Package 'igoR'

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Title Access the Intergovernmental Organizations Database

Version 1.0.2

Description Tools for searching, extracting and recoding information from the Intergovernmental Organizations ('IGO') Database (v3), distributed by the Correlates of War Project <https://correlatesofwar.org/>. See also Pevehouse, J. C. et al. (2020) <doi:10.1177/0022343319881175>.

License GPL (>= 3)

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

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`igo_dyadic` *Extract joint membership for a pair of countries across IGOs*

Description

Create a dyadic version of the data. The unit of observation is a country dyad. The result summarizes joint memberships across IGOs over time.

Usage

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

Arguments

`country1`, `country2`	State or vector of states to compare. Values can be any valid state name or code as specified in states2016.
`year`	Year to assess, as an integer or vector of years.
`ioname`	Optional. `ioname` or vector of `ioname` corresponding to the IGOs to assess. If `NULL` (the default), all IGOs will be extracted. See codes in `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` with one row for each common year selected via `country1`, `country2` and `year`.

An additional column, `dyadid`, computed as `(1000 * ccode1) + ccode2`, is provided to identify relationships.

For each IGO selected via `ioname`, or all IGOs if the default option is used, a column using lowercase `ioname` as an identifier is provided with the following coding system:

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

See the `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` with years and country dyads as rows and selected IGOs as columns. See **Details**.

Differences from the original data set

Some results from this function differ from the original data set for some IGOs regarding "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 data sets. *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)
```

```
# Use custom arguments.
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 countries that belong to an IGO on a specific date.

Usage

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

Arguments

`ioname`	Any valid `ioname` for an IGO as specified in igo_year_format3. This can also be a vector of IGOs.
`year`	Year to assess, as an integer or vector of years. If `NULL`, the latest year available for the IGO is extracted.
`status`	Character or vector with the membership status to be extracted. See **Details** in state_year_format3.

Value

A `data.frame`.

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 data sets. *Journal of Peace Research, 57*(3), 492–503. doi:10.1177/0022343319881175.

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 statuses.
igo_members("ACCT", status = c("Associate Membership", "Observer")) %>%
  as_tibble()

# States that are not 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 the countrycode 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 codes of igo_year_format3 and state_year_format3 into factors. Use `igo_recode_igoyear()` with values from igo_year_format3, `igo_recode_stateyear()` with values from state_year_format3 and `igo_recode_dyadic()` with values from `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 for an IGO*

Description

Search for any IGO by name or string pattern.

Usage

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

Arguments

pattern	regex pattern. If NULL, the function returns a data set with all IGOs in igo_year_format3. Integer values are accepted.
exact	Logical. When TRUE, only exact matches are returned.

Details

The information for each IGO is retrieved from the last year available in igo_year_format3.

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

Value

A `data.frame`.

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 data sets. *Journal of Peace Research, 57*(3), 492–503. doi:10.1177/0022343319881175.

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()

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

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

# Use several patterns (regex style).
igo_search("NAFTA|UN|EU") %>%
  select(ionum:orgname) %>%
```

```
  tibble()

# Use several exact patterns (regex style).
igo_search("^NAFTA$|^UN$|^EU$") %>%
  select(ionum:orgname) %>%
  tibble()
```

`igo_search_states` *Find codes and names of a state*

Description

Find codes and names of a state.

Usage

```
igo_search_states(state)
```

Arguments

`state`	Any valid state name or code as specified in states2016. This can also be a vector of states.

Value

A `data.frame`.

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 data sets. *Journal of Peace Research, 57*(3), 492–503. doi:10.1177/0022343319881175.

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 IGO memberships of a state on a specific date.

Usage

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

Arguments

state	Any valid state name or code as specified in states2016. This can also be a vector of states.
year	Year to assess, as an integer or vector of years. If NULL, the latest year available for the state is extracted.
status	Character or vector with the membership status to be extracted. See **Details** in igo_year_format3.

Value

A data.frame.

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 data sets. *Journal of Peace Research, 57*(3), 492–503. doi:10.1177/0022343319881175.

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 statuses.
igo_state_membership("kosovo", status = c(
  "Associate Membership", "Observer",
  "Full Membership"
))

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

# Use the countrycode 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 by year*

Description

Data on IGOs from 1815 to 2014 at the IGO-year level. Contains one record per IGO-year, with years listed at five-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 year for the IGO.
- **deaddate**: End year for the IGO.
- **longorgname**: Longer version of the IGO 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 values for the status of a 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 the `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 data sets. *Journal of Peace Research, 57*(3), 492–503. 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 values 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 that identify the beginning and end of each tenure.
- **version**: Data file version number.
- **state**: Abbreviated state name as it appears 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 to 2016 according to the following criteria:

- **Before 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

The `state` variable was added to the original data to help comparisons across data sets in 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 in IGOs by year*

Description

Data on IGOs from 1815 to 2014 at the country-year level. Contains one record per country-year, with years listed at five-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 values for the status of a 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 the `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 data sets. *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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