R Notebook

Code

This is an R Markdown (http://rmarkdown.rstudio.com) Notebook. When you execute code within the notebook, the results appear beneath the code.

Try executing this chunk by clicking the *Run* button within the chunk or by placing your cursor inside it and pressing *Cmd+Shift+Enter*.

Hide

```
library(readxl)
lee2015_s2 <- read_excel("lee2015-s2.xlsx", skip = 1)
head(lee2015_s2)
```

…	Country <dbl>	…	Region <chr>	Sub_region <chr>	Sampl
70	Afghanistan	AFG	Asia	Western Asia	
56	Angola	AGO	Africa	Central Africa	
87	Argentina	ARG	Latin America & Caribbean	Southern South America	
88	Armenia	ARM	Europe	Eastern Europe	
47	Australia	AUS	Europe (Oceania)	Western Europe (AustraliaNZ)	
89	Austria	AUT	Europe	Western Europe	

6 rows | 1-6 of 43 columns

Hide

```
library(readr)
howe_data <- read_csv("howe-2016-data.csv")
```

```
Rows: 4545 Columns: 38
── Column specification ────────────────────────────────────────────────────────
────────────────────────────────────────────────────────────────────────────────

Delimiter: ","
chr  (2): GeoType, GeoName
dbl (36): GEOID, TotalPop, discuss, discussOppose, CO2limits, CO2limitsOppose, trustc
limsciSST, trustclimsciSSTOppose, r...

ℹ Use `spec()` to retrieve the full column specification for this data.
ℹ Specify the column types or set `show_col_types = FALSE` to quiet this message.
```

Hide

```
head(howe_data)
```

GeoType <chr>	GE… <dbl>	GeoName <chr>	TotalPop <dbl>	discuss <dbl>	discussOppose <dbl>	CO2limits <dbl>	CO2limitsOppose <dbl>

GeoType <chr>	GE... <dbl>	GeoName <chr>	TotalPop <dbl>	discuss <dbl>	discussOppose <dbl>	CO2limits <dbl>	CO2limitsOppose <dbl>
National	9999	US	209056129	33.495	31.081	69.376	29.386
State	1	Alabama	3217902	27.468	38.892	63.122	35.589
State	2	Alaska	460319	36.632	28.074	68.231	31.123
State	4	Arizona	4284776	36.724	28.882	66.001	32.625
State	5	Arkansas	1949963	28.832	37.666	63.744	35.166
State	6	California	24865866	39.309	25.920	73.740	24.959

6 rows | 1-8 of 38 columns

Hide

```
unique(howe_data$GeoType)
```

```
[1] "National" "State"    "County"   "cd113"    "CBSA"
```

Hide

```
# national: US (1)
# state (51)
# county (3142)
# cd113: congressional district (435)
# CBSA: Core-based statistical area (916)
```

Hide

```
national <- howe_data[howe_data$GeoType=='National',]
county <- howe_data[howe_data$GeoType=='County',]
cd <- howe_data[howe_data$GeoType=='cd113',]
state <- howe_data[howe_data$GeoType=='State',]
cbsa <- howe_data[howe_data$GeoType=='CBSA',]
```

Hide

```
county
```

GeoT... <chr>	GE... <dbl>	GeoName <chr>	TotalPop <dbl>	discuss <dbl>	discussO
County	1001	Autauga County, Alabama	36233	25.075	
County	1003	Baldwin County, Alabama	133267	28.486	
County	1005	Barbour County, Alabama	18836	26.789	
County	1007	Bibb County, Alabama	15683	24.599	
County	1009	Blount County, Alabama	39052	25.467	
County	1011	Bullock County, Alabama	7283	28.666	

GeoT…	GE…	GeoName	TotalPop	discuss	discussO
<chr>	<dbl>	<chr>	<dbl>	<dbl>	
County	1013	Butler County, Alabama	14041	25.115	
County	1015	Calhoun County, Alabama	78667	26.815	
County	1017	Chambers County, Alabama	23825	25.735	
County	1019	Cherokee County, Alabama	18813	24.660	

