Package 'igoR'

February 5, 2024

Title Intergovernmental Organizations Database

Version 0.2.0

Description Tools to extract information from the Intergovernmental
Organizations ('IGO') Database , version 3, provided by the Correlates
of War Project <https://correlatesofwar.org/>. See also Pevehouse, J.
C. et al. (2020). Version 3 includes information from 1815 to 2014.

License GPL (>= 3)

URL <https://dieghernan.github.io/igoR/>,
<https://github.com/dieghernan/igoR>

BugReports <https://github.com/dieghernan/igoR/issues>

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R **topics documented:**

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igo_dyadic   *Extract the Joint Membership of a pair of Countries across IGOs.*

Description

Dyadic version of the data. The unit of observation is a dyad of countries. It provides a summary
of the joint memberships of two countries across IGOs over time.

Usage

```
igo_dyadic(country1, country2, year = 1816:2014, ioname = NULL)
```

Arguments

country1, country2

A state of vector of states to be compared. It could be any valid name or code of
a state as specified on states2016.

year   Year to be assessed, an integer or an array of year.

ioname   Optional. ioname or vector of ioname corresponding to the IGOs to be assessed.
If NULL (the default), all IGOs would be extracted. See codes on igo_search().

Details

This function tries to replicate the information contained in the original file distributed by The
Correlates of War Project (dyadic_format3.dta). That file is not included in this package due to
its size.

The result is a data.frame containing the common years of the states selected via country1, country2, year
by rows.

An additional column dyadid, computed as (1000*ccode1)+ccode2 is provided in order to iden-
tify relationships.

For each IGO selected via ioname (or all if the default option has been used) a column (using
lowercase ioname as identifier) is provided with the following code system:

Category	Numerical Value
No Joint Membership	0
Joint Full Membership	1
Missing data	-9
State Not System Member	-1

See `igo_recode_dyadic()` section for an easy way to recode the numerical values into factors.

If one state in an IGO is a full member but the other is an associate member or observer, that IGO is not coded as a joint membership.

Value

A coded `data.frame` representing the years and country dyad (rows) and the IGOs selected (columns). See **Details**.

Differences with the original dataset

There are some differences on the results provided by this function and the original dataset on some IGOs regarding the "Missing Data" (`-9`) and "State Not System Member" (`-1`). However it is not clear how to fully replicate those values.

See **Codebook Version 3 IGO Data**

Source

Codebook Version 3 IGO Data for full reference.

References

Pevehouse, J. C., Nordstrom, T., McManus, R. W., & Jamison, A. S. (2020). Tracking organizations in the world: The Correlates of War IGO Version 3.0 datasets. *Journal of Peace Research, 57*(3), 492–503. doi:10.1177/0022343319881175.

See Also

state_year_format3, states2016, `igo_search()`.

Examples

```
usa_esp <- igo_dyadic("USA", "Spain")
nrow(usa_esp)
ncol(usa_esp)

dplyr::tibble(usa_esp)

# Using custom parameters
custom <- igo_dyadic(
  country1 = c("France", "Germany"), country2 = c("Sweden", "Austria"),
  year = 1992:1993, ioname = "EU"
)
```

```
dplyr::glimpse(custom)
```

---

igo_members   *Extract Members of an IGO*

Description

Extract all the countries belonging to an IGO on a specific date.

Usage

```
igo_members(ioname, year = NULL, status = "Full Membership")
```

Arguments

ioname	Any valid `ioname` of an IGO as specified on igo_year_format3. It could be also a vector of IGOs.
year	Year to be assessed, an integer or an array of year. If `NULL` the latest year available of the IGO would be extracted.
status	Character or vector with the membership status to be extracted. See **Details** on state_year_format3.

Value

A `data.frame`.

See Also

igo_year_format3, igo_search(), state_year_format3.

Examples

```
library(dplyr)
igo_members("EU", year = 1993) %>% as_tibble()
igo_members("EU") %>% as_tibble()
igo_members("NAFTA", year = c(1995:1998)) %>% as_tibble()

# Extract different status
igo_members("ACCT", status = c("Associate Membership", "Observer")) %>%
  as_tibble()

# States no members of the UN
igo_members("UN", status = "No Membership") %>%
  as_tibble()

# Vectorized
igo_members(c("NAFTA", "EU"), year = 1993) %>%
  as_tibble() %>%
```

```
    arrange(state)

# Use countrycodes package to get additional codes
if (requireNamespace("countrycode", quietly = TRUE)) {
  library(countrycode)
  EU <- igo_members("EU")
  EU$iso3c <- countrycode(EU$ccode, origin = "cown", destination = "iso3c")

  EU$continent <- countrycode(EU$ccode,
    origin = "cown",
    destination = "continent"
  )

  tibble(EU)
}
```

---

igo_recode_igoyear   *Helper functions to recode categories*

Description

These functions convert the numerical code of igo_year_format3 and state_year_format3 into factors.

