Workshop on Theoretical Approaches to Languages of the Caucasus, Rethymno, Crete, 24 July 2019

Typologically outstanding aspects of the morphology of the languages of the Caucasus

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Introduction

"[T]he term 'morphology' refers to the study of the *internal structure* of **words**, and of the *systematic form–meaning correspondences* between **words**."
(Booij 2005: 7, emphasis mine)

Introduction

Morphology is concerned with

- syntagmatic structure of words
- paradigmatic relations between words

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- paradigmatic relations between words

Both aspects are essential, and none of them is reducible to the other.

Plank ed. 1991, Ackerman et al. 2008, Stump 2016, Ackerman & Malouf 2016, Blevins 2016 etc.

Introduction

- What is a "word"?

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- By no means an unproblematic issue, cf. Haspelmath (2011), Alpatov (2018) and much other work.

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- What is "word"?

- A syntagmatic unit characterized by

  - autonomy (e.g. independent occurrence, subject to syntactic rules etc.);

  - internal coherence (e.g. no interruption, no permutation, fixed order of subconstituents etc.).

Introduction

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- Concrete aspects of autonomy and coherence do not always converge, both across and within languages (Bickel & Zúñiga 2017, Tallman et al. 2018).

- Does not immediately imply that both "word" and "morphology" should be given up, *pace* Haspelmath (2011).

Introduction

With respect to the languages of the Caucasus the status of "words" and the morphology-syntax divide admittedly do not pose insurmountable problems as such, although many issues are far from trivial (and not yet well understood).

Cf. the Circassian nominal complex below.

Introduction

Languages of the Caucasus present a plethora of intricate and typologically rare morphological phenomena and, moreover, exhibit a striking degree of diversity in their morphological makeup.

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- Predominantly dependent-marking (Ingush) vs. predominantly head-marking (Abkhaz) vs. double-marking (Circassian, South Caucasian);

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- Predominantly dependent-marking (Ingush) vs. predominantly head-marking (Abkhaz) vs. double-marking (Circassian, South Caucasian);

- Mostly suffixing (Avar, Ossetic, Turkic) vs. heavily prefixing (West and South Caucasian);

- Highly developed nominal morphology (East Caucasian) vs. verbal polysynthesis (West Caucasian).

Introduction

In this talk, rather than presenting a comprehensive overview of the morphological diversity of the languages of the Caucasus, I will discuss selected outstanding issues in some detail.

Overview

1. **Layered nominal inflection in East Caucasian and elsewhere**
2. **Multiple exponence**
3. **Distributed exponence**
4. **Polysynthesis in West Caucasian**

Overview

1. **Layered nominal inflection in East Caucasian and elsewhere**
2. **Multiple exponence**
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4. **Polysynthesis in West Caucasian**

Layered nominal inflection

	SG	PL
NOM	*ev*	*evler*
ACC	*evi*	*evleri*
GEN	*evin*	*evlerin*
DAT	*eve*	*evlere*
LOC	*evde*	*evlerde*
ABL	*evden*	*evlerden*

"Agglutinative" paradigm:

Turkish,
EV 'house'

Layered nominal inflection

	SG	PL
NOM	*ev-Ø*	*ev-ler-Ø*
ACC	*ev-i*	*ev-ler-i*
GEN	*ev-in*	*ev-ler-in*
DAT	*ev-e*	*ev-ler-e*
LOC	*ev-de*	*ev-ler-de*
ABL	*ev-den*	*ev-ler-den*

"Agglutinative" paradigm:

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Layered nominal inflection

	SG	PL
NOM	*miestas*	*miestai*
ACC	*miestą*	*miestus*
GEN	*miesto*	*miestų*
DAT	*miestui*	*miestams*
LOC	*mieste*	*miestuose*
INS	*miestu*	*miestais*

Cumulative paradigm

Lithuanian, *MIESTAS* 'city'

Layered nominal inflection

	SG	PL
NOM	miest-*as*	miest-*ai*
ACC	miest-*ą*	miest-*us*
GEN	miest-*o*	miest-*ų*
DAT	miest-*ui*	miest-*ams*
LOC	miest-*e*	miest-*uose*
INS	miest-*u*	miest-*ais*

Cumulative paradigm

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Layered nominal inflection

	SG	PL
NOM	*rājā*	*rājānas*
ACC	*rājānam*	*rājñas*
INS	*rājñā*	*rājabhis*
DAT	*rājñe*	*rājabhyas*
ABL	*rājñas*	*rājabhyas*
GEN	*rājñas*	*rājñām*
LOC	*rājñi*	*rājasu*

