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16th Typology and Grammar Conference for Young Researchers

Towards a Typology of Tropative

I.   Definition of a term

Tropative is a derivation with a meaning "X [considers] Y (to be) Z". This term was introduced in [Larche 1996] (article about Arabic) and used in [Jacques 2011] (about Japhug) in the meaning 'word-forming affix creating the verb "to consider to be Z" from the verb "to be Z"'. In this report, X is to be named *subject*, Y is to be named *object*, Z is to be named *characteristics*.

The meaning of this term will be widened in the report. It will not only mean an affix, but also a verb or a clause with a similar meaning.

Let us also state some approaches to defining tropative:

1. _Tropative area_ is a conception of a personal meaning about some object.
2. _Semantical tropative_ is a statement 'Subject X has an opinion, that Y is Z' (a tropative class with an ability to introduce a subject (range of subjects) explicitly, while "It seems that he is smart" is a tropative class but not a semantical tropative)
3. _Syntactical tropative_ is an ability of a language to express semantical tropative with one finite clause (a triadic predicate T(X, Y, Z))
4. *Grammatical tropative* is a tropative in its original meaning (i.e. syntactical tropative with a characteristics incorporated into a verb, so, only X and Y are arguments)

Larche and Jacques describe _direct positive_ constructions only. In this report, _reverse_ (i.e. those having a meaning "Y is

[considered] (to be) Z", X can be omitted, so the predicate might have a form T(Y,Z) or T(Y) for grammaticalized) and _negative_ (i.e. with a meaning "X doesn't [consider] Y (to be) Z" or "Y isn't [considered] (to be) Z") ones are also discussed and considered tropative.

There are very few papers on tropative and it is rarely mentioned in grammar books, especially in case it is not grammaticalized.

Thus, it is necessary to use a method of elicitation. In this research, modification of this method called _cross-section method_ (rus. _метод поперечного среза (metod poperechnogo sreza)_) was used.

It involved a questionnaire with 4 sentences:
1. I consider him to be intelligent
2. He is considered to be intelligent
3. I don't consider him to be intelligent
4. He isn't considered to be intelligent

which informants were supposed to translate.

Questionnaire languages were mainly English and Russian, more rarely Spanish, Persian and Ukrainian (for people not speaking or not willing to use main languages).

Disadvantages:
- inability to make a negative statement (i.e. a conclusion about absence of some kind of tropative in a language) - but in this report, either positive or no statement is made (present vs not detected)
- inability to explore all the ways to express tropative in the language - but generalization was not the purpose, all sentences are just examples
- risk of an informant's mistake, which might not be corrected by others

But the main advantage is that it helps to process more languages than others.

During this research, 111 languages were processed - 100 of them are natural (only they influence typological conclusion!) and 11 are artificial (Emoji is among them).

II. Varieties of tropative

Note: due to the method, class of a construction can be upgraded further, no statement about of absence of a higher-class construction is made.

0. Rarissimo: no class - tropative area not detected. Arrernte is a single example. Informants answered:

"(0) *re akeltye*

3sg smart

"(S)he is smart"

is 'He is knowledgeable'. Something either is, or isn't. 'Consider' is a shade of grey from English".

1. Rare: 4th class - tropative area exists, semantical tropative not detected. E.g. Hawaiian:

(1)   *akamai 'o ia mana'o 'o ia*

        intelligent be.3sg 3sg opinion be.3sg 3sg

"It is an opinion that (s)he is smart".

At this stage, it is even impossible to distinguish direct and reverse constructions (usually X is supposed to be 1sg)

2. Quite common: 3rd class - semantical tropative exists, syntactical one not detected.

E.g. Nivkh

(2)   *ni k'ımlı-dj: if k'oɣa maŋɣ-dj*

        1sg think-pres 3sg intelligent be-pres

"I think he is intelligent"

X is 1sg, Y is 3sg-masculine, Z is 'intelligent'. But there are 2 finite clauses

Strictly speaking, it is not essential for X to be a subject of a main clause.

E.g. Tok Pisin

(3) *tingting bilong mi, em i saveman*
     opinion belong 1sg 3sg be.3sg intelligent

"Opinion belongs to me, that he is smart"

3. The most common: 2nd class - syntactical tropative exists, grammatical one not detected.

In this case tropative can be expressed:

3.1. by a special verb

E.g. Ukrainian

(4) *ja vvaža-ju joɣo rozumno-ju ľudino-ju*
     1sg think-1sg 3sg.ACC intelligent-f.INS person-INS

"I consider him to be an intelligent person"

3.2. by a polysemic verb. The most common polysemy is:

3.2.1. to count

E.g. Russian

(5) *ja sčita-ju ego umn-ɪm čelovek-om*
     1sg count-1sg 3sg.ACC intelligent-m.INS person-INS

"I consider him to be an intelligent person"

3.2.2. possessive verbs

E.g. English

(6) *I find him smart*

3.2.3. perception verbs

E.g. Greenlandic

(7) *pikorissu-tut isigi-va-ra*
     intelligent-EQU see-IND-1sgS.3sgO

"I see him/her as smart"

