Introduction to syntactic typology: Clause structure

Denis Creissels
Université Lumière (Lyon 2) & laboratoire DDL
denis.creissels@univ-lyon2.fr
http://deniscreissels.fr

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, and of the possible analyses that may be considered..

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.

As will be developed in §2.5, the transitive construction is not necessarily uniform in a given language, and may show variously conditioned variations.

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$_{ERG}$:3PL.I$_{ZER}$:3SG
'The children have broken the mirror.'

(1b)   *Haurr-ek   ispilu-a   ikusi   dute.*
child-PL.ERG   mirror-SG   see.CPL   have.PRS.I$_{ERG}$:3PL.I$_{ZER}$: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 protypical 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   biqʷāri.*
child-ERG   glass   break.CPL
'The child broke the glass.'

(2b)   *Mik'i-ƛa   istaka   harigʷari.*
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)   *Kèê   yè   fòolèesúwòo   dádâa.*
man.D   CPL.TR   bicycle.D   repair
'The man repaired the bicycle.'

(4b)   *Kèê   làfí-tà   kód-òo   lá.*
man.D   want-CPL.INTR   money.D   POSTP
'The man wants money.'

(4c)   *Kèê   ñìná-tá   ŋ́   kòntóŋò   lá.*
man.D   want-CPL.INTR   1SG   name.D   POSTP
'The man has forgotten my name.'

(5)   Moloko (Afroasiatic, Chadic)

Mana   a-ɓ=aŋ   ana   kəra.
Mana   I$_{S/A}$:3SG-hit=I$_{DAT}$: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, one of the constructions can be identified as the transitive construction on the basis of the following criteria:

– the constructions other than the basic transitive construction are formally similar to the construction of semantically monovalent verbs, whereas the transitive construction may show specific coding characteristics,
– 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, as in the construction of semantically monovalent verbs.

(6)   Baffin Island Inuktitut (Eskaleut)
(6a)   *Anguti-up   arnaq   kunik-taa.*
      man-ERG.SG   woman   kiss-I_A:3SG.I_P:3SG
      'The man kissed the woman.'
(6b)   *Arnaq   kunik-tau-juq   anguti-mut*
      woman   kiss-PASS-I_S:3SG   man-ABL.SG
      'The woman was kissed by the man.'
(6c)   *Anguti   kunik-si-vuq   arna-mik.*
      man   kiss-ANTIP-I_S: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) *Dánòo yè jàtóo fǎa.*
    hunter.D CPL.TR lion.D kill
    'The hunter killed the lion.'
(8b) *Jàtôo yè dánòo 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),[1] 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 form 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-$I_{S/A}$:SG.M girl(F).ACC
    'The doctor healed the girl.'

(10) Avar (Nakh-Daghestanian)
    quotation form of nouns: *was* 'boy', *χur* 'field'
    Was-aš̄ χur b-eƛ̄'ana.
    boy(M)-ERG field(N) $I_{S/P}$: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 that 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_{erg}:3SG.I_{dat}:3SG
    'Jon saw Edurne.'

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[1] 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', 'absolutive case', 'direct case', 'free state', etc.

(12)   Kabyle (Afroasiatic, Berber)
      Yeldi   *weqcic*   *tawwurt*
      I$_{S/A}$: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 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.[2]

(13)   Kurmanji (Indo-European, Iranian)

(13a) *Ez*   *Sînem-ê*   *dibîn-im.*   (13c) *Min*   *Sînem*   *dît-Ø.*
      1SG   Sinem-K   see.ICPL-I$_{ZER}$:1SG   1SG.K   Sinem   see.CPL-I$_{ZER}$:3SG
      'I see Sinem.'   'I saw Sinem.'

(13b) *Sînem*   *min*   *dibîn-e.*   (13d) *Sînem-ê*   *ez*   *dît-im.*
      Sinem   1SG.K   see.ICPL-I$_{ZER}$:3SG   Sinem-K   1SG   see.CPL-I$_{ZER}$:1SG
      'Sinem sees me.'   'Sinem saw me.'

