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Towards a typology and diachrony of ambifixation

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- I thank Yury Lander, in collaboration with whom I started this research in 2020, as well as numerous colleagues who gave me feedback and advice since then.

Roadmap

1. Definition
2. Database and overview
3. Typology
4. Diachronic considerations
5. Summary and outlook

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An ambifix is an affix
that can occur both as a prefix (i.e. before the root)
and as a suffix (i.e. after the root).

The term was used for the first time by Eric Hamp (1959), cf. also Malkiel (1978: 145), Plungian (2000: 88-89), Hall (2000: 536), Mugdan (2015: 268).

Alternative terms:

- "mobile affix" (Noyer 1994; Kim 2010 etc.)
- "Wechselaffix" (Bossong 2001: 667)
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- One of the well-known cases is the Lithuanian reflexive
  Nevis & Joseph 1993, Embick & Noyer (2001: 578–580), Korostenskienė (2017), Šereikaitė (2017, 2024), Stump (2022: 193-211), Kushnir (2025).
- Suffix if the verb is unprefixed, prefix in the presence of any other prefixes.

(1) a. *domėj-au-**si***
be_interested-PST.1SG-RFL
'I was interested.'

b. *ne-pa-si-domėj-au*
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PST – past tense, RFL – reflexive, SG – singular

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NEG – negation, PST – past tense, PVB – preverb, RFL – reflexive, SG – singular

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Some caveats:

- ambifixes should not be confused with circumfixes, which obligatorily contain two parts; however, there are cases where both the prefixal and the suffixal versions of an ambifix co-occur in one form;
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The term “ambifix” is more appropriate than “mobile affix”:

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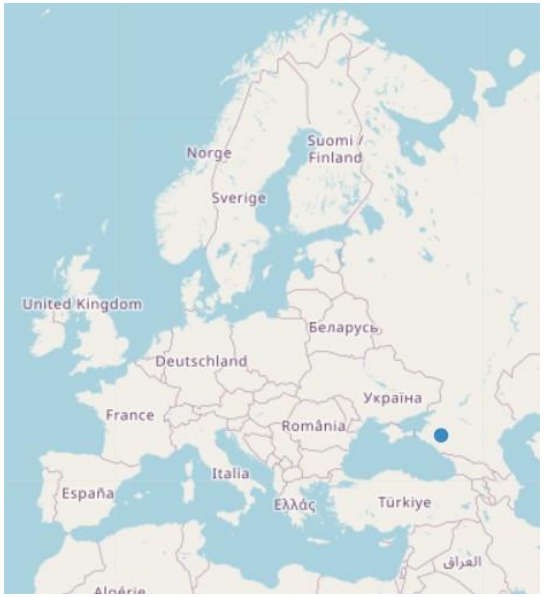
Besleney Kabardian (Northwest Caucasian, Russia; own fieldwork): mobile prefix, not ambifix

(2) a. *sə-q̇-**a**-de-ḳʷ-a*
1SG.ABS-CSL-3PL.IO-COM-go-PST

b. *s-**a**-q̇ə-de-ḳʷ-a*
1SG.ABS-3PL.IO-CSL-COM-go-PST

a=b ‘I came with them.’



ABS – absolutive, CSL – cislocative, COM – comitative applicative, IO – indirect object

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Affixes vs. clitics (cf. Spencer & Luís 2012, 2013):

- both are bound morphs, i.e. cannot occur in isolation;
- affixes are positioned with respect to roots, stems or words;
- clitics are positioned with respect to larger constituents (phrases or clauses).

Hinges on the definition of "word", which is itself loaded with problems (Haspelmath 2011, Tallman 2020 etc.).
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Macedonian (Indo-European > Slavic; Alexander 1994: 3):

(3) a. ***Mi-go-****dad-e* *Vera* *včera*
1SG.IO-3SG.DO-give-AOR.3SG Vera yesterday
'Vera gave it to me yesterday.'

b. *Donesi-mi-go!*
bring.IMP.2SG-1SG.IO-3SG.DO
'Bring it to me!'

c. **Dade-mi-go včera Vera*.

d. **mi-go-donesi!*

AOR – aorist, DO – direct object, IMP – imperative, IO – indirect object

1. Definition

Bulgarian (Indo-European > Slavic; Alexander 1994: 3):

(4) a. *Včera Vera mi=go=dade.*
yesterday Vera 1SG.DAT=3SG.ACC=give.AOR.3SG
'Vera gave it to me yesterday.'

b. *Dade=mi=go včera Vera.*
give.AOR.3SG=1SG.DAT=3SG.ACC yesterday Vera
'It was Vera who gave it to me yesterday.'

c. **Vera=mi=go včera dade.*

d. **mi=go=dade včera Vera.*

1. Definition

Both Bulgarian and Macedonian bound pronouns are verb-adjacent, however, there is a major difference:

- in Bulgarian, they occur in the second position in the clause, hence are clitics;
- in Macedonian, they are no longer sensitive to the second position or any extra-verbal syntax, hence are affixes, i.e. ambifixes.

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Cf. Aronson (1997: 33, 36):

- “the distribution of object clitics in Bulgarian is to a great extent syntactically determined”
- “The distribution of object clitics in Macedonian can be described purely on the level of morphology, with all rules relating to the inflected verbal form.”
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- The same reasoning applies, *mutatis mutandis*, to many so-called "pronominal clitics" in Romance languages (Monachesi 2005, Spencer & Luís 2012: Ch. 5), Modern Greek (Joseph 1988) and Albanian (Newmark 1955: 168-170).

1. Definition

Ambifix vs. unrelated prefix and suffix:

- identity of function: the prefix and the suffix should express the same featural / semantic content;
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Some borderline cases with respect to identity of function:

- instrumental case suffix *-la* vs. instrumental applicative prefix *la-* in Abkhaz and Abaza (Northwest Caucasian);
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Ambifixes have so far received little attention from linguists.

- in theoretical morphology only recently (Embick & Noyer 2001: 576-578; Crysmann & Bonami 2016; Stump 2017, 2022);
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2. Database and overview

Sources:

- grammatical descriptions;
- special publications on morphology and morphosyntax

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Area	Languages	Genera	Families
Eurasia	37	22	10
Africa	20	14	6
Oceania	22	15	9
Australia	2	2	2
North America	9	8	8
South America	16	13	12

2. Database and overview

Map created with Lingtypology, Moroz (2017)

2. Database and overview

- Absence of ambifixes in the most of eastern and northern Eurasia, subarctic North America, subequatorial Africa and Australia is due to the spread of several exclusively suffixing language families, i.e. Uralic, Transeurasian, Pama-Nyungan, Eskimo-Aleut, or predominantly prefixing Na-Dene and Bantu.
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2. Database and overview

Some better-represented families:

- Indo-European: 13 languages
- Atlantic-Congo: 11 languages
- Nuclear Trans-New-Guinean: 10 languages
- Nakh-Daghestanian: 9 languages

2. Database and overview

The database includes the following information about each instance of ambifixation:

- single affix vs. a class of affixes;
- single affix vs. a string of affixes;
- function(s) expressed;
- part of speech;
- type of conditioning for the choice of orientation;
- (putative) diachronic origins;
- any other relevant information.