1-10 of 3,142 rows | 1-7 of 38 columns Previous **1** 2 3 4 5 6 ... 100 Next

Hide

```
# belief
pol_pref <- c('CO2limits', 'regulate', 'supportRPS', 'fundrenewables')
pol_pref_o <- c('CO2limitsOppose', 'regulateOppose', 'supportRPSOppose', 'fundrenewab
lesOppose')
belief <- c('happening', 'human', 'consensus')
belief_o <- c('happeningOppose', 'humanOppose', 'consensusOppose', 'trustclimsciSSTOp
pose')
risk <- c('worried', 'personal', 'harmUS', 'devharm', 'futuregen', 'timing', 'harmpla
nts')
risk_o <- c('worriedOppose', 'personalOppose', 'harmUSOppose', 'devharmOppose', 'futu
regenOppose', 'timingOppose', 'harmplantsOppose')
behavior <- c('discuss', 'mediaweekly')
behavior_o <- c('discussOppose', 'mediaweeklyOppose')
pol_bel <- c(pol_pref, belief)

all <- c(pol_pref, belief, risk, behavior)
all_o <- c(pol_pref_o, belief_o, risk_o, behavior_o)
```

Hide

```
library(dplyr)

county_all <-
county %>%
  select(all_of(all))

county_all_o <-
county %>%
  select(all_of(all_o))

county_p <-
county %>%
  select(all_of(c(pol_pref, pol_pref_o)))

county_f <-
county %>%
  select(all_of(c('discuss', 'happening', 'human', 'consensus')))
```

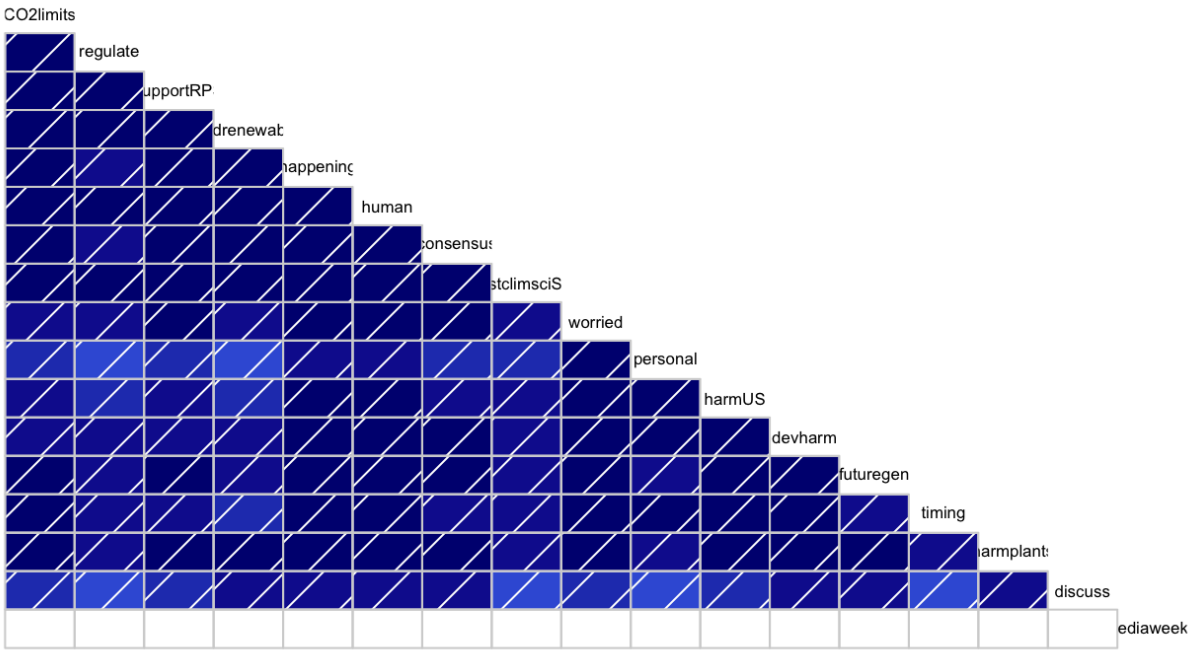
Hide

```
all_county = cor(county_all)
round(all_county, 2)
```

```
               CO2limits regulate supportRPS fundrenewables happening human consensus
worried personal harmUS devharm
CO2limits           1.00     0.90       0.91           0.86      0.93  0.91      0.91
0.85     0.69   0.80    0.84
regulate            0.90     1.00       0.95           0.89      0.85  0.87      0.84
0.77     0.53   0.68    0.73
supportRPS          0.91     0.95       1.00           0.89      0.93  0.95      0.91
0.86     0.67   0.80    0.85
fundrenewables      0.86     0.89       0.89           1.00      0.87  0.86      0.92
0.74     0.46   0.68    0.77
happening           0.93     0.85       0.93           0.87      1.00  0.97      0.95
0.94     0.80   0.92    0.94
human               0.91     0.87       0.95           0.86      0.97  1.00      0.94
0.94     0.79   0.91    0.94
consensus           0.91     0.84       0.91           0.92      0.95  0.94      1.00
