

## Introduction to syntactic typology: Clause structure

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### 1. Introduction

‘Linguistic typology’ is the term commonly used for the systematic study of the structural diversity of languages, its limits, and the regularities that can be found in cross-linguistic variation affecting various aspects of language structure.

Linguistic typology is crucial in the training of field linguists, since it allows them to have an idea of the types of organization they may be faced with in the analysis of poorly documented (or totally undocumented) languages.

As regards specifically syntactic typology, the questions commonly addressed in syntactic descriptions can be divided into three broad areas: clause structure, noun phrase structure, and complex constructions. Due to time limitation, this presentation is limited to the most basic aspects of clause structure.

### 2. Basic transitive construction

#### 2.1. Definition

In a given language, the basic transitive construction is the construction involving a verb and two noun phrases most commonly used to encode situations involving a prototypical agent and a prototypical patient (prototypical transitive actions). Prototypical transitive actions (or events characterized by the highest possible degree of semantic transitivity) involve a change of state or position undergone by one of the two participants (the patient) and triggered by the action of the other participant (the agent); moreover, prototypical transitivity implies that the action of the agent is conscious and voluntary, and aims at changing the state of the patient or controlling its position.

#### 2.2. Extension of the basic transitive construction to the coding of situations that cannot be characterized as prototypical actions

In all languages, the basic transitive construction is also widely used to encode situations that cannot be characterized as prototypical actions. In (1), sentence (1a) refers to a prototypical transitive event. This is not the case for sentence (1b), which nevertheless shows exactly the same construction.

(1) Basque (isolate)

(1a) *Haurr-ek ispilu-a puskatu dute.*

child-PL.ERG mirror-SG break.CPL have.PRS.I<sub>ERG</sub>:3PL.I<sub>ZER</sub>:3SG

‘The children have broken the mirror.’

- (1b) *Haurr-ek ispilu-a ikusi dute.*  
 child-PL.ERG mirror-SG see.CPL have.PRS.I<sub>ERG</sub>:3PL.I<sub>ZER</sub>:3SG  
 ‘The children have seen the mirror.’

However, there is cross-linguistic variation in ‘transitivity prominence’, i.e., the extension of the basic transitive construction to the coding of situations that cannot be characterized as prototypically transitive. Examples (2-5) illustrate the fact that English transitive clauses encoding events that are not prototypical transitive events may have intransitive equivalents in other languages (i.e., may correspond to clauses whose construction is different from that of the clauses referring to prototypical transitive events).

- (2) Akhvakh (Nakh-Daghestanian)
- (2a) *Mik'i-de istaka biq'wāri.*  
 child-ERG glass break.CPL  
 ‘The child broke the glass.’
- (2b) *Mik'i-λa istaka harig<sup>w</sup>ari.*  
 child-DAT glass see.CPL  
 ‘The child saw the glass.’
- (3) Koroboro Senni (Songhay)
- (3a) *Woy-oo na ar-oo wii.*  
 woman-D CPL.TR man-D kill  
 ‘The woman killed the man.’
- (3b) *Ay dii boro foo.*  
 1SG see person one  
 ‘I saw a person.’
- (4) Mandinka (Mande)
- (4a) *Kèwôo yè fòolèesúwòo dádâa.*  
 man.D CPL.TR bicycle.D repair  
 ‘The man repaired the bicycle.’
- (4b) *Kèwóo làfi-tà kòd-òo lá.*  
 man.D want-CPL.INTR money.D POSTP  
 ‘The man wants money.’
- (4c) *Kèwóo ñíná-tá íj kòntóyò lá.*  
 man.D want-CPL.INTR 1SG name.D POSTP  
 ‘The man has forgotten my name.’
- (5) Moloko (Afroasiatic, Chadic)
- Mana a-b=an ana kəra.*  
 Mana I<sub>S/A</sub>:3SG-hit=I<sub>DAT</sub>:3SG DAT dog  
 ‘Mana hits a dog.’ (lit. ... hits to a dog)

### 2.3. A terminological point

In order to avoid confusion, it is advisable to restrict the use of ‘agent’ and ‘patient’ to the semantic roles defined above, and to use for example A and P for the nominal terms of clauses that, whatever their semantic roles, are encoded in the same way as the agent and the patient in the basic transitive construction. For example, in (1b), *haurrek* ‘children’ is the A term of a syntactically transitive construction, but semantically, the participant it represents is an experiencer, not an agent.

## 2.4. Basic transitive construction and intransitive constructions of transitive verbs

In many languages, the verbs having the ability to encode prototypical transitive actions have alternative constructions with the same denotative meaning, as in *The mechanic fixed the car* and *The car was fixed by the mechanic*. In such cases, the question is to decide which construction qualifies as the basic transitive construction. In most languages, there is no difficulty in identifying one of the constructions as the basic transitive construction on the basis of the following criteria:

- in the basic transitive construction, the verb form is morphologically less complex,
- in the constructions other than the basic transitive construction, the coding of the agent and the patient shows less characteristics typical for core nominal terms, which can be analyzed as evidence of detransitivization,
- the basic transitive construction is subject to less restrictions, and is more frequent in spontaneous discourse.

For example, in Inuktitut, the basic transitive construction (6a) involves indexation of both nominal terms, whereas in the passive variant (6b) and in the antipassive variant (6c), one nominal term only is indexed.

(6) Baffin Island Inuktitut (Eskaleut)

(6a) *Anguti-up arnaq kunik-taa.*  
 man-ERG.SG woman kiss-I<sub>A</sub>:3SG.I<sub>p</sub>:3SG  
 ‘The man kissed the woman.’