Paradigm with multiple stems

Sanskrit, *RĀJĀ* 'king'

Layered nominal inflection

	SG	PL
NOM	*rājā*	*rājān-as*
ACC	*rājān-am*	*rājñ-as*
INS	*rājñ-ā*	*rāja-bhis*
DAT	*rājñ-e*	*rāja-bhyas*
ABL	*rājñ-as*	*rāja-bhyas*
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Layered nominal inflection

	SG	PL
NOM	*gel*	*gel-um*
ERG	*gel-li*	*gel-um-čaj*
GEN	*gel-li-n*	*gel-um-če-n*
DAT	*gel-li-s*	*gel-um-če-s*

Archi
GEL 'cup'
(Kibrik 2003: 185)

Layered nominal inflection

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Archi
GEL 'cup':
agglutinative?
But not
simply so.

Layered nominal inflection

- A possible analysis (Kibrik 1991: 257):
  - Nominative and Ergative both zero,
  - but based on distinct stems, i.e. **direct** (Nominative) and **oblique** (Ergative and other cases).

Layered nominal inflection

- An alternative analysis:
  - Ergative is a case on it own (with morphological exponence and syntactic functions)
  - as well as a base for oblique cases, i.e. the oblique stem formative (admittedly a purely morphological element).

Layered nominal inflection

The analysis with the "double-duty" Ergative is problematic not only semantically, but also morphologically, since in some languages the Ergative has non-zero exponence distinct from the oblique stem. (Kibrik 1991: 257)

Layered nominal inflection

	Sg	Pl
NOM	*jaʔq*	*jaʔq-bɨ*
ERG	*jaʔq-ɨ-n*	*jaʔq-b-iš-e*
DAT	*jaʔq-ɨ-s*	*jaʔq-b-iši-s*

Tsakhur 'road'
(Lyutikova 2017: 669)

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Layered nominal inflection

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Layered nominal inflection

root = NomSg

OblSg   Pl = NomPl

↓   ↓

oblique cases   OblPl

↓

oblique cases

(Kibrik 1991: 257)

Layered nominal inflection

East Caucasian nominal morphology exhibits a variety of paradigmatic schemas (Kibrik 1991, 2003) involving different formal relations between the nominative vs. oblique forms in singular and plural.

Both intra- and interlinguistic variation.

Layered nominal inflection

- The nominative vs. oblique division has repercussions across the whole nominal system:
  - patterns of pronominal suppletion;
  - attributive and genitive modifier inflection (Kibrik 1995);
  - syntactic constraints on oblique nominals.

Layered nominal inflection

- Pronominal suppletion in Avar (Alekseev & Ataev 1997: 50, 54-55)

	'son'	2SG
NOM	*was*	*mun*
ERG	*was-aš̄*	*du-č̄a*
GEN	*was-aš̄-ul*	*du-r*
DAT	*was-aš̄-e*	*du-e*

Layered nominal inflection

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Layered nominal inflection

- Attributive modifier inflection in Ingush (Nichols 2011: 221): 'cold wind'

NOM	*shiila mux*
ERG	*shiilacha mixuo*
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Layered nominal inflection

- Genitive modifier inflection in Bezhta (Kibrik 1995: 220):

(1a)   *abo-s*   *is*

      father-GEN.DIR   brother.NOM

      'father's brother'

(1b)   *abo-la*   *is-t'i-l*

      father-GEN.OBL   brother-OBL-DAT

      'to father's brother'

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'to father's brother'

Layered nominal inflection

- Constraints on focus in Bagwalal (Kirbik ed. 2001: 691-693):

(2a) [ʕisa-w-R-ō   waša]$_{NOM}$ w-ā.

Isa-GEN-FOC-M   son.NOM   M-come

'ISA's son came.'

(2b) *[ʕisa-w-R-ō   waša-š:u-r]$_{OBL}$ awal ǯērāχ.

Isa-GEN-FOC-M   son-OBL-ERG   house builds

expected: 'ISA's son is building a house.'

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Isa-GEN-FOC-M   son-OBL-ERG   house builds

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Layered nominal inflection

- A characteristic trait of East Caucasian morphology.

- Also attested in Indo-Iranian, most notably in Romani (Elšík 2000), but also in a covert form in Ossetic (Belyaev 2014).

- Marginally in West Caucasian

  (cf. Arkadiev 2014).

