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Geography 180
Assignment 3: Comparing Labeling and Symbolization Methods

Assignment Writeup

Panel 1 Writeup

I believe that the fourth panel (with 4 unique categories) does the best job of effectively representing the chosen area. Major cities like Istanbul and Naples are much larger than many of the capital cities in the Balkans, so they should be properly indicated as such. This panel shows that establishing a textual hierarchy for 4 different levels of cities is difficult. While all four categories of city have their own customization and typography, it's difficult for readers to visually differentiate the "Major City" and "Mid-Sized City" labels on their typography alone. The point symbols help with this immensely, however.

If map creators are worried about maximizing readability, then sticking to three categories may be the way to go instead. It provides a visually clean experience much like the fourth, but with one less category to parse. I will reiterate, however, that major cities like Istanbul are not properly represented. It's impossible to properly represent them without their own category. In my opinion, the "Four Categories" map is sufficiently clean and readable, and as such it is my official overall recommendation out of all four of these maps.

Panel 2 Writeup

I believe that the second map panel, titled "Parallel Placement", does the best job of effectively representing map features. The selected typography does a good job of differentiating major and minor rivers, and also represents lakes well. It's quite visually pleasing, and follows standard mapping conventions.

I think that curved labels could be more effective and visually pleasing, but there is an issue I encountered which led me to determine that it is not as viable as parallel placement. It seems like switching to "curved" placement for labels results in a significant amount of labels not being drawn on the map. For example, The labels for "Meadow Valley Wash," "Hassayampa," and many more are all missing from the third map. If there was a way to fix this without changing the map extent, it would be the best of the three; I especially enjoy how the curved label for the Colorado river looks!

Panel 3 Writeup

This map panel was the most difficult to create, requiring a significant time investment for every map on the panel. I spent a good amount of that time attempting to reduce label density, especially in the third and fourth maps. I'm really happy with the overall result - map 4 may be one of my favorite maps I've created.

While creating these maps, I utilized lots of different techniques for labels. The first and most important steps come while customizing labels' visual appearance. Aside from the standard stuff, I spent a while experimenting with letter spacing / kerning in order for labels to properly cover feature extent. Additionally, I set label placement for mountains to be "always vertical". Plateaus were "try horizontal first, then vertical" - these settings worked quite well.

After the initial setup, I experimented with the Maplex label engine. However, I was unhappy with the overall label changes, so I decided to disable it. In lieu of it, I chose to convert my labels to annotations and manually place them instead. This allowed me to customize the maps by hand so that I could guarantee a pleasing appearance. This took a really long time, but it's the most effective way I found to do this.

Converting to annotations allowed me to do several things, including: moving labels around, rotating labels to appear properly, deleting some of the minor peaks in the point layer, and clipping certain labels with abbreviations (I clipped "Baja California" to "Baja Calif.", and "Edwards Plateau" to "Edwards Plat."). These changes resulted in some extremely visually pleasing maps!

Panel 4 Writeup

My advice for new mappers would be to select a visual theme for the layer and differentiate roads while staying within that theme. As soon as you start varying color hues too drastically, it can become unclear as to whether or not all of the roads on the map are actually related. For example, I decided to pick a blue color theme for my roads, as it complements the red background I selected for my map and urban areas.

To visually differentiate individual roads, I varied the saturation and darkness of blue, while remaining around a similar hue. Additionally, I varied line thickness, and for my interstate road I actually created a custom symbol of a line with a darker blue outline. Pick a color without much contrast for minor roads, while major roads can remain thick and stand out. Selecting a labeling scheme was easier for road maps is easier, as the highway icon markers are universal. However, I recommend customizing the label font to be a more pleasing sans-serif than Arial.