3.2.4. attitude verbs

E.g. Rusyn

(8) *považ-uju ho za rozumn-oho človjik-a*
     respect-1sg 3sg.m.ACC intelligent-m.INS person-INS

"I consider him to be an intelligent person"

3.2.5. speech verbs

E.g. Dolgan

(9) *min dii-bi-n gini-ni əjdək kihi*
        1sg say-1-sg 3sg-ACC intelligent person
"I find him/her intelligent"

3.2.6. modal and abstract verbs

E.g. Bambara

(10) *ne bɛ k'a kɛ maa hakiliman ye*
        1sg be.1sg do person intelligent to.be
"I consider him to be an intelligent person"

Ye = to be, not "is": if it had been "is", the sentence would look like this: "*...k'a **ye** maa hakiliman ye*"

3.2.7. movement verbs

E.g. Hausa

(11) *ina ɗauka-n mai basira*
        COP.1sg carry-3sgO as intelligent
"I find him/her intelligent"

4. Rare: 1st class - grammaticalized tropative

E.g. Inuktitut

(12) *pinaju-gi-ja-ra*
        intelligent-TROP-IND.PRES-1sgS.3sgO
"I find him/her smart"

Grammatical tropative will be discussed more thoroughly later.

III. Direct/reverse constructions correlation

There are several types of correlation between direct and reverse constructions of the same language.

1. Both types of constructions formed non-syntactically

2. Only reverse constructions formed syntactically

E.g. North Russian dialect of Romani reverse construction

(13) *jov syi gin-ela-pe godjavir*
        1sg COP.3sg count-3sg-PASS intelligent
"(S)he is considered to be intelligent"

But direct construction is a polypredicative semantical tropative

(14) *me gin-av so jov syi godjavir*
      1sg count-1sg CONJ 3sg COP.3sg intelligent

"I think he/she is smart"

3. Only direct constructions formed syntactically, while reverse ones are actually direct with a "dummy subject" or descriptional tropative-class statements

E.g. Quechua direct construction

(15) *yuyaniyuq-tan riku-y-ki*
      intelligent-EVID see-1sgS.3sgO-PRES

"I consider him/her to be smart"

Reverse constructions are also direct:

(16) *yuyaniyuq-mi riku-kun-ki*
      intelligent-SUPP see-3sgS.3sgO-PRES

"(S)he is considered to be smart" ((S)he considers her/him to be smart)

X is usually 3pl, or indefinite, or X=Y

4. Both types formed syntactically

4.1. Reverse are independent from direct

E.g. Zulu

(17) *ngi-ca<ba>nga uhlakanipha*

1sgS-think<3sgO> intelligent

"I find him smart"

(18) *u-bheka uhlakanipha*

3sg-look intelligent

"(S)he is considered smart"

4.2. Reverse are passivation or intransitivization of direct

The most common type

But there might actually be reverse constructions in a meaning of direct ones (rarissimo)

E.g. Inuktitut

(19) *pinaju-gi-ja-uju-tit (uvagut)*
      intelligent-TROP-IND.PRES-PASS-2sg (1du)

"You are considered to be intelligent (by both of us)"

Reverse constructions are used when X is dual or plural.

IV.   Positive/negative constructions correlation

There are also several types of correlation between positive and negative constructions of the same language
1. Both types of constructions formed non-syntactically
2. Both types formed syntactically
2.1. Rarissimo: Negative are indepent from positive
Aymara reverse constructions
(20) *jupa chi'qhi-ta siwa*
        3SG intelligent-ABL   say.PASS
"(S)he is said to be intelligent"
(21) *jupa jan chi'qhi-ru unta-si*
        3sg   neg   intelligent-ALL   see-PASS
"(S)he doesn't look intelligent"
2.2. Negative are grammatical negation of positive
The most common type

V.   Grammatical tropative classification

Tropative grammaticalization cases can also be classified according to some parameters
   A. according to their availability to be attached to different stems.
      In some cases, tropative is universal, i.e. any stem of a particular class can be used to form a grammatical tropative construction.
E.g. Arabic *-ist*
(22) *hasana* 'to be good' - *ist-<a>hs<u>n<a>* 'to find smb/smth good'
(23) *'aqala* 'to be intelligent' - *ist-<a>'q<u>l<a>* 'to find smb intelligent'
      But in other cases, it is limited and may just be attached to some stems.

E.g. Turkish *-msa/mse/msi/msı*

(24) *iyi* 'good' - *iyi-msa-mak* 'to praise, to find good'

(25) *akıllı* 'intelligent' - **akıllı-msa-mak* 'to find intelligent'

    B. according to having other meanings

      In come cases, tropative is specific, i.e. has only tropative meaning.