Layered nominal inflection

West Circassian *PŜAŜE* 'girl'

	"definite"		"indefinite"
	SG	PL	
ABS	*pŝaŝe-r*	*pŝaŝe-xe-r*	*pŝaŝe*
OBL	*pŝaŝe-m*	*pŝaŝe-xe-m*	
INS	*pŝaŝe-m-č'e*	*pŝaŝe-xe-m-č'e*	*pŝaŝe-č'e*

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OBL	*pŝaŝe-m*	*pŝaŝe-xe-m*	
INS	*pŝaŝe-m-čʼe*	*pŝaŝe-xe-m-čʼe*	*pŝaŝe-čʼe*

Layered nominal inflection

- The Instrumental case in Circassian is "parasitic" on the Oblique case

- The Oblique case marker -*m* in the Instrumental forms retains its value as a marker of definiteness/specificity, hence is not simply a stem-marker.

Serdobolskaya (2011), Arkadiev & Testelets (to appear)

Layered nominal inflection

Standard Kabardian demonstrative inflection
(Colarusso 1992: 66)

	SG	PL
ABS	*a-r*	*a-xe-r*
OBL	*a-bə*	*a-bə-xe-m*
INS	*a-bə-c̣'e*	*a-bə-xe-m-c̣'e*

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Layered nominal inflection

- The double duty of *-bə*:
  - oblique case marker in the singular
  - oblique stem marker in the plural

Layered nominal inflection

AbsSg ← root →   Pl → AbsPl

↓

OblSg → OblPl

The plural marker is identical in both Absolutive and Oblique forms.

Layered nominal inflection

A development in Besleney Kabardian (own fieldwork, v. Ulyap, 2011)

	SG	PL
ABS	*a-r*	*a-bə-xe-r*
OBL	*a-bə-m*	*a-bə-xe-m*
INS	*a-bə-m-č̣'e*	*a-bə-xe-m-č̣'e*

Layered nominal inflection

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OBL	*a-bə-m*	*a-bə-xe-m*
INS	*a-bə-m-č'e*	*a-bə-xe-m-č'e*

Layered nominal inflection

root   →   AbsSg

     ↓

oblique stem → OblSg

      ↓

   Pl   →   plural forms

Cf. paradigm with a marked root (Kibrik 2003: 190)

Layered nominal inflection

- Layered nominal inflection in (East) Caucasian presents challenges for the theories of morphology and morphology-syntax interface (see further on multiple exponence) and

- opens potential windows into the history of nominal inflection with successive cycles of grammaticalization.

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Multiple exponence

- One function expressed by more than one form in a single word (cf. "extended exponence", Matthews 1972).

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- Analogous to agreement in syntax?

Multiple exponence

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Multiple exponence

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- "Because operations are informationally additive, multiple additions of identical information are precluded." (Steele 1995: 280)

Multiple exponence

- Harris (2017):
  - a comprehensive typology of multiple exponence singling out four distinct structural types associated with different paths of diachronic origin;
  - an insightful discussion of the challenges for morphological theory that multiple exponence presents.

Multiple exponence

- Harris (2017)'s typology of ME:
    - periodic ME
    - alternating ME
    - reinforcement ME
    - accidental ME
- All types are attested in the languages of the Caucasus

Multiple exponence

- Periodic ME "occurs when a bound morpheme [=a **carrier** morpheme] must be accompanied by an exponent of feature F, while the stem must also be accompanied by an exponent of F" (Harris 2017: 55)

Multiple exponence

- Periodic ME of gender in Batsbi (Harris 2009: 268)

  tiši^n c'a   daħ d-ex-d-o-d-an-iš

  old   house(NOM) PV   CM-destroy-CM-PRS-CM-EVID-
                          2PL.ERG

  'Y'all are evidently destroying the old house.'

  CM - class marker

  PV - preverb

Multiple exponence

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Multiple exponence

- Alternating ME "is very similar to Type 1, the difference being that in Type 2 the carrier morpheme does not host the doubled exponent when the carrier occurs as an independent word." (Harris 2017: 59)

Multiple exponence

- Alternating ME of case in Georgian (Vogt 1971: 44-46)

  rame 'something', the Dative form:

  ra-s=me   (older variant)

  ra-s-me-s   (intermediate variant)

  ra-me-s   (newer variant)

Multiple exponence

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Multiple exponence

- Reinforcement ME "characteristically involves exponents that are identical in feature representation but not identical in form".

