

This text is a revised and extended and version of a paper presented at SLE 2006, Bremen, August 30 – September 02 2006

## Direct and indirect explanations of typological regularities: the case of alignment variations <sup>1</sup>

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In the evolution of languages, some changes may lack functional explanations of their own, and instead be mechanically triggered by changes occurring in other areas of the grammar. This paper illustrates the necessity to consider indirect explanations of typological regularities on the basis of examples taken from alignment typology, namely: *a)* in predominantly ergative languages, intransitive constructions with accusative alignment may develop as a result of the coalescence of light verb compounds; *b)* in predominantly ergative languages as well as in predominantly accusative languages, constructions deviating from the dominant alignment type may originate from elliptical variants of transitive constructions; and *c)* alignment changes (both from accusative to ergative, and from ergative to accusative) may occur as a consequence of the grammaticalization of TAM periphrases.

### 1. Introduction

Many general linguists trying to explain typological regularities (including universals) tend to favor direct explanations, and to neglect the possibility of indirect explanations. Many of them tend also to neglect syntactic change as a first level of explanation in understanding typological regularities. However, since languages are perpetually changing, the frequency of a particular type of structure in the languages of the world must have some relation with the frequency of the types of changes that can either give rise to it, or lead to its disappearance. This is certainly not the ultimate explanation, since it raises the question of why some changes are particularly frequent in the evolution of languages, whereas others are rare, or not attested at all. But considering the historical development of languages as a first step in understanding typological regularities is nevertheless methodologically useful, as I will try to show in this paper.

The point made above that many linguistic facts cannot be explained from an exclusively synchronic perspective is of course not new.<sup>2</sup> Yet many functionalists seem

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<sup>1</sup> I am grateful to the following colleagues for their comments on earlier versions of this paper: Gilles Authier, Claire Moysse-Faurie, Spike Gildea, Andrej Malchukov, Bernard Oyharçabal, and Sylvain Patri.

to accept the hypothesis that every typological regularity must be motivated in some way or other, and that linguistic diversity boils down to the hierarchization of conflicting motivations. However, when a historical perspective is adopted, contrary to what functional approaches to language typology often suggest, it does not always make sense to postulate direct functional explanations for the types of organization attested in the languages of the world, since at least some types of organization may develop in a purely mechanical fashion as a by-product of developments in other areas of grammar.

In this paper the necessity to consider the possibility of indirect explanations will be illustrated on the basis of the following examples taken from alignment typology:

- (a) in predominantly ergative languages, intransitive constructions with accusative alignment may develop as a consequence of the coalescence of light verb compounds;
- (b) in predominantly ergative languages as well as in predominantly accusative languages, constructions departing from the dominant alignment type may originate from elliptical variants of transitive constructions;
- (c) alignment changes (both from accusative to ergative, and from ergative to accusative) may occur as a consequence of the grammaticalization of Tense/Aspect/Mood (TAM) periphrases.

The possibility that alignment can change in a relatively mechanical (i.e., functionally unmotivated) way is largely ignored in the literature on alignment typology, though *Anderson 1977* puts forward the hypothesis that alignment changes can be mechanically triggered by changes occurring in other domains of grammar. And more recently, similar views concerning in particular the grammaticalization of TAM periphrases as a source of split alignment patterns, have been proposed by Spike Gildea (see specially *Gildea 1998*).

The present research is a further step in the same direction. Unfortunately, to date the only historically documented case of alignment change is the development of ergativity in ancient Indo-Iranian languages, and its subsequent loss in some languages of that family (on this issue see further Section 5.2 below). Consequently, throughout the discussion it should be borne in mind that hypotheses on the mechanisms of alignment changes must remain largely speculative unless significant progress is made in the domain of syntactic reconstruction.<sup>3</sup>

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<sup>2</sup> See in particular, among many others, *Greenberg 1965, Greenberg 1978, Givón 1979, Bybee 1988, Hall 1988, Garrett 1990, Croft 2000, Bybee 2001, Blevins 2004*.

<sup>3</sup> On the reconstruction of the original alignment patterns in a language family whose members exhibit different alignment patterns, see in particular *Gildea 1998* on Carib. *Moyse-Faurie 2003* contains a survey of the discussion on the reconstruction of the alignment pattern of Proto-Polynesian.

## 2. Alignment typology: basic notions

In this section I summarize the fundamentals of alignment typology as developed in the last decades and exposed in works such as *Comrie 1978, Plank (ed.) 1979, Dixon 1994, Lazard 1994, Palmer 1994: Chapters 1-4, Manning 1996, Kibrik 1997, Lazard 1997, Mithun & Chafe 1999*. See *Creissels 2006a: Chapters 17-18* for a more detailed presentation of my own understanding of this question.

### 2.1. Transitive vs. intransitive constructions

In a prototypical transitive construction, a verb that encodes an event involving a prototypical agent and a prototypical patient combines with two NPs representing them. Constructions involving verbs of other semantic types are identified as transitive if and only if they include two nominal terms (*A* and *P*) showing the same morphosyntactic properties as the terms representing the agent and the patient in the prototypical transitive construction.

Three types of coding properties can contribute to the identification of *A* and *P*: NP marking by means of case markers or adpositions, argument indexation on the verb (i.e. cross-referencing or agreement) and constituent order.

Intransitive constructions (i.e., constructions in which it is impossible to identify a pair  $\langle A, P \rangle$ ) generally contain a term, commonly designated as *S*, whose coding properties coincide with those of one of the core terms in a transitive construction.

### 2.2. Major alignment types

In terms of the coding properties marking the contrast between *A* and *P* in a language, an intransitive construction can be aligned with the transitive construction in three different ways:

- (a) it may involve a term *S* with the same coding characteristics as *A* (*accusative alignment*),
- (b) it may involve a term *S* having the same coding characteristics as *P* (*ergative alignment*),
- (c) it may involve a term *S* whose coding characteristics are a mixture of *A*-like and *P*-like coding characteristics (*mixed alignment*).

In addition, the possibility exists for an intransitive construction to lack an *S* argument in the sense defined above.

Ex. (1) from Russian and (2) from Avar, a Nakh-Daghestanian language, illustrate, respectively, the accusative and ergative types of alignment with respect to NP marking

and indexation. In (1b) *A* is in the absolute form (traditionally called nominative)<sup>4</sup> and the verb agrees with it in number and gender; in the same way, *S* in the intransitive (1a) is also in the absolute form and the verb *prijti* ‘come’ agrees with it. In the example from Avar, *P* in the transitive construction (2c) is in the absolute form, like *S* in the intransitive (2b), and the transitive verb form *j-osana* agrees with *P* in the same way as *j-ač’ana* with *S*; by contrast *A* in (2c) is in the ergative case and the verb does not agree with it.

(1) *Russian*

a. *otec* ‘father’, *devuška* ‘girl’ (absolute form)

b. *Otec*      *prišel-Ø*  
 father.ABS    come.PST-SGM  
 ‘The father came’

c. *Otec*      *vzjal-Ø*      *devušk-u*  
 father.ABS    take.PST-SGM girl-ACC  
 ‘The father took the girl’

(2) *Avar (pers. doc.)*

a. *wac* ‘brother’, *jas* ‘girl’ (absolute form)

b. *jas*      *j-ač’ana*  
 girl.ABS    SGF-come.PF  
 ‘The girl came’

c. *dir*      *wac-as*      *jas*      *j-osana*  
 PRO1S.GEN    brother-ERG    girl.ABS    SGF-take.PF  
 ‘My brother took the girl’

Ex. (3) from Nepali illustrates the mixed type of alignment, namely ergative alignment of case marking, and accusative alignment of agreement. In the intransitive (3a) *S* is in the absolute form, like *P* in the transitive (3b); *A* (i.e. *mai-le*) is in the

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<sup>4</sup> Current grammatical terminology lacks a general term for the citation form of nouns. European traditional grammar uses the term *nominative* with this value, but ‘nominative’ is also applied in some descriptive traditions to a form of nouns used in *S/A* function, but distinct from the citation form of nouns. The solution adopted in this paper is to use *absolute form* as a general term for the form of nouns used extra-syntactically in the function of designation, regardless of the range of syntactic contexts in which it can be used.

ergative case. By contrast, the transitive verb form *dekh-ē* ‘saw’<sup>5</sup> agrees with *A*, and the intransitive *ga-ē* ‘went’ agrees with *S*.<sup>6</sup>

(3) *Nepali* (adapted from *Bickel Forthcoming*)

- a. *ma*            *ga-ē*  
PRO1S.ABS    go-1S.PST  
‘I went’
- b. *mai-le*    *timro*    *ghar*        *dekh-ē*  
PRO1S-ERG    your        house.ABS    see-1S.PST  
‘I saw your house’

Constructions in which the single argument of a monovalent verb does not share the coding characteristics of any of the two core terms of the transitive construction (a situation sometimes referred to as *tripartite alignment*) are attested in many languages, but rarely constitute the predominant pattern in the languages in question.

