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Case in head-marking languages: towards a comprehensive typology

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Roadmap

- Disclaimer
- What it is all about
- Database and sample
- Some quantitative observations
- The typology
- Summary and outlook

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  - My FRIAS scholarship allowed me to finally resume this work and I plan to make some progress, both empirical and conceptual.
  - Your comments and advice will be most welcome!

What it is all about

- Dependent-marking (flagging, DM) is morphological marking of participants expressed by nominals for the grammatical and/or semantic role they play in the sentence.
- Head-marking (indexing, HM) is morphological indexation on the predicate of such properties of participants as person, number and gender, as well as their grammatical and/or semantic role.

Nichols 1986, 1992, Lander & Nichols 2020, Haspelmath 2013, 2019

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- They serve as typologically-grounded extensions of such notions as “case-marking” and “verbal agreement” or “cross-referencing”, respectively.
- Both are grammatical mechanisms central for the encoding of syntactic and semantic relations in many languages of the world.

What it is all about

- Dependent-marking (flagging)

(1) Japanese (Altaic; constructed)

shōjo-ga	*shōnen-o*	*mi-ta*
girl-NOM	boy-ACC	see-PST

‘The girl saw the boy.’

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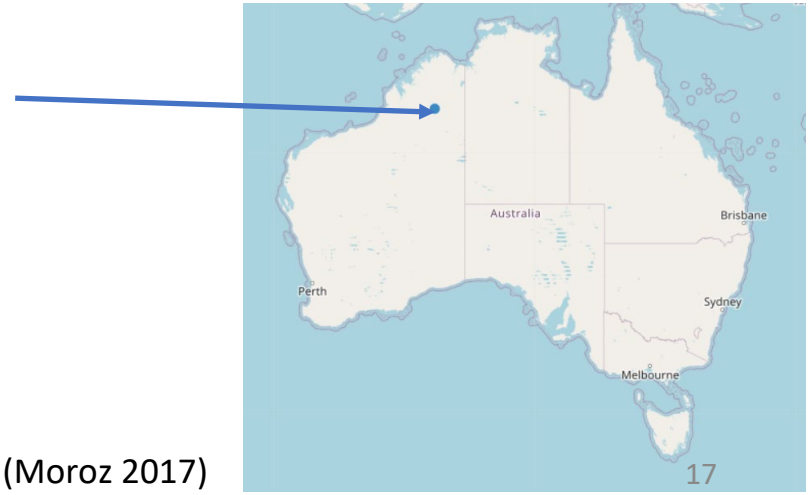
(3) Gooniyandi (Bunaban, Australia; McGregor 1990: 322)

nganyi-ngga *mawoolyi-yoo* *mila-limi-widdangi*

1SG-ERG children-LOC see-1SG.SBJ-3PL.OBJ

'I glanced at the children.'



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- E.g. Kibrik (2012: 213): “the head-marking technique of role-marking is functionally equivalent to nominal cases”.

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  - inverse preferences of HM and DM with respect to core vs. peripheral semantic roles (Nichols 1986);
  - double-marking for agents, patients and recipients (Bakker & Siewierska 2009, qualified in Arkadiev 2013, 2016);
  - some rather bold claims within the generative framework, e.g. “NPs do not have grammatical Case in any polysynthetic language” (Baker 1996: 132) or “There is no true ergative agreement” (Woolford 2006: 304).

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  - To what extent and under which conditions do HM and DM match each other or function independently?
  - What (if anything) motivates rare patterns of interactions between HM and DM attested in individual languages and language families or areas?

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  - to arrive at a comprehensive typology of the interactions of DM and HM, with attention to both cross-linguistically recurring and rare patterns;
  - to try to uncover functional, diachronic and areal motivations behind these patterns and their distribution.

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  - However, most grammatical theorizing so far has been based on the European languages, which are predominantly DM.
  - At the same time, a whole line of research within both functionalist (e.g. Van Valin 1985, 2013; Kibrik 2012) and formalist (e.g. Jelinek 1984; Jelinek & Demers 1994; Baker 1996) traditions has emphasized the sharp contrast between DM- and HM-languages, downplaying the fact that DM and HM often co-occur.

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  - Both types of bias have to be overcome in order for an empirically adequate typology and theory of grammatical relations to be possible (cf. e.g. Witzlack-Makarevich & Bickel 2019).

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  - available, readable, sufficiently detailed and realiable sources are crucial.

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  - not limited to verbal affixes: e.g. Wackernagel clitics are also included (“construction-marking”, Lander & Nichols 2020).

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  - all languages where any type of DM (including adpositions) is able to co-occur with HM, are included.

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  - distribution of HM and DM (complementarity vs. co-occurrence);
  - patterns of double-marking (e.g. which morphological cases allow simultaneous indexing);
  - presence of valency-changing mechanisms affecting HM and DM, in particular, applicatives.

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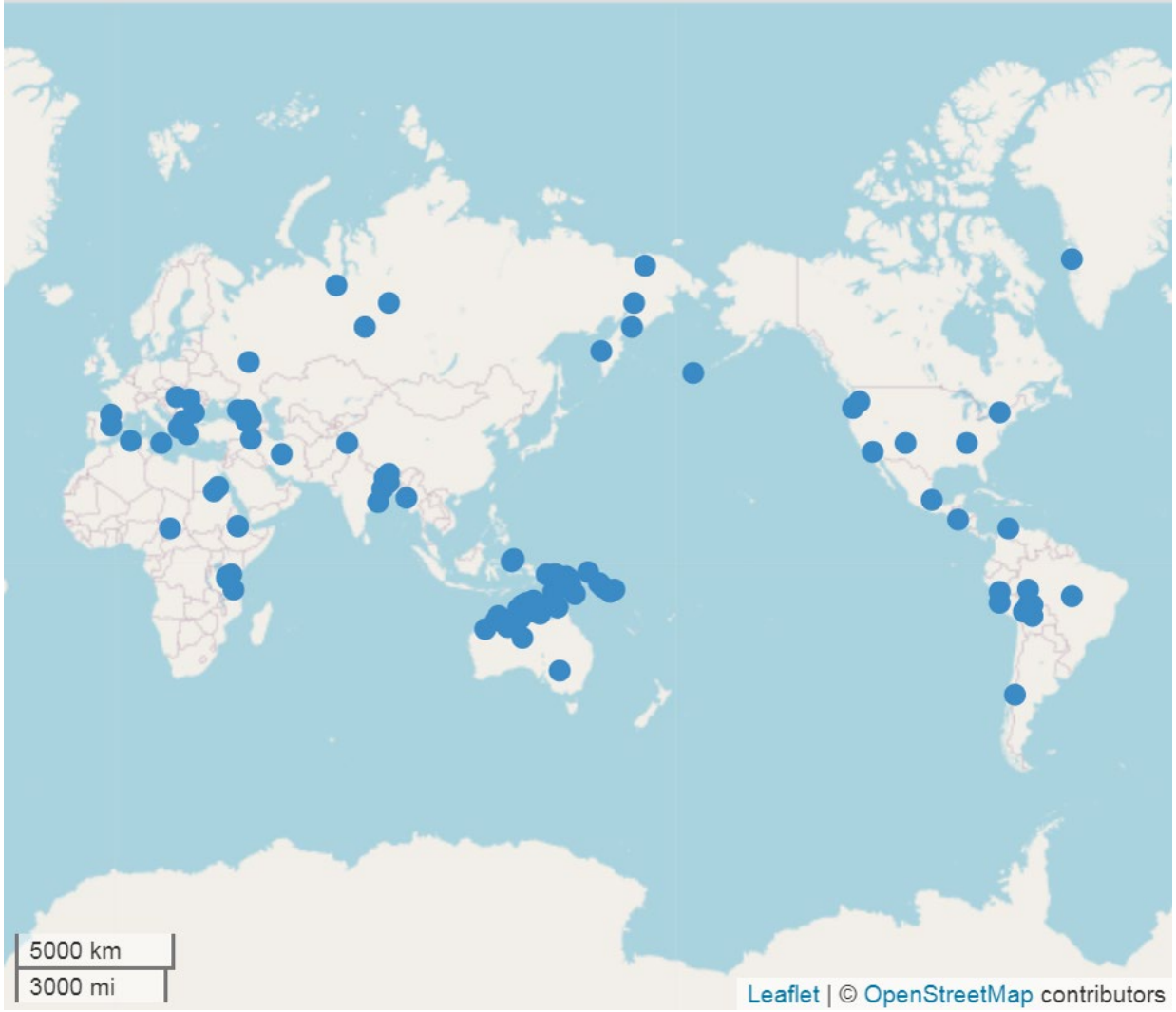
  - 190 entries, some of them just “placeholders”;
  - 132 entries after revision and cleaning last week, for which I think I have sufficient reliable information;
  - all macroareas, 51 family (83 genera) + 14 isolates.

Database and sample

Map created with Lingtypology (Moroz 2017)



Database and sample

Macroarea	No. languages	No. families (genera)
Africa	10	3 (7)
Eurasia	37	11 (22)
Australia	38	17 (27)
Oceania	26	16 (20)
North America	10	8 (10)
South America	11	11 (11)

NB Semitic (Afroasiatic) in both Africa and Eurasia

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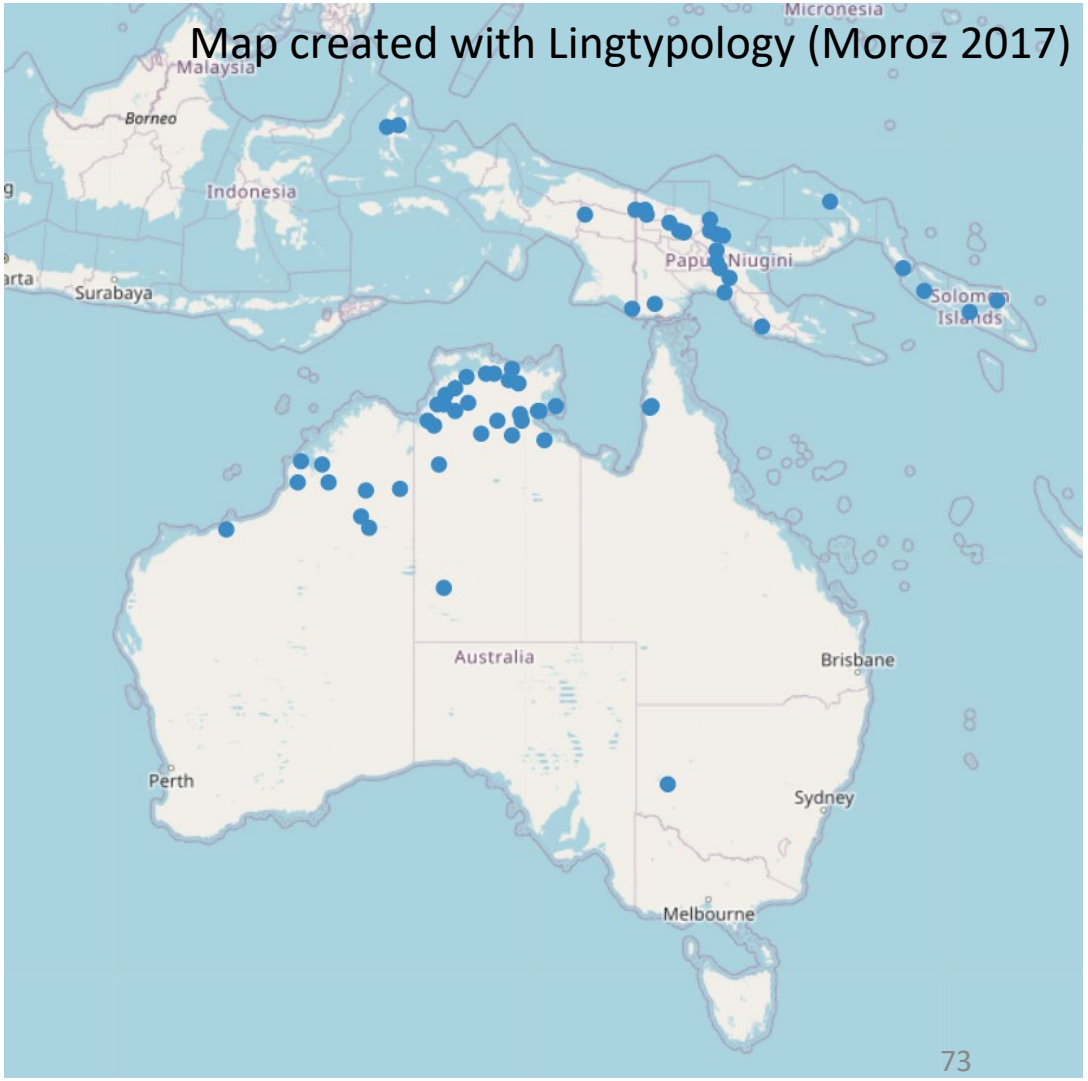
- Clear bias towards (Northern) Australia and Papua



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- Some better-represented language families:
  - Afroasiatic 9
  - Pama-Nyungan 9
  - Indo-European 8
  - Nuclear Trans-New-Guinean 7
  - Gunwinyguan 6
  - Kartvelian 5

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3-4	17	13	15	Nobiin
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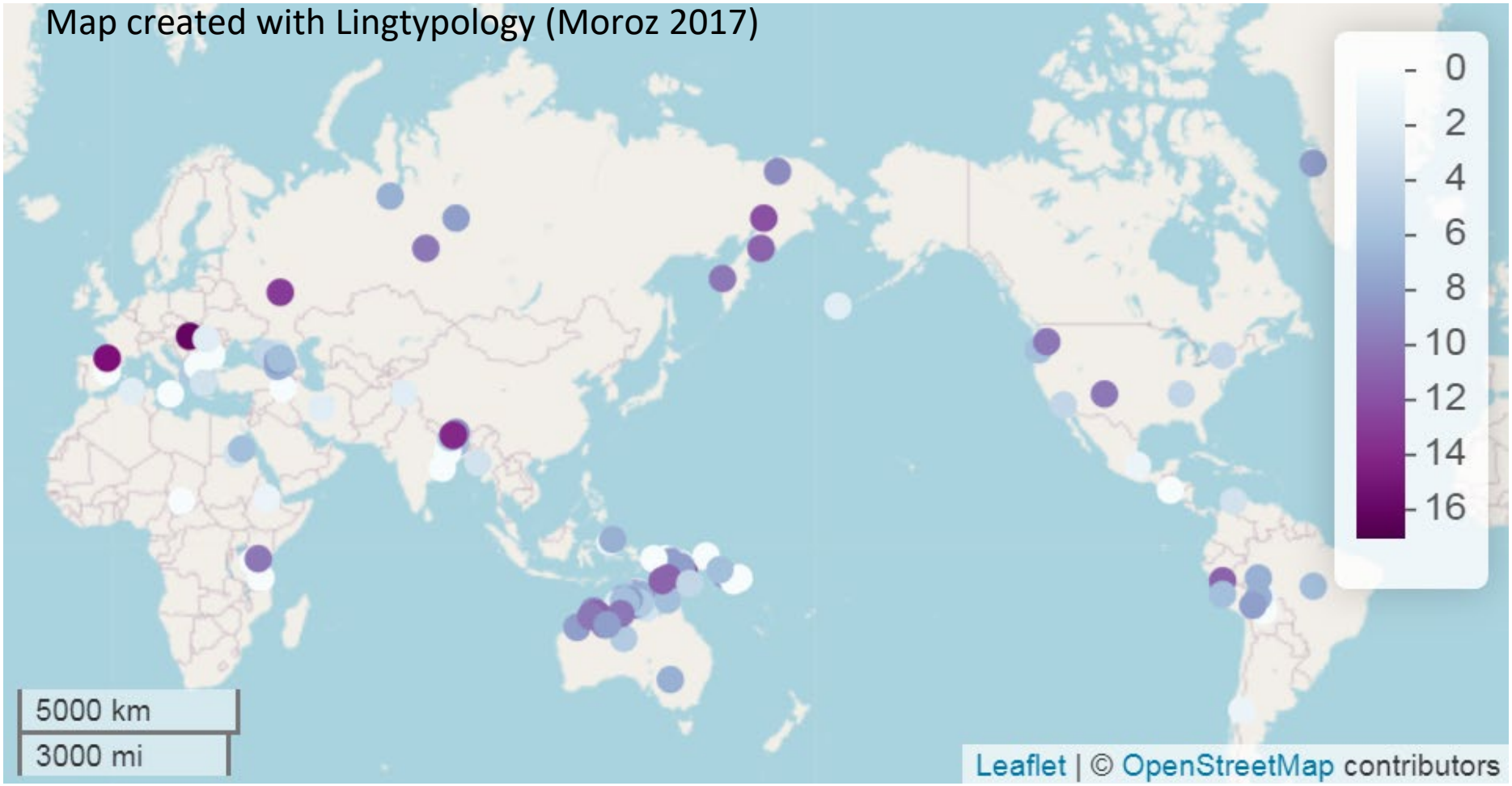