2. Database and overview

Some languages have more than one type of ambifixation differing along some of these parameters:

- Abaza, Tabasaran: 3
- Abkhaz, Agul, Chukchi, Crow, Fula, French, Guazacapan, Máku, Paunaka, Southern Kiwai, Ut-Ma'in: 2

2. Database and overview

- Paradigmatically, a single ambifix or a whole class of affixes with ambifixal behaviour:

  class: 89 cases

  single: 30 cases

  unclear: 4 cases

- Ambifixation tends to involve whole paradigms of affixes, which is related by the functions most frequently involved in ambifixation (see below).

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- Part-of-speech domains of ambifixation:
  - nominals: 14 cases, most of them in Atlantic-Congo
  - verbs: 79 cases
  - both (transcategorial): 30 cases
- That ambifixation tends to involve verbs is unsurprising, since verbal morphology is usually more complex than nominal one.

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- Common functional domains:

person marking	59 cases
gender marking	19 cases
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All involve transcategorial morphemes, e.g. nominal case and verbal applicatives

2. Database and overview

Abaza and Abkhaz instrumental marker: (case) suffix with nominals, (applicative) prefix with verbs:

Abaza (own fieldwork, textual examples)

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DEF-rod-PL-INS 1SG.ABS-3SG.N.IO-LOC-3SG.F.ERG-beat-DCL
'She beat me with rods.'

b. *a-ĉərʁʷə* *a-zernó* *a-lá-ʕ-ça-r-g-əj-t*
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- The non-random distribution of ambifixes across functional domains must be related to pathways of diachronic development leading to ambifixation.

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- morphotactic
- paradigmatic
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Some cases of ambifixation are conditioned by more than one type of factor simultaneously

3. Typology

Preliminary figures on types on conditioning:

- phonological 10 cases
- morphotactic 6 cases
- paradigmatic 26 cases
- part of speech 21 cases (+ 11 mixed ones)
- lexical 24 cases (+ 20 mixed ones)
- syntactic/semantic 12 cases
- mixed 21 cases
- free variation 1 case

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- Other potential factors: stress (so far unattested) and tone (disputable, see Jenks & Rose 2015 on Moro)

3.1. Phonological conditioning

Sáliba (Sáliban, Colombia; Estrada Ramírez 1996: 114-124): subject person markers prefixes with consonant-final roots and suffixes with vowel-final roots

	C-final ‘come’	V-final ‘work’
1Sg	*c-om-a*	*maɲu-c-a*
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This pattern is stable throughout the whole family and reconstructible to the proto-language (Rosés Labraba 2016)

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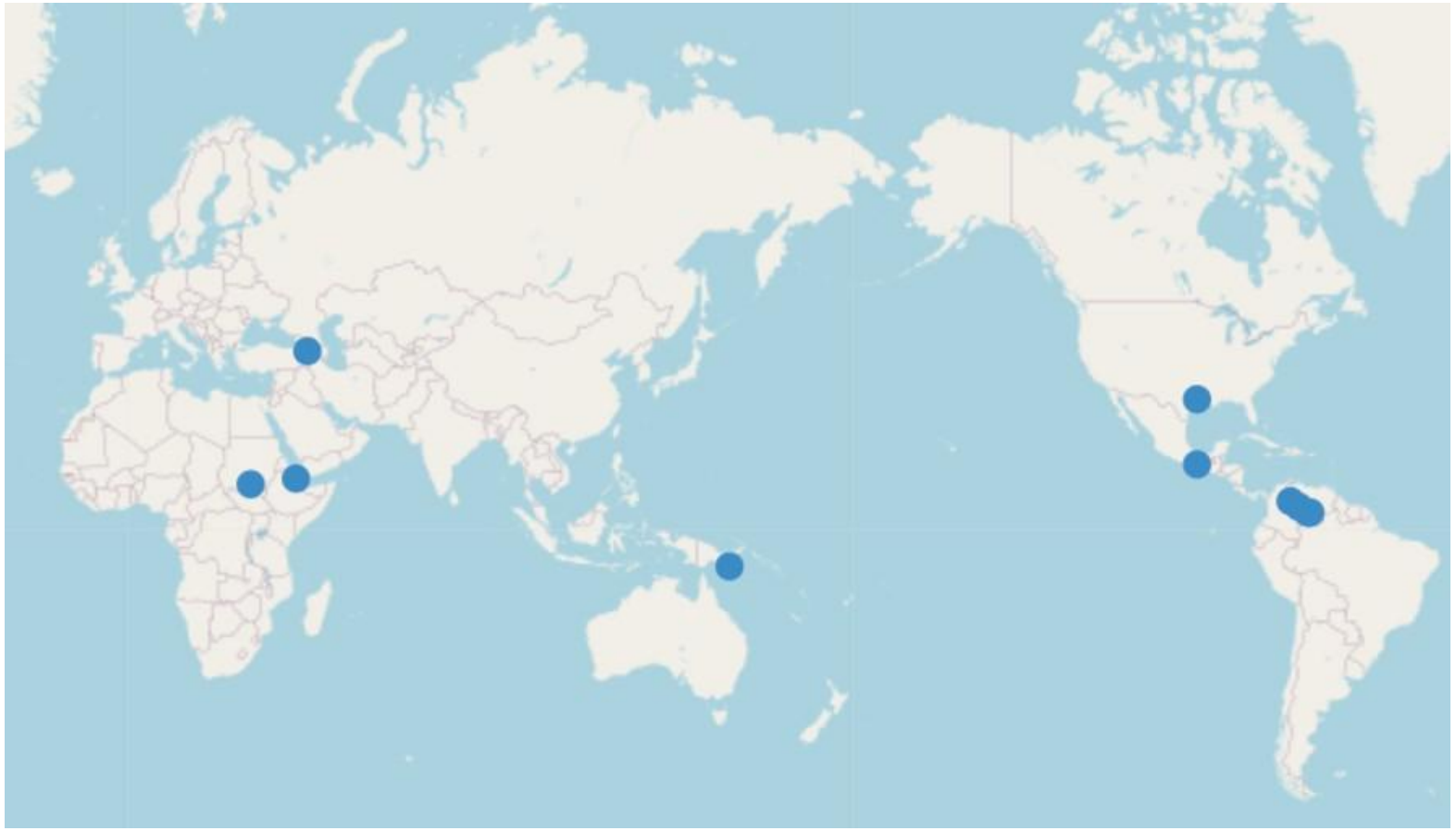

