

Starting Cohort 6: Adults (SC6)  
SUF-Version 1.0.0  
Data Manual [Supplement E]  
Anonymization Procedures  
*Tobias Koberg*



SPONSORED BY THE



Federal Ministry  
of Education  
and Research

Copyrighted Material

University of Bamberg, National Educational Panel Study (NEPS), 96045 Bamberg

<http://www.bildungspanel.de>

Principal Investigator: Prof. Dr. rer. pol. Dr. h. c. Hans-Peter Blossfeld

Vice Managing Director: Prof. Dr. Sabine Weinert

Executive Director of Research: Dr. Jutta von Maurice

Executive Director of Administration: Dipl. sc. pol. Univ. Dipl.-Betriebswirt (FH) Gerd Bolz  
Bamberg, 2011

# **Starting Cohort 6 of the National Educational Panel Study: Anonymisation procedures and statistical disclosure control**

Technical Report

Tobias Koberg

National Educational Panel Study  
University of Bamberg

*v 0.4 December 21, 2011*

## Preamble

This documentation gives an exhaustive explanation of all disclosure risk minimisation techniques applied before dissemination of the Starting Cohort 6 (Adults). For a quick reference what is done to the datasets in detail and on which level you will find your desired information, please skip forward to appendix A, where all affected variables are listed.

## Specifications

To ensure the best possible confidentiality protection of individuals and individual micro data, the National Educational Panel Study complies with strict international standards. Operationalise those, they have been abstracted to the following two criteria:

1. the disseminated data has been transferred to so called *de facto anonymous data*. Identifiable information is coarsened or cut off and kept securely to minimise the risk of statistical disclosure.
2. the use of data is strictly confidential and for statistical purposes only. The closed contract only grants access to members of the scientific community. This contract has a vast amount of legal stipulations, one of them being a large fine which applies for the realisation of re-identification on purpose. Therefore, the disseminated data is highly protected by law and allows a more flexible range of available data.

To pick up the latter, the NEPS has made a huge effort regarding legal regulations to offer as much analysis power of data as possible. This *paradigm of information esteem* reveals the fact that conducted measures of statistical disclosure control are few. Also, if there really was a need for modification, only non-perturbative methods were used.

## Onion-shaped model

The NEPS grants the user three different modes of data access: (1) ***OnSite***, which stands for the opportunity to use the secured infrastructure made available at the NEPS in Bamberg, (2) ***RemoteNEPS***, which is a progressive remote access technology providing a virtual desktop, and finally (3) ***Download***, indicating the possibility to fetch data via a secure web portal.

These given access modes have been originated to allow anonymisation routines for a subtle differentiation of information. The three resulting levels of anonymisation define as follows:

- data provided ***OnSite*** is generally not further anonymised. However, even those data has been rendered *de facto anonymous*, for no disclosure risk to persist. All information contained remains completely sane. Although users have to deal with limited possibilities of data access (i.e. supervised import and export of their results), they are free to work with all data available at the NEPS in a secure environment.

- access via *RemoteNEPS* is considered equivalent to *OnSite*, hence most of the data stays complete.
- as *Download* is assumed to be the most hazardous access mode<sup>1</sup>, some more anonymisation techniques are done to the dataset.

Obviously this approach results in three different versions of all involved datasets. To enable a consistent structure, these data files always contain the entire set of variables; it is their content which differs through the three levels.

As normally there is no need to resign aggregated variables in the higher levels (i.e. *OnSite* or *RemoteNEPS*), those are already defined as a surplus to the original variable in the *OnSite*-version. Stepping down to *RemoteNEPS* the content of related variables too sensitive for this level is overwritten with an exclusive missing code – an operation which we define as *purging*. Note that system missing values are not affected, allowing the user to differ between value existence and nonexistence. This still is a valuable additional information. Same applies to *Download*.

While there is no explicit documentation to this fact, it should remain clear that this procedure accumulates, i.e. purged content under *RemoteNEPS* is therefore neither included in *RemoteNEPS* nor in *Download*.

This *onion-shaped* model provides both ease of (1) use of different sensitivity models (e.g. preparing an analysis using the *Download* dataset and conducting it afterwards using the *OnSite*-data) and (2) documentation, for the subject of documentation is the most sensitive level (*OnSite*), with *RemoteNEPS* and *Download* levels being a subset of these data.

The fourth layer *master* depicted below contains every material which is needed during data processing by the NEPS, but is not meant for the scientific community to be usable.

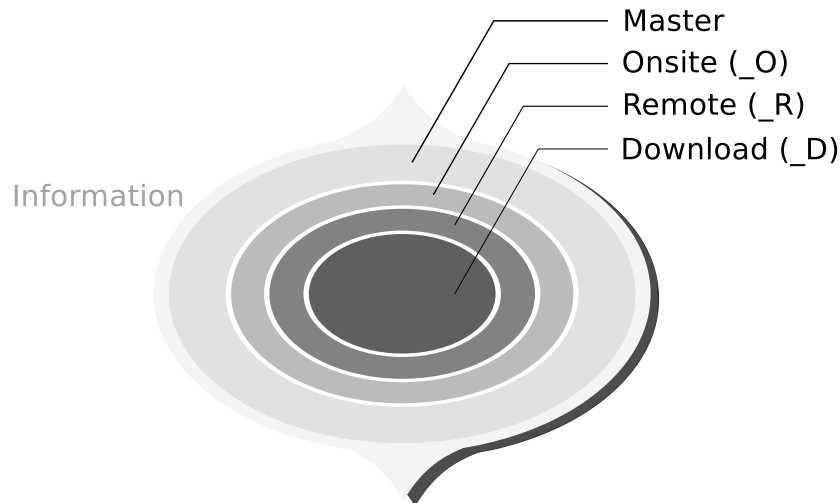


Figure 1: Onion-shaped model defining the different anonymisation levels

<sup>1</sup> 'hazardous' in terms of: the downloaded content is no longer under physical control of the NEPS

Technically, this model realizes in a single letter suffixed to dataset and variable names. All datasets available *OnSite* only are marked with an additional **\_O**, those available via *RemoteNEPS* with **\_R** and *Download* files with **\_D**. The same procedure applies when it comes to variable differentiation. A variable which is only available *OnSite* has been suffixed with **\_O**. In *RemoteNEPS*-access or *Download*, this variable is still present but purged. If there is an alternate version (mainly with coarsened content) for *RemoteNEPS* (suffix **\_R**) or *Download* (suffix **\_D**), those can be used. As said before, these are already integrated in the *OnSite* version.

## Conducted measures

Keeping the usability and the paradigm of information esteem in mind, only very few alterations are actually done to the dataset. These modifications always account for the fact that information may never be lost completely, but aggregated into coarse categories or variables. Please note that all information is still available somewhere and that only *RemoteNEPS* and (mainly) the *Download* version are constraint in this matter. In fact, roughly 90 variables are modified in some way – which is merely less than ten percent of the whole dataset volume. Please refer to appendix A for a complete overview of all variables which fell victim to anonymisation.