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$_{S/A}$:cl1-CPL-read   SG-book(7)
      'Hamisi read a book.'

(15b) *Hamisi*   *a-li-ki-soma*   *ki-tabu.*
      Hamisi(1)   I$_{S/A}$:cl1-CPL-I$_P$: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.

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[2] 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).

(16)   Hungarian (Uralic)
(16a)   *Az   ágy   alól   kihúz-ott-Ø   egy   macskát.*
        D   bed   from-under   take_from-PST-I$_{S/A}$: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$_{S/A}$:3SG.I$_P$:3.D   D   cat.ACC
        'He/she took the cat from under the bed.'
(16c)   *Az   ágy   alól   kihúz-t-unk   egy   macskát.*
        D   bed   from-under   take_from-PST-I$_{S/A}$: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$_{S/A}$:1PL.I$_P$: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)   *Yúgòn   dà   dòròkén   bòoxó.*
        man.D   CPL.TR   shirt.D   tear
        'The man tore the shirt.'
(17b)   *Yúgòn   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$_{ERG}$:3PL.I$_{ZER}$: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$_{ERG}$:3SG.I$_{ZER}$: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$_{S/A}$:SG.F
'The girl came.'

(20b) *Doktor   prišël-Ø.*
doctor(M)   come.PST-I$_{S/A}$:SG.M
'The doctor came.'

(20c) *Doktor   vylečil-Ø   devušku.*
doctor(M)   heal.PST-I$_{S/A}$:SG.M   girl(F).ACC
'The doctor healed the girl.'

(21) Avar (Nakh-Daghestanian)

(21a) *Jas   j-ač'ana.*
girl(F)   I$_{S/P}$:SG.F-come.CPL
'The girl came.'

(21b) *Was   w-ač'ana.*
     boy(M) $I_{S/P}$:SGM-come.CPL
     'The boy came.'

(21c) *Was-aš̄   χur   b-eλ̄'ana.*
     boy(M)-ERG   field(N) $I_{S/P}$: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_{zer}:3SG
     'The mirror has fallen down.'

(22b) *Ur-ak   irakin   du.*
     water-SG.ERG   boil.CPL   have.PRS.I_{erg}:3SG
     'The water has boiled.'

(22c) *Haurr-ak   ispilu-a   puskatu   du.*
     child-SG.ERG   mirror-SG   break.CPL   have.PRS.I_{erg}:3SG.I_{zer}: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_A:2SG-I_P:3SG.M-teach
     'You teach him.'

(23b) *Wo-ni-doto.*
     I_A:3SG.M-I_P:2SG-teach
     'He teaches you.'

(23c) *No-tagi.*
     I_A:2SG-go
     'You are going.' (S = A)

(23d) *Ni-kiolo.*
     I_P: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$_{ZER}$:1SG
      'I see Sinem.'

(24e) *Min   Sînem   dît-Ø.*
      1SG.K   Sinem   see.CPL-I$_{ZER}$:3SG
      'I saw Sinem.'

(24b) *Sînem   min   dibîn-e*
      Sinem   1SG.K   see.ICPL-I$_{ZER}$:3SG
      'Sinem sees me.'

(24f) *Sînem-ê   ez   dît-im.*
      Sinem-K   1SG   see.CPL-I$_{ZER}$:1SG
      'Sinem saw me.'

(24c) *Ez   tê-m.*
      1SG   come.ICPL-I$_{ZER}$:1SG
      'I am coming.'

(24g) *Ez   hat-im.*
      1SG   come.CPL-I$_{ZER}$:1SG
      'I came.'

(24d) *Sînem   tê-Ø.*
      Sinem   come.ICPL-I$_{ZER}$:3SG
      'Sinem is coming.'

(24h) *Sînem   hat-Ø.*
      Sinem   come.CPL-I$_{ZER}$: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 correlates 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$_{S/A}$:3SG.M
      'The car is not arriving.'

