Package 'glottospace'

October 13, 2022

Type Package

Title Language Mapping and Geospatial Analysis of Linguistic and
Cultural Data

Version 0.0.112

Author Sietze Norder

Maintainer Sietze Norder <mail@sietzenorder.nl>

Description Streamlined workflows for geolinguistic analysis, including:
accessing global linguistic and cultural databases, data import, data
entry, data cleaning, data exploration, mapping, visualization and
export.

License GPL (>= 3)

URL <https://github.com/SietzeN/glottospace>

BugReports <https://github.com/SietzeN/glottospace/issues>

Depends R (>= 4.1.0)

Imports dplyr, ggplot2, magrittr, purrr, readxl, rlang, rnaturalearth,
rnaturalearthdata, sf, tibble, tidyr, tmap, units, writexl

Suggests cluster, grDevices, htmlwidgets, jsonlite, mapedit, plotly,
RColorBrewer, s2, scales, vegan, viridisLite, xml2

Encoding UTF-8

Language en-US

LazyData true

RoxygenNote 7.1.2

NeedsCompilation no

Repository CRAN

Date/Publication 2022-04-12 12:42:29 UTC

R topics documented:

---

glottobooster	*Enhance glottolog data*

Description

This function restructures glottolog data, and optionally adds/removes data. If you want more flexibility in choosing which data to add/remove, you can use glottoboosterflex().

Usage

```
glottobooster(
  glottologdata = NULL,
  space = TRUE,
  addfamname = TRUE,
  addisolates = TRUE,
  L1only = TRUE,
  addfamsize = TRUE,
  addfamsizerank = TRUE
)
```

Arguments

`glottologdata`	data from glottolog, can be downloaded with glottoget("glottolog").
`space`	Return spatial object?
`addfamname`	Add column with familiy names?
`addisolates`	Add column to identify isolates?
`L1only`	Keep only L1 languages (remove bookkeeping, unclassifiable, sign languages, etc.).
`addfamsize`	Add column with family size?
`addfamsizerank`	Add column with family size rank?

Details

This function is used to generate 'glottobase' (the reference dataset used throughout the glottospace R package). The default options generate 'glottobase', which can be loaded directly using glottoget("glottobase").

Value

glottologdata object, either a spatial object (class: sf) or a data.frame.

See Also

Other <glottobooster>: glottoboosterflex()

Examples

```
glottologdata <- glottoget("glottolog")
glottobase <- glottobooster(glottologdata)
```

---

glottocheck	*Quality check of glottodata or glottosubdata*

Description

This function first checks whether a dataset is glottodata or glottosubdata, and depending on the result calls glottocheck_data or glottocheck_subdata.

Usage

```
glottocheck(glottodata, diagnostic = TRUE, checkmeta = FALSE)
```

Arguments

glottodata	User-provided glottodata
diagnostic	If TRUE (default) a data viewer will be opened to show the levels of each variable (including NAs), and a data coverage plot will be shown.
checkmeta	Should metadata be checked as well?

Details

It subsequently checks whether:

- one column exists with the name "glottocode"
- there are rows without a glottocode (missing IDs)
- there are rows with duplicated glottocodes (duplicate IDs)
- all variables have at least two levels
- all glottocodes are valid

Value

Diagnostic messages highlighting potential issues with glottodata or glottosubdata.

Examples

```
glottodata <- glottoget("demodata")
glottocheck(glottodata, diagnostic = FALSE)
```

---

glottoclean	*Clean glottodata/glottosubdata*

Description

This function cleans glottodata/glottosubdata and returns a simplified glottodata/glottosubdata object containing only the cleaned data table and a structure table.

Usage

```
glottoclean(glottodata, tona = NULL, tofalse = NULL, totrue = NULL, id = NULL)
```

Arguments

glottodata	glottodata (either a list or a data.frame)
tona	Optional additional values to recode to NA (besides default)
tofalse	Optional additional values to recode to FALSE (besides default)
totrue	Optional additional values to recode to TRUE (besides default)
id	By default, glottoclean looks for a column named 'glottocode', if the id is in a different column, this should be specified.

