Loanwords

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June 28, 2017

Outline

Do languages with more speakers (bigger population size) have more or less loanwords than languages with fewer speakers?

Loanword

a word adopted or borrowed from another language
e.g. **dressing gown** Dutch *duster* to Indonesian *daster*

Cognate

a linguistic form which is historically derived from the same source as another form [2]
e.g. **father** French *père* and Spanish *padre*

World Loanword Database (WOLD) [3]

- 41 languages
- 1460 lexical meanings
- each language curated by an expert

Automated Similarity Judgment Program (ASJP) [4]

- originally compiled for computing word similarity with the same meaning from different languages
- 40 words $\subset$ Swadesh list
- open access

Other Databases

- Ethnologue (latest edition) for obtaining population size.
- NorthEuraLex for 6 additional languages.

- 5 degrees of borrowing certainty[1]:

1	Clearly borrowed.
2	Probably borrowed.
3	Perhaps borrowed.
4	Very little evidence for borrowing.
5	No evidence for borrowing.

- Loanword percentages only consider level-1 and level-2 loanwords.
- Average borrowing rate of **25.2%**.
- There is a bias in the sample towards languages with many loanwords.
- Old High German is excluded from the subsequent analyses because it has no speakers.

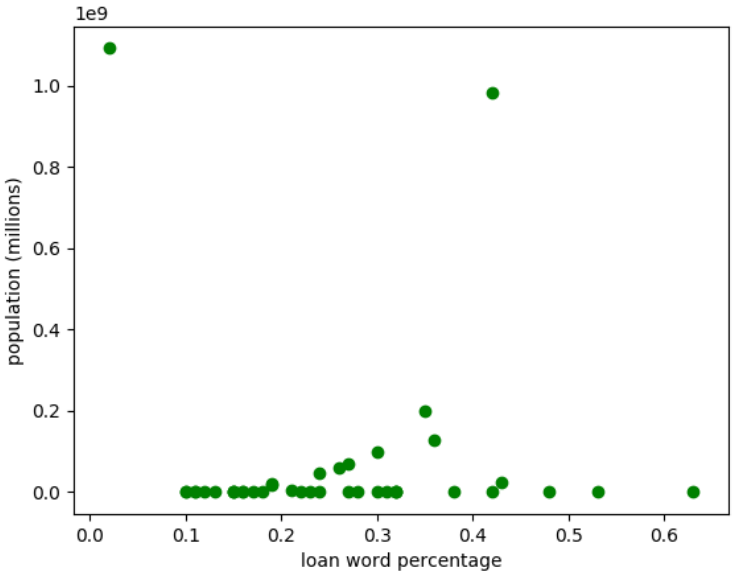
[1] In the 2009 WOLD literature, these degrees are in reverse numerical order.

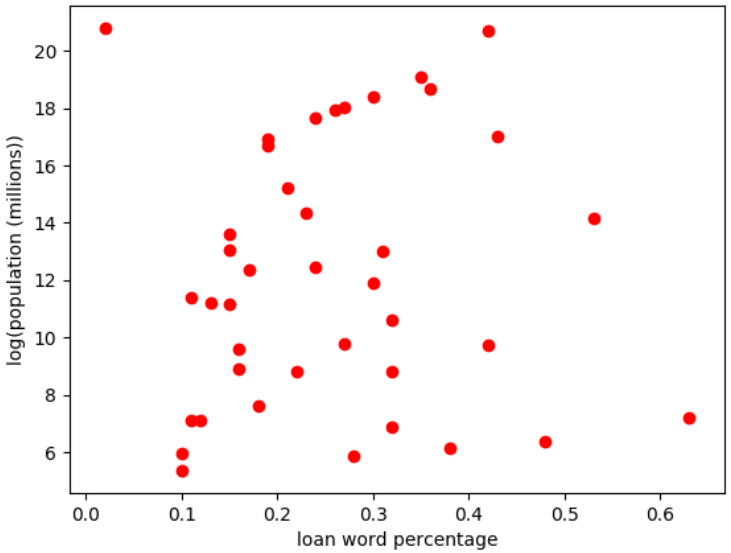
$$r = \frac{\sum_{i=1}^{n}(x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_{i=1}^{n}(x_i - \bar{x})^2}\sqrt{\sum_{i=1}^{n}(y_i - \bar{y})^2}}$$

where X is loanword percentage and Y is population size [5].

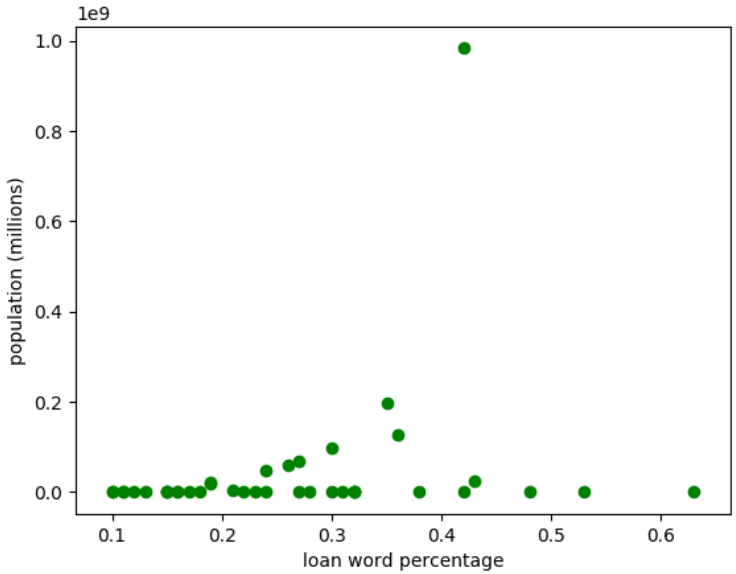
$r_{x,y}$	p	$r_{x,log(y)}$	p	exclusions (iso)
-0.052	0.749	0.043	0.791	null
0.244	0.134	0.145	0.379	cmn
0.186	0.263	0.086	0.609	cmn, eng