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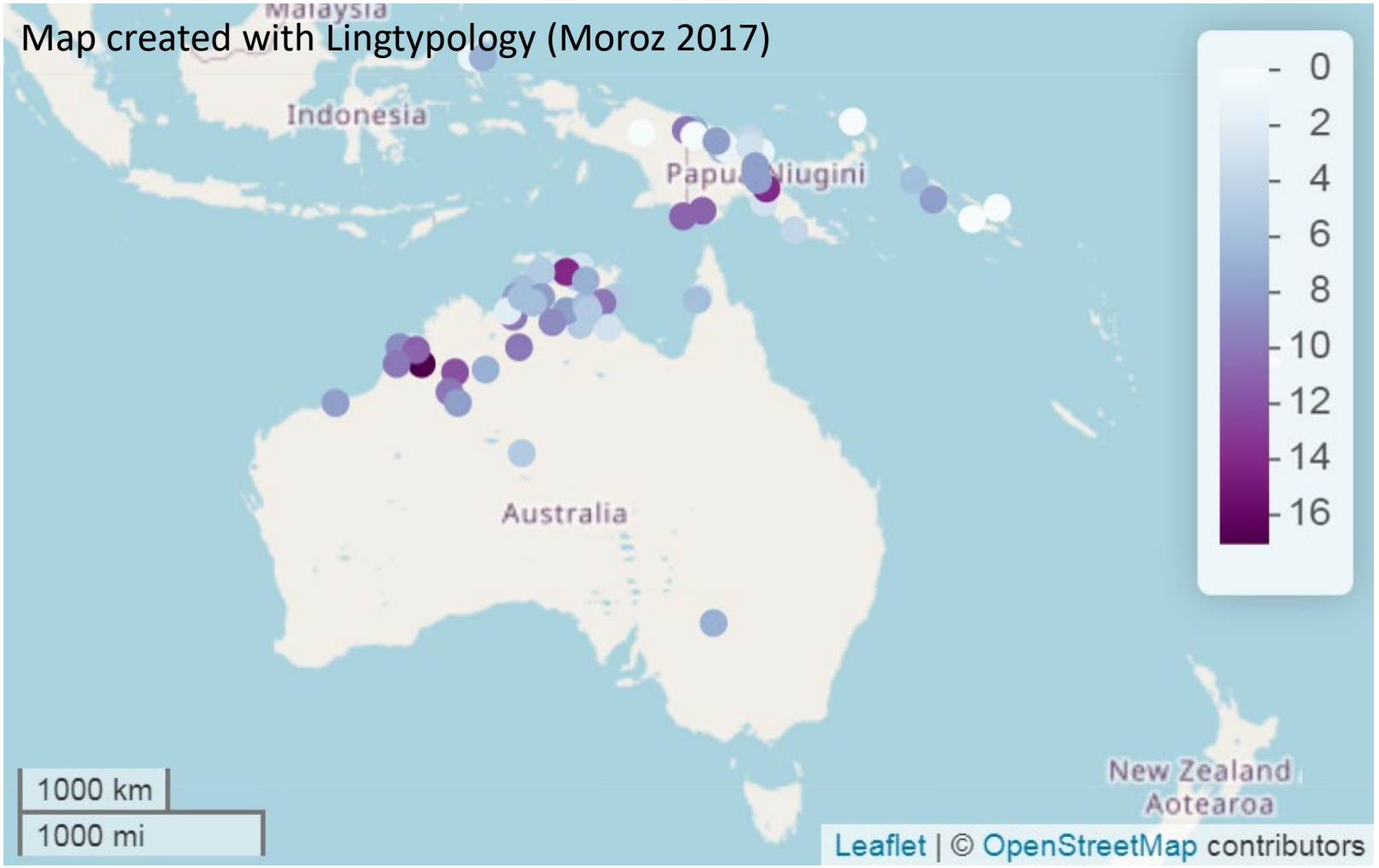

Some quantitative observations

- The world-wide data from WALS on number of cases (Iggesen 2013) combined with the data on verbal person marking (Siewierska 2013) is, unfortunately, not directly comparable due to diverging definitions of case.

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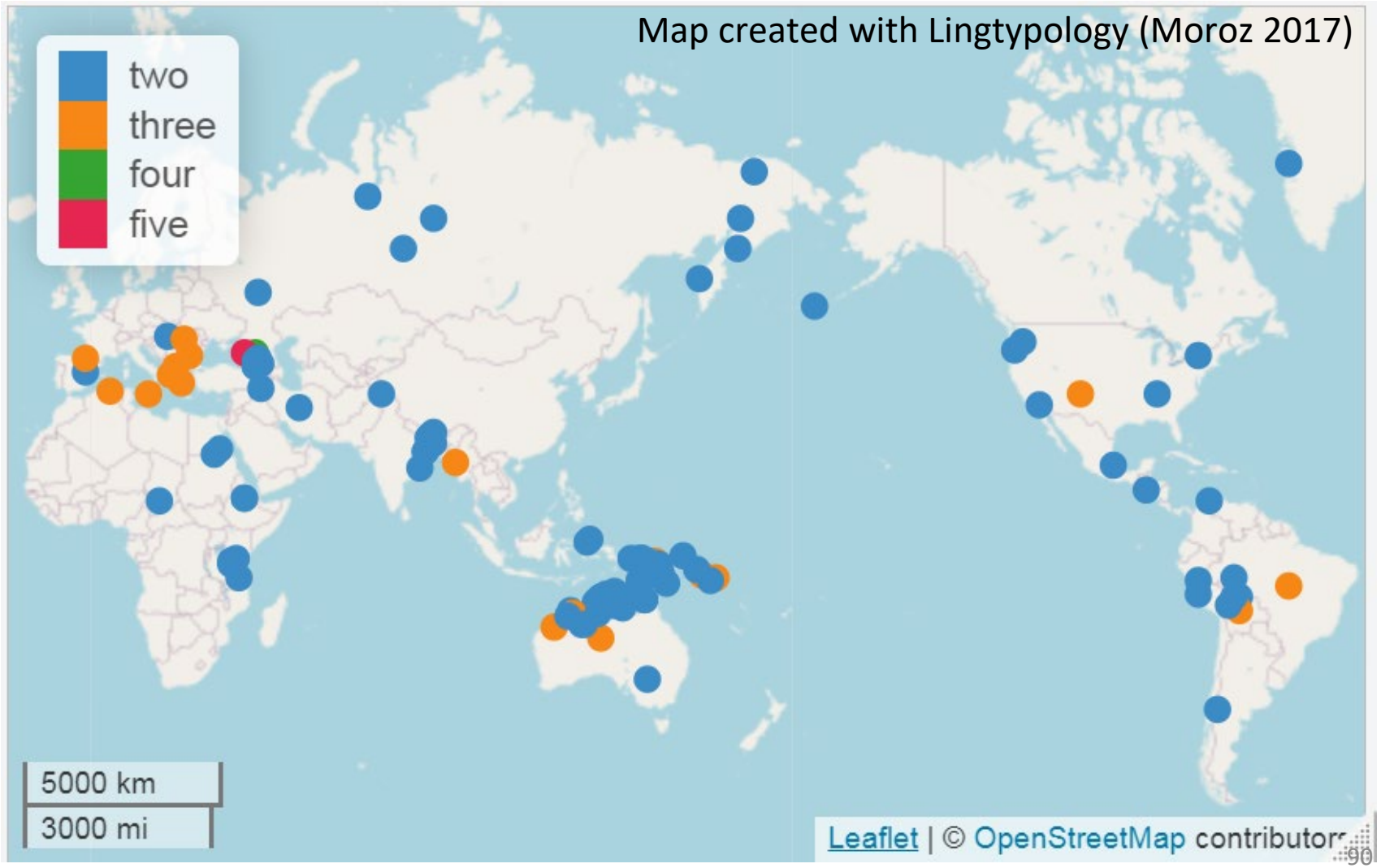
Number of indexed participants



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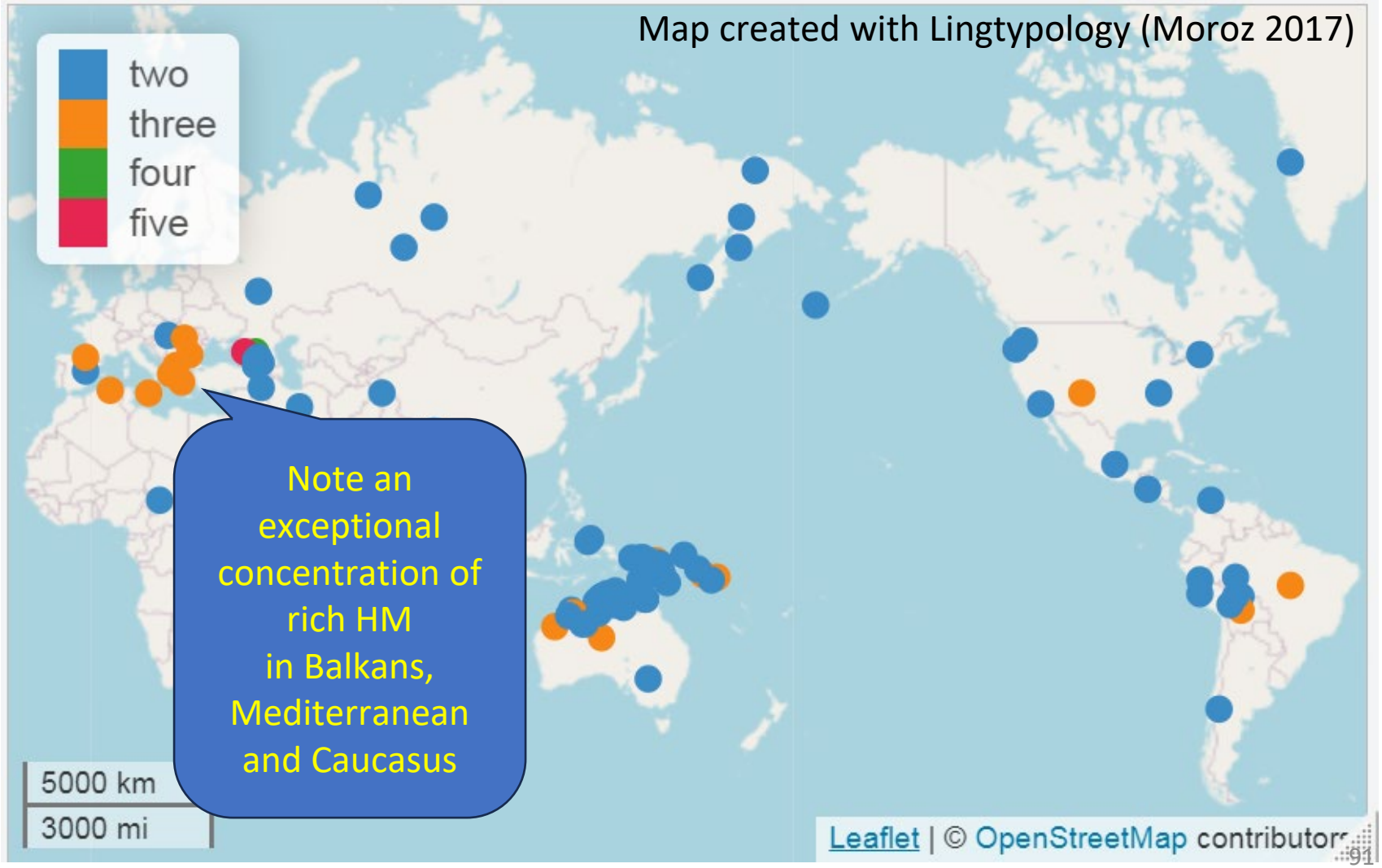

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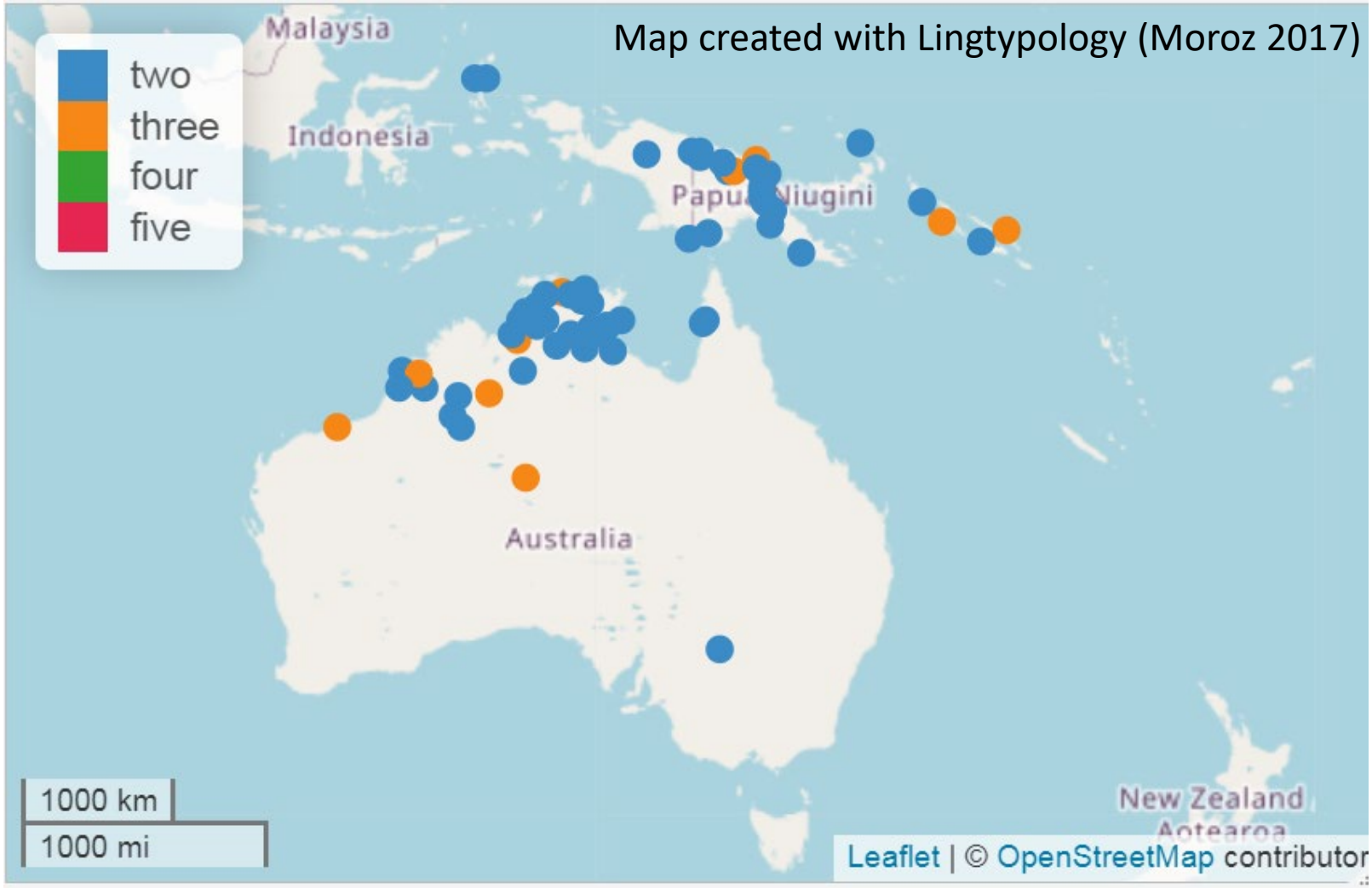

