

## Predicative argument marking: The case of transformation verbs

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### 1. Introduction

Canonical arguments are NPs representing entities involved in the event encoded by the verb. Predicative arguments are NPs that share with canonical arguments the properties distinguishing arguments from adjuncts, but differ from them by the fact that they do not denote an entity involved in the verbal event, but a property predicated of the referent of another argument of the same verb. In other words, verbs whose argument structure includes a predicative argument lend themselves to a semantic decomposition including a predication of identification. This applies in particular to verbs such as English *become* or *transform*:

- E becomes P = the referent of E undergoes a process at the outcome of which it will belong to the denotation of P;
- E<sub>1</sub> transforms E<sub>2</sub> into P = the referent of E<sub>1</sub> is the agent of an action undergone by the referent of E<sub>2</sub>, at the outcome of which E<sub>2</sub> will belong to the denotation of P.

This presentation is limited to transformation verbs, but predicative arguments can be identified in other semantic types of predicative expressions lending themselves to similar decompositions: ‘E pretends to be P’, ‘E acts as P’, ‘E<sub>1</sub> considers E<sub>2</sub> to be P’, etc.

Whatever their coding properties, the particular semantic nature of predicative arguments can be expected to manifest itself in some aspects of their syntactic behavior (combinability with determiners, possibility to use adjectives in the same syntactic slot, pronominalization, topicalization, focalization etc.), but this presentation concentrates on the marking of predicative arguments in the construction of verbs such as English *become* or *transform*. Suffice it to say that, irrespective of the etymology of transformation verbs and the marking of their predicative arguments, the behavior of the predicative arguments of transformation verbs tends to depart from that of canonical arguments and to align with that of non-verbal predicates in basic identification clauses (i.e., in clauses such as English *John is a teacher*).

The presentation is organized as follows. Section 2 puts forward some preliminary remarks on the verbs used as transformation verbs. Section 3 examines the marking properties of the predicative arguments of intransitive transformation verbs whose construction includes a predicative argument, whereas section 4 is devoted to the predicative arguments of transitive transformation verbs. Section 5 discusses the patterns observed in predicate argument

marking from the functional and historical points of view, and section 6 summarizes the main conclusions.

## 2. Preliminary remarks on transformation verbs

### 2.1. Predicative arguments and the distinction between ‘generic’ and ‘specific’ transformation verbs

Not all transformation verbs are relevant to the topic of this presentation, in the sense that the construction of transformation verbs does not necessarily involve a predicative argument. Most transformation verbs are “specific” transformation verbs whose lexical meaning encodes a particular type of transformation (for example, *melt*, glossed ‘become liquid’ or ‘change to a liquid’ in English dictionaries), and consequently makes superfluous the addition of an NP specifying the result of the transformation. Predicative arguments can be expected to occur mainly in the construction of “generic” transformation verbs, i.e., verbs whose lexical meaning says nothing about the result of the transformation process.

Note however that this correlation is not absolute. For example, in Tswana, *nna* ‘become’ seems to be the only verb whose argument structure includes a predicative argument encoding the result of a transformation. The argument structure of the Tswana equivalents of English *change* or *transform* does not include a predicative argument, and the result of the change is usually specified by combining them with *nna* ‘become’, as in ex. (1).

(1) Tswana

*Pula e-fetoletse lolwapa go-nna mogobe*

9.rain 3:9-transform.PERF 11.yard INF-become 3.pound

lit. ‘The rain has transformed the yard to become a pound’ → ‘The rain has transformed the yard into a pound’

Conversely, in some languages, predicative arguments are found not only in the construction of generic transformation verbs, but also of verbs implying a particular type of transformation. It may even happen that verbs that are not by themselves transformation verbs take adjuncts morphologically and semantically identical to the predicative arguments of transformation verbs. This is in particular the case in Estonian – ex. (2).

(2) Estonian

*Ma õpin õpetajaks*

1SG study.1SG teacher.SG.TRNSF

lit. ‘I am studying into a teacher’ → ‘I am studying to become a teacher’

### 2.2. Polysemy and etymology of generic transformation verbs

Most often, the verbs used as generic transformation verbs have other uses, or have a transparent etymological relationship with verbs that are not transformation verbs, in

particular *movement* verbs (‘come’, ‘move’, ‘turn’), *creation* verbs (‘make’, ‘form’), or *substitution* verbs (‘exchange’). The etymology must be taken into account when explaining the argument structure of generic transformation verbs, as will be discussed in section 5.