(6b) *Arnaq kunik-tau-juq anguti-mut*  
 woman kiss-PASS-I<sub>S</sub>:3SG man-ABL.SG  
 ‘The woman was kissed by the man.’

(6c) *Anguti kunik-si-vuq arna-mik.*  
 man kiss-ANTIP-I<sub>S</sub>:3SG woman-MOD.SG  
 ‘The man is kissing a woman.’

## 2.5. Transitive coding typology

As will be discussed in section 7, in some languages, the linear ordering of the terms in predicative constructions (in particular in the basic transitive construction) is totally rigid. If there is no morphological mark distinguishing A from P, their position in the clause may be essential for their identification.

(7) !Xun (Kx’a)

(7a) *mī kú shē ’āà.*  
 1SG PROG see 2SG  
 ‘I see you.’

(7b) *’āà kú shē mī.*  
 2SG PROG see 1SG  
 ‘You see me.’

(8) Mandinka (Mande)

(8a) *Dánòò yè jàtóo fǎa.*  
 hunter.D CPL.TR lion.D kill  
 ‘The hunter killed the lion.’

- (8b) *Jàtôo yè dánòò fǎa.*  
 lion.D CPL.TR hunter.D kill  
 ‘The lion killed the hunter.’

Two types of morphological mechanisms may contribute to the distinction between A and P:

- the ‘flagging’ of A and/or P by the use of a syntactically marked case form (i.e., a case form distinct from the quotation form of nouns used in non-syntactic contexts),<sup>1</sup> or by the adjunction of an adposition (pre- or postposition) ;
- the indexation of A and/or P, i.e. the use of morphological elements referring to A and/or P that occupy a position distinct from that occupied by the corresponding NPs (most often, within the verb form or in its immediate periphery: agreement markers, pronominal clitics).

The contrast between A and P is maximal in the languages in which one of them (P in example (9), A in example (10)) is at the same time flagged and not indexed, whereas the other (A in example (9), P in example (10)) is at the same time unflagged and indexed.

- (9) Russian (Indo-European, Slavic)  
 quotation form of nouns: *doktor* ‘doctor’, *devuška* ‘girl’  
*Doktor vylečil-Ø devušku.*  
 doctor(M) heal.PST-*I*<sub>S/A</sub>:SG.M girl(F).ACC  
 ‘The doctor healed the girl.’

- (10) Avar (Nakh-Daghestanian)  
 quotation form of nouns: *was* ‘boy’, *χur* ‘field’  
*Was-aṣ χur b-eḷ’ana.*  
 boy(M)-ERG field(N) *I*<sub>S/P</sub>:SG.N-plough.CPL  
 ‘The boy ploughed the field.’

As illustrated by examples (11) and (12), many other configurations are attested. In (11), both A and P are flagged and indexed, whereas in (12), A is flagged and indexed, whereas P is neither flagged nor indexed. However, on the whole, A is less often flagged and more often indexed than P (which means that the configuration illustrated above by Russian is much more widespread, in the languages of the world, than that illustrated by Avar).

- (11) Basque, non-standard (isolate)  
*Jon-ek Edurne-ri ikusi dio.*  
 Jon-ERG Edurne-DAT see.CPL have.PRS.*I*<sub>erg</sub>:3SG.*I*<sub>dat</sub>:3SG  
 ‘Jon saw Edurne.’

- (12) Kabyle (Afroasiatic, Berber)  
*Yeldi weqcic tawwurt*  
*I*<sub>S/A</sub>:3SG.M.open.CPL SBJ.boy(M) door(F)  
 ‘The boy opened the door.’

In a given language, the transitive coding is not necessarily uniform, in the sense that two or more formal types of coding may alternate according to various types of conditioning. In

<sup>1</sup> In this presentation, for the languages in which nouns are inflected for case, I designate the case form coinciding with the quotation form of nouns as ‘zero-case’. In grammatical traditions, this form is variously designated as ‘nominative case’, ‘absolute case’, ‘direct case’, ‘free state’, etc.

quite a few languages, the transitive coding varies depending on the TAM value expressed by the verb. In (13a-b), A is indexed and not flagged, whereas P is flagged and not indexed. By contrast, in (13c-d), A is flagged and not indexed, whereas P is indexed and not flagged.<sup>2</sup>

(13) Kurmanji (Indo-European, Iranian)

- |   |  |
|---|--|
| <p>(13a) <i>Ez Sînem-ê dibîn-im.</i><br/>         1SG Sinem-K see.ICPL-I<sub>ZER</sub>:1SG<br/>         ‘I see Sinem.’</p> <p>(13b) <i>Sînem min dibîn-e.</i><br/>         Sinem 1SG.K see.ICPL-I<sub>ZER</sub>:3SG<br/>         ‘Sinem sees me.’</p> | <p>(13c) <i>Min Sînem dît-Ø.</i><br/>         1SG.K Sinem see.CPL-I<sub>ZER</sub>:3SG<br/>         ‘I saw Sinem.’</p> <p>(13d) <i>Sînem-ê ez dît-im.</i><br/>         Sinem-K 1SG see.CPL-I<sub>ZER</sub>:1SG<br/>         ‘Sinem saw me.’</p> |
|---|--|

The ‘differential flagging’ of P (i.e., P flagging limited to animate or definite Ps) is widespread cross-linguistically. In (14), the use of the preposition *a* to flag the P phrase is conditioned by the animate vs. inanimate nature of its referent.

(14) Spanish

- (14a) *El coche atropelló a un peatón.*  
 the car ran\_over ACC a pedestrian  
 ‘The car ran over a pedestrian.’
- (14b) *El tren atropelló un tractor.*  
 the train ran\_over a tractor  
 ‘The train ran over a tractor.’

