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Tropative, Causative and Apparetive in Different Types of Constructed Languages: a Typological Approach

I. Introduction

My report is dedicated to 3 lexical derivations in constructed languages, or *conlangs*. These are languages that did not develop as a result of natural evolution, but were deliberately created.

Conlangs are usually divided into 4 categories according to their aim:

- auxiliary languages (auxlangs), which are designed as lingua franca for native speakers of different languages
- zonal auxlangs (zonlangs), which are designed as lingua franca for a particular language family or area
- artistic languages (artlangs), which are designed for the works of art or as pieces of art themselves. The former languages are sometimes separated and called fictional. However, for this research I do not make a distinction, since both categories of languages have a common aim, which is a recreation
- engineered languages (englangs), which are meant to check linguistic hypotheses

Lexical derivations are both grammaticalized derivations and similar analytical constructions. E.g., English causative:

(1) *simple - simpli-fy*
(2) *difficult - *difficultify - make difficult*

Only (1) is an example of grammaticalized causative, but both are examples of lexical causative. This approach is based on M. Haspelmath's notion of 'Comparative Concepts'.

An aim of my research is to reveal which derivational models are used in different conlangs and to classify these models and to reveal factors which influence a choice of a model for a conlang.

This topic is quite scarcely explored, most aspects are completely untouched. There are several papers by Alan Libert on different aspects of auxlang typology. More papers are dedicated to acquisition of conlangs (Carpenter; Windsor & Stewart) or philosophy of conlanging (Piperski). In my previous reports on typology of tropative and negative concord, conlangs were mentioned as a detached subsample.

It is necessary to emphasize that while most of conlang-related papers concern cultural or psychological aspects of language construction, I present an attempt of studying conlangs with purely linguistic methods, i.e., the same way that natural languages (NLs) are usually treated.

Despite the fact that conlangs are almost always ignored in typological research, there are some strong arguments in favour of conlang typology studies. Firstly, typology is quite a young branch, while conlangs have been created since the 12th century. This must mean that the choice of a model could only be based on the creator's own position on what is easy or naturalistic and what is not. Data about conlangs can help us explain linguistic universalities and diachronic changes. One more argument is that sometimes it is difficult to draw a border between natural languages and conlangs (e.g., Basic English by Charles Ogden, Orwell's Newspeak can be regarded as controlled versions of NLs; furthermore, is Modern Indo-European a conlang or a reconstructed NL? What about Hebrew)

II. Methods of research

As well as in my previous report, 2 methods were used:

- grammar descriptions analysis - for studying causatives
- cross-sectional method - for studying tropatives and apparetives.

The latter method involved translation of 6 sentences from Russian or English, performed by advanced users of conlangs.
In both of my previous reports, disadvantages of this method are thoroughly discussed:

- inability to make a negative statement (i.e. a conclusion about absence of another model)
- risk of an informant's mistake

These disadvantages cannot be omitted, but this method has an important advantage: while tropative and apparetive are rarely mentioned in grammar descriptions, it allows to receive data about languages lacking these details in their descriptions.

On the other hand, it is unsuitable for studying causatives, due to a much wider range of contexts.

III. Tropative and apparetive in conlangs

Term '**tropative**' was introduced by P. Larche. As stated in [Tarasov 2019], it 'is a derivation having a meaning: X considers Y to be Z'. X is a *subject*, Y is an *object*, Z is a *characteristic*. The term **apparetive** is being introduced in this paper (from Latin *apparere*) to denote a derivation having a meaning: 'X seems to be Y'. X is a *stimulus*, Y is a *characteristic*.

My first report introduces the notion of negative tropative: X does not consider Y to be Z. By analogy, the notion of negative apparetive is introduced: X does not seem to be Y. If a negative tropative or apparetive in a language is a grammatical negation of a positive one, we call such a model *positive-negative symmetric.*

It also introduces a reverse tropative: Y is considered to be Z. If a reverse tropative is a grammatical passivization or detransitivization of a direct one, we call such a model *direct-reverse symmetric*. There can be no reverse apparetive, because this is an intransitive predicate, but I must admit that apparetive is quite close semantically to reverse tropative.