Cross-linguistically, generic transformation verbs identical or cognate with verbs meaning ‘turn’ (or ‘turn around’, ‘turn over’) are particularly widespread. An illustrative list is given in (3).

(3) Transformation verbs identical or etymologically related to verbs meaning ‘turn’

- Akhvakh (Nakh-Daghestanian) *soruruʒa* (intr.) / *sorõruʒa* (tr.)
- Arabic *inqilāb* < QLB ‘turn’
- Basque *bihurtu*
- Catalan *tornar(se)*
- Fon (Kwa) *hùzú*
- Estonian *muutuda*
- Japanese *kaeru*
- Kabyle (Berber) *ɣɣal*
- Kanuri (Saharan) *wáɓgin* ~ *wáɓjin*
- Latin *vertere* and its reflexes in modern languages (English *convert*, etc.)
- Mandinka (Mande) *yèlema*
- Migama (Chadic) *sàwɓò*
- Russian *prevratit’(sja)*
- Spanish *volver(se)*
- Turkish *dön(dür)mek*

### 2.3. Generic transformation verbs and copulas

Another cross-linguistically frequent pattern is the use of the same verb as generic transformation verb and copulative verb. For example, in Hungarian, the present tense of *lesz* ‘become’ is also used as a suppletive future of the copulative verb *van* ‘be’. In Turkish, the copula *-i* has a defective TAM inflection, and *olmak* ‘become’ is used in copula function in the tenses for which no form of the copula *-i* exists.

Mandinka has a verb *ké* used transitively with the meanings ‘do, make’, ‘put’, or ‘transform’; used intransitively, this verb may have the meanings ‘happen’ or ‘become’ – ex. (4), and it is also used as a copulative verb (glossed here as ‘be’) in competition with the non-verbal copulas, depending on the TAM value of the clause – ex. (5).

(4) Mandinka

- a. *mùsoo yé tábiroo ké*  
 woman.DEF PFVPOS cooking.DEF do  
 ‘The woman did the cooking’
- b. *kódoó ké í lá jíboo kóno*  
 money.DEF put 2SG GEN pocket.DEF in  
 ‘Put the money in your pocket’

c. *mòolu yé à ké sàateetio tí*  
 person.DEF.PL PFVPOS 3SG make chief.DEF TRNSF  
 ‘The people made him chief’

d. *mùn nè ké-ta?*  
 what FOC happen-PFVPOS  
 ‘What happened?’

e. *à ké-ta sàateetio tí*  
 3SG become-PFVPOS chief.DEF TRNSF  
 ‘He became the chief’

#### (5) Mandinka

a. *àte mú màndinkoo lè tí*  
 3SG COPPOS Mandinka.DEF FOC TRNSF  
 ‘He is a Mandinka’

b. *àte té màndinkoo tí = àte máŋ ké màndinkoo tí*  
 3SG COPNEG Mandinka.DEF TRNSF 3SG PFVNEG be Mandinka.DEF TRNSF  
 ‘He is not a Mandinka’

c. *jàmaa-jàmaa ñiŋ mòolu ká ké tìlibonkoolu le tí*  
 often-often DEM people.DEF.PL HABPOS be easterner.DEF.PL FOC TRNSF  
 ‘These people are very often easterners’

#### 2.4. Transitive and intransitive verbs of transformation

Irrespective of the presence of a predicative argument, the verbs of transformation may be transitive (English *transform*) or intransitive (English *become*), depending on the presence / absence of an agent responsible for the transformation process in their argument structure.

Transitive and intransitive verbs of transformation may be related via causative or anticausative derivation – ex. (6) & (7).

#### (6) Turkish

a. *Su buz-a dön-dü*  
 water ice-DAT/ALL turn-PFV.3SG  
 ‘The water changed into ice’

b. *Büyücü oğlan-ı kuş-a dön-dür-dü*  
 witch boy-ACC bird-DAT/ALL turn-CAUS-PFV.3SG  
 ‘The witch changed the boy into a bird’

(7) Russian

a. *Ved'ma prevratila mal'čika v pticu*  
witch.SG transform.PST.SGF boy.SG.ACC in bird.SG.ACC  
'The witch changed the boy into a bird'

b. *Voda prevratila-s' v lëd*  
water.SG transform.PST.SGF-MID in ice.SG.ACC  
'The water changed into ice'

Transformation verbs may also be labile verbs (like English *change*) used in the same form both in transitive constructions in which A represents the agent of a transformation, and in intransitive constructions in which S represents an entity undergoing a transformation process – ex. (8).