### 2.3. Alignment variations within languages

In some languages, all intransitive constructions show accusative alignment, which means that any construction in the languages in question must necessarily involve a term with the same coding characteristics as the agent of prototypical action verbs. In other languages, symmetrically, all intransitive constructions show ergative alignment. In such languages, any construction must necessarily involve a term with the same coding characteristics as the patient of prototypical action verbs. There are many other languages, however, where accusative and ergative alignment coexist, as variously discussed in *Comrie 1973*, *Moravcsik 1978*, or *Van Valin 1981*, among others.

Basically, variations in alignment patterns can be of two types, commonly known as *split ergativity* and *split intransitivity*, as defined below:<sup>7</sup>

- (a) Split ergativity refers to alignment variations conditioned by grammatical features of the verb (e.g. tense, aspect, etc.) or of its core arguments.
- (b) Split intransitivity (*Van Valin 1990*) refers to the fact that, in the same grammatical conditions, verbs occurring in intransitive constructions may divide into two (or possibly more) classes differing in their alignment properties.

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<sup>5</sup> Perception verbs like ‘see’ are not prototypically transitive, but in Nepali, as in most European languages, the construction of this verb does not differ from that of prototypical transitive verbs.

<sup>6</sup> The combination of accusatively aligned agreement and ergatively aligned NP marking is relatively common – see in particular *Anderson 1976*.

<sup>7</sup> Both types of alignment variation can be attested in the same language. See for instance *Lazard 1995* on Georgian.

### 2.3.1. Split ergativity

Among the possible types of split ergativity, I will be concerned here by the particularly common type shown by languages in which the coding characteristics of the transitive construction vary depending on the TAM value of the verb, whereas intransitive constructions have constant coding characteristics.

For example, in the intransitive constructions of the Kurmanji variety of Kurdish, *S* is invariably in the absolute form, and the verb invariably agrees with it, whereas the coding characteristics of *A* and *P* in the transitive construction depend on the tense of the verb: in some tenses, *A* is in the absolute form and *P* in the oblique case, and the verb agrees with *A*, whereas in other tenses, *A* is in the oblique case, *P* in the absolute form, and the verb agrees with *P* – ex. (4).<sup>8</sup> In other words, in ex. (4), the tense illustrated by the sentences to the left of the stroke triggers accusative alignment, whereas the tense illustrated in the sentences to the right of the stroke triggers ergative alignment.

#### (4) *Kurdish (Kurmanji) (Blau & Barak 1999)*

- |    |                  |                |                 |   |                 |              |               |
|----|------------------|----------------|-----------------|---|-----------------|--------------|---------------|
| a. | <i>Ez</i>        | <i>Sînem-ê</i> | <i>dibîn-im</i> | / | <i>Min</i>      | <i>Sînem</i> | <i>dît-Ø</i>  |
|    | PRO1SG           | Sinem-OBL      | see.IPF-1SG     |   | PRO1SG.OBL      | Sinem        | see.PF-3SG    |
|    | 'I see Sinem'    |                |                 |   | 'I saw Sinem'   |              |               |
| b. | <i>Tu</i>        | <i>Sînem-ê</i> | <i>dibîn-î</i>  | / | <i>Te</i>       | <i>Sînem</i> | <i>dît-Ø</i>  |
|    | PRO2SG           | Sinem-OBL      | see.IPF-2SG     |   | PRO2SG.OBL      | Sinem        | see.PF-3SG    |
|    | 'You see Sinem'  |                |                 |   | 'You saw Sinem' |              |               |
| c. | <i>Sînem</i>     | <i>min</i>     | <i>dibîn-e</i>  | / | <i>Sînem-ê</i>  | <i>ez</i>    | <i>dît-im</i> |
|    | Sinem            | PRO1SG.OBL     | see.IPF-3SG     |   | Sinem-OBL       | PRO1SG       | see.PF-1SG    |
|    | 'Sinem sees me'  |                |                 |   | 'Sinem saw me'  |              |               |
| d. | <i>Sînem</i>     | <i>te</i>      | <i>dibîn-e</i>  | / | <i>Sînem-ê</i>  | <i>tu</i>    | <i>dît-î</i>  |
|    | Sinem            | PRO2SG.OBL     | see.IPF-3SG     |   | Sinem-OBL       | PRO2SG       | see.PF-2SG    |
|    | 'Sinem sees you' |                |                 |   | 'Sinem saw you' |              |               |

### 2.3.2. Split intransitivity and the notion of active type

The definition of split intransitivity put forward in section 2.4.1 leaves open the possibility of variations along the following two parameters: the relative importance of

<sup>8</sup> Here again, the transitive construction is illustrated by a verb which is not a prototypical transitive verb, but which, in the language in question, has the same construction as prototypical transitive verbs.

the two classes of intransitive verbs and the possibility to characterize them in semantic terms.

Most typological works on split intransitivity implicitly concentrate on the case of languages with two classes of intransitive verbs of roughly equal importance. But languages with a clearly predominant alignment type and a minor class of intransitive verbs whose construction does not follow the predominant alignment type are probably much more frequent.

For example, in Russian or in Latin, the accusative alignment is clearly predominant, but impersonal verbs governing the accusative case can be viewed as exceptional cases of intransitive verbs with ergative alignment, since their construction involves a term with the coding characteristics of *P* and no term with the coding characteristics of *A*.

Quite symmetrically, predominantly ergative languages may have a minor class of verbs occurring in constructions that involve no term with coding characteristics identical to those of *P*, and therefore constitute exceptions to the rule of ergative alignment. Such constructions can be called *anti-impersonal* in order to emphasize the symmetry with the impersonal constructions of predominantly accusative languages – see *Lazard 1985, Lazard 1995*. If they include a term with the same coding characteristics as *A*, they constitute exceptional instances of accusative alignment in predominantly ergative languages. Basque illustrates this type of split intransitivity.

As for the possible semantic correlates, it is uncontroversial that the notion of *active type* (*Klimov 1971, Mithun 1991*) often provides a satisfying explanation of split intransitivity. In the active type, intransitive verbs with *S* encoded like *A* assign a (relatively) active semantic role to *S*, whereas those with *S* encoded like *P* assign a (relatively) passive semantic role to *S*. It may also happen that the relevant feature is rather stativity, whose relation with agentivity is however obvious (see *Mithun 1991* for a discussion). To the classical examples of languages illustrating this type of split intransitivity, I would like to add the Nakh-Daghestanian language Akhvakh (*Creissels 2006b*). With the only exception of a very limited set of verbs with atypical valency patterns (see section 4.1), this language is consistently ergative in case marking and gender-number agreement, but in one tense (the perfective positive) the verb has active person agreement. In this tense, transitive verbs invariably agree with *A*, whereas intransitive verbs divide into two semantically motivated classes: those assigning a relatively active role to *S* agree in person with *S* in the same way as transitive verbs do with *A*, whereas those assigning a relatively passive role to *S* do not show person agreement.

However, at least in languages with a marked asymmetry between two classes of intransitive verbs differing in their alignment properties, the existence of a semantic correlate of split intransitivity should not be taken for granted. In such languages, one can imagine that the major class is simply the default class, and that synchronically, the minor class is nothing more than a set of exceptions that speakers must memorize. For example, if no condition on the relative importance of the two classes of intransitive

verbs is added, the definition of split intransitivity clearly applies to Latin or Russian, but so far nobody has argued that these languages should be considered as belonging to the active type.

