Package ‘ggparliament’

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**Description**

**ggparliament**

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**calc_coordinates**

*A function that calculates the coordinates of parliamentary seats in incomplete circular parliaments E.g. The US (semicircle) and Australian (horseshoe) shaped parliaments*

**Description**

A function that calculates the coordinates of parliamentary seats in incomplete circular parliaments E.g. The US (semicircle) and Australian (horseshoe) shaped parliaments

**Usage**

```
calc_coordinates(N, M, limits, segment = 0.5)
```

**Arguments**

- **N**  
  the total of number of seats
- **M**  
  the number of rows in parliament
- **limits**  
  the limits to seq the radii between- controls the 'shape' of the parliament
- **segment**  
  the percentage of a full circle for the final plot- defaults to 0.5 (a semicircle)
**draw_majoritythreshold**

*Draw majority threshold*

**Author(s)**

Zoe Meers, Rob Hickman

**Description**

Draw majority threshold

**Usage**

```r
draw_majoritythreshold(n = NULL, label = TRUE, type = c("horseshoe", "semicircle", "opposing_benches"), linecolour = "black", linesize = 1, linetype = 2, linealpha = 1)
```

**Arguments**

- `n` The number of seats required for a majority
- `label` A logical variable for labelling majority threshold. Defaults to TRUE.
- `type` Type of parliament (horseshoe, semicircle, opposing benches)
- `linecolour` The colour of the majority line. Defaults to gray.
- `linesize` The size of the line. Defaults to 1.
- `linetype` The style of the line. Defaults to 2, or a dashed line.
- `linealpha` Set the transparency of the line. Defaults to 1.

**Author(s)**

Zoe Meers

**Examples**

```r
data <- election_data[
election_data$country == "USA" &
election_data$house == "Representatives" &
election_data$year == "2016",
]
usa_data <- parliament_data(
election_data = data,
    type = "semicircle",
    party_seats = data$seats,
    parl_rows = 8
)
 ggplot2::ggplot(usa_data, ggplot2::aes(x, y, colour = party_long)) +
    geom_parliament_seats() +
```
draw_partylabels

Draw labels for political parties and seats per party

draw_partylabels(type = c("semicircle", "horseshoe"), names = TRUE, 
seats = TRUE, party_names = party_names, 
party_colours = party_colours, party_seats = party_seats)

Arguments

- **type**: Define type. Currently only supports semicircle and horseshoe style parliaments.
- **names**: If TRUE, finds party names from data. Defaults to TRUE.
- **seats**: If TRUE, finds party seats from data. Defaults to TRUE.
- **party_names**: A column containing party names.
- **party_colours**: A column containing party colours.
- **party_seats**: A column containing party seats.

Author(s)

Zoe Meers

Examples

data <- election_data[
  election_data$country == "USA" &
  election_data$house == "Representatives" &
  election_data$year == "2016",
]
usa_data <- parliament_data(
  election_data = data, 
  type = "semicircle", 
  party_seats = data$seats, 
  parl_rows = 8
)
### draw_totalseats

*Draw total number of seats in the middle of the parliament*

#### Description

Draw total number of seats in the middle of the parliament

#### Usage

```r
draw_totalseats(n = NULL, size = 12, colour = "black",
               type = c("horseshoe", "semicircle", "opposing_benches", "circle",
                         "classroom"))
```

#### Arguments

- **n**: The number of total seats in the legislature.
- **size**: Size of font
- **colour**: Colour of label
- **type**: Type of parliament (horseshoe, semicircle, circle, opposing benches, classroom)

#### Author(s)

Zoe Meers

#### Examples

```r
data <- election_data[
    election_data$country == "USA" &
    election_data$house == "Representatives" &
    election_data$year == "2016",
]
usa_data <- parliament_data(
    election_data = data,
    type = "semicircle",
    party_seats = data$seats,
```
parl_rows = 8
)
ggplot2::ggplot(usa_data, ggplot2::aes(x, y, colour = party_long)) +
  geom_parliament_seats() +
  draw_totalseats(n = 435, type = 'semicircle') +
  theme_ggparliament()

---

**election_data**  
*Election data from 5 countries*

**Description**

A dataset containing the results of 3 elections for parliamentary houses from Russia, Australia, Germany, UK and USA. The variables are as follows:

