphosyntax, each of which makes up half of an aspectually split ergative system.

From this perspective, ergative case Hindi-Urdu completes the typology of expected ways of expressing perfective aspect.

		Perfective Morphosyntax	
		Aux HAVE	ERG/OBL for Subj
Distribution	Only in Transitive	*Italian, Dutch*	*Hindi-Urdu*
	Uniform	*English, Spanish*	*Estonian, North Russian, Mingrelian*

Importantly, this unification is possible only if ergative is seen as the result of perfectivity – not if ergativity is suppressed by the imperfective.

5 Details of the proposal

- We have seen reasons to relate aspectually split ergativity in Hindi-Urdu to both cases where perfective aspect is uniformly associated with oblique subject marking, and to auxiliary selection.

- Both these connections have been separately noted before, linking aspectually split ergativity to Kayne (1993)'s structure for possession:

  - Jung (2011) proposed an underlying structure the "possessive perfect" construction in North Russian based on Kayne (1993)'s structure for possession, and explicitly suggested it be extended to account for ergative case assignment.

  - Mahajan (1997) similarly proposed a Kaynian source for ergative in Hindi-Urdu, drawing on the parallels with auxiliary selection.

- Kayne (1993) proposes an analysis of HAVE in both possession and auxiliary selection.
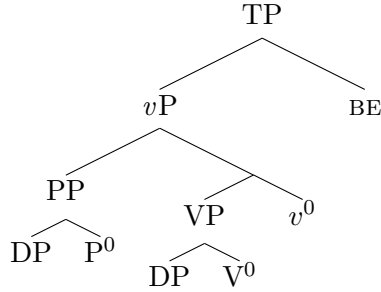
  Regarding auxiliary HAVE, he suggests that a prepositional element appears in the syntax of the perfect, but that in languages with auxiliary selection it occurs only in transitive and unergative structures.

  This prepositional element incorporates to auxiliary BE (in order to repair an otherwise-illicit step of movement), yielding HAVE.[4]

- Mahajan (1997) proposes that the Hindi-Urdu ergative marker *-ne* is a realization of this same prepositional element, generated as the sister of the subject as in (22).

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[4]This analysis builds on the observation that possessive HAVE developed historically from BE + P^0 constructions (Benveniste, 1968), and similar analyses of possessive HAVE as being derived from incorporation of P^0 to BE.

(22)   Mahajan (1997): *underlying structure of transitive perfective*

```
                        TP
                      /    \
                    vP      BE
                   /  \
                 PP    \
                /  \    VP    v⁰
              DP    P⁰  /  \
                      DP    V⁰
```

$$
\begin{array}{c}
\text{TP} \\
\swarrow \qquad \searrow \\
v\text{P} \qquad\qquad \text{BE}
\end{array}
$$

- Mahajan proposes that the difference between ergative case in Hindi-Urdu and auxiliary HAVE in Germanic and Romance arises from **word order**:

  - In a head-initial language like Dutch or Italian, P^0 is adjacent to BE and can incorporate.

  - In a head-final language like Hindi-Urdi incorporation under adjacency is not possible, and so the adposition is realized independently.

- This derives the typological association between ergative alignment and verb-peripherality, otherwise unaccounted for.

Questions raised by a Kaynian approach:

- What is the connection between the prepositional element and perfective interpretation?

- Why are only external arguments generated as the sister of P^0?

An alternative approach

- These questions are answered if ergative case is instead licensed directly by the head responsible for perfective semantics: i.e. perfective Asp^0.

  Cf. the proposal of Anand and Nevins (2006), who propose that ergative is licensed by perfective v^0 – though for them this head is identical to passive v^0.

- Asp^0_{perf} is realized in some languages directly as auxiliary HAVE, while in others it simply influences the morphological realization of arguments in its specifier.

- In its guise as a case assigner, Asp^0_{perf} resembles Pylkkänen (2008)'s applicative heads in that it licenses a DP in its specifier by assigning a particular (oblique) case.