(8) Basque (Céline Mounole, p.c.)

a. *Printze-a igel bilakatu zen*  
prince-SG frog change.PFV AUX.PST.3SG  
'The prince changed into a frog'

b. *Jesus-ek ur-a ardo bilakatu zuen*  
Jesus-SG.ERG water-SG wine change.PFV AUX.PST.3SG:3SG  
'Jesus changed the water into wine'

### 3. The construction of intransitive transformation verbs with predicative arguments

#### 3.1. Introductory remarks

In the construction of transformation verbs whose argument structure does not include an agent, the entity undergoing a transformation is treated like the sole argument S of monovalent verbs. If a predicative argument is present, it may be morphologically marked (i.e., in a form different from the quotation form of nouns) or unmarked (i.e., in a form identical to the quotation form of nouns).

Since the result of a transformation can be independently described by means of a predication of identification, the main question is: to what extent does the treatment of the predicative argument of transformation verbs coincide with that of nouns in predicate function in basic identification clauses.

Cross-linguistically, nouns in predicate function in basic identification clauses show a very strong tendency to be unmarked. A similar tendency is observed in the construction of intransitive verbs of transformation, which is not surprising, but it is much less strong, which calls for an explanation.

### 3.2. Intransitive transformation verbs with unmarked predicative arguments

In languages in which nouns in predicate function in basic identification clauses are unmarked, intransitive transformation verbs with an equally unmarked predicative argument are relatively common. This is for example the case of Catalan *tornar(se)* – ex. (9).

(9) Catalan

*L'esperança es va tornar decepció*  
DEF.SGF-hope MID AUX.3SG turn disappointment  
'The hope changed into disappointment'

In some languages, this results in a construction with exceptional marking characteristics. For example, in Basque, the transformation verbs are the only verbs whose construction involves two arguments represented by NPs in the absolute case (see ex. (8a) above).

### 3.3. Intransitive transformation verbs with marked predicative arguments

In spite of the semantic affinity between predicative arguments of transformation verbs and nouns in predicate function in basic identification clauses, zero marking is less widespread for predicative arguments of transformation verbs. Morphologically marked predicative arguments commonly occur in languages in which nouns in predicate function in basic identification clauses are unmarked, as illustrated by Akhvakh – ex. (10) and Japanese – ex. (11).

(10) Akhvakh

- a. *hu-be šakiba godi*  
DEM-N bird COP<sub>SGN</sub>  
'This is a bird'
- b. *waša šakiba-ga šor-uwī*  
boy bird-ALL turn-EVID<sub>SGM</sub>  
'The boy changed into a bird'
- c. *ała-šw-e waša šakiba-ga šor-ōwi*  
God-O<sub>SGM</sub>-ERG boy bird-ALL turn-CAUS.EVID<sub>SGM</sub>  
'God changed the boy into a bird'

(11) Japanese (Miyuki Ishibashi, p.c.)

- a. *kore wa tori da*  
DEM TOP bird COP  
'This is a bird'

b. *majo-ga tori-ni kawat-ta*  
 witch-SBJ bird-DAT/ALL become-PST  
 ‘The witch changed into a bird’

c. *majo-ga kodomo-o tori-ni kae-ta*  
 witch-SBJ child-ACC bird-DAT/ALL transform-PST  
 ‘The witch changed the boy into a bird’

In languages in which nouns in predicate function in basic identification clauses may be in a marked case form or combined with an adposition, predicative arguments of intransitive transformation verbs may show the same marking, but this is not necessarily the case.

In Mandinka, the same postposition *tí* marks nouns in predicate function in basic identification clauses and predicative arguments of intransitive transformation verbs.

## (12) Mandinka

a. *àte mú màndinkoo lè tí*  
 3SG COPPOS Mandinka.DEF FOC TRNSF  
 ‘He is a Mandinka’

a. *jínoo yèlema-ta yíroo lè tí*  
 jinn.DEF turn-PFVPOS tree.DEF FOC TRNSF  
 ‘The jinn changed into a tree’

Russian and Finnish illustrate the possibility to have two distinct marked case forms or adpositions for predicates in basic identification clauses and for predicative arguments of transformation verbs. In Russian, nouns used as predicates in basic identification clauses may be in the nominative case or in the instrumental case. The predicative argument of transformation verbs is never in the nominative case, but it is not necessarily in the instrumental case. For example, the predicative argument of Russian *prevratit'sja* ‘transform (intr.)’ is marked by the preposition *v* + accusative case, as illustrated above by ex. (7). In Finnish, nouns used as predicates in basic identification clauses may be in the nominative case or in the essive case, whereas the predicative argument of transformation verbs is in the translative case.

