## Negative Concord models in Slavonic languages and Beyond from a Typological Perspective

## I. Introduction

Negative Concord (NC) is a participant (argument or adjunct) negation marked both on a polarity item and on a verb.

In this report, participant negation in different types and groups of languages is discussed.

Slavonic languages are the main focus of the report. 17 languages and dialects of this group were explored, Russian and Bulgarian are core languages of the research.

Besides them, 22 natural and 6 constructed languages were processed.

The following contexts are checked:

- prototypical - with arguments (subjects and objects) and adjuncts
- participant negation accompanied by a verbal ellipse (if it is possible in a language)
The possible explanation for NC + ellipse incompatibility is that predicate negation and a verb are inseparable and therefore, using NC in an ellipse clause violates the principle of inseparability.

The possible explanation for compatibility is that predicate negation is obligatory in all clauses with NPI or negative pronouns in NC-languages. (Tiskin 2017), (Letuchiy 2017)

## II. Methods of the research

There are a few papers dedicated to NC, e.g. (Tiskin 2017), (Letuchiy 2017) about Russian, typological (Siek 2016) but compatibility with ellipse is extremely rarely discussed.

Thus, it is necessary to use a method of elicitation. For this research, two forms of elicitation are used:

- template method (rus. метод шаблона) is used for Slavonic languages, except for uncodified and minority languages and dialects; also used for Greek and Turkish. It involves assessment of 10 replicated sentences. Assessment scale was individual for each language, basing on school grading scale, but all grades were normalized to bilateral 100-point scale (from 100 (absolutely correct) to -100 (absolutely incorrect)). Table is in the handouts. 2 correctness indices absolute and relative - are used. Relative correctness index is an average relative grade (difference between absolute grade and particular informant's average grade). It allows to take informants' tendency to overestimate or underestimate phrases in general into account.
The number of informants is the following:
* 50 for core languages
* 10 for other Slavonic languages
* 5 for Greek and Turkish
- cross-section method, borrowed from (Tarasov 2019), involving translation of 3 sentences from Russian, English or Ukrainian.
In that report, disadvantages of the method were discussed:
- inability to make a negative statement (i.e. a conclusion about absence of another construction) - but in this report, correctness of another option was also checked
- risk of an informant's mistake - this disadvantage cannot be omitted
But, as it was mentioned, its main advantage is allowance to process more languages.

Targets are:

1. I know nothing about him (this person).
2. Some of them are 15 years old, some are 30 but none is 20. (twice in survey - "is 20" and "isn't 20")
3. She read that book many times but never up to the end (twice in survey - "never up..." and "never not up...")

## III. Slavonic models. Absolute Slavonic Universality

A. East Slavonic models (Russian and beyond)

Russian, Ukrainian and Belarusian use NC but it is incompatible with verbal ellipse:

| Language <br> name/Polarized <br> item role | Russian | Ukrainian | Belarusian |
| :--- | :--- | :--- | :--- |
| Argument | -2 vs +12 | -8 vs +22 | -8 vs +6 |
| Adjunct | -21 vs +12 | -16 vs +3 | -36 vs +25 |

Rusyn language and Kuban Balachka have the same model:
e.g. Rusyn
(1) Ona čita-l-a sısj-u knıžk-u bayato raz, 3sg.f read-PST-f time.GEN.PL

| ajbo | $n ı$-gda | (*ne) | do | konc-a |
| :--- | :--- | :--- | :--- | :--- |
| CONJ | NEG-when | (*NEG) | PREP | end-GEN |

