Package: polimetrics (via r-universe)

May 28, 2026

Title R Tools for Political Measures

Version 1.2.1.23

Description This is a collection of data and functions for common metrics in political science research. Data measuring ideology, and functions calculating geographical diffusion and ideological diffusion - geog.diffuse() and ideo.dist(), respectively. Functions derived from methods developed in: Soule and King (2006) <doi:10.1086/499908>, Berry et al. (1998) <doi:10.2307/2991759>, Cruz-Aceves and Mallinson (2019) <doi:10.1177/0160323X20902818>, and Grossback et al. (2004) <doi:10.1177/1532673X04263801>.

Depends R (>= 3.2.3)

Imports MASS, dplyr, ggplot2, rlang, tidyverse, car, purrr, stats, graphics, formula.tools, gplots, rstatix, stringr

License GPL-3

LazyData true

NeedsCompilation no

RoxygenNote 7.1.1

URL https://github.com/burrelvannjr/polimetrics, https://burrelvannjr.github.io/polimetrics/

BugReports https://github.com/burrelvannjr/polimetrics/issues

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Contents

`geog.diffuse` *Calculating Geographical Diffusion*

Description

Calculating Geographical Diffusion

Usage

```
geog.diffuse(df, id, neighbors, time, status, end = FALSE, keep = FALSE)
```

Arguments

`df`	data frame to read in. Data frame should include a variable that is a character list of each observation's neighbors.
`id`	the grouping variable, usually states or counties
`neighbors`	a variable that is a `character` list of each observation's neighbors. The elements of the character list of neighbors should be separated by commas.
`time`	the time variable, at which observations are measured.
`status`	binary, user-defined measure of the status of policy or event in a state in a given year. `0` equates to *policy has not yet occurred in the year, for the state*, `1` equates to *policy event has already been adopted in the year, for the state* – a value of `1` should exist for a state in the year it was adopted and every year thereafter). The example below relies on ERA ratification data from Soule and King (2006) <doi:10.1086/499908>, merged with ideology data from Berry et al. (1998) <doi:10.2307/2991759>, but the user should include the measure of adoption of their choice.
`end`	logical (default set to `F`). When set to `end = T`, will calculate the percent of neighbors that had adopted policy by year-end. Otherwise, will calculate based on number of neighbors that had adopted the policy at year-start.
`keep`	logical (default set to `F`). When set to `end = T`, will include additional variables (*number of neighbors* and *number of neighbors that had adopted the policy*) in the updated data frame.

Value

This function updates the data frame with a new variable capturing the geographical diffusion score.

References

Berry, William D., Ringquist, Evan J., Fording, Richard C., and Hanson, Russell L. (1998) 'Measuring Citizen and Government Ideology in the American States, 1960-93.' *American Journal of Political Science* 42:327-348. doi:10.2307/2991759.
Soule, Sarah A., and King, Brayden G. (2006) 'The Stages of the Policy Process and the Equal Rights Amendment, 1972-1982.' *American Journal of Sociology* 111:1871-1909. doi:10.1086/499908.

This function calculates the percent (or proportion) of geographically contiguous neighbors that have engaged in some *event* (e.g. policy adoption) in a given year. This function can be applied to any unit of analysis and time level for any type of event.

Examples

```
data <- Ideology_ERA

geog.diffuse(data, state, neighbors, year, era_status)
```

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ideo.dist *Calculating Ideological Distance*

Description

Calculating Ideological Distance

Usage

```
ideo.dist(df, id, ideology, time, adoption)
```

Arguments

df	data frame to read in. This should be an adapted version of the Ideology data set provided in the package. The adapted version should include an outcome variable measuring the policy adoption of choice.
id	the grouping variable, usually states
ideology	the state's ideology score variable (either *state* or *citizen* ideology) in a given year. These data come from Richard C. Fording (https://rcfording.com/state-ideology-data/) as used in Berry et al. (1998), and are measured, for each state, from 1960 to 2018.
time	the time variable, at which the ideology score is measured. These data come from Richard C. Fording (https://rcfording.com/state-ideology-data/) as used in Berry et al. (1998), and are measured, for each state, from 1960 to 2018.

`adoption` binary, user-defined measure of policy adoption in a state in a given year. `0` equates to *policy not adopted in the year, for the state*, `1` equates to *policy is adopted in the year, for the state* – a value of `1` should only exist for a state in the year it was adopted (e.g. not every year thereafter). The example below relies on ERA ratification data from Soule and King (2006), but the user should include the measure of adoption of their choice.