The following gives an explanatory overview of all measures conducted.

**countries and languages** All information corresponding to (international) localisation, nationality or languages is only available en full *OnSite* or via *RemoteNEPS*. Variables comprised in the *Download* Scientific Use File (SUF) are aggregated into larger categories – mainly allocating continents and, in detail, states in Europe. For a full list, see appendix B and C.

**open ended strings** All string variables containing actual text are purged in the *RemoteNEPS* version. The information remains accessible *OnSite*. However, all text entries have been reviewed by staff to ensure that absolutely no re-identificational material is included.

**regional information** Regional information below federal districts in Germany is only available via *RemoteNEPS* (i.e. NUTS-3, *Download* version contains NUTS-1). This regards places of birth as well as work, school or residence.

**number of employees** Considering self-employed persons, information about the number of salaried employees has been censored to prevent effortless identification of large entrepreneurs. Therefore, related variables are top-coded at 20 employees. Again, this information is still present via *RemoteNEPS* and *OnSite*.

**macro indicators** Additional information including structural topography and macro-economic measures has been made available only *OnSite*. Please refer to the separate documentation describing those datasets for further information.

Topic	<i>OnSite</i>	<i>RemoteNEPS</i>	<i>Download</i>
International <sup>1</sup>	full data	full data	collapsed
String variables	anonymised	n/a	n/a
Regional (national) <sup>2</sup>	NUTS-3	NUTS-3	NUTS-1
Number of employees	full data	full data	top coded
Macro indicators	accessible	n/a	n/a

<sup>1</sup> international geographical information (e.g., nation states, national languages)

<sup>2</sup> NUTS-1: federal states (“Bundesländer”); NUTS-3: administrative districts (“Kreise”)

Table 1: Availability of sensitive data

For enquiries or further information not covered in this document please feel free to contact `userservice.neps@uni-bamberg.de`.

# A Anonymisation sheet

Instrument					
Name	Starting Cohort Adults, Version 1-0-0				
Stage	8				
Study type	Main survey				
Study number	B72				
Dissemination	Scientific Use File				
Measures					
Datafile	Variable	Label	On-site	RemoteNEPS	SUF-Download
<b>Countries &amp; Languages</b>					
pTarget	t405010	Country in which place of birth is located			Country aggregation
pTarget	t751004	Country in which place of work is located (abroad)			Country aggregation
pTarget	t751015	Second place of residence - country			Country aggregation
pTarget	t406100	Other nationality			Country aggregation
pTarget	t430000	1st native language			Language aggregation
pTarget	t430010	2nd native language			Language aggregation
pTarget	t413060	Auxiliary variable: Native language			Language aggregation
pTarget	t405070	Country of birth, mother			Country aggregation
pTarget	t413100	First language/native language, mother			Language aggregation
pTarget	t405100	Country of birth, father			Country aggregation
pTarget	t413120	First language / native language, father			Language aggregation
pTarget	t413510	1st foreign language household			Language aggregation
pTarget	t32601a	Position generator: country, nurse/carer			Country aggregation
pTarget	t32601b	Position generator: country, engineer			Country aggregation
pTarget	t32601c	Position generator: country, warehouse/transport worker			Country aggregation
pTarget	t32601d	Position generator: country, social worker			Country aggregation
pTarget	t32601e	Position generator: country, shop assistant			Country aggregation
pTarget	t32601f	Position generator: country, policeman/policewoman			Country aggregation
pTarget	t32601g	Position generator: country, doctor			Country aggregation
pTarget	t32601h	Position generator: country, bank clerk			Country aggregation
pTarget	t32601k	Position generator: country, motor mechanic			Country aggregation
pTarget	t32601l	Position generator: country, judge			Country aggregation
pTarget	t32601m	Position generator: country, optician			Country aggregation
pTarget	t32601n	Position generator: country, translator			Country aggregation
pTarget	t32601o	Position generator: country, teacher at a elementary school, Hauptschule or Realschule			Country aggregation
spEmp	ts23239	Country in which place of work is located			Country aggregation
spPartner	ts31205	Partner's country of birth			Country aggregation
spPartner	ts31208	Country of birth, partner's father			Country aggregation
spPartner	ts31210	Country of birth, partner's mother			Country aggregation
spSchool	ts1120s	Country in which school is/was located			Country aggregation
spVocTrain	ts1521s	Country in which vocational training program was done			Country aggregation
<b>String variables (Note: all string variables have been approved for reidentificational material and anonymised where necessary.)</b>					
pTarget	t406001	Other reasons for migration		Purged	
pTarget	t731302	Mother's other school-leaving qualification		Purged	
pTarget	t731304	Other vocational education qualification, mother (open)		Purged	
pTarget	t731305	Other educational institution, mother (open)		Purged	
pTarget	t731307	Other type of degree, mother (open)		Purged	
pTarget	t731309	Institution conferring other degree type, mother (open)		Purged	
pTarget	t731352	Other school-leaving qualification, father		Purged	
pTarget	t731354	Other vocational education qualification, father (open)		Purged	
pTarget	t731355	Other educational institution, father (open)		Purged	
pTarget	t731357	Other type of degree, father (open)		Purged	
pTarget	t731359	Institution conferring other degree type, father (open)		Purged	
spChild	ts33213	Other type of school child		Purged	
spChild	ts33215	Other school-leaving qualification child		Purged	
spChild	ts33217	Other vocational training child		Purged	
spChild	ts33219	Other type of educational institute child		Purged	
spChild	ts33221	Other vocational education qualification, child (open)		Purged	
spChild	ts33222	Other educational institution child (open)		Purged	
spChild	ts33224	Other type of degree child (open)		Purged	
spChild	ts33226	Other institution conferring degree type child (open)		Purged	
spChild	ts33211	Other employment status child (open information)		Purged	
spFurtherEdu2	t272041	Other provider		Purged	
spFurtherEdu2	t272044	Type of certificate		Purged	
spGap	ts29102	Other activity		Purged	
spPartner	ts31213	Other school-leaving qualification of partner		Purged	
spPartner	ts31215	Other vocational education qualification of partner (open)		Purged	
spPartner	ts31216	Other type of educational institution, partner (open)		Purged	
spPartner	ts31218	Other degree from a university / institute of higher education, partner (open)		Purged	
spPartner	ts31220	Other institution conferring degree, partner (open)		Purged	
spSchool	ts11206	Other type of school		Purged	
spSchool	ts11212	Other school-leaving qualification		Purged	
spSchool	ts11217	Other school-leaving qualification respondent is working towards		Purged	
spVocTrain	ts15202	Other type of vocational training		Purged	
spVocTrain	ts15220	other vocational education qualification		Purged	
spVocTrain	ts15222	other vocational education qualification		Purged	
<b>Occupation</b>					
spCourses	t272011	Course content			Purged
spCourses	t272012	Course content			Purged
spCourses	t272013	Course content			Purged
spFurtherEdu1	t272000	Course content of other course			Purged
FurtherEducation	tx28202	Course content (open)			Purged
<b>Geographical region</b>					
pTarget	t700101_g2	Place of birth (Regierungsbezirk)			Purged
pTarget	t700101_g3	Place of birth (Kreiskennziffer)			Purged
pTarget	t751001_g2	Place of residence (Regierungsbezirk)			Purged
pTarget	t751001_g3	Place of residence (Kreiskennziffer)			Purged
pTarget	t751011_g2	Second place of residence (Regierungsbezirk)			Purged
pTarget	t751011_g3	Second place of residence (Kreiskennziffer)			Purged
spEmp	ts23237_g2	Place of work (Regierungsbezirk)			Purged
spEmp	ts23237_g3	Place of work (Kreiskennziffer)			Purged
spSchool	ts11202_g2	Place of school (Regierungsbezirk)			Purged
spSchool	ts11202_g3	Place of school (Kreiskennziffer)			Purged
spVocTrain	ts15207_g2	Place of training center (Regierungsbezirk)			Purged
spVocTrain	ts15207_g3	Place of training center (Kreiskennziffer)			Purged
<b>Number of employees</b>					
pTarget	t731406	Number of mother's employees			TopCoding
pTarget	t731406_v1	Number of mother's employees			TopCoding
pTarget	t731406_ha	Number of mother's employees			TopCoding
pTarget	t731456	Number of father's employees			TopCoding
pTarget	t731456_v1	Number of father's employees			TopCoding
pTarget	t731456_ha	Number of father's employees			TopCoding
spEmp	ts23210	Number of employees			TopCoding