0.86     0.66   0.84    0.90
worried             0.85     0.77       0.86           0.74      0.94  0.94      0.86
1.00     0.90   0.98    0.97
personal            0.69     0.53       0.67           0.46      0.80  0.79      0.66
0.90     1.00   0.94    0.87
harmUS              0.80     0.68       0.80           0.68      0.92  0.91      0.84
0.98     0.94   1.00    0.97
devharm             0.84     0.73       0.85           0.77      0.94  0.94      0.90
0.97     0.87   0.97    1.00
futuregen           0.86     0.78       0.87           0.85      0.95  0.95      0.92
0.94     0.76   0.91    0.97
timing              0.86     0.75       0.82           0.66      0.91  0.87      0.80
0.93     0.92   0.93    0.88
harmplants          0.89     0.80       0.87           0.86      0.95  0.94      0.92
0.93     0.76   0.90    0.96
discuss             0.64     0.49       0.60           0.72      0.75  0.73      0.84
0.70     0.54   0.71    0.78
mediaweekly           NA       NA         NA             NA        NA    NA        NA
NA       NA     NA      NA
               futuregen timing harmplants discuss mediaweekly
CO2limits           0.86   0.86       0.89    0.64          NA
regulate            0.78   0.75       0.80    0.49          NA
supportRPS          0.87   0.82       0.87    0.60          NA
fundrenewables      0.85   0.66       0.86    0.72          NA
happening           0.95   0.91       0.95    0.75          NA
human               0.95   0.87       0.94    0.73          NA
consensus           0.92   0.80       0.92    0.84          NA
worried             0.94   0.93       0.93    0.70          NA
personal            0.76   0.92       0.76    0.54          NA
harmUS              0.91   0.93       0.90    0.71          NA
devharm             0.97   0.88       0.96    0.78          NA
futuregen           1.00   0.82       0.99    0.79          NA
timing              0.82   1.00       0.84    0.57          NA
harmplants          0.99   0.84       1.00    0.78          NA
discuss             0.79   0.57       0.78    1.00          NA
mediaweekly           NA     NA         NA      NA           1
```