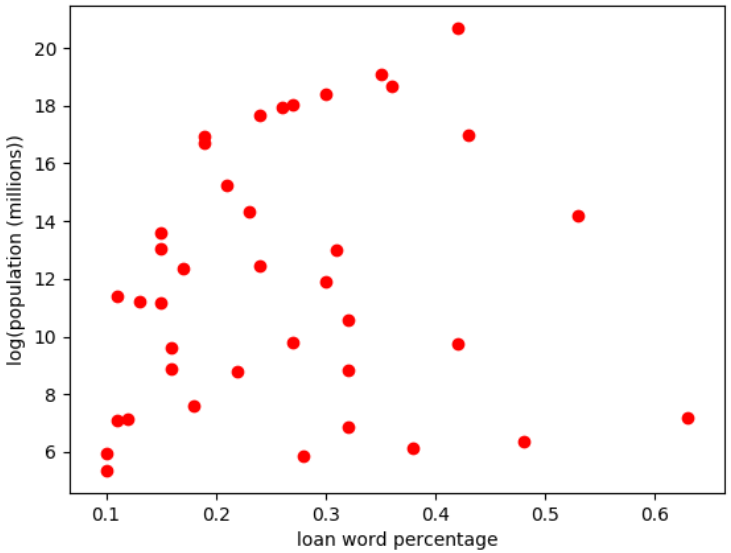
WOLD languages



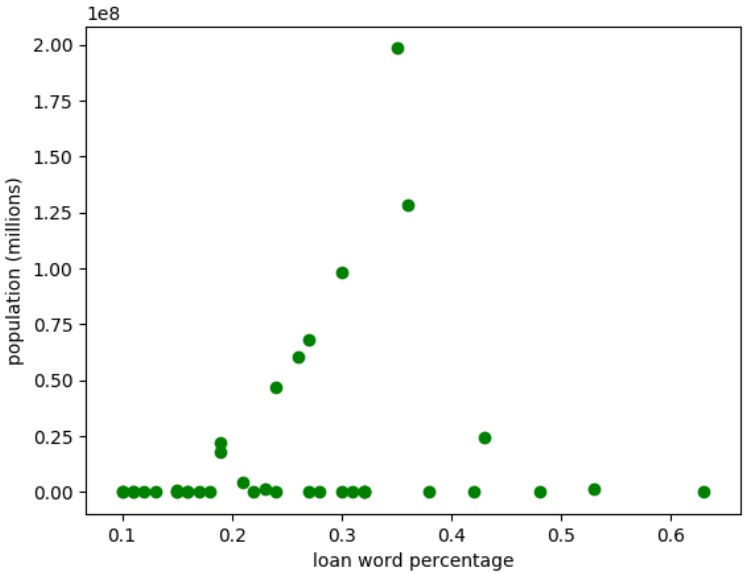


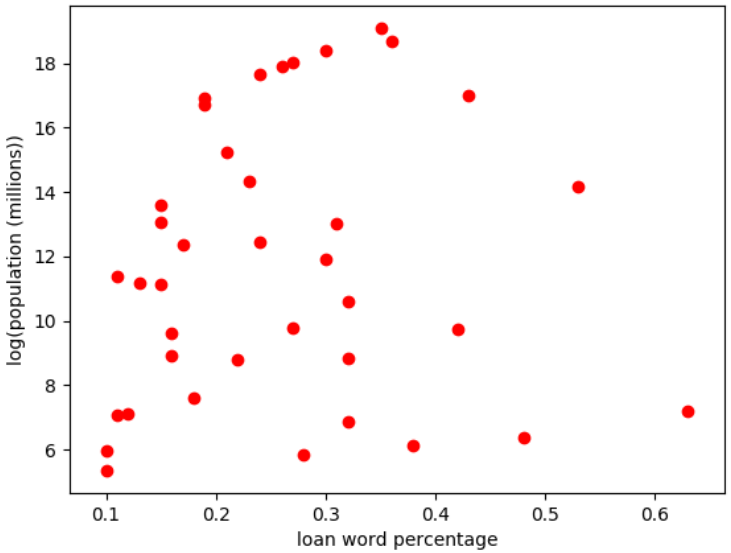
WOLD languages without Mandarin Chinese





WOLD languages without Mandarin Chinese and English



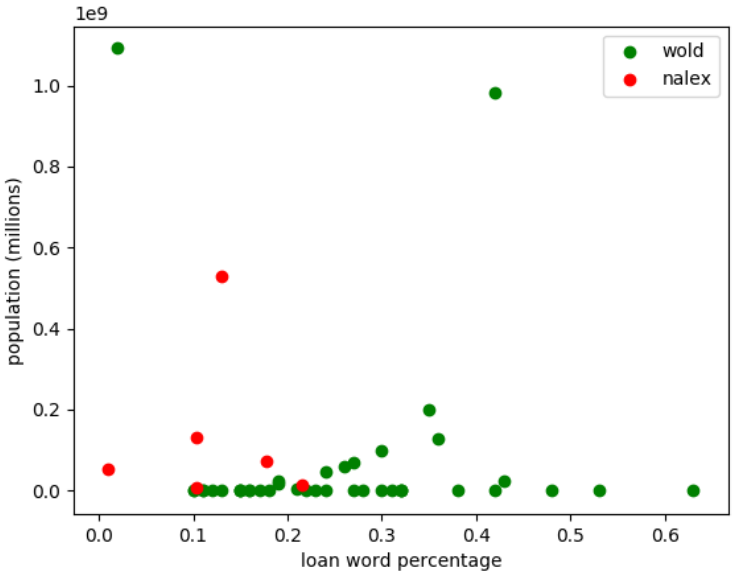


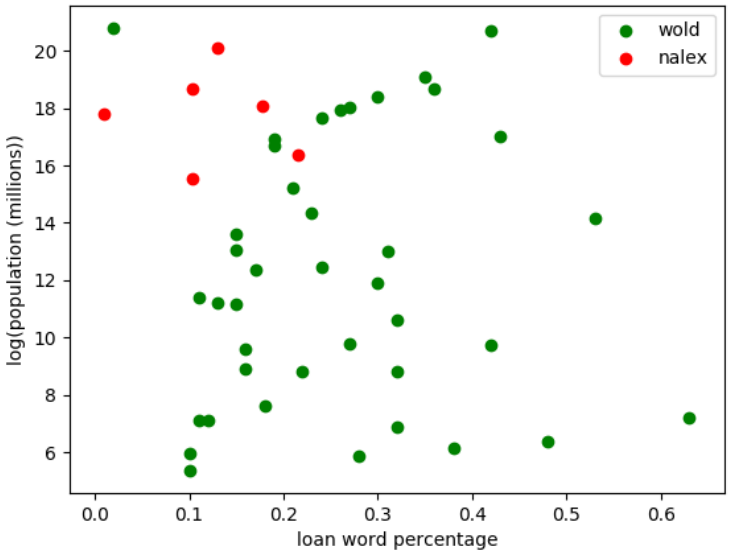
- Added 6 data points from NorthEuraLex.[2]
- Finnish, Hungarian, Spanish, German, Persian, Turkish

$r_{x,y}$	p	$r_{x,log(y)}$	p	exclusions (iso)
-0.079	0.600	-0.104	0.490	null
0.129	0.398	-0.044	0.773	cmn
-0.093	0.549	-0.104	0.501	cmn, eng

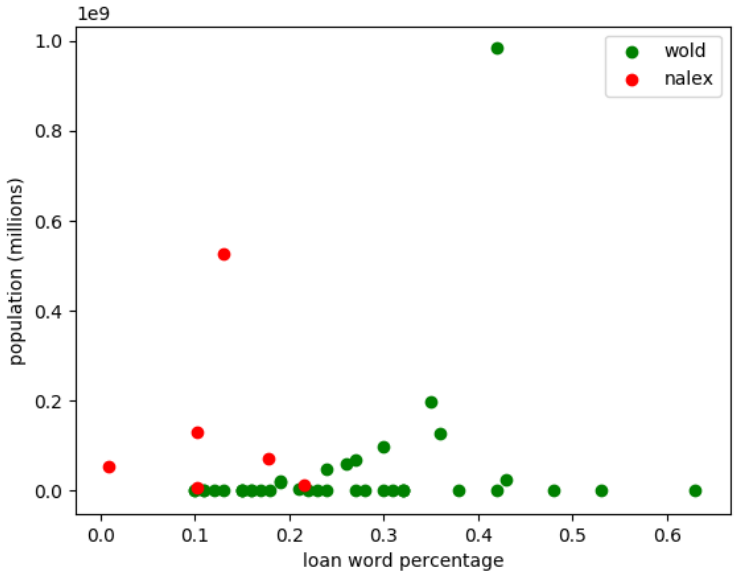
[2] Data courtesy of Johannes Dellert.