## B Country aggregation

[423]	afghanistan	→	[14]	Other Asia
[121]	albania	→	[16]	Other Southern Europe
[221]	algeria	→	[12]	Other Middle East and North Africa
[123]	andorra	→	[16]	Other Southern Europe
[223]	angola	→	[13]	Other Africa
[320]	antigua and barbuda	→	[ 8]	Central and South America, Caribbean
[323]	argentina	→	[ 8]	Central and South America, Caribbean
[422]	armenia	→	[ 7]	Former Soviet Union
[523]	australia	→	[11]	Oceania/Polynesia
[594]	australian dependent territories in australia, oceania, antarctica	→	[11]	Oceania/Polynesia
[151]	austria	→	[ 9]	Northern and Western Europe
[425]	azerbaijan	→	[ 7]	Former Soviet Union
[324]	bahamas	→	[ 8]	Central and South America, Caribbean
[424]	bahrain	→	[12]	Other Middle East and North Africa
[460]	bangladesh	→	[14]	Other Asia
[322]	barbados	→	[ 8]	Central and South America, Caribbean
[169]	belarus	→	[ 7]	Former Soviet Union
[124]	belgium	→	[ 9]	Northern and Western Europe
[330]	belize	→	[ 8]	Central and South America, Caribbean
[229]	benin	→	[13]	Other Africa
[426]	bhutan	→	[14]	Other Asia
[326]	bolivia, plurinational state of	→	[ 8]	Central and South America, Caribbean
[122]	bosnia and herzegovina	→	[ 6]	Former Yugoslavia
[227]	botswana	→	[13]	Other Africa
[327]	brazil	→	[ 8]	Central and South America, Caribbean
[295]	british dependent territories in africa	→	[ 9]	Northern and Western Europe
[395]	british dependent territories in america	→	[ 9]	Northern and Western Europe
[495]	british dependent territories in asia	→	[ 9]	Northern and Western Europe
[595]	british dependent territories in australia, oceania, antarctica	→	[ 9]	Northern and Western Europe
[195]	british dependent territories in europe	→	[ 9]	Northern and Western Europe
[429]	brunei darussalam	→	[14]	Other Asia
[125]	bulgaria	→	[15]	Other Central and Eastern Europe
[258]	burkina faso	→	[13]	Other Africa
[291]	burundi	→	[13]	Other Africa
[446]	cambodia	→	[14]	Other Asia
[262]	cameroon	→	[13]	Other Africa
[348]	canada	→	[10]	North America
[242]	cape verde	→	[13]	Other Africa
[289]	central african republic	→	[13]	Other Africa
[284]	chad	→	[13]	Other Africa
[332]	chile	→	[ 8]	Central and South America, Caribbean
[479]	china	→	[14]	Other Asia
[349]	colombia	→	[ 8]	Central and South America, Caribbean
[244]	comoros	→	[13]	Other Africa
[245]	congo	→	[13]	Other Africa
[246]	congo, the democratic republic of the	→	[13]	Other Africa
[527]	cook islands	→	[11]	Oceania/Polynesia
[334]	costa rica	→	[ 8]	Central and South America, Caribbean
[130]	croatia	→	[ 6]	Former Yugoslavia
[351]	cuba	→	[ 8]	Central and South America, Caribbean
[181]	cyprus	→	[16]	Other Southern Europe
[164]	czech republic	→	[15]	Other Central and Eastern Europe
[162]	czechoslovakia	→	[15]	Other Central and Eastern Europe
[231]	côte d'Ivoire	→	[13]	Other Africa
[396]	danish dependent territories in america	→	[ 9]	Northern and Western Europe
[196]	danish dependent territories in europe	→	[ 9]	Northern and Western Europe
[126]	denmark	→	[ 9]	Northern and Western Europe
[230]	djibouti	→	[13]	Other Africa
[333]	dominica	→	[ 8]	Central and South America, Caribbean
[335]	dominican republic	→	[ 8]	Central and South America, Caribbean
[392]	dutch dependent territories in america	→	[ 9]	Northern and Western Europe
[336]	ecuador	→	[ 8]	Central and South America, Caribbean
[287]	egypt	→	[12]	Other Middle East and North Africa
[337]	el salvador	→	[ 8]	Central and South America, Caribbean
[274]	equatorial guinea	→	[13]	Other Africa
[224]	eritrea	→	[13]	Other Africa
[127]	estonia	→	[ 7]	Former Soviet Union
[225]	ethiopia	→	[13]	Other Africa
[526]	fiji	→	[11]	Oceania/Polynesia
[128]	finland	→	[ 9]	Northern and Western Europe
[129]	france	→	[ 9]	Northern and Western Europe
[298]	french dependent territories in africa	→	[ 9]	Northern and Western Europe
[398]	french dependent territories in america	→	[ 9]	Northern and Western Europe
[598]	french dependent territories in australia, oceania, antarctica	→	[ 9]	Northern and Western Europe
[236]	gabon	→	[13]	Other Africa
[237]	gambia	→	[13]	Other Africa
[430]	georgia	→	[ 7]	Former Soviet Union
[ 0]	germany	→	[ 1]	Germany
[238]	ghana	→	[13]	Other Africa
[134]	greece	→	[16]	Other Southern Europe
[340]	grenada	→	[ 8]	Central and South America, Caribbean
[345]	guatemala	→	[ 8]	Central and South America, Caribbean