Similarly, in Basque, the class of intransitive verbs with accusative alignment includes *irakin* ‘boil (intr.)’,<sup>9</sup> which can hardly be characterized as assigning an active role to its unique argument, whereas *mintzatu* ‘speak’, which clearly assigns an active role to its unique argument, follows the predominant ergative alignment. Some authors (for example, *Lafitte 1962*) have tried to propose a semantic characterization of this class of verbs, but their proposals are not very convincing, and I fully agree with Trask, who characterized it as ‘semantically arbitrary’, and suggested that it represents nothing more than a collection of historical accidents (*Trask 1997:111*).

We will return to this question in the conclusion, because the facts examined in sections 3 and 4 help to understand the emergence of semantically arbitrary split intransitivity.

### 3. Evolution of light verb constructions and alignment

A light verb construction,<sup>10</sup> such as English *have a look*, *do a dance* or *take a plunge*, departs from the canonical situation in which NPs represent participants in an event encoded by the verb. In a light verb construction, the verb is semantically “light” in the sense that its contribution to the conceptualization of an event is relatively small in comparison with that of one of its complements, very commonly, but not exclusively, a noun in *Prole*.

Light verb constructions are probably universal, but some languages use them with great frequency and systematically, and thus have a relatively limited number of verbal lexemes, in some cases less than a hundred.

Languages in which light verb constructions are particularly frequent include both predominantly accusative languages, such as Japanese, Turkish, Persian or Ewe (for discussion see, respectively, *Miyamoto 2000*, *Öztürk 2004*, *Samvelian 2001*, *Essegbey 1999*), and predominantly ergative languages, such as Basque, Tibetan or Lezgian (see respectively *Oyharçabal Forthcoming*, *Tournadre 1996: 184–188*, *Haspelmath 1993: 178–183*). Examples (5) and (6) illustrate the use in Turkish and Basque of the light verb corresponding to Eng. *do*.

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<sup>9</sup> Contrary to its English equivalent *boil*, *irakin* cannot be used transitively, and the Basque equivalent of the transitive uses of English *boil* is a causative construction.

<sup>10</sup> *Jespersen 1909–1949: VI §7.2* is generally credited with first coining the term *light verb*, which he applied to English V+NP constructions of the kind quoted above.

(5) *Turkish*

<i>hayret etmek</i>	astonishment + do → be astonished
<i>istirahat etmek</i>	rest (N) + do → rest (V)
<i>kabul etmek</i>	acceptance + do → accept
<i>şüphe etmek</i>	doubt (N) + do → doubt (V)
<i>taksim etmek</i>	division + do → divide
<i>vefat etmek</i>	death + do → die

(6) *Basque*

<i>agur egin</i>	greeting + do → greet
<i>barre egin</i>	laugh (N) + do → laugh (V)
<i>amets egin</i>	dream(N) + do → dream (V)
<i>leher egin</i>	explosion + do → explode
<i>lo egin</i>	sleep(N) + do → sleep (V)
<i>negar egin</i>	tear + do → cry

Crosslinguistically, light verb constructions tend to form more or less lexicalized or “idiomatized” combinations (for discussion see, for instance, *Brinton & Traugott 2005: 130ff*). Thus the nouns combining with light verbs usually exhibit morphosyntactic properties different from those of ordinary nominal arguments. For instance, in Basque and other languages where determiners are obligatory, light verb constructions are often characterized by the use of bare nouns (*Oyharçabal Forthcoming*). And in languages with a relatively flexible constituent order, the nouns in light verb constructions tend to exhibit limited mobility in relation to the verb.

Consequently, as in other cases of compounding, a natural evolution of light verb compounds is the fusion of the two elements, which results in re-establishing the canonical situation in which the main verb of a clause encodes the event to which the clause refers. In languages making extensive use of light verbs, this process may result in the massive creation of new verbal lexemes. For example, the Saharan language Kanuri has two morphological classes of verbs (*Hutchinson 1981*): a set of some 150 verbs that have long been available in the language but represent an unproductive morphological type, and a productive class of verbs originating in light verb compounds whose second element was the verb ‘say’. Ex. (7) shows that the inflectional suffixes of these verbs are still recognizable as cognate with forms of the verb ‘say’.

(7) *Kanuri*

<i>ngin</i>	‘I say’	<i>le-ngîn</i>	‘I go’
<i>nəmin</i>	‘you (sg.) say’	<i>le-nəmin</i>	‘you (sg.) go’

<i>shin</i>	‘he/she says’	<i>le-jîn</i>	‘he/she goes’
<i>nyen</i>	‘we say’	<i>le-nyên</i>	‘we go’
<i>nuwi</i>	‘you (pl.) say’	<i>le-núwi</i>	‘you (pl.) go’
<i>sai</i>	‘they say’	<i>le-zâi</i>	‘they go’

Like other types of compounds, light verb compounds may show coding characteristics different from those of canonical syntactic constructions, but this is not necessarily the case. In many languages, light verb constructions involving transitive verbs include a term showing coding characteristics identical to those of *A* in canonical transitive constructions, and the coalescence of *light verb* + *P* or *P* + *light verb* compounds may thus lead to the reanalysis of an argument having the coding characteristics of *A* as the *S* argument of an intransitive construction.

In predominantly accusative languages, this process has no incidence on alignment, since within the frame of accusative alignment, *S* and *A* have the same coding characteristics. By contrast, in a language in which ergative alignment predominates, if *A* reanalyzed as *S* maintains its coding characteristics, the coalescence of *light verb* + *P* or *P* + *light verb* compounds automatically creates intransitive verbs with accusative alignment.

### 3.1. An illustration from Lezgian

In Lezgian (*Haspelmath 1993*), the single argument of the verb *k'walaxun* ‘work’ is in the ergative case, like *A* in the prototypical transitive construction. The construction of this verb includes no term with the coding characteristics of *P*, and therefore exhibits accusative alignment. But ‘work’ as a noun is in Lezgian *k'walax*, and the verb *k'walaxun* is synonymous with the phrase *k'walax awun* (lit. ‘do work’, taking *work* as a noun) – ex. (8).

(8) *Lezgian (Haspelmath 1993)*

- a. *Ada k'walax iji-zwa*  
 DEM.SG.ERG work.ABS do-IPF  
 ‘(S)he is doing work’
- b. *Ada k'walax-zawa*  
 DEM.SG.ERG work-IPF  
 ‘(S)he is doing work’

According to Haspelmath’s analysis (see *Haspelmath 1993:178-180*), *k'walaxun* is the reduced form of the verbal compound *k'walax awun*. Within the frame of ergative alignment, it is perfectly normal for the NP representing the worker in the construction

of *k'walax awun* 'work' to stand in the ergative case, since the construction involves a noun (*k'walax*) in *P* role. It seems therefore reasonable to suppose that the conversion of a transitive light verb construction into an intransitive verb (described by Haspelmath as *Absolutive absorption*), not followed by a readjustment in the treatment of the remaining core term, is responsible for the exceptional construction of the intransitive verb *k'walaxun*.

Similar facts can be observed in many predominantly ergative languages having a minor class of anti-impersonal verbs whose construction follows accusative alignment.<sup>11</sup>

### 3.2. An illustration from Basque

In the southern dialects of Basque, in the construction of *deitu* 'call', the person who calls and the person being called are respectively represented by an NP in the ergative case and an NP in the dative case, but no term in the absolute form is present (*Zubiri & Zubiri 2000:520*). Since transitive constructions involve a term *A* in the ergative case and a term *P* in the absolute form, the construction of *deitu* is an accusatively aligned intransitive construction. But the verb *deitu* 'call' is synonymous with the light verb construction *dei egin*, lit. 'do call' (taking *call* as a noun). In this construction, the person who calls and the person being called are encoded exactly in the same way as with the verb *deitu*, but the presence of a noun in the absolute form (*dei*) gives to the construction the appearance of a canonical transitive construction – ex. (9).