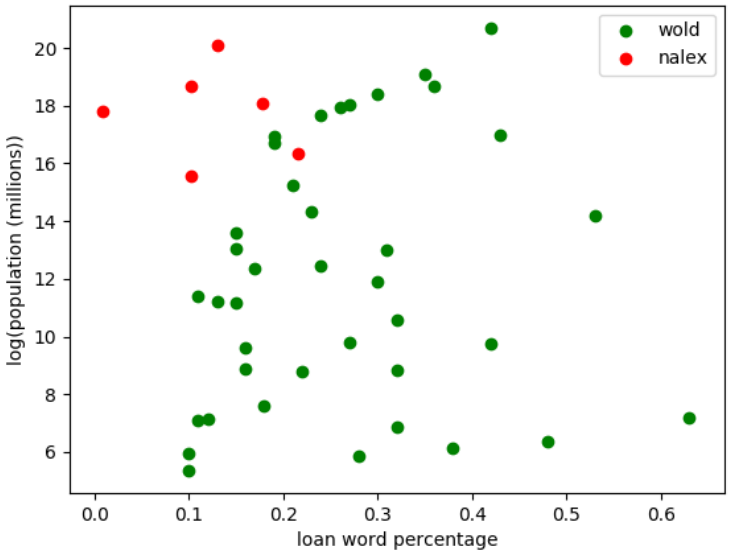
WOLD + NLex


1e9
1.0
0.8
0.6
0.4
0.2
0.0
population (millions)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
loan word percentage
wold
nalex

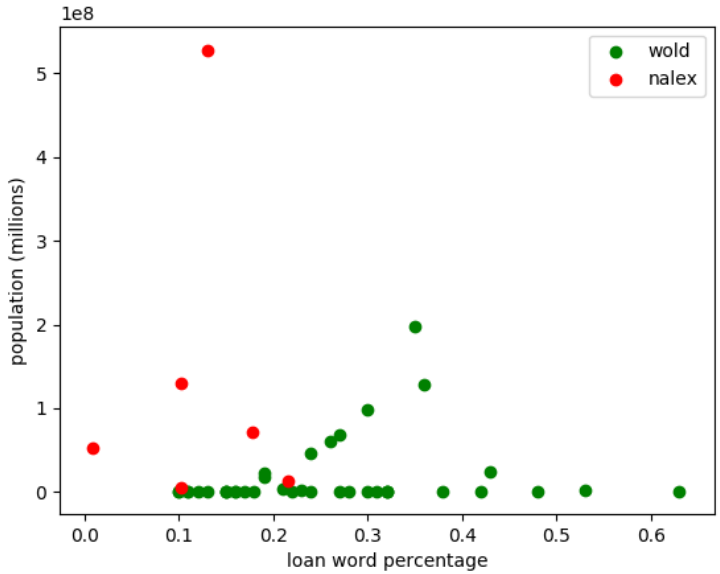

20
18
16
14
12
10
8
6
log(population (millions))
0.0
0.1
0.2
0.3
0.4
0.5
0.6
loan word percentage
wold
nalex

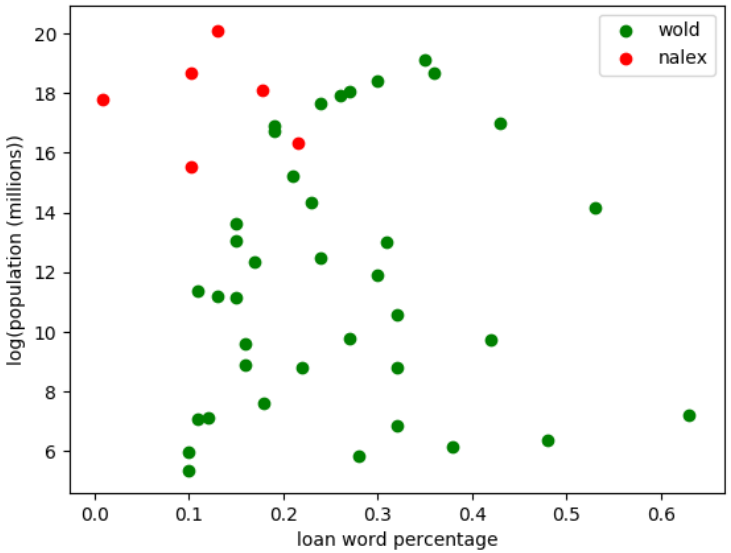
WOLD + NLex without Mandarin Chinese



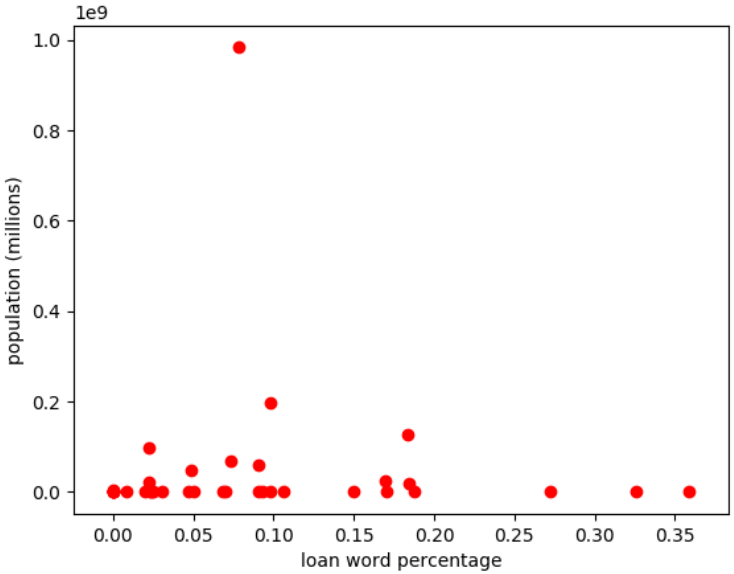


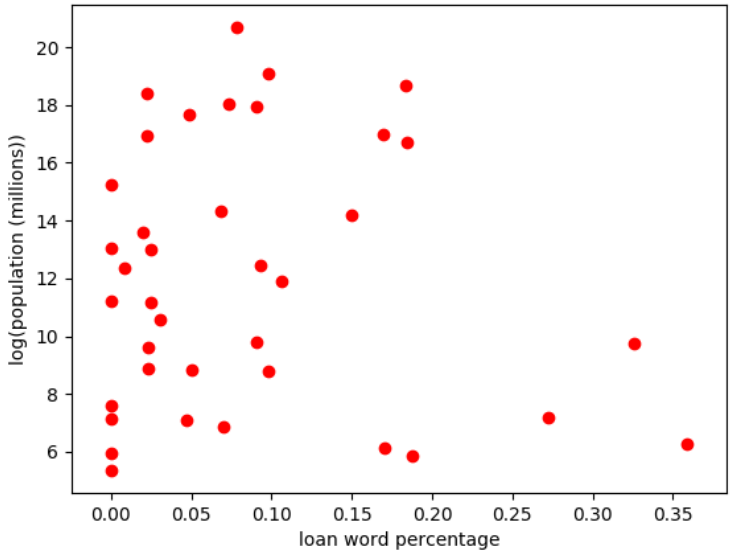
WOLD + NLex without Mandarin Chinese and English





$r_{x,y}$	p	$r_{x,log(y)}$	p
0.006	0.973	-0.081	0.630





- ASJP languages in this sample are a subset of the WOLD sample. Mandarin Chinese and Old High German are excluded.
- Loanword percentage mean is **8.5%**.

