

Meaning and Grammar Research Group, University of Edinburgh
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Conditions on ambifixation

Peter Arkadiev

University of Potsdam

alpgurev@gmail.com, <https://peterarkadiev.github.io/>



POTSDAM
T TYPOLOGY LAB

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Acknowledgments

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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. Defining ambifixes
2. Database
3. Conditions on ambifixation
4. Summary and outlook

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1. Defining ambifixes

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)

“variable-direction affix” (Ussishkin 2007: 460)

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1. Defining ambifixes

- 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 unprefixes, 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*

NEG-PVB-RFL-be_interested-PST.1SG

‘I did not show interest.’

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- Suffix if the verb is unprefixes, prefix in the presence of any other prefixes.

(1) a. *maudži-au-si*

wash.PST-1SG-RFL

‘I washed myself.’

suffix

b. *ne-pa-si-domėj-au*

NEG-PVB-RFL-be_interested-PST.1SG

‘I did not show interest.’

PST – past tense, RFL – reflexive, SG – singular

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(1) a. *maudži-au-si* suffix

wash.PST-1SG-RFL

'I washed myself.'

b. *ne-pa-si-maudži-au* prefix

NEG-PVB-RFL-wash.PST-1SG

'I did not wash myself.'

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

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The term “**ambifix**” is more appropriate than “**mobile affix**”:

- the latter can refer to affixes showing variable position in a string without changing orientation with respect to the root (see e.g. Bickel et al. 2007, Cryssman & Bonami 2016).

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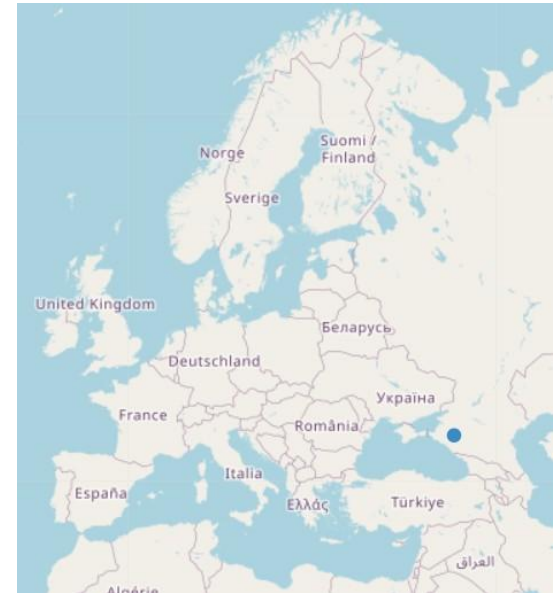
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1. Defining ambifixes

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

- (2) a. $sə-ḡ-ḃ-de-ḡ^w-a$
1SG.ABS-CSL-3PL.IO-COM-go-PST
- b. $s-ḃ-ḡə-de-ḡ^w-a$
1SG.ABS-3PL.IO-CSL-COM-go-PST
- a=b 'I came with them.'



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

1. Defining ambifixes

Immediate questions:

- How to tell whether a “mobile” element is an affix and not a clitic?
- In fact, for quite a few cases traditionally treated as “clitics” analysis in terms of ambifixation may be preferable:
- bound pronominals in Balkan and Romance languages (e.g. Joseph 1988, Aronson 1997, Enrique-Arias 2000, Monachesi 2005 etc.).
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Immediate questions:

- How to distinguish between an ambifix and a pair or set of unrelated prefix(es) and suffix(es)?
 - Identity of Function: the prefix and the suffix should express the same featural / semantic content;
 - Identity of Form: the prefix and the suffix should have one phonological form, with only transparent phonological modifications allowed.
- ☞ Not always clear-cut, borderline cases exist and must be taken into consideration.

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Yeri (Torricelli, Papua New Guinea, Wilson 2017: 220) gender-number markers (simplified)

	prefixes	suffixes
masculine singular	<i>n-</i>	<i>-n, -na</i>
feminine singular	<i>w-</i>	<i>-∅, -ha</i>
plural	<i>w-, ∅-</i>	<i>-ei, -i, -m</i>



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Some further 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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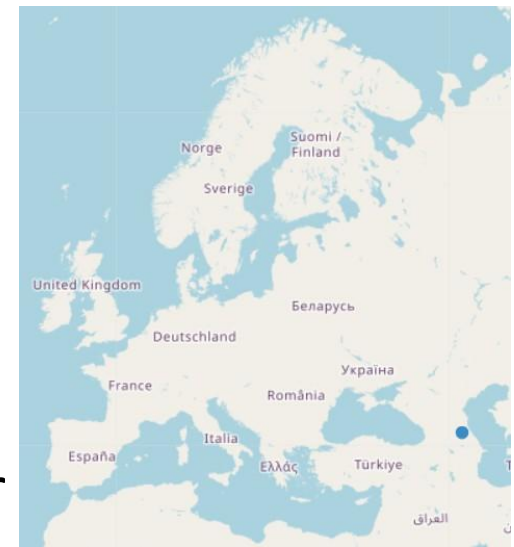
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Archi (Nakh-Daghestanian > Lezgetic, Russia;
Chumakina et al. 2016: 23-25): gender-number
agreement



	'bite', perfective	'fall', perfective	'real', adjective
Masculine	<i>w-eq:ʼu</i>	<i>cu<w>χu</i>	<i>haxdu-(w)</i>
Feminine	<i>d-eq:ʼu</i>	<i>ca<r>χu</i>	<i>haxdu-r</i>
Neuter I	<i>b-eq:ʼu</i>	<i>caχu</i>	<i>haxdu-b</i>
Human Plural	<i>b-eq:ʼu</i>	<i>caχu</i>	<i>haxd-ib</i>

1. Defining ambifixes

- Ambifixation is one of the blank spots of morphology.
 - In theoretical morphology, they have become subject of discussion only recently (Embick & Noyer 2001: 576-578; Kim 2010; Crysmann & Bonami 2016; Stump 2017, 2022);
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1. Defining ambifixes

- Open questions:

- In which languages are ambifixes attested and how widespread they are cross-linguistically?
- By which parameters do ambifixes vary across languages?
- From which diachronic sources and through which historical pathways do ambifixes arise and why are they less frequent than “ordinary” prefixes resp. suffixes?