The same phenomenon may occur in P indexation. In (15), the indexation of P in sentence (b) is conditioned by definiteness.

(15) Swahili (Niger-Congo, Bantu)

- (15a) *Hamisi a-li-soma ki-tabu.*  
 Hamisi(1) I<sub>S/A</sub>:cl1-CPL-read SG-book(7)  
 ‘Hamisi read a book.’
- (15b) *Hamisi a-li-ki-soma ki-tabu.*  
 Hamisi(1) I<sub>S/A</sub>:cl1-CPL-I<sub>p</sub>:cl7-read SG-book(7)  
 ‘Hamisi read the book.’

In most languages, it is possible to describe the coding of A and P separately, but it may also happen that the coding of A and the coding of P interfere in a more or less complex way (*co-argument sensitivity*). For example, in Hungarian, the indexation of A depends on the definiteness/indefiniteness of P.

(16) Hungarian (Uralic)

- (16a) *Az ágy alól kihúz-ott-Ø egy macskát.*  
 D bed from-under take\_from-PST-I<sub>S/A</sub>:3SG one cat.ACC  
 ‘He/she took a cat from under the bed.’
- (16b) *Az ágy alól kihúz-t-a a macskát.*  
 D bed from-under take\_from-PST-I<sub>S/A</sub>:3SG.I<sub>p</sub>:3.D D cat.ACC  
 ‘He/she took the cat from under the bed.’

<sup>2</sup> Kurmandji has a binary case system, with two cases designated here as zero-case (coinciding with the quotation form of nouns) and marked case (glossed K, whose use depends on the syntactic role of nouns).

- (16c) *Az ágy alól kihúz-t-unk egy macskát.*  
 D bed from-under take\_from-PST-I<sub>S/A</sub>:1PL one cat.ACC  
 ‘We took a cat from under the bed.’
- (16d) *Az ágy alól kihúz-t-uk a macskát.*  
 D bed from-under take\_from-PST-I<sub>S/A</sub>:1PL.I<sub>P</sub>:3.D D cat.ACC  
 ‘We took the cat from under the bed.’

In some languages, transitive coding involves a marking of TAM distinctions distinct from that found in intransitive constructions. For example, in Soninke, the completive aspect is marked by *dà* in transitive clauses, but zero-marked in intransitive clauses.

- (17) Soninke (Mande)
- (17a) *Yùgòn dà dòròkén bòoxó.*  
 man.D CPL.TR shirt.D tear  
 ‘The man tore the shirt.’
- (17b) *Yùgòn búgú.*  
 man.D go.out  
 ‘The man went out.’

## 2.6. Optionality vs. obligatoriness of A and P

There is considerable cross-linguistic variation in the possibility vs. impossibility of omitting the NPs in A and/or P role with either an anaphoric or non-specific reading, and this variation is not correlated to the presence vs. absence of an indexation mechanism. For example, Bambara (Mande) and Japanese equally lack any form of indexation, but in the transitive construction of Bambara, it is absolutely impossible to leave A and P unexpressed, whereas in Japanese, A and P are commonly omitted if the speaker estimates that the addressee can retrieve them from the context.

## 3. Intransitive constructions

### 3.1. Valency and transitivity

There is no straightforward relationship between the number of essential participants implied by the lexical meaning of verbs, and the fact that they occur in the transitive construction as defined above, or in other types of constructions.

As already discussed, even the bivalent verbs whose lexical meaning can be characterized as prototypically transitive may have alternative intransitive constructions (passive or antipassive), and there is cross-linguistic variation in the fact that bivalent verbs that are not prototypically transitive select the transitive construction or an ‘extended intransitive construction’ in which the coding of one of the two arguments is not distinct from the coding of adjuncts.

Conversely, a transitive construction may be possible for semantically monovalent verbs, in particular when they take the form of ‘light verb compounds’. For example, in Basque, ‘sleep’ and ‘speak’ are expressed literally as ‘do sleep’ (*lo egin*) and ‘do word’ (*hitz egin*), with the single participant encoded as the A term of a transitive construction whose P term is the non-verbal element of the compound.

(18) Basque (isolate)

(18a) *Haurr-ek lo egiten dute.*  
 child-PL.ERG sleep do.ICPL PRS.I<sub>ERG</sub>:3PL.I<sub>ZER</sub>:3SG  
 ‘The children are sleeping (lit. are doing sleep).’

(18b) *Gizon horr-ek ez du euskar-az hitz egiten.*  
 man DEM.SG-ERG NEG PRS.I<sub>ERG</sub>:3SG.I<sub>ZER</sub>:3SG Basque-SG.INSTR word do.ICPL  
 ‘This man does not speak Basque (lit. does not do word in Basque).’

It may also happen that the P term of a transitive construction does not refer to a participant, but to the delimitation of the event, as in (19b), where *qású-báané* ‘one month’ is encoded as the P term of a transitive construction:

(19) Soninke (Mande)

(19a) *À wàtí yérú.*  
 3SG be\_sick last\_year  
 ‘(S)he was sick last year.’

(19b) *À dà qású-báané wàtí.*  
 3SG TR month-one be\_sick  
 ‘(S)he was sick during a whole month.’

### 3.2. Alignment relationships between transitive and intransitive constructions

Most of the time, intransitive constructions include a term whose coding properties are identical to those of one of the core terms of the transitive construction, either A (‘accusative’ alignment, as in (20)) or P (‘ergative’ alignment, as in (21)). In the typological literature, this term is commonly designated as S (which can be understood as an abbreviation for ‘single core term’).