- `igo_recode_igoyear()` is intended to work with values on igo_year_format3.
- `igo_recode_stateyear()` is intended to work with values on state_year_format3.
- `igo_recode_dyadic()` is intended to work with values on `igo_dyadic()`.

Usage

```
igo_recode_igoyear(x)

igo_recode_stateyear(x)

igo_recode_dyadic(x)
```

Arguments

x   Numerical value (or vector of values) to recode.

Value

The recoded values as factors.

See Also

Other datasets: `igo_year_format3`, `state_year_format3`, `states2016`

Examples

```
data("igo_year_format3")

# Recode memberships for some countries

library(dplyr)

samp <- igo_year_format3 %>%
  select(ioname:year, spain, france) %>%
  filter(year > 2000) %>%
  as_tibble()

glimpse(samp)

# Recode
samp %>%
  mutate(
    spain = igo_recode_igoyear(spain),
    france = igo_recode_igoyear(france)
  ) %>%
  glimpse()
```

---

igo_search   *Search and Find an IGO*

Description

Search any IGO by name or string pattern.

Usage

```
igo_search(pattern = NULL, exact = FALSE)
```

Arguments

pattern   [regex](#) pattern. If `NULL` the function returns a dataset with all the IGOs on [igo_year_format3](#). Integer values are accepted.

exact   Logical. When `TRUE` only exact matches are returned.

Details

The information of each IGO is retrieved based on the last year available on [igo_year_format3](#).

An additional column `label` is provided. This column is a clean version of `longorgname`

Value

A [`data.frame`](#).

See Also

igo_year_format3

Examples

```
# All values
library(dplyr)
all <- igo_search()

all %>% tibble()

# Search by pattern
igo_search("EU") %>%
  select(ionum:orgname) %>%
  tibble()

igo_search("EU", exact = TRUE) %>%
  select(ionum:orgname) %>%
  tibble()

# With integers
igo_search(10) %>%
  select(ionum:orgname) %>%
  tibble()

igo_search(10, exact = TRUE) %>%
  select(ionum:orgname) %>%
  tibble()

# Several patterns (regex style)
igo_search("NAFTA|UN|EU") %>%
  select(ionum:orgname) %>%
  tibble()

# Several patterns Exact (regex style)
igo_search("^NAFTA$|^UN$|^EU$") %>%
  select(ionum:orgname) %>%
  tibble()
```

---

igo_search_states   *Finds codes and names of a state*

Description

Extract all the memberships of a state on a specific date.

Usage

```
igo_search_states(state)
```

Arguments

state   Any valid name or code of a state as specified on states2016(). It could be
                    also an array of states.

Value

A data.frame.

See Also

states2016().

Examples

```
library(dplyr)

igo_search_states("Spain") %>% as_tibble()

igo_search_states(c(20, 150)) %>% as_tibble()

igo_search_states("congo") %>% as_tibble()

igo_search_states(c("Germany", "papal states")) %>% as_tibble()

igo_search_states(c("FRN", "United Kingdom", 240, "italy")) %>% as_tibble()
```

---

igo_state_membership   *Extract Memberships of a State*

Description

Extract all the memberships of a state on a specific date.

Usage

```
igo_state_membership(state, year = NULL, status = "Full Membership")
```

Arguments

state   Any valid name or code of a state as specified on states2016(). It could be
                    also an array of states.

year   Year to be assessed, an integer or an array of year. If NULL the latest year avail-
                    able of the state would be extracted.

status   Character or vector with the membership status to be extracted. See **Details** on
                    igo_year_format3.

Value

A [data.frame](#).

See Also

[igo_year_format3](#), [igo_search_states()](#), [states2016](#).

Examples

```
# Memberships on two different dates
igo_state_membership("Spain", year = 1850)
igo_state_membership("Spain", year = 1870)
igo_state_membership("Spain", year = 1880:1882)

# Last year
igo_state_membership("ZAN")[, 1:7]

# Use codes to get countries
igo_state_membership("2", year = 1865)

# Extract different status
igo_state_membership("kosovo", status = c(
  "Associate Membership", "Observer",
  "Full Membership"
))

# Vectorized
igo_state_membership(c("usa", "spain"), year = 1870:1871)

# Use countrycodes package to get additional codes
if (requireNamespace("countrycode", quietly = TRUE)) {
  library(countrycode)
  IT <- igo_state_membership("Italy", year = 1880)
  IT$iso3c <- countrycode(IT$ccode, origin = "cown", destination = "iso3c")
  head(IT)
}
```

---

igo_year_format3	*Intergovernmental Organizations (IGO) by year*

Description

Data on IGOs from 1815-2014, at the IGO-year level. Contains one record per IGO-year (with years listed at 5 year intervals through 1965, and annually thereafter).