[261]	guinea	⇒	[13]	Other Africa
[259]	guinea-bissau	⇒	[13]	Other Africa
[328]	guyana	⇒	[ 8]	Central and South America, Caribbean
[346]	haiti	⇒	[ 8]	Central and South America, Caribbean
[167]	holy see (vatican city state)	⇒	[16]	Other Southern Europe
[347]	honduras	⇒	[ 8]	Central and South America, Caribbean
[165]	hungary	⇒	[15]	Other Central and Eastern Europe
[136]	iceland	⇒	[ 9]	Northern and Western Europe
[436]	india	⇒	[14]	Other Asia
[437]	indonesia	⇒	[14]	Other Asia
[439]	iran, islamic republic of	⇒	[12]	Other Middle East and North Africa
[438]	iraq	⇒	[12]	Other Middle East and North Africa
[135]	ireland	⇒	[ 9]	Northern and Western Europe
[441]	israel	⇒	[12]	Other Middle East and North Africa
[137]	italy	⇒	[ 2]	Italy
[355]	jamaica	⇒	[ 8]	Central and South America, Caribbean
[442]	japan	⇒	[14]	Other Asia
[445]	jordan	⇒	[12]	Other Middle East and North Africa
[444]	kazakhstan	⇒	[ 7]	Former Soviet Union
[243]	kenya	⇒	[13]	Other Africa
[530]	kiribati	⇒	[11]	Oceania/Polynesia
[434]	korea, democratic people's republic of	⇒	[14]	Other Asia
[467]	korea, republic of	⇒	[14]	Other Asia
[448]	kuwait	⇒	[12]	Other Middle East and North Africa
[450]	kyrgyzstan	⇒	[ 7]	Former Soviet Union
[449]	lao people's democratic republic	⇒	[14]	Other Asia
[139]	latvia	⇒	[ 7]	Former Soviet Union
[451]	lebanon	⇒	[12]	Other Middle East and North Africa
[226]	lesotho	⇒	[13]	Other Africa
[247]	liberia	⇒	[13]	Other Africa
[248]	libya	⇒	[12]	Other Middle East and North Africa
[141]	liechtenstein	⇒	[ 9]	Northern and Western Europe
[142]	lithuania	⇒	[ 7]	Former Soviet Union
[143]	luxembourg	⇒	[ 9]	Northern and Western Europe
[144]	macedonia	⇒	[ 6]	Former Yugoslavia
[249]	madagascar	⇒	[13]	Other Africa
[256]	malawi	⇒	[13]	Other Africa
[482]	malaysia	⇒	[14]	Other Asia
[454]	maldives	⇒	[14]	Other Asia
[251]	mali	⇒	[13]	Other Africa
[145]	malta	⇒	[16]	Other Southern Europe
[544]	marshall islands	⇒	[11]	Oceania/Polynesia
[239]	mauritania	⇒	[13]	Other Africa
[253]	mauritius	⇒	[13]	Other Africa
[353]	mexico	⇒	[ 8]	Central and South America, Caribbean
[545]	micronesia, federated states of	⇒	[11]	Oceania/Polynesia
[146]	moldova, republic of	⇒	[ 7]	Former Soviet Union
[147]	monaco	⇒	[ 9]	Northern and Western Europe
[457]	mongolia	⇒	[14]	Other Asia
[140]	montenegro	⇒	[ 6]	Former Yugoslavia
[252]	morocco	⇒	[12]	Other Middle East and North Africa
[254]	mozambique	⇒	[13]	Other Africa
[427]	myanmar	⇒	[14]	Other Asia
[267]	namibia	⇒	[13]	Other Africa
[531]	nauru	⇒	[11]	Oceania/Polynesia
[458]	nepal	⇒	[14]	Other Asia
[148]	netherlands	⇒	[ 9]	Northern and Western Europe
[536]	new zealand	⇒	[11]	Oceania/Polynesia
[590]	new zealand dependent territories in australia, oceania, antarctica	⇒	[11]	Oceania/Polynesia
[354]	nicaragua	⇒	[ 8]	Central and South America, Caribbean
[255]	niger	⇒	[13]	Other Africa
[232]	nigeria	⇒	[13]	Other Africa
[533]	niue	⇒	[11]	Oceania/Polynesia
[149]	norway	⇒	[ 9]	Northern and Western Europe
[593]	norwegian dependent territories in australia, oceania, antarctica	⇒	[ 9]	Northern and Western Europe
[193]	norwegian dependent territories in europe	⇒	[ 9]	Northern and Western Europe
[456]	oman	⇒	[12]	Other Middle East and North Africa
[499]	other asia	⇒	[12]	Other Middle East and North Africa
[461]	pakistan	⇒	[14]	Other Asia
[537]	palau	⇒	[11]	Oceania/Polynesia
[357]	panama	⇒	[ 8]	Central and South America, Caribbean
[538]	papua new guinea	⇒	[11]	Oceania/Polynesia
[359]	paraguay	⇒	[ 8]	Central and South America, Caribbean
[361]	peru	⇒	[ 8]	Central and South America, Caribbean
[462]	philippines	⇒	[14]	Other Asia
[152]	poland	⇒	[ 3]	Poland
[153]	portugal	⇒	[16]	Other Southern Europe
[447]	qatar	⇒	[12]	Other Middle East and North Africa
[154]	romania	⇒	[ 4]	Romania
[160]	russian federation	⇒	[ 7]	Former Soviet Union
[265]	rwanda	⇒	[13]	Other Africa
[370]	saint kitts and nevis	⇒	[ 8]	Central and South America, Caribbean
[366]	saint lucia	⇒	[ 8]	Central and South America, Caribbean
[369]	saint vincent and the grenadines	⇒	[ 8]	Central and South America, Caribbean
[543]	samoa	⇒	[11]	Oceania/Polynesia
[156]	san marino	⇒	[16]	Other Southern Europe