(20) Russian (Indo-European, Slavic)

(20a) *Devuška prišl-a.*  
 girl(F) come.PST-I<sub>S/A</sub>:SG.F  
 ‘The girl came.’

(20b) *Doktor prišël-Ø.*  
 doctor(M) come.PST-I<sub>S/A</sub>:SG.M  
 ‘The doctor came.’

(20c) *Doktor vylečil-Ø devušku.*  
 doctor(M) heal.PST-I<sub>S/A</sub>:SG.M girl(F).ACC  
 ‘The doctor healed the girl.’

(21) Avar (Nakh-Daghestanian)

(21a) *Jas j-ač’ana.*  
 girl(F) I<sub>S/P</sub>:SG.F-come.CPL  
 ‘The girl came.’

(21b) *Was w-ač’ana.*  
 boy(M) I<sub>S/P</sub>:SG.M-come.CPL  
 ‘The boy came.’

(21c) *Was-aš χur b-eš’ana.*  
 boy(M)-ERG field(N) I<sub>S/P</sub>:SG.N-plough.CPL  
 ‘The boy ploughed the field.’

In some languages all (or almost all) intransitive verbs show the same alignment relationship with the transitive construction, but some languages have two classes of intransitive verbs that differ in their alignment relationship with the transitive construction. In (22a), the single core argument of *erori* ‘fall’ is coded like P in the transitive construction (illustrated by the verb ‘break’), whereas in (22b), the single core argument of *irakin* ‘boil’ has the same coding characteristics as A in the transitive construction.

(22) Basque (isolate)

(22a) *Ispilu-a erori da.*  
mirror-SG fall.CPL be.PRS.I<sub>zer</sub>:3SG  
‘The mirror has fallen down.’

(22b) *Ur-ak irakin du.*  
water-SG.ERG boil.CPL have.PRS.I<sub>erg</sub>:3SG  
‘The water has boiled.’

(22c) *Haurr-ak ispilu-a puskatu du.*  
child-SG.ERG mirror-SG break.CPL have.PRS.I<sub>erg</sub>:3SG.I<sub>zer</sub>:3SG  
‘The child has broken the mirror.’

In (23), the single core argument of ‘go’ is indexed like A in the transitive construction (illustrated by the verb ‘teach’), whereas the single core argument of ‘sleep’ is indexed like P.

(23) Galela (West Papuan)

(23a) *No-wi-doto.*  
I<sub>A</sub>:2SG-I<sub>p</sub>:3SG.M-teach  
‘You teach him.’

(23b) *Wo-ni-doto.*  
I<sub>A</sub>:3SG.M-I<sub>p</sub>:2SG-teach  
‘He teaches you.’

(23c) *No-tagî.*  
I<sub>A</sub>:2SG-go  
‘You are going.’ (S = A)

(23d) *Ni-kiolo.*  
I<sub>p</sub>:2SG-be\_asleep  
‘You are asleep.’ (S = P)

It may also happen that the alignment relationship between transitive and intransitive constructions is conditioned grammatically, in particular, by the TAM value expressed by the verb. For example, in Kurmanji, the TAM-conditioned variation in transitive coding has no equivalent in intransitive constructions, and consequently the alignment relationship depends on TAM (A = S ≠ P in (24a-d), A ≠ S = P in (24e-h)).

(24) Kurmanji (Indo-European, Iranian)

(24a) *Ez Sînem-ê dibîn-im*  
1SG Sinem-K see.ICPL-I<sub>ZER</sub>:1SG  
‘I see Sinem.’

(24b) *Sînem min dibîn-e*  
Sinem 1SG.K see.ICPL-I<sub>ZER</sub>:3SG  
‘Sinem sees me.’

(24e) *Min Sînem dît-Ø.*  
1SG.K Sinem see.CPL-I<sub>ZER</sub>:3SG  
‘I saw Sinem.’

(24f) *Sînem-ê ez dît-im.*  
Sinem-K 1SG see.CPL-I<sub>ZER</sub>:1SG  
‘Sinem saw me.’

- (24c) *Ez têt-m.*  
 1SG come.ICPL-I<sub>ZER</sub>:1SG  
 ‘I am coming.’
- (24d) *Sînem têt-Ø.*  
 Sinem come.ICPL-I<sub>ZER</sub>:3SG  
 ‘Sinem is coming.’
- (24g) *Ez hat-im.*  
 1SG come.CPL-I<sub>ZER</sub>:1SG  
 ‘I came.’
- (24h) *Sînem hat-Ø.*  
 Sinem come.CPL-I<sub>ZER</sub>:3SG  
 ‘Sinem came.’

Finally, it must be emphasized that there is no straightforward relationship between the formal characteristics of the transitive construction and the alignment relationship with intransitive constructions. Example (25) illustrates that, contrary to a widespread belief, the overt flagging of A does not necessarily correlate with ergative alignment. In (25), the same explicit marking by means of the ‘subject case’ is observed for S in intransitive predication.

- (25) Oromo (Afroasiatic, Cushitic)
- (25a) quotation form: *Tulluu* (proper name), *makiinaa* ‘car’
- (25b) *Makiinaa-n hin dhufu.*  
 car-SBJ NEG arrive.PRS.I<sub>S/A</sub>:3SG.M  
 ‘The car is not arriving.’
- (25c) *Tulluu-n gammada.*  
 Tulluu-SBJ be\_glad.PRS.I<sub>S/A</sub>:3SG.M  
 ‘Tulluu is glad.’
- (25d) *Tulluu-n makiinaa bite.*  
 Tulluu-SBJ car buy.CPL.I<sub>S/A</sub>:3SG.M  
 ‘Tulluu bought a car.’