### 3.3. Cases / adpositions used to mark the predicative argument of intransitive transformation verbs.

When they are morphologically marked, the predicative arguments of intransitive transformation verbs may show a (relatively) specific kind of marking. This has already been illustrated by the Mandinka postposition *tí*: apart from predicative arguments of transformation verbs and nouns in predicate function in basic identification clauses, this postposition marks the standard of comparison in sentences such as *sánoo kúliyaa-ta kódoó tí* ‘Gold is heavier than silver’, but has no other productive use.

Other possible illustrations of cases or adpositions (relatively) specialized in predicative argument marking are the “transformative” or “translative” cases found in several Uralian languages (Hungarian *-vá ~ -vé*, Finnish *-ksi*, Estonian *-ks*, etc.) – ex. (13) & (14).

(13) Hungarian

- a. *A királyfi béká-vá változott*  
 DEF prince frog-TRNSF change.PST.3SG  
 ‘The prince changed into a frog’
- b. *Jézus bór-rá változtatta a vizet*  
 Jesus wine-TRNSF change.CAUS.PST.3SG.DEF DEF water.ACC  
 ‘Jesus changed the water into wine’

(14) Finnish

- a. *Lumi muuttui vede-ksi*  
 snow become.PST.3SG water-TRNSF  
 ‘The snow changed into water’
- b. *Kylmä muuttaa vede-n jää-ksi*  
 cold transform.PRES.3SG water-GEN ice-TRNSF  
 ‘The cold changes the water into ice’

However, most of the time, the case forms or adpositions used for predicative arguments are also widely used with canonical complements or adjuncts, and descriptive grammars consider their use to encode predicative arguments as derived from more “central” meanings. Predicative arguments showing *allative* marking are particularly widespread, as already illustrated above by Turkish, Russian, Akhvakh and Japanese examples. The use of *instrumental* marking (as with Russian *stanovit’sja* ‘become’) is also attested, but much less common.

## 4. Predicative arguments of transitive transformation verbs

### 4.1. Transitive transformation verbs with the entity undergoing a transformation encoded as P

In the construction of transitive transformation verbs, the instigator of the transformation is encoded like A in the prototypical transitive construction. Most of the time, the entity undergoing a transformation is encoded as P, and the predicative argument is treated in the same way as in the construction of an intransitive transformation verb. In particular, this can be expected to be the case with transitive transformation verbs related to intransitive transformation verbs via causative or anticausative derivation, or with labile transformation verbs – see above for illustrations.



## 4.2. Transitive transformation verbs with the entity undergoing a transformation encoded as an oblique

Another possible construction for transitive transformation verbs is that the entity undergoing a transformation is treated as an oblique argument in a form typically used to encode origin, and the predicative argument shows the same marking (or absence of marking) as P in typical transitive clauses. This pattern occurs with creation verbs occasionally used as transformation verbs. For example, in English, it is possible to say *Don't make it a habit* (with a construction of the type described in section 4.1), or *Don't make a habit of it*.

## 5. Explaining the marking of predicative arguments

### 5.1. Unmarked predicative arguments

Unmarked predicative arguments have a straightforward functional explanation: since cross-linguistically, nouns in predicate function in basic identification clauses tend to show no overt mark of their syntactic role (even in languages in which very few syntactic contexts allow for the use of nouns in a form identical to their quotation form), the absence of marking with predicative arguments reflects their semantic affinity with the predicate of basic identification clauses.

Among the languages whose history is documented, it is not difficult to find examples of verbs that, originally, were not transformation verbs, and whose construction as transformation verbs has departed from the original construction and has been aligned with the construction of a copulative verb in all respects, including marking.

For example, the construction of French *devenir* 'become' is identical to that of *être* 'be' in every respect, in spite of the fact that *devenir* is the reflex of Latin *dēvenīre* 'come down'. In Classical Latin, this verb was not used as a transformation verb, and its construction was identical to that of other movement verbs taking a complement encoding destination. However, in French, *devenir* 'become' has a construction which has nothing in common with that of movement verbs anymore; its predicative argument is treated in all respects like the predicative complement of the copulative verb *être* 'be', and shows in particular the same absence of overt marking.