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Won't be discussed today, see Arkadiev 2026
for preliminary observations

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2. Database

Sources:

- grammatical descriptions;
- special publications on morphology and morphosyntax

2. Database

- (As of October 2026) A phenomenon-based sample of 162 instances of ambifixation from 141 languages (48 families, 93 genera, including isolates) from all over the world.
- NB Work in progress, so coverage is certainly not ideal and will be improved.
- See Miestamo 2025 on phenomenon-based sampling

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Area	Languages	Genera	Families
Eurasia	41	24	10
Africa	30	21	7
Oceania	39	22	11
Australia	2	2	2
North America	11	10	9
South America	17	14	11

2. Database



Map created with Lingtypology, Moroz (2017)

2. Database

Some better-represented families:

- Atlantic-Congo: 17 languages
- Austronesian: 17 languages
- Indo-European: 13 languages
- Nuclear Trans-New-Guinean: 12 languages
- Nakh-Daghestanian: 10 languages

2. Database

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

For a more detailed typological overview, see Appendix 2.

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The most important parameter of the typology of ambifixes is based on the type of conditioning factors determining their prefixal vs. suffixal orientation:

- phonological
- morphotactic
- paradigmatic
- part of speech
- lexical
- syntactic and/or semantic

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Many cases of ambifixation are conditioned by more than one type of factor simultaneously

3. Conditions on ambifixation

Preliminary figures on types on conditioning:

- phonological 10 cases (+ 4 mixed ones)
- morphotactic 6 cases (+ 4 mixed ones)
- paradigmatic 32 cases (+ 15 mixed ones)
- part of speech 18 cases (+ 30 mixed ones)
- lexical 39 cases (+ 27 mixed ones)
- syntactic/semantic 8 cases (+ 9 mixed ones)
- free variation 2 cases (both mixed, probably more)

3. Conditions on ambifixation

- The few cases of ambifixation that have been discussed in theoretical literature so far mostly belong to the **phonological** and **morphotactic** types of conditioning.
- Yet, it is exactly these two types that are the least frequent across languages.
- The absolute majority of ambifixation patterns found in the languages of the world involve other types of conditioning; many of them are well-known to specialists, but have remained below the radars of morphological theory and typology.

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The orientation of the affix is determined by the phonological environment (e.g. the phonological composition of the root or stem it attaches to, Paster 2006: 253–254).

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- Most known cases: consonantal vs. vocalic edge
 - Also: syllable structure (negation and subject marking in [Alabama](#), Montler & Hardy 1990, 1991) and number of syllables (imperfective in [Korafe](#), Farr 1999: 27)
 - 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	<i>c-om-a</i>	<i>maɲu-c-a</i>
2Sg	<i>k-om-a</i>	<i>maɲu-g-a</i>
3SgF	<i>x-om-a</i>	<i>maɲu-x-a</i>



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This pattern is stable throughout the whole family and reconstructible to the proto-language (Rosés Labraba 2016)



3.1. Phonological conditioning



Map created with Lingtypology, Moroz (2017)

3.1. Phonological conditioning

English denominal/deadjectival verbs in {*en*} (Jespersen 1939):
complex lexical + phonological conditioning

- suffix *-en* mostly occurs with Germanic bases ending in obstruents: *deafen, harden, sharpen, strengthen*
- prefix *en-* mostly occurs with Latinate bases (with which it entered the language): *enlarge, ensure, encourage, enrage*
- the prefix also spread to Germanic bases ending in vowels and sonorants: *embody, endear*
- as well as to Germanic bases that already had the suffix: *enlighten, enliven, embolden*

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- prefix *en-* mostly occurs with Latinate bases (with which it entered the language): *enlarge*, *ensure*, *encourage*, *enrage*
- the prefix also spread to Germanic bases ending in vowels and sonorants: *embody*, *endear*
- as well as to Germanic bases that already had the suffix: *enlighten*, *enliven*, *embolden*

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A peculiar case of ambifixation arising accidentally from two historically unrelated sources

3.1. Phonological conditioning

- Phonological structure is an additional factor in a number of patterns of ambifixation whose major conditioning factors are non-phonotactic.
 - E.g. in Nakh-Daghestanian languages, basically only vowel-initial stems can take gender prefixes; it is not the case, though, that consonant-initial stems take gender suffixes, since suffixation is determined morphologically.
 - In Savosavo (isolate, Solomon Islands) prefixal object indexes occur with a small set of verbal stems, all of which happen to be vowel-initial (Wegener 2012: 54), although some vowel-initial stems belong to the suffixing class.

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Murrinhpatha (Southern Daly, Northern Australia; Nordlinger 2010: 334; Nordlinger & Mansfield 2021) dual non-sibling marker occurs in prefixal position, but when the latter is occupied by an object marker, it appears as a suffix:

- (3) 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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DU – dual, F – feminine, NFUT – non-future, OBJ – object,
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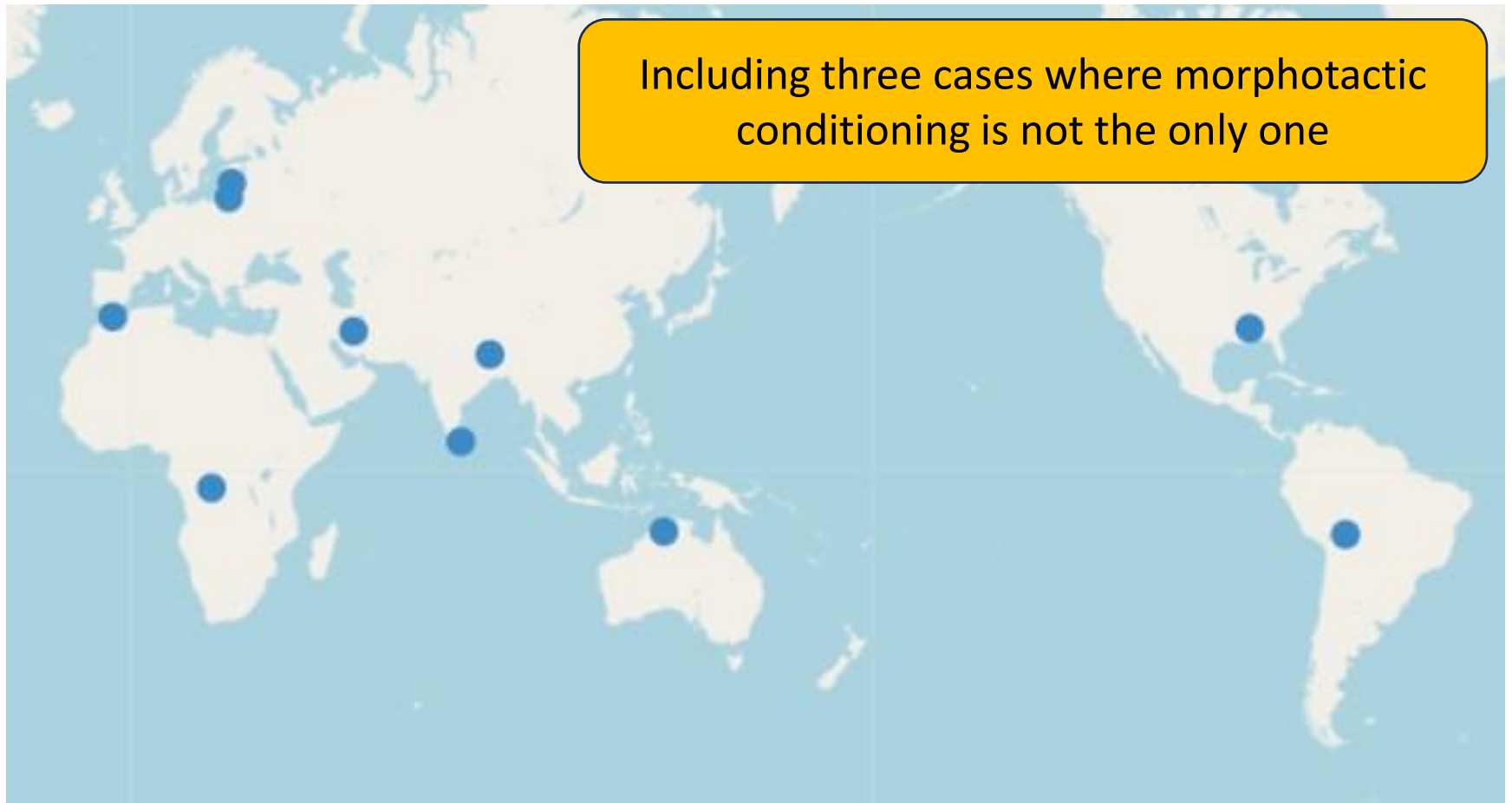
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Map created with Lingtypology, Moroz (2017)

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.

3.3. Paradigmatic conditioning

- One on the most widespread types of ambifixation, which tends to combine with other kinds of conditioning, i.e. lexical and part-of-speech-based.
- Tends to involve person marking and negation.
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Catalan object bound pronominals, traditionally called “clitics” (Wheeler et al. 1999: 172-174, 203):

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

- (4) a. *me-la-llegiràs* ‘you will read it to me’
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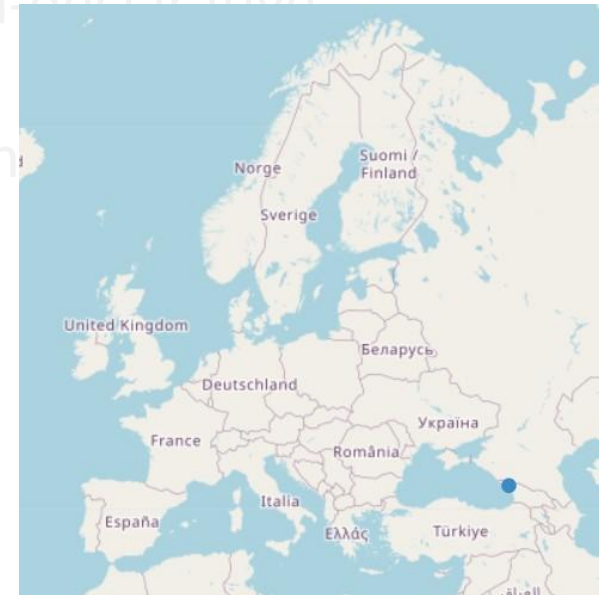


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Abkhaz (Northwest Caucasian, Georgia; Chirikba 2003: 44-45)
negation marker *-m-*:

- stative verbs: suffix in all forms;
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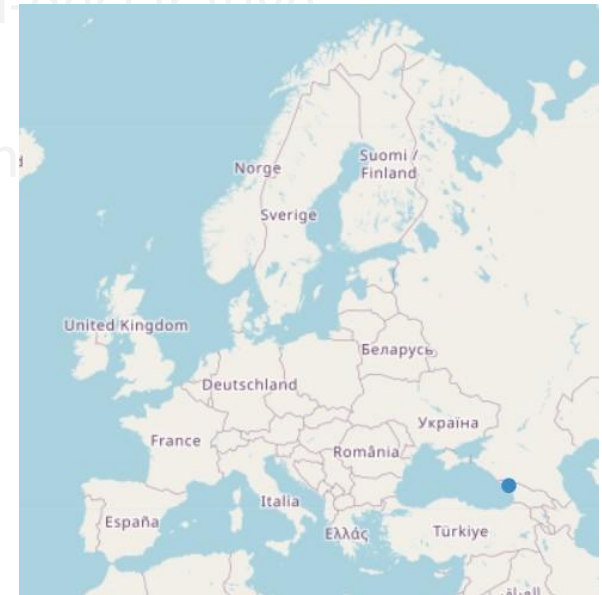


