## Valency classes in the languages of West Asia

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## Structure of the talk

- Introduction to valency classes (Bivaltyp database)
- Areal features in Western Asia:
  - Valency class depends on TAM
  - Prominence of hanging arguments
- Quantitative summary of the languages of Western Asia
- Conclusion

### Valency classes and BivalTyp

## Valency classes

• The valency of a verb = "the list of its arguments with their coding properties" (Malchukov et al. 2015: 30)

Coding properties (devices)
flagging: cases & adpositions
indexing: agreement, cross-referencing
word order (rarely)

## Valency classes: coding

(mainly) flagging

 (1) Turkish (< Turkic)</li>
 Mehmet Filiz-e inan-iyor
 PN(NOM) PN-DAT believe-PRS
 'Mehmet believes Filiz'

(mainly) indexing
 (2) Abaza (< Northwest Caucasian)</li>
 *fatíma murád jə-z-qá-l-c-j-t* PN PN [3SG.M.IO-BEN]-LOC-[3SG.F.ERG]-believe-PRS-DCL
 'Fatima trusts Murad.'

• (mainly) word order: (3) *Mary kissed Peter* 

## Valency classes: BivalTyp

• Say, Sergey (ed.). 2020-. BivalTyp: Typological database of bivalent verbs and their encoding frames. (Available online at <a href="https://www.bivaltyp.info">https://www.bivaltyp.info</a>)

- Questionnaire with 130 bivalent verbs given in context
- First-hand data provided by language experts
- Disclaimer: types (in the lexicon) not tokens (in discourse)
- Currently 136 languages



## Valency classes: BivalTyp

- #21(Peter was crossing the river in a boat)'Peterreachedthe bank'XY
- #22 (The wall was covered with fresh paint)
   'Peter touched the wall' (and got dirty)
   X Y

= > Two pre-defined arguments (X, Y) for each predicate

## Valency classes

- Syntactic status (X or Y separately)  $\rightarrow$  valency pattern (X and Y)  $\rightarrow$  valency classes
- Typologically default situation:

Argument encoding pattern in a given sentence



Valency class of the verb

## Languages in our sample

- Narrow focus
  - Turoyo, Assyrian (Christian Urmi) < Neo-Aramaic < Semitic</li>
     Kurmanji, Sorani Kurdish, Zazaki < Iranian < Indo-European</li>
- Broader areal background
  - •Turkish, Azerbaijani < Turkic
  - Modern Hebrew, Standard Arabic < Semitic
  - Eastern Armenian, Ossetic < Indo-European
  - Georgian, Laz, Mingrelian, Svan < Kartvelian
  - Adyghe, Abaza < Northwest Caucasian
  - °30 Nakh-Daghestanian languages



### TAM and valency classes

## Valency classes and TAM

- Determining the valency pattern of a predicate depends on:
  - TAM (perfective vs. imperfective = past vs. present)
  - Lexical vs. pronominal subjects/objects

## Turoyo: overview of statuses

Syntactic status	Flag	Index: Nominal, PFV	Index: Nominal, IPFV	Index: Pron., PFV	Index: Pron., IPFV
SBJ	no	LS	SS	LS	SS
SBJ.SS	no	SS	SS	SS	SS
DO	no	no	по	SS	LS
DO.LS	no	no	no	LS	LS
Ю	l-	no	по	LS	LS
1	<b>l</b> -	no	no	no	no
OBJAGR	no	LS	LS	LS	LS
BARE	no	no	no	*	*

## Valency classes in Turoyo: indexing

- Transitive (A) and intransitive (S) subjects are indexed differently in the PFV:
  - (4) *damix-o*sleep.PFV-SS.3F
    'She fell asleep.'
  - (5) *ftəḥ-la u tarʕo* open.PFV-LS.3F ART.M door 'She opened the door'



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DO.LS	no	no	no	LS	LS
Ю	<b>l</b> -	no	no	LS	LS
1	<b>l</b> -	no	no	no	no
OBJAGR	no	LS	LS	LS	LS
BARE	no	no	no	*	*

## Valency classes in Turoyo: indexing

- Turoyo (Neo-Aramaic): different indexing of direct objects is also apparent only in the PFV, with pronominal objects:
- (6a) Gabriyel k-šoməs i mosiqa / k-šomas-la

PN PRS-hear.IPFV.3M ART.F music / PRS-hear.IPFV.3M-DO.LS.3F 'Gabriyel hears the music.' / 'Gabriyel hears it (the music).'