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(6) a. *bam-**ngintha**-ngkardu*
3SG.SBJ.NFUT-DU.F-see
'They two (non-siblings) saw him/her'

b. *bam-**ngi**-ngkardu-**ngintha***
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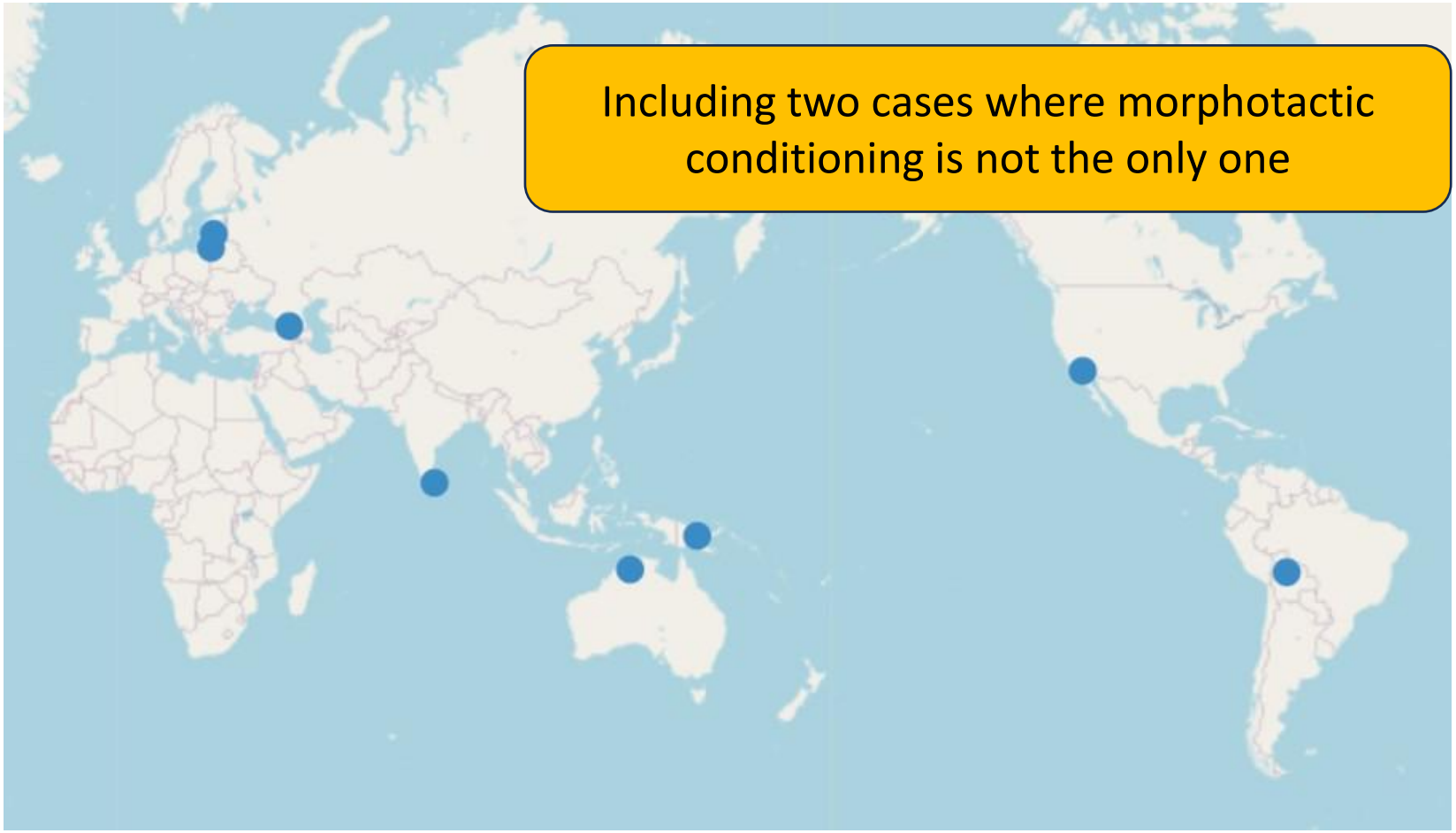

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3.2. Morphotactic conditioning

- Unequivocal cases of purely morphotactic conditioning are rare.
- Drawing a clear boundary between morphotactic and other types of conditioning is often difficult.

3.3. Paradigmatic conditioning

The orientation of the affix is determined by the inflectional features of the wordform it occurs in (but cannot be reduced to the presence/absence of any particular [types of] morphemes).

- One on the most widespread type of ambifixation, which tends to combine with other kinds of conditioning, i.e. lexical and part-of-speech-based.
- NB most so-called “pronominal clitics” of Romance and Balkan languages (see Macedonian above) belong to this class.

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(7) a. *ʔi-nna-n-du$_{11}$.g*
VM-3SG.IO-3SG.A-say
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Abkhaz (Northwest Caucasian; Chirikba 2003: 44-45) negation marker *-m-*:

- stative verbs: suffix in all forms;
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Abkhaz negation (Chirikba 2003: 44-45, *-ga-* ‘take’, 3Pl>3Sg):

	Finite	Non-finite
Present	*də-r-ga-wá-**m***	*jə́-rə-**m**-ga-wa*
Aorist	*d-rə-**m**-gá-jṭ*	*jə́-rə-**m**-ga*
Future I	*də-r-ga-rə́-**m***	*jə́-rə-**m**-ga-ra*
Perfect	*d-rə-**m**-gá-c-ṭ*	*jə́-rə-**m**-ga-c*

3.3. Paradigmatic conditioning

Inflectional features determining the position of ambifixes vary considerably:

- TAM
- voice
- (non)finiteness
- definiteness

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Agreement markers in Walman (Torricelli, New Guinea; Dryer 2019: 176-176): prefixes with verbs and suffixes with adjectives.

(9) a. *pelen* ***y****-aykiri*
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Apart from a few cases in the Americas, part-of-speech conditioned ambifixation shows clear areal and/or genealogical patterning:

- West Africa (Atlantic-Congo)
- Caucasus
- Indonesia and New Guinea (both Austronesian and Papuan)

3.4. Part-of-speech conditioning

Part-of-speech conditioned ambifixation tends to involve specific functional domains:

- gender marking (e.g. agreement on adjectives vs. verbs);
- person marking (e.g. possessor indexing on nominals vs. participant indexing on verbs);
- relational marking (e.g. case-marking on nominals vs. applicative marking on verbs).

3.5. Lexical conditioning

The orientation of the affix is determined by lexically-specified features of the base (e.g. inflection class).

- So far the most widespread type of conditioning that often combines with other factors, such as paradigmatic or part-of-speech.