"She read that book many times but never up to the end"
(2) Da-ko-mu iz nıx 15 rok-iw, da-ko-mu 30,
IND-who-DAT PREP 3pl.GEN 15 when-GEN.PL
IND-who-DAT 30
ajbo nı-ko-mu - (*ne) 20
CONJ NEG-when-DAT (*NEG) 20
"Some of them are 15 years old, some are 30 but none is 20 " However, Polesian microlanguage allows NC + ellipse:
(3) De-kotrim
iz
PREP
jih
15 liet, IND-which-DAT.PL
3pl.GEN
15 year-GEN.PL
de-kotrim 30, ale
ni-komu
(ni) 20
IND-who-DAT.PL 30 CONJ NEG-who.DAT NEG 20
"Some of them are 15 years old, some are 30 but none is 20 "
(4)
Vona
knig-u, 3sg.f. many time.GEN.PL read-PST-f this.f.ACC book-ACC
(ni) do konc-a
NEG PREP end-GEN
"She read that book many times but never up to the end"
Don Cossack Ghutor even requires it:
(5) Kakim-tasj at ix 15 yadkow,
which-DAT-PL PREP 3PL.GEN 15 year-GEN-PL
kakim-tasj 30, ajžis ni-ka-mu *(nie) 20
which-DAT-PL 30, CONJ NEG-who-DAT NEG 20
"Some of them are 15 years old, some are 30 but none is 20 "
(6) Wana skoj raz-ow čita-l-a ent-u
kitap-u,
3sg.f many time-GEN.PL read-PST-f this-f
book-ACC
$\begin{array}{lllll}\text { ajžis ni-kada } & \text { *(nie) } & \text { da } & \text { ukarot-u }\end{array}$
"She read that book many times but never up to the end"
B. South Slavonic models (Bulgarian and beyond)

Bulgarian, Macedonian and Serbian use NC but their models slightly differ from one another. Bulgarian allows both NC and single negation in elliptic contexts if the polarized item is an argument, Serbian and Macedonian allow it if Pl is an adjunct.

In Serbian ellipse itself is not compatible with polarized argument.

| Language <br> name/Polarized <br> item role | Bulgarian | Macedonian | Serbian |
| :--- | :--- | :--- | :--- |
| Argument | +7 vs +23 | -11 vs +11 | -4 vs -1 |
| Adjunct | -5 vs +30 | +14 | $+7,5$ vs +41 |

C. West Slavonic models

Polish and Czech both use NC, their models are slightly different from each other. In Polish ellipse itself is not compatible
with polarized argument. Czech allows both NC and single negation if the polarized item is an adjunct.

| Language <br> name/Polarized item role | Polish | Czech |
| :--- | :--- | :--- |
| Argument | -9 vs -14 | -5 vs +28 |
| Сирконстант | -1 vs +36 | +48 vs +26 |

Kashubian and Upper Sorbian require NC irrespective of the verbal ellipse and PI role
e.g. Kashubian:

le ni-gdë *(nie) skùńcza

CONJ NEG-when *(NEG) up.to.end.
"She read that book many times but never up to the end"
Absolute Slavonic Universality: every Slavonic language and dialect uses NC at least in basic contexts.

## IV. Ossetian Case

However, it is not always the case that languages of one group use the same strategy - NC/SN even in basic contexts.

For example, Talish, belonging to Iranian group, is an
NC-language:

| (9) | Az | əс̌әу | hiči |
| :--- | :--- | :--- | :--- | zinde-ni-m

"I know nothing about him"
Standard Ossetian, belonging to the same group, uses single negation:

| (10) Uəj tıxxaej | nici | zon-ın |
| ---: | :--- | :--- | :--- |
| 3sg POSTP | nothing | know-1sg |

"I know nothing about him"
The example from Ossetian clearly illustrates that even different dialects of one language can use different models. E.g., South (Kudar) Ossetian is an NC-dialect:
(11) Uәj tıxxaej nici nae zon-ın

3sg POSTP nothing NEG know-1sg
"I know nothing about him"

## V. English: different types of double negation

English is the most famous language having more than one model. As we all know, Standard English uses a single negation system. Thus, the sentence (12) must have the meaning "For every $X$ it is false that John does $X$ ", while the sentence (13) must mean "Sentence 12 is wrong => For some $X$ it is true that John does $X$ " (12) John does not do anything
(13) John does not do nothing

This rule was introduced in (Lowth 1762), negative concord was announced "relique of the antient (not misprint - orthography of R. Lowth) style, which is (R. L.'s grammar) now grown wholly obsolete". This principle is called duplex negatio affirmat (I would prefer the englified term Negation Opposition Principle (NOP), rus. принцип противостояния отрицаний (ППО))