Value

This function updates the data frame with a new variable capturing the ideological distance score.

References

Grossback, Lawrence J., Nicholson-Crotty, Sean, and Peterson, David A.M. (2004) 'Ideology and Learning in Policy Diffusion.' *American Politics Research* 32:521-545. doi:10.1177/1532673X04263801.
Cruz-Aceves, Victor D., and Mallinson, Daniel J. (2019) 'Clarifying the Measurement of Relative Ideology in Policy Diffusion Research.' *State and Local Government Review* 51:179-186. doi:10.1177/0160323X20902818.
Berry, William D., Ringquist, Evan J., Fording, Richard C., and Hanson, Russell L. (1998) 'Measuring Citizen and Government Ideology in the American States, 1960-93.' *American Journal of Political Science* 42:327-348. doi:10.2307/2991759.
Soule, Sarah A., and King, Brayden G. (2006) 'The Stages of the Policy Process and the Equal Rights Amendment, 1972-1982.' *American Journal of Sociology* 111:1871-1909. doi:10.1086/499908.

This function calculates ideological distance scores based on the calculation created by Grossback et al. (2004) and clarified by Cruz-Aceves and Mallinson (2019). This calculation is based on state ideology data (by year) provided by Richard C. Fording (`https://rcfording.com/state-ideology-data/`) and used in Berry et al. (1998). This function can be applied to any unit of analysis and time level for any type of policy adoption.

Examples

```
data <- Ideology_ERA

ideo.dist(data, state, s_ideo, year, era_ratified)
```

Ideology *Fording's State Ideology Data*

Description

This data set comes from Richard C. Fording (`https://rcfording.com/state-ideology-data/`) and used in Berry et al. (1998). The data set includes state ideology data (measured at the state/legislature and citizen levels), for each year between 1960 and 2018. These data will be updated as Fording updates the data.

Usage

```
Ideology
```

Format

A data frame with 3050 observations and 4 variables.

state	state name
year	year measured
c_ideo	citizen ideology score
s_ideo	state level ideology score

`Ideology_ERA` *Fording's State Ideology Data (adapted, with E.R.A. status)*

Description

This data set comes from Richard C. Fording (https://rcfording.com/state-ideology-data/) and used in Berry et al. (1998). The data set includes state ideology data (measured at the state/legislature and citizen levels), for each year between 1960 and 2018. These data will be updated as Fording updates the data. This data set enables inclusion of a variable measuring state-level policy adoption by year. As an example, the data set also include a variable measuring the ratification of the Equal Rights Amendment as depicted in Soule and King (2006).

Usage

```
Ideology_ERA
```

Format

A data frame with 300 observations and 5 variables.

state	state name
year	year measured
c_ideo	citizen ideology score
s_ideo	state level ideology score
era_status	measures the the event: adoption/ratification of the Equal Rights Amendment for a state in a given year. 0 equates
neighbors	list of neighboring states for each observation. Elements (states) comma-delimited

US_Counties *US Counties Information for Merging*

Description

This data set provides common names and abbreviations for U.S. counties to enable merging with various data sets.

Usage

```
US_Counties
```

Format

A data frame with 3106 observations and 11 variables.

countystate	proper county name and state name (separated by ':')
state_name	proper state name
county_name	proper county name
state_abbv	abbreviated state name
state_name_cap	capitalized state name
state_name_cap_nominate	capitalized state name, shortened (as in DW-NOMINATE data)
state_fips	state FIPS
county_fips	county FIPS
fullgeoid	Twelve-digit GEOID identifier for each county observation (as a character string)
neighbors_fullgeoid	character string of neighboring counties' fullgeoid's (separated by ',') for each county observatio
neighbors_countystate	character string of neighboring counties' countystate names (separated by ',') for each county ob

US_States *US States Information for Merging*

Description

This data set provides common names and abbreviations for U.S. states to enable merging with various data sets.

Usage

```
US_States
```

Format

A data frame with 50 observations and 8 variables.

state_name	proper state name
state_abbv	abbreviated state name
state_name_cap	capitalized state name
state_name_cap_nominate	capitalized state name, shortened (as in DW-NOMINATE data)
state_fips	state FIPS
fullgeoid	Twelve-digit GEOID identifier for each state observation (as a character string)
neighbors_state_name	character string of neighboring states' state_name (separated by ',') for each state observation
neighbors_fullgeoid	character string of neighboring states' fullgeoid's (separated by ',') for each state observation

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