Format

data.frame with 19,335 rows. Relevant fields:

- **ioname**: Short abbreviation of the IGO name.
- **orgname**: Full IGO name.
- **year**: Calendar Year.
- **afghanistan...zimbabwe**: status of that state in the IGO. See **Details**.
- **sdate**: start date (year) that the IGO started.
- **deaddate**: dead date (year) that the IGO dead.
- **longorgname**: a longer version of the IGOs name (including previous names)
- **ionum**: IGO id number in v2.1 and v3.0 of the data.
- **version**: COW version number.

See **Codebook Version 3 IGO Data** for full reference.

Details

Possible value of the status of that state in the IGO are:

Category	Numerical Value
No Membership	0
Full Membership	1
Associate Membership	2
Observer	3
Missing data	-9
State Not System Member	-1

See igo_recode_igoyear() section for an easy way to recode the numerical values into factors.

Note

Raw data used internally by **igoR**.

Source

Intergovernmental Organizations (v3), The Correlates of War Project (IGO Data Stata Files).

References

Pevehouse, J. C., Nordstrom, T., McManus, R. W., & Jamison, A. S. (2020). Tracking organizations in the world: The Correlates of War IGO Version 3.0 datasets. *Journal of Peace Research, 57*(3), 492–503. [doi:10.1177/0022343319881175](doi:10.1177/0022343319881175).

See Also

Other datasets: igo_recode_igoyear(), state_year_format3, states2016

Examples

```
data("state_year_format3")

# Show a glimpse
library(dplyr)

state_year_format3 %>%
  select(ccode:afgec) %>%
  filter(year > 1990) %>%
  glimpse()

# Recode numerical to factors: with a sample
sample_state_year <- state_year_format3 %>%
  as_tibble() %>%
  select(ccode:afgec) %>%
  filter(year == 1990)

sample_state_year %>% glimpse()

# Recode
sample_state_year_recoded <- sample_state_year %>%
  mutate(across(-c(ccode:state), igo_recode_stateyear))

sample_state_year_recoded %>% glimpse()
```

---

states2016 *State System Membership (v2016)*

Description

The list of states with COW abbreviations and ID numbers, plus the field state from state_year_format3.

Format

[data.frame](#) with 243 rows. Relevant fields:

- **ccode**: COW country number.

- **stateabb**: COW state abbreviation (3 characters).

- **statenme**: COW state name.

- **styear...endday**: Fields to identify the beginning and the end of each tenure.

- **version**: Data file version number.

- **state**: Abbreviated state name as appear in state_year_format3.

Details

This data set contains the list of states in the international system as updated and distributed by the Correlates of War Project.

These data sets identify states, their standard Correlates of War "country code" or state number (used throughout the Correlates of War project data sets), state abbreviations, and dates of membership as states and major powers in the international system.

The Correlates of War project includes a state in the international system from 1816-2016 for the following criteria:

- **Prior to 1920** the entity must have had a population greater than 500,000 and have had diplomatic missions at or above the rank of charge d'affaires with Britain and France.

- **After 1920** the entity must be a member of the League of Nations or the United Nations, or have a population greater than 500,000 and receive diplomatic missions from two major powers.

Note

`state` variable added to original data to help comparison across datasets on this package.

Source

State System Membership (v2016), The Correlates of War Project.

References

Correlates of War Project. 2017 "State System Membership List, v2016." Online, `https://correlatesofwar.org/`.

See Also

Other datasets: `igo_recode_igoyear()`, `igo_year_format3`, `state_year_format3`

Examples

```
# example code
data("states2016")
dplyr::glimpse(states2016)
```

---

state_year_format3   *Country membership to IGO by year*

Description

Data on IGOs from 1815-2014, at the country-year level. Contains one record per country-year (with years listed at 5 year intervals through 1965, and annually thereafter).

Format

[data.frame](#) with 15,557 rows. Relevant fields:

- **ccode**: COW country number, see [states2016](#).
- **year**: Calendar Year.
- **state**: Abbreviated state name, identical to variable names in [igo_year_format3](#).
- **aaaid...wassen**: IGO variables containing information on state membership status. See **Details**.

See [**Codebook Version 3 IGO Data**](#)

Details

Possible value of the status of that state in the IGO are:

Category	Numerical Value
No Membership	0
Full Membership	1
Associate Membership	2
Observer	3
Missing data	-9
IGO Not In Existence	-1

See [igo_recode_stateyear()](#) section for an easy way to recode the numerical values into [factors](#).

Note

Raw data used internally by [**igoR**](#).

Source

[Intergovernmental Organizations (v3)](#), The Correlates of War Project (IGO Data Stata Files)

References

Pevehouse, J. C., Nordstrom, T., McManus, R. W., & Jamison, A. S. (2020). Tracking organizations in the world: The Correlates of War IGO Version 3.0 datasets. *Journal of Peace Research, 57*(3), 492–503. [doi:10.1177/0022343319881175](#).

See Also

[countrycode::countrycode()](#) to convert between different country code schemes.

Other datasets: [igo_recode_igoyear()](#), [igo_year_format3](#), [states2016](#)

Examples

```
data("state_year_format3")
dplyr::tibble(state_year_format3)
```

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