  It is unlike an applicative, however, in not introducing any argument, instead attracting a lower DP.

Remainder of this section walks though how this applies to derive perfective morphosyntax in the languages discussed earlier.

5.1   Deriving uniform oblique subjects in the perfective

- In languages such as Estonian, North Russian, and Mingrelian, the behaviour of Asp^0_{perf} is straightforward: it attracts the highest DP in its complement, regardless of whether that DP originates as an external or internal argument.

- This is illustrated in (23):

a. Transitive/Unergative

b. Unaccusative
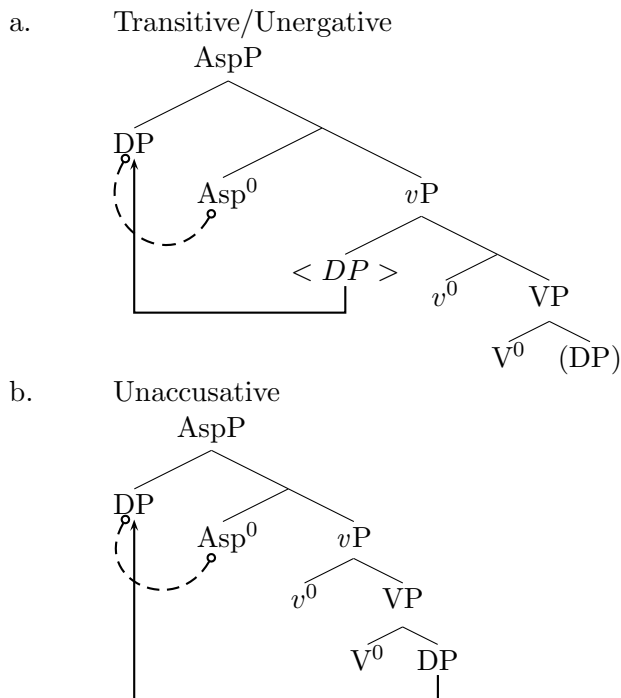
- This highest DP would then move further to Spec-TP, I assume for independent EPP reasons.

5.2   Deriving ergative alignment for perfective oblique case

- The aspectually split pattern of Hindi-Urdu differs from the one seen in uniform oblique languages in being sensitive to the argument structure of the lower predicate.

- The simplest way to implement this sensitivity is for Asp^0_{perf} in Hindi-Urdu to be only able to assign oblique case to a DP to which it is sufficiently local.

- There are at least two ways this locality could be cached out, in terms of either syntactic or morphological locality.

A morphological approach to the locality of ergative licensing:

- One could propose that Asp^0_{perf} assigns oblique (i.e. ergative) case only to DPs it is **adjacent** to – though because Hindi-Urdu is head final, the relevant adjacency must be structural, as in Embick and Noyer (2001).

- The problem for this kind of approach is in the **timing** of the relevant operation.

  Merger under adjacency should be a morphological operation – but by the point of morphological realization, there is no reason to believe that even ergative-marked subjects remain in Spec-vP.

  Having moved to Spec-TP, there would no longer be any morphologically local relationship between the to-be-marked-ergative DP and Asp^0.

Possible syntactic approaches to the locality of ergative licensing:

- A story framed in terms of syntactic locality must explain why only Asp^0 is unable to attract internal argument DPs – given the facts of finite agreement, T^0 is clearly not subject to this restriciton.

- One possible approach is to say that Asp^0 – but not T^0 – bears probe that can be satisfied by *either* a verb or by a DP.

  The question here is why this type of probe would be apparently unique to Asp^0.

- A more radical proposal is to identify perfective Asp^0 as the head that actually introduces the external argument in perfective clauses – again cf. Anand and Nevins (2006).

  The problem here is that though this is potentially feasible for simple aspectual splits, it would have difficulty extending to account for more complex splits further conditioned by the person and number of the subject argument.

  Seems infeasiable to suggest that first and second person arguments are projected in a different position than third person arguments are.

