

## DEM 5093/7093 - Lab 1 / Homework 2 | 02.01.2023

For anyone trying to make the interactive map, but is running into the following error, here is how to address it.

(Note: the interactive map is not necessary for Homework 2)

### ERROR

```
177 ## Interactive map with mapview
178
179 ```{r}
180 library(mapview)
181 library(RColorBrewer)
182 mhi_map$mhi_jbrks<-relevel(mhi_map$mhi_jbrks, ref = "0-5.5" )
183 pal <- colorRampPalette(brewer.pal(7, "Blues")) #set colors
184 mapview(mhi_map,
185         zcol="mhi_jbrks",
186         legend=T,
187         map.types="OpenStreetMap",
188         layer.name="Median Household Income")
189 ```
```

```
Error in relevel.factor(mhi_map$mhi_jbrks, ref = "0-5.5") :
  'ref' must be an existing level
```

### SOLUTION

This error is happening with the switch from the poverty variable to the median household income variable. Since their values are different, picking 0-5.5 as the ref may not align with the income values. Try `head(mhi_map)` to see what some of the values for your variable `mhi_jbrks` look like and then do `summary(mhi_map)` to get a summary of those values for `mhi_jbrks`.

(Highlights are just for ease of distinguishing objects and will depend on what you name your variable.)

See the outcomes following for running these lines of code with the original poverty variable for reference:

```
head(ppov_map)
```

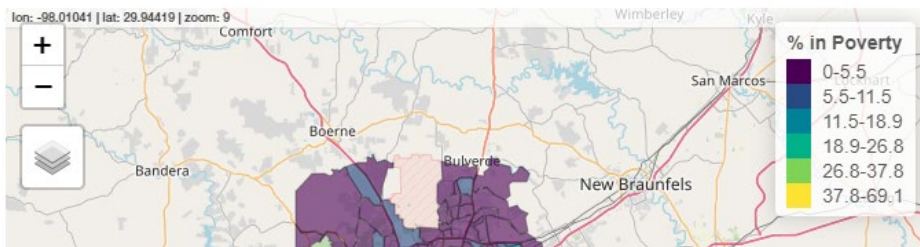
```
## Simple feature collection with 6 features and 11 fields
## Geometry type: MULTIPOLYGON
## Dimension:      XY
## Bounding box:   xmin: 2106567 ymin: 13681230 xmax: 2144180 ymax: 13744320
## Projected CRS: NAD83(HARN) / Texas South Central (ftUS)
##      GEOID      NAME DP05_0001E DP05_0001M
## 1 48029190601 Census Tract 1906.01, Bexar County, Texas      4514      788
## 2 48029181100 Census Tract 1811, Bexar County, Texas      6359      523
## 3 48029140700 Census Tract 1407, Bexar County, Texas      4838      303
## 4 48029180602 Census Tract 1806.02, Bexar County, Texas      3751      536
## 5 48029140800 Census Tract 1408, Bexar County, Texas      5124      453
## 6 48029170200 Census Tract 1702, Bexar County, Texas      5599      617
##      DP03_0119PE DP03_0119PM      geometry county totpop ppov
## 1      10.5      6.1 MULTIPOLYGON (((2119318 137... 48029 4514 10.5
## 2       7.8      6.8 MULTIPOLYGON (((2107703 137... 48029 6359  7.8
## 3       9.4      4.5 MULTIPOLYGON (((2136161 136... 48029 4838  9.4
## 4      17.1     11.6 MULTIPOLYGON (((2106567 137... 48029 3751 17.1
## 5      21.4      7.9 MULTIPOLYGON (((2134799 136... 48029 5124 21.4
## 6      35.4     11.2 MULTIPOLYGON (((2118664 136... 48029 5599 35.4
##      ppov_qbrks ppov_jbrks
## 1  6.3-11.25    5.5-11.5
## 2  6.3-11.25    5.5-11.5
## 3  6.3-11.25    5.5-11.5
## 4 16.9-24.58    11.5-18.9
## 5 16.9-24.58    18.9-26.8
## 6 24.58-69.1    26.8-37.8
```

1st 6 values

summary(ppov\_map)

```
##      GEOID      NAME      DP05_0001E      DP05_0001M
## Length:362      Length:362      Min.   : 793      Min.   : 29.0
## Class :character Class :character 1st Qu.: 3838      1st Qu.: 381.2
## Mode  :character Mode  :character Median : 5051      Median : 521.5
##                                     Mean  : 5395      Mean   : 542.7
##                                     3rd Qu.: 6578      3rd Qu.: 664.8
##                                     Max.   :18624      Max.   :1368.0
## DP03_0119PE      DP03_0119PM      geometry      county
## Min.   : 0.00      Min.   : 0.600      MULTIPOLYGON :362      Length:362
## 1st Qu.: 4.90      1st Qu.: 3.925      epsg:2919     : 0      Class :character
## Median :11.25      Median : 6.700      +proj=lcc ...: 0      Mode  :character
## Mean   :13.63      Mean   : 6.811
## 3rd Qu.:20.77      3rd Qu.: 9.000
## Max.   :69.10      Max.   :24.100
##      totpop      ppov      ppov_qbrks      ppov_jbrks
## Min.   : 793      Min.   : 0.00      0-3.4 :63      0-5.5 :104
## 1st Qu.: 3838      1st Qu.: 4.90      3.4-6.3 :60      5.5-11.5 :82
## Median : 5051      Median :11.25      6.3-11.25 :58      11.5-18.9 :75
## Mean   : 5395      Mean   :13.63      11.25-16.9 :61      18.9-26.8 :54
## 3rd Qu.: 6578      3rd Qu.:20.77      16.9-24.58 :59      26.8-37.8 :41
## Max.   :18624      Max.   :69.10      24.58-69.1 :61      37.8-69.1 : 6
```

all range  
options



These ranges match all range options.