Some quantitative observations

- Monotransitive alignment (differential accusative/optional ergative marking merged with accusative resp. ergative):

type	languages	families	genera	example
neutral	41	31	35	Mapudungun
accusative	30	17	25	Amharic
marked-nominative	3	3	3	Kaki Ae
ergative	45	28	38	Chukchi
active	4	4	4	Nyigina
tripartite	4	3	3	Yakima
no dominant	5	3	5	Svan

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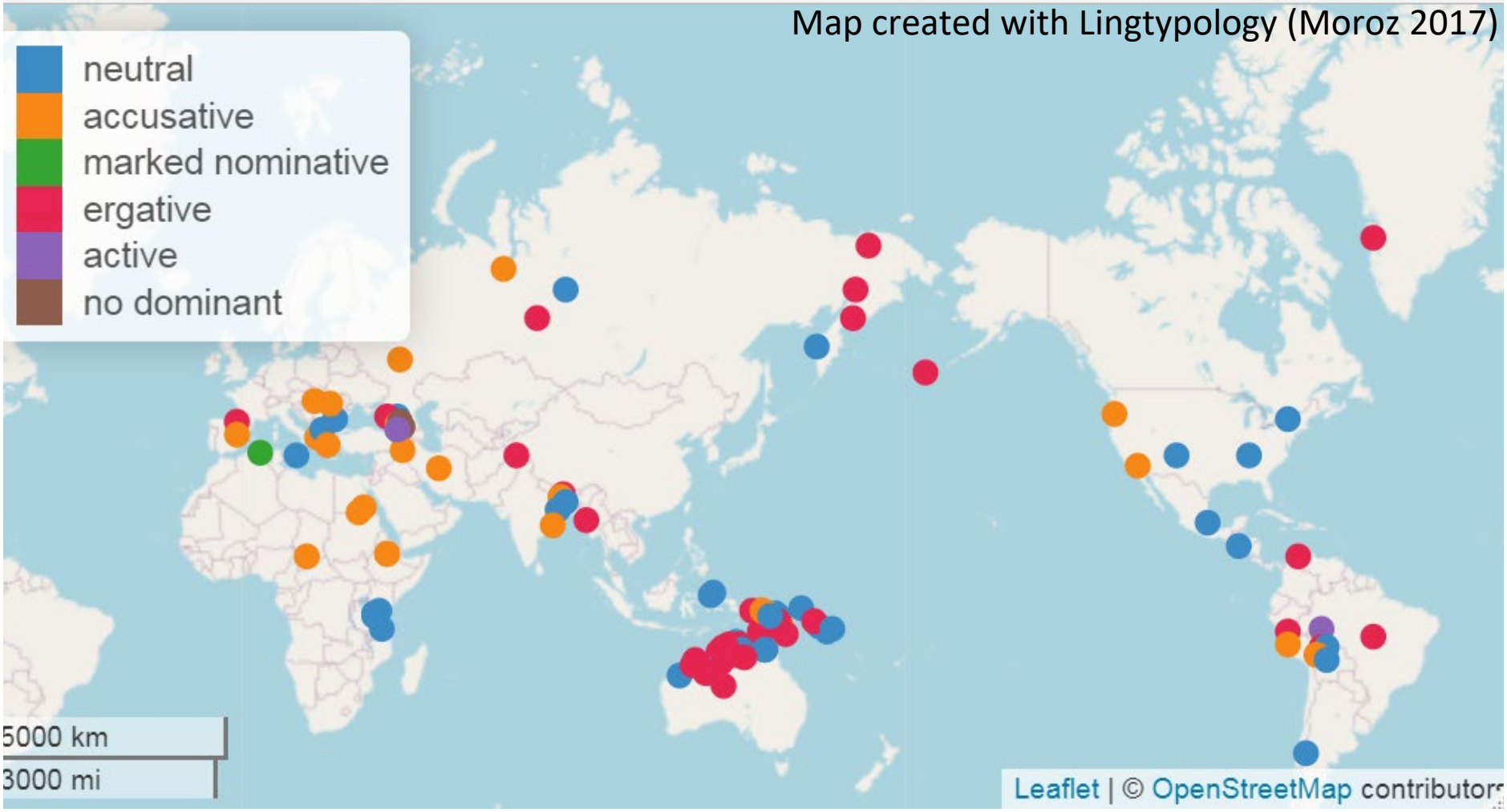
A notably high incidence of ergative alignment, even when stratified

Monotransitive alignment



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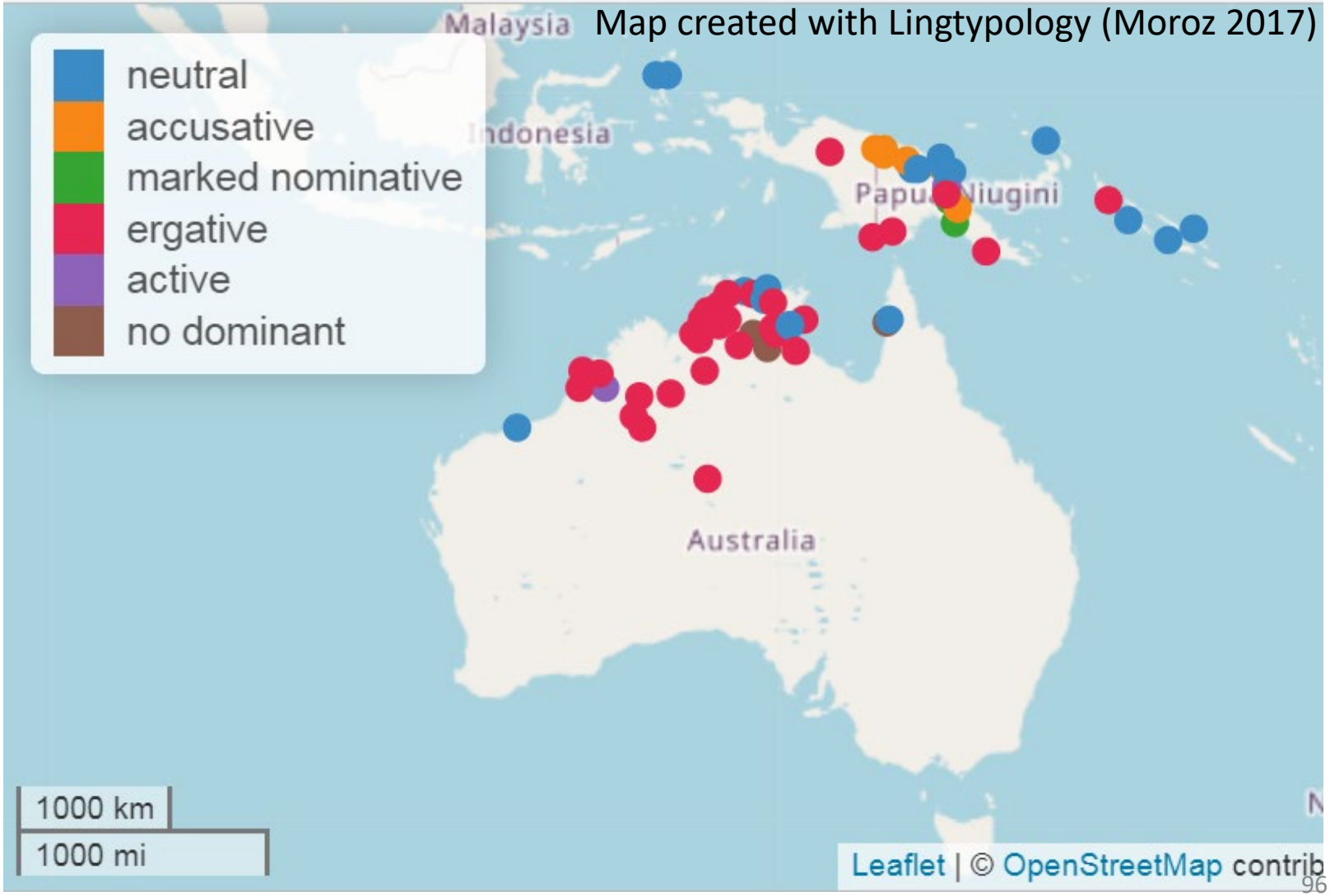

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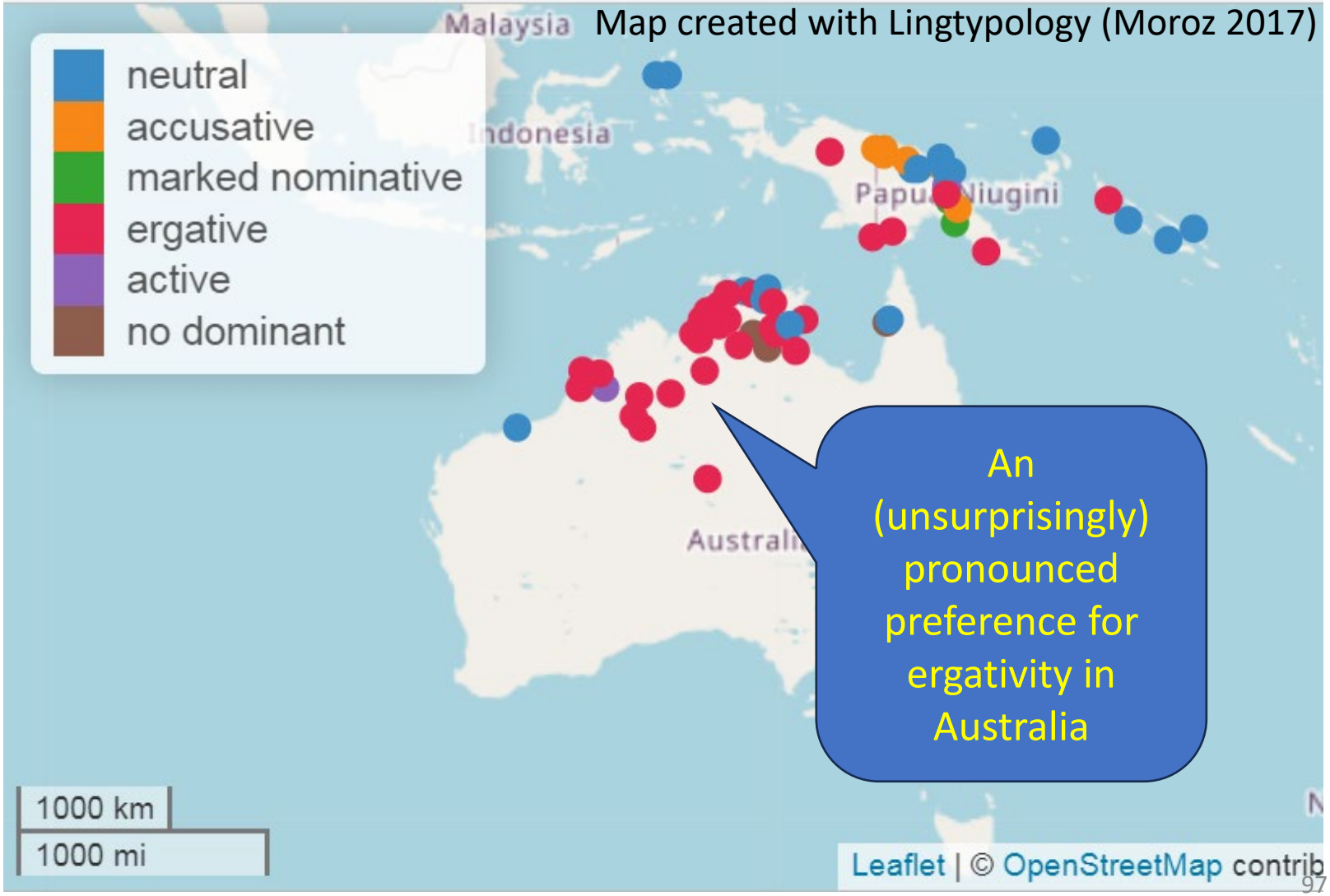

Some quantitative observations

- For comparison, the world-wide distribution of monotransitive alignments (WALS, Comrie 2013):

type	total lgs.	lgs. indexing both A and P
neutral	98	60
accusative	46	13
marked-nominative	6	4
ergative	32	17
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tripartite	4	1

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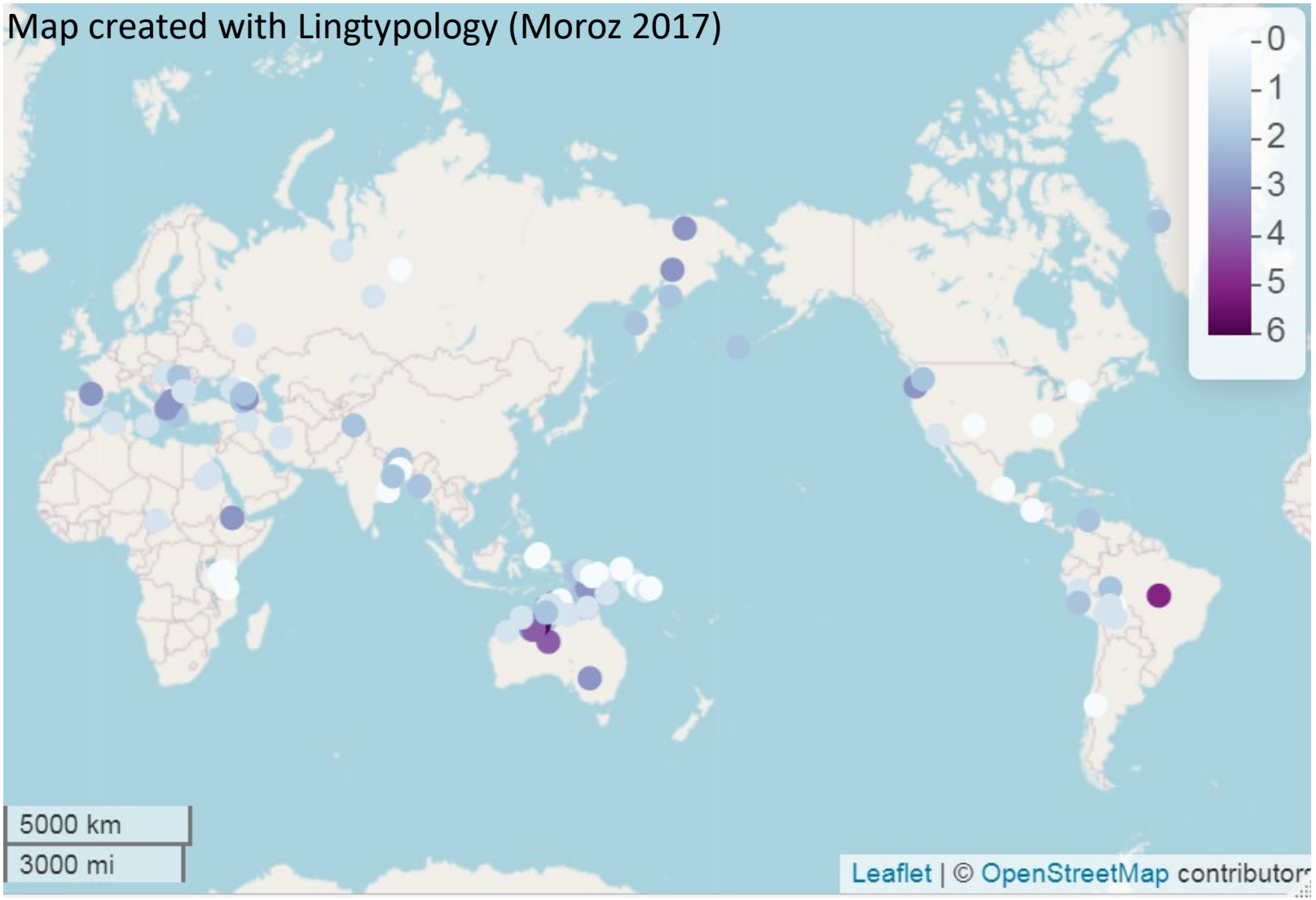
No statistically significant differences apart from a higher preference for neutral alignment at the expence of the accusative