Multiple exponence

- Reinforcement ME in Khinalug nominal plurals (Harris 2017: 64)

SG	PL	gloss
dušman	*dušman-ır*	'enemy'
taka	*taka-d*	'goat'
kixir	*kixir-d-ir*	'drop'
eng	*eng-ir-d-ir*	'cheese'

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Multiple exponence

- Reinforcement ME in Abaza negative finite verbal forms (own fieldwork data, Inzhich-Chukun, 2017-2019, textual examples)

(4a) *j-sə-m-də́r-wa-ta*

      3SG.N.ABS-1SG.ERG-NEG-know-IPF-ADV

      'as I did not know that...' (non-finite)

(4b) *jə-g'-sə-m-də́r-ṭ*

      3SG.N.ABS-NEG-1SG.ERG-NEG-know(AOR)-DCL

      'I did not know that.' (finite)

AOR - aorist   IPF - imperfective
DCL - declarative   N - neuter

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Multiple exponence

- Accidental ME "involves exponents in a subset or overlapping relationship", i.e. "if one realizes a feature set that is a proper subset of the feature set realized by the other". (Harris 2017: 64)

Multiple exponence

- Accidental ME of plural in Archi (cf. above):

  GEL 'cup'

	SG	PL
NOM	*gel*	*gel-um*
ERG	*gel-li*	*gel-um-čaj*
GEN	*gel-li-n*	*gel-um-če-n*
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Multiple exponence

- ME of absolutive plural in Ubykh verbs
  - dedicated person-number prefixes
  - tense-dependent plural suffixes
  - retrospective shift (≈ pluperfect) markers
  - causative prefixes
  - root suppletion

  (Fenwick 2011: 135)

Multiple exponence

- ME of absolutive plural in Ubykh verbs:

(5a) *a-z-ʁe-dex-á-n*

     3PL.ABS-1SG.ERG-CAUS.PL-stand.PL-PL-PRS

     'I make them stand up.' (Vogt 1963: 112)

(5b) *š'-ḳ'-á-ne-jλe-me*

     1PL.ABS-go-PL-IPF-RS.PL-NEG

     'We weren't going' (Fenwick 2011: 122)

CAUS - causative   PRS - present
IPF - imperfective   RS - retrospective shift

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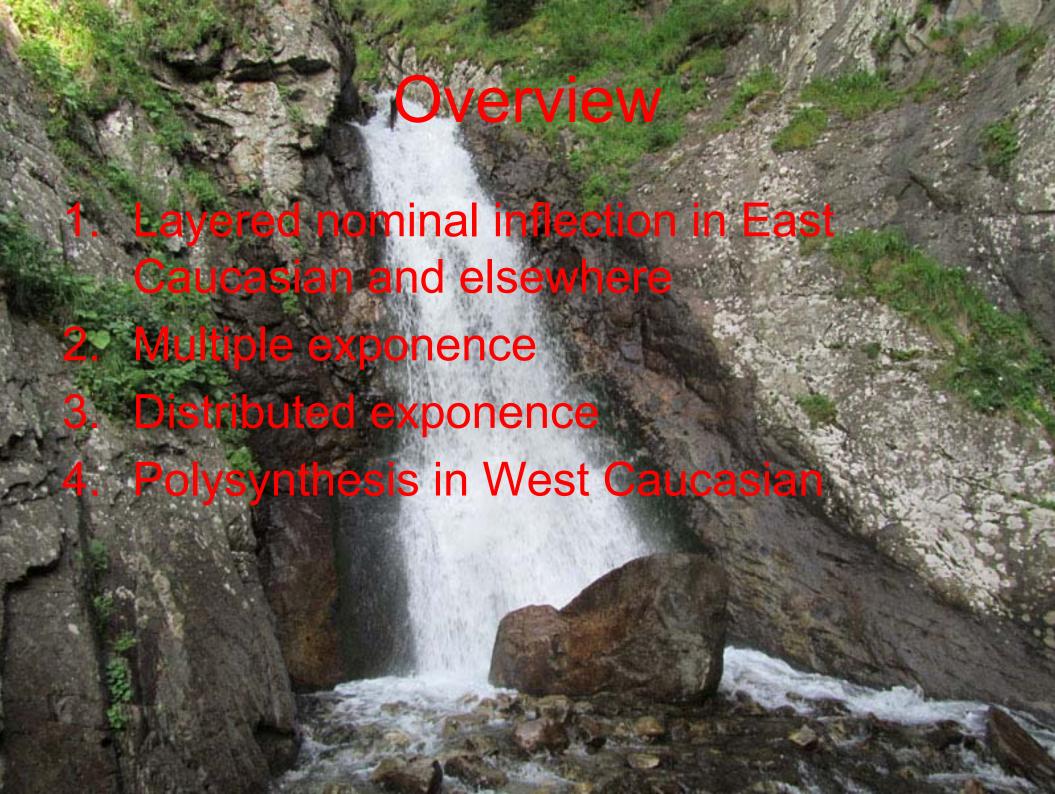 'We weren't going' (Fenwick 2011: 122)

