Putting Down Roots: A Graphical Exploration of Community Attachment

Preliminary Progress

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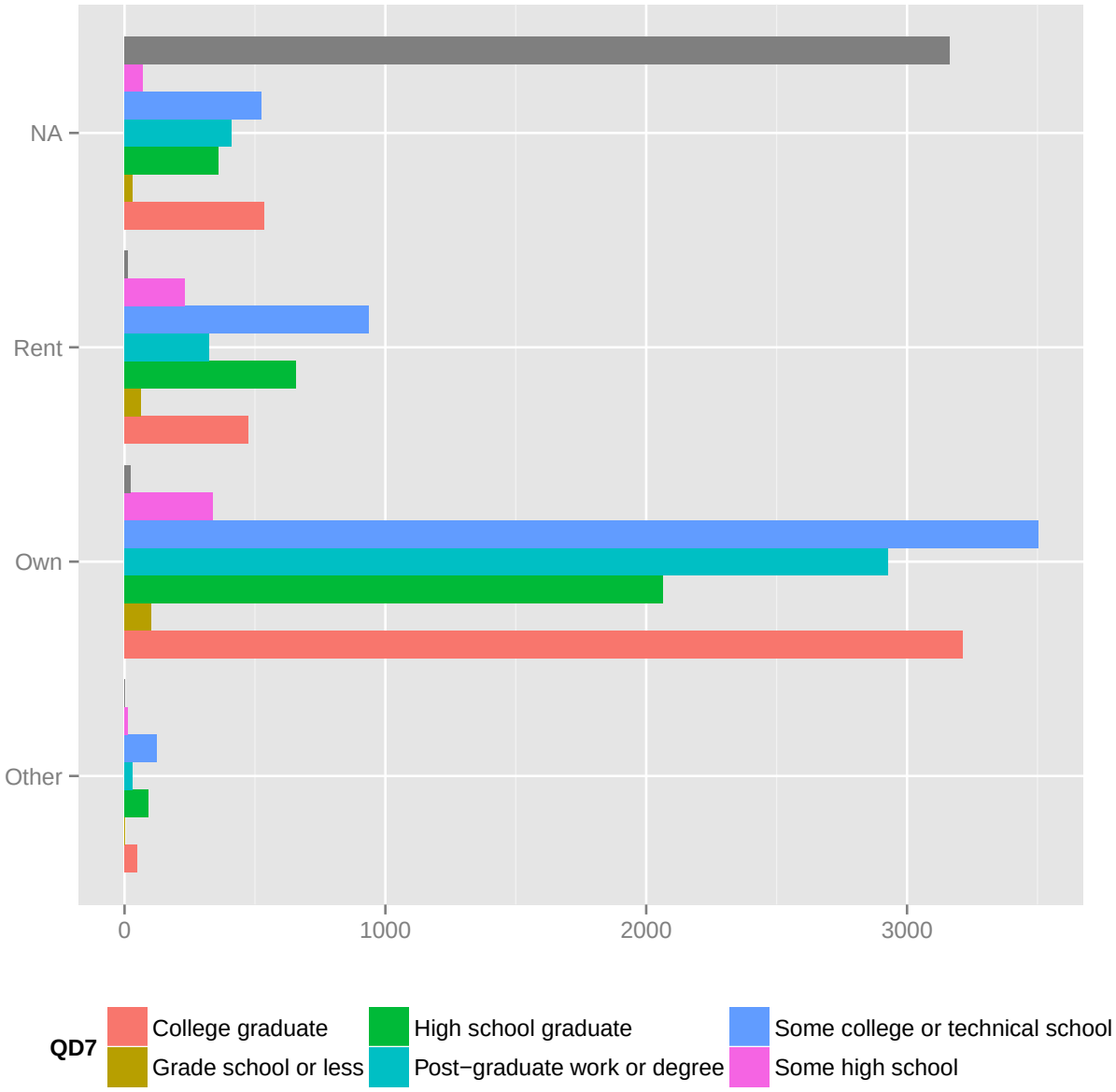
```
library(ggplot2)
library(plyr)
library(maps)
library(RgoogleMaps)


## Loading required package:  png


library(scales)
library(xtable)
```

```
unclean.2010 <- read.csv("http://streaming.stat.iastate.edu/dataexpo/2013/data/sotc10.csv",
    na.strings = c("NA", "<NA>", "(DK)", "(Refused)"))
```

```
## Housing situation by Education level
qplot(QD8, data = unclean.2010, fill = QD7, geom = "bar", position = "dodge") +
    coord_flip() + xlab("") + ylab("") + scale_x_discrete(labels = c("Other",
    "Own", "Rent", "NA")) + guides(fill = guide_legend(nrow = 2)) + theme(legend.position = "b
```




```
## Thriving - Struggling
unclean.2010$THRIVEIND <- unclean.2010$THRIVING - unclean.2010$STRUGGLI

unclean.city <- ddply(unclean.2010, .(QSB), summarise, THRIVEIND = mean(THRIVEIND,
    na.rm = TRUE), TOTALRESP = length(GENDER))

## Which communities are most thriving?
unclean.city <- unclean.city[with(unclean.city, order(-THRIVEIND)), ]

xtable(unclean.city)
```