## 4. Trivalent verbs

### 4.1. Extended transitive coding and double transitive coding

As a rule, trivalent verbs such as ‘give’, ‘show’, ‘send’, or ‘sell’, have a construction in which the most agent-like participant is coded as A. By contrast, there is cross-linguistic variation in the coding of the other two participants (commonly designated as ‘recipient’ and ‘theme’ in recent literature). Their coding may show a contrast between a term coded like the P term in the basic transitive construction, and a term showing oblique-like coding (extended transitive coding). In the recent literature, the alignment of the theme with P (as in *give something to someone*) is designated as ‘indirective’, and the alignment of the recipient with P (as in *provide someone with something*) is designated as ‘secundative’. Example (26) illustrates indirective alignment, whereas example (27) illustrates secundative alignment, and example (28) shows that both alignment types may coexist in one and the same language.

- (26) Hungarian (Uralic)
- (26a) *János pénz-t keresett.*  
 János money-ACC earn.PST.I<sub>S/A</sub>:3SG  
 ‘János earned money.’
- (26b) *János pénz-t adott Béla-nak.*  
 János money-ACC give.PST.I<sub>S/A</sub>:3SG Béla-DAT  
 ‘János gave money to Béla.’

- (27) Chamorro (Austronesian, Oceanic)  
 (27a) *Ha tuge' i kannastra.*  
 3SG.ERG weave ABS basket  
 'He wove the basket.'  
 (27b) *Ha na'i i patgon ni leche.*  
 3SG.ERG give ABS child OBL milk  
 'He gave the child milk.'
- (28) Soninke (Mande)  
 (28a) *Múusá dà qálisî-n kìnì Dénbà yí.*  
 Moussa TR money-D give Demba POSTP  
 'Moussa gave the money to Demba.'  
 (28b) *Múusá dà Dénbà kú qálisí yà.*  
 Moussa TR money-D give Demba POSTP  
 'Moussa gave the money to Demba.'

It may also happen that no hierarchy is apparent in the coding of the recipient and the theme (double-transitive constructions, commonly referred to as 'double-object constructions).

- (29) Panyjima (Pama-Nyungan)  
 (29a) *Ngunha parnka ngarnarta mantu-yu.*  
 DEM lizard eat.FUT meat-ACC  
 'That lizard will eat the meat.'  
 (29b) *Ngatha yukurru-ku mantu-yu yinyanha.*  
 1SG dog-ACC meat-ACC give.PFV  
 'I gave the dog meat.'
- (30) Yaqui (Uto-Aztecan)  
 (30a) *U yoeme tabu-ta bwise-k*  
 D man rabbit-ACC catch-CPL  
 'The man caught the rabbit.'  
 (30b) *U yoeme jamut-ta kaba'i-ta mika-k.*  
 D man woman-ACC horse-ACC give-CPL  
 'The man gave the woman a horse.'

The question of the SYNTACTIC hierarchy in double-transitive constructions is a complex question, since there may be asymmetries in the syntactic behavior of the recipient and the theme. In such cases, it is often the recipient (rather than the theme) that shows properties similar to those of P in the basic transitive construction. Example (31) shows that, in the double-transitive construction of Yaqui, a passive construction is only possible with the recipient in subject role.

- (31) Yaqui (Uto-Aztecan)  
 (31a) *Inepo kareta-ta María-ta mikak.*  
 1SG cart-ACC María-ACC give.TAM  
 'I gave María a cart.'  
 (31b) *María kareta-ta mik-wa-k.*  
 María cart-ACC give-PASS-TAM  
 'María was given a cart.'

- (31c) \**Kareta Maria-ta mik-wa-k.*  
 carreta María-ACC dar-PASS-TAM  
 Intended meaning: ‘The car was given to María.’

## 5. Non-core participants and circumstantials (obliques)

Cross-linguistically, the nominal terms of clauses other than A, P and S (commonly grouped under the label of ‘obliques’) occur most often as adpositional (pre- or postpositional) phrases, or (in the languages in which nouns are inflected for case) as NPs in a morphological case other than the zero case (the zero case being defined as the case form coinciding with the quotation form of nouns). In (32), *S* (*a férjem*) is in the zero case, whereas all the other noun phrases are in a marked case form.

- (32) Hungarian (Uralic)  
*A férj-em öt év-ig mérnök-ként dolgozott egy gyár-ban.*  
 D husband-1SG five year-TERM engineer-ESS work.PST.I<sub>S/A</sub>:3SG one factory-INESS  
 ‘My husband worked five years as an engineer in a factory.’

The possibility of having morphologically unmarked obliques is variously regulated in the individual languages. For example, (33) illustrates the fact that in many languages, including the languages of Sub-Saharan Africa, place names in locative function do not take the morphological marks taken by most other nouns in the same function.

- (33) Mandinka (Mande)  
 (33a) *Í ná Fàatú tàrà sàatée tó.*  
 1SG CPL.TR Fatou find village.D LOC  
 ‘I met Fatou in the village.’  
 (33b) *Í ná Fàatú tàrà Sějò.*  
 1SG CPL.TR Fatou find Sédhiou  
 ‘I met Fatou in Sédhiou.’

It may also happen that mentioning a non-essential participant requires a construction including a second verb whose function is not to denote a distinct event, but to expand the argument structure of the first verb. For example, the use of ‘give’ in benefactive periphrases is widespread in the world’s languages.