4 classes of tropativity are also introduced. By analogy, 3 classes of apparetivity are to be introduced:

Class / Derivation	Tropative	Apparetive	Extra criteria
1 - grammatical (affix or copula)	e.g. Arabic tropative: *'aqala* 'to be intelligent' - *ist-'aqula* 'to consider intelligent'	e.g. Klingon apparetive: *val* 'to be intelligent' - *vallaw'* 'to seem intelligent'	universality (strong if universal, weak otherwise), polysemy
2 - syntactical analytical (triadic or dyadic predicate expressed with one finite clause)	e.g. English: *I consider him (to be) intelligent*	e.g. English: *He seems (to be) intelligent*	polysemy
3 - (semantical) polypredicative (all arguments stated explicitly)	e.g. English: *I think that he is smart*	e.g. English: *It seems that he is smart*	-
4 - descriptional (tropative only)	e.g. English: *He is probably smart*	-	-

6 auxlangs were studied, and here are the results:

Language/Feature	**Tropativity class**	**Polysemy**	**Direct / reverse symmetry**	**Positive / negative symmetry**	**Apparetivity class**	**Polysemy**	**Positive / negative symmetry**
Solresol	2	to praise / to scold	asymmetry - direct instead of reverse	no negative constructions	2	monosemic	symmetry
Volapük	2	monosemic	symmetry	symmetry	2	monosemic	symmetry
Esperanto	2	monosemic	symmetry	symmetry	2	monosemic or 'to be seen by mistake'	symmetry
Sambahsa	2	to say	symmetry	symmetry	2	monosemic	symmetry

Lidepla	3	-	asymmetry, direct instead of reverse	symmetry	2	monosemic	symmetry
Globasa	2	to consider	symmetry	symmetry	2	monosemic	symmetry

Within the sample, typical auxiliary model is like this:

- Class 2 in terms of both tropativity and apparetivity
- Both tropative and apparetive are positive-negative symmetric
- Tropative is direct-reverse symmetric

For example, let us consider Esperanto:

(3) *mi* *opini-as* *li-n* *sağa* *homo*
1sg consider-pres 3sg-ACC intelligent person
'I find him/her smart' [Tarasov 2019: 8]

(4) *li* *opini-at-as* *sağa* *homo*
3sg consider-pass-pres intelligent person
'(S)he is considered to be smart'

(5) *mi* *ne* *opini-as* *li-n* *sağa* *homo*
1sg NEG consider-pres 3sg-ACC intelligent person
'I don't find him/her smart' [Tarasov 2019: 9]

(6) *Li* *aspekt-as* *sağa*
1sg be.seen-3sg intelligent
'He seems to be intelligent' [elic.]

However, Lidepla uses Class 3 tropative model:

(7) *me* *opini* *ke* *ta* *es* *intele*
1sg consider.pres comp 3sg cop intelligent
'I think he is intelligent' [elic.]

Moreover, instead of reverse constructions, direct ones with dummy 3pl subjects are used:

(8) *oni* *opini* *ke* *ta* *es* *intele*
3pl consider.pres comp 3sg cop intelligent
'They think he is intelligent' [elic.]

Solresol is the only conlang lacking negative tropative constructions:

(9) *dore milado dofa domisolfa*
1sg praise 3sg intelligent
‘I find him/her smart’ [Tarasov 2019: 9]

(10) *dore dolami dofa fasolmido*
1sg scold 3sg stupid
‘I find him/her stupid’ [Tarasov 2019: 10]

4 zonlangs were studied:

Language/Feature	Tropativity class	Polysemy	Direct / reverse symmetry	Positive / negative symmetry	Appareitivity class	Polysemy	Positive / negative symmetry
Interslavic	2	to have, to respect, etc	symmetry	symmetry	2	to look or to show oneself as	symmetry
Folkspraak	2	to find, to consider	symmetry	symmetry	2	monosemic or ‘to look’	symmetry
Guosa	3	-	asymmetry - direct instead of reverse	symmetry	3	-	symmetry
International Sign	2	to see	asymmetry - independent constructions	symmetry	2	monosemic	symmetry

From this table we can see that zonlangs follow the same models as auxlangs do, while these categories of conlangs have a common aim. An only exception is International Sign, using different models for direct and reverse tropative constructions:

(11) 1sg see 3sg intelligent
‘I consider him to be intelligent’ [elic.]