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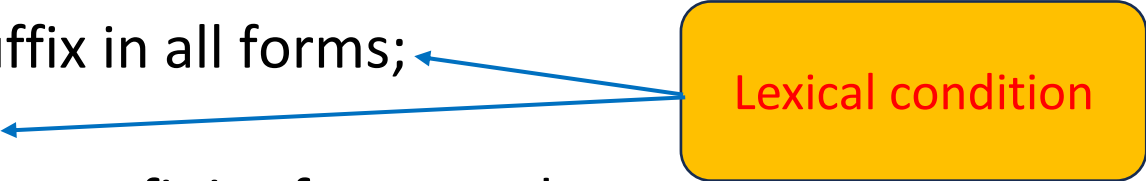
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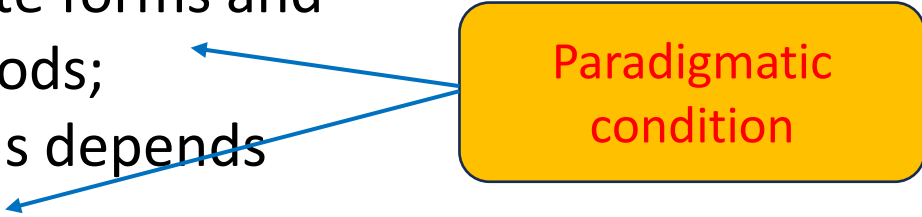


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3.3. Paradigmatic conditioning

Abkhaz negation (Chirikba 2003: 44-45):

lexeme	tense	finite	non-finite (Rel)
'sleep' 3Sg.H.Abs	present	<i>dá-ĉ^wa-m</i>	<i>já-ĉ^wa-m</i>
'take' 3Pl.Erg>3Sg.H.Abs	present	<i>də-r-ga-wá-m</i>	<i>já-rə-m-ga-wa</i>
	future II	<i>də-r-gá-ša-m</i>	<i>já-rə-m-ga-ša</i>
	aorist	<i>d-rə-m-gá-jt</i>	<i>já-rə-m-ga</i>
	perfect	<i>d-rə-m-gá-c-ṭ</i>	<i>já-rə-m-ga-c</i>

3.3. Paradigmatic conditioning

Inflectional features determining the position of ambifixes vary considerably:

- TAM
- voice
- (non)finiteness
- definiteness
- number

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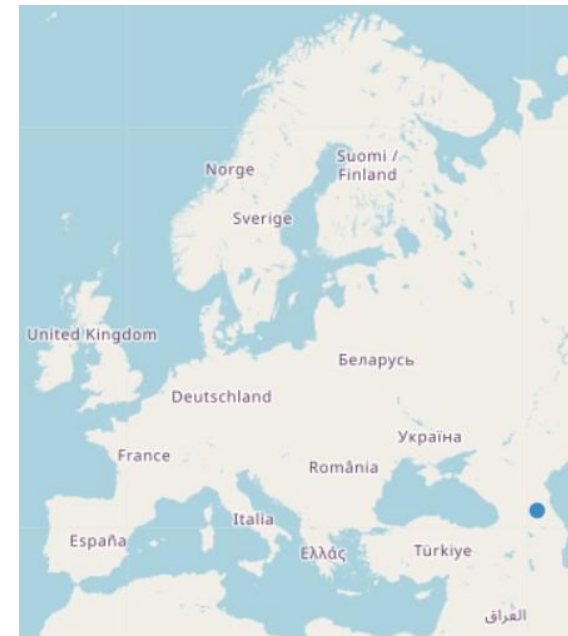
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Bagvalal (Nakh-Daghestanian > Avar-Andic, Russia; Kibrik et al. 2001): gender-number agreement

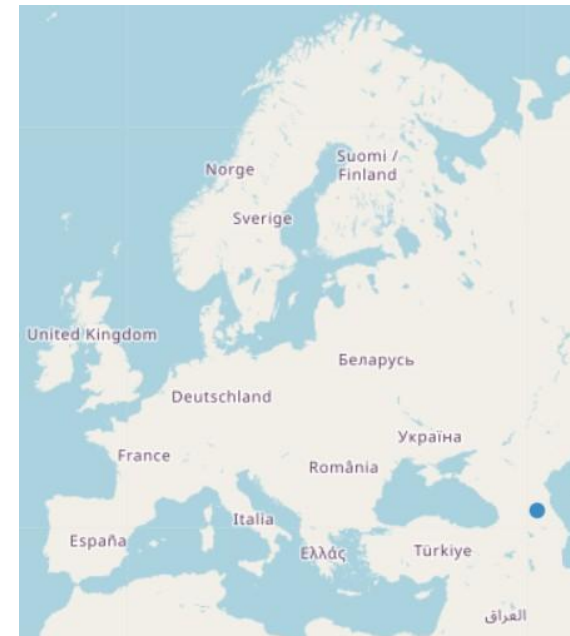
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 - adjectives: suffixes (*žaru-b* ‘yellow.N’)
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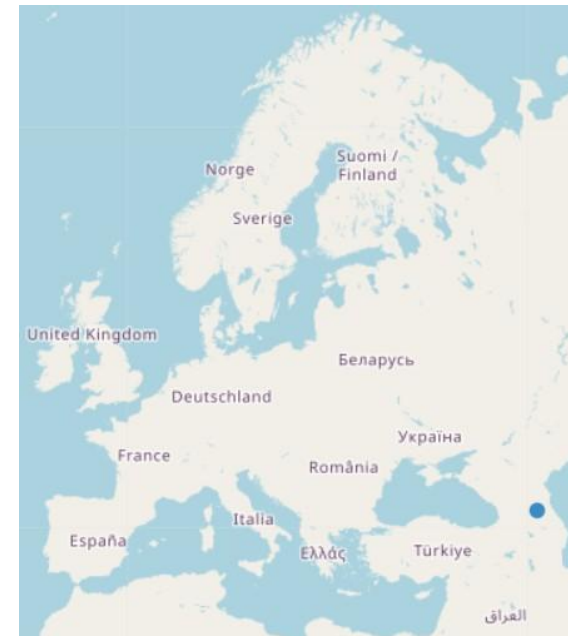
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3.4. Part-of-speech conditioning