- (34) Yoruba (Benue-Kwa)  
 (34a) *Rà á fún mi.*  
 buy 3SG give 1SG  
 ‘Buy it for me.’  
 (.34b) *Ó jíṣé fún mi.*  
 3SG go.on.an.errand give 1SG  
 ‘He went on an errand for me.’  
 (35) Ecuadorian Highland Spanish  
 (35a) *Me dio cocinando.*  
 I<sub>dat.</sub> 1SG give.CPL.I<sub>S/A</sub>:1SG cook.GER  
 ‘(S)he cooked for/instead of me.’  
 lit. ‘(S)he gave me cooking.’

- (35b) *Él me da haciendo el pan mientras yo lavo.*  
 3SGM I<sub>dat</sub>.1SG give.PRS.I<sub>S/A</sub>:1SG make.GER D.SGM bread while 1SG wash.PRS.I<sub>S/A</sub>:1SG  
 ‘He bakes the bread for/instead of me while I wash.’  
 lit. ‘He gives me baking the bread while I wash.’
- (35c) *Él me dio dando el cuchillo a la María.*  
 3SGM I<sub>dat</sub>.1SG give.CPL.I<sub>S/A</sub>:1SG give.GER D.SGM knife to D.SGF María  
 ‘He gave the knife to María instead of me.’  
 lit. ‘He gave me giving the knife to María.’

## 6. Verbal valency

### 6.1. The notion of valency alternation

‘Valency alternation’ refers to the use of the same verb, or of derived forms of the same verb, in distinct constructions with identical (or at least partly identical) denotative meanings. (36) and (37) illustrate the active-passive alternation, with or without a modification of the verb form.

(36) Tswana (Benue-Kwa, Bantu)

- (36a) *Kitso<sup>1</sup> ’ó-tláà-kwál-á lò-kwá:lò.*  
 Kitso(1) I<sub>S/A</sub>:c11-FUT-write-FV SG-letter(11)  
 ‘Kitso will write the letter.’
- (36b) *Lò-kwáló ’lò-tláà-kwál-w-á kí Kí:tsò.*  
 SG-letter(11) I<sub>S/A</sub>:c111-FUT-write-PSF-FV by Kitso(1)  
 ‘The letter will be written by Kitso.’
- (37) Bambara (Mande)
- (37a) *Sékù bènà bàtáki ’sébén.*  
 Sékou FUT letter write  
 ‘Sékou will write the letter.’
- (37b) *Bàtáki ’bènà sébén Sékù fê.*  
 letter FUT write Sékou by  
 ‘The letter will be written by Sékou.’

A recurrent problem in the analysis of valency alternation is that there is rarely a straightforward one-to-one correspondence between the morphological mechanisms found in a given language and their possible functions in valency alternations. For example, in Tswana, the same suffix *-el-* may mark the introduction of an additional NP representing a recipient or beneficiary in the syntactic role of P, without any other change in the construction (applicative), or the ‘demotion’ of A, replaced by an NP representing an instrument, which in the absence of *-el-* could occur as a preposition phrase in oblique role.

(38) Tswana (pers.doc.)

- (38a) *Kì-tláà-kwál-á lò-kwá:lò.*  
 I<sub>S/A</sub>:1SG-FUT-write-FV SG-letter(11)  
 ‘I’ll write the letter.’
- (38b) *Kì-tláà-kwál-él-á ’Kitsó lò-kwá:lò.*  
 I<sub>S/A</sub>:1SG-FUT-write-EL-FV Kitso(1) SG-letter(11)  
 ‘I’ll write the letter to/for Kitso.’

- (38c) *Mò-àpèì ó-fáb-á bò-χóbé 'ká nâ:mà.*  
 SG-cook(1) I<sub>S/A</sub>:cl1-flavour-FV SG-porridge(14) with meat(9)  
 'The cook flavours the porridge with meat.'
- (38d) *Nàmà í-fáb-él-à bò-χó:bè.*  
 meat(9) I<sub>S/A</sub>:cl9-flavour-EL-FV SG-porridge(14)  
 'Meat is used to flavour the porridge.'

Similarly, the same Tswana suffix *-w-* may occur in passive constructions in which the P term of a transitive construction is converted into the S term of an intransitive construction, but also in impersonal constructions in which A is equally demoted, but the coding characteristics of P do not change.

- (39) Tswana (Benue-Kwa, Bantu)
- (39a) *Kì-tlàà-kwál-á lè-kwá:lò.*  
 I<sub>S/A</sub>:1SG-FUT-write-FV SG-letter(11)  
 'I'll write the letter.'
- (39b) *Lè-kwáló 'lò-tlàà-kwál-w-á kí ò:ná.*  
 SG-letter(11) I<sub>S/A</sub>:cl11-FUT-write-W-VF by 1SG  
 'The letter will be written by me.'
- (39c) *χó-tlàà-kwál-w-á lè-kwá:lò.*  
 EXPL-FUT-write-W-FV SG-letter(11)  
 'A letter will be written.' lit. 'There will be written a letter.'

In Songhay, the same suffix *-ndi* is used to encode causativization (40a) and passivization (40b).

- (40) Diré Songhay (Songhay)
- (40a) *Musa ηa tasu di.*  
 Moussa eat rice D  
 'Moussa ate the rice.'
- (40b) *Ali ηa-ndi tasu di Musa se.*  
 Moussa eat-NDI rice D Moussa to  
 'Ali had Moussa eat the rice.'
- (40c) *Tasu di ηa-ndi.*  
 rice D eat-NDI  
 'The rice was eaten.'

## 6.2. Morphologically marked valency alternation.

Morphologically marked valency alternation can often (but not always!) be analyzed in terms of derivation from a base form to a morphologically more complex derived form.