(9) *Basque*

- a. *Koldo-k Gorka-ri deitu dio*  
 Koldo-ERG Gorka-DAT call.PF AUX.PRES.A3SG.P3SG.D3SG  
 'Koldo called Gorka'
- b. *Koldo-k Gorka-ri dei egin dio*  
 Koldo-ERG Gorka-DAT call.ABS do.PF AUX.PRES.A3SG.P3SG.D3SG  
 'Koldo called Gorka' (lit. 'did call to Gorka')

The evolution that gave rise to the verb *deitu* is not exactly the coalescence of the light verb with *P*, but the mechanism of 'Absolutive absorption' is the same as in Lezgian: the phrase *dei egin*, in which the noun *dei* in the absolute form assumed the syntactic role of *P*, has been substituted by a verb *deitu* derived from its nominal element, without any modification in the coding characteristics of the terms representing the participants, which automatically created an accusatively aligned intransitive construction.

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<sup>11</sup> See for example *Tournadre 1996:101-103* on Tibetan.

#### 4. Ellipsis and alignment

*A* and *P* may behave as obligatory terms of the transitive construction, but the mere omission of a core term can also be used to signal that the missing argument must be, either anaphorically identified with a salient referent, or interpreted as indeterminate. For example, in English, the absence of *P* in *He is eating* implies an indeterminate interpretation of the patient; in other languages, a formally identical construction would be interpreted as ‘He is eating it’.

The use of *A* or *P* ellipsis with an indeterminate interpretation is not limited to languages in which a particular type of alignment predominates. For example, *P* ellipsis with an indeterminate interpretation is perhaps particularly common among predominantly accusative languages, but some accusative languages ignore this possibility (for example, Nahuatl systematically uses ‘indeterminate object prefixes’ – see *Launey 1994:155-159*), and *P* ellipsis with an indeterminate interpretation is widespread among predominantly ergative languages too (for example, in Basque, depending on the context, *ikusi dute*, with *A* agreement of 3rd person plural and *P* agreement of 3rd person singular, can equally express ‘they see it / him / her’ or ‘they can see’).

Historically, transitive constructions in which the absence of a core argument expresses indeterminacy may undergo evolutions converting them into intransitive constructions. More or less complicated scenarios can be imagined, depending on the particularities of the individual languages, but the most obvious one is that the verb in question simply loses the possibility to be used in a full transitive construction, and consequently undergoes a reduction of the number of its arguments.

In predominantly accusative languages, the reanalysis of a transitive construction from which *P* is missing as an intransitive construction has no consequence on alignment typology, since a transitive construction from which *P* is missing has the appearance of a canonical intransitive construction. But in a predominantly ergative language, the result is a construction departing from the predominant alignment pattern, since it involves a term having the coding characteristics of *A*, but no term having the coding characteristics of *P*.

Symmetrically, in predominantly ergative languages, the reanalysis of *A* ellipsis cannot have any consequence on alignment typology, since a transitive construction from which *A* is missing has the appearance of a canonical intransitive construction. But in a predominantly accusative language, intransitive constructions resulting from such a reanalysis deviate from the predominant alignment pattern, since they involve a term having the coding characteristics as *P*, but no term having the coding characteristics of *A*.

#### 4.1. Pellipsis in predominantly ergative languages: an illustration from Akhvakh

In the Nakh-Daghestanian language Akhvakh,<sup>12</sup> a mechanism of person agreement following active alignment is found in one tense (and in one tense only), but the other coding properties of syntactic core terms follow ergative alignment. As in most languages belonging to the Nakh-Daghestanian family, NP case marking and verb agreement in gender and number are consistently ergative: in the transitive construction, *A* in the ergative case contrasts with *P* in the absolute form, and the verb agrees in gender and number with *P*,<sup>13</sup> whereas intransitive constructions generally include a term in the absolute form governing verb agreement in gender and number like *P* in the transitive construction – ex. (10).

(10) *Akhvakh*

- a. *ek'wa w-oq'-iło*  
man SGM-come-PF.NEG.SGM  
'The man did not come'
- b. *jaše j-eq'-iłe*  
girl SGF-come-PF.NEG.SGF  
'The girl did not come'
- c. *mašina b-eq'-iłe*  
car SGN-come-PF.NEG.SGN  
'The car did not come'
- d. *ek'wassw-e jaše j-ič'-iłe*  
man-ERG girl SGF-push-PF.NEG.SGF  
'The man did not push the girl'
- e. *ek'wassw-e mašina b-ič'-iłe*  
man-ERG car SGN-push-PF.NEG.SGN  
'The man did not push the car'
- f. *jašo-de ek'wa w-uč'-iło*  
girl-ERG man SGM-push-PF.NEG.SGM  
'The girl did not push the man'

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<sup>12</sup> The Akhvakh data discussed here is drawn from the author's field notes on the variety of Akhvakh spoken in Axaxdərə (Zaqatala province, Azerbaijan).

<sup>13</sup> The rule of gender-number agreement of the transitive verb with *P* applies even in the tense in which transitive verbs agree in person with *A*.

Depending on a complex combination of grammatical and lexical factors, verb agreement in gender and number is not always apparent.<sup>14</sup> As regards *P* ellipsis, depending on the context, in the absence of an NP in *P*role, transitive verb forms either showing neuter singular agreement or devoid of any apparent agreement mark equally admit an anaphorical or indeterminate interpretation.

In addition to the canonical valency patterns characterized by the presence of a term in the absolute form governing the agreement of the verb in gender and number, Akhvakh has a limited class of verbs with non-canonical valency patterns involving an argument in the ergative case and an argument in a spatial case, but no argument that could be represented by an NP in the absolute form. With respect to gender and number agreement, the verbs in question show neuter singular default agreement – ex. (11).

(11) *Akhvakh*

a. *ek'wassw-e jašo-ga eq-ere godi*  
 man-ERG girl-LAT look at-CONV COP.SGN  
 'The man is looking at the girl'

b. *χwe-de jašo-ge q'alač'-ari*  
 dog-ERG girl-ESS bite-PF  
 'The dog bit the girl'

c. *mik'i-de di-ge q'it'-ari*  
 child-ERG PRO1S-ESS pinch-PF  
 'The child pinched me'

There is no direct evidence that a *P*argument was ever present in the construction of these verbs, and an explanation of the exceptional valency pattern can only be speculative. However, the observation of some verbs occurring in canonical constructions suggests that the explanation may lie in the conventionalization of *P* ellipsis in constructions that, originally, were perfectly canonical transitive constructions.

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<sup>14</sup> In Akhvakh, gender-number agreement of verbs with *P* or *S* involves prefixes and suffixes. The presence of agreement prefixes is lexically determined (verbs divide into two morphological classes, those that have agreement prefixes in all their forms, and those devoid of agreement prefixes), whereas agreement suffixes occur in certain tenses only, irrespective of the presence or absence of lexically determined agreement prefixes. The verbs of ex. (10) (<*b*->*eq'uruła* 'come' and <*b*->*ič'uruła* 'push', conventionally quoted in isolation with the singular neuter prefix) belong to the class of verbs with obligatory agreement prefixes, whereas the verbs of the following examples all belong to the class of verbs devoid of agreement prefixes.

For example, the verb *λ'oruruła* is commonly encountered with the meaning 'hit' in a construction superficially similar to those illustrated by ex. (11), with an argument in the ergative case and an argument in the essive case – ex. (12).

(12) *Akhvakh*

*ek'wassw-e jašo-ge λ'or-ari*  
 man-ERG girl-ESS hit-PF  
 'The man hit the girl'

At first sight, *λ'oruruła* seems therefore to be another verb with an exceptional valency pattern. But in fact, *λ'oruruła* is a trivalent verb, and the construction illustrated by ex. (12) must be analyzed as the elliptical variant of a perfectly canonical valency pattern including an oblique argument in addition to *A* and *P*.

The point is that the same verb with the same meaning 'hit' (or closely related meanings) occurs also in a construction in which a term in the absolute form governing the agreement of the verb in gender and number represents the instrument used by the hitter to perform his/her action – ex. (13).

