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Towards a typology of ambifixes

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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. Setting the scene
2. Database
3. Typological overview
4. Conditions on ambifixation
5. Summary and outlook

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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*
NEG-PVB-RFL-be_interested-PST.1SG
'I did not show interest.'

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(1) a. *maudži-au-si* suffix
wash.PST-1SG-RFL
'I washed myself.'

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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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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 2022 or Zingler 2022.

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Balkan Slavic, cf. Aronson (1997: 33, 36):

- “the distribution of object clitics in Bulgarian is to a great extent syntactically determined”
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(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
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c. **Vera=mi=go včera dade.*

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

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- preposition with indicative forms;
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(3) a. *Mi-go-dade* *včera* *Vera*.
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'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*.

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

1. Setting the scene

- 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. Setting the scene

Ambifix vs. unrelated prefix and suffix:

- 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.

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☞ Not always clear-cut, borderline cases exist and must be taken into consideration.

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- 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);
  - In typology they have not been discussed at all (e.g. not mentioned in Bickel & Nichols 2007: 198–201; Haspelmath & Sims 2010; nor recognised in WALS or Grambank).

1. Setting the scene

- 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 August 2026) A phenomenon-based sample of 162 instances of ambifixation from 142 languages (50 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	43	24	10
Africa	29	20	7
Oceania	37	22	12
Australia	2	2	2
North America	11	10	9
South America	18	15	12

2. Database

Map created with Lingtypology, Moroz (2017)

2. Database

Some better-represented families:

- Atlantic-Congo: 17 languages
- Austronesian: 16 languages
- Indo-European: 14 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

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

- 2 (Fula, Tabasaran): 3 cases
- 15 (Abaza, Agul, Alabama, Alune, Chimariko, Chukchi, Crow, French, Guazacapán, Máku, Maleu, Paulohi, Paunaka, Southern Kiwai, Tsugni Dargwa, Ut-Ma'in): 2 cases

2. Database

- Caution: Work in progress
- Both coverage and analysis will be improved and revised

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3. Typological overview

- Ambifixation patterns differ along many parameters:
  - a single affix vs. a whole paradigm of affixes
  - a single affix vs. a string of affixes
  - functions of the affix(es)
  - word class(es) in which the pattern is observed
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  - etc

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3. Typological 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).

3. Typological overview

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

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

	prefixes	suffixes
masculine singular	*n-*	*-n, -na*
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plural	*w-, Ø-*	*-ei, -i, -m*

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  single: 112 cases

  string: 11 cases, most of them in Europe

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  string: 18 cases, many of them in Europe

  unclear: 4 cases

3. Typological overview

Map created with Lingtypology, Moroz (2017)

3. Typological overview

- 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.

3. Typological overview

- Part-of-speech domains of ambifixation:
  - nominals: 22 cases
  - verbs: 92 cases
  - both (transcategorial): 48 cases
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  - verbs: 92 cases
  - both (transcategorial): 48 cases
- That ambifixation tends to involve verbs is unsurprising, since verbal morphology is usually more complex than nominal one.
- Ambifixation in nominals it attested almost exclusively in Atlantic-Congo and Austronesian families.

3. Typological overview

- Part-of-speech domains of ambifixation:

  nominals: 22 cases

  verbs: 92 cases

  both (transcategorial): 48 cases

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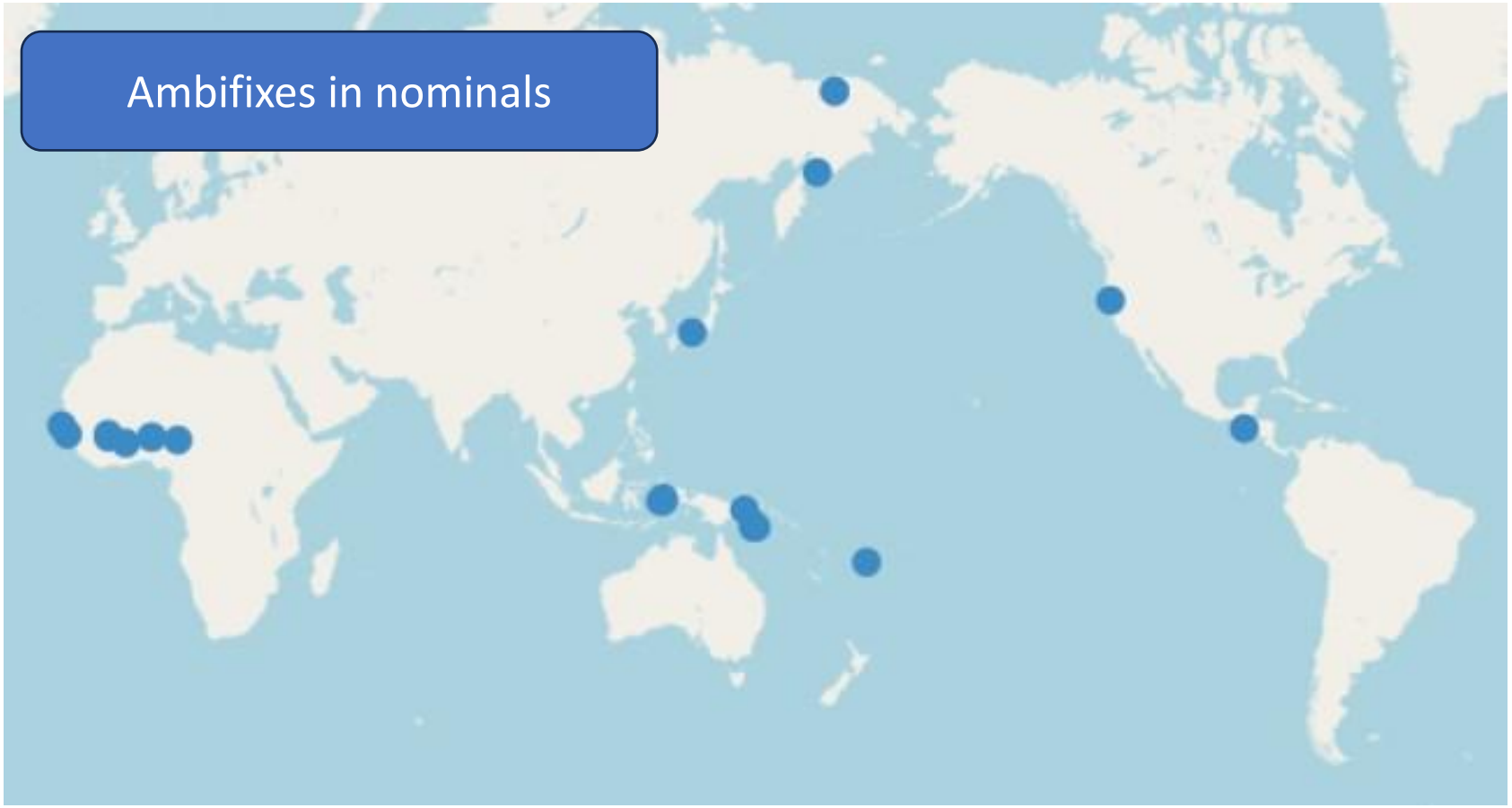
- Ambifixation in nominals is mainly attested in Atlantic-Congo and Austronesian families and overwhelmingly involves gender or possession marking.

3. Typological overview



Map created with Lingtypology, Moroz (2017)

3. Typological overview

- Common functional domains:

person marking	59 cases
gender marking	19 cases
relational markers	10 cases
TAM	9 cases
negation	8 cases
other	18 cases

3. Typological overview

- Common functional domains:

person marking	87 cases
gender marking	27 cases
TAM	11 cases
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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)

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Atlantic-Congo and Nakh-Daghestanian

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Possibly related to negation being prone to cyclic renewal

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

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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

(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)

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

Roadmap

1. Setting the scene
2. Database
3. Typological overview
4. Conditions on ambifixation
5. Summary and outlook

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4. Conditions on ambifixation

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

4. Conditions on ambifixation

Preliminary figures on types on conditioning:

- phonological 10 cases
- morphotactic 6 cases (+ 4 mixed ones)
- paradigmatic 31 cases (+ 15 mixed ones)
- part of speech 19 cases (+ 29 mixed ones)
- lexical 38 cases (+ 18 mixed ones)
- syntactic/semantic 9 cases (+ 11 mixed ones)
- free variation 2 cases (both mixed)

4.1. Phonological conditioning

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)

4.1. 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)

4.1. Phonological conditioning

Map created with Lingtypology, Moroz (2017)

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(5) a. *bam-**ngintha**-ngkardu*
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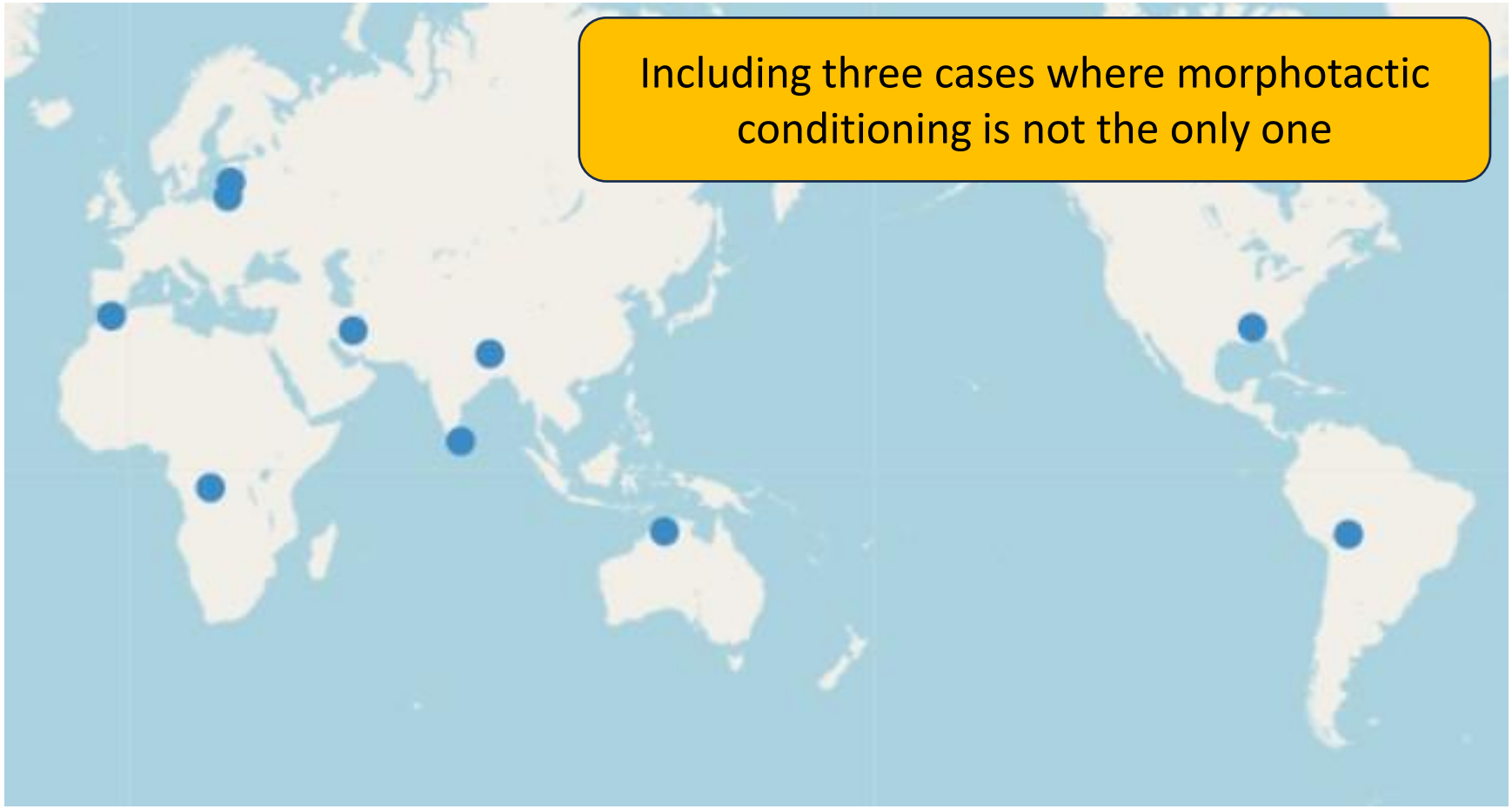

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4.2. Morphotactic conditioning

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

4.3. 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.
- Tends to involve person marking and negation.
- NB most so-called “pronominal clitics” of Romance and Balkan languages (see Macedonian above) belong to this class.