However, some varieties of English do not use single negation.
E.g. African American Vernacular English (AAVE):
(14) He ain't know nothing

It might seem that AAVE is an NC-dialect, but that is not fully true. In fact, AAVE clause does not need a polarized participant for double negation.
(15) Ain't got no place to lay your head [McFerrin 1988]
"[You] have no place to lay your head"
This principle is called duplex negatio negat (I would prefer englified term Negation Cooperation Principle (NCP), rus. принцип сотрудничества отрицаний (ПСО)).

## VI. About sign languages. Sign Language Iconicity Principle

Russian Sign Language uses NC, including clauses with verbal ellipse (but only if polarized item is an adjunct):
(16) f-3sg this book read time many CONJ up.to.end never NEG
"She read that book many times but never up to the end"
If it is an argument, single negation is used:
(17) some 3pl 15 age other 30 age CONJ 20 who NEG
"Some of them are 15 years old, some are 30 but none is 20 "
American Sign Language uses NC in basic contexts:
(18) 1sg know.NEG nothing 3sg
"I know nothing about him"
But does not use it for elliptic contexts irrespective of PI role:
(19) 3 pl some age 15 other age 30 age 20 CONJ NEG
"Some of them are 15 years old, some are 30 but none is 20 "
British Sign Language uses NC for subjects but not for objects:
(20) nothing happen.NEG
"Nothing happens" [spreadthesign]
(21) eat anything $2 \mathrm{sg} / \mathrm{pl}$ must.not
"You must not eat anything"
(Pfau, Quer 2002) also mentions NC in Catalan Sign language:
(22) Berta vegetables eat.NEG never
"Berta never eats vegetables" [Pfau, Quer 2002: 80]
and NCP in German Sign Language:
(23) mother flower.PL buy.NEG NEG
"Mother does not buy flowers".
Sign Language Iconicity Principle: sign languages tend to use NC or NCP at least in some contexts. Number of processed languages does not allow to call it universality.

## VII. About language isolates

It was discovered that genetically isolated languages tend to avoid NC in clauses with verbal ellipse. 3 language isolates were processed: Basque, Nivkh and Yukaghir (2 dialects - Tundra and Forest). That is not many, but there are only 7 non-extinct isolates.

| Language <br> name/ <br> Context type | Basque | Nivkh | Tundra <br> Yukaghir | Forest <br> Yukaghir |
| :--- | :--- | :--- | :--- | :--- |
| Basic | single | NC | single | NC |
| Verbal ellipse <br> (PI as an <br> argument) | - | not compatible | - | not compatible |
| Verbal ellipse <br> (PI as an <br> adjunct) | - | NC | - | not compatible |

## VIII. About constructed languages. Constructed Language Consistency Principle.

Method of constructed language analysis was also borrowed from (Tarasov 2019). The purposes of this part are the same now:

- to compare and contrast constructed negation models with natural ones
- to analyze dependence of the model on an aim of a language
The first published auxiliary language was Solresol by Jean Francois Sudre. The research has shown that single negation is used in this language:
$\begin{array}{clll}\text { (24) } \begin{array}{lll}\text { Dore } & \text { farefa } & \text { lasol }\end{array} & \text { lami } \\ 1 \mathrm{sg} / \mathrm{pl} & \text { go } & \text { never } & \text { there }\end{array}$
"I/we have never gone there" [Rice 1997: 14], [Gajewski 1902: 36]
Esperanto by Ludowik Zamenhof is another auxiliary language which was highly opposed to previous conlangs. However, it also uses single negation:


## (25) Mi nenian vid-is

1sg never see-pres
"I have never seen [it]" [Zamenhof 1887: 39]
This might mean that single negation model should be considered the easiest. Thus, Klingon by Marc Okrand, having been designed as an unnaturalistic language for non-human race, would have to be NC-language.