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English denominal/deadjectival verbs in {*en*}:

(11) prefix with Latinate: ***en****large*, ***en****sure*, ***en****courage*, ***en****rage* …
suffix with Germanic: *deaf****en***, *hard****en***, *sharp****en***, *strengthen* …
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The orientation of the affix is determined by syntactic or semantic properties of the construction its hosting word occurs in.

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- Depends on the basic assumptions and definitions.

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French subject indexes: prefixes in declarative, suffixes in interrogative clauses (+ other cases of inversion).

(11) a. ***Il*** *travaillait* 'He was working'
b. *Travaillait-**il**?* 'Was he working?'
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"Declarative" vs. "interrogative" feature signalled by the position of the subject marker?

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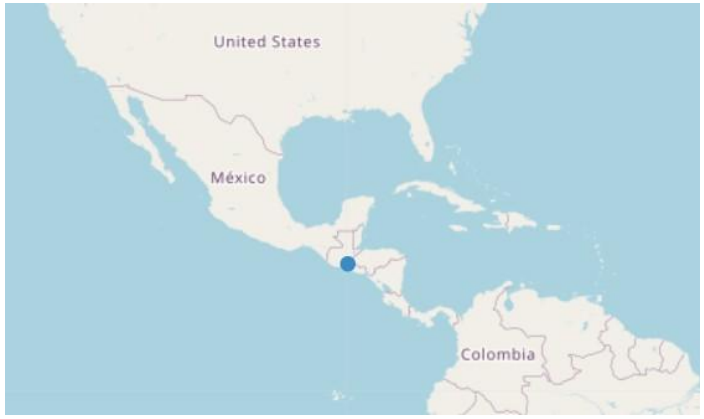
- suffixes in inalienable possession
- prefixes in alienable possession
- not a purely lexical distinction, since some nouns allow alternative construal



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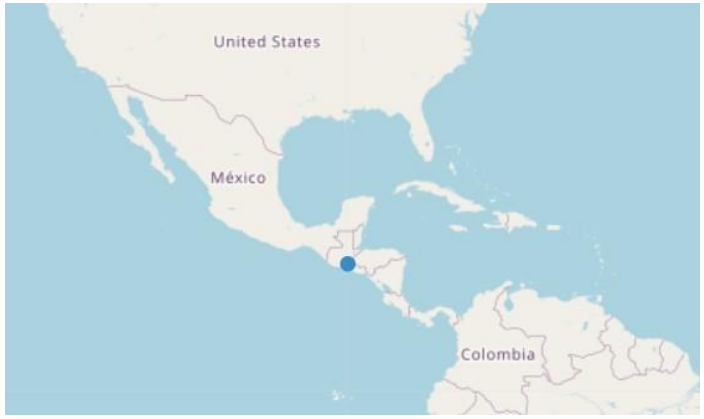

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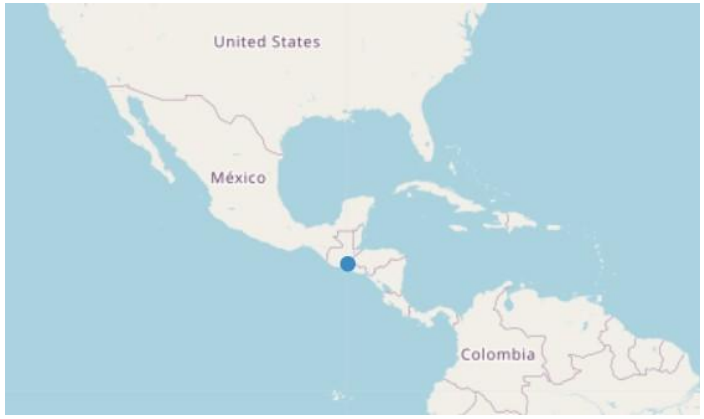

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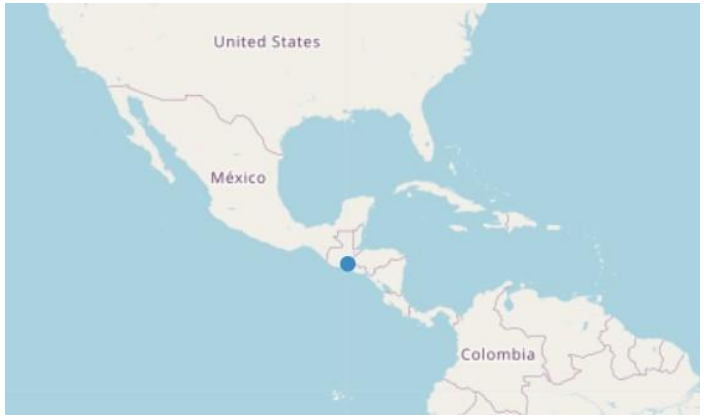

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Guazacapán (Xincan; Rogers 2010: 178, 182, 185)

(11) a. *uxti-**ka’*** ‘your spouse’s parents’ (inalienable)

b. ***ka**-xuxi* ‘your beard’ (alienable)

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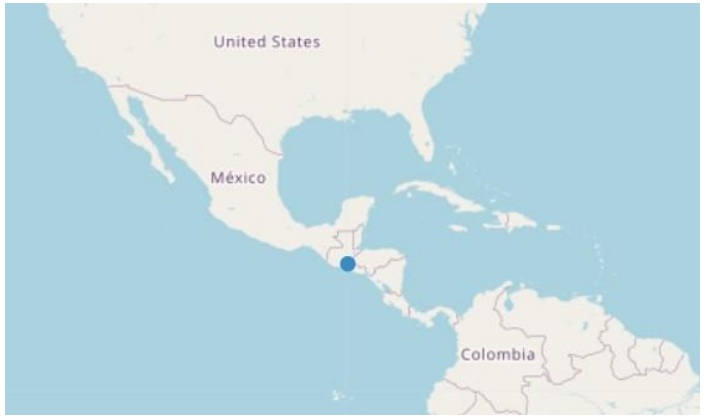

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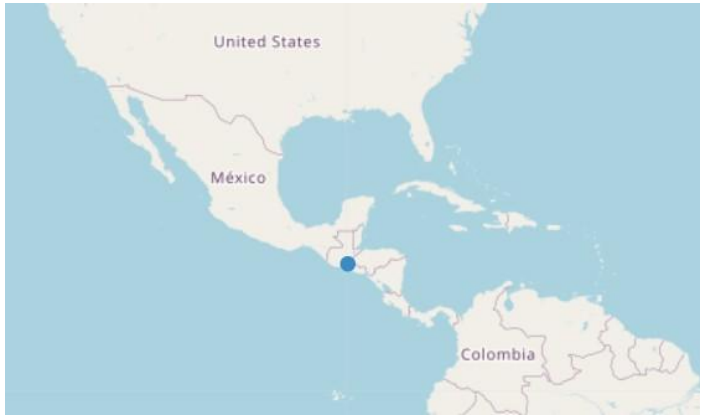
(12) a. *mak’u-**ka’*** ‘your house’ (you earned it from personal effort)
b. ***ka**-maku* ‘your house’



3.6. Syntactic/semantic conditioning

Map created with Lingtypology, Moroz (2017)

3.7. Free variation?

Yuqui (Tupi-Guarani, Bolivia; Villafañe 2004: 168; van Gijn & Zúñiga 2014: 152): the focus marker and the past tense marker occur either suffixally or prefixally in apparently free variation:

(13) a. *yagua* *bia-ño-ke* *yukia*
jaguar man-FOC-PST 3SG.kill
'The man killed the jaguar.'

b. *so-natut-ĩ* *ño-ke-bia* *u*
meat-EMPH-EMPH FOC-PST-man 3SG.eat
'The people ate a lot of meat.'

