Package 'ggparliament'

October 13, 2022

Type Package

Title Parliament Plots

Description Simple parliament plots using 'ggplot2'. Visualize election results as points in the architectural layout of the legislative chamber.

Depends R (>= 2.10)

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Version 2.0.0

Date 2018-09-14

URL https://github.com/robwhickman/ggparliament

BugReports https://github.com/robwhickman/ggparliament/issues

LazyData true

Imports ggplot2, dplyr, rlang

Suggests tidyr, magrittr, knitr, testthat, rmarkdown, purrr, ggrepel, scales

VignetteBuilder knitr

RoxygenNote 6.1.0.9000

Encoding UTF-8

Collate 'ggparliament_package.R' 'data.R' 'draw_majoritythreshold.R' 'helper_funcs.R' 'parliament_data.R' 'draw_partylabels.R' 'draw_totalseats.R' 'geom_parliament_seats.R' 'geom_emphasize_parliamentarians.R' 'geom_parliament_bar.R' 'geom_highlight_government.R' 'geom_overhang_seats.R' 'theme_ggparliament.R'

NeedsCompilation no

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Repository CRAN

Date/Publication 2018-09-30 13:00:03 UTC

R topics documented:

`ggparliament-package` *ggparliament*

Description

ggparliament

`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)

Author(s)

Zoe Meers, Rob Hickman

`draw_majoritythreshold` *Draw majority threshold*

Description

Draw majority threshold

Usage

```
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

```
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_majoritythreshold(
    n = 218,
    label = TRUE,
    type = 'semicircle'
  ) +
  theme_ggparliament()
```

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draw_partylabels *Draw labels for political parties and seats per party*

Description

Draw labels for political parties and seats per party

Usage

```
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
)
```

```
ggplot2::ggplot(usa_data, ggplot2::aes(x, y, colour = party_long)) +
  geom_parliament_seats() +
  draw_partylabels(
    type = "semicircle",
    party_names = party_long,
    party_seats = seats,
    party_colours = colour
  ) +
  ggplot2::scale_colour_manual(
    values = usa_data$colour,
    limits = usa_data$party_long)  +
  theme_ggparliament()
```

`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

```
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

```
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

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

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

```
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() +
 ggplot2::scale_colour_manual(values = as.character(german_data$colour),
 limits = as.character(german_data$party))
```

geom_parliament_bar *Add a bar showing proportion of seats by party in parliament*

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

```
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()
```

geom_parliament_seats *Parliament seats The parliament seats geom is used for plotting data from parliament_data()*

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

```
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()
```

---

parliament_data *A function that prepares data for parliamentary plots*

Description

A function that prepares data for parliamentary plots

Usage

```
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

```
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

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

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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