Some quantitative observations

- Number of overt flagging-types that can be simultaneously indexed:

No.	languages	families	genera	example
0	30	22	25	Alamblak
1	45	28	39	Cahuilla
2	31	20	28	Maithili
3	18	11	15	Molalla
4	4	2	3	Pintupi
5	2	2	2	Panará
6	2	2	2	Djaru

Number of “indexed flags”



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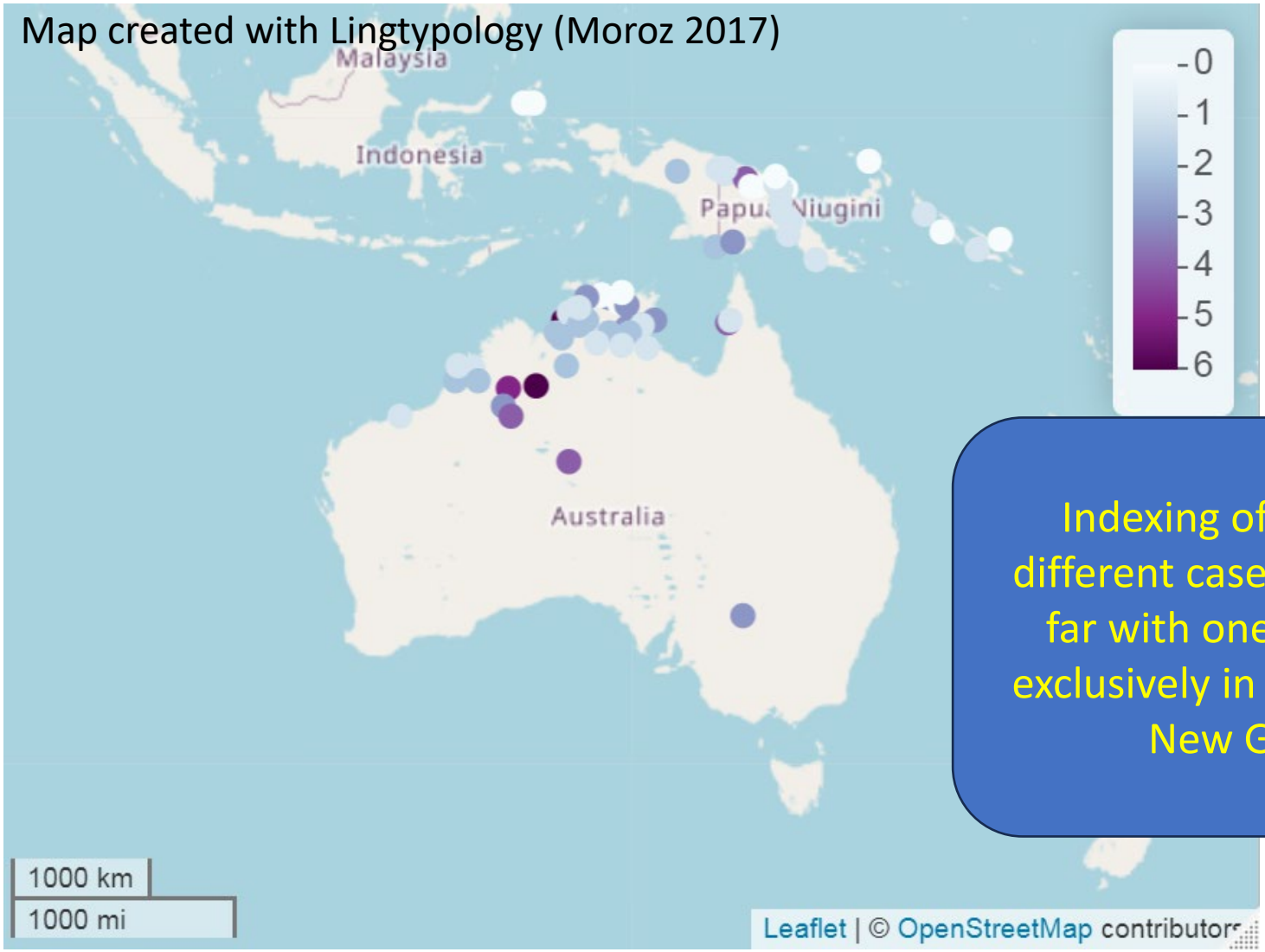

Indexing of 4 or more different cases is found (so far with one exception) exclusively in Australia and New Guinea

Some quantitative observations

- Which overt flagging-types are indexed
  (NB I count "cases", not semantic roles, but labels are – as far as possible – role-based):

flagging-type	languages	families	genera	example
ergative	52	26	40	Tauya
dative	41	18	28	Maltese
accusative	23	15	22	Moksha
spatial	20	13	16	Ungarinjin
objective	13	8	11	Georgian
nominative/ absolutive	10	6	7	Aleut
other	25	22	25	Pintupi

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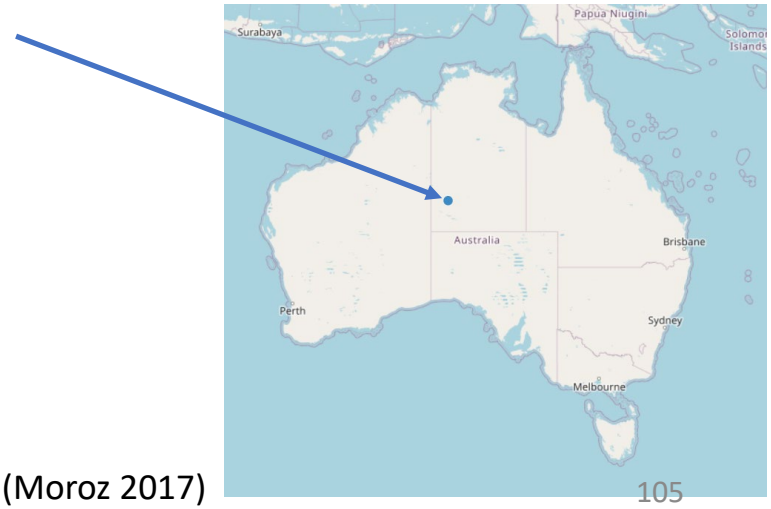
"Avoidance" case

Indexation of “weird” cases

- Pintupi (Pama-Nyungan > Desert Nyungic; Hansen & Hansen 1978: 61)

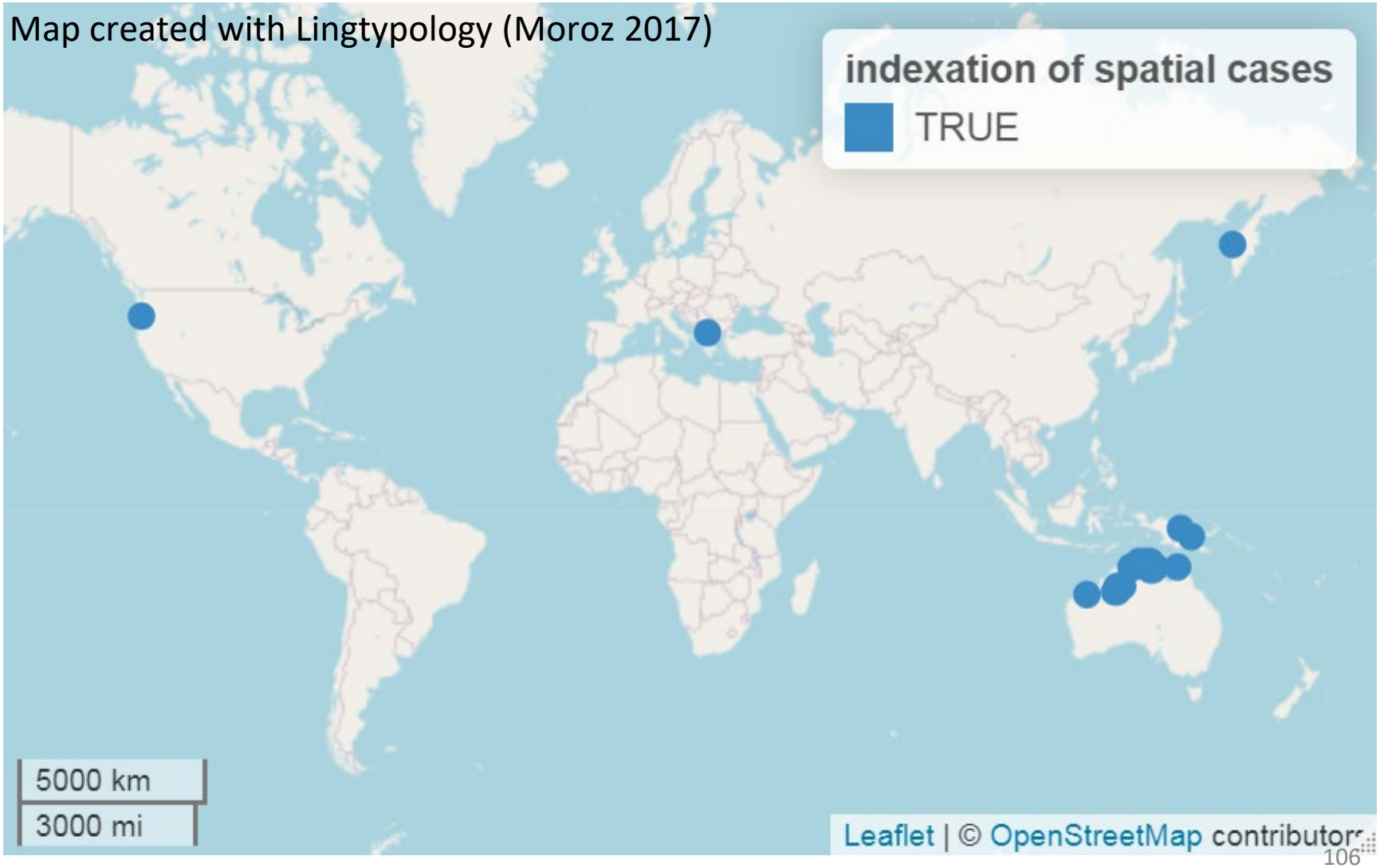
(5) *ma̲laku=latju-tjanampalura* *pitjangu*
return=1PL.EX.SBJ-3PL.AV went
ma̲lpu-ngkamarra *patjal-tjakumarra*
spirit-AV biting-AV
‘We turned back to avoid the spirits biting us.’

AV – avoidance, EX – exclusive



Map created with Lingtypology (Moroz 2017)

Indexation of spatial cases



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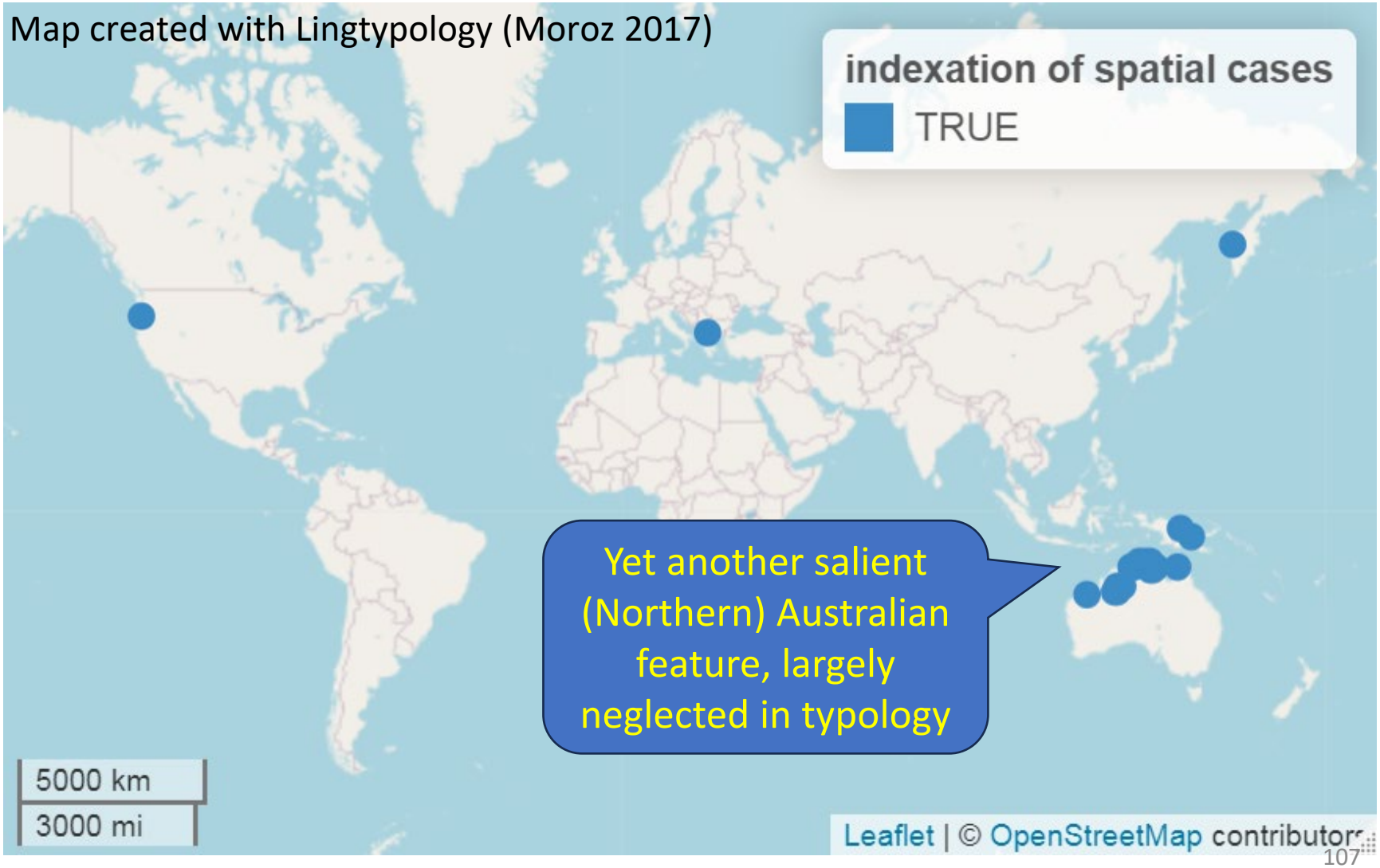