(12) 3sg to.have.reputation intelligent
‘He is considered to be intelligent’ [elic.]

4 artlangs were studied:

Language/Feature	Tropativity class	Polysemy	Direct / reverse symmetry	Positive / negative symmetry	Apparentivity class	Polysemy	Positive / negative symmetry
Sindarin	3	-	asymmetry - direct instead of reverse	symmetry	2	probability adverb	symmetry
Klingon	3	-	asymmetry - direct instead of reverse	symmetry	1 strong	monosemic	symmetry
Na'vi	3	-	asymmetry - direct instead of reverse	symmetry	3	-	symmetry
Dothraki	4	-	-	symmetry	3	-	

What do we see here? None of artlangs uses Class 2 tropative! Why is it so? Now we should remember that, firstly, Class 3 model is also used in auxlangs, and secondly, that this is also natural (cf. *I consider him to be smart* vs *I think that he is smart*). Whereas the first structure is a triadic predicate, the second one is two dyadic ones. Thus, it can be regarded as more simple for recreational purposes. However, Dothraki uses Class 4 tropative system:

(13) *Me nem nesa fin yotnhare*
3sg postp known conj.anim brain
mae haj-a
3sg.poss strong-3sg
'It is known that his brain is strong' [elic.]

In Klingon, apparetive is grammaticalized:

(14) *val-law'*
intelligent-app
'He seems to be intelligent' [elic.]

I would also like to correct a mistake which I made in my first report. I regarded this sentence as doubtful between Class 2 and Class 3:

(15) *val* *ghaH* *'e'* *vI-Har*
intelligent 3sg TOP 1sgS.3O-believe
'I find him/her smart'

However, it is actually Class 3. Mistake was caused by wrong parsing, third person object was not Y, it was sentential object *val ghaH 'e'* 'that he is smart'

5 englangs were studied:

Language/Feature	Tropativity class	Polysemy	Direct / reverse symmetry	Positive / negative symmetry	Apparetivity class	Polysemy	Positive / negative symmetry
Toki Pona	3	-	asymmetry - direct instead of reverse	symmetry	3	-	symmetry
Ithkuil	2	-	asymmetry - descriptive instead of reverse	symmetry	1	-	symmetry
Lojban	1 strong or 2	special copulative predicate	symmetry	symmetry	1 strong or 2	special copulative predicate	symmetry
Laadan	4	-	-	symmetry	2	monosemic	symmetry
aUI	2	in-prox-mind-verb	symmetry	symmetry	2	feel-shine-verb	symmetry

Lojban causative and apparetive predicates are not incorporated into characteristic, and thus can be regarded as analytical; but in most cases Lojban predicates are actually copulas, and thus they can be regarded as grammaticalized. Therefore, class of Lojban models depends on an approach to the definition of grammaticalization:

(16) *Mi jinvi lodu'u ra mencre*
1sg trop top 3sg intelligent
'I consider him to be intelligent'

(17) *ra simlu mencre*
3sg seem intelligent
'He seems intelligent'

In Ithkuil, tropative subject is marked as an adjunct:

(18) *Thuzaleoč üode*
intelligent.3sg 1sg.rel
'He is intelligent, according to my opinion'

Furthermore, this language utilizes grammaticalized apparetive:

(19) *tv-älo-rd-a ma*
intelligent-state-app-3sg 3sg
'He seems to be intelligent'

Laadan does not distinguish tropative and apparetive:

(20) *bii wotha wa*
decl intelligent evid.pers
'She is intelligent (perceived by the speaker)' [elic.]

These data allow us to conclude that the structure of a tropative or an apparetive system for a conlang is chosen according to an aim of a language. Englangs show a high degree of variation because of the diversity of their aims. Artlangs show the same degree of variation in terms of apparetive, which might be explained by the fact that ideas about apparetive are less uniform than those about tropative. Higher prevalence of apparetive Class 2 over Class 3 in comparison with those of tropative might be explained by the fact that tropative Class 3 simplifies a syntactic structure (turns a

triadic predicate into two dyadic predicates), apparetive Class 3 preserves a dyadic predicate and adds a monadic predicate.