CAUS - causative   PRS - present
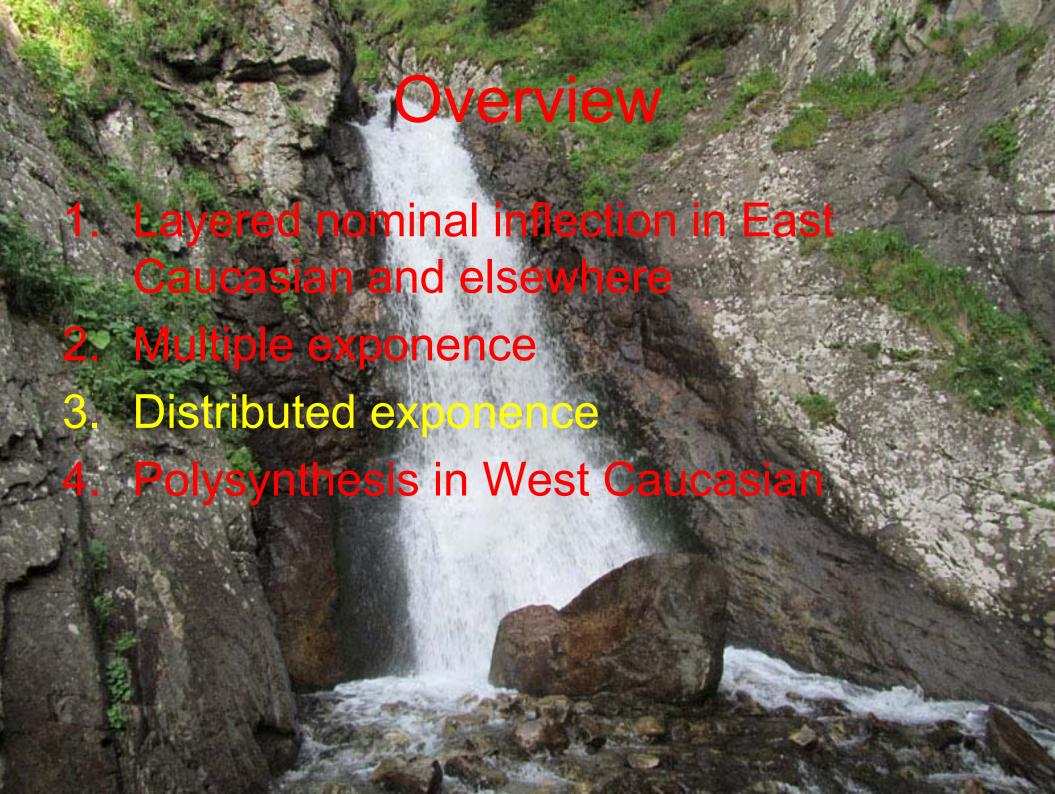IPF - imperfective   RS - retrospective shift

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(5a)   *a-z-ʁe-dex-á-n*

      3PL.ABS-1SG.ERG-CAUS.PL-stand.PL-PL-PRS

      'I make them stand up.' (Vogt 1963: 112)

(5b)   *š'-ḳ'-á-ne-jλe-me*

      1PL.ABS-go-PL-IPF-RS.PL-NEG

      'We weren't going' (Fenwick 2011: 122)

CAUS - causative   PRS - present
IPF - imperfective   RS - retrospective shift

Multiple exponence

- ME of absolutive plural in Ubykh verbs:
  - "accidental" according to Harris (2017)'s typology;
  - highly systematic and pervasive in the system of the language;
  - unique among the West Caucasian languages.

Multiple exponence

- The indigenous languages of the Caucasus are one of the "hotbeds" of multiple exponence in the languages of the world.

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Multiple exponence

- The indigenous languages of the Caucasus are one of the "hotbeds" of multiple exponence in the languages of the world.

- Some of the cases of ME in the languages of the Caucasus are highly systematic and cannot be "explained away" as accidental quirks.

- Morphological theory has to take these facts at face value and develop analytical tools to account for them (and give up constraints ruling them out).