(25c) *Tulluu-n   gammada.*
      Tulluu-SBJ   be_glad.PRS.I$_{S/A}$:3SG.M
      'Tulluu is glad.'

(25d) *Tulluu-n   makiinaa   bite.*
      Tulluu-SBJ   car   buy.CPL.I$_{S/A}$: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/goal' 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 goal 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$_{S/A}$:3SG
    'János earned money.'

(26b) *János pénz-t adott Bélá-nak.*
    János money-ACC give.PST.I$_{S/A}$: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) *Múusà dà qálìsî-n kínì Dénbà yí.*
    Moussa TR money-D give Demba POSTP
    'Moussa gave the money to Demba.'

(28b) *Múusà dà Dénbà kú qálìsí 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 goal 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 goal and the theme. In such cases, it is often the goal (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 goal in subject role.

(31)   Yaqui (Uto-Aztecan)

(31a)   *Inepo   kareta-ta   Maria-ta   mikak.*
       1SG   cart-ACC   María-ACC   give.TAM
       'I gave María a cart.'

(31b)   *Maria   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$_{S/A}$: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)   *Ŋ́   ŋá   Fàatú   tàrá   sàatêe   tó.*
       1SG   CPL.TR   Fatou   find   village.D   LOC
       'I met Fatou in the village.'

(33b)   *Ŋ́   ŋá   Fàatú   tàrá   Sěejò.*
       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   jíṣẹ́   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$_{dat}$.1SG   give.CPL.I$_{S/A}$: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$_{dat}$.1SG   give.PRS.I$_{SA}$:1SG   make.GER   D.SGM   bread   while   1SG   wash.PRS.I$_{SA}$: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$_{dat}$.1SG   give.CPL.I$_{S/A}$: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 denotative meanings that may be identical, or differ at most by a manipulation of the relationship between an event and its participants. (36) and (37) illustrate the active-passive alternation, with or without a modification of the verb form.

(36)   Tswana (Bantu)

(36a) *Kítsɔ́   ᵓ́-tɬáà-kwál-á   lò-kwâ:lɔ̀.*
    Kitso(1)   I$_{S/A}$:cl1-FUT-write-FV   SG-letter(11)
    'Kitso will write the letter.'

(36b) *Lò-kwálɔ́   ᶦlóᵓ-tɬáà-kwál-w-á   kí   Kî:tsɔ̀.*
    SG-letter(11)   I$_{S/A}$:cl11-FUT-write-PSF-FV   by   Kitso(1)
    'The letter will be written by Kitso.'

(37)   Bambara (Mande)

(37a) *Sékù   bénà   bàtàkí   ᶦsébɛ́n.*
    Sékou   FUT   letter   write
    'Sékou will write the letter.'

(37b) *Bàtàkí   ᶦbénà   sébɛ́n   Sékù   fɛ̀.*
    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 *-ɛl-* 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), as in (38a-b), or the 'demotion' of A, replaced by an NP representing an

instrument, which in the absence of *-ɛl-* could occur as a preposition phrase in oblique role, as in (38c-d).

(38)   Tswana (Bantu)

(38a)   *Kì-tɬàà-kwál-á   lò-kwâːlɔ̀.*
         I_{S/A}:1SG-FUT-write-FV   SG-letter(11)
         'I'll write the letter.'

(38b)   *Kì-tɬàà-kwál-ɛ́l-á   ˈKítsɔ́   lò-kwâːlɔ̀.*
         I_{S/A}:1SG-FUT-write-*EL*-FV   Kitso(1)   SG-letter(11)
         'I'll write the letter to/for Kitso.'

(38c)   *Mò-àpèì   ó-ʃáb-á   bò-χɔ́bɛ́   ˈká   nâːmà.*
         SG-cook(1)   I_{S/A}:cl1-flavour-FV   SG-porridge(14)   with   meat(9)
         'The cook flavours the porridge with meat.'