### 5.2. Marked predicative arguments

We have already seen that the absence of overt marking for predicative arguments of transformation verbs, although relatively common, is much less widespread than the absence of marking for predicates in basic identification clauses. The historical explanation of this situation is that, when verbs that originally are not transformation verbs acquire a use as transformation verbs with a predicative argument, the tendency to align the predicative argument in all respects (including marking) with nouns in predicate function in basic identification clauses under the pressure of analogy (as illustrated above by Latin *dēvenīre* > French *devenir*) is in conflict with a tendency to restrict the alignment to properties other than marking, and to maintain a marking of the predicative argument justified by the etymology.

In particular, the fact that predicative arguments of transformation verbs showing allative marking are particularly widespread is quite obviously correlated with the fact that verbs such as ‘come’ or ‘turn’ are particularly prone to be used as transformation verbs with a predicative argument (see above for illustrations).

### 5.3. The emergence of a specific marking for predicative arguments

Allative may also be the source of cases specifically used to mark predicative arguments, as illustrated by the translative case of Finnish and Estonian – see ex. (14) above. The system of spatial cases of Finnish and Estonian originally consisted of nine cases organized in three series with the meanings ‘unmarked for relative orientation’, ‘IN’ (originally characterized by a formative *-s-*), and ‘AT’ (originally characterized by a formative *-l-*), but the first series has developed non-spatial uses (modal < locative, partitive < ablative, and transformative < allative), and is now used only residually in spatial functions.

The transformative case of Hungarian (ex. (13) above) has a similar origin, although the details of the scenario are less clear. The historical grammars of Hungarian unanimously consider that the transformative suffix *-vá ~ -vé* is a reflex of the ancient allative suffix *-á ~ -é*, but they provide no real explanation for the *v* that constitutes the initial element of this suffix.

The other case of a marking specifically used for predicative arguments of transformation verbs mentioned above is the Mandinka postposition *tí* (also used in copulative clauses). There is some evidence that this postposition also had a comitative function in a relatively recent past. However, the related languages do not seem to provide comparative data making it possible to elaborate an etymological hypothesis that would not be purely speculative.

## 6. Conclusion

The main conclusion suggested by the data presented above concerns the behavior of NP marking in changes affecting the argument structure of verbs. It has already been observed in other domains (for example, in the domain of accusativity/ergativity), that argument NP marking tends to be relatively conservative, and to undergo alignment under the pressure of analogy less easily (or later) than other properties. The observation of the predicative arguments of transformation verbs confirms that, in the evolutions affecting the argument structure of verbs, the marking of argument NPs tends to behave differently from the other properties contributing to define grammatical relations.

Most descriptive grammars provide very few information (or no information at all) about the particularities of NPs used as predicative arguments. However, as already mentioned in the introduction, the data I have been able to examine suggests that, when nouns in predicate function in basic identification clauses contrast with nouns in canonical argument function, the general rule is that the predicative arguments of transformation verbs, irrespective of their etymology, tend to align with the predicate of basic identification clauses with respect to properties other than marking. By contrast, they very often maintain a marking justified by the etymology of the transformation verb.

Consequently, the observation of the marking properties of the predicative arguments of transformation verbs provides some support to the view that the primary function of

argument NP marking is to ensure the distinction between the essential terms of a construction, and that the semantic role encoding function of argument NP marking is only secondary.

## Abbreviations

In the Tswana example, numbers at the beginning of nominal forms indicate noun classes, and 3:9 means '3rd person, class 9'. Otherwise, numbers indicate persons.

ACC: accusative  
ALL: allative  
AUX: auxiliary  
CAUS: causative  
COP: copula  
COPNEG: negative copula  
COPPOS: positive copula  
DAT: dative  
DEF: definite  
DEM: demonstrative  
ERG: ergative  
EVID: evidential  
FOC: focus  
GEN: genitive  
HABPOS: habitual positive  
INF: infinitive  
MID: middle  
O: oblique stem  
PERF: perfect  
PFVNEG: perfective negative  
PFVPOS: perfective positive  
PL: plural  
PST: past  
SBJ: subject  
SG: singular  
SGF: singular feminine  
SGM: singular masculine  
SGN: singular neuter  
TOP: topic  
TRNSF: transformative, or translative

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