	QSB	THRIVEIND	TOTALRESP
8	Columbus, GA	41.50	400
25	Tallahassee, FL	24.69	400
19	Myrtle Beach, SC	24.44	400
4	Boulder, CO	23.49	407
1	Aberdeen, SD	23.08	403
22	San Jose, CA	21.83	1570
13	Grand Forks, ND	21.42	400
2	Akron, OH	17.68	1768
7	Columbia, SC	17.16	400
11	Fort Wayne, IN	17.08	400
15	Long Beach, CA	17.05	406
26	Wichita, KS	16.99	401
21	Philadelphia, PA	16.74	1633
23	St. Paul, MN	15.36	1819
24	State College, PA	14.83	401
20	Palm Beach, FL	14.54	411
6	Charlotte, NC	11.78	1617
3	Biloxi, MS	11.21	402
14	Lexington, KY	11.20	400
10	Duluth, MN	2.80	403
16	Macon, GA	2.79	1657
17	Miami, FL	0.98	1330
5	Bradenton, FL	-0.07	402
9	Detroit, MI	-2.73	1606
12	Gary, IN	-5.93	400
18	Milledgeville, GA	-15.55	435

```
states.data <- map_data("state")

lats <- c(33.080143, 41.59337, 42.331427, 27.498928, 25.788969, 32.840695, 46.786672,
    38.040584, 30.396032, 35.227087, 26.705621, 40.793395, 44.953703, 39.952335,
    37.688889, 33.768321, 41.079273, 34.00071, 41.081445, 47.925257, 37.339386,
    45.464698, 40.014986, 33.68906, 30.438256, 32.460976)
lons <- c(-83.232099, -87.346427, -83.045754, -82.574819, -80.226439, -83.632402,
    -92.100485, -84.503716, -88.885308, -80.843127, -80.03643, -77.860001, -93.089958,
    -75.163789, -97.336111, -118.195617, -85.139351, -81.034814, -81.519005,
    -97.032855, -121.894955, -98.486483, -105.270546, -78.886694, -84.280733,
    -84.987709)
unclean.city$lats <- rev(lats)
unclean.city$lons <- rev(lons)

qplot(long, lat, data = states.data, group = group, geom = "polygon", fill = I("white")) +
    geom_path() + geom_point(data = unclean.city, aes(lons, lats, colour = THRIVEIND,
    size = TOTALRESP), inherit.aes = FALSE) + scale_size(range = c(3, 8)) +
    geom_text(data = unclean.city, aes(lons, lats, label = QSB), inherit.aes = FALSE,
```

```
    size = 3, vjust = -0.8) + scale_colour_gradient2(low = "red", high = "darkgreen",
mid = "yellow", midpoint = median(unclean.city$THRIVEIND)) + theme_bw() +
theme(aspect.ratio = 1/1.5, legend.position = "bottom") + theme(axis.ticks = element_blank
axis.line = element_blank(), axis.text.x = element_blank(), axis.text.y = element_blank(),
axis.ticks = element_blank(), axis.title.x = element_blank(), axis.title.y = element_blank
panel.border = element_blank(), panel.grid.major = element_blank(), panel.grid.minor = ele
```