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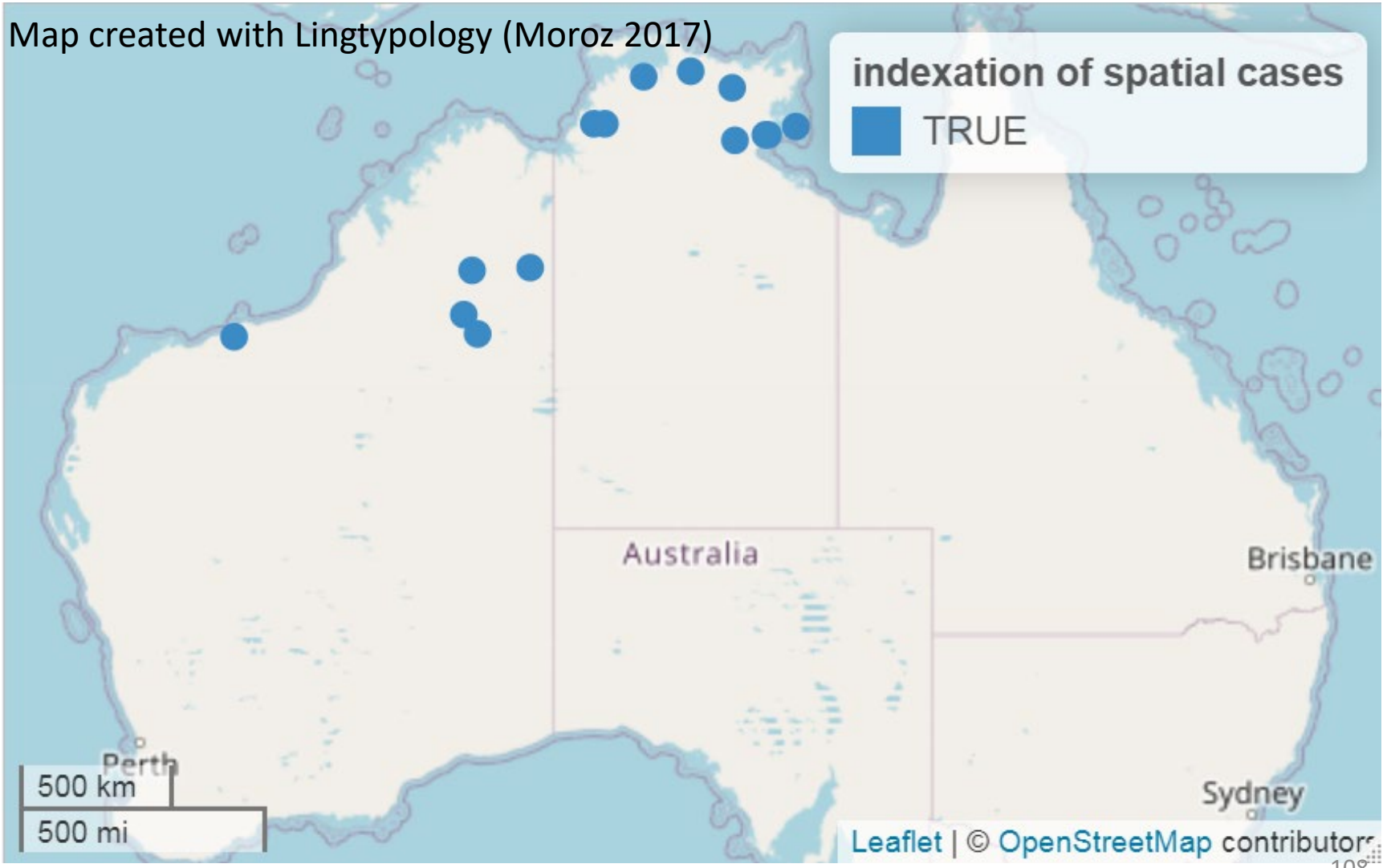

Indexation of spatial cases

- Djaru (Pama-Nyungan > Desert Nyungic)

(6) *ŋaɟu* *ŋa=ɳa=ɲanda* *jan-i* *mawun-dawu*.
1SG.ABS AUX=1SG.NOM=3SG.OBL go-PST man-ALLAT
'I went to a man.' (Tsunoda 1981: 104)

(7) *mawun* *ŋa=ŋguwulala* *wuɳa jan-i* *ɲunbulaŋiɲ-ŋu*.
man AUX=2DU.OBL away go-PST 2DU-ABL
'A man went away from you (two)' (ibid.: 115)

Map created with Lingtypology (Moroz 2017)

Some quantitative observations

- Some further aspects omitted here:
  - alignment of HM;
  - alignment in ditransitive constructions;
  - morphological status of indexes (affixes, clitics, free words): should be defined in a meaningful way first;
  - marking (head-, dependent-, double-) of particular semantic relations: not yet systematically coded, on my to-do-list.

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- What it is all about
- Database and sample
- Some quantitative observations
- The typology
- Summary and outlook

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The typology

- A preliminary classification into three major types:
  - complementary (A): overt DM is incompatible with HM, e.g. Yimas;
  - harmonic (B): particular patterns of HM and DM match each other to a significant degree, e.g. Modern Greek;
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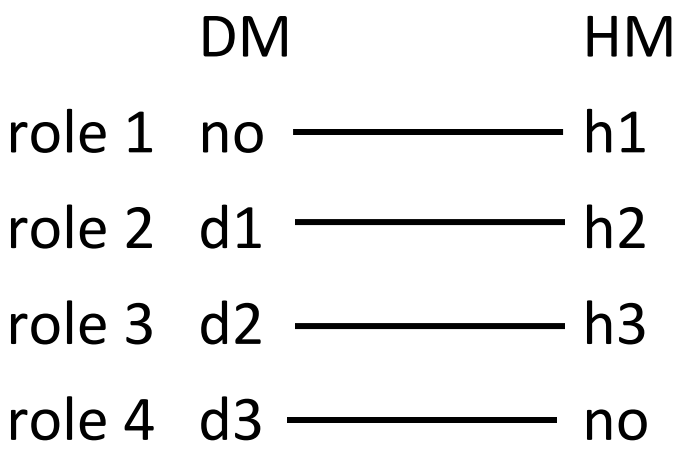
The typology

- Complementary systems

	DM	HM
role 1	yes	no
role 2	yes	no
role 3	no	yes
role 4	no	yes

The typology

- Harmonic systems



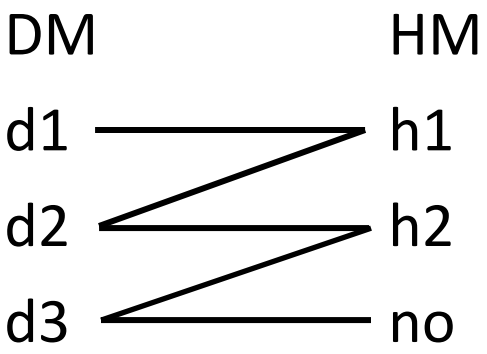
The typology

- Disharmonic systems

	DM	HM
role 1	d1	h1
role 2	d2	h1
role 3	d2	h2
role 4	d3	h2 or no

The typology

- Disharmonic systems



The typology

- Some caveats:
  - the proposed types are to a considerable degree idealised and will be revised and probably even refuted;
  - it is particularly hard to draw a clear boundary between the harmonic and the disharmonic types, e.g. because many languages combine more or less (dis)harnomic subsystems;
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- Distribution (languages):

	Complementary	Harmonic	Disharmonic	Transitional or unclear
Africa	3	5	1	1
Eurasia	7	14	15	1
Australia	3	3	25	7
Oceania	9	7	8	2
N.America	5	2	3	0
S.America	3	4	3	1
Total	30	35	55	12

The typology

The otherwise dominant disharmonic type is marginal in Africa

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- Distribution (languages):

The harmonic type is better represented in Eurasia

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The typology

- Distribution (languages):

The disharmonic type is exceptionally frequent in Australia

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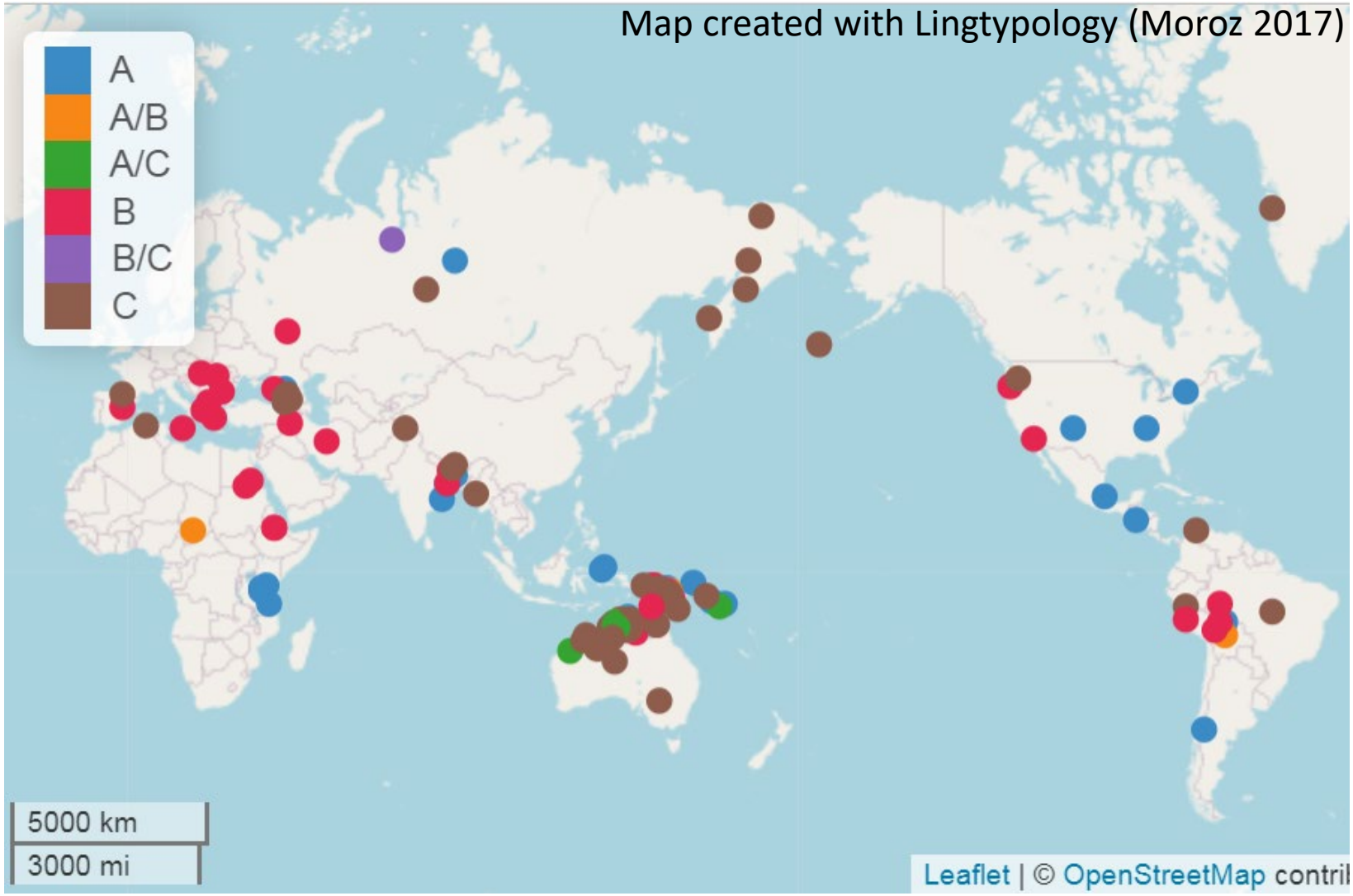
The complementary type is better represented in Oceania and North America

Distribution of the types



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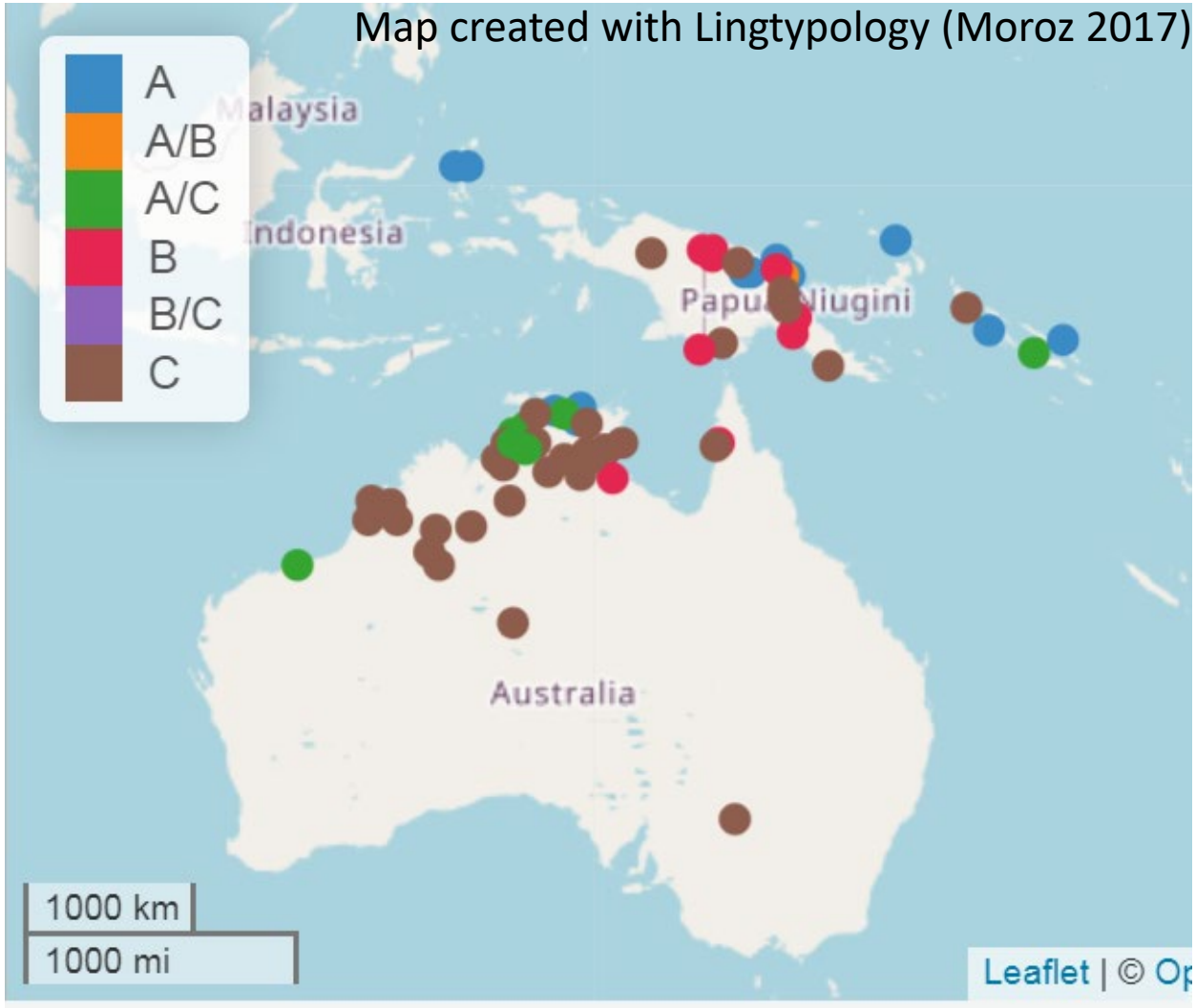