(13) *Akhvakh*

a. *ek'wassw-e jašo-ge reλ'a λ'or-ari*  
 man-ERG girl-ESS hand hit-PF  
 'The man hit the girl with his hand' (lit. applied the hand to the girl)

b. *ek'wassw-e jašo-ge ža λ'or-ari*  
 man-ERG girl-ESS fist hit-PF  
 'The man hit the girl with his fist' (lit. applied the fist to the girl)

c. *ek'wassw-e jašo-ge č'uli λ'or-ari*  
 man-ERG girl-ESS stick hit-PF  
 'The man hit the girl with a stick' (lit. applied a stick to the girl)

d. *toxturussw-e jašo-ge mežu λ'or-ari*  
 doctor-ERG girl-ESS needle hit-PF  
 'The doctor gave an injection to the girl' (lit. applied a needle to the girl)

Consequently, the basic meaning of *λ'oruruła* is 'someone applies something to a surface violently'. In *Akhvakh*, as in other Caucasian languages, the person being hit is not conceptualized as the patient of a prototypical two participant action, but as the target at which an agent is aiming a missile, and the apparently exceptional valency

pattern illustrated by ex. (12) is still recognizable as a transitive construction from which *P* is missing: ‘The man applied [an unspecified object] to the girl’, or ‘The man aimed [an unspecified object] at the girl’.

#### 4.2. *A* ellipsis in predominantly accusative languages

As discussed in three of the papers included in a forthcoming volume on split intransitivity edited by Mark Donohue and Søren Wichmann, in predominantly accusative languages, the reanalysis of *P* in elliptical transitive constructions (or ‘transimpersonal’<sup>15</sup> constructions) as the unique core argument of intransitive constructions can be a source of split intransitivity. *Holton Forthcoming* and *Mithun Forthcoming* discuss comparative evidence supporting the conclusion that, in various languages from the Americas and Papua New Guinea, split-intransitivity developed from the reanalysis of transimpersonal constructions as ergatively aligned intransitive constructions. *Malchukov Forthcoming* proposes a wider discussion of the evolutions of transimpersonal constructions, rightly pointing out that their reinterpretation as intransitive constructions has no consequence on alignment patterns in predominantly ergative languages (for example, in the Iwaidjan languages discussed by *Evans 2004*), whereas the same reanalysis may yield a split intransitive pattern when it occurs in predominantly accusative languages.

In this section, I illustrate this point by the comparison of Amharic and Russian impersonal constructions that can be viewed as representing two different stages in the evolution of transimpersonal constructions towards plain intransitive constructions with an exceptional alignment pattern.

The Ethiosemitic language Amharic is a predominantly accusative language in which arguments encoded as *S/A* are obligatorily cross-referenced by person markers which, in the absence of an NP in *S/A* role, normally have an anaphorical value. Amharic also has constructions, traditionally identified as ‘impersonal’, that can be analyzed as elliptical transitive constructions in which the absence of an NP in *A* role exceptionally triggers an indeterminate rather than anaphorical interpretation.

For example, the state of being hungry, without any hint about a possible external cause, is rendered in Amharic by a verb showing an expletive *S/A* marker of 3rd person singular masculine, and a *P* marker representing the person or animal being hungry – ex. (14a). But the same verb also occurs in a canonical transitive construction in which *A* and *P* are respectively assigned the roles of stimulus and experiencer – ex. (14b).

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<sup>15</sup> According to *Malchukov Forthcoming*, this term was coined by Mary Haas (*Haas 1941*).

(14) *Amharic* (Leslau 2005:43)

a. *rabä-ñ*

hunger.PF.S/A3SGM-P1SG

‘I am hungry’, lit. ‘It hungered me’

b. *injära rabä-ñ*

bread hunger.PF.S/A3SGM-P1SG

‘I am hungry for bread’, lit. ‘Bread hungered me’

Starting from situations of this type, one can easily imagine how the loss of the construction illustrated by ex. (14b) may result in the emergence of intransitive verbs whose exceptional construction cannot be explained as an elliptical transitive construction anymore, and must be viewed as an instance of ergative alignment.

The impersonal construction of the Russian verb *trjasti* ‘shake’ results from an evolution of this type. This verb occurs in a canonical transitive construction – ex. (15a), but also in an ergatively aligned impersonal construction. In ex. (15b), the only core term is an experiencer in the accusative case; it would be ungrammatical to add a nominative NP, and the only possible way to mention an external cause is to use a preposition phrase in oblique role.

(15) *Russian*

a. *Ja trjasu kovër*

PRO1S shake.PRES.1SG carpet.ACC

‘I am shaking the carpet’

b. *Menja trjasët (ot lixoradki)*

PRO1S.ACC shake.PRES.3SG (from fever.GEN)

‘I am shaking (with fever)’, lit. ‘It shakes me (from fever)’

It seems reasonable to assume that the impersonal construction illustrated by (15b) developed as an elliptical variant of the transitive construction: ‘[An unspecified cause] shakes me’. But the fact that the cause is now encoded as an oblique introduced by the ablative preposition *ot* proves that, in the present state of Russian, this construction is no longer an elliptical variant of the transitive construction, and has been reanalyzed as a construction of its own.

## 5. Grammaticalization of TAM periphrases and alignment

The frequency of split alignment patterns conditioned by tense or aspect has long been recognized in the literature on alignment typology. In such cases, ergative alignment is generally found in past tense or perfective aspect, and the commonly proposed explanations rest on the hypothesis of the passive origin of ergative alignment.

For example, *Estival & Myhill 1988:445* propose “the hypothesis that in fact all ergative constructions have developed from passives”. But, as noted by *Gildea 1998:246*, in order to maintain this proposal, they have to broaden the definition of passive in such a way that it trivializes their claim.

Discussions on the origin of ergativity are often flawed by the lack of a clear distinction between *resultative* and *passive*. Non-finite or nominalized verb forms with a resultative meaning are a common source of passives, but are also very often involved in TAM periphrases. Consequently, the mere fact that a resultative form can be identified in the source of an ergative construction is not sufficient to conclude that the source construction was passive. The confusion between resultative (forms) and passive (constructions) is probably the reason why so many authors have overestimated the importance of passive constructions as the source of ergativity, and neglected the possibility of changes in alignment patterns induced by the grammaticalization of aspectual, temporal or modal periphrases.

### 5.1. TAM periphrases and their evolution

A TAM periphrasis is a complex construction whose function is to provide a temporal, aspectual, or modal characterization of the event encoded by a verb involved in the construction. In a particularly common type of TAM periphrasis, a temporal, aspectual or modal *auxiliary* constitutes the main predicate to which the *auxiliated verb* is subordinated, and the construction involves some raising mechanism, for example raising to subject, as in English *You should [speak with him]*, or *He began [to move around the room]*.

In a TAM periphrasis, depending on the nature of the matrix construction and of the form taken by the auxiliated verb, the coding characteristics of the arguments of the auxiliated verb are not necessarily the same as in a simple independent clause headed by the same verb. Syntactically, the crucial distinction is between arguments that remain within the phrase headed by the auxiliated verb, and arguments external to this phrase, whose coding characteristics are determined by their role in the matrix construction.

In the particular type of periphrasis involving a raising verb in the role of auxiliary and a non-finite form of the auxiliated verb, the arguments that remain within the phrase headed by the auxiliated verb can be expected to have the same coding characteristics as in a non-periphrastic construction, but the coding characteristics of

the raised argument are determined by the auxiliary acting as a TAM operator, and consequently may differ from those it shows in non-periphrastic constructions.

TAM periphrases of this type may subsequently evolve into complex predicates in which the auxiliary and the auxiliated verb do not behave as two verbal heads in a relation of subordination, and rather function as a single predicate whose argument structure is that of the auxiliated verb. The following step in the evolution may be the fusion of the two elements of the complex predicate into a single word, resulting in the creation of a synthetic verb form whose inflection is at least partly the reflex of an ancient auxiliary. Romance future, originating in a modal periphrasis similar to English *have to V*, is a well-known illustration of this type of evolution.

In cases when the NPs representing the arguments of the auxiliated verb have the same coding characteristics in the original TAM periphrasis as in non-periphrastic constructions, the new synthetic tense forms created by such evolutions do not differ from the pre-existing tenses in their alignment properties. But if the arguments of the auxiliated verb have different coding characteristics in the TAM periphrasis, the result may be the creation of tense forms with alignment properties differing from those of the pre-existing tenses, unless a readjustment occurs under the pressure of analogy.