Details

This function has some built in default values that are being recoded: For example, if column type is 'symm' or 'asymm', values such as "No" and 0 are recoded to FALSE Values such as "?" are recoded to NA.

Value

A cleaned-up and simplified version of the original glottodata object

Examples

```
glottodata <- glottoget("demodata", meta = TRUE)
glottodata <- glottoclean(glottodata)

glottosubdata <- glottoget("demosubdata", meta = TRUE)
glottosubdata <- glottoclean(glottosubdata)
```

---

glottocode_exists	*Check whether a set of glottocodes exist in glottolog*

Description

Checks whether a set of glottocodes exist in glottolog (checked at the level of L1 languages)

Usage

```
glottocode_exists(glottocode)
```

Arguments

glottocode   A glottocode or character vector of glottocodes

Value

A logical vector

Examples

```
glottocode_exists(c("yucu1253"))
glottocode_exists(c("yucu1253", "abcd1234"))
```

glottoconvert	*Convert a linguistic dataset into glottodata or glottosubdata*

Description

Convert a linguistic dataset into glottodata or glottosubdata

Usage

```
glottoconvert(
  data,
  var,
  glottocodes = NULL,
  table = NULL,
  glottocolumn = NULL,
  glottosubcolumn = NULL,
  ref = NULL,
  page = NULL,
  remark = NULL,
  contributor = NULL,
  varnamecol = NULL
)
```

Arguments

data	A dataset that should be converted into glottodata/glottosubdata. This will generally be an excel file loaded with glottoget().
	The dataset will be converted into glottodata if:
	• all data are stored in a single table, or
	• the dataset contains several tables of which one is called 'glottodata', or
	• a table argument is provided.
	Otherwise, glottospace will attempt to convert the dataset into glottosubdata. This works if:
	• table names are glottocodes, and
	• an argument is provided to glottocodes, or the dataset contains a sample table from which glottocodes can be obtained.
var	Character string that distinguishes those columns which contain variable names.
glottocodes	Optional character vector of glottocodes. If no glottocodes are supplied, glottospace will search for them in the sample table.
table	In case dataset consists of multiple tables, indicate which table contains the data that should be converted.
glottocolumn	column name or column id with glottocodes (optional, provide if glottocodes are not stored in a column called 'glottocode')

glottosubcolumn

        Column name or column id with glottosubcodes (optional, provide if glottosub-
        codes are not stored in a column called 'glottosubcode')

ref	Character string that distinguishes those columns which contain references.
page	Character string that distinguishes those columns which contain page numbers.
remark	Character string that distinguishes those columns which contain remarks.
contributor	Character string that distinguishes those columns which contain contributors.
varnamecol	In case the dataset contains a structure table, but the varnamecol is not called 'varname', its name should be specified.

Value

A glottodata or glottosubdata object (either a list or data.frame)

---

glottocreate   *Generate empty glottodata or glottosubdata for a set of glottocodes.*

Description

Creates glottodata/glottosubdata and optionally save it as excel file.

Usage

```
glottocreate(
  glottocodes,
  variables,
  meta = TRUE,
  filename = NULL,
  simplify = TRUE,
  groups = NULL,
  n = NULL,
  levels = NULL,
  check = FALSE,
  maintainer = NULL,
  email = NULL,
  citation = NULL,
  url = NULL
)
```

Arguments

glottocodes	Character vector of glottocodes
variables	Either a vector with variable names, or a single number indicating the total number of variable columns to be generated
meta	Should metatables be created?

filename	Optional name of excel file where to store glottodata
simplify	By default, if a glottodata table is created without metadata, the data will be returned as a data.frame (instead of placing the data inside a list of length 1)
groups	Character vector of group names (only for glottosubdata)
n	Optional, number of records to be assigned to each group (only for glottosubdata)
levels	Optional character vector with levels across all variables
check	Should glottocodes be checked? Default is FALSE because takes much time to run.
maintainer	Name of the person/organization maintaining the data (optional)
email	Email address of maintainer/contact person (optional)
citation	How to cite the data (optional)
url	Optional url linking to a webpage.