(38d)   *Nàmà   í-ʃáb-ɛ́l-à   bò-χɔ̂ːbɛ̀.*
         meat(9)   I_{S/A}: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 a canonical intransitive construction, but also in impersonal constructions in which A is equally demoted, but the coding characteristics of P do not change.

(39)   Tswana (Bantu)

(39a)   *Kì-tɬàà-kwál-á   lò-kwâːlɔ̀.*
         I_{S/A}:1SG-FUT-write-FV   SG-letter(11)
         'I'll write the letter.'

(39b)   *Lò-kwálɔ́   ˈló-tɬáà-kwál-w-á   kí   ǹːná.*
         SG-letter(11)   I_{S/A}:cl11-FUT-write-*W*-VF   by   1SG
         'The letter will be written by me.'

(39c)   *χó-tɬáà-kwál-w-á   lò-kwâːlɔ̀.*
         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   ŋa   tasu   di.*
         Moussa   eat   rice   D
         'Moussa ate the rice.'

(40b)   *Ali   ŋa-ndi   tasu   di   Musa   se.*
         Moussa   eat-*NDI*   rice   D   Mousa   to
         'Ali had Moussa eat the rice.'

(40c)   *Tasu   di   ŋa-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 (ou 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$_A$:3SG.I$_P$:3SG   shirt
'The woman tears the shirt.'

(41b)   *Arnaq   allg-i-uq   'lumarra-mek.*
woman   tear-ANTIP-DECL.I$_S$:3SG   shirt-ABL
'The woman tears a shirt.'

(42)   Jóola Banjal (Atlantic)

(42a)   *Gáleto   na-lluj-e   Atejo.*
Gáleto   I$_{S/A}$:clA-look-CPL   Atejo
'Gáleto looked at Atejo.'

(42b)   *Gáleto   na-lluj-oro-e   bala   a-púr.*
Gáleto   I$_{S/A}$:clA-look-REFL-CPL   before   I$_{S/A}$: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$_{S/A}$:clA-greet-CPL   Atejo
'Gáleto greeted Atejo.'

(43b)   *Gáleto   ni   Atejo   gu-ssaf-or-e*
Gáleto   and   Atejo   I$_{S/A}$:clBG-greet-RECIP-CPL
'Gáleto and Atejo greeted each other.'

(44)   Tswana (Bantu)

(44a)   *Ŋw-àná   ó-tʰùb-íl-é   mà:-í.*
SG-child(1)   I$_{S/A}$:cl1-break-PRF-FV   PL-egg(6)
'The child broke the eggs.'

(44b)   *Mà-í   ˈá-tʰúb-èχ-ì:l-è.*
PL-egg(6)   I$_{S/A}$:cl6-break-DECAUS-PRF-FV
'The eggs broke.'

6.3. Polyvalency

Polyvalent verbs are verbs lending themselves to valency alternations involving no morphological marking. 'Causal-noncausal' polyvalency (often referred to as 'lability'), as in *The child broke the glass / The glass broke* is particularly widespread, but many other types can be found in the languages of the world. The Bambara example (37) above illustrates transitive-passive polyvalency, 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$_{erg}$:3SG.I$_{dat}$:3SG
        'Jon called MIKEL.'

(45b)   *Mikel-i   Jon-ek   dei-tu   zion.*
        Mikel-DAT   Jon-ERG   call-CPL   have.PST.I$_{erg}$:3SG.I$_{dat}$:3SG
        'JON called Mikel.'

(46)   Russian (Indo-European, Slavic)

(46a)   *Koški   edjat   myšej.*
        cat.PL   eat.PRS.I$_{S/A}$:3PL   mouse.PL.ACC
        'Cats eat mice.'

(46a)   *Myšej   edjat   koški.*
        mouse.PL.ACC   eat.PRS.I$_{S/A}$:3PL   cat.PL
        'CATS eat mice.'

(47)   Hungarian (Uralic)

(47a)   *Péter   be-mutatta   János-t   Mari-nak.*
        Péter   PREV-introduce.PST.I$_A$:3SG.I$_P$: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$_A$:3SG.I$_P$:3SG.D   PREV   Mari-DAT
        'PÉTER introduced János to Mari.'