Languages with high loanword percentages

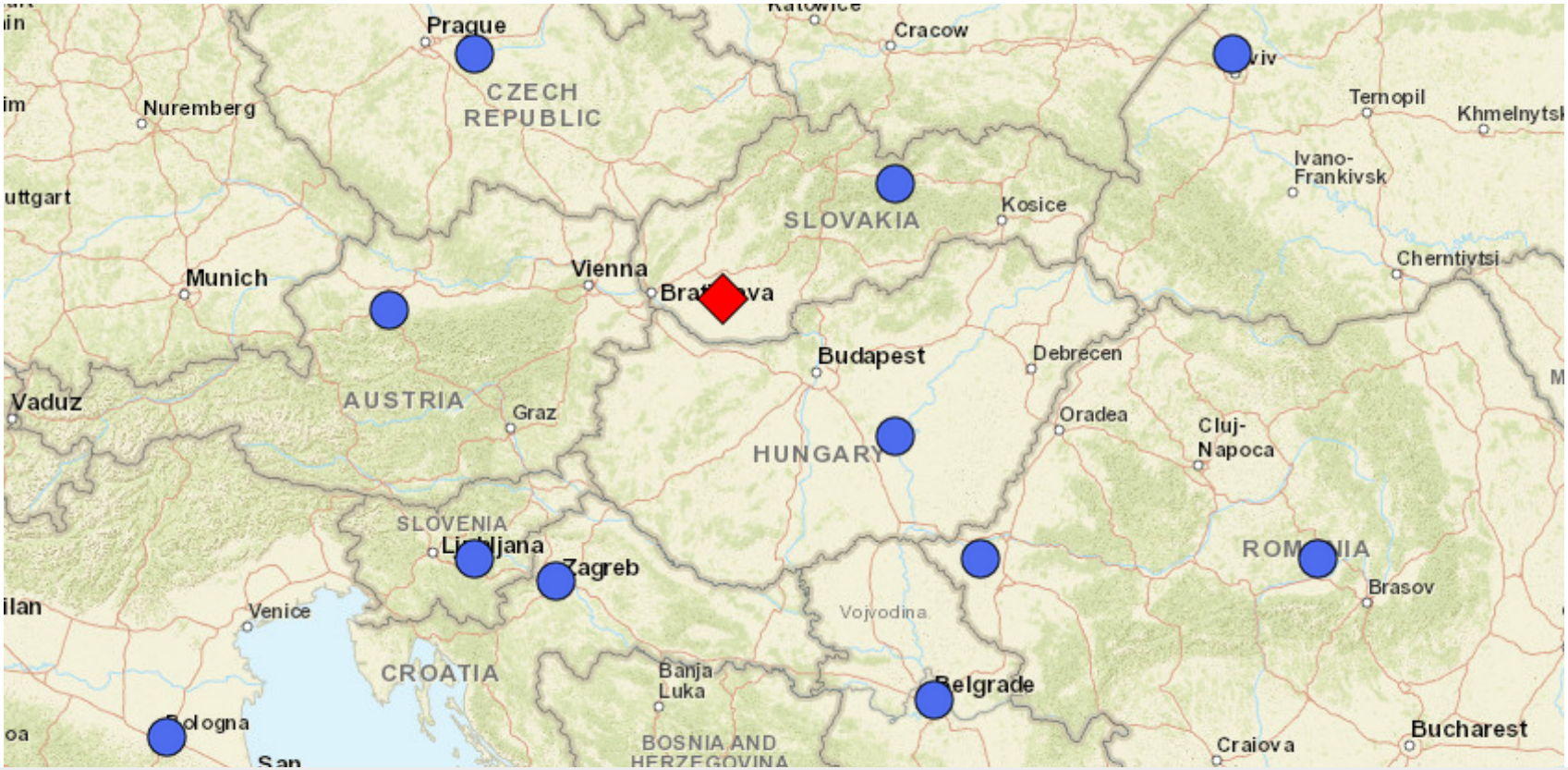
Glottocode	Language	Percentage of loanwords	Number of speakers
west2376	Selice Romani	63%	1350
tari1263	Tarifiyt Berber	53%	1423000
guri1247	Gurindji	48%	540
roma1327	Romanian	43%	24150840
stan1293	English	42%	983522920
sara1340	Saramaccan	42%	26000
chew1245	Ceq Wong	38%	460
nucl1643	Japanese	36%	128204860
indo1316	Indonesian	35%	198395070
taki1248	Takia	32%	40000
bezh1248	Bezhta	32%	6800
arch1244	Archi	32%	970
yaku1245	Sakha	31%	450000
swah1253	Swahili	30%	787360
imba1240	Imbabura Quechua	30%	150000
kild1236	Kildin Saami	28%	350
viet1252	Vietnamese	27%	68058620
yaqu1251	Yaqui	27%	18030
thai1261	Thai	26%	60548550
haus1257	Hausa	24%	46874100
mapu1245	Mapudungun	24%	258410
hmon1333	White Hmong	23%	1698400
lowe1385	Lower Sorbian	22%	20000
cent2050	Kanuri	21%	3240500
dutc1256	Dutch	19%	22163020
plat1254	Malagasy	19%	7528900
hawa1245	Hawaiian	18%	1000
tzot1264	Zinacantán Tzotzil	17%	235000
wich1264	Wichí	16%	15000
gali1262	Kali'na	16%	7430
iraq1241	Iraqw	15%	462000
kekc1242	Q'eqchi'	15%	423500
gaww1239	Gawwada	15%	32700
sese1246	Seychelles Creole	13%	72700
hupd1244	Hup	12%	1360
mezq1235	Otomi	11%	88789
oroq1238	Oroqen	11%	1200
mana1288	Manange	10%	390
kett1243	Ket	10%	210
oldh1241	Old High German	6%	0
mand1415	Mandarin Chinese	2%	1091782930