## 5.2. Possessive-resultative periphrases and split alignment

*Benveniste 1952* argued that the evolution responsible for the emergence of ergatively aligned perfects in Indo-Iranian languages was not the reanalysis of passive constructions, as was traditionally assumed, but the development of a periphrastic expression of the perfect of transitive verbs within the frame of possessive predication, that is, an evolution basically identical to the formation of Romance or Germanic *have* perfects. *Anderson 1977* is also often quoted for drawing attention to cases of possessive constructions that become ergative.

Benveniste's theory has been challenged by *Cardona 1970*, who argued the case for the traditional solution. The fact that Old Indic marked *A* in the construction of the transitive perfect with the instrumental (and not with the genitive) provides some support to this thesis. However, on the basis of a detailed examination of Old Indic data, *Peterson 1998* and *Bynon 2005* conclude that the view according to which the ergative construction of the modern Indic languages goes back to a Sanskrit passive must be rejected in favor of Benveniste's theory. In particular, they rightly point out that, if passive is assumed to be the source of the ergative construction, the place of the transitive agent at the beginning of the clause preceding the patient requires a special explanation, whereas this position is natural for a possessor reinterpreted as an agent.

Perfects originating from periphrases involving a transitive verb of possession ('have') seem to be attested only in Europe, but in languages that have other types of possessive predication, a similar reanalysis of possessive periphrases involving resultative forms is not uncommon. In addition to Indo-Iranian languages, *Benveniste*

1952 mentions Classical Armenian and Ancient Egyptian, and *Creissels 1979* discusses evidence for reconstructing various sub-types of the evolution *possessive-resultative periphrasis* > *transitive perfect* in the history of perfect or past forms of the verb in Hungarian, K'ichee', Northern Russian dialects, and Georgian.

The first stage in the evolution that gave rise to *have* perfects in Romance and Germanic languages is the development of a possessive-resultative periphrasis combining possessive predication with a resultative form derived from a transitive verb. Originally, the term coded in the same way as the possessor in the prototypical possessive predication is interpreted as a person concerned by the result of an event, as was the case in Late Latin when the periphrasis that subsequently gave rise to the Romance perfect started developing – ex. (16).

(16) *Late Latin*

a. *Littera scripta est*

letter.ABS written.ABS be.PRES.3SG

'The letter is written'

b. *Habeo pecuniam*

have.PRES.3SG money.ACC

'I have money'

c. *Habeo litteram scriptam*

have.PRES.3SG letter.ACC written.ACC

lit. 'I have a letter written', with the meaning 'I am concerned by the fact that a letter is written'

Later, the NP encoded like a possessor is reinterpreted as representing the *A* argument of the transitive verb. In other words, the possessive-resultative periphrasis becomes the expression of perfect with transitive verbs. This is what occurred in Romance languages, and this evolution tends to repeat itself in a cyclic way. For example, French has a distinction between the Romance perfect resulting from the evolution of the possessive-resultative periphrasis of Latin (as in *J'ai écrit la lettre* 'I have written the letter') and a more recent possessive-resultative periphrasis, still interpretable in its literal meaning, at least in certain contexts (in French, *J'ai déjà deux lettres d'écrites* lit. 'I already have two letters written' does not necessarily imply to identify the 1st person with the agent of *écrire*; this sentence can be uttered for example by an applicant collecting recommendation letters, with the meaning 'Two of the letters I have solicited have already been written').<sup>16</sup>

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<sup>16</sup> The relative chronology of the emergence of the two constructions is particularly obvious in Spanish, since the Spanish perfect auxiliary *haber* is no more used as a verb of possession in Spanish, whereas the

When this evolution occurs in a language in which possessive predication involves a transitive verb assigning the role of possessor to *A* (as was the case in Late Latin), it does not induce any change in alignment, since the reanalyzed possessor already has the coding characteristics of *A*. But in the languages of the world, possessive predications more or less aligned on locative or existential constructions, in which the possessor is encoded as an oblique in an intransitive predication, are also very common. In such conditions, a transitive perfect developing from a possessive-resultative periphrasis, if no readjustment occurs, will be characterized by a construction in which *P* (the reanalyzed possessee) is encoded like *S* in intransitive predication, whereas *A* (the reanalyzed possessor) has coding characteristics differ from those of *A* in other tenses.

For example, in Classical Latin, possession was not expressed by the transitive *habeo* construction (as in *Habeo pecuniam* ‘I have money’), but by a copular construction with the possessee encoded as *S* and the possessor in the dative case (*Mihi est pecunia*). If the process that gave rise to the Romance perfect had started at a stage when Latin still used this expression of possession, the possessive-resultative periphrasis would have been something like *\*Mihi est littera scripta*, which could have led to a split alignment pattern with ergative alignment in the perfect.

Moreover, even in languages in which the possessor in possessive predication is assimilated to the agent of the prototypical transitive construction, ‘pre-ergative’ possessive-resultative periphrases are possible, as pointed out by *Bynon 2005*, who draws an interesting parallel between the Vedic construction in which she sees the ancestor of Indic ergative constructions and the German construction illustrated by ex. (17b).<sup>17</sup>

(17) *German (Bynon 2005:46)*

a. *Die Kartoffeln sind angebrannt*

DEF potato.PL be.PRES.3P PV.burn.PP

‘The potatoes are / have got burnt’

a. *Mir sind die Kartoffeln angebrannt*

PRO1S.DAT be.PRES.3P DEF potato.PL PV.burn.PP

‘I have been and gone and burned the potatoes’

(lit. ‘To me the potatoes are burnt’)

Other languages attest that similar evolutions may be followed by readjustments leading to less common types of alignment. For example, the usual expression of

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Spanish possessive-resultative periphrasis is based on *tener*, which in Modern Spanish has replaced *haber* as a verb of possession.

<sup>17</sup> An interesting parallel can also be drawn with the use of possessive marking to encode agents in the Western Polynesian language Futunan – *Moyse-Faurie 2000*.

possession in Russian is aligned on existential predication, with the possessee in the absolute form (nominative), and the possessor marked by the preposition *u* ‘at, near’ – ex. (18a). Some dialects of Russian have created a transitive perfect with *A* treated in the same way as the possessor in possessive predication, but *P* in the accusative case – ex. (18b).<sup>18</sup>

(18) *Russian (dial.) (Creissels 1979:593)*

- a. *U Ivana novaja mašina*  
 at Ivan.GEN new.SGF.ABS car.SG.ABS  
 ‘Ivan has a new car’
- b. *U volkov s’edeno korovu*  
 at wolf.PL.GEN eaten.SGN cow.SG.ACC  
 ‘The wolves have eaten the cow’

In this construction, the agent maintains the oblique-like marking of the possessor in the original possessive-resultative periphrasis, but the patient has acquired accusative case marking by analogy with the canonical transitive construction, and verb agreement has been lost. *Benveniste 1952* describes a similar situation in Classical Armenian.

To summarize, TAM-driven split alignment patterns with ergative alignment in past tense or perfective aspect may develop as an automatic consequence of the evolution of possessive-resultative periphrases, in accusative languages that have possessive predications in which the possessor is encoded as an oblique.

### 5.3. Progressive periphrases and split alignment

Progressive aspect is often expressed by complex constructions in which the phrase headed by the auxiliated verb in some non-finite or derived form is treated as a non-verbal predicate, as in English *Mary is [buying gifts for the children]* (to compare with *Mary is [in the garden]*), or Spanish *María está [comprando regalos para los niños]* (to compare with *María está [en el jardín]*). The tendency of such periphrases to evolve towards a more general meaning of present, as attested by the ongoing evolution of English progressive periphrasis, is a well-known phenomenon.

The motivations of this type of periphrasis and its further evolutions have been largely discussed in the literature on grammaticalization. What I would like to draw attention to is that, in predominantly ergative languages, if no readjustment occurs, the development of such periphrases may lead to a split alignment pattern with accusative alignment in the present tense.