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3. Typology: summary

- Some of the types are less clear-cut than others.
- Some ambifixes show mixed and transitional types of conditioning.
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3. Typology
4. Diachronic considerations
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- Still, at least three pathways to ambifixation can already be discerned:
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4.1. Clitics > ambifixes

- Romance and Balkan Slavic object markers:
  (0) unstressed pronouns →
  (1) Wackernagel (second position) enclitics →
  (2) adverbal clitics subject to Tobler-Mussafia law ("no clitics in first position of the clause") →
  (3) ambifixes whose position wrt verb depends on its inflectional features
- Benacchio 1988, Alexander 1994, 2000, 2020, Pancheva 2005, Friedman & Joseph (2025: 802-807, 816-817) on Balkan Slavic
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stage 2 (Bulgarian): X om=(*Y) V Y ~ V=om X

- In the transition from stage 1 to stage 2 clitics become verb-adjacent.
- A precondition for this is a statistically significant share of verb-adjacent clitics already at stage 1 (Benacchio 1988: 466; Pancheva 2006: 151-2; Bennett 2006; Pescarini 2021: Ch. 7).

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- Conventionalisation of statistical tendencies in the use of different verbal forms in V=om X vs. X=om V clauses as paradigmatic restrictions on the position of verb-adjacent markers (Wanner 1987: 269-270, 278; Bennett 2006; Russi 2008: 78-9).

4.1. Clitics > ambifixes

- A separate important question: how do enclitics become proclitics and subsequently prefixes?
- See e.g. the notion of “prosodic realignment” proposed for different yet related developments in Hill et al. (2019).
- In the case of Balkan Slavic, language contact must have also played an important role.

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b.	Albanian:	*i-a-jap*	*jep-i-a*
c.	Modern Greek:	*tu-ton-ðino*	*ðose-tu-ton*
d.	Aromanian:	*lj-u-dau*	*dă-lj-u*
		‘I give it to him.’	‘Give it to him!’

(Based on Alexander 2000: 13; Mišeska-Tomić 2005: 300-302; Buchholz & Fiedler 1987: 82; Friedman & Joseph 2025: 803-4)

(15) a.	Italian:	*glie-lo-do*	*da-glie-lo*
b.	Catalan:	*li-ho-dono*	*dóna-li-ho*
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- Balkan Slavic, in particular, Macedonian, shows convergence to a pattern actually extending beyond the Balkans.
- Lindstedt (2014: 172):

"Balkan Slavic is typologically different from the rest of Slavic languages, and this difference is mainly explained as a result of the influence of other Balkan languages. Balkan Romance does not differ from other Romance languages so radically."

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4.2. Univerbation in counterposition

An element hosting a prefix resp. suffix can be suffixed resp. prefixed to a host, resulting in so-called “counterposed affixes” (Stump 2022):

(16) a. m-X ~ X m-Y > m-X ~ X-m(-y)

b. X-m ~ Y-m X > X-m ~ (y-)m-X

4.2. Univerbation in counterposition

Ono (Trans-New-Guinea > Finisterre-Huon, New Guinea; Wacke 1930-31: 174, 178), cf. Suter (2012, 2018) and Windschuttel (2018) for a comparative and historical perspective.

- A limited number of verbs take object prefixes.
- Two of such verbs, *-an-* 'see' and *-in-* 'give', productively suffix to non-inflected verbs and serve as markers of P and R indexing.

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Ono (Wacke 1930-31: 174-5, 178-9), present tense 3Sg subject:

	‘see’	‘protect’
1Sg	***n*-*an*-*maike***	***ware*-*nan*-*maike***
2Sg	***g*-*an*-*maike***	***ware*-*gan*-*maike***
1Pl	***ŋ*-*on*-*maike***	***ware*-*ŋon*-*maike***

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Ono (Wacke 1930-31: 174-5, 178-9), present tense 3Sg subject:

	‘give’	‘cook for smb’
1Sg	***n*-*in*-*maike***	***mire*-*nin*-*maike***
2Sg	***g*-*in*-*maike***	***mire*-*gin*-*maike***
1Pl	***ŋe*-*bon*-*maike***	***mire*-*ŋebon*-*maike***

4.2. Univerbation in counterposition

- Similar cases are quite widely attested across languages, e.g. in Nakh Daghestanian, Cushitic, Kanuri (Saharan), Crow (Siouan), Diegueño (Yuman) etc.
- Univerbation in counterposition often yields ambifixation coupled with multiple exponence (Harris 2017).

4.2. Univerbation in counterposition

Joola Fogny (Atlantic-Congo > North-Central Atlantic, Senegal, Bassène 2024: 197, 198): noun class markers are prefixed by default, but additionally occur as suffixes in definite forms

(17) a. *bu-bɐɐr b-ɐɐmɐk*
CL-tree CL-big
'a big tree'

b. *bu-bɐɐr-ɐ-b b-ɐɐmɐk-ɐ-b*
CL-tree-DEF-CL CL-big-DEF-CL
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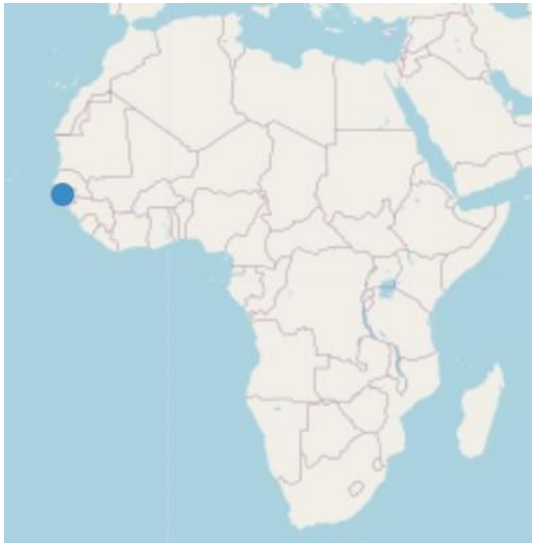