The most widespread types of morphologically oriented valency alternations are as follows:

- passivization ('demotion' of A, as in (36b) and (40c) above);
- antipassivization ('demotion' of P, as in (41b) below);
- reflexivization, as in (42b);
- reciprocalization, as in (43b);
- decausativization (or anticausativization), as in (44b);
- causativization (introduction of a causer in the syntactic role of A, as in (40b) above);

- applicativization (introduction of a participant in the syntactic role of P, as in (38b) above.

## (41) Central Alaskan Yupik (Eskaleut)

(41a) *Arna-m allg-aa 'lumarraq.*woman-ERG tear-DECL.I<sub>A</sub>:3SG.I<sub>P</sub>:3SG shirt

'The woman tears the shirt.'

(41b) *Arnaq allg-i-uq 'lumarra-mek.*woman tear-ANTIP-DECL.I<sub>S</sub>:3SG shirt-ABL

'The woman tears a shirt.'

## (42) Jóola Banjal (Atlantic)

(42a) *Gáleto na-lluj-e Atejo.*Gáleto I<sub>S/A</sub>:clA-look-CPL Atejo

'Gáleto looked at Atejo.'

(42b) *Gáleto na-lluj-oro-e bala a-púr.*Gáleto I<sub>S/A</sub>:clA-look-REFL-CPL before I<sub>S/A</sub>:clA-go.out

'Gáleto looked at himself (in the mirror) before going out.'

## (43) Jóola Banjal (Atlantic)

(43a) *Gáleto na-ssaf-e Atejo.*Gáleto I<sub>S/A</sub>:clA-greet-CPL Atejo

'Gáleto greeted Atejo.'

(43b) *Gáleto ni Atejo gu-ssaf-or-e*Gáleto and Atejo I<sub>S/A</sub>:clBG-greet-RECIP-CPL

'Gáleto and Atejo greeted each other.'

## (44) Tswana (Benue-Kwa, Bantu)

(44a) *Dw-àná ó-t<sup>h</sup>ùb-ìl-é mà:-í.*SG-child(1) I<sub>S/A</sub>:cl1-break-PRF-FV PL-egg(6)

'The child broke the eggs.'

(44b) *Mà-í 'á-t<sup>h</sup>ùb-èχ-ì:l-è.*PL-egg(6) I<sub>S/A</sub>:cl6-break-DECAUS-PRF-FV

'The eggs broke.'

**6.3. Lability**

Labile verbs are verbs lending themselves to valency alternations involving no morphological marking. 'Causal-noncausal' lability, as in *The child broke the glass / The glass broke* is particularly widespread (and some authors restrict the use of the term 'labile' to this particular type of lability) but many other types can be found in the languages of the world. The Bambara example (37) above illustrates active-passive lability, which is fully productive in Bambara, but totally unknown in most languages.

**7. Clause structure and information structure**

In some languages, the linear order of NPs in the construction of a given verb is bound rigidly to their semantic role, as in French *Jean a appelé Marie / Marie a appelé Jean*. In some other languages, the linear order of NPs is totally flexible, in the sense that any permutation is possible, without any readjustment other than intonational, and without any change in the

semantic roles assigned to NPs. The function of such alternations in the linear order of NPs is to contribute to the expression of information structure.

(45) Basque (isolate)

(45a) *Jon-ek Mikel-i dei-tu zion.*  
Jon-ERG Mikel-DAT call-CPL have.PST.I<sub>erg</sub>:3SG.I<sub>dat</sub>:3SG  
'Jon called MIKEL.'

(45b) *Mikel-i Jon-ek dei-tu zion.*  
Mikel-DAT Jon-ERG call-CPL have.PST.I<sub>erg</sub>:3SG.I<sub>dat</sub>:3SG  
'JON called Mikel.'

(46) Russian (Indo-European, Slavic)

(46a) *Koški edjat myšej.*  
cat.PL eat.PRS.I<sub>S/A</sub>:3PL mouse.PL.ACC  
'Cats eat mice.'

(46a) *Myšej edjat koški.*  
mouse.PL.ACC eat.PRS.I<sub>S/A</sub>:3PL cat.PL  
'CATS eat mice.'

(47) Hungarian (Uralic)

(47a) *Péter be-mutatta János-t Mari-nak.*  
Péter PREV-introduce.PST.I<sub>A</sub>:3SG.I<sub>p</sub>:3SG.D János-ACC Mari-DAT  
'Péter introduced János to Mari.'

(47b) *János-t Péter mutatta be Mari-nak.*  
János-ACC Péter introduce.PST.I<sub>A</sub>:3SG.I<sub>p</sub>:3SG.D PREV Mari-DAT  
'PÉTER introduced János to Mari.'

(47c) *Péter János-t mutatta be Mari-nak.*  
Péter János-ACC introduce.PST.I<sub>A</sub>:3SG.I<sub>p</sub>:3SG.D PREV Mari-DAT  
'Péter introduced JÁNOS to Mari.'

(47d) *Mari-nak mutatta be Péter János-t.*  
Mari-DAT introduce.PST.I<sub>A</sub>:3SG.I<sub>p</sub>:3SG.D PREV Péter János-ACC  
'Péter introduced János to MARI.'

However, in most languages, the linear order of the terms of the clause is neither totally rigid nor totally flexible. For example, constituent order in Spanish is much less flexible than in Russian, Hungarian, or Basque, but more flexible than in French.

(48) Spanish (Indo-European, Romance)

(48a) *Juan llegó. ~ Llegó Juan.*  
Juan arrive.CPL.I<sub>S/A</sub>:3SG  
'Juan arrived.'

(48b) *Juan trajo las bebidas.*  
Juan bring.CPL.I<sub>S/A</sub>:3SG D.PL.F drink.PL  
'Juan brought the drinks.'