Hide

```
corrgram(all_county, order = NULL, lower.panel = panel.shade, upper.panel = NULL)
```



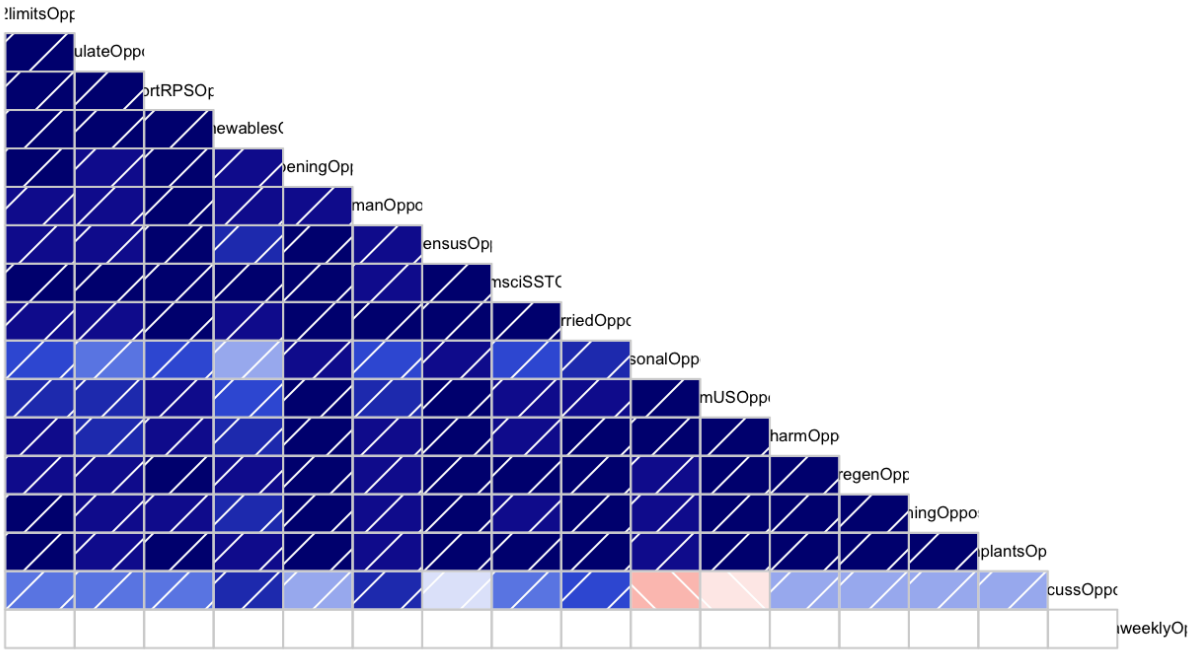
Hide

```
all_county_o = cor(county_all_o)
round(all_o , 2)
```

```
               happening cause_original
happening           1.00          -0.35
cause_original     -0.35           1.00
```