Top 5 languages with most loanwords

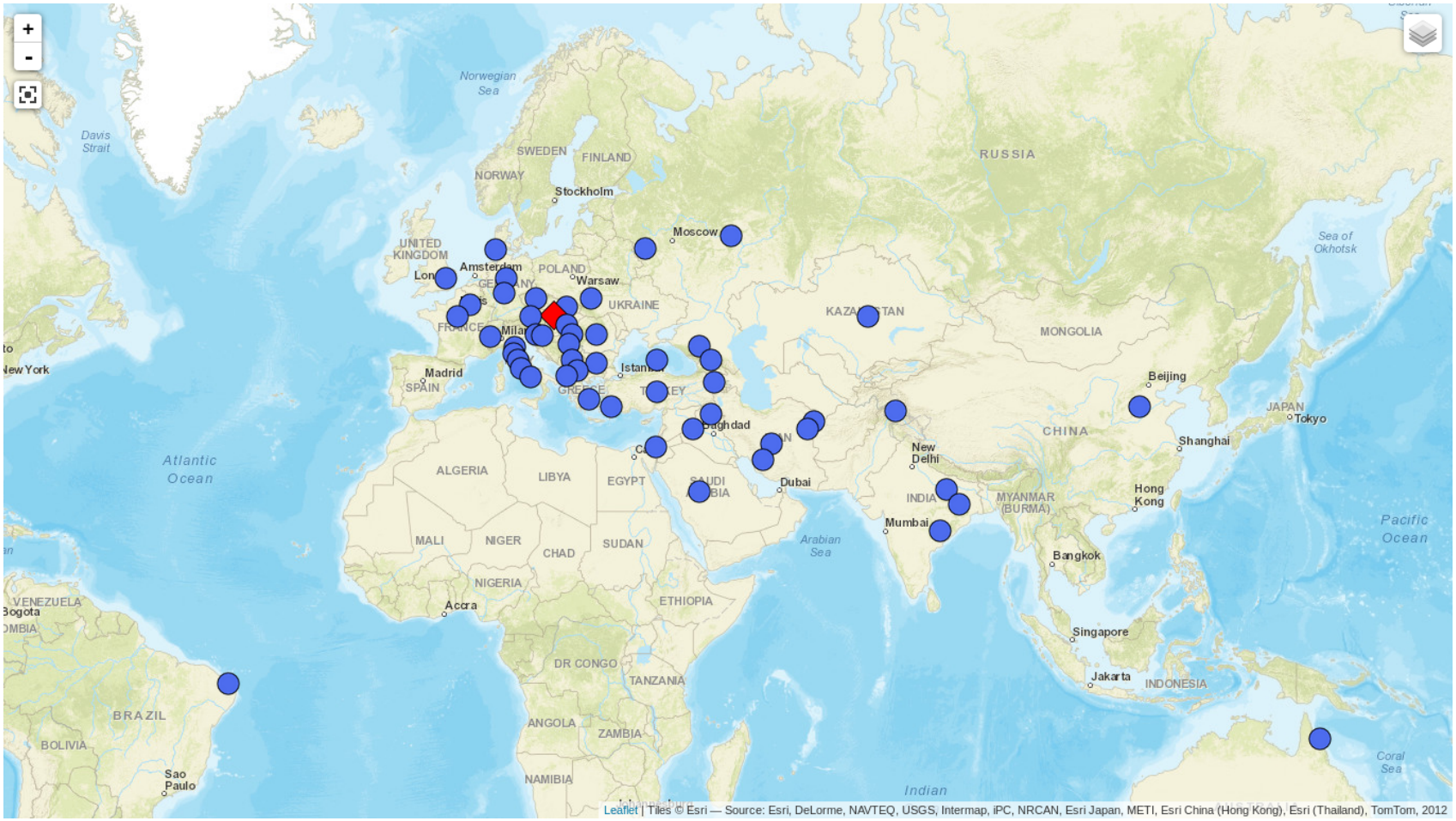
Glottocode	Language	Percentage of loanwords	Number of speakers
west2376	Selice Romani	63%	1350
tari1263	Tarifiyt Berber	53%	1423000
guri1247	Gurindji	48%	540
roma1327	Romanian	43%	24150840
stan1293	English	42%	983522920
sara1340	Saramaccan	42%	26000

Selice Romani

- Percentage of loanwords: 63%
- Number of speakers: 1,350
- Language family: Indo-European



Selice Romani

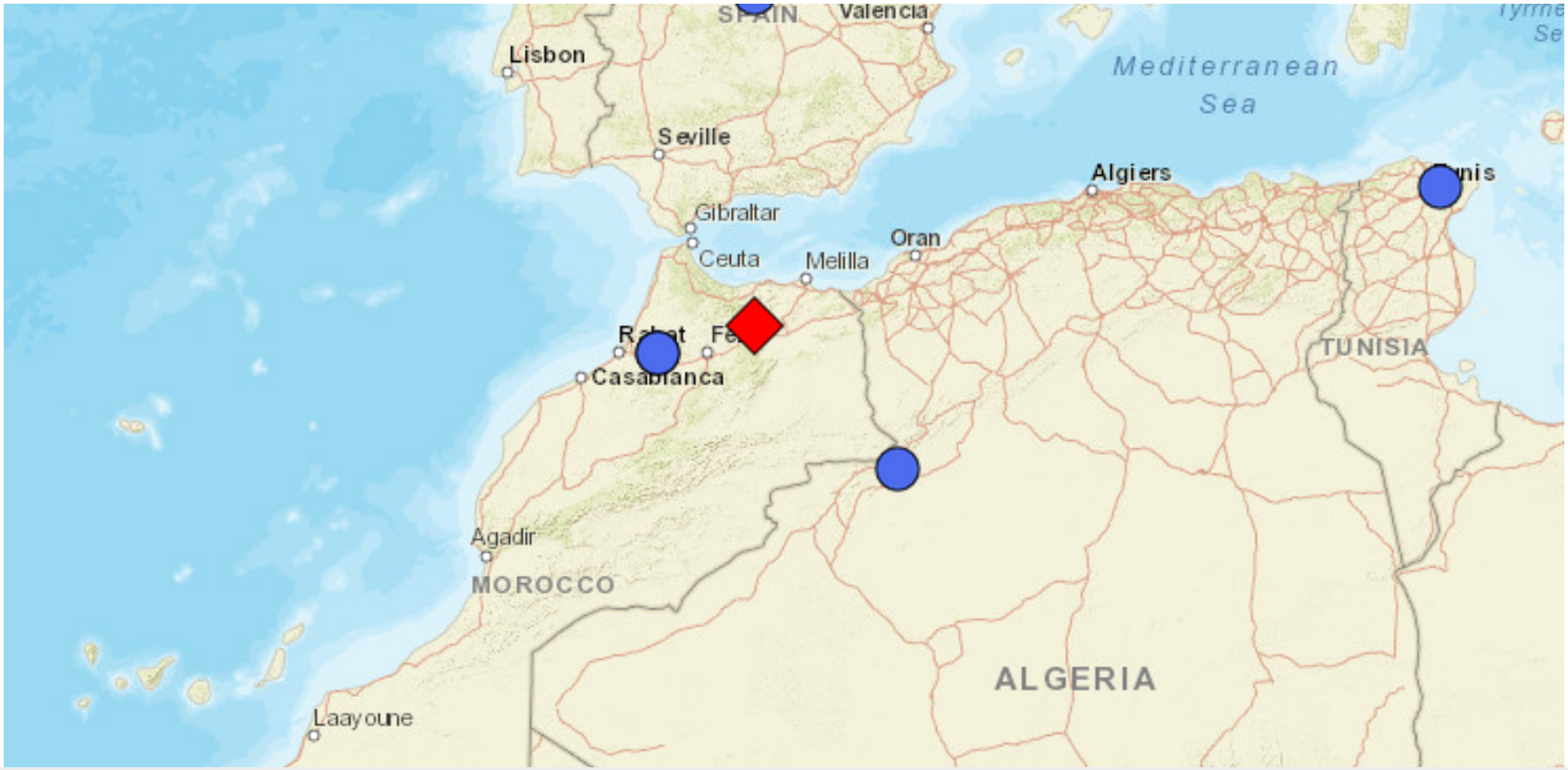


Selice Romani

- Biggest donor language: Hungarian

Tarifiyt Berber

- Percentage of loanwords: 53%
- Number of speakers: 1,423,000
- Language family: Afro-Asiatic, Berber