Details

By default, glottodata will be created. In case a groups argument is provided, glottosubdata will be created.

glottodata has one table for all languages (and a number of metatables if meta = TRUE), with one row per glottocode. glottosubdata has one table for each language (and a number of metatables if meta = TRUE), with one row per glottosubcode.

Run glottoget("demodata") or glottoget("demosubdata") to see examples.

In case you already have your own dataset and want to convert it into glottodata, use: glottoconvert().

Value

A glottodata or glottosubdata object (either with or without metadata). The output can be a list or a data.frame.

Examples

```
# Creates glottodata table without metadata tables
glottocreate(glottocodes = c("yucu1253", "tani1257"),
variables = 3, meta = FALSE)

# Creates glottodata table with metadata tables (stored in a list):
glottocreate(glottocodes = c("yucu1253", "tani1257"), variables = 3)


# Creates glottosubdata table (stored in a list)
glottocreate(glottocodes = c("yucu1253", "tani1257"),
variables = 3, groups = c("a", "b") )
```

---

glottocreate_addtable   *Add a table to glottodata*

Description

Add a table to glottodata

Usage

```
glottocreate_addtable(glottodata, table, name)
```

Arguments

glottodata	A glottodata table, or a list of glottodata tables
table	A table to be added
name	A name for the table

Value

a glottodata object with structure table added to it.

Examples

```
glottodata <- glottoget("demodata", meta = FALSE)
structuretable <- glottocreate_structuretable(varnames = colnames(glottodata)[-1])
glottodata <- glottocreate_addtable(glottodata, table = structuretable, name = "structure")
```

---

glottodist   *Calculate distances between languages*

Description

Calculate distances between languages

Usage

```
glottodist(glottodata)
```

Arguments

glottodata	glottodata or glottosubdata, either with or without structure table.

Value

object of class dist

Examples

```
glottodata <- glottoget("demodata", meta = TRUE)
glottodist <- glottodist(glottodata = glottodata)

glottosubdata <- glottoget("demosubdata", meta = TRUE)
glottodist <- glottodist(glottodata = glottosubdata)
```

---

glottofilter   *Filter glottodata by language, glottocode, etc.*

Description

By default, the glottolog data will be used to filter from. But in case the user provides glottodata, this will be used.

Usage

```
glottofilter(
  glottodata = NULL,
  glottocode = NULL,
  location = NULL,
  name = NULL,
  family = NULL,
  family_id = NULL,
  continent = NULL,
  country = NULL,
  sovereignty = NULL,
  macroarea = NULL,
  expression = NULL,
  isocodes = NULL,
  colname = NULL,
  select = NULL,
  drop = NULL
)
```

Arguments

glottodata	A glottodata table
glottocode	A character vector of glottocodes
location	A character vector with a location (either a continent, country, macroarea, or sovereignty)
name	A character vector of language names
family	A character vector of language families
family_id	A character vector of language family IDs

continent	A character vector of continents
country	A character vector of countries
sovereignty	Sovereignty
macroarea	Glottolog macroarea
expression	A regular expression
isocodes	A character vector of iso639p3codes
colname	A column name
select	Character vector of things to select (only if colname is provided)
drop	Character vector of things to drop (only if colname is provided)

Value

A subset of the original glottodata table (data.frame or sf) containing only filtered languages.

