"COLORBREWER" AN EXPERIMENT WITH COLOR

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PURPOSE

To see what colors work best according to ColorBrewer for a map based on:

- U.S. Census data for 2010
- Population of children under age 5
- Albers Equal Area Conic Projection
- In ESRI'S ArcMap 10.1

METHODOLOGY

Used ColorBrewer software and followed the steps in selecting the criteria

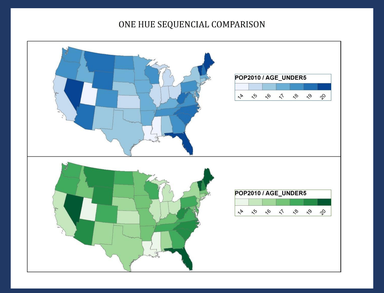
- Number of classes: 7
- Legend Type: Sequential, Diverging, and Qualitative
- Selected color schemes from each legend type
- Used ArcMap 10.1 to create the maps

POSSIBLE ISSUES

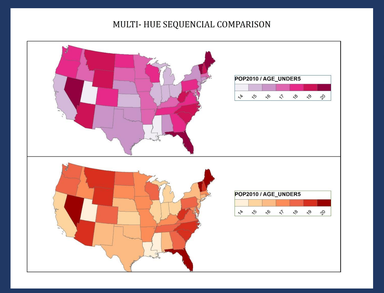
? = potentially an issue (might be ok - check first)

X = very likely an issue (best avoided)

SEQUENTIAL

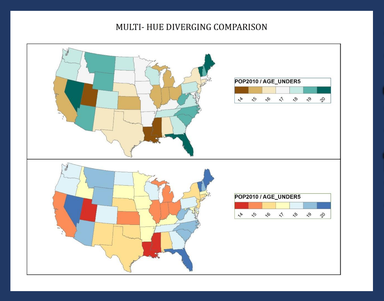


- Color-blind friendly for both maps to the left
- ? for laptop for blue
- x for all other usability

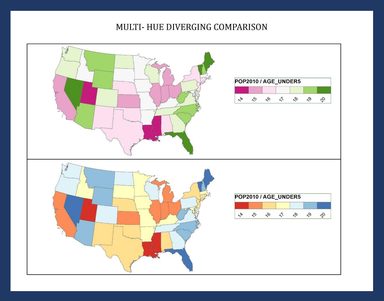


- Both maps to the left are only color blind friendly

DIVERGING

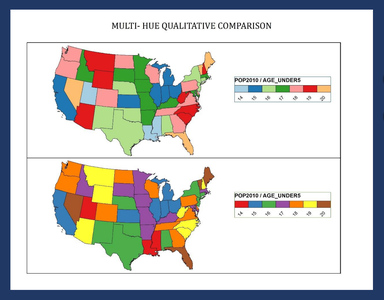


- Both maps to the left are color blind friendly
- Bottom map ? printer friendly
- x for other usability

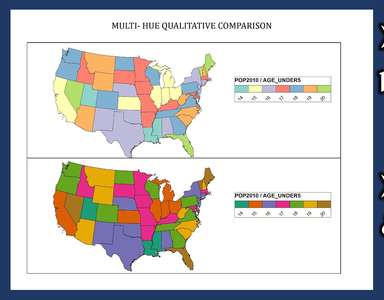


- Top map to the left is only color blind friendly
- Bottom map is color blind friendly & ? on printer friendly

QUALITATIVE



- Both maps to the left are friendly for laptop and printing
- ? for color blind
- x for photocopy



- Top map to the left is printer friendly
  - ? on photocopy & laptop
- Bottom map is laptop & printer friendly
  - x for others

BIBLIOGRAPHY

- ArcMap GIS. Vers. 10.1. Redlands, CA: ESRI, 1995-2013. Program documentation.
- Brewer, Cynthia A., 200x. 08 DEC 2013. <http://www.ColorBrewer.org>.
- U.S. Census Bureau. 2010. Population. Esri.

USABILITY

Color Blind Friendly

"Indicates that a given color scheme will not confuse people with red-green color blindness. Red-green color blindness affects approximately 8 percent of men and 0.4 percent of women, although its severity varies and so some schemes will have a "?" indicating it may be a problem for some, but not all folks with color vision impairment."

Color Printing Friendly

"Suitable for desktop color printing (based on our color printers - your mileage will vary and you should check on your own printer). We checked Matchprint proofs for all of these schemes and they are all printed in a 2003 journal article and the book Designing Better Maps by Cynthia Brewer. CMYK specs are as close to press-ready as is reasonable."

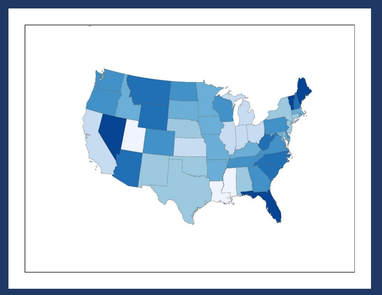
Photocopy Friendly

"This indicates that a given color scheme will withstand black and white photocopying. Diverging schemes can not be photocopied successfully. Differences in lightness should be preserved with sequential schemes."

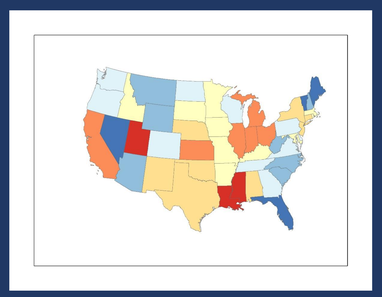
Laptop (LCD) Friendly

"This icon indicates that a given color scheme is suitable for viewing on a laptop LCD display. Small, portable LCD monitors tend to wash-out colors which results in noticeable differences from computer-to-computer."

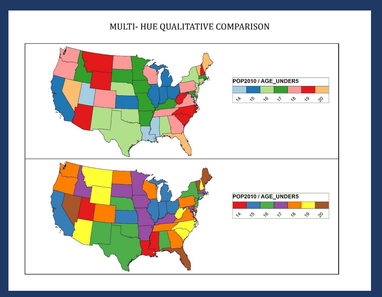
CONCLUSION



- The best option for sequential data is the single blue hue



- The best option for diverging data is the red, yellow, and blue scheme



- The best option for qualitative data is a toss up between the dark 2 & set 1 color schemes