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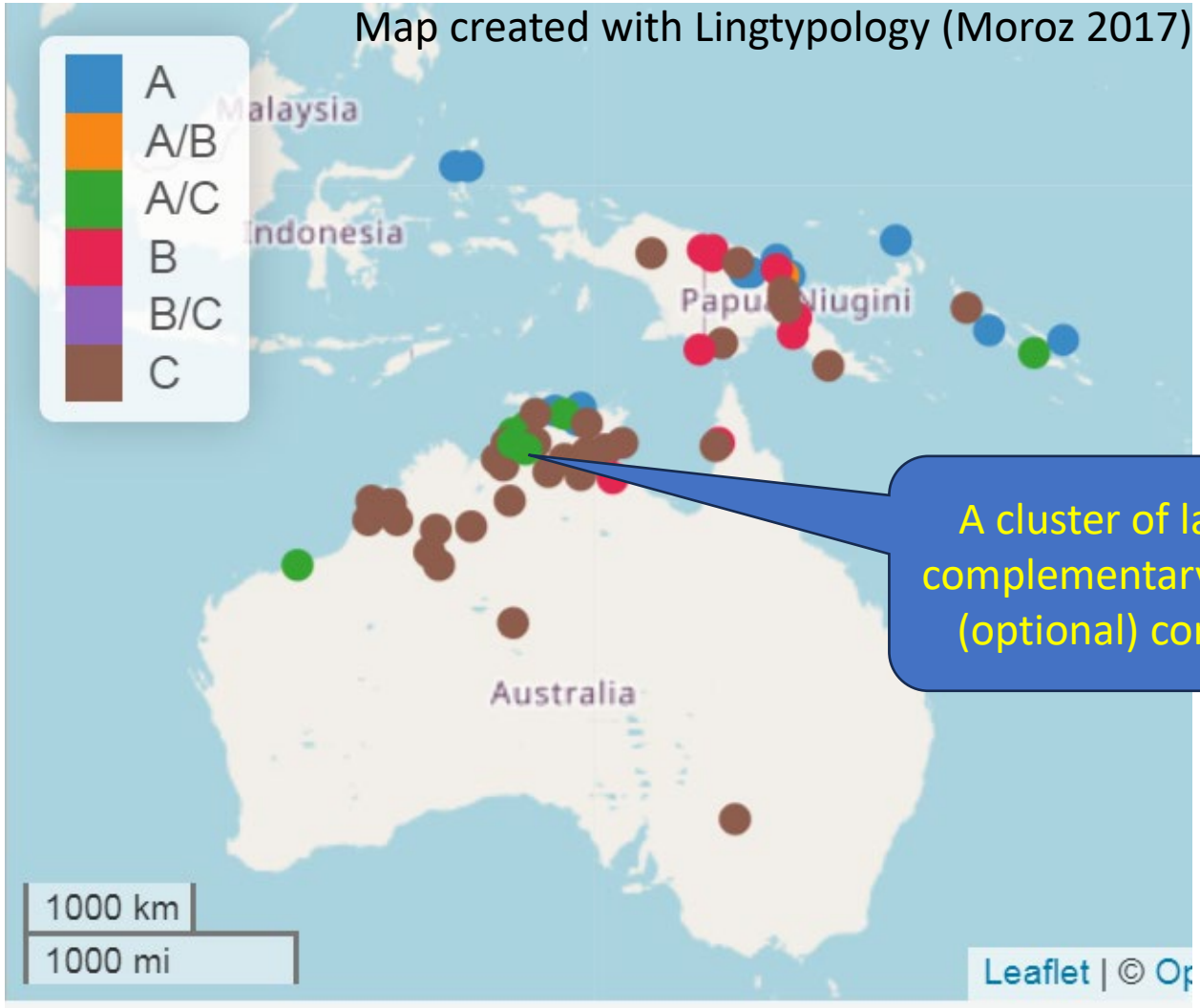

A cluster of languages of the complementary type developing (optional) core case-marking

The typology

- Family-internal stability vs. variability of types:
  - “consistent” families: Indo-European (harmonic), Chukotko-Kamchatkan, Sino-Tibetan (disharmonic);
  - “inconsistent” families: Afro-Asiatic (but Semitic consistently harmonic), Northwest Caucasian, Nuclear Trans-New-Guinean;
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The typology

- Northwest Caucasian:

(8) Abkhaz (Hewitt 1979: 36)

a-χáṣa *a-phʷás* *a-šʷq̇ʷá* *lá-j-te-jṭ*
ART-man ART-woman ART-book 3SG.F.IO-3SG.M.ERG-give-DCL
'The man gave the book to the woman.'

(9) West Circassian (constructed)

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Harmonic

ART – article, OBL – oblique case

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- Alignment of core flagging neutral (by definition).
- General schema: “verbal affixation for the core participants and nominal case for the peripheral ones” (Foley 1986: 96).

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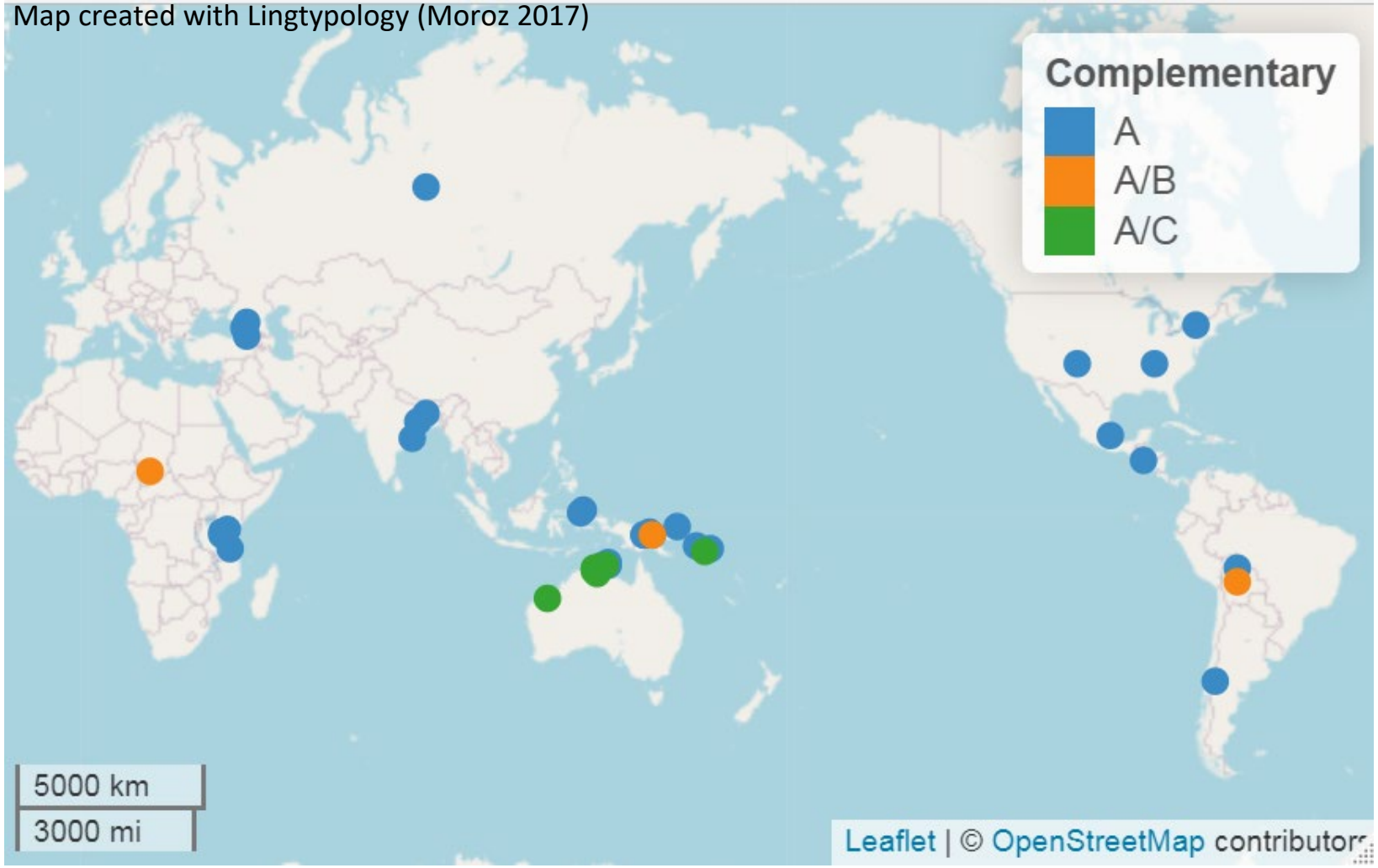

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- S of an intransitive verb (Foley 1986: 94)

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'The woman went.'

Map created with Lingtypology (Moroz 2017)

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PRF – perfect

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- HM for core participants:
- A and P of a monotransitive verb (Foley 1986: 94)

(11) *narmaŋ uraŋk kɨ-n-am-ɨt*
woman coconut 3SG.P-3SG.A-eat-PRF
'The woman ate the coconut.'

Complementary type

- Yimas (Lower Sepik-Ramu, Papua New Guinea)
- HM for core participants:
- A, T and R of ditransitive verbs (Foley 1986: 94)

(12) *namat uraŋk narmaŋ kɨ-n-ŋa-r-umpun*
man.PL coconut woman 3SG.P-3SG.A-give-PRF-3PL.R
'The woman gave the coconut to the men.'

Complementary type

- Yimas (Lower Sepik-Ramu, Papua New Guinea)
- The Oblique case for peripheral participants:
- location (Foley 1991: 165)

(13) *tnumut-ŋan* *ama-na-irm-n*
sago_palms-OBL 1SG.S-ASP-stand-PRS
'I am standing at the two sago palms.'

ASP – aspect marker, PRS – present

Complementary type

- Yimas (Lower Sepik-Ramu, Papua New Guinea)
- The Oblique case for peripheral participants:
- time (Foley 1991: 169)

(14) *tmat-ŋan* *nma-kay-wark-wat*
day-OBL house-1PL.A-build-HAB
'We always build a house during the day.'

HAB – habitual

Complementary type

- Yimas (Lower Sepik-Ramu, Papua New Guinea)
- The Oblique case for peripheral participants:
- instrument (Foley 1991: 165)

(15) *tktntrm-nan namarawt na-ŋa-tpul*
chair.DU-OBL person 3SG.A-1SG.P-hit
'The person hit me with two chairs.'

Complementary type

- Yimas (Lower Sepik-Ramu, Papua New Guinea)
- Valency-alternations are particularly telling (Foley 1991: 299-300):

(16) a. *ikn-an* *antki* *ya-urkpwica-t*
smoke-OBL thatch.PL 3Pl.S-blacken-PRF
'The roof got blackened from the smoke.'

b. *ikn* *antki* *ya-n-tal-urkpwica-t*
smoke thatch.PL 3PL.P-3SG.A-CAUS-blacken-PRF
'Smoke blackened the roof.'

CAUS – causative

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HM: no
DM: yes

CAUS – causative

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Complementary type

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- Ket (Yeniseian, Russia)

Complementary type

- Ket case system (Georg 2007: 103-104):

	Sg Masculine	Sg Feminine	Pl animate	Pl inanimate
Nominative	*Ø*			
Genitive	*-da*	*-di*	*-na*	*-di*
Dative	*-daŋa*	*-diŋa*	*-naŋa*	*-diŋa*
Benefactive	*-data*	*-dita*	*-nata*	*-dita*
Ablative	*-daŋal*	*-diŋal*	*-naŋal*	*-diŋal*
Adessive	*-daŋta*	*-diŋta*	*-naŋta*	*-diŋta*
Locative	*n/a*	*-ka*	*n/a*	*-ka*
Prosecutive	*-bes*			
Instrumental	*-as*			
Abessive	*-an*			
Translative	*-esaŋ*			

Complementary type

- Ket case system (Georg 2007: 103-104):

	Sg Masculine	Sg Feminine	Pl animate	Pl inanimate
Domain of head-marking				
Genitive	*-da*	*-di*	*-na*	*-di*
Dative	*-daŋa*	*-diŋa*	*-naŋa*	*-diŋa*
Benefactive	*-data*	*-dita*	*-nata*	*-dita*
Ablative	*-daŋal*	*-diŋal*	*-naŋal*	*-diŋal*
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Instrumental	*-as*			
Abessive	*-an*			
Translative	*-esaŋ*			

Complementary type

- Ket (Yeniseian, Russia; Vajda 2004: 82)

(17) *ām* *dílgàt* *súùl-as* *da-óŋ-d-p-taŋ*
mother kids sled-INS 3SG.F.SBJ-3AN.PL.O-across-APPL-drag
'The mother takes her kids by sled.'

(18) *qɬm tēt* *qɬmdɬl* *da-ó-v-ìj-aq*
wife husband woman.child 3SG.F.SBJ-3M.O-APPL-PST-give
'She gave her husband a baby girl.'

AN – animate, APPL – applicative, INS – instrumental

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'She gave her husband a baby girl.'

A participant devoid of either flagging or indexing

AN – animate, APPL – applicative, INS – instrumental

Complementary type leaks

- Optional overt flagging of some core participants in languages with otherwise complementary DM and HM.
- Bininj Gun-wok (Gunwinyguan, Australia): Ablative and Instrumental may be used to mark transitive Agents, especially inanimate (18a) or when ambiguity may arise (18b).

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Map created with Lingtypology (Moroz 2017)

Complementary type leaks

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- Bininj Gun-wok (Gunwinyguan, Australia): Ablative and Instrumental may be used to mark transitive As, especially inanimate (19a) or when ambiguity may arise (19b).

(19) a. *gubunj-be ba-gubunj-djirrkka-ng*.
canoe-ABL 3SG>3SG-canoe-push-PST.PRF
'One canoe pushed another.' (Evans 2003: 138)

b. *Kodjok bi-karrme-ng Kamarrang-yih*.
kin_name 3SG>3SG-grab-PST.PRF kin_name-INS
'Kamarrang grabbed Kodjok.' (ibid.: 140)

Complementary type leaks

- Optional overt flagging of some core participants in languages with otherwise complementary DM and HM.
- Yurakaré (isolate, Bolivia; van Gijn 2005: 60): objects introduced by the comitative applicative and indexed by object prefixes may optionally retain postpositional marking.

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Complementary type leaks

- Optional overt flagging of some core participants in languages with otherwise complementary DM and HM.
- Yurakaré (isolate, Bolivia; van Gijn 2005: 60): objects introduced by the comitative applicative and indexed by object prefixes may optionally retain postpositional marking.

(20) *më-jti* *lëtta-m* *ku-winani-shta-m*
2SG-only one-2SG.SBJ 3SG.OBJ+APPL-walk-FUT-2SG.SBJ
mi-ye=tina.
2SG-sister-COM
'You will be the only one that is going to live [sic!] together with your sister.'

Harmonic type

- One-to-one or one-to-many correspondences between HM and DM.
- Predominantly accusative alignment of flagging (25/35):
  - in this type alignments of DM and HM must be identical (otherwise mismatch);
  - alignment of indexing is well-known to tend towards accusativity (e.g. Siewierska 2013).
- Particularly well-attested in Western Eurasia and East Africa (Indo-European and Afro-Asiatic).