However, it also uses single negation. [Ocrand 1985] does not introduce negative or polarized pronouns for Klingon at all. Negation is single and may be expressed like this:
(26) Wa'maH vagh ben bogh-pu' 'op,
ten five year be.born-3pl.PST some
wejmaH ben boghpu' 'op,
thirty year be.born-3pl.PST some 'ach cha'maH ben boghpu' pagh
CONJ twenty year be.born-3pl.PST zero
"Some of them are 15 years old, some are 30, but none [0 people] is 20 "

Thus, constructed languages with opposite aims use the same model.
Constructed Language Consistency Principle: constructed languages tend to use single negation.
In this case, it is essential to check conlangs that are expected to follow other principles.

Interslavic by Jan van Steenbergen et al. is a panslavonic conlang. Therefore, it is regulated by both ASU and CLCP, which are contradictory.

The research has shown that it follows ASU (uses NC):
(27) Ne zna-m o njem ni-čto

NEG know-1sg PREP 3sg.m.LOC NEG-what.ACC
"I know nothing about him"

NC in Interslavic is not compatible with verbal ellipse, but that does not contradict ASU:


The research has shown that it follows SLIP (uses NC):
(29) 3sg.m 1sg know.NEG nothing
"I know nothing about him"
NC in International Signs is not compatible with verbal ellipse, but that does not contradict SLIP:
(30) 3sg.f many.times read book again CONJ up.to.end NEG "She read that book many times but never up to the end"

Reformulated CLCP: constructed languages tend to use single negation if no other principle is applied.

## IX. Conclusion

1. Within the sample, there are more NC-languages than single-negation ones.
2. Different dialects of one language can use different NC models.
3. There is an Absolute Slavonic Universality - ASU: all Slavonic languages use NC in standard contexts. If the verb is elided, it might not be used.
3.1. East Slavonic languages and dialects typically use single negation in clauses with verbal ellipse.
3.2. Models of South and West Slavonic languages are different for verbal ellipse contexts.
4. There is a Sign Language Iconicity Principle - SLIP: sign languages tend to use NC or NCP.
5. Isolated languages tend to avoid NC in verbal ellipse contexts (especially if polarized item is an argument).
6. There is a Constructed Language Consistency Principle CLCP: constructed languages tend to use single negation if no other principle is applied.

## Sources

- Gajewski 1902 - Grammaire du Solresol, ou langue universelle de Fr. Sudre. - Paris, 1902
- Letuchiy 2017 - A. Letuchiy. Non-standard Negative Concord in Russian. - FARL (Formal approaches to Russian Linguistics), Moscow, March 29-31, 2017
- Ocrand 1985 - M. Ocrand. The Klingon Dictionary. Paramount Pictures, 1985
- Pfau, Quer 2002 - R. Pfau, J. Quer. V-to-Neg Raising and Negative Concord in Three Sign Languages. Rivista di Grammatica Generativa 27: pp. 73-86
- Rice 1997 - S. Rice. Grammar of Solresol or the Universal Language of François Sudre by Boleslas Gajewski, Professor. - 1997
- Siek 2016 - N. Siek. Sentential Negations and Negative Concord. — Poznan, 2016
- Spreadthesign — https://www.spreadthesign.com
- Tarasov 2019 - R. Tarasov. Towards a Typology of Tropative. Conference on Typology and Grammar for Young Scholars. Saint-Petersburg, 2019, November 21-23.
- Tiskin 2017 - D. Tiskin. Ni: Negative Concord M in Russian. —Rhema, 2017 №4. Pp. 123-137
- Zamenhof 1887 - L.L.Zamenhof. Meždunarodnyij Jazyik. Predislovije I Polnyi Učebnik // International language. An introduction and a full textbook. - Warsaw, Tipolitographija Keltera. - 1887


## Conventional notations

1, 2, 3-1st, 2nd, 3rd person
sg, pl - singular, plural
NEG - negation
IND - indefinite
PST - past tense
$\mathrm{m}, \mathrm{f}$ - masculine, feminine
ACC - accusative
GEN - genitive
DAT - dative
CONJ - conjunction
PREP - preposition
POSTP - postposition