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- stative verbs: suffix in all forms;
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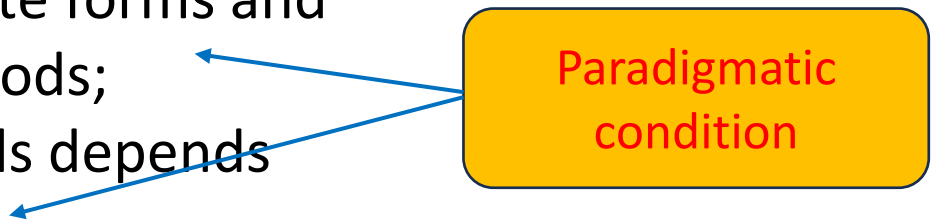

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Abkhaz negation (Chirikba 2003: 44-45, *-ga-* ‘take’, 3Pl>3Sg):

	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*

4.3. Paradigmatic conditioning

Inflectional features determining the position of ambifixes vary considerably:

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

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The orientation of the affix depends on the word class of its host.

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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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'The dogs are barking.' verb

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4.4. 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)

4.4. 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).

4.5. Lexical conditioning

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

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

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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 4.3.
- Depends on point of view.

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- Possibly, but still they look different from the cases discussed in 4.3.
- Partly depends on the basic assumptions and definitions.

4.6. 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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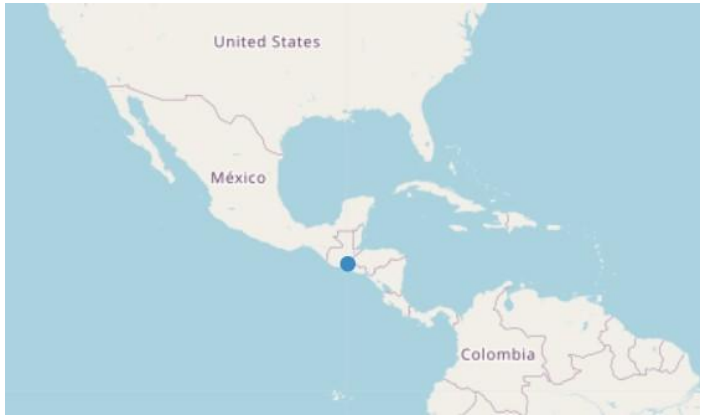
Cf. Auger 1994, Bonami & Boyé 2007, Culbertson 2010 on affixal status.

4.6. Syntactic/semantic conditioning

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

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



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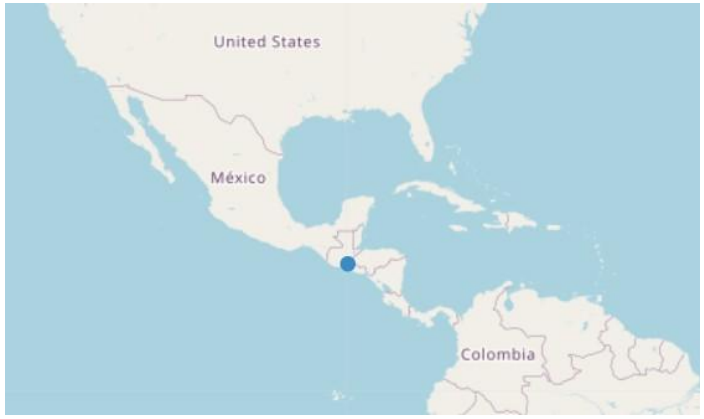