(6b) Gabriyel k-zomər i zmarto / k-zomar-la

PN PRS-sing.IPFV.3M ART.F song / PRS-sing.IPFV.3M-DO.LS.3F 'Gabriyel sings the song.' / 'Gabriyel sings it (the song).'



(7a) Gabriyel šaməs i mosiqa / šaməs-la

PN hear.PFV.3M ART.F music / hear.PFV.3M-DO.LS.3F 'Gabriyel heard the music.' / 'Gabriyel heard it (the music.)'

(7b) Gabriyel zmər-le i zmarto / zmir-o-le

PN sing.PFV.3M-LS.3M ART.F song // sing.PFV.3M-SS.3F-LS.3M

'Gabriyel sang the song.' / 'Gabriyel sang it (the song).'

## Valency classes in Kurmanji

- Transitive vs. intransitive distinction in the past tense: (S = P  $\neq$  A)
- Many compound verbs formed with bûn 'to be' and kirin 'to do'
- In Kurmanji (Northern Kurdish) basic TR pattern:
  - IPFV: X = NOM, Y = OBL
  - PFV: X = OBL, Y = NOM
- Statuses and patterns are obscured:
  - Loss of OBL marking on masculine nouns
  - Non-canonical use of OBL (+ dialectal variation, see Haig 2017)

## Valency classes in Kurmanji: flagging

(8a) zilam li kilît-ê xwe di-ger-e

man.NOM at key-EZ.PL self PRS-look\_for.IPFV-3SG

'The man is looking for his keys.'

- (8b)jinik-êduhtevahiy-aroj-êwoman-OBL.Fyesterdaywhole-EZ.Fday-OBL.F
  - li miftey-ên xwe ger-iye
  - at key-EZ.PL own look.PFV-PERF.3SG

'Yesterday, the woman looked for her keys all day.'

X is looking for Y: X = SBJ.TRY = li + OBL

## Valency classes in Kurmanji: flagging

from man love PRS-do.PFV.SG

(9a) zilam ji jin-ê di-k-e hez man.NOM from woman-OBL.F love PRS-do.IPFV-3SG 'The man loves the woman.' jinik-ê berê zilam hez di-kir (9b) ji

X loves Y: X = SBJ.TR Y = ji + OBL

'The woman used to love the man.'

earlier

woman-OBL.F

## Hanging arguments

## Hanging arguments: basic features

#### Assyrian Neo-Aramaic

- (10) brata adiyya riš-o + mray=əl
   girl(F) now head(M)-P.3F ache.PROG=3M
   'The girl now has a headache'
- The possessee is syntactically the canonical subject (cf. verb index)
- The possessor is not flagged, not indexed on the verb
- Synchronically, no prosodic boundary between the possessor and possessee

## Hanging arguments: not NPinternal

(11) brata adiyya riš-o + mray=əl
girl(F) now head(M)-P.3F ache.PROG=3M
'The girl now has a headache'

• This is not a regular possessive NP

° word order

° separability

• lack of the expected *at* (REL) marker, cf.:

(12)brun = at $+A\check{s}ur$ +var-ragubetason(M) = RELPNenter.PST-LS.3Minhouse'Ashur's son entered the house'inbeta

## Hanging arguments: links to extraposition

brataadiyyariš-o+ mray=əlgirl(F)nowhead(M)-P.3Fache.PROG=3M'The girl now has a headache'---

- The possessee is syntactically the canonical subject (cf. verb index)
- The possessor is not flagged, not indexed on the verb
- Synchronically, no prosodic boundary between the possessor and possessee
- This is not a regular possessive NP