Hide

```
corrgram(all_o, order = NULL, lower.panel = panel.shade, upper.panel = NULL)
```



Hide

```
state_all <-
state %>%
  select(all_of(all))

state_all_o <-
state %>%
  select(all_of(all_o))
```

Hide

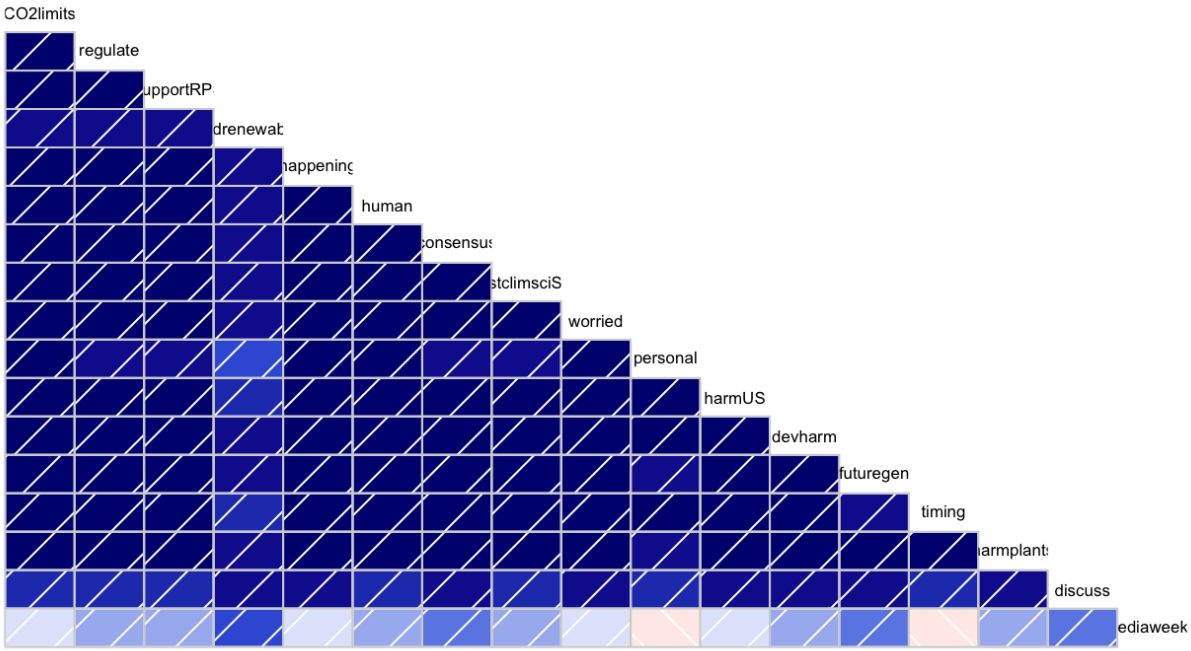
```
all_state = cor(state_all)
round(all_state, 2)
```

```
                CO2limits regulate supportRPS fundrenewables happening human consensu
s trustclimsciSST worried personal
CO2limits            1.00     0.96       0.95           0.74      0.97  0.95      0.9
2            0.89    0.97     0.88
regulate             0.96     1.00       0.97           0.84      0.96  0.97      0.9
7            0.95    0.95     0.83
supportRPS           0.95     0.97       1.00           0.79      0.96  0.98      0.9
7            0.96    0.95     0.85
fundrenewables       0.74     0.84       0.79           1.00      0.79  0.77      0.8
3            0.78    0.74     0.52
happening            0.97     0.96       0.96           0.79      1.00  0.96      0.9
7            0.92    0.99     0.92
human                0.95     0.97       0.98           0.77      0.96  1.00      0.9
6            0.95    0.97     0.89
consensus            0.92     0.97       0.97           0.83      0.97  0.96      1.0
0            0.95    0.95     0.85
trustclimsciSST      0.89     0.95       0.96           0.78      0.92  0.95      0.9
5            1.00    0.91     0.85
worried              0.97     0.95       0.95           0.74      0.99  0.97      0.9
5            0.91    1.00     0.93
personal             0.88     0.83       0.85           0.52      0.92  0.89      0.8
5            0.85    0.93     1.00
harmUS               0.94     0.93       0.94           0.66      0.97  0.96      0.9
5            0.92    0.98     0.97
devharm              0.94     0.95       0.96           0.76      0.98  0.96      0.9
8            0.91    0.97     0.90
futuregen            0.93     0.97       0.97           0.82      0.95  0.97      0.9
8            0.92    0.95     0.82
timing               0.91     0.88       0.90           0.58      0.94  0.92      0.8
9            0.90    0.94     0.98
harmplants           0.95     0.96       0.95           0.83      0.98  0.95      0.9
8            0.90    0.96     0.84
discuss              0.70     0.70       0.71           0.72      0.80  0.70      0.8
1            0.66    0.78     0.66
mediaweekly          0.03     0.19       0.23           0.47      0.13  0.18      0.3
2            0.19    0.09    -0.11
                harmUS devharm futuregen timing harmplants discuss mediaweekly
CO2limits         0.94    0.94      0.93   0.91        0.95    0.70        0.03
regulate          0.93    0.95      0.97   0.88        0.96    0.70        0.19
supportRPS        0.94    0.96      0.97   0.90        0.95    0.71        0.23
fundrenewables    0.66    0.76      0.82   0.58        0.83    0.72        0.47
happening         0.97    0.98      0.95   0.94        0.98    0.80        0.13
human             0.96    0.96      0.97   0.92        0.95    0.70        0.18
consensus         0.95    0.98      0.98   0.89        0.98    0.81        0.32
trustclimsciSST   0.92    0.91      0.92   0.90        0.90    0.66        0.19
worried           0.98    0.97      0.95   0.94        0.96    0.78        0.09
personal          0.97    0.90      0.82   0.98        0.84    0.66       -0.11
harmUS            1.00    0.97      0.93   0.98        0.93    0.75        0.06
devharm           0.97    1.00      0.97   0.91        0.98    0.81        0.22
futuregen         0.93    0.97      1.00   0.85        0.98    0.77        0.34
timing            0.98    0.91      0.85   1.00        0.87    0.67       -0.09
harmplants        0.93    0.98      0.98   0.87        1.00    0.82        0.27
discuss           0.75    0.81      0.77   0.67        0.82    1.00        0.41
mediaweekly       0.06    0.22      0.34  -0.09        0.27    0.41        1.00
```

Add a new chunk by clicking the *Insert Chunk* button on the toolbar or by pressing *Cmd+Option+I*.

Hide

```
corrgram(all_state, order = NULL, lower.panel = panel.shade, upper.panel = NULL)
```



Hide

```
risk perception and policy preference
weak relationship between behavior and perception
```

Hide

```
library(corrgram)
corrgram(R, order = NULL, lower.panel = panel.shade, upper.panel = NULL)
```

```
Error in ncol(x) : object 'R' not found
```

Hide

```
# library
library(ggplot2)
national_pref <-
national %>%
  select(all_of(pol_pref))
```