[268]	sao tome and principe	→	[13]	Other Africa
[472]	saudi arabia	→	[12]	Other Middle East and North Africa
[269]	senegal	→	[13]	Other Africa
[170]	serbia	→	[ 6]	Former Yugoslavia
[132]	serbia and montenegro	→	[ 6]	Former Yugoslavia
[271]	seychelles	→	[13]	Other Africa
[272]	sierra leone	→	[13]	Other Africa
[474]	singapore	→	[14]	Other Asia
[155]	slovakia	→	[15]	Other Central and Eastern Europe
[131]	slovenia	→	[ 6]	Former Yugoslavia
[524]	solomon islands	→	[11]	Oceania/Polynesia
[273]	somalia	→	[13]	Other Africa
[263]	south africa	→	[13]	Other Africa
[159]	soviet union	→	[ 7]	Former Soviet Union
[161]	spain	→	[16]	Other Southern Europe
[297]	spanish dependent territories in africa	→	[16]	Other Southern Europe
[431]	sri lanka	→	[14]	Other Asia
[276]	sudan	→	[13]	Other Africa
[364]	suriname	→	[ 8]	Central and South America, Caribbean
[281]	swaziland	→	[13]	Other Africa
[157]	sweden	→	[ 9]	Northern and Western Europe
[158]	switzerland	→	[ 9]	Northern and Western Europe
[475]	syrian arab republic	→	[12]	Other Middle East and North Africa
[465]	taiwan, province of china	→	[14]	Other Asia
[470]	tajikistan	→	[ 7]	Former Soviet Union
[282]	tanzania, united republic of	→	[13]	Other Africa
[476]	thailand	→	[14]	Other Asia
[483]	timor-leste	→	[14]	Other Asia
[283]	togo	→	[13]	Other Africa
[541]	tonga	→	[11]	Oceania/Polynesia
[371]	trinidad and tobago	→	[ 8]	Central and South America, Caribbean
[285]	tunisia	→	[12]	Other Middle East and North Africa
[163]	turkey	→	[ 5]	Turkey
[471]	turkmenistan	→	[ 7]	Former Soviet Union
[540]	tuvalu	→	[11]	Oceania/Polynesia
[286]	uganda	→	[13]	Other Africa
[166]	ukraine	→	[ 7]	Former Soviet Union
[469]	united arab emirates	→	[12]	Other Middle East and North Africa
[168]	united kingdom	→	[ 9]	Northern and Western Europe
[368]	united states	→	[10]	North America
[996]	unknown foreign country	→	[17]	Other
[365]	uruguay	→	[ 8]	Central and South America, Caribbean
[391]	US dependent territories in america	→	[10]	North America
[591]	US dependent territories in australia, oceania, antarctica	→	[10]	North America
[477]	uzbekistan	→	[ 7]	Former Soviet Union
[532]	vanuatu	→	[11]	Oceania/Polynesia
[367]	venezuela, bolivarian republic of	→	[ 8]	Central and South America, Caribbean
[432]	viet nam	→	[14]	Other Asia
[421]	yemen	→	[12]	Other Middle East and North Africa
[120]	yugoslavia	→	[ 6]	Former Yugoslavia
[257]	zambia	→	[13]	Other Africa
[233]	zimbabwe	→	[13]	Other Africa

## C Language aggregation

[1010211]	Abkhazian	→	[21]	Other languages
[1010305]	Achinese	→	[19]	Asian languages
[1010308]	Acoli	→	[20]	African languages
[1010401]	Adangme	→	[20]	African languages
[1010118]	Afar	→	[20]	African languages
[1010608]	Afrihili	→	[20]	African languages
[1010618]	Afrikaans	→	[20]	African languages
[1011101]	Akan	→	[20]	African languages
[1011111]	Akkadian	→	[19]	Asian languages
[1011202]	Albanian	→	[21]	Other languages
[1011205]	Aleut	→	[21]	Other languages
[1011207]	Algonquian languages	→	[21]	Other languages
[1202120]	Altaic languages	→	[21]	Other languages
[1011308]	Amharic	→	[20]	African languages
[1011601]	Apache languages	→	[21]	Other languages
[1011801]	Arabic	→	[ 1]	Arabic
[1011807]	Aragonese	→	[21]	Other languages
[1011816]	Arapaho	→	[21]	Other languages
[1011823]	Arawak	→	[21]	Other languages
[1011813]	Armenian	→	[21]	Other languages
[1011913]	Assamese	→	[19]	Asian languages
[1012008]	Athapascan languages	→	[21]	Other languages
[1012119]	Australian languages	→	[21]	Other languages
[1012201]	Avaric	→	[21]	Other languages

[1012205]	Avestan	↔	[19]	Asian languages
[1012301]	Awadhi	↔	[19]	Asian languages
[1012513]	Aymara	↔	[21]	Other languages
[1012605]	Azerbaijani	↔	[21]	Other languages
[1020114]	Balinese	↔	[19]	Asian languages
[1020112]	Baluchi	↔	[19]	Asian languages
[1020113]	Bambara	↔	[20]	African languages
[1020109]	Bamileke languages	↔	[20]	African languages
[1020104]	Banda languages	↔	[20]	African languages
[1020119]	Basa	↔	[20]	African languages
[1020111]	Bashkir	↔	[21]	Other languages
[1020117]	Basque	↔	[21]	Other languages
[1022011]	Batak languages	↔	[19]	Asian languages
[1020510]	Beja; Bedawiyet	↔	[20]	African languages
[1020512]	Belarusian	↔	[21]	Other languages
[1020513]	Bemba	↔	[20]	African languages
[1020514]	Bengali	↔	[19]	Asian languages
[1020815]	Bhojpuri	↔	[19]	Asian languages
[1020908]	Bihari languages	↔	[19]	Asian languages
[1020911]	Bikol	↔	[19]	Asian languages
[1020914]	Bini; Edo	↔	[20]	African languages
[1020919]	Bislama	↔	[21]	Other languages
[1141502]	Bokmål, Norwegian; Norwegian Bokmål	↔	[21]	Other languages
[1021519]	Bosnian	↔	[ 2]	Bosnian
[1021801]	Braj	↔	[19]	Asian languages
[1021805]	Breton	↔	[21]	Other languages
[1022107]	Buginese	↔	[19]	Asian languages
[1022112]	Bulgarian	↔	[ 3]	Bulgarian
[1022101]	Buriat	↔	[19]	Asian languages
[1022118]	Burmese	↔	[19]	Asian languages
[1030104]	Caddo	↔	[21]	Other languages
[1030120]	Catalan; Valencian	↔	[21]	Other languages
[1030502]	Cebuano	↔	[19]	Asian languages
[1110813]	Central Khmer	↔	[19]	Asian languages
[1030807]	Chagatai	↔	[19]	Asian languages
[1031303]	Chamic languages	↔	[19]	Asian languages
[1030801]	Chamorro	↔	[21]	Other languages
[1030805]	Chechen	↔	[21]	Other languages
[1030818]	Cherokee	↔	[21]	Other languages
[1030825]	Cheyenne	↔	[21]	Other languages
[1030802]	Chibcha	↔	[21]	Other languages
[1142501]	Chichewa; Chewa; Nyanja	↔	[20]	African languages
[1030809]	Chinese	↔	[19]	Asian languages
[1030814]	Chinook jargon	↔	[21]	Other languages
[1030816]	Chipewyan; Dene Suline	↔	[21]	Other languages
[1030815]	Choctaw	↔	[21]	Other languages
[1030821]	Church Slavic; Old Slavonic; Church Slavonic; Old Bulgarian; Old Church Slavonic	↔	[21]	Other languages
[1030811]	Chuukese	↔	[19]	Asian languages
[1030822]	Chuvash	↔	[21]	Other languages
[1192503]	Classical Syriac	↔	[19]	Asian languages
[1031516]	Coptic	↔	[20]	African languages
[1031518]	Cornish	↔	[21]	Other languages
[1031519]	Corsican	↔	[21]	Other languages
[1031805]	Cree	↔	[21]	Other languages
[1132119]	Creek	↔	[21]	Other languages
[1031816]	Creoles and pidgins	↔	[21]	Other languages
[1031605]	Creoles and pidgins, English based	↔	[21]	Other languages
[1081822]	Croatian	↔	[ 9]	Croatian
[1032605]	Czech	↔	[21]	Other languages
[1040111]	Dakota	↔	[21]	Other languages
[1040114]	Danish	↔	[21]	Other languages
[1040512]	Delaware	↔	[21]	Other languages
[1040914]	Dinka	↔	[20]	African languages
[1040922]	Divehi; Dhivehi; Maldivian	↔	[19]	Asian languages
[1041509]	Dogri	↔	[19]	Asian languages
[1040718]	Dogrib	↔	[21]	Other languages
[1042101]	Duala	↔	[20]	African languages
[1042113]	Dutch, Middle (ca.1050-1350)	↔	[21]	Other languages
[1042120]	Dutch; Flemish	↔	[21]	Other languages
[1042521]	Dyula	↔	[20]	African languages
[1042615]	Dzongkha	↔	[19]	Asian languages
[1050609]	Efik	↔	[20]	African languages
[1050725]	Egyptian (Ancient)	↔	[20]	African languages
[1051101]	Eka-juk	↔	[20]	African languages
[1051224]	Elamite	↔	[19]	Asian languages
[1051407]	English	↔	[ 5]	English
[1051413]	English, Middle (1100-1500)	↔	[21]	Other languages
[1011407]	English, Old (ca.450-1100)	↔	[21]	Other languages
[1051615]	Esperanto	↔	[21]	Other languages
[1051920]	Estonian	↔	[21]	Other languages
[1052305]	Ewe	↔	[20]	African languages
[1052315]	Ewondo	↔	[20]	African languages
[1060114]	Fang	↔	[20]	African languages
[1060120]	Fanti	↔	[20]	African languages
[1060115]	Faroese	↔	[21]	Other languages
[1060910]	Fijian	↔	[21]	Other languages

