

# Alignment

Jinyuan Wu

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## 1 Introduction

### 1.1 Starting point: accusative v.s. ergative

This note is about alignment in world languages. I start from summarizing the ideas reviewed in Aldridge (2008) in more descriptive terms, and clarification of the discussion of **ergativity** in the descriptive-typological literature, say, Dixon’s Basic Linguistic Theory (BLT) § 3.9. What I want to do is to reconcile both approaches: to “integrate out” unobservable derivational steps in the generative account and present them in terms of BLT, while giving more precise and structure-based definition of so-called “functional” terms.

To do so, I need to first coin a definition of *surface* S, A and O arguments. I emphasize *surface* because languages have *valency changing devices*. In a clause constructed with a valency changing device, say passivization, the S arguments semantically corresponds to the O argument in the active counterpart of the clause, while the E argument semantically corresponds to the A argument in the active counterpart. In transformational terms, we can say in a passive clause, the **surface** S argument corresponds to the **deep** A argument, and the **surface** E argument corresponds to the **deep** O argument (BLT § 3.20). Though the transformational analysis is no longer supported as a separate stage after PSG in generative syntax, it is still a good descriptive tool to link two constructions with only slightly differences in their derivations.

## 2 The argument structure and the definition of deep S, A, and O arguments

### 2.1 The argument structure: coarse-grained *vP*

The first question is what morphosyntactic phenomena are related to the argument structure and the definition of deep S, A and O mentioned above. In generative terms, the **argument structure** is given by the parts of *vP* in which specifier positions are filled by NPs. Routinization of the structure of *vP* gives a Tree-adjoining grammar (TAG)-like tree with argument slots, something like Fig. 1. The information contained in the derivation process of the *vP* can be roughly summarized as the following:

- The relation between the verb and the arguments, or the **semantic (thematic) roles** of the arguments.
  - A Trans-DP dependency relation is to be interpreted as the grammatical relation connecting the verb and the **patient**.
  - A *v*-DP dependency relation is to be interpreted as the grammatical relation connecting the verb and the **agent**.
  - Fig. 1 therefore gives the *argument structure* of *hurt*: it may take an agent argument and a patient argument.
- The relation between the arguments. The agent is in a higher position than the patient position.

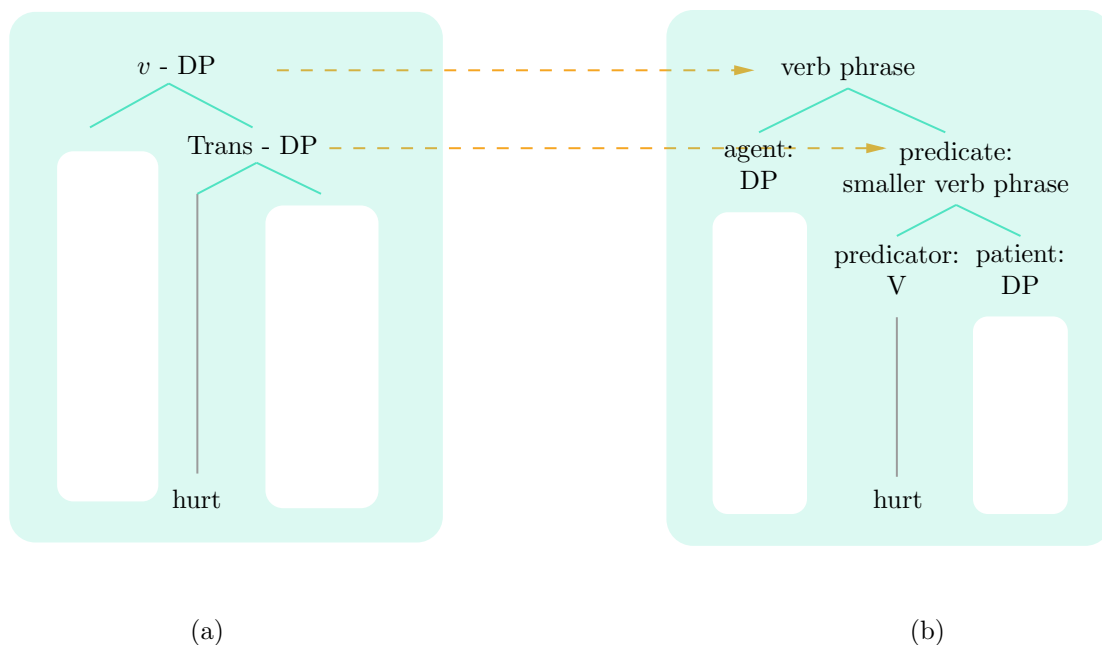


Figure 1: An example of a routinized *vP*, or the so-called argument structure of the verb *hurt*

## 2.2 Syntactic tendencies related to the argument structure

Though the argument structure is commonly recognized as mostly semantic (BLT Table 3.1), it has syntactic consequences, which are also regulated by pragmatic factors. Note that it immediately follows from the relative hierarchy position of different arguments that there is likely to be a stable *binding* relation from the higher argument to the lower argument. Hence, we may expect that

- (1) If a language has an English-like reflexive pronoun system (i.e. *myself*, *yourself*, *himself*, *herself*), then it is highly likely that a reflexive pronoun can fill the patient position, but not the agent position.