= > Arguably, this is a case of "extraposition" (Khan 2016b, II:386), where the actual NP-internal possessor is the possessive suffix

# Hanging arguments: interim summary

Hanging arguments in Assyrian Neo-Aramaic (and elsewhere):

- These possessors are not NP-internal
- These constructions are different from the predicative possessive constructions
- Unlike the usual external possessors, they do not involve any explicit clause-level marking
- Synchronically, they are not topics:
- (14) *háč náša lább-u lé* + *tálab šárva kàšta* no man(M) heart(M)-P.3M NEG2 ask.PRS(M) soup(F) cold.F 'Nobody likes cold soup' (Khan 2106, II: 389)

## Hanging arguments: annotation

- (15) brata adiyya riš-o + mray=əl
   girl(F) now head(M)-P.3F ache.PROG=3M
   'The girl now has a headache'
- = > Special status in the BivalTyp valency classes annotation system, cf. [BARE\_SBJ]
- = > In BivalTyp, this structure is annotated as involving "X locus of intransitivity" = patterns, where the X argument is encoded differently from core arguments in the basic transitive pattern

## Hanging arguments: their "niche"

- "Hanging argument" are common in bi-partite expressions
- denoting emotions and similar expressions
- and involving body- or "spiritual" parts
- mismatch between the syntactic and pragmatic dimension

## Hanging arguments: typological prevalence

• At least some examples in 3 out of 5 focus languages, but hardly attested in Northern Kurdish (Kurmanji) and Zazaki

(16) Sorani Kurdish

tol-i

eye-NOM

• Sporadic examples in some other languages of West Asia: Laz, Avar, Tsakhur, Karata

(17) Laz

Käzim-iFatma-sPN-NOMPN-DAT'Käzim envies Fatma.'

*do-Ø-skid-un-Ø* PRV-S3-remain-SM-S3SG.INACT

## Hanging arguments: typological prevalence

- Prominent in Persian (Jügel and Samvelian 2020)
- Similar constructions with detached (but dependentmarked) possessors in Turkic
- And almost no similar constructions in the BivalTyp sample outside West Asia!

### **Quantitative analysis**

## Quantitative analysis

- Quantitative assessment of (dis)similarities between valency class systems
- Distance matrices based on
  - the distribution of verbs into transitive patterns and patterns with X-, Y- and XY-locus of intransitivity: **DistValLoc**
  - the distribution of verbs into language-specific valency classes: a distance metric based on Mutual Information: DistValPat (Say 2014)
- Standard methods for dimensionality reduction and visualization: Hierarchical clustering (implemented in R), NeighborNet (SplitsTree)

#### Hierarchical clusters based on DistValLoc



#### Hierarchical clusters based on DistValLoc



## Quantitative analysis: DistValLo

- Apart from our five focus languages, this cluster also encompasses
  - Turkish (and Kumyk) < Turkic
  - A few Nakh-Daghestanian languages, mainly in contact with Turkic: Budugh, Kryz, 4 Dargwa varieties
  - Adyghe and Abkhaz < Northwest Caucasian
  - Ossetic
  - = > Broad but weak areal effects (contact with Turkic?)



#### Hierarchical clusters based on DistValPat



**Hierarchical clusters based on DistValPat** 



#### NeighborNet visualization based on DistValPat

- Our five focus languages do not form a cluster... other than part of a larger set of West Asian languages that are not indigenous languages of the Caucasus



Laz

Svan

## Conclusions

- 1. To accurately determine the valency class of a predicate in the languages in our focus, it is necessary to consider both Past (Perfective) and Present (Imperfective) constructions;
- 2. #1 is the result of alignment splits, differential object indexing, subject flagging (< convergence and common paths of grammaticalization of the participles and subject and object pronouns in Iranian and Neo-Aramaic);
- **3.** Hanging arguments are a prominent and possibly exclusive feature of the West Asia region;
- 4. Quantitative analysis summary:
  - Broad typological similarities in the organization of valency class systems in the five focus languages: YES
  - Strong cross-linguistic similarities in the lexical extent of specific valency classes:
     NO

## Thank you for your attention!

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