Map created with Lingtypology, Moroz (2017)

3.4. Part-of-speech conditioning

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)
- South America (Arawakan)

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);
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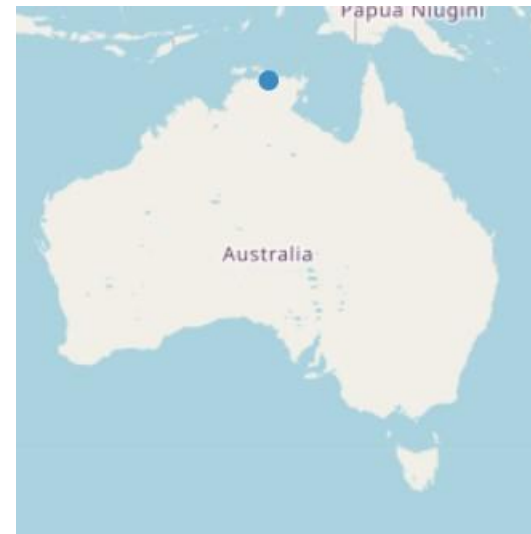
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Bininj Gun-wok (Gunwinyguan, Australia; Evans 2003: 139-141, 432-437) instrumental-comitative marker: case suffix with nominals, applicative prefix with verbs

(5)a. *Balloon barri-dukga-ng gun-yarl-yi gu-dulk-gah.*
balloon 3PL>3-tie-PST.PFV CL-string-INS LOC-stick-LOC
'They tied the balloon onto the stick with a string.' (139)

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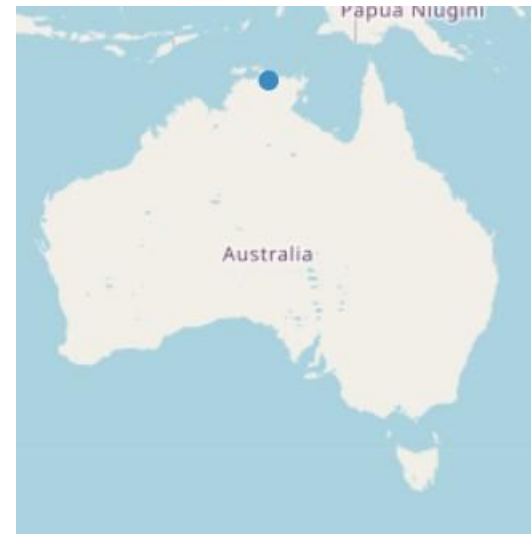
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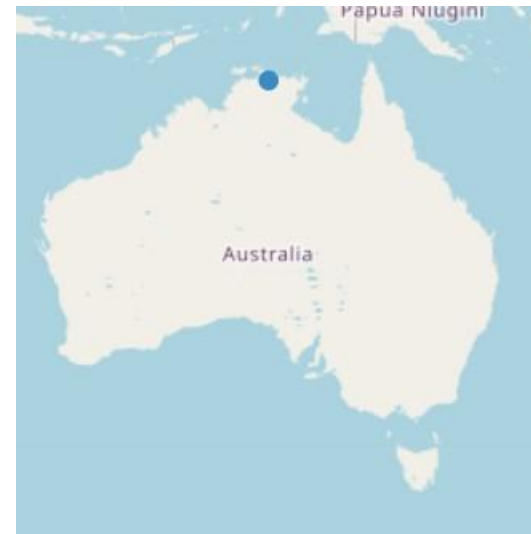
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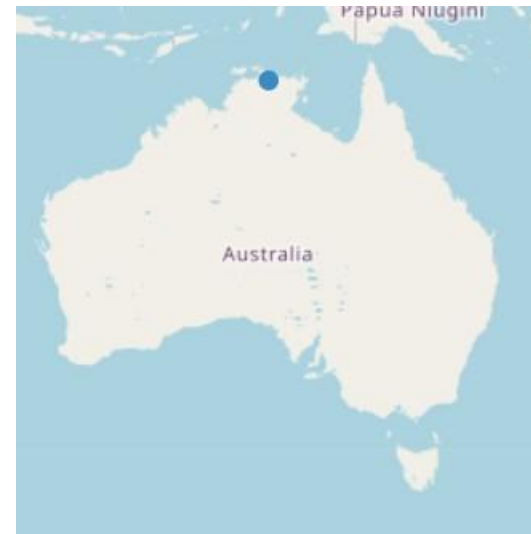
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Such cases, often arising through polygrammaticalisation (Craig 1991), can be problematic from the point of view of Identity of Function



3.5. Lexical conditioning

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

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Map created with Lingtypology, Moroz (2017)

3.6. Syntactic/semantic conditioning

The orientation of the affix is determined by syntactic or semantic properties of the construction its hosting word occurs in.

- Shouldn't all such cases be recast in terms of paradigmatic features?
- Possibly, but still they look different from the cases discussed in 3.3.
- Depends on point of view.

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- Shouldn't all such cases be recast in terms of paradigmatic features?
- Possibly, but still they look different from the cases discussed in 3.3.
- Partly depends on the basic assumptions and definitions.

3.6. Syntactic/semantic conditioning

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?’
c. *Où travaillait-il?* ‘Where was he working?’

“Declarative” vs. “interrogative” feature signalled by the position of the subject marker?

Cf. Auger 1994, Bonami & Boyé 2007, Culbertson 2010 on affixal status.