Overview

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2. Multiple exponence
3. Distributed exponence
4. Polysynthesis in West Caucasian

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Distributed exponence

Situations where "no single morphological marker can truly be said to realize a feature or category; the feature is, rather, realized by a combination of morphemes."

(Caballero & Harris 2012: 170)

Distributed exponence

- DE is a prominent feature of verbal morphology of South Caucasian languages.

Distributed exponence

- Georgian, some TAM-forms of 'hide'

	Active	Passive
Present	*malavs*	*imaleba*
Imperfect	*malavda*	*imaleboda*
Future	*damalavs*	*daimaleba*
Conditional	*damalavda*	*daimaleboda*
Aorist	*damala*	*daimala*
Optative	*damalos*	*daimalos*

Distributed exponence

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Present	*mal-av-s*	*i-mal-eb-a*
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Conditional	*da-mal-av-d-a*	*da-i-mal-eb-od-a*
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- Each TA-value is uniquely expressed by a combination of affixes none of which is a dedicated exponence thereof.

- Affixes cannot be assigned "meanings", they "mean" only as parts of the whole word (cf. Gurevich 2003).

Distributed exponence

"The meaning of the whole word licenses the exponents to be used, but there is no precondition that the meanings of the exponents have to combine to comprise the meaning of the whole. <...> The whole itself may contribute meaning to the meanings of the parts, or may override the meanings of the parts."

(Gurevich 2006: 44-45)

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- Distributed exponence presents challenges for morpheme-based morphological theories, since it does not involve "morphemes" as Saussurean signs.

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- Distributed exponence presents challenges for morpheme-based morphological theories, since it does not involve "morphemes" as Saussurean signs.

- Distributed exponence presents challenges to grammaticalization theory, since the origin of such systems lies in processes of functional redistribution and adjustment ("featurization", Dahl 2004), rather than ordinary lexeme-to-affix pathways.

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Polysynthesis in West Caucasian

- "To qualify as core polysynthetic a language must display holophrasis (i.e. be able to represent a whole clause — including all bound core pronominals — by a single word) *and* must allow more than one lexically 'heavy' morpheme within the holophrastic verb, whether it be lexical or affixal". (Fortescue 2017: 122)

Polysynthesis in West Caucasian

- Besleney Kabardian polysynthetic predicate (own fieldwork, v. Ulyap, 2011-2013)

  sə-q̇ə-zer-a-xʷə-č̣'erə-mə-ṭetə-č̣'ə-ž'-a-r

  1SG.ABS-DIR-REL.FCT-3PL.IO-BEN-LOC-NEG-tie-ELAT-RE-PST-ABS

  'that they could not untie me from there'

ABS – absolutive	NEG - negation
BEN – benefactive	PL - plural
DIR – directional preverb	PST – past
ELAT - elative	RE - refactive
IO – indirect object	REL.FCT – factive relativization
LOC – locative preverb	SG - singular

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Polysynthesis in West Caucasian

- Besleney Kabardian polysynthetic nominal (Yury Lander's fieldwork data)

$$d\text{-}j\mathschwa\text{-}[\text{ʁ}^w\mathschwa ne\text{ʁ}^w = bz\mathschwa \lambda x^w \mathschwa \text{ʁ}e = daxe = dede]\text{-}m$$

1PL.PR-POSS-neighbour=woman=beautiful=very-OBL

'our very beautiful lady-neighbour'

OBL – oblique case   POSS – possession marker
PL – plural   PR – possessor

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'our very beautiful lady-neighbour'

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Polysynthesis in West Caucasian

- Exuberant polypersonalism facilitated by a rich system of semantically specialized applicatives introducing indirect objects
- A rich system of locative affixes
- An intricate mixture of templatic and scopal organization
- Nominal complexes sharing properties of words and phrases
- Typologically exceptional structures

Polysynthesis in West Caucasian

- Polypersonalism in West Circassian (Lander & Letuchiy 2010: 266)

  sə-qə-t-de-p-fə-Ø-r-a-ʁa-ǯe-š'tə-ʁ

  1SG.ABS-DIR-1PL.IO-COM-2SG.IO-BEN-3SG.IO-DAT-3PL.ERG-CAUS-read-IPF-PST

  'They were making me read it to you together with us.'