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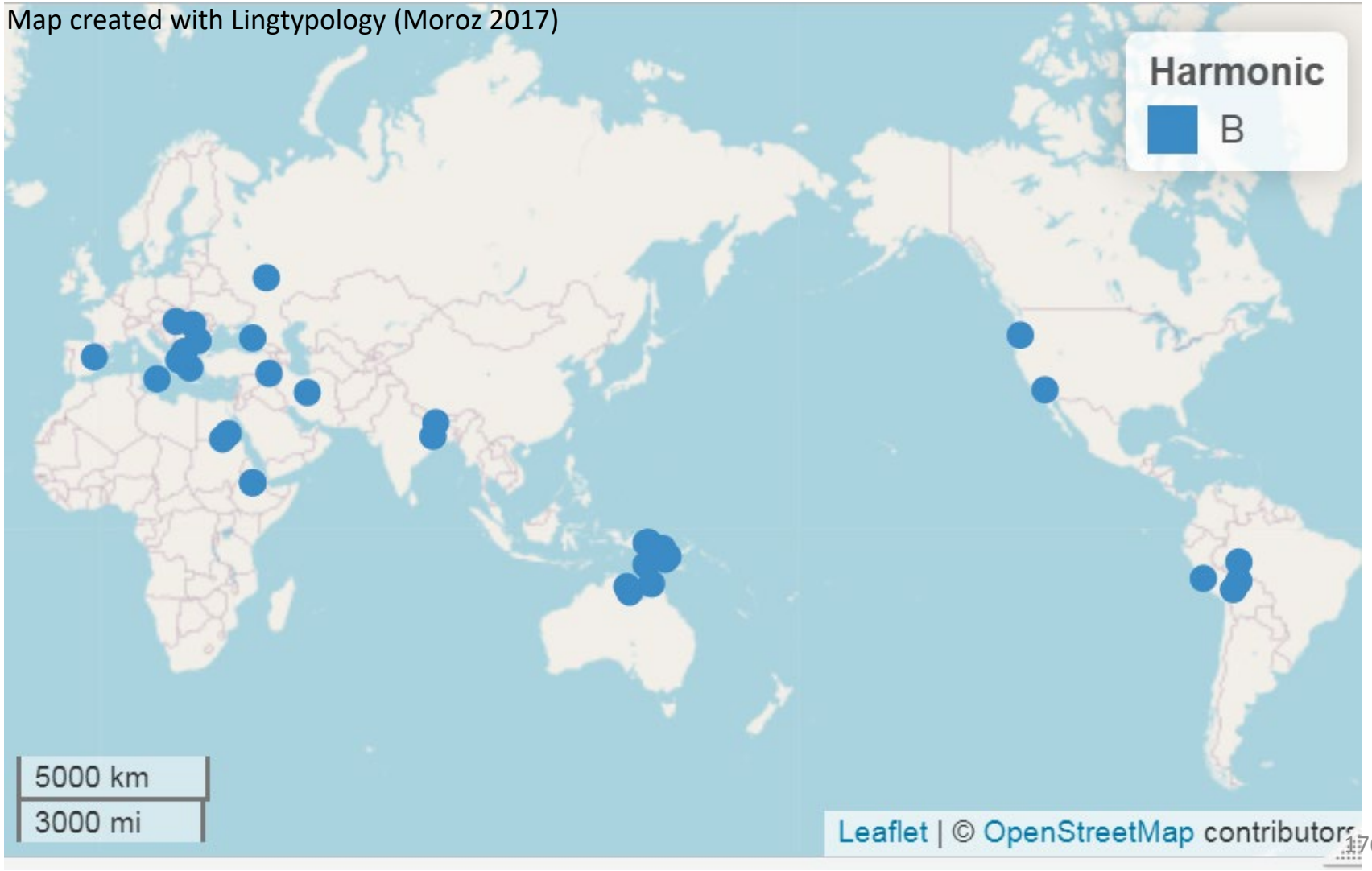

Harmonic type

- Romanian (Indo-European > Romance; Mallinson 1987)

role	**flagging**	**indexing**
S/A	NOM (often zero)	SBJ
indefinite P	NOM (often zero)	no
definite P	*pe=*	DO
R	DAT	IO

Harmonic type

- Romanian (Indo-European > Romance)

(21) a. *Ana* *l-a* *văz-ut* *pe* *Radu*.
Ana.NOM 3SG.DO-AUX.3SG.SBJ see-PTCP ACC Radu
'Anna saw Radu.' (Mallinson 1987: 207)

b. *Băiat-ul-ui* *i-a-m* *da-t* *un* *cadou*.
boy-DEF-DAT 3SG.IO-AUX-1SG.SBJ give-PTCP INDEF present
'I gave the boy a present.' (ibid.: 209)

AUX – auxiliary, DO – direct object, PTCP - participle

Harmonic type

- Romanian (Indo-European > Romance)

(21) a. *Ana l-a văz-ut pe Radu.*
Ana.NOM 3SG.DO-AUX.3SG.SBJ see-PTCP ACC Radu
'Anna saw Radu.' (Mallinson 1987: 207)

b. *Băiat-ul-ui i-a-m da-t un cadou.*
boy-DEF-DAT 3SG.IO-AUX-1SG.SBJ give-PTCP INDEF present
'I gave the boy a present.' (ibid.: 209)

Systems like Romanian, where a prominent (animate and/or definite) P is simultaneously flagged and indexed, are quite widespread

Harmonic type

- Macedonian (Indo-European > Slavic; Lunt 1952, Mišeska-Tomić 2012)

role	flagging	indexing
S/A	zero	SBJ
indefinite P	zero	no
definite P	zero	DO
R	*na*	IO
various	prepositions	IO (optional)

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role	flagging	indexing
S/A	zero	SBJ
indefinite P	zero	no
definite P	zero	DO
R	*na*	IO
various	prepositions	IO (optional)

Many-to-one relations

Harmonic type

- Macedonian:

(22) *Jana* *mu=go=dad-e* *pismo-to*
Jana 3SG.M.IO=3SG.M.DO=give-AOR.3SG.SBJ letter-DEF
na *edno* *dete*.
DAT one child
'Jana gave the letter to a child (that I know).'
(Mišeska-Tomić 2006: 255)

AOR – aorist

(23) *Naizlego-a* *gluvc-i* *i* *mu=pojdo-a*
come.out-AOR.3PL.SBJ rat-PL and 3SG.M.IO=go-AOR.3PL.SBJ
kaj *adži* *mačor-ot...*
to Haji cat-DEF
'The rats came out in crowds and went to Haji Cat...'
(Lunt 1952: 108)

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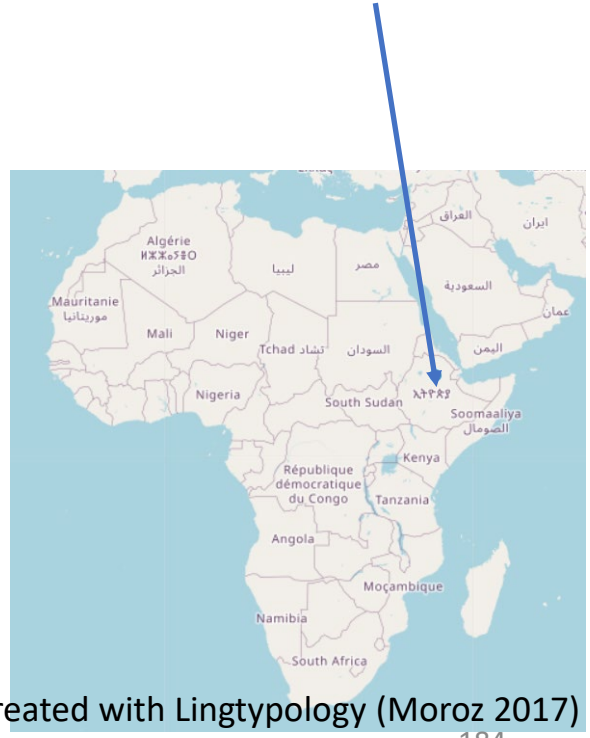
'The rats came out in crowds and went to Haji Cat...'
(Lunt 1952: 108)

Harmonic type leaks

- Amharic (Afro-Asiatic > Semitic; Ethiopia):

role	flagging	indexing
S/A	no	SBJ
indefinite P	no	no
definite P	ACC	(OBJ)
R	ACC/DAT	OBJ
benefactive	DAT	DAT+OBJ
instrument	INS	INS+OBJ



Map created with Lingtypology (Moroz 2017)

Harmonic type leaks

- Amharic (Afro-Asiatic > Semitic; Ethiopia):

(24) a. *lämma ṭärmus-u-n säbbär-ä-w*.
Lemma bottle-DEF-ACC break:PST-3SG.M.SBJ-3SG.M.OBJ
'Lemma broke the bottle.' (Amberber 2005: 299)

b. *lä-ləğ-u bet-u-n asayy-ä-w*.
DAT-child-DEF.M house-DEF.M-ACC showed-3SG.M.SBJ-3SG.M.OBJ
'He showed the house to the child.' (Leslau 1995: 893)

c. *ənnatəyya-wa lä-ləğo-čč-əwa šänkora agäda gäzza-čč-all-aččäw*.
mother-DEF.F DAT-child-PL-3SG.F.POSS sugar.cane stalk buy.PST-3SG.SBJ-BEN-3PL.OBJ
'The mother bought sugar cane for her children.' (ibid.: 429–430)

Harmonic type leaks

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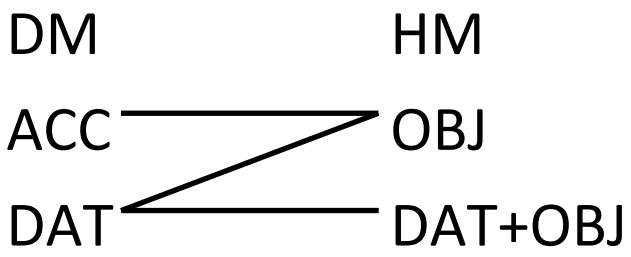

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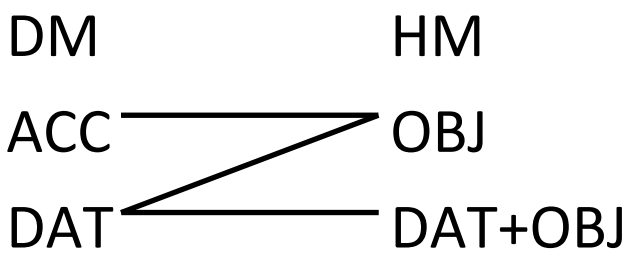

Enough many-to-many correspondences to be considered disharmonic?

Disharmonic type

- Many-to-many correspondences between DM and HM, which work largely independently of each other.
- The most widespread and varied type, especially densely concentrated in Australia and New Guinea.
- A predominance of ergative alignment in flagging (43/56):
  - indexing tends to accusativity;
  - hence, most languages with accusative flagging fall into the harmonic type;
  - ergative flagging + accusative indexing = mismatch.

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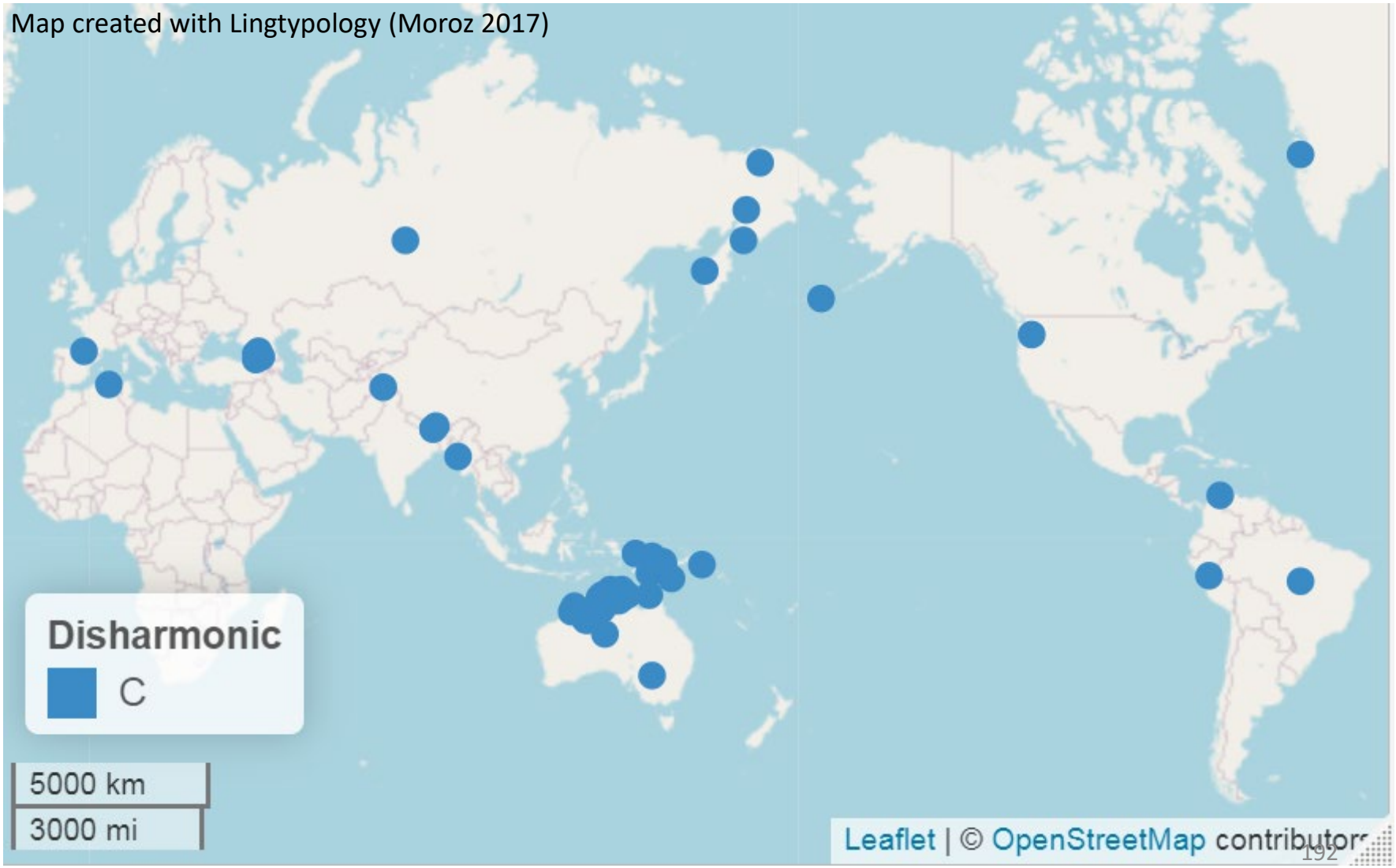

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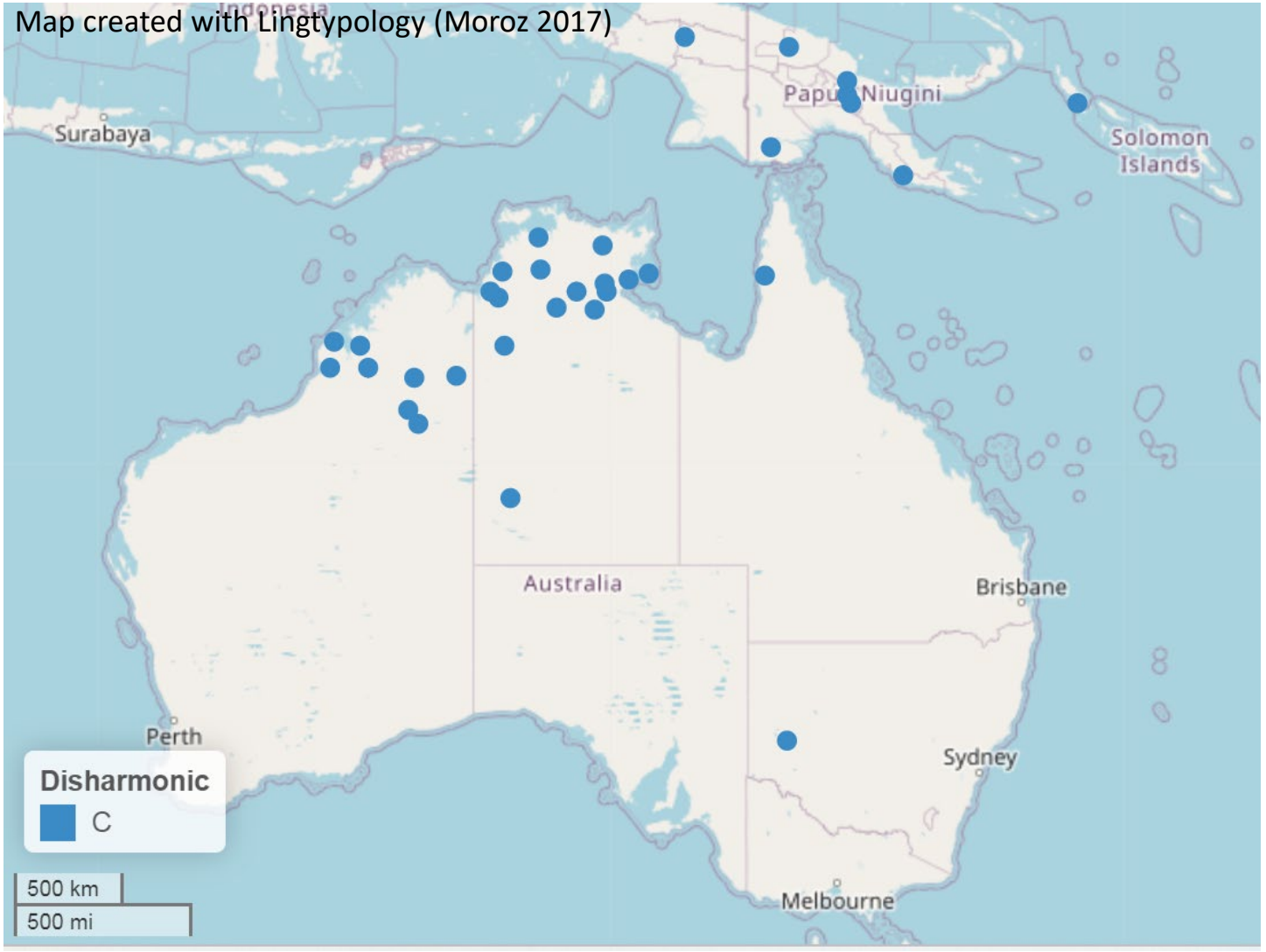