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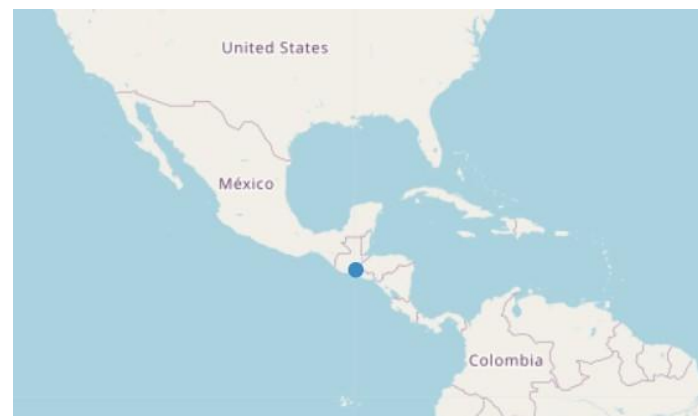
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Xinkan person markers (Rogers 2010: 176-186) with nouns:

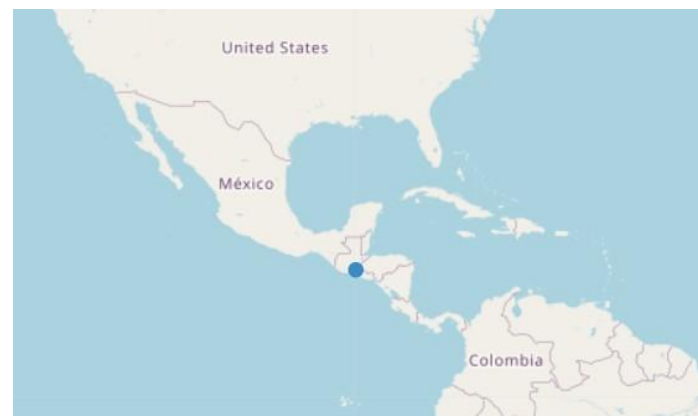
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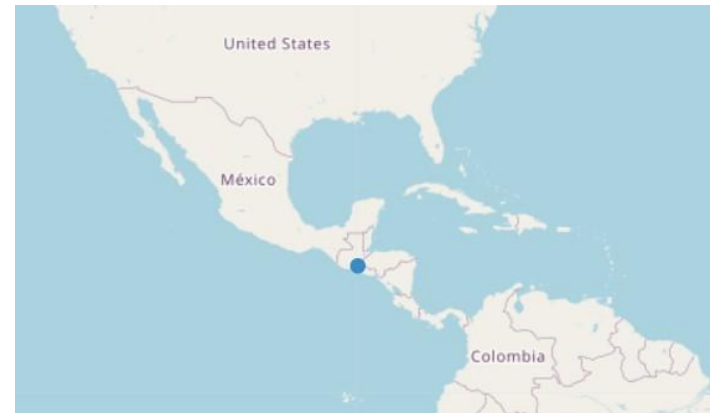


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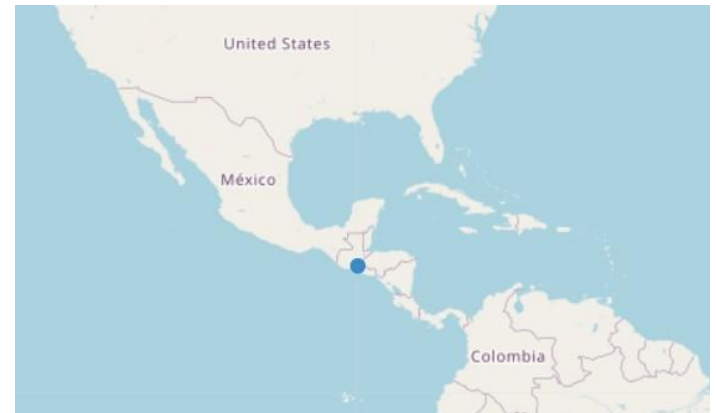


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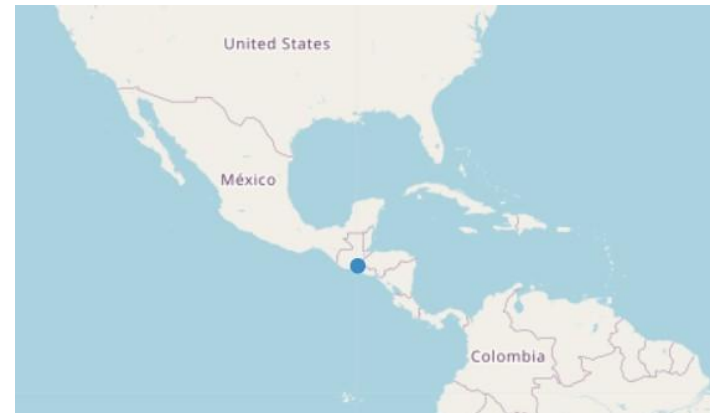


3.6. Syntactic/semantic conditioning

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

- (7) a. *uxti-ka'* 'your spouse's parents' (inalienable)
b. *ka-xuxi* 'your beard' (alienable)

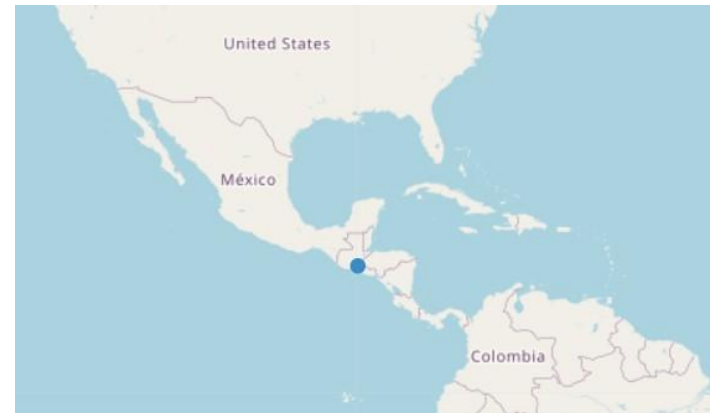
- (16) a. *mak'u-ka'* 'your house' (you earned it from personal effort)
b. *ka-maku* 'your house'



3.6. Syntactic/semantic conditioning

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3.6. Syntactic/semantic conditioning



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- To this class are tentatively assigned cases (attested e.g. in Coptic, Arawakan and Austronesian languages) where the position of person markers wrt verbal stem correlates with grammatical role (subject/agent vs. object/patient).