Polysynthesis in West Caucasian

- Polypersonalism in West Circassian (Lander &
  Letuchiy 2010: 266)

  sə-*qə*-*t*-*de*-*p*-*fə*-*Ø*-*r*-*a*-*ʁa*-*ǯe*-*š'tə*-*ʁ*

  1SG.ABS-DIR-1PL.IO-COM-2SG.IO-BEN-3SG.IO-DAT-
  3PL.ERG-CAUS-read-IPF-PST

  'They were making me read it to you together
  with us.'

Polysynthesis in West Caucasian

- Polypersonalism in Abaza (Inzhich-Chukun, 2017, textual example)

j-ŝǝ-z-j-á-s-hʷ-p̓

3SG.N.ABS-2PL.IO-BEN-3SG.M.IO-DAT-1SG.ERG-say-NPST.DCL

'I will tell this to him about you.'

Polysynthesis in West Caucasian

- Polypersonalism in Abaza (Inzhich-Chukun, 2017, textual example)

j-ŝə-z-j-á-s-hʷ-pˈ

3SG.N.ABS-2PL.IO-BEN-3SG.M.IO-DAT-1SG.ERG-say-NPST.DCL

'I will tell this to him about y'all.'

Polysynthesis in West Caucasian

- Polypersonalism:
    - three-participant verbal forms common;
    - four-participant verbal forms uncommon, but attested in texts;
    - five-participant verbal forms can be constructed and parsed by speakers (and are reported in grammars written by native speakers).

Polysynthesis in West Caucasian

- Polypersonalism
  - *prima facie* counterexample to the claim often expressed in generative and functionalist work alike that predicates in natural languages don't take more than three arguments (cf. Babby 2009; Nichols 2017: 64)
  - "open head-marking" (Nichols 2017)

Polysynthesis in West Caucasian

- Applicatives
  - introduce indirect objects and do not affect agent and patient;
  - are very numerous (up to several dozens in Ubykh and Abaza);
  - in terms of semantics range from underspecified ("dative") to highly specific (mainly locative);
  - allow stacking and limited recursion.

Polysynthesis in West Caucasian

Locative applicatives in Kabardian (Kumakhov 1964: 165):

(10) a. *tjepŝeč'ə-m*   *jə-ƛə-n*
     plate-OBL   LOC:container-lie-MSD
     'to be on a plate'

   b. *škamṗə-m*   *de-ƛə-n*
     cupboard-OBL   LOC:enclosure-lie-MSD
     'to be in a cupboard'

   c. *daʁe-m*   *xe-ƛə-n*
     oil-OBL   LOC:mass-lie-MSD
     'to be in oil'

   d. *šxəʔenə-m*   *ḳʷeċə-ƛə-n*
     blanket-OBL   LOC:through-lie-MSD
     'to be in a blanket'

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       'to be in a blanket'

Polysynthesis in West Caucasian

- Highly specialized applicatives in Abaza:

(11)   *j-s-napə̇-ça-pə-l-č-ṭ*

     3SG.N.ABS-1SG.IO-LOC:hand-LOC:below-LOC:front-3SG.F.ERG-break(AOR)-DCL

  'She broke it in my hands.' (Klychev 1995: 170)

(12)   *j-lə-qʷdə-l-ẑa-ṭ*

     3SG.N.ABS-3SG.F.IO-LOC:neck-3SG.F.ERG-tear(AOR)-DCL

  'She tore it from her neck.' (Klychev 1995: 275)

Polysynthesis in West Caucasian

- Highly specialized applicatives in Abaza:

(11)   *j-s-napə̇-ça-pə-l-č-ṭ*

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   'She broke it in my hands.' (Klychev 1995: 170)

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       tear(AOR)-DCL

   'She tore it from her neck.' (Klychev 1995: 275)

Polysynthesis in West Caucasian

- Applicative recursion in West Circassian (Lander & Letuchiy 2010: 269):

  s-a-fə-Ø-f-e-txe

  1SG.ABS-3PL.IO-BEN-3SG.IO-BEN-DYN-write

  'I write to him for their benefit.'

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Polysynthesis in West Caucasian

- Applicatives in West Caucasian present challenges for theories of argument structure and morphology-syntax-semantics interface, as well as for theories of the lexicon.