- Moreover, this would require that the compositional semantics of viewpoint aspect is fundamentally different in languages with aspectual splits than in those without – that only in the latter is viewpoint aspect a truly propositional operator.

  This is certainly possible, but not something to embrace unnecessarily.

The least problematic of these ideas seems to be the idea that languages with aspectual splits differ from those without in allowing Asp^0_{perf} to attract either a DP or a verb, whichever is higher.

In support of this, note that the perfective in Hindi-Urdu is simplex, while the imperfective is periphrastic – Bjorkman (2011) argues that auxiliaries correlate with an *absence* of head movement.

The following trees illustrate the proposed derivation for transitive and unaccusative structures in Hindi-Urdu, abstracting away from head-finality:

(23)   Transitive:
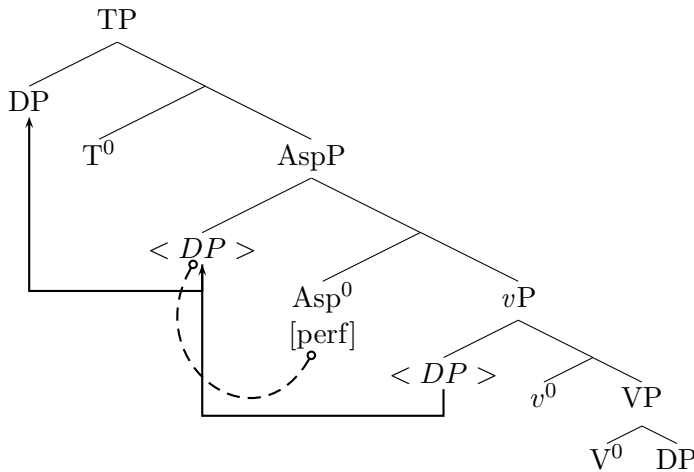
(24) Unaccusative:
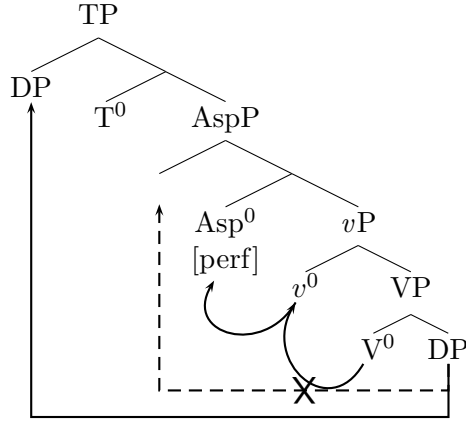
- To account for intransitive verbs with optional ergative, we must allow the position of the sole argument to be determined by agentivity.

  This may involve finer distinctions in the v^0 domain: core requirement is that non-agentive subjects be merged lower than the highest position to which V^0 moves.
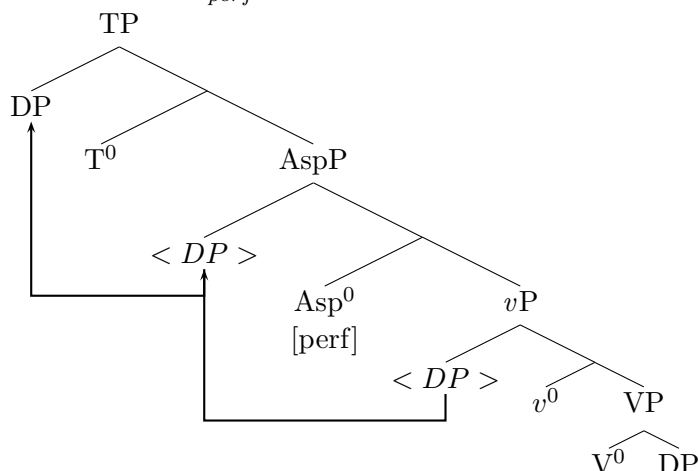
5.3   Deriving auxiliary selection

- The approach just developed for aspectual splits extends straightforwardly to languages with auxiliary selection.