See Also

glottofiltermap()

Examples

```
points <- glottofilter(location = "Australia")
points <- glottofilter(glottocode = "wari1268")
points <- glottofilter(family = "Indo-European")
points <- glottofilter(continent = "South America")
points <- glottofilter(family = "Indo-European", continent = "South America")
points <- glottofilter(country = c("Colombia", "Venezuela"))
points <- glottofilter(expression = family %in% c("Arawakan", "Tucanoan"))
points <- glottofilter(expression = family_size > 2)
points <- glottofilter(colname = "family", drop = "Indo-European")
```

---

glottofiltermap *Filter languages from a map*

Description

Select languages by drawing or clicking on a map

Usage

```
glottofiltermap(glottodata = NULL, mode = NULL, ...)
```

Arguments

glottodata	Spatial glottodata object
mode	Either "draw" or "click"
...	Additional arguments to pass to glottofilter

Value

A set of languages selected from the original glottodata object

Examples

```
## Not run:
selected <- glottofiltermap()
glottomap(selected)

glottofiltermap(continent = "South America")
glottofiltermap(country = "Netherlands")

## End(Not run)
```

---

glottoget   *Get glottodata from local path or online global databases*

Description

Load locally stored glottodata, download databases from online sources, or load built-in demo data

Usage

```
glottoget(
  glottodata = NULL,
  meta = FALSE,
  download = FALSE,
  dirpath = NULL,
  url = NULL
)
```

Arguments

glottodata   options are:

- A filepath to locally stored glottodata or glottosubdata with file extension (.xlsx .xls .gpkg .shp). See also: options meta and simplify.
- "glottobase" - Default option, an spatially enhanced version of glottolog. See glottobooster for details. If glottodata = NULL, "glottobase" will be loaded.
- "wals" - This is a spatially enhanced version of WALS.

- "dplace" - Not yet supported. This is a spatially enhanced version of D-PLACE.
- "glottolog" - This is a restructured (non-spatial) version of glottolog.
- "glottospace" - A simple dataset with glottocodes and a geometry column. This is a subset of all languages in glottolog with spatial coordinates.
- "demodata" - Built-in artificial glottodata (included for demonstration and testing).
- "demosubdata" - Built-in artificial glottosubdata (included for demonstration and testing)

meta	In case 'glottodata' is demodata/demosubdata: by default, meta sheets are not loaded. Use meta=TRUE if you want to include them.
download	By default internally stored versions of global databases are used. Specify download = TRUE in case you want to download the latest version from a remote server.
dirpath	Optional, if you want to store a global CLDF dataset in a specific directory, or load it from a specific directory.
url	Zenodo url, something like this: "https://zenodo.org/api/records/3260727"

Value

A glottodata or glottosubdata object (a data.frame or list, depending on which glottodata is requested)

See Also

Other <glottodata>: glottosave()

Examples

```
glottoget("glottolog")
```

---

glottojoin	*Join glottodata with other objects, datasets, or databases.*

Description

Join glottodata with other objects, datasets, or databases.

Usage

```
glottojoin(glottodata, with = NULL, id = NULL, rm.na = FALSE, type = "left")
```

Arguments

glottodata	glottodata or glottosubdata
with	Optional: glottodata (class data.frame), a dist object (class dist), or the name of a glottodatabase ("glottobase" or "glottospace")
id	By default, data is joined by a column named "glottocode" or "glottosubcode". In case you want to join using another column, the column name should be specified.
rm.na	Only used when joining with a dist object. By default NAs are kept.
type	In case two glottodata objects are joined, you can specify the type of join: "left" (default), "right", "full", or "inner"

Value

glottodata or glottosubdata, either with or without metatables. Object is returned as a data.frame or list, depending on the input.

See Also

glottosplit

Examples

```
glottodata <- glottoget("demodata")
glottodata_space <- glottojoin(glottodata, with = "glottospace")
glottodata_base <- glottojoin(glottodata, with = "glottobase")

# Join with a dist object
glottodata <- glottoget("demodata", meta = TRUE)
dist <- glottodist(glottodata)
glottodata_dist <- glottojoin(glottodata, with = dist)

# Join glottosubdata tables:
glottosubdata <- glottocreate(glottocodes = c("yucu1253", "tani1257"),
variables = 3, groups = c("a", "b"), n = 2, meta = FALSE)
glottodatatable <- glottojoin(glottodata = glottosubdata)
```

---

glottomap	*Create static and dynamic maps from glottodata, or select languages from a map*

Description

With this function you can easily create static and dynamic maps from glottodata (by setting type to 'static' or 'dynamic'). Alternatively, by specifying type = "filter", you can select languages by drawing/clicking on a map.