**Usage**

data(election_data)

**Format**

A data frame with 167 rows and 8 variables

**Details**

- **year.** The year of the election (1990-2017)
- **country.** The country the election took place within (Russia, Australia, Germany, UK, USA)
- **house.** The parliamentary house of the election
- **party_long.** The full name of a party which had elected representatives
- **party_short.** The abbreviated name of a party which had elected representatives
- **seats.** The number of seats won by each party
- **government.** Whether or not that party was a part of the government following the election (1, NA)
- **colour.** A hex code indicating the colours of each party

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**GeomParliamentSeats**  
*ggplot2-ggproto*

**Description**

ggplot2-ggproto
geom_emphasize_parliamentarians

Emphasize certain parliamentarians (for example, female members of parliament) by increasing transparency on the remaining observations.

Description

Emphasize certain parliamentarians (for example, female members of parliament) by increasing transparency on the remaining observations.

Usage

geom_emphasize_parliamentarians(expr)

Arguments

expr                  The observation that you wish to emphasize

Author(s)

Zoe Meers

Examples

data <- election_data[
  election_data$country == "USA" &
  election_data$house == "Representatives" &
  election_data$year == "2016",
]
usa_data <- parliament_data(
  election_data = data,
  type = "semicircle",
  party_seats = data$seats,
  parl_rows = 8
)

women_in_congress <- c(1, 0, 0, 1)
number_of_women <- c(23, 218, 133, 61)
usa_data$women <- rep(women_in_congress, number_of_women)

ggplot2::ggplot(usa_data, ggplot2::aes(x, y, colour=party_long)) +
  geom_parliament_seats() +
  geom_emphasize_parliamentarians(women == 1) +
  theme_ggparliament(legend = FALSE) +
  ggplot2::scale_colour_manual(values = usa_data$colour, limits = usa_data$party_long) +
  ggplot2::labs(title = "Women in Congress")
geom_highlight_government

Highlight governments or parties in control of the legislature by encircling the points.

Description

Highlight governments or parties in control of the legislature by encircling the points.

Usage

geom_highlight_government(expr, colour, size, shape, stroke)

Arguments

expr

Expr refers to the observation that you wish to highlight.

colour

Colour of the highlight

size

Size of highlighter

shape

Shape of highlight

stroke

Size of stroke shape

Author(s)

Zoe Meers

Source

https://yutani.rbind.io/post/2017-11-07-ggplot-add/

Examples

data <- election_data[
  election_data$country == "USA" &
  election_data$house == "Representatives" &
  election_data$year == "2016",
]
usa_data <- parliament_data(
  election_data = data,
  type = "semicircle",
  party_seats = data$seats,
  parl_rows = 8
)

ggplot2::ggplot(usa_data, ggplot2::aes(x, y, colour = party_long)) +
  geom_parliament_seats() +
  geom_highlight_government(government == 1) +
  theme_ggparliament()
geom_overhang_seats

**Description**

Draw overhang seats in mixed-member proportional (MMP) electoral systems

**Usage**

`geom_overhang_seats(expr)`

**Arguments**

- `expr`  
  Expr refers to the designated overhang seats.

**Author(s)**

Zoe Meers

**Examples**

```r
germany <- data.frame(
  year = 2013,
  seats = c(64, 63, 311, 193),
  government = c(0, 0, 1, 1),
  colour = c("#BE3075", "#64A12D", "#000000", "#EB001F"),
  party = c("The Left", "Alliance 90/The Greens", "Christian Democratic Union", "Social Democratic Party")
)

german_data <- parliament_data(
  election_data = germany,
  parl_rows = 11,
  party_seats = germany$seats,
  type = "semicircle"
)

german_data$overhang_seats <- rep(
  c(1, 0, 1, 0, 1, 0, 1, 0),
  c(16, 295, 11, 182, 3, 61, 3, 60)
)

ggplot2::ggplot(german_data, ggplot2::aes(x, y, colour = party)) +
  geom_parliament_seats() +
  geom_overhang_seats(overhang_seats == 1) +
  theme_ggparliament() +
  ggrepel::scale_colour_manual(values = as.character(german_data$colour),
  limits = as.character(german_data$party))
```
Description

Add a bar showing proportion of seats by party in parliament.