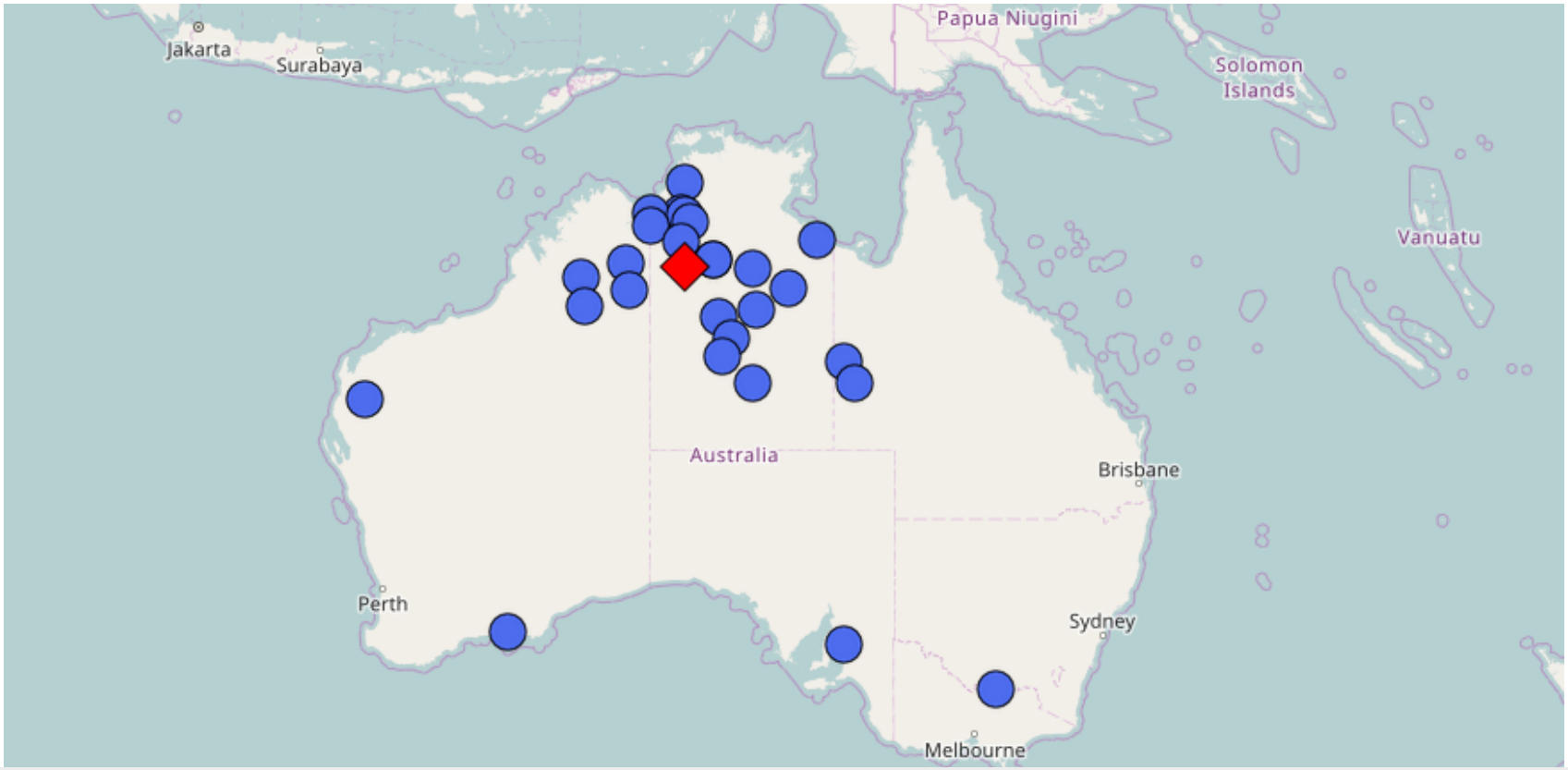


Tarifiyt Berber

- Biggest donor language: Arabic (Moroccan)

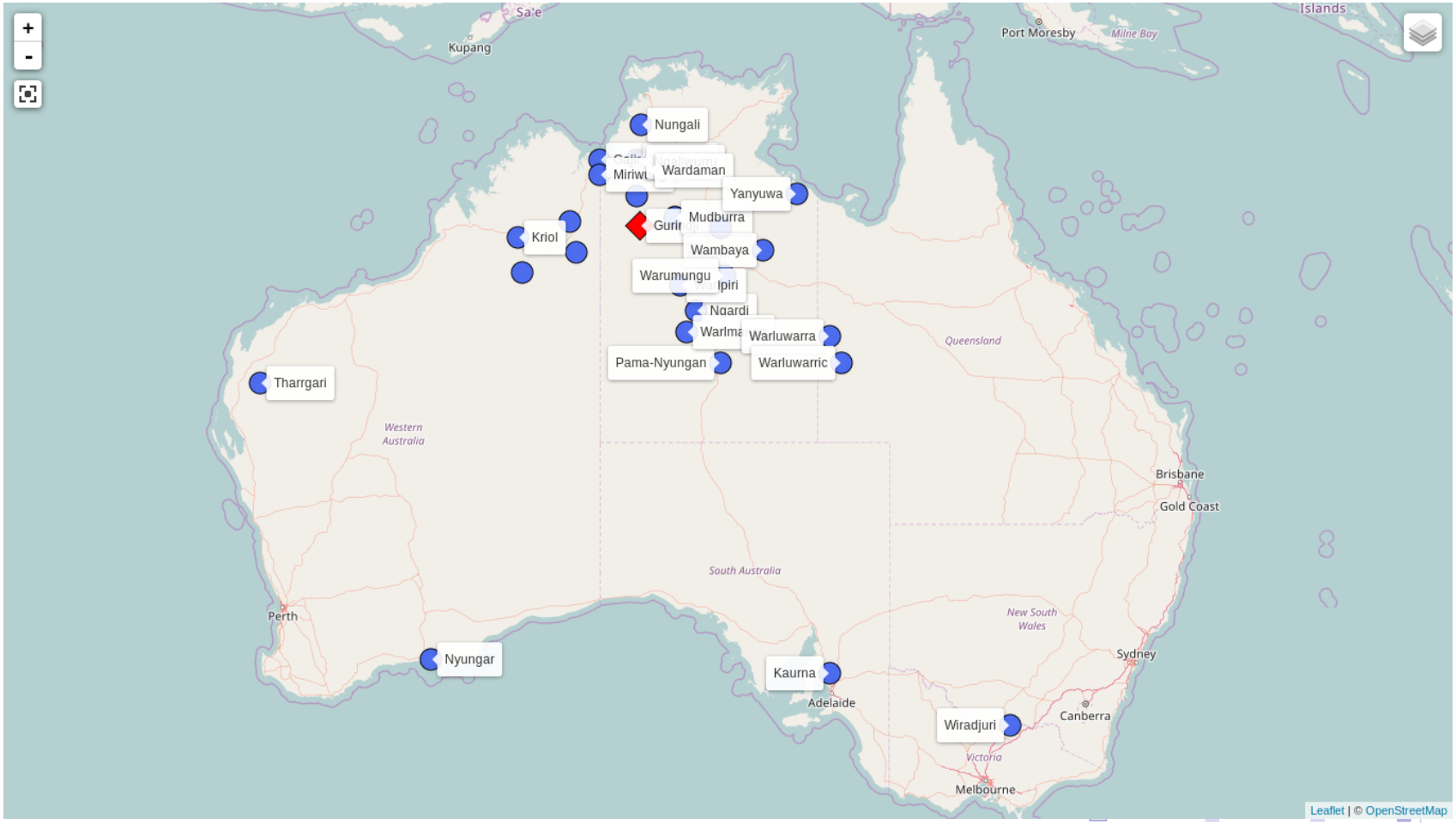
Gurindji

- Percentage of loanwords: 48%
- Number of speakers: 590
- Language family: Australian, Pama-Nyungan