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- To this class are tentatively assigned cases (attested e.g. in Coptic, Arawakan and Austronesian languages) where the position of person markers wrt verbal stem correlates with grammatical role (subject/agent vs. object/patient).
- Such cases can be problematic from the point of view of Identity of Function.

3.6. Syntactic/semantic conditioning

Iñapari (Arawakan, Peru; Rogers 2021: 100, 107, 110):

- (9) a. *pi-niʔa-ma-ru* *tavari* transitive
 2SG.S-eat-DEF-3SG.F.O chicken
 ‘You definitely ate the hen.’
- b. *ru-niʔa-ma-na* *tavari*
 3SG.F.S-eat-DEF-3PL.O chicken
 ‘She definitely ate the chickens.’



3.6. Syntactic/semantic conditioning

Iñapari (Arawakan, Peru; Rogers 2021: 100, 107, 110):

- (10) a. *n-apaatahe-ma* *nohá* unergative
1SG-yawn-NFUT.DEF 1SG
'I am yawning.'
- b. *nati-ma-no* unaccusative
be.hungry-NFUT.DEF-1SG
'I am hungry.'

4.7. Free variation?

- In some cases the prefixal vs. suffixal positions appear to be in free variation.
- Such cases seem to be so far very rare and always limited in their distribution.

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- (10) 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
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Roadmap

1. Defining ambifixes
2. Database
3. Conditions on ambifixation
4. Summary and outlook

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 - Is there any correlation with other characteristics of morphology (e.g., prefixing, absence of fusion, affix invariance, etc.)?

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4. Summary and outlook

- Ambifixation can involve both single affixes and, even more frequently, whole sets of affixes.
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4. Summary and outlook

- 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.
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Thank-you for your-attention!



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Appendix 1

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.).

NB my understanding of the clitic vs. affix distinction is **not** coextensive with the one proposed by Haspelmath 2023 or Zingler 2022.

Appendix 1

Balkan Slavic, 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.**”

Appendix 1

Standard Bulgarian: bound pronominals are verb-adjacent, but their position wrt the verb is determined by the latter's position in the clause:

- postposed if the verb is clause-initial (Tobler-Mussafia law);
- preposed otherwise.

1. Defining ambifixes

Standard Bulgarian: bound pronominals are verb-adjacent, but their position wrt the verb is determined by the latter's position in the clause:

- (2) a. *Včera Vera mi=go=dade.*
yesterday Vera 1SG.DAT=3SG.ACC=give.AOR.3SG
'Vera gave it to me yesterday.' (Alexander 1994: 3)
- b. *Dade=mi=go včera Vera.*
give.AOR.3SG=1SG.DAT=3SG.ACC yesterday Vera
'It was Vera who gave it to me yesterday.' (ibid.)
- c. **Vera=mi=go včera dade.*
- d. **mi=go=dade včera Vera.*

Position determined (in part) by the sentence-level syntax,
hence clitics

1. Defining ambifixes

Macedonian: bound pronominals are verb-adjacent, and their position vrt the verb is determined by the latter's inflectional form:

- preposition with indicative forms;
- postposition with imperative and non-finite forms

1. Defining ambifixes

Macedonian: bound pronominals are verb-adjacent, and their position wrt the verb is determined by the latter's inflectional form:

- (3) a. *Mi-go-dade* včera Vera.
1SG.IO-3SG.DO-give.AOR.3SG yesterday Vera
'Vera gave it to me yesterday.' (Alexander 1994: 3)
- 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!*

Position determined entirely by the properties of the verb itself,
hence not clitics but ambifixes

1. Defining ambifixes

- 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).

Appendix 2

- Ambifixation patterns differ along many parameters:
 - a single affix vs. a whole paradigm of affixes
 - a single affix vs. a string of affixes
 - function(s) of the affix(es)
 - word class(es) in which the pattern is observed
 - conditioning factor(s) determining the choice of orientation
 - etc

Appendix 2

- Paradigmatically, a single ambifix or a whole class of affixes with ambifixal behaviour:
 - class: 123 cases
 - single: 35 cases
 - unclear: 4 cases
- Ambifixation tends to involve whole paradigms of affixes, which is related to the functions most frequently expressed by ambifixes (see below).

Appendix 2

- Syntagmatically, a single ambifix in a wordform, or a string of several affixes with ambifixal behaviour (like in Macedonian):
 - single: 140 cases
 - string: 18 cases, many of them in Europe
 - unclear: 4 cases