[1060914]	Finnish	→	[21]	Other languages
[1061514]	Fon	→	[20]	African languages
[1061805]	French	→	[ 6]	French
[1061813]	French, Middle (ca.1400-1600)	→	[21]	Other languages
[1061815]	French, Old (842-ca.1400)	→	[21]	Other languages
[1062118]	Friulian	→	[21]	Other languages
[1062112]	Fulah	→	[20]	African languages
[1070101]	Ga	→	[20]	African languages
[1071201]	Gaelic; Scottish Gaelic	→	[21]	Other languages
[1030118]	Galibi Carib	→	[21]	Other languages
[1071207]	Galician	→	[21]	Other languages
[1122107]	Ganda	→	[20]	African languages
[1070125]	Gayo	→	[19]	Asian languages
[1070201]	Gbaya	→	[20]	African languages
[1070526]	Geez	→	[20]	African languages
[1070515]	Georgian	→	[21]	Other languages
[1070518]	German	→	[ 4]	German
[1071308]	German, Middle High (ca.1050-1500)	→	[21]	Other languages
[1071508]	German, Old High (ca.750-1050)	→	[21]	Other languages
[1070912]	Gilbertese	→	[21]	Other languages
[1071514]	Gondi	→	[19]	Asian languages
[1071518]	Gorontalo	→	[21]	Other languages
[1071520]	Gothic	→	[21]	Other languages
[1071802]	Grebo	→	[20]	African languages
[1071803]	Greek, Ancient (to 1453)	→	[ 7]	Greek
[1071805]	Greek, Modern (1453-)	→	[ 7]	Greek
[1071814]	Guarani	→	[21]	Other languages
[1072110]	Gujarati	→	[19]	Asian languages
[1072309]	Gwich'in	→	[21]	Other languages
[1080109]	Haida	→	[21]	Other languages
[1080120]	Haitian; Haitian Creole	→	[21]	Other languages
[1080121]	Hausa	→	[20]	African languages
[1080123]	Hawaiian	→	[21]	Other languages
[1080502]	Hebrew	→	[19]	Asian languages
[1080518]	Herero	→	[20]	African languages
[1080912]	Hiligaynon	→	[19]	Asian languages
[1080913]	Himachali languages; Western Pahari languages	→	[19]	Asian languages
[1080914]	Hindi	→	[19]	Asian languages
[1081315]	Hiri Motu	→	[21]	Other languages
[1080920]	Hittite	→	[19]	Asian languages
[1081314]	Hmong; Mong	→	[19]	Asian languages
[1082114]	Hungarian	→	[21]	Other languages
[1082116]	Hupa	→	[21]	Other languages
[1090201]	Iban	→	[19]	Asian languages
[1090305]	Icelandic	→	[21]	Other languages
[1090415]	Ido	→	[21]	Other languages
[1090215]	Igbo	→	[20]	African languages
[1091015]	Ijo languages	→	[20]	African languages
[1091215]	Iloko	→	[19]	Asian languages
[1091404]	Indonesian	→	[19]	Asian languages
[1091401]	Interlingua (International Auxiliary Language Association)	→	[21]	Other languages
[1091205]	Interlingue; Occidental	→	[21]	Other languages
[1091121]	Inuktitut	→	[21]	Other languages
[1091611]	Inupiaq	→	[21]	Other languages
[1071205]	Irish	→	[21]	Other languages
[1130701]	Irish, Middle (900-1200)	→	[21]	Other languages
[1190701]	Irish, Old (to 900)	→	[21]	Other languages
[1091815]	Iroquoian languages	→	[21]	Other languages
[1092001]	Italian	→	[ 8]	Italian
[1101614]	Japanese	→	[19]	Asian languages
[1100122]	Javanese	→	[19]	Asian languages
[1101802]	Judeo-Arabic	→	[19]	Asian languages
[1101618]	Judeo-Persian	→	[19]	Asian languages
[1110102]	Kabyle	→	[20]	African languages
[1110103]	Kachin; Jingpho	→	[19]	Asian languages
[1110112]	Kalaallisut; Greenlandic	→	[21]	Other languages
[1110113]	Kamba	→	[20]	African languages
[1110114]	Kannada	→	[19]	Asian languages
[1110121]	Kanuri	→	[20]	African languages
[1110101]	Kara-Kalpak	→	[19]	Asian languages
[1110118]	Karen languages	→	[19]	Asian languages
[1110119]	Kashmiri	→	[19]	Asian languages
[1110123]	Kawi	→	[19]	Asian languages
[1110126]	Kazakh	→	[19]	Asian languages
[1110801]	Khasi	→	[19]	Asian languages
[1110815]	Khotanese; Sakan	→	[19]	Asian languages
[1110911]	Kikuyu; Gikuyu	→	[20]	African languages
[1111302]	Kimbundu	→	[20]	African languages
[1110914]	Kinyarwanda	→	[20]	African languages
[1110918]	Kirghiz; Kyrgyz	→	[19]	Asian languages
[1111513]	Komi	→	[21]	Other languages
[1111514]	Kongo	→	[20]	African languages
[1111511]	Konkani	→	[19]	Asian languages
[1111518]	Korean	→	[19]	Asian languages
[1111519]	Kosraean	→	[21]	Other languages
[1111605]	Kpelle	→	[20]	African languages