Usage

geom_parliament_bar(colour = colour, party = party, label = TRUE)

Arguments

- **colour**: The colours associated with each political party.
- **party**: The party name variable in your data frame.
- **label**: If label = TRUE, print the percentage above the bar.

Author(s)

Zoe Meers

Examples

```r
data <- election_data[election_data$country == "USA" 
 & election_data$house == "Representatives" 
 & election_data$year == "2016",]
usa_data <- parliament_data(election_data = data, 
type = "semicircle", 
party_seats = data$seats, 
parl_rows = 8)
ggplot2::ggplot(usa_data, ggplot2::aes(x, y, colour = party_long)) + 
geom_parliament_seats() + 
geom_parliament_bar(colour, party_long) + 
ggplot2::scale_colour_manual(values = usa_data$colour, limits = usa_data$party_long) + 
theme_ggparliament()
```

Description

Parliament seats The parliament seats geom is used for plotting data from parliament_data().
Usage

`geom_parliament_seats(mapping = NULL, data = NULL, stat = "identity", position = "identity", na.rm = FALSE, size = 3.5, show.legend = NA, inherit.aes = TRUE)`

Arguments

- **mapping**: Mapping the aesthetics (the x and y coordinates, as well as the colour of each political party).
- **data**: The parliament_data data frame.
- **stat**: "identity"
- **position**: "identity"
- **na.rm**: If ‘FALSE’, the default, missing values are removed with a warning. If ‘TRUE’, missing values are silently removed.
- **size**: Size of the point
- **show.legend**: If ‘TRUE’, print legend. If ‘FALSE’ do not print legend.
- **inherit.aes**: Inherit aes from other ggplot2 functions.

Author(s)

Zoe Meers

Examples

```r
data <- election_data[
  election_data$country == "USA" &
  election_data$house == "Representatives" &
  election_data$year == "2016",
]
usa_data <- parliament_data(
  election_data = data,
  type = "semicircle", party_seats = data$seats,
  parl_rows = 8
)
ggplot2::ggplot(usa_data, ggplot2::aes(x = x, y = y, colour = party_long)) +
  geom_parliament_seats() +
  theme_ggparliament()
```

Description

A function that prepares data for parliamentary plots
Usage

```r
parliament_data(election_data = NULL, parl_rows = NULL,
    party_seats = election_data$seats, group = NULL, plot_order = NULL,
    type = c("horseshoe", "semicircle", "circle", "classroom",
            "opposing_benches"))
```

Arguments

- `election_data`: aggregate election results
- `parl_rows`: number of rows in parliament
- `party_seats`: seats per party
- `group`: grouping variable for separate chunks. e.g. opposing benches in UK parliament
- `plot_order`: plot the data in a specified order
- `type`: type of parliament (horseshoe, semicircle, circle, classroom, opposing benches)

Author(s)

Zoe Meers, Rob Hickman

Examples

```r
data <- election_data[
    election_data$country == "USA" &
    election_data$house == "Representatives" &
    election_data$year == "2016",]
usa_data <- parliament_data(
    election_data = data,
    type = "semicircle",
    party_seats = data$seats,
    parl_rows = 8
)
```

---

**theme_ggparliament**

*A theme for ggparliament*

Description

Calls the ggparliament theme. A reconstructed opinionated theme_void() ggplot2 theme.

Usage

```r
theme_ggparliament(legend, background_colour, border)
```
theme_ggparliament

Arguments

- legend: If legend = ‘TRUE’, add legend to plot. Defaults to ‘TRUE’.
- background_colour: If background colour = ‘TRUE’, fill panel with a grey background. Defaults to ‘FALSE’.
- border: If ‘TRUE’ add panel border. Defaults to ‘FALSE’.

Author(s)

Zoe Meers

Examples

data <- election_data[
  election_data$country == "USA" &
  election_data$house == "Representatives" &
  election_data$year == "2016",
]
usa_data <- parliament_data(
  election_data = data,
  type = "semicircle",
  party_seats = data$seats,
  parl_rows = 8
)
ggplot2::ggplot(usa_data, ggplot2::aes(x, y, colour = party_long)) +
geom_parliament_seats() +
geom_highlight_government(government == 1) +
theme_ggparliament(legend = TRUE, background_colour = TRUE, border = TRUE)
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