Usage

```
glottomap(
  glottodata = NULL,
  color = NULL,
  label = NULL,
  type = NULL,
  ptsize = NULL,
  alpha = NULL,
  lbsize = NULL,
  palette = NULL,
  rivers = FALSE,
  nclass = NULL,
  numcat = FALSE,
  filename = NULL,
  projection = NULL,
  mode = NULL,
  ...
)
```

Arguments

glottodata	Optional, user-provided glottodata. In case no glottodata is provided, you can pass arguments directly to glottofilter.
color	glottovar, column name, or column index to be used to color features (optional). Run glottovars() to see glottovars
label	glottovar, column name, or column index to be used to label features (optional). Run glottovars() to see glottovars
type	One of: "static", "dynamic", or "filter". Default is "static".
ptsize	Size of points between 0 and 1
alpha	Transparency of points between 0 (very transparent) and 1 (not transparent)
lbsize	Size of labels between 0 and 1
palette	Color palette, see glottocolpal("all") for possible options, and run glottocolpal("turbo") to see what it looks like (replace it with palette name). Alternatively, you could also run tmaptools::palette_explorer(), RColorBrewer::display.brewer.all(), ?viridisLite::viridis, or scales::show_col(viridisLite::viridis(n=20))
rivers	Do you want to plot rivers (only for static maps)?
nclass	Preferred number of classes (default is 5)
numcat	Do numbers represent categories? For example, if your dataset consists of 0 and 1, you might want to set this to TRUE.
filename	Optional filename if you want to save resulting map
projection	For static maps, you can choose one of the following: 'eqarea' (equal-area Eckert IV, default), 'pacific' (Pacific-centered), or any other Coordinate Reference System, specified using an EPSG code (https://epsg.io/).
mode	In case type = "filter", you can set mode to either "draw" or "click".
...	Additional parameters to glottofilter

Value

a map created from a glotto(sub)data object and can be saved with glottosave()

Examples

```
glottomap(country = "Netherlands")

glottopoints <- glottofilter(continent = "South America")
glottopols <- glottospace(glottopoints, method = "voronoi")
glottomap(glottodata = glottopols, color = "family_size_rank")
glottomap(glottodata = glottopols, color = "family", palette = "turbo",
type = "dynamic", label = "name")

glottodata <- glottoget()
families <- dplyr::count(glottodata, family, sort = TRUE)

# highlight 10 largest families:
glottodata <- glottospotlight(glottodata = glottodata, spotcol =
"family", spotlight = families$family[1:10], spotcontrast = "family", bgcontrast = "family")

# Or, place 10 largest families in background
glottodata <- glottospotlight(glottodata = glottodata, spotcol =
"family", spotlight = families$family[-c(1:10)], spotcontrast = "family", bgcontrast = "family")
glottomap(glottodata, color = "color")
```

---

glottonmds	*Nonmetric Multidimensional Scaling for a glottodist object*

Description

Nonmetric Multidimensional Scaling for a glottodist object

Usage

```
glottonmds(glottodist = NULL, k = NULL, rm.na = FALSE, row2id = NULL)
```

Arguments

glottodist	A glottodist object
k	Number of dimensions. Either 2 or 3 for nmds.
rm.na	Whether na's should be removed (default is FALSE)
row2id	In case of nmds, specify what each row contains (either 'glottocode' or 'glotto-subcode')

Value

a glottonmds object

---

glottoplot *Visualize glottodata or glottodistances*

Description

This function offers different types of visualizations for linguistic data and linguistic distances.