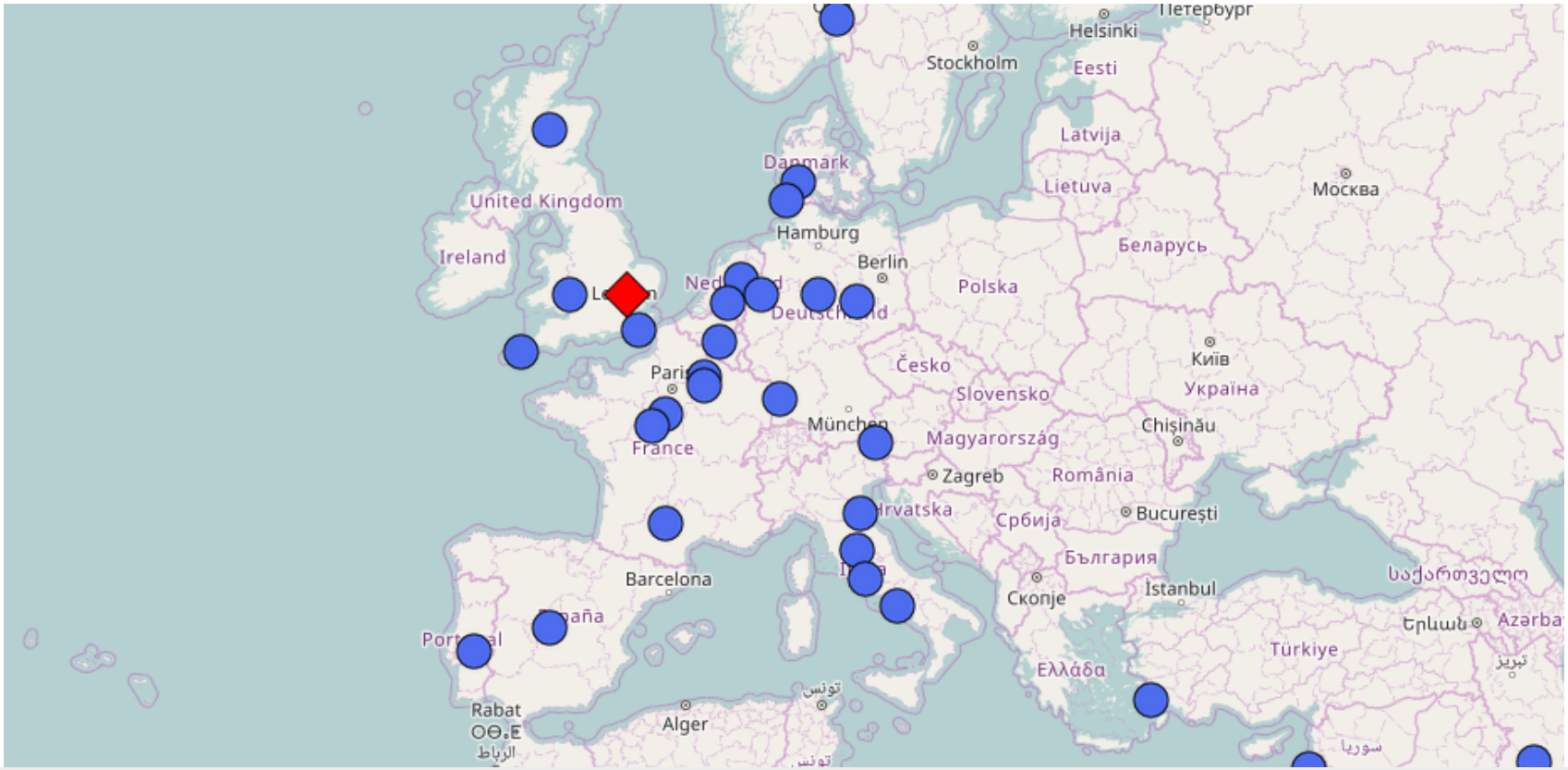
Gurindji

- Biggest donor language: Jaminjung, Miriwung



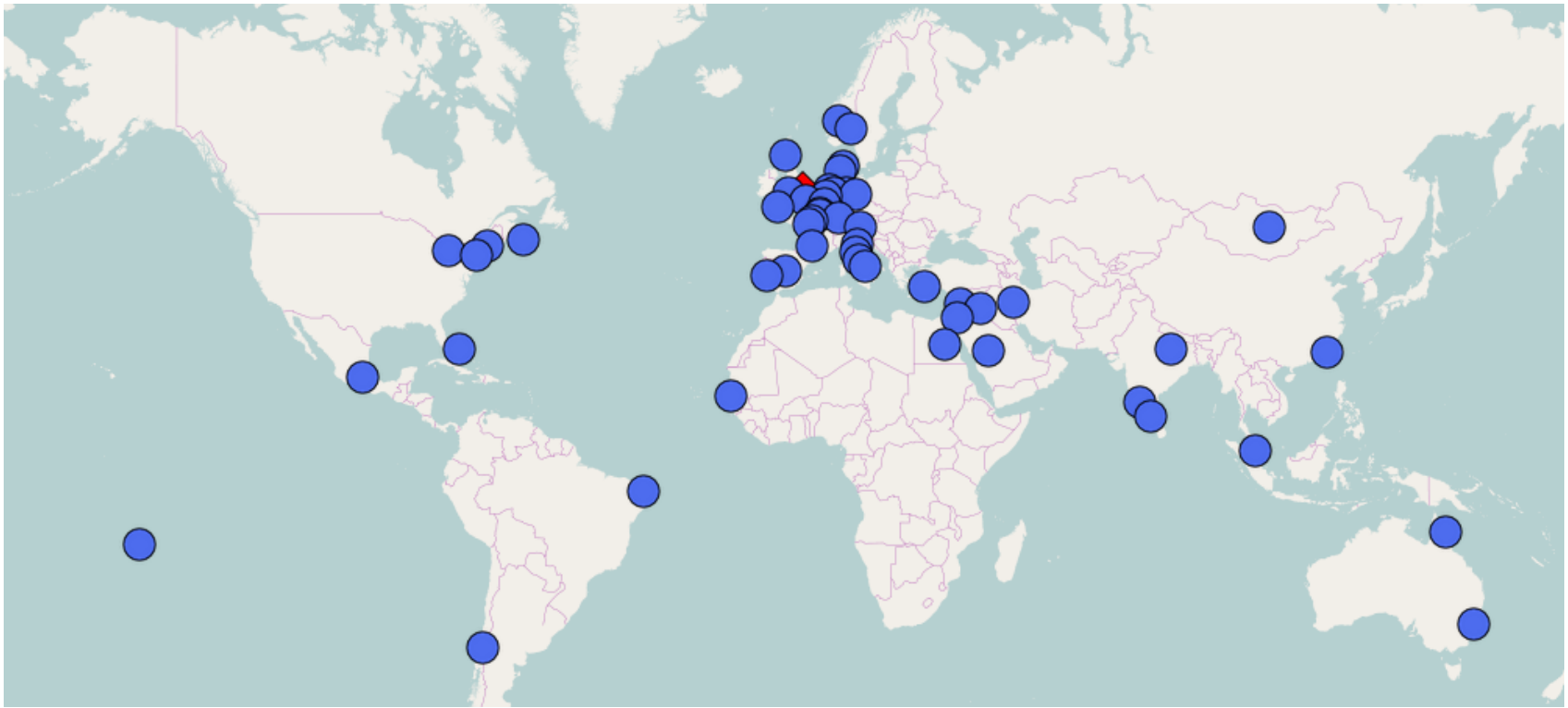
English

- Percentage of loanwords: 42%
- Number of speakers: 983,522,920
- Language family: Indo-European, Germanic



