Waffle plots and heat plots in R

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This document provides a cursory overview of waffle plots and heat plots in R. These plots can be useful for plotting large panel datasets.

Prep

Start by clearing your workspace and loading necessary packages (not included).

Load and clean data

Load

We start by loading a dataset on country military specialization scores. The unit of analysis is country-year-specialization score (not included).

Prep

After general cleaning, there isn't much in the way of data preparation. Just make sure that, if your highest level of analysis is a character variable, coerce it into a factor to allow for alphabetical reordering.

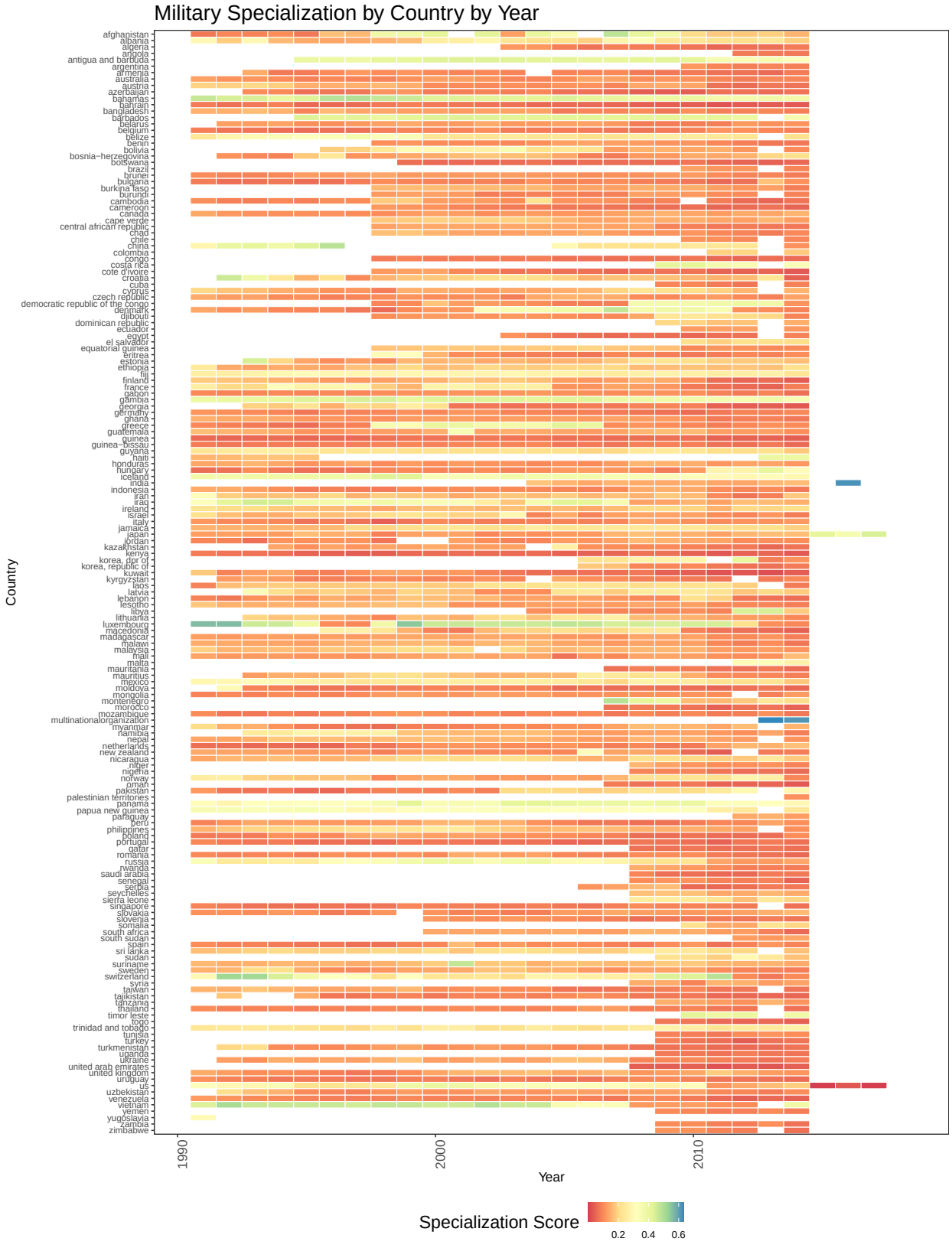
```
# Prep data
scores_waffle <-
  df %>%
  dplyr::filter(year != "   0") %>%
  dplyr::mutate(country = forcats::fct_reorder(country, dplyr::desc(country)))

# Specify color palette
my_palette <-
  RColorBrewer::brewer.pal(7, "Spectral")
```

Plot

Waffle plots can be made using just ggplot2.

```r
p2 <-
  ggplot(scores_waffle, aes(x = country, y = year, fill = d)) +
  geom_tile(color = "white", size = 0.35) +
  scale_fill_gradientn(colors = my_palette, na.value = 'white') +
  theme_bw() +
  coord_flip() +
  labs(title = "Military Specialization by Country by Year",
       x = "Country",
       y = "Year",
       fill = "Specialization Score",
       caption = "") +
  theme(panel.grid = element_blank(),
        title = element_text(size = 16),
        axis.title.x = element_text(size = 12),
        axis.title.y = element_text(size = 12),
        axis.text.x = element_text(size = 12, angle = 90),
        axis.text.y = element_text(size = 8),
        strip.text = element_text(size = 12),
        legend.position = "bottom",
        legend.direction = "horizontal",
        legend.title = element_text())
p2
```



Voila! These types of plots can be customized in all kinds of ways. See below for expanding your heat

plot knowledge:

- Waffle and swarm plots
- Heat maps
- Animated and interactive heat plots