Usage

```
glottoplot(
  glottodata = NULL,
  glottodist = NULL,
  type = NULL,
  glottonmds = NULL,
  color = NULL,
  ptsize = NULL,
  label = NULL,
  filename = NULL,
  palette = NULL,
  k = NULL,
  rm.na = FALSE,
  row2id = NULL,
  preventoverlap = FALSE,
  alpha = NULL,
  colorvec = NULL
)
```

Arguments

glottodata	glottodata table
glottodist	A dist object created with [glottodist](#)
type	The type of plot: "heatmap", "nmds", or "missing". Default is heatmap if nothing is provided.
glottonmds	A glottonmds object created with [glottonmds](#)
color	Name of variable to be used to color features (optional). Run glottovars() to see the options.
ptsize	Size of points between 0 and 1 (optional)
label	Name of variable to be used to label features (optional). Run glottovars() to see the options.
filename	Optional filename if output should be saved.
palette	Name of color palette, use glottocolpal("all") to see the options
k	Number of dimensions. Either 2 or 3 for nmds.
rm.na	Whether na's should be removed (default is FALSE)

row2id	In case of nmds, specify what each row contains (either 'glottocode' or 'glotto-subcode')
preventoverlap	For nmds with 2 dimensions, should overlap between data points be prevented?
alpha	For nmds with 2 dimensions: Transparency of points between 0 (very transparent) and 1 (not transparent)
colorvec	Vector specifying colors for individual values and legend order (non-matching values are omitted), for example: c("Arawakan" = "rosybrown1", "Yucuna" = "red", "Tucanoan" = "lightskyblue1", "Tanimuca-Retuarã" = "blue", "Naduhup" = "gray70", "Kakua-Nukak" = "gray30") See the 'values' argument in ggplot2::scale_color_manual() for details.

Value

a visualization of a glotto(sub)data, glottodist or glottonmds object, which can be saved with glottosave()

Examples

```
# Plot glottodist as nmds:
glottodata <- glottoget("demodata", meta = TRUE)
glottodist <- glottodist(glottodata = glottodata)
glottoplot(glottodist = glottodist, type = "nmds",
 k = 3, color = "family", label = "name", row2id = "glottocode")

# To create a stress/scree plot, you can run:
# goeveg::dimcheckMDS(matrix = as.matrix(glottodist), k = k)


# Plot missing data:
glottodata <- glottoget("demodata", meta = TRUE)
glottodata <- glottosimplify(glottodata)
glottoplot(glottodata = glottodata, type = "missing")
```

---

glottosave   *Save glottodata, maps and plots*

Description

If no filename is provided, the name of the glottodata object will be used.

Usage

```
glottosave(glottodata, filename = NULL)
```

Arguments

`glottodata`	User-provided glottodata
`filename`	Filename either with or without file extension

Details

If no file extension is provided, a sensible default file extension is chosen. Dynamic maps (tmap) are saved in .html format, static maps (tmap) are saved as .png. Spatial data (sf) are saved as geopackage (.GPKG) by default, but .shp is also possible.

Value

No object is returned, it will be save locally at the specified location

See Also

glottoget_glottodata

Other <glottodata>: [glottoget]()()

Examples

```
glottodata <- glottoget("demodata", meta = FALSE)
# Saves as .xlsx
glottosave(glottodata, filename = file.path(tempdir(), "glottodata") )

glottospacedata <- glottospace(glottodata)
# Saves as .GPKG
glottosave(glottodata, filename = file.path(tempdir(), "glottodata") )

glottomap <- glottomap(glottodata)
# Saves as .png
glottosave(glottomap, filename = file.path(tempdir(), "glottomap") )

# Saves as .html
glottomap <- glottomap(glottodata, type = "dynamic",
            filename = file.path(tempdir(), "glottomap") )
```

---

glottosearch	*Search within glottodata for languages, glottocodes, etc.*

Description

Search within glottodata for languages, glottocodes, etc.