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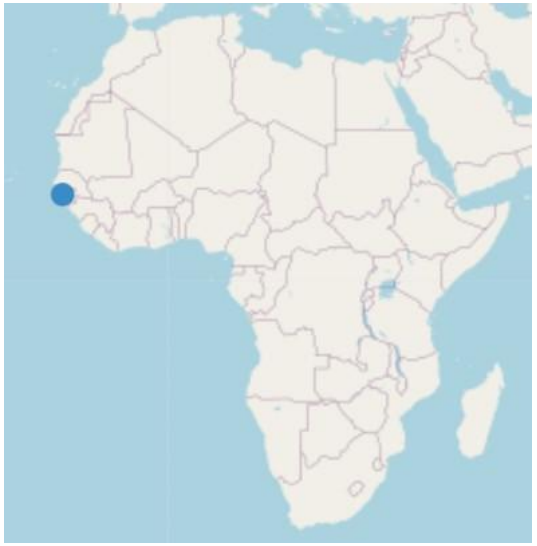

4.2. Univerbation in counterposition

- Suffixed noun class markers in a number of western Atlantic-Congo languages clearly go back to encliticised determiners (see e.g. Greenberg 1977; Dimmendaal 2001: 378-382; Good 2018: 36-40; Güldemann & Fiedler 2022).

4.3. Affixalisation of adverbs or adpositions

- Adverbials or adpositions (and probably other word classes, e.g. classifiers) can encliticise to nouns becoming (e.g. case) suffixes and procliticise to / incorporate into verbs becoming (e.g. spatial) prefixes (or vice versa).
- The few examples I am aware of come from the languages of the Caucasus, but I am sure that this pathway is attested more broadly.
- Cf. Kuryłowicz (1964: 171–178), Pinault (1995) on Indo-European spatial adverbs developing into adpositions and preverbs.

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function	verbal prefix	nominal suffix
INTER	ʕ(a)-	-ʕ
ANTE	hV-	-h
POST	qV-	-q
APUD	f(a)-	-w
SUPER	(a)l-	-l
SUB/CONT	kV-	-k

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(18) *ruš.a* *gardani-q* *šarf* *q-ix.i-ne*
girl.ERG neck-POST scarf POST-put.PFV-AOR
'The girl put a scarf on her neck.'

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- The formally cognate and functionally similar (though not identical) nominal suffixes and verbal prefixes in a number of Nakh-Daghestanian languages are hypothesised to go back to spatial adverbs (cf. e.g. Alekseev 1985: 117-121).
- Similar developments are attested e.g. in Panará (Macro-Je), Amharic and Sumerian (the latter two cases are not in my database, since the nominal markers are clitics rather than affixes).

4.3. Affixalisation of adverbs or adpositions

- In some languages different stages of this or similar development can even be observed synchronically.

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Abkhaz (Northwest Caucasian, Hewitt 1979: 114) instrumental:

(19) a. *a-ž’ah^{w}a* ***a-la*** *sə-jə-sə-jṭ*
DEF-hammer 3SG.IO.N-with 1SG.ABS-3SG.M.IO-hit-DCL
‘I hit him with the/a hammer.’ (adposition)

ABS – absolutive, DCL – declarative, DEF – definite, M – masculine, N – non-human, IO – indirect object

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(enclitic > case suffix)

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(incorporation > applicative prefix)

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4.3. Affixalisation of adverbs or adpositions

- Does this pathway ever lead to “true” ambifixes fully satisfying the Identity of Function criterion?
- Even if the answer to this question is negative and these and similar cases should not be considered ambifixes *sensu stricto*, they are instructive from a diachronic-typological perspective.

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- A remarkable degree of cross-linguistic variation is observed in the factors that determine the orientation of ambifixes, from phonotactics through various types of morphology all the way to semantics and syntax, with many intermediate cases in between.
    - What principles influence which explanation we choose?
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5. Summary and outlook

- Ambifixes arise through a number of diachronic pathways that recur across various language families.
  - Why do some ambifixes remain while others turn into simple prefixes or suffixes?


Thank-you for your-attention!

References

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Appendix

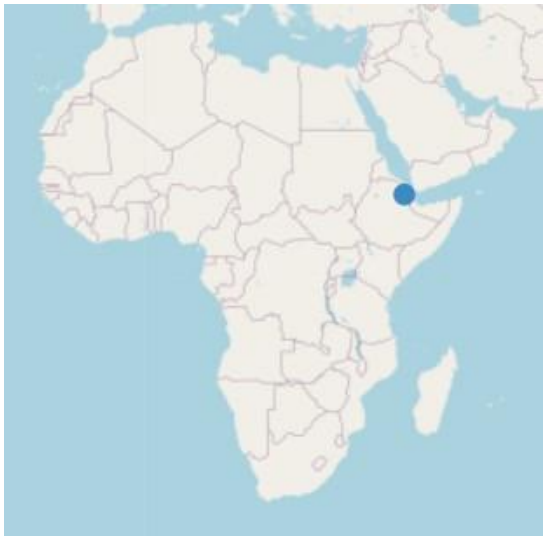
Excluded slides from previous versions (2024)

3.1. Phonological conditioning

Afar (Cushitic, Ethiopia; Fulmer 1991): various verbal affixes occur prefixed to roots beginning in vowels except /a/ and suffixed to roots beginning in /a/ or consonants:

(5) a. ***t***-*o**km-è***
2/3SG.F-eat-PFV
'You/she ate.'

b. *yab-**t**-à*
speak-**2/3SG.F**-IPF
'You/she speak(s).'



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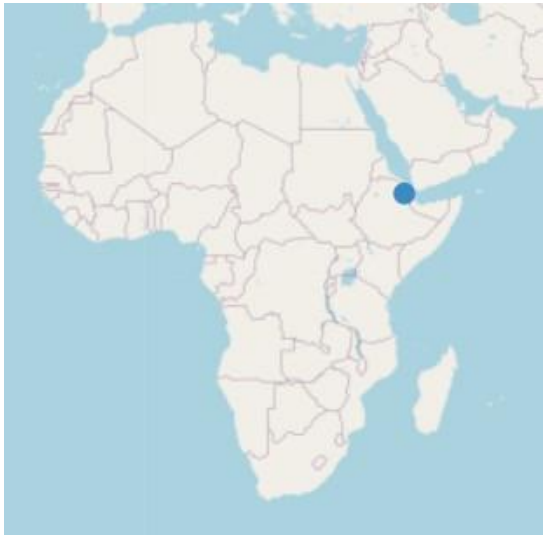

3.3. Paradigmatic conditioning

Catalan object bound pronominals, traditionally called "clitics" (Wheeler et al. 1999: 172-174):

- prefixes in finite forms (except positive imperative);
- suffixes in positive imperative and non-finite forms

(8) a. ***m'ajuda*** 's/he helps me'
b. *ajuda'**m*** 'help me!'
c. *ajudar-**me*** 'to help me'

The same rule in Spanish and Italian and, remarkably, also in Macedonian (Friedman 2002: 38-39).