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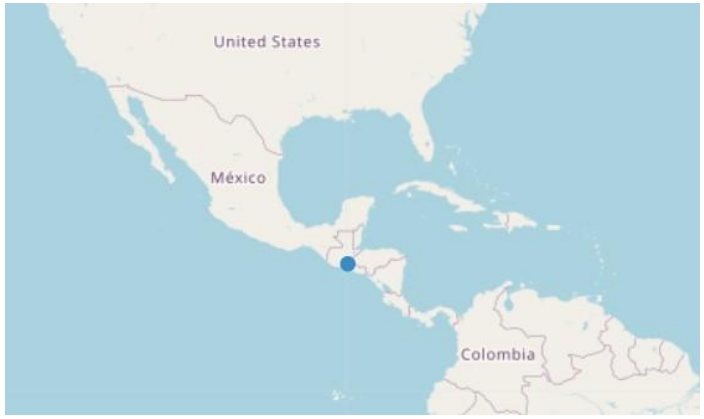

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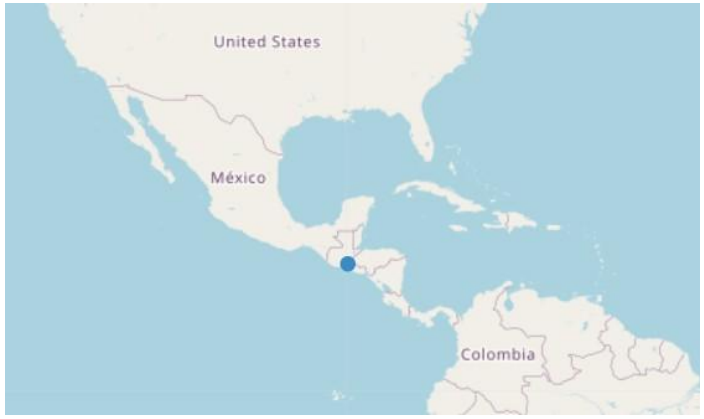

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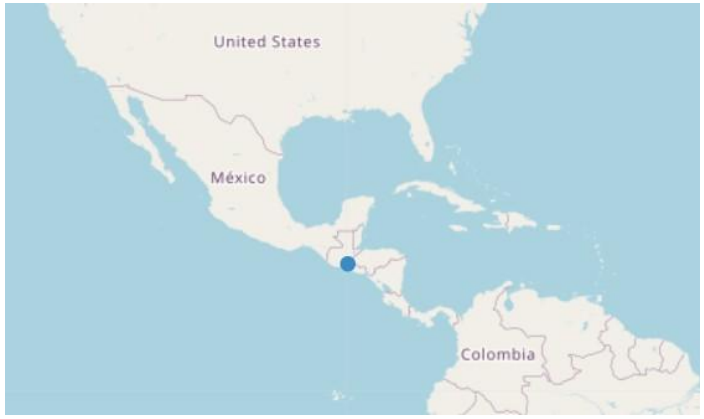
Guazacapán (Xincan; Rogers 2010: 178, 182, 185)

(8) 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’



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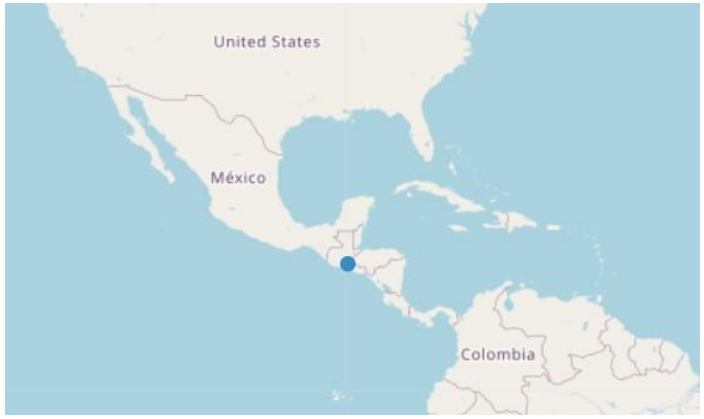

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Map created with Lingtypology, Moroz (2017)

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4.7. 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:

(10) a. *yagua* *bia-ño-ke* *yukia*
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'The man killed the jaguar.'

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4. Conditions on ambifixation

It is remarkable that orientation of an affix with respect to the root can depend on such a wide range of factors (even in the same language).

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5. 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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