Disharmonic type

- Common sources of flagging-indexing mismatches:
  - co-occurrence of ergative flagging and accusative indexing in monotransitive constructions;
  - co-occurrence of indirective flagging and secundative indexing in ditransitive constructions (Haspelmath 2005; Malchukov et al. 2010);
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Disharmonic type

- Burushaski (isolate, Pakistan; Munshi 2006)

role	flagging	indexing
S	no	suffix(+prefix)
A	OBL	suffix
P	no	prefix (if animate)
R	DAT	prefix (if animate)

Disharmonic type

- Burushaski (isolate, Pakistan; Munshi 2006)

DM	HM
no	suffix
OBL	
DAT	prefix

Disharmonic type

- Burushaski (isolate, Pakistan)

(25) a. *in* *mu-val-umo*.
3SG 3SG.F.ABS-fall.PST-3SG.F.SBJ
'She fell down.' (Munshi 2006: 132)

b. *salim-e* *huma* *mu-ye:c-imi*.
Salim-OBL Huma 3SG.F.ABS-see.PST-3SG.M.SBJ
'Salim (M) saw Huma (F).' (ibid.: 135)

c. *in-e* *in-e-re* *ḳita:b-an* *e:-ć-umo*.
3SG-OBL 3SG-OBL-DAT book-INDF 3SG.M.ABS-give-3SG.F.SBJ
'She gave him a book.' (ibid. : 139)

Disharmonic type

- Mismatches between flagging and indexing need not necessarily involve “alignment splits”.
- Nyigina (Nyulnyulan, Australia; Stokes 1982):
  - for subjects, both HM and DM show “agentive/patientive” alignment, but the factors are different;
  - for objects, both HM and DM are semantically motivated, but the factors are again different.

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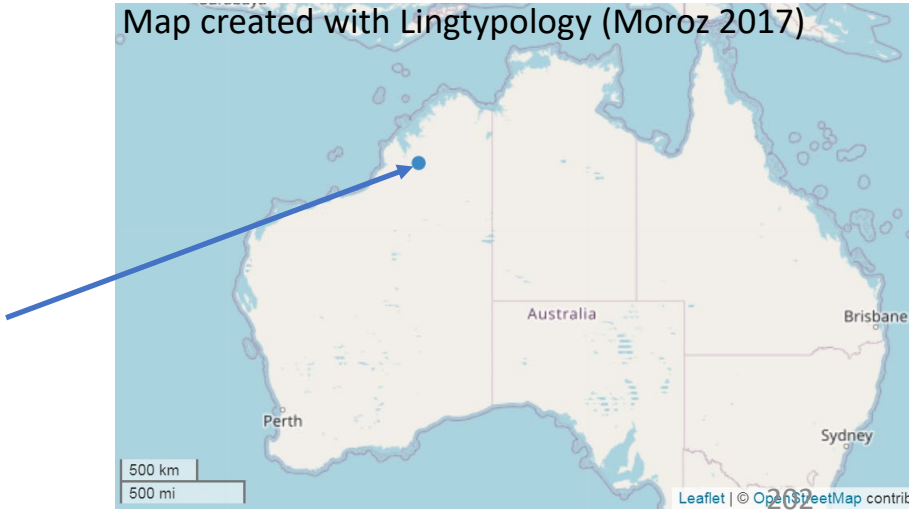

Disharmonic type

- Nyigina (Nyulnyulan, Australia; Stokes 1982: 258-259):

(26) a. *wamba-ni yin-marra-n waɭi*.
man-ERG 3SG.A-burn-PRS meat
'The man is cooking the meat.'

b. *dyuŋgu-ni yi-marra-n waɭi*.
fire-ERG 3SG.S-burn-PRS meat
'The fire is cooking the meat.'

c. *dyuŋgu yi-marra-n*.
fire 3SG.S-burn-PRS
'The fire is burning.'

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Ergative flagging occurs when a "second entity is significantly affected by the activity" (ibid.: 130)

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Agentive indexing occurs when the subject shows a "degree of control over the activity" (ibid.: 260)

Disharmonic type

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(27) a. *yin-alga-na-da-yirr* *wamba* *maɳin.*
3SG.A-eat-PST-HAB-3NSG.O man woman
'He used to kill them, men and women.' (ibid.: 391)

b. *gaɖady* *yi-na-yina* *ginya* *wamba*.
search 3SG.A-PST-3SG.IO DEM man
'He searched for that man [in vain].' (ibid.: 78)

c. *gaɖady* *yi-na-yina* *ginya-yi* *wamba*.
search 3SG.A-PST-3SG.IO DEM-DAT man
'He searched for that man [and found him].' (ibid.: 79)

Disharmonic type

Special series of indexes for objects not directly affected by the event

- Nyigina (Nyulnyulan, Australia; Stokes 1982)

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'He used to kill them, men and women.' (ibid.: 391)

b. *gaḍady* *yi-na-yina* *ginya wamba.*
search 3SG.A-PST-3SG.IO DEM man
'He searched for that man [in vain].' (ibid.: 78)

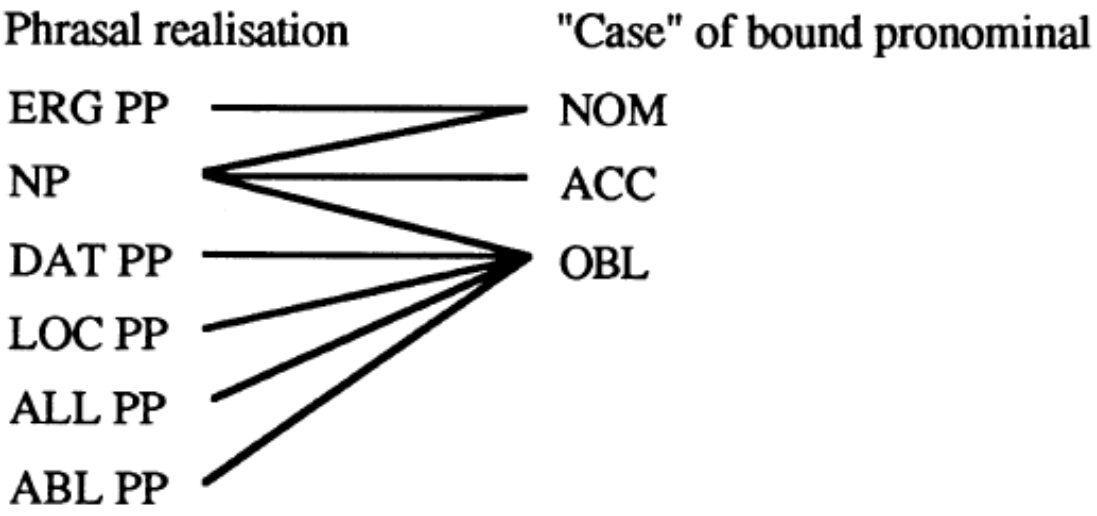
c. *gaḍady* *yi-na-yina* *ginya-yi wamba.*
search 3SG.A-PST-3SG.IO DEM-DAT m[illegible]
'He searched for that man [and found [illegible]' (ibid.: 79)

Such objects get Dative flagging when "attainable"

Disharmonic type leaks

- McGregor (1990: 317) on Gooniyandi:

Figure 5-1: *Pairing of phrase types and cross-referencing bound pronominals*



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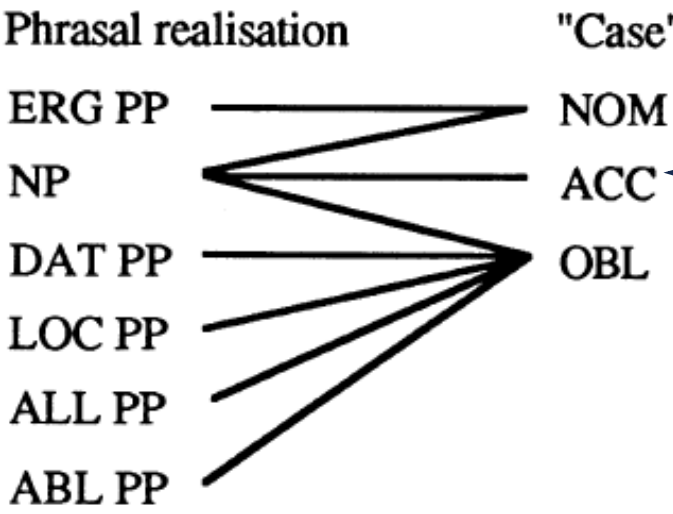

A disharmonic (many-to-many) subsystem

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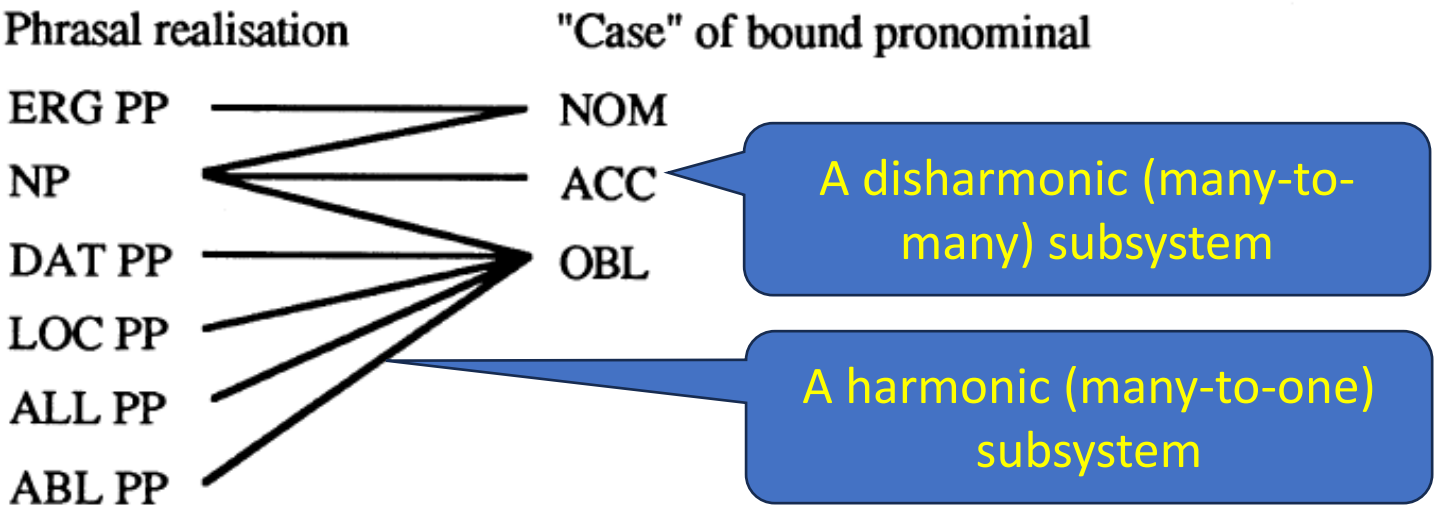

Disharmonic type leaks

- Harmonic subsystems in apparently disharmonic systems.
- Wangkajunga (Pama-Nyungan > Desert Nyungic, Australia, Jones 2011):

Disharmonic type leaks

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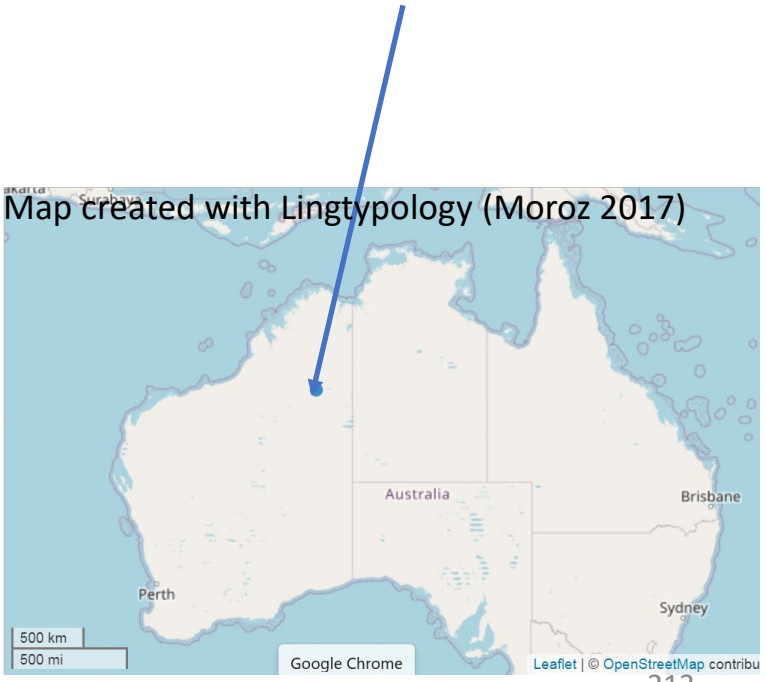
flagging	indexing
ERG (A)	Subject
ABS (S)	Subject
ABS (P, R)	Object
DAT (goal)	Dative
LOC, ALL (human)	Accessory
ABL (human)	Ablative



Disharmonic type leaks

- Wangkajunga (Pama-Nyungan > Desert Nyungic, Australia):

(28) a. *tuju=ra* *wirrja-nin* *mirrka-ku* *talakutu-ku*
woman=3SG.DAT run-PRS food-DAT mango-DAT
'The woman is running for a mango.' (Jones 2011: 139)

b. *ya-nku=lu-npula* *Jukuja-kutu*
go-FUT=3SG.ACS-2DU.SBJ name-ALL
'You two go to Jukuja (a person).' (ibid.: 140)

c. *ya-nu=rna-janampalura* *Sydney-janu*
go-PST=1SG.SBJ-3PL.ABL name-ABL
'I left those people from Sydney.' (ibid.: 141)

ABL – ablative, ACS – accessory, ALL – allative

The typology

- While one-to-one, one-to-many and many-to-many correspondences between flagging and indexing exist and should be distinguished, it is unclear that whole-language systems can be meaningfully classified into “harmonic” and “disharmonic” types.
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- Database and sample
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- The typology
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- HM tends to syntagmatically co-occur with DM, double-marking of various kinds being more widespread than strict complementarity of HM and DM → disconfirms the contention that HM and DM are just different realisations of the same basic mechanism (cf. Kibrik 2012).

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- Two emergent generalisations:

(1) Double-marking tends to be aligned with prominence scales:

The more animate/definite/topical is a participant, the greater is the probability that it receives both overt DM and overt HM.

Quite robust, see Arkadiev 2013, 2016.

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In languages with distinct paradigms of indexes for different types of objects, the more oblique arguments (e.g. recipients, comitatives, animate locations etc.) tend to show more consistent alignment of HM and DM than the less oblique ones.

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- To-do list:
  - revise (again) the existing database;
  - expand the database, especially by including families and areas which so far remain underrepresented;
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Thank you for your attention!
Danke für Ihre Aufmerksamkeit!

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