Hide

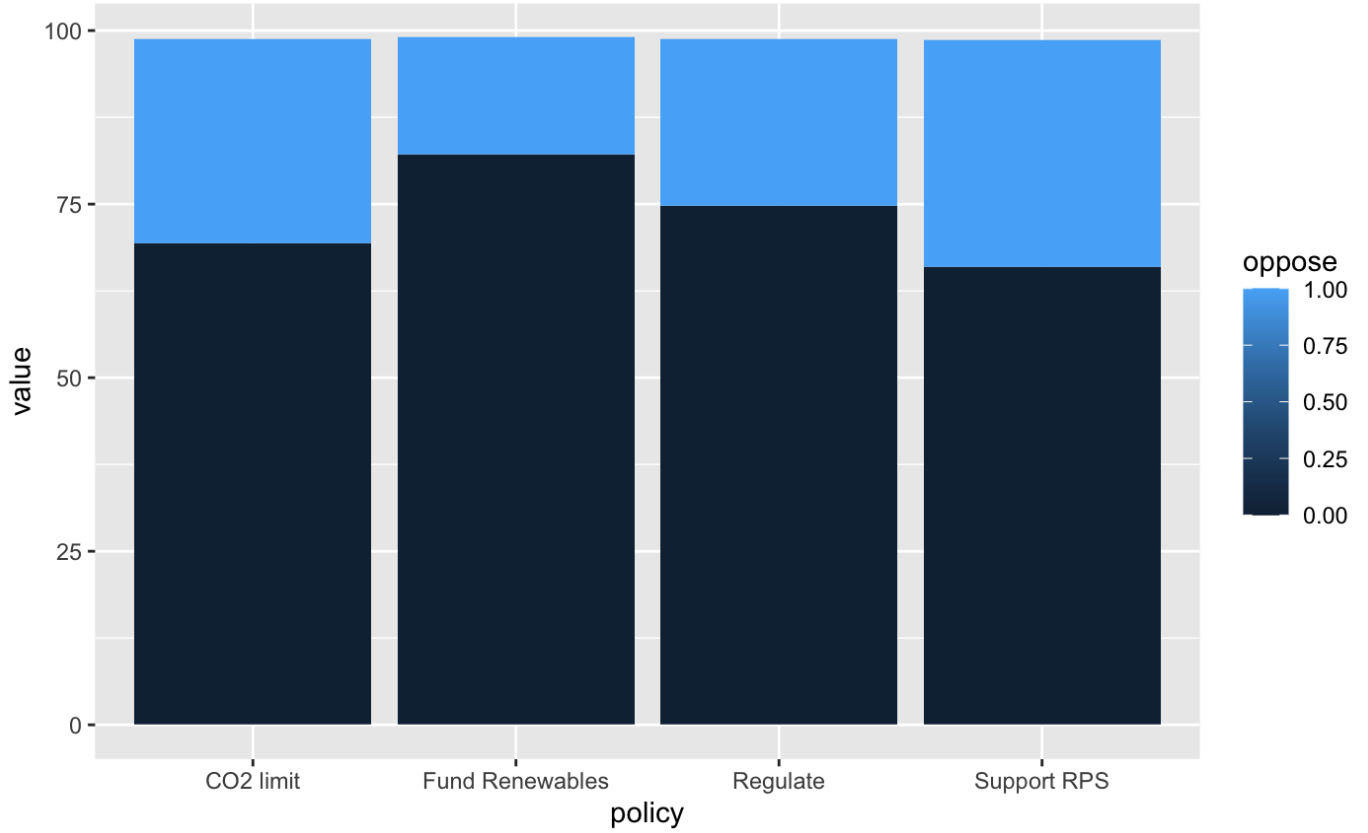
```
# create a dataset
policy <- c('CO2 limit', 'Regulate', 'Support RPS', 'Fund Renewables', 'CO2 limit',
'Regulate', 'Support RPS', 'Fund Renewables')
value <- c(national$CO2limits, national$regulate, national$supportRPS, national$fundr
enewables, national$CO2limitsOppose, national$regulateOppose, national$supportRPSOppo
se, national$fundrenewablesOppose)
oppose <- c(0, 0, 0, 0, 1, 1, 1, 1)
data <- data.frame(policy, value, oppose)
data
```

policy <chr>	value <dbl>	oppose <dbl>
CO2 limit	69.376	0
Regulate	74.774	0
Support RPS	65.993	0
Fund Renewables	82.196	0
CO2 limit	29.386	1
Regulate	23.993	1
Support RPS	32.663	1
Fund Renewables	16.802	1

8 rows

Hide

```
# Stacked
ggplot(data, aes(fill = oppose, y=value, x=policy)) +
    geom_bar(position="stack", stat="identity")
```