Polysynthesis in West Caucasian

- ## Morphological organization
  - layered morphology (order of morphemes based on their semantic scope, cf. Baker's Mirror Principle);
  - template morphology (order of morphemes based on a rigid template with semantic opacity and discontinuous dependencies)

  Baker 1985, Stump 2006, Manova & Aronoff 2010, Rice 2011, Mattissen 2017

Polysynthesis in West Caucasian

The general West Caucasian verbal template (Arkadiev & Lander to appear):

prefixes						root	suffixes			
argument structure zone				pre-stem elements	stem (Σ)				endings	
absolu-tive	subor-dinators	applicatives and indirect objects	erga-tive	preradical negation	causative	root	aspectual, modal and evaluative operators	temporal operators	suffixal negation	illocutionary operators or subordinators
1	1	>1	1	1	1 or 2	may be complex	>1	>1	1	>1

Polysynthesis in West Caucasian

- Despite an apparent templatic organization, some zones of the verbal word clearly follow scopal ordering (cf. Korotkova & Lander 2010, Lander 2016 on West Circassian, Panova 2019 on Abaza).

Polysynthesis in West Caucasian

- Scope ordering of suffixes in West Circassian (Lander 2016: 3523)

(14)   a. $g^{w}ə\hat{s}^{w}e$-$\hat{s}^{w}e$-$\check{z}$'ə-ʁ

be.glad-SML-RE-PST

's/he pretended again that s/he was happy' (refactive > similative)

Polysynthesis in West Caucasian

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   b. $g^wəŝ^we$-ž'ə-ŝ^wa-ʁ

           be.glad-RE-SML-PST

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Polysynthesis in West Caucasian

- Discontinuous dependencies between suffixes and prefixes (cf. Arkadiev & Letuchiy 2011 on West Circassian)

Polysynthesis in West Caucasian

- Discontinuous dependencies in Abaza (cf. Lomtatidze et al. 1989: 111-112)

(15)　a.　　*d-c-wə-n*

　　　　　3SG.H.ABS-go-IPF-PST.DCL

　　　　　'S/he was going.'　　　　　(finite)

　　b.　　*j-c-wə-z*

　　　　　REL.ABS-go-IPF-PST.NFIN

　　　　　'the one who was going'　(non-finite)

DCL - declarative　　　　　NFIN - non-finite
H - human class　　　　　　REL - relative
IPF - imperfective

Polysynthesis in West Caucasian

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'S/he was going.'   (finite)

b.   *j-c-wə-z*

REL.ABS-go-IPF-PST.NFIN

'the one who was going'   (non-finite)

DCL - declarative   NFIN - non-finite
H - human class   REL - relative
IPF - imperfective

Polysynthesis in West Caucasian

- Floating prefixes in Besleney Kabardian (own fieldwork data, Ulyap, 2011):

(16) a.   *sǝ-q̇-a-de-ḳʷ-a*

      1SG.ABS-DIR-3PL.IO-COM-go-PST

      'I came with them.'

COM - comitative   IO - indirect object
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Polysynthesis in West Caucasian

- Morphological organization in West Caucasian defies any straightforward analysis aiming at reducing morpheme ordering to semantic scope or syntactic derivation.

Polysynthesis in West Caucasian

- Nominal complex (Lander 2017):
  - a nominal constituent comprising the head noun and its non-referential modifiers;
  - productively formed in syntax, though feeds nominal compounding;
  - behaves as a single word in terms of morpho(phono)logical coherence.

Polysynthesis in West Caucasian

- Mismatch of syntactic and morphological constituency in West Circassian (Lander 2017: 90):

[*a   gʷəšʼəʔe-xe-r   z-e-s-ʔʷe-re*]*=pŝeŝeʁʷə-r*

that word-PL-ABS   REL.IO-DAT-1SG.ERG-say-
                           DYN=female.friend-ABS

'the female friend to whom I told those words'

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Polysynthesis in West Caucasian

- Nominal complex (Lander 2017):
  - is problematic for the theories of morphosyntax assuming all syntactic rules operating before morphological spellout;
  - is problematic for theories of wordhood and lexical integrity.

  Cf. Ershova (2018) for a post-syntactic (prosodic) analysis of the nominal complex.

Polysynthesis in West Caucasian

- Some further brain-teasers and typologically outstanding phenomena:
  - relativization by means of verbal morphology (Caponigro & Polinsky 2011, Lander 2012);
  - interrogative inflection in Abaza and Abkhaz ("parasitic" on the former, Arkadiev to appear);
  - morphologically-bound complementation in Abaza (Panova 2018) with parallels in Lezgic (Maisak 2016).

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- A no less ideal field of inquiry into micro- and macrovariation in morphology.

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  ... before it is too late.

Acknowledgments

- All my Circassian and Abaza consultants
- Yury Lander, Yakov Testelets and other participants of the Northwest Caucasian fieldwork project
- Maria Polinsky
- Russian Foundation for Basic Research, grant # 17-04-00444