  The main difference will be in the morphological consequence of Asp^0 attracting a DP to its specifier.
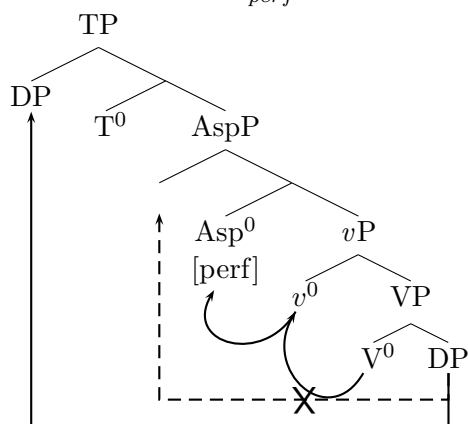
- In languages like Hindi-Urdu, Estonian, North Russian, and Mingrelian, I have suggested that perfective Asp^0 is "applicative like" in that it licenses (via oblique case) an argument in its specifier, without having semantically introduced that argument.

- In languages like Italian, German, and Dutch, perfective aspect does not influence the morphological realization of argument DPs, but instead influences the realization of the perfective aspectual head itself.

- There is a long tradition of linking the presence of auxiliary HAVE very directly to transitivity – the idea that HAVE is an intrinsically transitive verb that serves to "retransitivize" the passive participle main verb (Belvin and Dikken, 1997; Den Dikken, 1994; Hoekstra, 1984, 1994, a.o.).

- While there is little semantic justification for composing perfectives from a passive structure, the intuition behind these approaches is maintained if the realization of perfective Asp^0 as HAVE is dependent on whether there is a DP in Spec- Asp^0 – i.e. on whether Asp^0 is syntactically (though not semantically) transitive.[5]

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[5]A similar view of possessive HAVE as involving raising into the specifier of an applicative-like head can be found in the work of Myler (2013, 2014). See also Bjorkman and Cowper (2013, 2014) for this type of view of causative and modal uses of HAVE.

(25)   Transitive: Asp^0_{perf} realized as HAVE due to DP in Spec

```
            TP
          /    \
    DP          \
     ↑     T⁰      AspP
     |          /      \
     |    < DP >         \
     |          Asp⁰        vP
     |          [perf]    /     \
     |              < DP >   v⁰      VP
     |                           /    \
     |                          V⁰    DP
```

(26)   Unaccusative: Asp^0_{perf} realized as BE because Spec remains empty

```
            TP
          /    \
    DP          \
     ↑     T⁰      AspP
     |          /      \
     |        Asp⁰        vP
     |        [perf]    /     \
     |                 v⁰      VP
     |                      /    \
     |                     V⁰    DP
```

- Languages with uniform HAVE– English, Spanish, Greek, etc. – can be accounted for in one of two ways:

    – On analogy to uniform oblique languages: Asp^0_{perf} attracts highest DP, regardless of intervening V^0.

    – Alternatively, could simply have the morphological realization of Asp^0 be determined by its featureal content, rather than by whether its specifier is filled.

- An interesting detail: uniform HAVE languages all maintain perfect as morphologically distinct from the perfective. Potentially related?

6 Multiple sources for aspectual splits?

With the account of aspectual splits in place, now appropriate to consider it's **limits**:

- The proposal that applicative-like Asp^0_{perf} licenses oblique in its specifier can account for aspectual splits where:
    - The split falls between the perfective and the imperfective.
    - There is a further split in intransitives, with unergative subjects receiving ergative case.

- It cannot account for splits where:
    - Imperfective aspect shows ergative alignment, and only the progressive is non-ergative (e.g. Basque).
    - Languages without a split intransitive system.
    - Languages where the non-ergative pattern is so-called "extended ergative" (e.g. Chol)

- This is a narrower scope than other accounts of aspectual splits, in particular Coon (2010, 2013a) (based on Laka (2006)'s analysis of split ergativity in Basque).