IV. Causative in conlangs

Classification of causatives

Information about causatives was received from grammar descriptions of conlangs.

The following criteria are used for classification:

- Is causative grammaticalized?
- Is grammaticalized causative strong or weak? Again, causative is strong if it is applicable to all stems of a particular class and weak otherwise.

Causative verb is called non-integrating if it only expresses causative meaning without expressing a caused action. (*to bring* is an integrating verb, while *to command* is non-integrating).

Causatives in auxlangs

Language/ Feature	Grammaticalization	Analytical strategies
Solresol	no	stem alteration, non-integrating verbs, caused state (impilicit causative)
Volapük	weak verbal	stem alteration, non-integrating verbs
Esperanto	strong universal	stem alteration, non-integrating verbs
Sambahsa	strong universal	stem alteration, non-integrating verbs
Lidepla	strong universal	stem alteration, non-integrating verbs
Globasa	strong universal	non-integrating verb

Later conlangs, beginning from Esperanto, possess strong universal causative, since it decreases the number of stems to be created and to be learned, and thus suitable for both creators and users.

Volapük lacks grammaticalized non-verbal causatives. For non-verbal causatives, prefix *be-* or suffix *-ik* is used.

Solresol, the earliest of auxlangs studied, lacks grammaticalized causatives. However, it can express non-verbal causatives with an adjective of a caused state:

(21) *simisol* ‘simple’, ‘simplify’

Causatives in zonlangs

Language/Feature	Grammaticalization	Analytical strategies
Interslavic	weak non-verbal	stem alteration, causative verbs
Folkspraak	strong non-verbal	causative verbs
Elefen	strong non-verbal	stem alteration, causative verbs

There are no grammaticalized verbal causatives in zonlangs. Interslavic non-verbal causative is weak. Why do they avoid simplistic strategy? That might be due to the fact that they should not only be auxiliary, but also naturalistic and avoid significant difference from languages of corresponding areas.

Causatives in artlangs

Language/Feature	Grammaticalization	Analytical strategies
Sindarin	strong universal	non-integrating causative verbs
Klingon	strong universal	stem alteration, non-integrating causative verbs
Na’vi	strong universal	stem alteration, non-integrating causative verbs
Dothraki	strong universal	non-integrating causative verbs

All artlangs use strong universal causative, which decreases the number of stems to be created. The fact that Klingon and Na'vi, which were designed for non-human races, still use this strategy, points out that while an ideally convenient strategy might be chosen intuitively, creation of an ideally inconvenient one requires intention towards it.

Causatives in englangs

Language/Feature	Grammaticalization	Analytical strategies
Toki Pona	no	non-integrating causative verbs
Ithkuil	no	stem alteration, caused action
Lojban	strong universal	non-integrating predicates
Laadan	strong universal	non-integrating causative verbs
aUI	strong universal	no

aUI lacks any analytical strategy, which is predictable for an oligosynthetic language.

Toki Pona lacks both grammatical causative and integrating causative verbs, which helps it decrease a number of stems and avoid affixation.

Ithkuil can express causative meaning implicitly:

(22) *atř* 'to be observable' — *atř* 'to make observable'

But why does Ithkuil avoid grammaticalization? The reason is probably the same as the one for auxlangs and artlangs to use it: it simplifies language comprehension, which is opposite to the aim of a creator.

It can be stated again that the main factor defining a choice of a causative model, is an aim of a language. However, there is some difference between conlang behavior in terms of tropative or apparetive and causative.

V. Conclusion

Overall conclusions are as follows:

- The aim of a conlang is the most important factor having an influence on its derivational model. Englangs show the highest degree of variation, since their aims are also extremely different.
- Tropative, apparetive and causative show different rates of grammaticalization. This discrepancy could be

explained by the fact that different methods were applied, but tropative and apparetive still show different results. Explanation through a level of coverage also seems unsuitable, since both tropative and apparetive are equally poorly explored. The most probable explanation is that there are different ideas about structures of these derivations.