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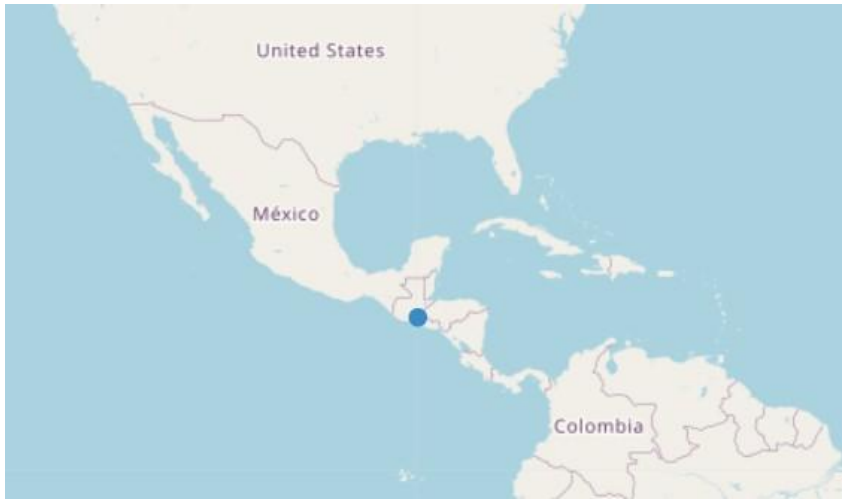
3.3. Paradigmatic conditioning

Yupiltepeque (extinct; Xincan, Guatemala; Rogers 2010: 224-231) subject markers:

- intransitive verbs: always prefixes
- transitive verbs: prefixes in the imperfective, suffixes in the perfective

NB Not all prefixes and suffixes

criterion.



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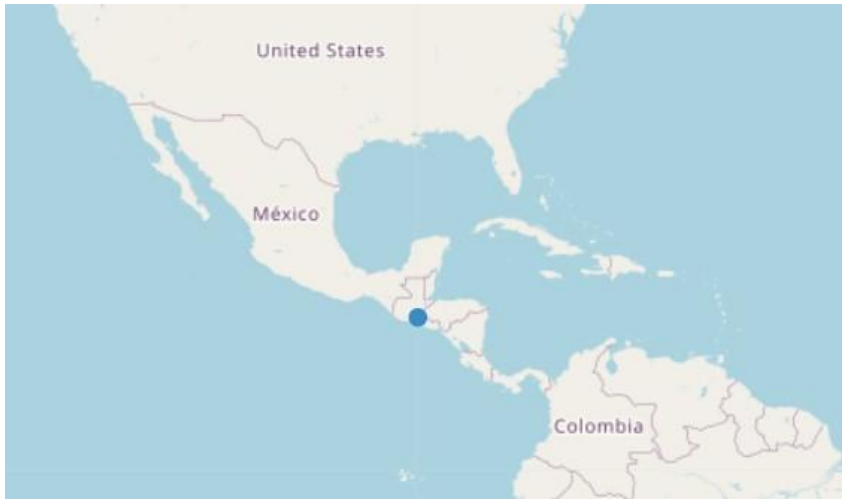

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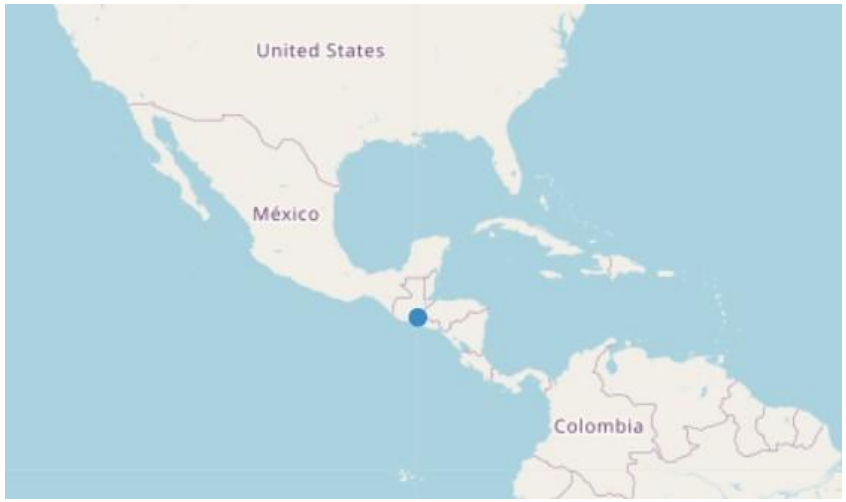

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NB Not all prefixes and suffixes adhere to the Same Form criterion.

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Yupiltepeque (extinct; Xincan, Guatemala; Rogers 2010: 224-231) subject markers:

	prefixes		suffixes	
	Sg	Pl	Sg	Pl
1	*n-*	*lki-*	*-n/-n'*	*-lki'*
2	*k-*	*lka-/lik-*	*-ka'*	*-lik*
2 formal	*y-*	*liy-*	*-y*	*-liy*
3	*h-*	*lih-*	*-yi*	*-hri*

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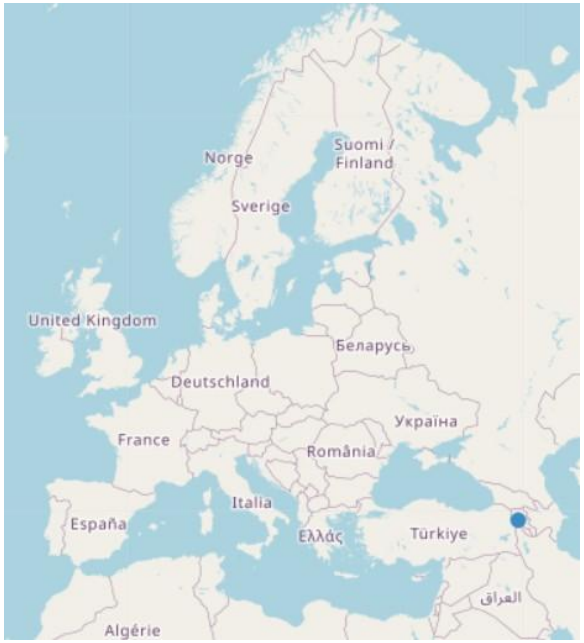
	Sg	Pl	Sg	Pl
1	*n-*	*lki-*	*-n/-n'*	*-lki'*
2	*k-*	*lka-/lik-*	*-ka'*	*-lik*
2 formal	*y-*	*liy-*	*-y*	*-liy*
3	*h-*	*lih-*	*-yi*	*-hri*

3.6. Syntactic/semantic conditioning

Gyumri Armenian indicative marker (Bezrukov, Dolatian 2020):



3.6. Syntactic/semantic conditioning

Gyumri Armenian indicative marker (Bezrukov, Dolatian 2020):

prefix	suffix
habitual	progressive
realis	irrealis
preverbal nuclear stress	no preverbal nuclear stress
narrow argument focus	broad focus

3.6. Syntactic/semantic conditioning

Gyumri Armenian (Bezrukov, Dolatian 2020: 3-5):

(14) a. *šun-ə* *vazze-**gə*** progressive
dog-DEF run-**IND**
'The dog is running.'

b. *šun-ə* ***kə**-vazze* habitual
dog-DEF **IND**-run
'The dog (habitually) runs.'