    Worthwhile to look more closely at such alternatives, and evaluate whether they indeed offer a potentially universal view of aspectual splits.

What we'll see is that the proposal that aspectual splits arise from **more complex structure in the imperfective** is not supported by the properties of perfective/imperfective contrasts cross-linguistically, either in ergative languages or more generally.

6.1 Aspectual splits and "big" imperfectives: background

This section provides an overview of the proposal that aspectual splits are due to structural complexity in the imperfective.

The analysis of Basque's aspectual split developed by Laka (2006) is the basis of the more general account proposed by Coon (2010, 2013a).

- In Basque, both imperfective and perfective aspect show ergative alignment – only the progressive is non-ergative.[6]

(27) a. emakume-a-k   ogi-ak   ja-n   d-it-u
          woman-DET-ERG bread-DET.PLeat-PFV 3ABS-PL-AUX3ERG
          "The woman has eaten (the) breads."
      b. emakume-a-k   ogi-ak   ja-ten   d-it-u
          woman-DET-ERG bread-DET.PLeat-IMPF 3ABS-PL-AUX3ERG
          ' 'The woman eats (the) breads."
      c. emakume-a ogi-ak   ja-ten   ari   da
          woman-DET bread-DET.PLeat-IMPF PROG 3ABS.AUX
          "The woman is eating (the) breads."   *(Laka, 2006, 177)*

---

[6]The glosses have been changed from Laka's original by glossing the auxiliary uniformly as AUX, rather than as HAVE or BE, following Arregi (2004)'s argument that the so-called "HAVE" auxiliary is simply the allomorph of the auxiliary that allows ergative agreement morphology.

- Laka's analysis of the Basque pattern is built on two observations: first, that though the alignment seen in the progressive is sometimes called "nominative", there is no distinct nominative case in sentences like (26)– the subject appears to be marked absolutive (unmarked); second, the progressive aspectual particle looks like an embedding verb whose complement clause is locative-marked.

- Laka argues that the progressive particle *ari* is in fact an embedding verb, so that progressive aspect involves a biclausal structure.

  The transitive subject in (27c) is therefore not marked with the ergative suffix *-k* because it is actually the sole DP argument of the matrix clause:

A more general account of split ergativity is proposed in Coon (2010, 2013a).

- Coon proposes that **all** aspectual splits arise because of increased structural complexity in non-ergative aspects.

- The question her account therefore faces is why *only* imperfective or progressive aspects ever result in these splits, crosslinguistically. That is, what is it in imperfective syntax that can divide a clause in two case domains, and why is this systematically unavailable in perfective clauses.

- In response to this question, she appeals to semantic and typological links between temporal relations on the one hand, and locative relations on the other.

- The starting point is the idea that temporal and locative meanings are not merely typologically correlated, but actually deeply semantically and perhaps syntactically identical, as proposed by Demirdache and Uribe-Etxebarria (2000), among others.

  This semantic and syntactic identity is used to account for the fact that in many languages we find clearly locative morphosyntax used to express temporal contrasts. Imperfective and progressive meanings, for example, are very frequently expressed by prepositions meaning *at* or *in* (Bybee et al., 1994, a.o.).

- This type of grammaticalization, on Demirdache and Uribe-Etxebarria's account, reflects the fact that an imperfective aspectual head literally asserts that the reference time is *in* or *contained by* the time of an event:

(28)   Demirdache and Uribe-Etxebarria (2000) view of imperfective:
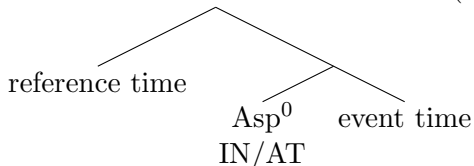
- The locative relation corresponding to **perfective**, by contrast, would be one expressing the **reverse** of the relation expressed by *in* or *at*.

- Coon suggests that no natural language has a preposition lexicalizing such a relation.