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<sup>18</sup> On constructions involving resultative forms in Russian dialects, see *Trubinskij 1983*.

Non-verbal predications generally involve an argument encoded like the *S* argument of ordinary intransitive verbs. Consequently, in predominantly accusative languages, the *A* argument of a transitive verb treated as *S* in a progressive periphrasis shows the same coding characteristics as in non-periphrastic constructions, and the grammaticalization of such a periphrasis cannot induce a change in alignment. By contrast, in predominantly ergative languages, the *A* argument of transitive verbs receives a different treatment in the progressive periphrasis, since formally it is then *S* in an intransitive predication.

For example, Basque has a progressive periphrasis in which the main predicate is the intransitive compound verb *ari izan* ‘be engaged in’. This compound verb combines with nominal complements marked typically locative – ex. (19a), or with clausal complements headed by a verb in the form of the so-called ‘imperfective participle’, used also to form the non-periphrastic present of the verbs that do not have synthetic finite forms – ex. (19b) & (19d). The construction with a clausal complement is a raising construction in which *S* in the construction of the intransitive verb *ari izan* represents the *S/A* argument of the auxiliated verb. With transitive verbs, this results in coding characteristics different from those of the same argument in non-periphrastic constructions – ex. (19d-e).

(19) *Basque*

- a. *Jon lanean ari da*  
 Jon.ABS work.SG.LOC engaged be.PRES.S3SG  
 lit. ‘Jon is engaged in work’ → ‘Jon is working’
- b. *Jon paseatzen da*  
 Jon.ABS walk.IPF AUX.PRES.S3SG<sup>19</sup>  
 ‘Jon is walking’ (non-periphrastic present)
- c. *Jon [[paseatzen] ari]] da*  
 Jon.ABS walk.IPF engaged be.PRES.S3SG  
 lit. ‘Jon is engaged in walking’ (progressive periphrasis)
- d. *Jonek berriak ikusten ditu*  
 Jon.ERG news.SG.ABS see.IPF AUX.PRES.A3SG.P3PL  
 ‘Jon is watching the news’ (non-periphrastic present)

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<sup>19</sup> The auxiliary in the analytic conjugation of intransitive verbs is identical with the verb *be*, but the combination it forms with the auxiliated verb behaves differently from the combination of *be* with its complement.

- e. *Jon*    [[*berriak*    *ikusten*] *ari*]    *da*  
 Jon.ABS    news.SG.ABS    see.IPF    engaged    be.PRES.S3SG  
 lit. ‘Jon is engaged in watching the news’ (progressive periphrasis)

It might be tempting to conclude from this that Basque has a split alignment pattern with a progressive tense triggering accusative alignment, but this would not be correct, since there is no evidence that the *ari izan* construction has been reanalyzed as a single clause. As explicitly stated in *Hualde & Ortiz de Urbina 2003:284*, the construction in (19c) & (19e) is a complex construction, in which the verb supplying the lexical content of the expression is formally subordinate to the main verb *ari izan*. In (19e), *Jon* is not *A* in the construction of the transitive verb *ikusi* ‘see’, but *S* in the construction of the intransitive verb *ari izan* ‘be engaged in’, and therefore the fact that it stands in the absolute form does not contradict the principle of ergative alignment. But if this periphrasis were reanalyzed as a verb form on a par with the other non-periphrastic forms of the Basque verb, in the absence of a readjustment, this evolution would result in a split ergativity pattern with accusative alignment in a present or progressive tense.

The facts of Avar are particularly interesting to observe in this connection. Avar has an analytic present in which a participial form of the verb combines with the copula in auxiliary function. But with transitive verbs, two constructions are possible. A first possibility is that *A* is in the ergative case, *P* is in the absolute form, and the verb agrees in gender and number with *P* only, as in the other tenses. In ex. (20b), *A* is masculine and *P* neuter, and *b-eχ’ule-b b-ugo* shows neuter agreement in the prefix of the participle, in the suffix of the participle, and in the prefix of the auxiliary. A second possibility is that *A* and *P* are in the absolute form, and the verb shows a complex agreement pattern: if the auxiliated verb belongs to the class of verbs that have agreement prefixes, its prefix agrees with *P*, but the agreement suffix of the auxiliated verb and the auxiliary agree with *A*. In ex. (20c), with the same nouns in *A* and *P* roles, *b-eχ’ule-w w-ugo* shows neuter agreement in the prefix of the participle only, whereas the suffix of the participle and the prefix of the auxiliary show masculine agreement (i.e., agreement with *A*).

(20) *Avar* (*Alekseev & Ataev 1997*)

- a. *emen*    *w-ač’ule-w*    *w-ugo*  
 father.ABS    SGM-coming-SGM    SGM-COP  
 ‘Father is coming’
- b. *insu-ca*    *χur*    *b-eχ’ule-b*    *b-ugo*  
 father-ERG    field.ABS    SGN-plowing-SGN    SGN-COP  
 ‘Father is plowing the field’

c. *emen*      [*χur b-eλ'ule-w*]      *w-ugo*  
 father.ABS    field.ABS    SGN- plowing -SGM    SGM-COP  
 'Father is plowing the field'

The construction illustrated by ex. (20c) can be analyzed as involving two clauses, a matrix clause headed by the copula and a subordinate participial clause:

- (a) the copula agrees with its sole argument *emen* 'father' in the absolute form;
- (b) the agreement suffix of the participle reflects its status of head of a phrase that, taken as a whole, behaves as a predicative adjective phrase in a copular construction;
- (c) the agreement prefix of the participle takes into account the syntactic relations within the phrase [*χur b-eλ'ule-w*].

A plausible explanation, elaborated by Harris & Campbell (*Harris & Campbell 1995:187-189*), is that (20c) maintains the structure of the original periphrasis, whereas in (20b), the original biclausal construction has been reinterpreted as a single clause, and the case and agreement marks have been readjusted under the pressure of the predominant ergative pattern.

#### 5.4. Uncommon split alignment patterns, and the TAM periphrases of Basque

*Dixon 1979:95* makes the strong claim that "if a split is conditioned by tense or aspect, the ergative marking is ALWAYS found in either past tense or perfect aspect". Counterexamples have been found, in particular among Cariban languages, but *Dixon 1994* discards them as insignificant, because of their "transitional" nature.

I will not discuss here the exact significance of the Cariban examples, which are analyzed in detail in Gildea's works (see in particular *Gildea 1998*). What I would like to show here is that, more generally, there is nothing extraordinary in the existence of less common TAM-driven split alignment patterns, since some languages attest TAM periphrases whose grammaticalization, in the absence of a readjustment under the pressure of analogy, would automatically give rise to split alignment patterns contradicting the universal posited by Dixon.

Basque provides particularly interesting data. In addition to the progressive periphrasis analyzed in the previous section, Basque has several TAM periphrases whose grammaticalization could lead to the emergence of various split alignment patterns, since in the periphrases in question, the core arguments of transitive verbs are not encoded in the same way as in non-periphrastic constructions.

### 5.5.1. The future periphrasis of Basque with *joan* ‘go’

In this periphrasis, the verb *joan* ‘go’ combines with the allative form of a verbal noun. Since *joan* is an intransitive verb, in this future periphrasis, the S/A argument of the auxiliated verb is uniformly treated as an *S* – ex. (21).

(21) *Basque*

a. *Jonek berriak ikusiko ditu*

Jon.ERG news.SG.ABS see.FUT AUX.PRES.A3SG.P3PL

‘Jon will watch the news’ (non-periphrastic future)

b. *Jon [berriak ikustera] doa*

Jon.ABS news.SG.ABS see.NOM.ALL go.PRES.S3SG

‘Jon is going to watch the news’ (periphrastic future)

Consequently, in the absence of a readjustment, the replacement of the non-periphrastic future by a form originating from this periphrasis (which is a very common phenomenon in the evolution of languages) could lead to a split alignment pattern with accusative alignment in the future.

### 5.5.2. The modal periphrasis of Basque with *behar izan* ‘have to’

In the evolution of languages, periphrases involving motion verbs are not the only possible source of renewal of future morphology. Future tenses originating from modal periphrases are also widely attested, and in this connection it is interesting to mention the *behar izan* construction, a modal periphrasis of Basque whose grammaticalization could also result in a change in alignment.