Appendix 2

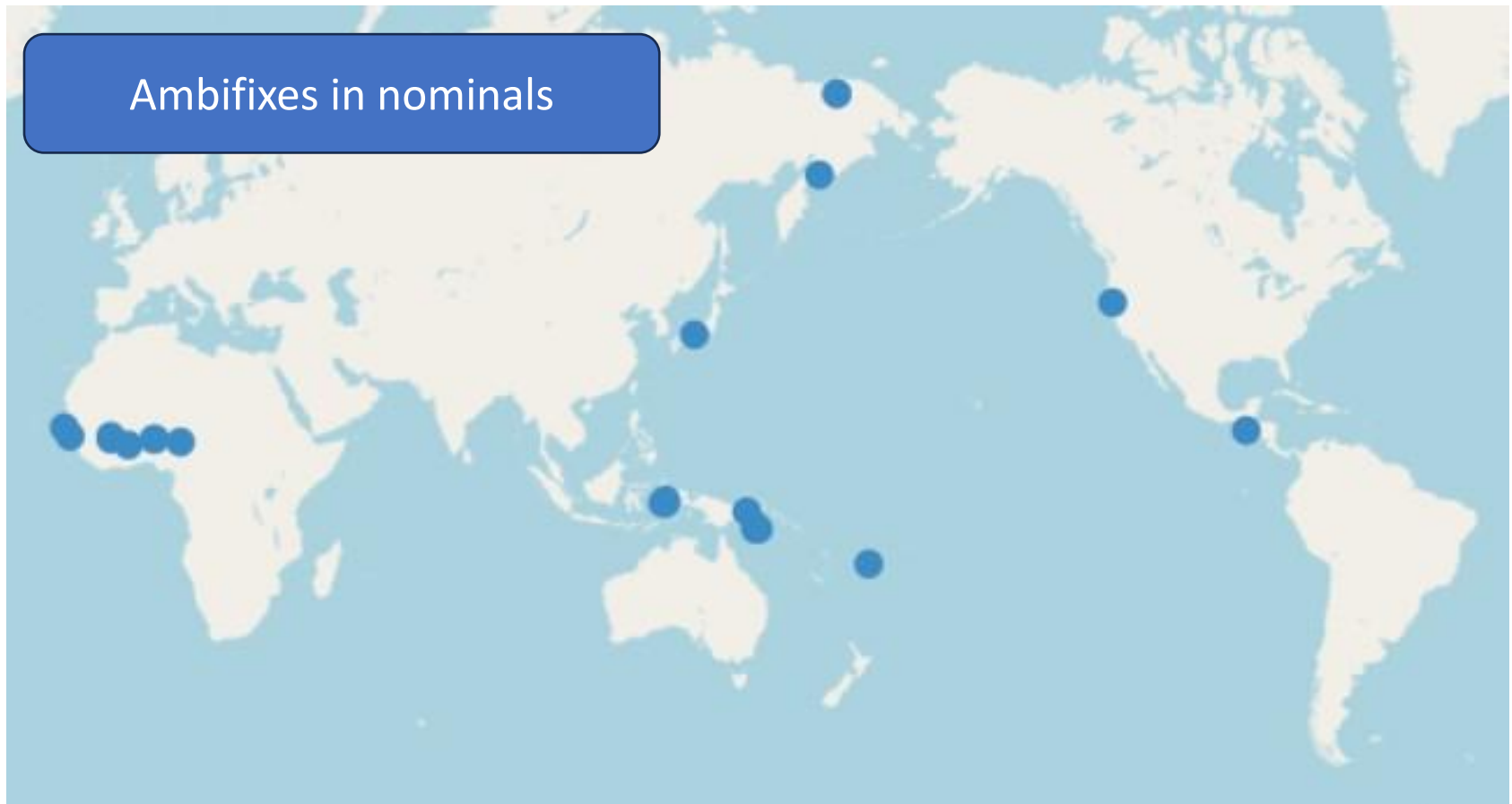


Map created with Lingtypology, Moroz (2017)

Appendix 2

- Part-of-speech domains of ambifixation:
 - nominals: 22 cases
 - verbs: 92 cases
 - both (transcategorical): 48 cases
- That ambifixation tends to involve verbs is unsurprising, since verbal morphology is usually more complex than nominal one.
- Ambifixation in nominals is mainly attested in Atlantic-Congo and Austronesian families and overwhelmingly involves gender or possession marking.

Appendix 2



Map created with Lingtypology, Moroz (2017)

Appendix 2

- Common functional domains:

person marking 87 cases

gender marking 27 cases

TAM 11 cases

negation 8 cases

relational markers 7 cases

other (including patterns involving markers from more than one domain) 22 cases

Person marking is known to be prone to formal mismatches of various kinds (e.g. Zingler 2023)

Appendix 2

- Common functional domains:

person marking 87 cases

gender marking 27 cases

TAM 11 cases

negation 8 cases

relational markers 7 cases

other (including patterns involving markers from more than one domain) 22 cases



Atlantic-Congo and
Nakh-Daghestanian

Appendix 2

- Common functional domains:

person marking	87 cases
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gender marking	27 cases
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TAM	11 cases
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negation	8 cases
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other (including patterns involving markers from more than one domain)	22 cases
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Appendix 2

- Common functional domains:

person marking 87 cases

gender marking 27 cases

TAM 11 cases

negation 8 cases

relational markers 7 cases

other (including patterns involving markers from more than one domain) 22 cases

Possibly related to
negation being prone to
cyclic renewal

Appendix 2

- Common functional domains:

person marking	87 cases
gender marking	27 cases
TAM	11 cases
negation	8 cases
relational markers	7 cases

other (including patterns involving markers from more than one domain) 22 cases

All involve transcategorical morphemes, e.g. nominal case and verbal applicatives

Appendix 2

- Common functional domains:

person marking	87 cases
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gender marking	27 cases
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TAM	11 cases
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negation	8 cases
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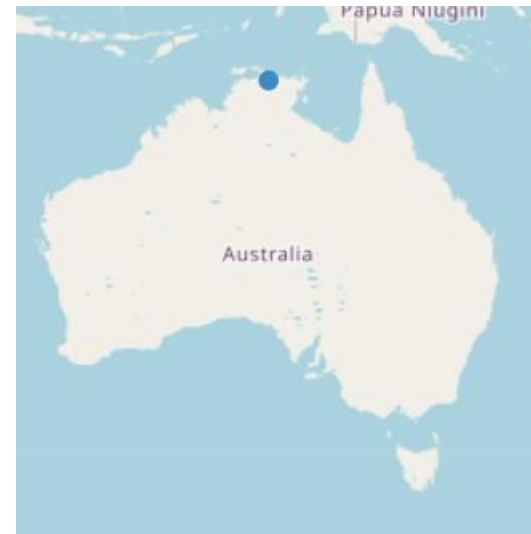
Appendix 2

Bininj Gun-wok (Gunwinyguan, Australia; Evans 2003: 139-141, 432-437) instrumental-comitative marker: case suffix with nominals, applicative prefix with verbs

(4)a. *Balloon barri-dukga-ng gun-yarl-yi gu-dulk-gah.*
balloon 3PL>3-tie-PST.PFV CL-string-INS LOC-stick-LOC
'They tied the balloon onto the stick with a string.' (139)

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

CL – classifier, INS – instrumental, LOC – locative,
PFV – perfective, PST – past



Appendix 2

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Such cases, often arising through polygrammaticalisation (Craig 1991), can be problematic from the point of view of Identity of Function