  Because of this lexical gap, perfectives simply do not have available to them the kind of locative morphosyntax that is available to imperfectives – and so they never contain the kind of structure that disrupts ergativity.

- The final step of the proposal is the claim that because perfective aspect is never locative, it is systematically (structurally) "unmarked" relative to the imperfective.

If true this is an elegant account of both the mechanics of aspectual splits, and of their uniform directionality.

However its claims about the structural relation between imperfective and perfective aspect cannot be maintained on the basis of cross-linguistic comparison.

- Perfective is not always "unmarked" relative to the imperfective.
- Perfective can be associated with (non-locative) prepositional structure.

6.2 Comparative "markedness" in viewpoint aspect

- In support of her typological claims, Coon cites a numer of cases where imperfectives – notably, particularly progressives – appear to involve more morphosyntactic structure than corresponding perfectives, in the sense of involving an additional auxiliary verb or particle. Similar evidence is cited in Coon and Preminger (2011) and Coon (2013b)

- Such examples are used to argue that the imperfective is **uniformly** more structurally complex than the perfective.

- By contrast, typological work on aspect presents a much less categorical picture of the relative markedness of imperfective and perfective.

  The consensus view there is that either perfective or imperfective may be the "marked" member of an aspectual contrast (Comrie, 1976; Dahl, 1985).

- Indeed, if we follow Coon in using the presence of an auxiliary verb as a diagnostic of structural complexity (or, as in Bjorkman (2011), at least featureal complexity), there are many cases where perfective verb forms transparently involve "more" structure than their imperfective counterparts.

  This often arises because the perfective form has developed from an earlier (complex) perfect form, as in the case of French:[7]

(29) a. Ils   ont   dansé.
          they.M have.3PL dance.PTCP
          "They danced / have danced."
      b. Ils   dansaient.
          they.M dance.IMPF.PAST.3PL
          "They danced / were dancing."

- Moreover, the presence of an auxiliary does not correlate with the disruption of ergativity, even in the languages Coon discusses.

- Coon (2013a), for example, provides contrasts like the following from Hindi-Urdu as evidence that the perfective is less structurally complex than the imperfective in that language. As we have already seen, the perfective is expressed by a simple inflected verb, while the imeprfective requires an auxiliary.

---

[7]This applies only to spoken French: formal written French maintains the earlier synthetic perfective, the *passé simple*.

(30) a. Lataa-ji-ne   kai   gaane gaa-ye.
          Lataa-HON-ERG many song.M sing-PFV.M.PL
          "Lataa-ji sang several songs." (Bhatt 2007, (5a))
      b. Lataa-ji   gaane gaa-tii   hɛ̃   / thĩ:
          Lataa-HON song.PLsing-HAB.F BE.PRES.PL / BE.PAST.F.PL
          "Latta-ji sings/used to sing songs."   *(Bhatt 2007, 8a)*

- Coon fails to mention, however, that Hindi-Urdu uses an auxiliary-participle construction entirely parallel to the imperfective to express the perfect – but that the perfect shows ergative alignment.

(31) Lataa-ji-ne   kai   gaane   gaa-ye   hɛ̃   / the
      Lataa-HON-ERG many song.M.PL sing-PFV.M.PL BE.PRES.PL/ BE.PAST.M.PL
      "Lataa-ji has/had sung several songs."   *(Bhatt 2007, 5b)*

- Many of the other examples discussed by Coon as structurally complex imperfectives are in fact specifically *progressive*.

- Indeed, progressives tend to be more morphosyntactically complex than either perfective or imperfective.

  But this is true of essentially **all** aspects beyond the basic perfective/imperfective contrast.

  True of perfects, inceptives, completives, duratives, etc. etc.

- If we employ a simple metric for syntactic complexity ("amount of visible syntactic stuff") and our claim is that "more stuff" corresponds to a greater likelihood of a split, then we would expect to find splits where perfective and perfect pattern together to the exclusion of the imperfective.