[1111815]	Kru languages	↔	[20]	African languages
[1112101]	Kuanyama; Kwanyama	↔	[20]	African languages
[1112113]	Kumyk	↔	[19]	Asian languages
[1112118]	Kurdish	↔	[10]	Kurdish
[1111821]	Kurukh	↔	[19]	Asian languages
[1112120]	Kutenai	↔	[21]	Other languages
[1120104]	Ladino	↔	[21]	Other languages
[1120108]	Lahnda	↔	[19]	Asian languages
[1120113]	Lamba	↔	[20]	African languages
[1040125]	Land Dayak languages	↔	[19]	Asian languages
[1120115]	Lao	↔	[19]	Asian languages
[1120120]	Latin	↔	[21]	Other languages
[1120122]	Latvian	↔	[21]	Other languages
[1120526]	Lezghian	↔	[19]	Asian languages
[1120913]	Limburgan; Limburger; Limburgish	↔	[21]	Other languages
[1120914]	Lingala	↔	[20]	African languages
[1120920]	Lithuanian	↔	[21]	Other languages
[1121526]	Lozi	↔	[20]	African languages
[1122102]	Luba-Katanga	↔	[20]	African languages
[1122101]	Luba-Lulua	↔	[20]	African languages
[1122109]	Luiseno	↔	[21]	Other languages
[1122114]	Lunda	↔	[20]	African languages
[1122115]	Luo (Kenya and Tanzania)	↔	[20]	African languages
[1122119]	Lushai	↔	[19]	Asian languages
[1122026]	Luxembourgish; Letzeburgesch	↔	[21]	Other languages
[1130103]	Macedonian	↔	[21]	Other languages
[1130104]	Madurese	↔	[19]	Asian languages
[1130107]	Magahi	↔	[19]	Asian languages
[1130109]	Maithili	↔	[19]	Asian languages
[1130111]	Makasar	↔	[19]	Asian languages
[1131207]	Malagasy	↔	[20]	African languages
[1130125]	Malay	↔	[19]	Asian languages
[1130112]	Malayalam	↔	[19]	Asian languages
[1131220]	Maltese	↔	[21]	Other languages
[1131403]	Manchu	↔	[19]	Asian languages
[1130418]	Mandar	↔	[19]	Asian languages
[1130114]	Mandingo	↔	[20]	African languages
[1131409]	Manipuri	↔	[19]	Asian languages
[1131415]	Manobo languages	↔	[19]	Asian languages
[1071222]	Manx	↔	[21]	Other languages
[1130115]	Maori	↔	[21]	Other languages
[1011814]	Mapudungun; Mapuche	↔	[21]	Other languages
[1130118]	Marathi	↔	[19]	Asian languages
[1030813]	Mari	↔	[21]	Other languages
[1130108]	Marshallese	↔	[21]	Other languages
[1132318]	Marwari	↔	[19]	Asian languages
[1130119]	Masai	↔	[20]	African languages
[1132514]	Mayan languages	↔	[21]	Other languages
[1130514]	Mende	↔	[20]	African languages
[1130903]	Mi'kmaq; Micmac	↔	[21]	Other languages
[1130914]	Minangkabau	↔	[19]	Asian languages
[1131508]	Mohawk	↔	[21]	Other languages
[1121512]	Mongo	↔	[20]	African languages
[1131514]	Mongolian	↔	[19]	Asian languages
[1131519]	Mossi	↔	[20]	African languages
[1132114]	Munda languages	↔	[19]	Asian languages
[1140108]	Nahuatl languages	↔	[21]	Other languages
[1140121]	Nauru	↔	[21]	Other languages
[1140122]	Navajo; Navaho	↔	[21]	Other languages
[1140405]	Ndebele, North; North Ndebele	↔	[20]	African languages
[1140212]	Ndebele, South; South Ndebele	↔	[20]	African languages
[1140415]	Ndonga	↔	[20]	African languages
[1140523]	Nepal Bhasa; Newari	↔	[19]	Asian languages
[1140516]	Nepali	↔	[19]	Asian languages
[1140901]	Nias	↔	[19]	Asian languages
[1140921]	Niuean	↔	[21]	Other languages
[1141514]	Norse, Old	↔	[21]	Other languages
[1191305]	Northern Sami	↔	[21]	Other languages
[1141518]	Norwegian	↔	[21]	Other languages
[1141415]	Norwegian Nynorsk; Nynorsk, Norwegian	↔	[21]	Other languages
[1142513]	Nyamwezi	↔	[20]	African languages
[1142514]	Nyankole	↔	[20]	African languages
[1142515]	Nyoro	↔	[20]	African languages
[1142609]	Nzima	↔	[20]	African languages
[1150309]	Occitan (post 1500); Provençal	↔	[21]	Other languages
[1011803]	Official Aramaic (700-300 BCE); Imperial Aramaic (700-300 BCE)	↔	[19]	Asian languages
[1151009]	Ojibwa	↔	[21]	Other languages
[1151809]	Oriya	↔	[19]	Asian languages
[1151813]	Oromo	↔	[20]	African languages
[1151901]	Osage	↔	[21]	Other languages
[1151919]	Ossetian; Ossetic	↔	[19]	Asian languages
[1152015]	Otomian languages	↔	[21]	Other languages
[1160112]	Pahlavi	↔	[21]	Other languages
[1160121]	Palauan	↔	[21]	Other languages
[1161209]	Pali	↔	[19]	Asian languages
[1160113]	Pampanga; Kapampangan	↔	[19]	Asian languages