3.6. Syntactic/semantic conditioning

Gyumri Armenian (Bezrukov, Dolatian 2020: 3-5):

(14) a. *šun-ə* *vazze-**gə*** broad focus
dog-DEF run-**IND**
'The dog is running.'

b. *šun-ə* ***kə**-vazze* narrow focus
dog-DEF **IND**-run
'The dog (habitually) runs. / The DOG is running.'

3.6. Syntactic/semantic conditioning

Gyumri Armenian (Bezrukov, Dolatian 2020: 3-5):

(14) a. *šun-ə* *vazze-**gə*** no preverbal stress
dog-DEF run-**IND**
'The dog is running.'

c. *šun-ə* ***tun*** ***kə**-vazze* preverbal stress
dog-DEF home **IND**-run
'The dog is running home.'

3.6. Syntactic/semantic conditioning

Gyumri Armenian (Bezrukov, Dolatian 2020: 3-5):

(14) a. *šun-ə* *vazze-**gə***
dog-DEF run-**IND**
'The dog is running.'

c. *šun-ə* ***tun*** ***kə**-vazze*
dog-DEF home **IND**-run
'The dog is running home.'

Which feature(s) determine affix orientation?

3.6. Syntactic/semantic conditioning

Gyumri Armenian (Bezrukov, Dolatian 2020: 3-5):

(14) a. *šun-ə* *vazze-**gə***
dog-DEF run-**IND**
'The dog is running.'

c. *šun-ə* ***tun***
dog-DEF home
'The dog is runni

Which feature(s) determi

Or, perhaps, such cases should not be included at all, since the rules determining the position of the elements in question are sensitive to phrase- or clause-based factors?

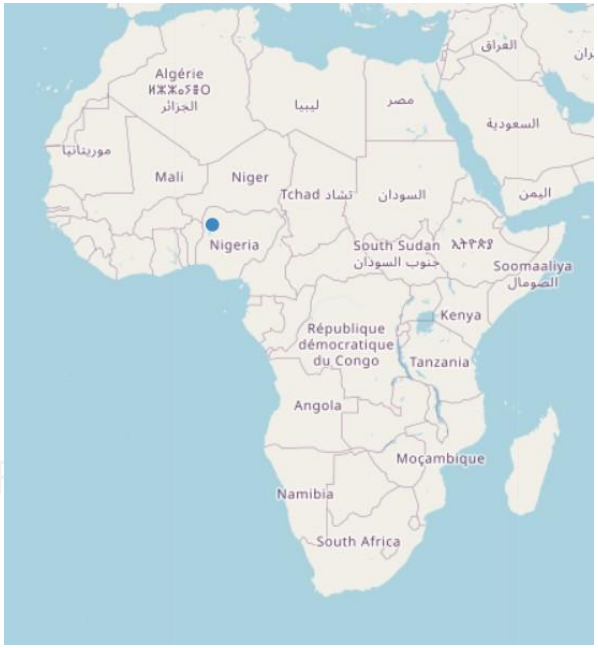
3.6. Syntactic/semantic conditioning

Ut-Ma’in (Atlantic-Congo, Nigeria; Paterson 2019: 104) gender markers: suffixed to the noun in some syntactic environments and prefixed in others.

(13)a. *mɔ́ŋgɔ̀r-**tɘ̀*** *àzgɘ̀-sː-tɛ̀* subject
mango.fruit-**C6** pour-ITR-PRF
‘Mango fruit rolled out (of the bask

b. *wā* *ká-ːn* ***ɘ̄t**-mɔ́ŋgɔ̀r*
C1.SBJ pluck-DIST **C6**-mango.fruit
‘He picked mango fruits.’

C – gender marker, DIST – distal, ITR – intransitive, PF



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'Mango fruit rolled out (of the basket).'

b. *wā* *ká-ːn* ***ə̄t**-mɔ́ŋgɔ̀r* object
C1.SBJ pluck-DIST **C6**-mango.fruit
'He picked mango fruits.'

C – gender marker, DIST – distal, ITR – intransitive, PRF – perfect

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'He picked mango fruits.'

NOT a subject vs. object distinction!

C – gender mar … PRF – perfect

3.6. Syntactic/semantic conditioning

Ut-Ma'in gender markers (Paterson 2019: 59-61):

prefixes	suffixes
citation form	modified by an adjective, definite marker, possessive pronoun or relative clause
modified by a numeral	
unmodifed object	unmodified subject
modifier of another noun	
object of adpositions	

3.6. Syntactic/semantic conditioning

Ut-Ma'in gender markers (Paterson 2019: 59-61):

prefixes	suffixes
citation form	modified by an adjective,
modified by	ossessive
	e clause
unmodifed	t
modifier of another noun	
object of adpositions	

What kind of a morphosyntactic feature could the orientation of Ut-Ma'in gender markers be associated with?

4.3. Univerbation in counterposition

- An interesting case from Gunwinyguan languages (northern Australia), superficially similar to that of the Abaza/Abkhaz instrumental but apparently involving a distinct diachronic pathway (Evans 2024).
- Case suffixes "surfing a ride on incorporated nominals" to become applicative prefixes:

(a)		(b)		(c)		(d)
N-m	>	[N-m]-V	>	N-[m-V]	>	(N)-[m-V]
nominal case-marker		incorporation of suffixed N		reanalysis from suffix to verbal prefix		incorporated noun becomes optional

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Bininj Gun-wok (Gunwinyguan, Australia; Evans 2003)

(20) a. *Balloon barri-dukga-ng gun-yarl-yi*
balloon 3pl>3-tie-PST.PFV CL-string-INS
'They tied the balloon with a string.' (139)

b. *Yi-[yiuk-yi]-rrurnde-ng*
2-honey-COM-return-NPST
'You are returning with the honey.'

c. *Gun-yarl ba-yi-dukga-ng*
CL-string 3>3-COM-tie-PST.PFV
'He tied it up with string.' (434)

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