(47c)   *Péter   János-t   mutatta   be   Mari-nak.*
        Péter   János-ACC   introduce.PST.I$_A$:3SG.I$_P$:3SG.D   PREV   Mari-DAT
        'Péter introduced JÁNOS to Mari.'

(47d)   *Mari-nak   mutatta   be   Péter   János-t.*
        Mari-DAT   introduce.PST.I$_A$:3SG.I$_P$: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$_{S/A}$:3SG

    'Juan arrived.'

(48b)   *Juan   trajo   las   bebidas.*

    Juan   bring.CPL.I$_{S/A}$:3SG   D.PL.F   drink.PL

    'Juan brought the drinks.'

    ~ *Las   bebidas   las   trajo   Juan.*

      D.PL.F   drink.PL   I$_P$:3PL.F   bring.CPL.I$_{S/A}$: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 Makuwa, 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   clB.D   rebound   PRF.I$_{S/A}$:3SG   LOC   top   table   clB.D

    'The ball rebounded on the table.'

(49b)   *Ci   kow   taabal   bi   la   bal   bi   bonde.*

    LOC   top   table   clB.D   FOC.I$_{S/A}$:3SG   ball   clB.D   rebound

    'The ball rebounded ON THE TABLE.'

(50)   Makhuwa (Benue-Kwa, Bantu)

(50a)   *Ní-m-váhá   maatsí   enúni.*

    I$_{S/A}$:1PL-PRS.CJ-give   water(6).FOC   birds(10)

    'We give the birds WATER.'

(50b)   *Ní-m-váhá   enuní   maátsi.*

    I$_{S/A}$: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 pédicate (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).

(51)   Mandinka (Mande)
(51a)   *Kèê   yè   fòolèesúwòo   dádâa   díndíŋò   yé   kúnùŋ.*
        man.D   CPL   bicycle.D   repair   child.D   for   yesterday
        'The man repaired the bicycle for the child yesterday.'

(51b)   *Kèê   lè   yè   fòolèesúwòo   dádâa   díndíŋò   yé   kúnùŋ.*
        man.D   FOC   CPL   bicycle.D   repair   child.D   for   yesterday
        'THE MAN repaired the bicycle for the child yesterday.'

(51c)   *Kèê   yè   fòolèesúwòo   lè   dádâa   díndíŋò   yé   kúnùŋ.*
        man.D   CPL   bicycle.D   FOC   repair   child.D   for   yesterday
        'The man repaired THE BICYCLE for the child yesterday.'

(51d)   *Kèê   yè   fòolèesúwòo   dádâa   díndíŋò   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   fòolèesúwòo   dádâa   díndíŋò   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,[3] ACC = accusative, ANTIP = antipassive, CJ = conjoint,[4] clX = classe X,[5] 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_A = index corresponding to the A phrase in the transitive construction, I_{dat} = index corresponding to a noun phrase in the dative case, I_{erg} = index corresponding to a noun phrase in the ergative case, I_P = index corresponding to the P phrase in the transitive construction, I_S : index corresponding to the S phrase in an intransitive construction, $I_{S/A}$: index corresponding to the S phrase in an intransitive construction or to the A phrase in the transitive construction, $I_{S/P}$ = index corresponding to the S phrase in an intransitive construction or to the P phrase in the transitive construction, Izer = index corresponding to a noun phrase in the zero-case, ICPL = incompletive, 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,[6] SG = singular, TAM = tense-aspect-modality marker, TERM = terminative (case), TR = transitive.

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[3] Marked case or adposition used in some languages to flag both P in the transitive construction and S in intransitive constructions.

[4] In Bantu linguistics, 'conjoint' is the term used for verb forms that cannot occur in clause-final position.

[5] Gender-number agreement marker, in the languages having a gender system of the type commonly found in Niger-Congo languages.

[6] Marked case form used in some languages to flag both A in the transitive construction and S in intransitive constructions.

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