~ *Las bebidas las trajo Juan.*  
D.PL.F drink.PL I<sub>p</sub>:3PL.F bring.CPL.I<sub>S/A</sub>:3SG Juan  
\*Trajo Juan las bebidas.  
\*Trajo las bebidas Juan.

In many of the languages that have at least some flexibility in constituent order at clause level (but not all!), the variation in constituent order crucially involves a ‘focus position’. Depending on the individual languages, the focus position may be clause-initial (Wolof), clause-final (Russian), immediately before the verb (Basque, Hungarian), or immediately after the verb (Makhuwa). In some languages (Wolof, Makhuwa), the use of the focus position requires special morphological marking. In Wolof, the focalized phrase is immediately followed by a focus marker, and the subject index (whose position varies from one construction to another) attaches to the focus marker. In Makhuwa, the focalized noun is in a special form also used for nouns in predicate function.

(49) Wolof (Atlantic)

(49a) *Bal bi bonde na ci kow taabal bi.*  
 ball cIB.D rebound PRF.I<sub>S/A</sub>:3SG LOC top table cIB.D  
 ‘The ball rebounded on the table.’

(49b) *Ci kow taabal bi la bal bi bonde.*  
 LOC top table cIB.D FOC.I<sub>S/A</sub>:3SG ball cIB.D rebound  
 ‘The ball rebounded ON THE TABLE.’

(50) Makhuwa (Benue-Kwa, Bantu)

(50a) *Ni-m-váhá maatsí enúni.*  
 I<sub>S/A</sub>:1PL-PRS.CJ-give water(6).FOC birds(10)  
 ‘We give the birds WATER.’

(50b) *Ni-m-váhá enuni maátsi.*  
 I<sub>S/A</sub>:1PL-PRS.CJ-give birds(10).FOC water(6)  
 ‘We give THE BIRDS water.’

However, it may also happen, in particular in languages with relatively rigid constituent order, that focalization is usually expressed by means of ‘cleft’ constructions in which the term in focus is introduced as a nominal pécicate (as French *C’est Jean qui a appelé Marie / C’est Marie qui a appelé Jean*). There are also languages, such as English, in which a purely intonational marking of focalization is usual. Another possibility is the mere adjunction of a focus marker to the focalized constituent, without any change in the construction.

(51) Mandinka (Mande)

(51a) *Kèè yè fòolèesúwòò dádâa dindinjò yé kúnùŋ.*  
 man.D CPL bicycle.D repair child.D for yesterday  
 ‘The man repaired the bicycle for the child yesterday.’

(51b) *Kèè lè yè fòolèesúwòò dádâa dindinjò yé kúnùŋ.*  
 man.D FOC CPL bicycle.D repair child.D for yesterday  
 ‘THE MAN repaired the bicycle for the child yesterday.’

(51c) *Kèè yè fòolèesúwòò lè dádâa dindinjò yé kúnùŋ.*  
 man.D CPL bicycle.D FOC repair child.D for yesterday  
 ‘The man repaired THE BICYCLE for the child yesterday.’

(51d) *Kèè yè fòolèesúwòò dádâa dindinjò lè yé kúnùŋ.*  
 man.D CPL bicycle.D repair child.D FOC for yesterday  
 ‘The man repaired the bicycle for THE CHILD yesterday.’

- (51e) *Kèê yè fòlèesúwòò dádâa dínđínò yé kúnùŋ nè.*  
 man.D CPL bicycle.D repair child.D for yesterday FOC  
 ‘The man repaired the bicycle for the child YESTERDAY.’

## Abbreviations

ABL = ablative, ABS = absolutive,<sup>3</sup> ACC = accusative, ANTIP = antipassive, CJ = conjoint,<sup>4</sup> clX = classe X,<sup>5</sup> CPL : completive, D = definite, DAT = dative, DECL = declarative, DEM = demonstrative, ERG = ergative, ESS = essive (case), EXPL = expletive, F = feminine, FOC = focus, FUT = future, FV = final vowel, GER = gerundive, I = index, I<sub>A</sub> = index corresponding to the A phrase in the transitive construction, I<sub>dat</sub> = index corresponding to a noun phrase in the dative case, I<sub>erg</sub> = index corresponding to a noun phrase in the ergative case, I<sub>P</sub> = index corresponding to the P phrase in the transitive construction, I<sub>S</sub> : index corresponding to the S phrase in an intransitive construction, I<sub>S/A</sub> : index corresponding to the S phrase in an intransitive construction or to the A phrase in the transitive construction, I<sub>S/P</sub> = index corresponding to the S phrase in an intransitive construction or to the P phrase in the transitive construction, I<sub>zer</sub> = index corresponding to a noun phrase in the zero-case, ICPL = incomplete, INESS = inessive (case), INSTR = instrumental (case), INTR = intransitive, K = marked case (in binary case systems), LOC = locative, M = masculine, MOD = modal (case), N = neuter, NEG = negative, OBL = oblique, PASS = passive, PL = plural, POST = postposition, PREV = preverb, PRF = perfect, PROG = progressive, PRS = present, PST = past, SBJ = subject case,<sup>6</sup> SG = singular, TAM = tense-aspect-modality marker, TERM = terminative (case), TR = transitive.

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<sup>3</sup> Marked case or adposition used in some languages to flag both P in the transitive construction and S in intransitive constructions.

<sup>4</sup> In Bantu linguistics, ‘conjoint’ is the term used for verb forms that cannot occur in clause-final position.

<sup>5</sup> Gender-number agreement marker, in the languages having a gender system of the type commonly found in Niger-Congo languages.

<sup>6</sup> Marked case form used in some languages to flag both A in the transitive construction and S in intransitive constructions.

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