Note that this tendency has *nothing* to do with how the arguments are marked, and so the correlation between semantic roles and the distribution of reflexive pronouns holds for both accusative and ergative languages.

Similarly, when forming an imperative clause, the agent is easily understood from the context, and hence it can be expected that among languages there is the following generalization (Comrie, 1989, § 5.4):

- (2) Even though *pro*-drop is not allowed in most cases, the agent in an imperative clause is likely to be omitted, *regardless* of its case marking.

Thus the largely semantic argument structure has syntactic consequences and is strongly related to pragmatics, and therefore may be seen as a *construction* with integrated syntactic, semantic and pragmatic information. But note that it can be broken down into smaller structural units built together by the structure-building operation Merge, and its semantic and pragmatic functions can be analyzed in terms of the structure building or *derivation* process. This is where my opinion deviates from the strictly constructivist approach.

## 2.3 Coarse-graining of semantic roles: introducing the S, A, and O roles

The problem of the tendencies related to the argument structure discussed above is their scopes are too narrow. (1) and (2) tell us nothing about a clause headed by a verb with no agent argument. The next question to ask is for clauses without an agent argument, whether we have generalizations like

Table 1: Morphological and syntactic ergativity

	syntactically accusative	syntactically ergative
morphologically accusative	typical accusative languages	Dyirbal 1st and 2nd pronouns
morphologically ergative	Basque, Tzotzil	Dyirbal

(1) and (2). In other words, the question is whether non-agent arguments have agent-like syntactic properties. Another equivalent way to frame the question is to ask how can semantic roles be coarse-grained (or clustered) further into categories with respect to argument structure-related syntactic properties. The definition of these coarse-grained categories of semantic roles is a prototype-based one (Comrie, 1989, § 5.2).

After defining S, A, and O, tendencies like (1) and (2) can be further generalized to all types of verbs. The generalized version of (1) is that

(3) A always binds O.

This generalization seems too strong at the first glance: it means semantics-related information of argument slots has direct influence on their syntactic structural positions. Even for Dyirbal, a language with much more ergativity than most syntactically ergative languages, (3) still holds (Van de Visser, 2003).

### 3 Morphological ergativity

#### 3.1 Marking strategies of S, A, and O

Once the definition of the S, A and, O notation is obtained, the question becomes how they are marked. But what is meant by “marking”? Languages may mark S, A and O via the following ways:

- Morphological case.
- Constituent order.
- Movement, ellipsis,

Morphological marking occurs at all stages of clause building. It may occur directly in the

### 4 The split pivot theory of syntactic ergativity

#### 4.1 Definition of subjecthood 1: agent property

#### 4.2 Definition of subjecthood 2: topic property

#### 4.3 Coordination pivot

#### 4.4 Control construction

#### 4.5 Variation 1: control structures

### 5 Constituent orders and ergativity

One important question avoided in § 3 and § 4 is constituent order. It is in principle possible, for example, that a language is typically morphologically and syntactically ergative, but the constituent order is  $\text{NP}_{\text{erg}}\text{-V-NP}_{\text{abs}}$  and  $\text{NP}_{\text{abs}}\text{-V}$ . Should this be the case, we would have to come up with a typology of *constituent order* ergativity. The good news is that ergative languages also tend to avoid this tricky point: it seems that (Mahajan, 1994)

- (4) Ergative languages are largely verb-peripheral, or free word order or V2 or ...

Hence no reasonable comparison between a transitive clause and an intransitive clause can be made with respect to constituent order.

## 6 Transitive alignment

Transitive alignment

## 7 Split-S systems

## 8 Austronesian focus system

## 9 Direct-Inverse system

## References

- Edith Aldridge. Generative approaches to ergativity. *Language and Linguistics Compass*, 2(5): 966–995, 2008.
- Bernard Comrie. *Language universals and linguistic typology: Syntax and morphology*. University of Chicago press, 1989.
- Anoop Mahajan. The ergativity parameter: have-be alternation, word order and split ergativity. In *North East Linguistics Society*, volume 24, page 22, 1994.
- Mario Van de Visser. ‘syntactic ergativity’ in dyirbal and balinese. *Linguistics in the Netherlands*, 20(1):177–188, 2003.