  Yet that is precisely the type of split we do not see, and which Coon's account is built to exclude.

6.3   Second, no prepositional content in the perfective

The last section argued that perfectives are not reliably "less marked" than imperfectives, typologically speaking.

A reasonable response would be to protest that what is special about imperfective syntax is not merely that it is more complex than its perfective counterparts, but that its complexity involves specifically **locative** syntax.

But the perfective can be locative too. . . . or at least prepositional.

  While perfective clauses marked by clearly locative morphosyntax are at best much rarer than locative imperfectives, it is quite common for perfectives to be expressed by **possessive** syntax.

  Common view of possession as fundamentally prepositional Freeze (1992); Kayne (1993); Boneh and Sichel (2010); Levinson (2011); Myler (2013, a.o.).

Possessive perfects are thus just as prepositional as imperfectives expressed by "in" or "at".

Breaking this down:

- Bybee et al. (1994) observe that explicitly locative expressions analogous to *in* or *at*, or explicitly locative verbs like *sit* or *stay*, are used crosslinguistically to express imperfective or progressive meanings.

Within their survey, however, no such transparently locative expressions are used to express perfective or anterior meanings.

- Coon proposes that this typological gap arises because there of a corresponding typological gap in the inventory of prepositions: no preposition corresponding to the meaning of a perfective.

  In other words, no preposition *ni* as in (32a) actually means (unambiguously) the same as (32b).

(32)   a.   A is ni B.

        | A | B |

     b.   B is in A.

(33)   Closest approximation: A is *outside* B. (ambiguous)

    a. | A | B | b. | A | | B |

Two points here:

1. Locative morphosyntax is not used to express perfective meanings.

2. This is expected, because natural language simply lacks the type of locative morphosyntax that *would* express perfective meanings.

However, we do actually find perfective meanings associated with arguably prepositional, albeit non-locative, morphosyntax: **possession**

- Freeze (1992) and Kayne (1993), among others, have argued that the possessive verb *have* reflects the syntactic presence of a prepositional head.

- Indeed Coon and Preminger (2011) assume a prepositional source for HAVE in their remarks on person-based auxiliary selection, but do not address why this preposition does not have the clause-dividing property of the locative structure in imperfectives.

- So we **cannot** attribute the failure of perfective aspect to disrupt ergativity to a typological aspect of its structure.

  The perfective is just as prepositional as the imperfective – it's just a different preposition.

6.4   Summary

Coon (2010, 2013) proposes an elegant account of aspectual splits, which offers an explanation for why it is always the imperfective/progressive that is non-ergative.

- In detail, it is almost certainly the correct analysis of many aspectual splits, particularly Basque and Chol.

- Applied more generally, however, it relies on a representational asymmetry between perfective and imperfective aspect that does not appear to be borne out.

Remaining question: why is the perfect associated with possessive morphosyntax, rather than locative morphosyntax?

A wildly-speculative answer to a different question: Consider the ambiguity of *A is outside B*, illustrated in (33).

Imagine that these were relations between times, rather than physical objects. (33a) resembles a perfective; (33b) resembles a perfect.

Perhaps this is related to the fact that in language after language we find an ambiguity between these two categories, despite their different semantics.

7   Conclusion

Central claim of this paper has been that aspectually split ergativity fits naturally within a broader typology of perfective morphosyntax.

These patterns can be related to one another, however, only if ergative is licensed directly by perfective Asp^0.

This represents a departure from recent work on aspectual splits, which have proposed that imperfective aspect instead disrupts ergative assignment.

Whence the aspectual hierarchy? A serious drawback of this approach is that because it does not offer a unified analysis of aspectual splits, it cannot explain why they are so consistent in direction – but the existing explanations fall short as well.

Related issues (feel free to ask):

- Person/number splits, especially their interaction with aspectual splits

- Relationship between perfect(ive) and possession

- ERG-OBL splits (i.e. Georgian, perhaps Inuktitut)

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