E.g. Lakota *-la/lakA*

(26) *wašte* 'good' - *wašte-lakA* 'to like, to find good'

(27) *ksapa* 'intelligent' - *ksapalakA* 'to find intelligent'

      But in other cases, there are also different meanings:

E.g. Nanai verb-forming affix *-si*

(28) *ulen* 'good' - *ule-si-uri* 'to like, to find good'

(29) *orkin* 'bad' - *orki-si-ori* 'to get offended, to find bad'

But also:

(30) *alov-ori* 'to give' - *alo-si-ori* 'to teach'

VI.   Tropative in artificial languages

     Besides the actual typological sample of 100 languages, 11 artificial languages were also processed, 1 of which is Emoji.

     Purposes of this part:

- to compare artificial languages' laws of tropative forming to those in natural languages
- to analyze which constructions are used according to credo of a language

     Esperanto was intended by L.Zamenhof to be as easy as possible, in order to encourage every single person to learn it. And for this language, syntactical tropative expressed by the verb *opinii* without any polysemy is used. Reverse constructions are passivation of direct ones, while negative constructions are grammatical negation to positive ones.

     (31) *mi opini-as li-n saĝa homo*

          1sg consider(trop.)-pres 3sg-ACC intelligent person

"I find him/her smart"

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

(33) *mi ne opini-as li-n sağa homo*
  1sg NEG consider(trop.)-pres 3sg-ACC intelligent person
"I don't find him/her smart"

(34) *li ne opini-at-as sağa homo*
  3sg NEG consider(trop.)-pass-pres intelligent person
"(S)he isn't considered to be smart"

Whereas **Klingon** was designed by M.Ocrand to be as difficult and unnatural as possible. It is doubtful whether its tropative can be named syntactical (*'e'* can be considered to be a subordinate clause marker, but verb *Har* 'to believe' is transitive). Negative constructions are grammatical negation to positive ones, whereas for reverse ones direct tropative is used with dummy X

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

(36) *val ghaH 'e' Har-lu'*
  intelligent 3sg TOP believe-0s.3O
"Someone finds him/her smart"

(37) *val ghaH 'e' vI-Har-be'*
  intelligent 3sg TOP 1sgS.3O-believe-NEG
"I don't find him/her smart"

It will also be reasonable to discuss the case of **Solresol** by F. Sudre. Tropative is syntactical, but constructions are only direct in this language. There is an interesting feature about positive and negative constructions. The same type of construction can be either positive or negative, depending on the desirability of X.

(38) *dore milado dofa domisolfa*
  1sg praise 3sg intelligent
"I find him/her smart"

(39) *dore dolami dofa domisolfa*
       1sg scold 3sg intelligent

"I don't find him/her smart"

(40) *dore dolami dofa fasolmido*
       1sg scold 3sg stupid

"I find him/her stupid"

(41) *dore milado dofa fasolmido*
       1sg praise 3sg stupid

"I don't find him/her stupid"

Emoji by S. Kurita is different from other artificial languages in the way that it has no grammar. It is the most iconic language, so, tropative system used in it is probably convenient and intuitive. Negative constructions are grammatical negation to positive ones, while reverse constructions are independent to positive ones.

(42) 🙋‍♂️🤔🧑🤓
       1sg-ZWJ-m think 3sg-ZWJ-m intelligent

 "I (male) find him smart"

(43) 🙋‍♂️🚫🤔🧑🤓
       1sg-ZWJ-m NEG think 3sg-ZWJ-m intelligent

 "I (male) don't find him smart"

(44) 🧑☆🤓
       3sg-ZWJ-m be.famous intelligent

"He is considered to be intelligent"

(45) 🧑🚫☆🤓
       3sg-ZWJ-m NEG be.famous intelligent

"He isn't considered to be intelligent"

VII. Conclusion

1. There are several classes of language tropative system, and syntactical tropative with no grammatical one detected is the most common.

2. The most common polysemy cases for syntactical tropative are mental and possessive areas
3. Grammatical tropative can be classified according to its ability to be attached to different stems or to express other meanings
4. Reverse tropative constructions are usually a passivation of direct ones, but there are some exceptions (like in Zulu)
5. Negative tropative constructions are usually a grammatical negation of positive ones, but there is an exception in Aymara
6. Syntactical non-grammatical tropative model with no exception on Rules 4 and 5 may be considered convenient (because it is used in Esperanto), but the system with reverse constructions independent from direct ones can also be considered iconical (due to its use in Emoji). Whereas tropative system without reverse constructions can be considered incovenient and unnatural (and therefore it is used in Klingon).

As a result of a research, Roman Tarasov's Tropative database (http://apptropative.herokuapp.com, to be modified soon) was designed.

Conventional notations

1, 2, 3 - 1st, 2nd, 3rd person
0 - indefinite person
S - subject (agent), O - object (patient)
sg - singular, pl - plural, du - dual
m - masculine, f - feminine
pres - present tense
ACC - accusative case
INS - instrumental case

ABL - ablative case

ALL - allative case

COP - copula

ep - epinthese

EQU - equative

evid - evidentiality

ind - indicative

ipfv - imperfective

NEG - negation

PASS - passive voice

supp - suppose

ZWJ - zero-width joiner

Sources

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