[1160107]	Pangasinan	↔	[19]	Asian languages
[1160114]	Panjabi; Punjabi	↔	[19]	Asian languages
[1160116]	Papiamento	↔	[21]	Other languages
[1141915]	Pedi; Sepedi; Northern Sotho	↔	[20]	African languages
[1160518]	Persian	↔	[19]	Asian languages
[1160515]	Persian, Old (ca.600-400 B.C.)	↔	[19]	Asian languages
[1160814]	Phoenician	↔	[19]	Asian languages
[1161514]	Pohnpeian	↔	[19]	Asian languages
[1161512]	Polish	↔	[11]	Polish
[1161518]	Portuguese	↔	[12]	Portuguese
[1161801]	Prakrit languages	↔	[19]	Asian languages
[1161815]	Provençal, Old (to 1500)	↔	[21]	Other languages
[1162119]	Pusho; Pashto	↔	[19]	Asian languages
[1172105]	Quechua	↔	[21]	Other languages
[1180110]	Rajasthani	↔	[19]	Asian languages
[1180116]	Rapanui	↔	[21]	Other languages
[1180118]	Rarotongan; Cook Islands Maori	↔	[21]	Other languages
[1182113]	Romanian; Moldavian; Moldovan	↔	[14]	Romanian
[1181508]	Romansh	↔	[21]	Other languages
[1181513]	Romany	↔	[21]	Other languages
[1182114]	Rundi	↔	[20]	African languages
[1182119]	Russian	↔	[13]	Russian
[1190112]	Salishan languages	↔	[21]	Other languages
[1190113]	Samaritan Aramaic	↔	[19]	Asian languages
[1191309]	Sami languages	↔	[21]	Other languages
[1191315]	Samoan	↔	[21]	Other languages
[1190104]	Sandawe	↔	[20]	African languages
[1190107]	Sango	↔	[20]	African languages
[1190114]	Sanskrit	↔	[19]	Asian languages
[1190120]	Santali	↔	[19]	Asian languages
[1191804]	Sardinian	↔	[21]	Other languages
[1190119]	Sasak	↔	[19]	Asian languages
[1190315]	Scots	↔	[21]	Other languages
[1190512]	Selkup	↔	[19]	Asian languages
[1191816]	Serbian	↔	[15]	Serbian
[1191818]	Serer	↔	[20]	African languages
[1190814]	Shan	↔	[19]	Asian languages
[1191401]	Shona	↔	[20]	African languages
[1190904]	Sidamo	↔	[20]	African languages
[1021201]	Siksika	↔	[21]	Other languages
[1191404]	Sindhi	↔	[19]	Asian languages
[1190914]	Sinhala; Sinhalese	↔	[19]	Asian languages
[1190915]	Siouan languages	↔	[21]	Other languages
[1191201]	Slavic languages	↔	[20]	African languages
[1191215]	Slovak	↔	[21]	Other languages
[1191222]	Slovenian	↔	[21]	Other languages
[1191507]	Sogdian	↔	[19]	Asian languages
[1191513]	Somali	↔	[20]	African languages
[1191514]	Songhai languages	↔	[20]	African languages
[1191411]	Soninke	↔	[20]	African languages
[1230514]	Sorbian languages	↔	[21]	Other languages
[1191520]	Sotho, Southern	↔	[20]	African languages
[1191601]	Spanish; Castilian	↔	[16]	Spanish
[1192111]	Sukuma	↔	[20]	African languages
[1192124]	Sumerian	↔	[19]	Asian languages
[1192114]	Sundanese	↔	[19]	Asian languages
[1192119]	Susu	↔	[20]	African languages
[1192301]	Swahili	↔	[20]	African languages
[1191923]	Swati	↔	[20]	African languages
[1192305]	Swedish	↔	[21]	Other languages
[1200712]	Tagalog	↔	[19]	Asian languages
[1200108]	Tahitian	↔	[21]	Other languages
[1200711]	Tajik	↔	[19]	Asian languages
[1201308]	Tamashek	↔	[20]	African languages
[1200113]	Tamil	↔	[19]	Asian languages
[1200120]	Tatar	↔	[19]	Asian languages
[1200512]	Telugu	↔	[19]	Asian languages
[1200518]	Terenó	↔	[21]	Other languages
[1200520]	Tetum	↔	[19]	Asian languages
[1200801]	Thai	↔	[19]	Asian languages
[1200902]	Tibetan	↔	[19]	Asian languages
[1200907]	Tigre	↔	[20]	African languages
[1200918]	Tigrinya	↔	[20]	African languages
[1200513]	Timne	↔	[20]	African languages
[1200922]	Tiv	↔	[20]	African languages
[1201209]	Tlingit	↔	[21]	Other languages
[1201609]	Tok Pisin	↔	[21]	Other languages
[1201112]	Tokelau	↔	[21]	Other languages
[1201507]	Tonga (Nyasa)	↔	[20]	African languages
[1201514]	Tonga (Tonga Islands)	↔	[21]	Other languages
[1201909]	Tsimshian	↔	[21]	Other languages
[1201915]	Tsonga	↔	[20]	African languages
[1201914]	Tswana	↔	[20]	African languages
[1202113]	Tumbuka	↔	[20]	African languages
[1202118]	Turkish	↔	[17]	Turkish
[1152001]	Turkish, Ottoman (1500-1928)	↔	[19]	Asian languages

[1202111]	Turkmen	↔	[19]	Asian languages
[1202212]	Tuvalu	↔	[21]	Other languages
[1202522]	Tuvinian	↔	[19]	Asian languages
[1202309]	Twi	↔	[20]	African languages
[1210701]	Ugaritic	↔	[19]	Asian languages
[1210907]	Uighur; Uyghur	↔	[19]	Asian languages
[1211118]	Ukrainian	↔	[21]	Other languages
[1211302]	Umbundu	↔	[20]	African languages
[1211804]	Urdu	↔	[19]	Asian languages
[1212602]	Uzbek	↔	[19]	Asian languages
[1220109]	Vai	↔	[20]	African languages
[1220514]	Venda	↔	[20]	African languages
[1220905]	Vietnamese	↔	[18]	Vietnamese
[1221512]	Volapük	↔	[21]	Other languages
[1221520]	Votic	↔	[21]	Other languages
[1230111]	Wakashan languages	↔	[21]	Other languages
[1230112]	Walamo	↔	[20]	African languages
[1231214]	Walloon	↔	[21]	Other languages
[1230118]	Waray	↔	[19]	Asian languages
[1230119]	Washo	↔	[21]	Other languages
[1230512]	Welsh	↔	[21]	Other languages
[1061825]	Western Frisian	↔	[21]	Other languages
[1231512]	Wolof	↔	[20]	African languages
[1240815]	Xhosa	↔	[20]	African languages
[1190108]	Yakut	↔	[19]	Asian languages
[1250115]	Yao	↔	[20]	African languages
[1250116]	Yapese	↔	[19]	Asian languages
[1250904]	Yiddish	↔	[21]	Other languages
[1251518]	Yoruba	↔	[20]	African languages
[1251611]	Yupik languages	↔	[21]	Other languages
[1261404]	Zande languages	↔	[20]	African languages
[1260116]	Zapotec	↔	[21]	Other languages
[1260514]	Zenaga	↔	[20]	African languages
[1260801]	Zhuang; Chuang	↔	[19]	Asian languages
[1262112]	Zulu	↔	[20]	African languages
[1262114]	Zuni	↔	[21]	Other languages