English

- Biggest donor languages: Latin, French



Languages with low loanword percentages

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guri1247	Gurindji	48%	540
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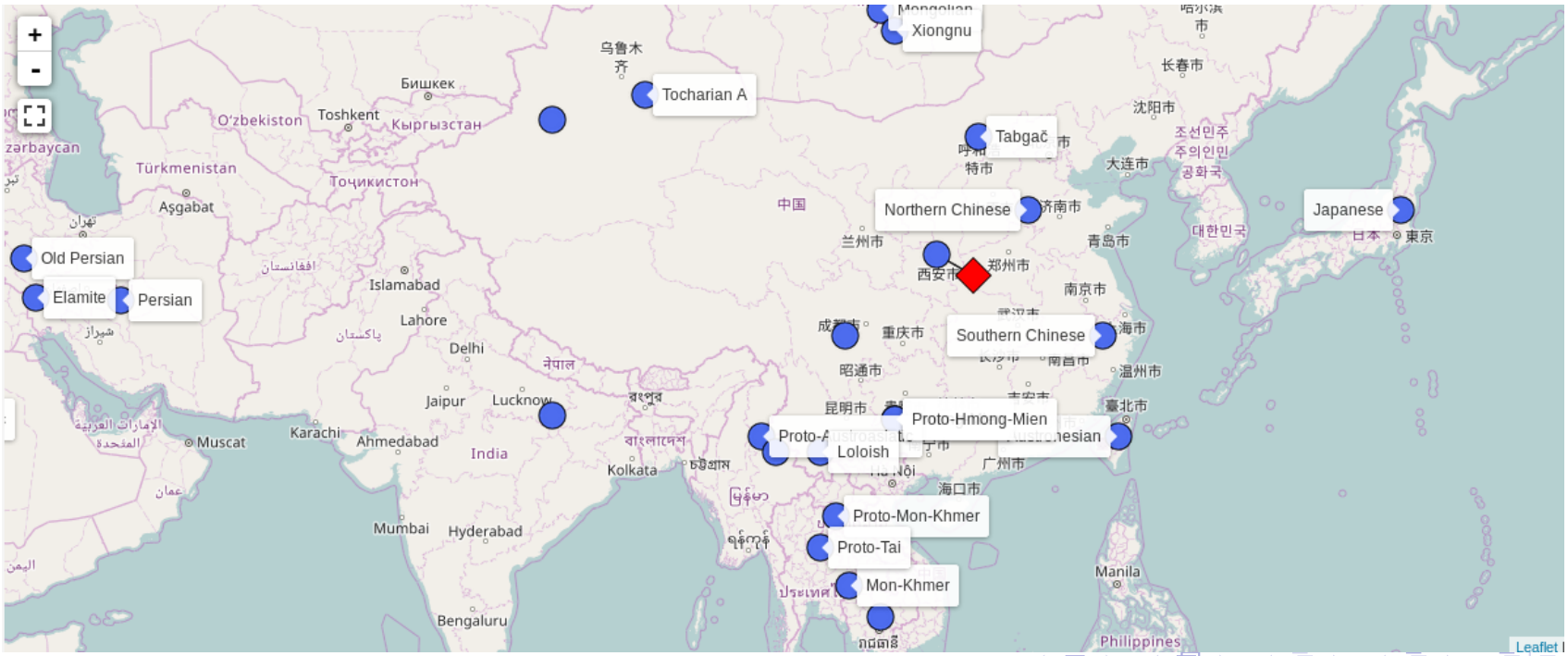
Mandarin Chinese

- Percentage of loanwords: 2%
- Number of speakers: 1,091,782,930
- Language family: Sino-Tibetan, Chinese



Mandarin Chinese

Problem with adopting loanwords

Google	Guge (谷歌)	“harvesting song”/“grain song”
Facebook	Feisibuke (-)	“must die/death is inevitable”
McDonald’s	mài dāng láo (麦当劳)	“wheat serve as labor”

Problematic loanword adoptions

BMW	bǎo mǎ (宝马)	“precious horse”
Nike	nài kè(耐克)	“enduring and persevering”
Coca-Cola	kě kǒu kě lè(可口可乐)	“tasty fun”

Positive examples of loanword adoptions

Otomi

- Percentage of loanwords: 11%
- Number of speakers: 88,789
- Language family: Oto-Manguean, Otomian
- The only donor language in WOLD is Spanish.

Seychelles Creole

- Percentage of loanwords: 13%
- Number of speakers: 72,700
- Language family: Creoles and Pidgins
- Biggest donor language: French

Most languages with a large population occur in the middle of the data set having 20-30% and performing average percentages among others:

Japanese

- Speakers: 128,204,860
- Loanwords: 36%
- Language family: Japanese
- Biggest donor languages: Chinese, English
- It is an isolated language.
- Chinese influence and results of 20th century.

Indonesian

- Speakers: 198,395,070
- Loanwords: 35%
- Language Family: Austronesian, Malayic
- No significant donor language, several of them present: Dutch, Javanese, Arabic, Sanskrit
- Due to colonization?

Vietnamese

- Speakers: 68,058,620
- Loanwords: 27%
- Language Family: Austro-Asiatic, Viet-Muong
- Biggest donor language: Chinese
- Chinese influence

Selice Romani	Mandarin Chinese
Universal multilingualism	Almost no bilingualism
Minority language	Majority language
Socio-politically marginalized	Socio-politically dominant
Relatively short history	Relatively long history
Long absence from ancestral homeland	Long presence in ancestral homeland
Permissiveness towards borrowing	Purism
No standard	Highly standardized
Language contact well-studied	Language contact poorly studied
Donor languages well known	Some donor languages poorly known

Sociolinguistic circumstances underlying lexical borrowing rates in Selice Romani and Mandarin Chinese [1]

- There is a very weak to weak positive correlation between the number of speakers and percentage of loanwords in a language.
- The large p-values (> 0.1) support the above claim.
- Borrowing is asymmetric.
- Borrowing can be considered a sociolinguistic phenomenon. This could possibly be why looking at it in terms of population size will not yield us any meaningful results.
- Further analysis will be done with a larger sample from ASJP.

Thank you for your attention!
Questions?

[1] M. Haspelmath and U. Tadmor.
Loanwords in the World's Languages: A Comparative Handbook.
De Gruyter Mouton. De Gruyter Mouton, 2009.

[2] D. Crystal.
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[4] Eric W. Holman Søren Wichmann and Cecil H. Brown, editors.
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[5] Wikipedia.
Pearson correlation coefficient — wikipedia, the free encyclopedia, 2017.