Usage

```
glottosearch(
  search,
  glottodata = NULL,
  partialmatch = TRUE,
  columns = NULL,
  tolerance = NULL
)
```

Arguments

search	Character string to search for, this can be the name of a language, a family, a glottocode, isocode.
glottodata	Any linguistic or cultural dataset. Default is to search within glottobase.
partialmatch	By default, partial matches will be returned as well. In case you only want exact matches, this argument should be set to FALSE.
columns	By default, the entire dataset is searched, but optionally the search can be limited to specific columns.
tolerance	In case partialmatch is TRUE: what is the maximum difference between search term and match? Default is 0.1

Value

A subset of glottodata that matches search conditions (object returned as a data.frame/tibble)

Examples

```
glottosearch(search = "Yucuni")
glottosearch(search = "Yucuni", columns = "name")
glottosearch(search = "Yucuni", columns = c("name", "family"))
```

---

glottosimplify	*Simplify glottodata structures*

Description

With glottosimplify, the structure of a glottodata object is simplified by removing tables and properties

Usage

```
glottosimplify(
  glottodata,
  droplist = TRUE,
  dropmeta = TRUE,
  dropspatial = TRUE,
  submerge = TRUE,
  dropunits = FALSE
)
```

Arguments

glottodata	glottodata or glottosubdata.
droplist	By default, if only one sheet is loaded, the data will be returned as a data.frame (instead of placing the data inside a list of length 1)
dropmeta	By default all metadata is removed.
dropspatial	By default spatial properties are removed.
submerge	By default, glottosubdata tables are merged into a single glottodata table.
dropunits	By default units are kept.

Value

a simplified version of the original dataset, either a data.frame/tibble or a list (depending on the selected options)

Examples

```
glottodata <- glottoget("demodata", meta = TRUE)
glottosimplify(glottodata)
```

---

glottospace	*Make glottodata spatial and generate language polygons from points.*

Description

This function takes glottodata (either with or without metadata) and turns it into spatial points or polygons.

Usage

```
glottospace(glottodata, method = NULL, radius = NULL)
```

Arguments

glottodata	A glottodata table, or list of a glottodata table and metadata table(s)
method	Interpolation method, either "buffer" or "voronoi" (synonymous with "thiessen")
radius	In case interpolation method "buffer", the radius in km.

Value

A spatial version of glottodata. In case glottodata has metadata, only glottodata will be converted to spatial (but all metadata tables are kept). Object returned as sf object, or a list of which the first element is an sf object, depending on the input.

Examples

```
glottodata <- glottoget("demodata", meta = TRUE)

glottospacedata <- glottospace(glottodata, method = "voronoi")
```

---

glottosplitmergemeta   *Split or merge metadata from glottodata (or glottosubdata)*

Description

Usually, you will run this function twice, once to split metadata from glottodata, and a second time to join it again.

Usage

```
glottosplitmergemeta(glottodata, splitted = NULL)
```

Arguments

glottodata   glottodata

splitted   if provided, the second element of the list will be joined with glottodata

Value

A list of length 2 in case only glottodata is provided, and a merged glottodata object otherwise.

See Also

glottojoin

glottosimplify

Examples

```
glottodata <- glottoget("demodata", meta = TRUE)
splitted <- glottosplitmergemeta(glottodata)
merged <- glottosplitmergemeta(glottodata = glottodata, splitted = splitted)
```

---

glottospotlight   *Highlight certain data points in visualizations*

Description

This function creates two separate color scales: one for points to highlight, and a second for the remaining background points. It also creates a legend. This is useful for preparing the data for visualizations such as maps or other plots.

Usage

```
glottospotlight(
  glottodata,
  spotcol,
  spotlight,
  spotcontrast = NULL,
  spotpal = NULL,
  bgcontrast = NULL,
  bgpal = NULL
)
```

Arguments

glottodata	User-provided glottodata
spotcol	Name of the column that contains the data to put in the spotlights (as well as remaining background data).
spotlight	Selection of data to put in the spotlights.
spotcontrast	Optional column to contrast between data points in the spotlight.
spotpal	color palette for spotligbht points
bgcontrast	Optional column to contrast between background data points
bgpal	color palette for background points (default is grays)

Value

A glottodata object with columns added to be used in visualization.

Examples

```
glottodata <- glottofilter(country = c("Netherlands", "Germany", "Belgium") )
glottodata <- glottospotlight(glottodata = glottodata, spotcol = "country",
spotlight = "Netherlands", spotcontrast = "name")
glottomap(glottodata, color = "color")
```

Index