*Behar izan*, lit. ‘have need’ is a compound verb which can take a nominal complement, as in ex. (22a), but is found also in a modal periphrasis in which it combines with the perfective participle of the auxiliated verb – ex. (22c) & (22e). The behavior of this modal periphrasis is rather intricate (for a detailed discussion, see *Hualde & Ortíz de Urbina (eds.) 2003:301-308*), but what is important in the perspective of this article is that, in conformity with the etymology, the person that has to do something can always be encoded as *A* in a transitive construction, even if the auxiliated verb is intransitive, as in ex. (22c).

(22) *Basque*

- a. *Jon-ek kotxe berri bat behar du*  
Jon-ERG car new one need have.PRES.A3SG.P3SG  
'Jon needs a new car'
- b. *Jon etxe-ra doa*  
Jon.ABS house-SG.ALL go.PRES.S3SG  
'Jon is going home'
- c. *Jon-ek [etxe-ra joan] behar du*  
Jon-ERG house-SG.ALL go.PF need have.PRES.A3SG.P3SG  
'Jon must go home'
- d. *Jon-ek ogi-a erosten du*  
Jon-ERG bread-SG.ABS buy.IPF AUX.PRES.A3SG.P3SG  
'Jon is buying bread'
- e. *Jon-ek [ogi-a erosi] behar du*  
Jon-ERG bread-SG.ABS buy.PF need have.PRES.A3SG.P3SG  
'Jon must buy bread'

Consequently, in the absence of a readjustment, the grammaticalization of this periphrasis as the usual expression of future might lead to a split ergative pattern with accusative alignment in the future, but with the atypical variety of accusative case marking commonly designated as *marked-nominative*.

5.5.3. *The resultative periphrasis of Basque*

In the perspective of this article, a particularly interesting construction is the resultative periphrasis in which the verb *izan* 'be' combines with the perfective participle in the definite form treated as an adjectival predicate.<sup>20</sup>

Contrary to Indo-European 'past participles', this resultative form of the Basque verb is not particularly patient-oriented, and with transitive verbs it can be constructed with a term in the ergative case, like the finite forms of transitive verbs. Consequently, when transitive verbs occur in the resultative periphrasis, the raised argument can indifferently be *A* or *P*, and the non-raised argument is treated exactly as in an independent clause, which gives rise to constructions that are often designated as passive (if the raised term is *P*) and antipassive (if the raised term is *A*) – ex. (23).

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<sup>20</sup> In most dialects of Basque, nouns and adjectives in predicate function are in the definite form.

(23) *Basque*

- a. *Jon-ek eskutitz bat idatzi du*  
Jon-ERG letter one write.PF AUX.PRES.A3SG.P3SG  
'Jon wrote a letter' (non-periphrastic perfective)
- b. *Eskutitz hau [Jon-ek idatzi-a] da*  
letter DEM.SG.ABS Jon-ERG write.PF-SG.ABS be.PRES.S3SG  
'This letter has been written by Jon' (passive variant of the resultative periphrasis, lit. 'This letter is [Jon (having) written (it)]')
- c. *Jon [eskutitz asko idatzi-a] da*  
Jon letter many write.PF-SG.ABS be.PRES.S3SG  
'Jon has written many letters' (antipassive variant of the resultative periphrasis, lit. 'Jon is [(having) written many letters]')

In the passive variant of this periphrasis, there is no change in case assignment in comparison with the non-periphrastic construction of a transitive verb, and *izan* 'be' agrees with an *S* representing the *P* argument of a transitive verb. Consequently, the grammaticalization of this construction would induce no modification in the alignment patterns of Basque, and the loss of verb agreement with *A* would even reinforce the consistency of ergative alignment. By contrast, the grammaticalization of the antipassive variant could lead to a split alignment pattern with accusative alignment in the perfect. In other words, Basque attests a resultative periphrasis whose grammaticalization, in the absence of a readjustment, would automatically lead to the emergence of a split alignment pattern contradicting Dixon's universal.

## 6. Conclusion

I have tried to show that the explanation of typological regularities in the alignment patterns of the languages of the world lies at least partly in changes whose motivation has nothing to do with alignment, but which automatically induce alignment changes if certain conditions are met.

The facts examined in sections 3 and 4 show that split intransitivity is not necessarily semantically motivated, at least in languages with a marked predominance of one of the two major alignment types, since at least some of the phenomena responsible for the emergence of intransitive verbs departing from the predominant alignment pattern are devoid of semantic conditioning. In particular, the use of *do* as a light verb is not necessarily limited to constructions in which the argument treated as *A* in the construction of *do* can be characterized as relatively active (see for example Basque *lo*

*egin* ‘sleep’, or Turkish *vefat etmek* ‘die’). This implies that, in anti-impersonal constructions originating from the coalescence of such compounds, the term showing the same coding characteristics as the agent of prototypical transitive verbs must not necessarily represent a participant assuming a relatively active role in the event.

Consequently, it would not be correct to consider the notion of active type as providing a universally valid explanation of split ergativity, and there is no reason to consider anomalous the case of Basque, with a semantically heterogeneous class of intransitive verbs triggering accusative alignment in a predominantly ergative language. Many of the reported cases of active alignment are uncontroversial (and I have myself discovered a particularly clear case of active alignment in Akhvakh), but I would not be surprised if further investigations revealed that the importance of the active type has been overestimated by linguists focusing on the possible direct motivations of lexically conditioned variations in alignment, and neglecting the possibility of indirect motivations.<sup>21</sup>

In section 5, I have argued that TAM-driven split alignment patterns have not necessarily direct motivations either, since the grammaticalization of TAM periphrases is a particularly frequent phenomenon in the evolution of languages, and in TAM periphrases, core arguments may show coding characteristics different from those they show in non-periphrastic constructions.

More generally, the observations made in the preceding sections suggest that alignment changes induced by changes occurring in other areas of the grammar may play a crucial role in the relative recessivity of ergative alignment.<sup>22</sup> It is not excluded that some functional factors may play a direct role in this phenomenon too, but perhaps the main reason of this relative recessivity is simply that changes whose motivation has nothing to do with alignment, but which mechanically induce a shift from ergative to accusative, are more frequent than those likely to induce a shift from accusative to ergative.

Another general conclusion suggested by the data analyzed in this paper concerns the role of analogical readjustments in the evolutions affecting alignment patterns. In particular, TAM-driven split-ergativity is very common, but given the particularly usual character of the evolutions leading to this kind of split-ergativity, one might wonder why it not even more widespread. The reason is probably that paradigmatic pressure favors readjustment processes, as shown in section 5.3 on the example of Avar.

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<sup>21</sup> On this matter, see in particular the discussion between Hewitt and Harris on split intransitivity in Georgian – *Harris 1981, Hewitt 1983, Hewitt 1987a, Hewitt 1987b, Harris 1989, Harris 1990*.

<sup>22</sup> According to the currently admitted estimations (see in particular *Dixon 1994:2-4*), approximately 25-30% of the languages of the world have a predominantly ergative system of core syntactic term coding. For more precise estimates, taking into account the distinction between NP marking and indexation, see the relevant chapters in *Haspelmath & al. 2005*.

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## Abbreviations

A (preceding a number indicating a person) = A marker, ABS = absolute form of nouns, ACC = accusative case, ALL = allative case, AUX = auxiliary, CONV = converb, COP = copula, D = dative marker, DAT = dative case, DEF = definite article, DEM = demonstrative, ERG = ergative case, ESS = essive case, FUT = future, GEN = genitive case, IPF = imperfective, LAT = lative case, LOC = locative case, NEG = negative marker, NOM = nominalization, P (preceding a number indicating a person) = P marker, OBL = oblique case, PF = perfective, PL = plural, PP = past participle, PRES = present, PRO = pronoun, PST = past, PV = preverb, S (preceding a number indicating a person) = S marker, S/A (preceding a number indicating a person) = S/A marker, SG = singular, SGF = singular feminine, SGM = singular masculine, SGN = singular neuter, S/P (preceding a number indicating a person) = S/P marker.