Hide

```
head(lee2015_s2)
```

…	Country	…	Region	Sub_region	Sampl
	<dbl>		<chr>	<chr>	
70	Afghanistan	AFG	Asia	Western Asia	
56	Angola	AGO	Africa	Central Africa	
87	Argentina	ARG	Latin America & Caribbean	Southern South America	
88	Armenia	ARM	Europe	Eastern Europe	
47	Australia	AUS	Europe (Oceania)	Western Europe (AustraliaNZ)	
89	Austria	AUT	Europe	Western Europe	

6 rows | 1-6 of 43 columns

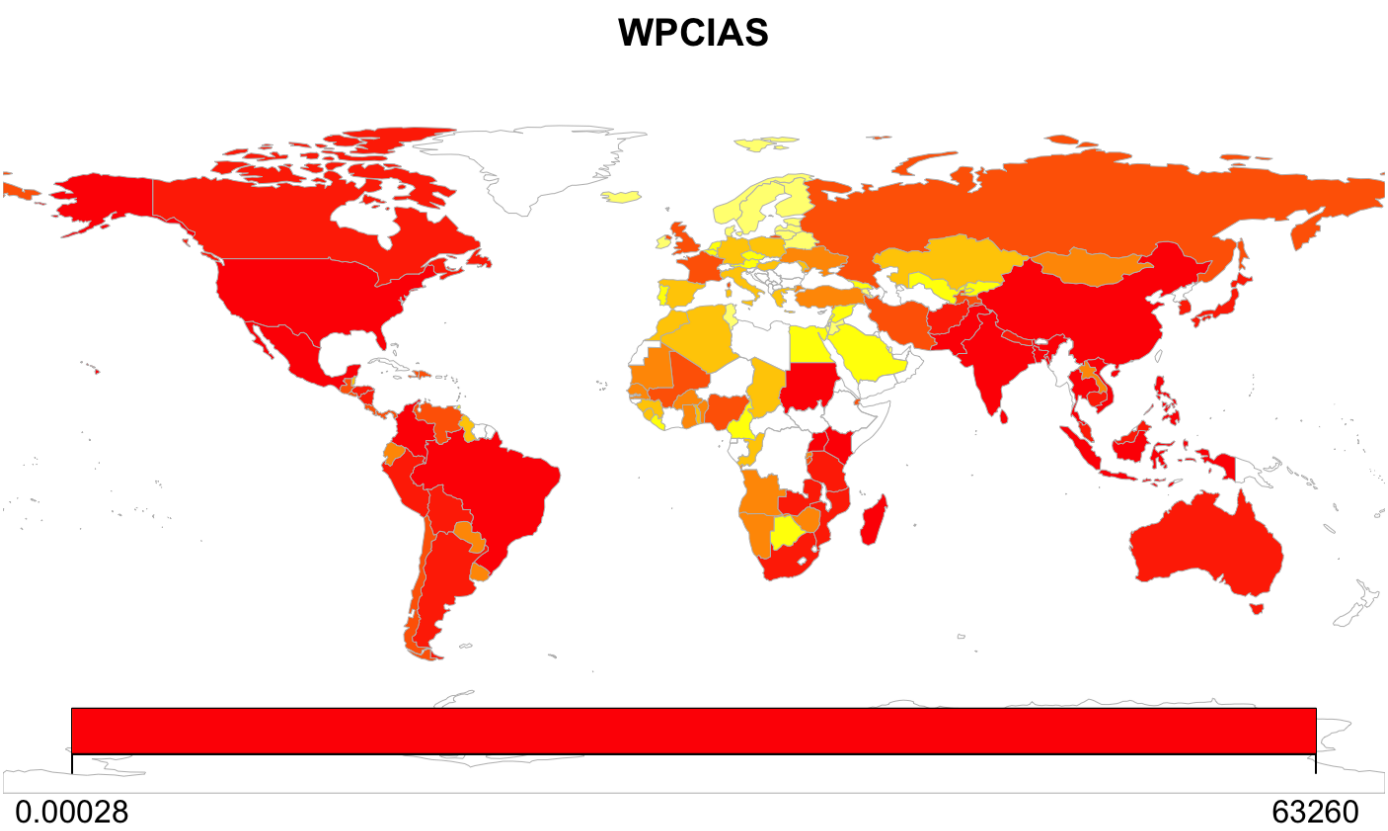
Hide

```
library(ggplot2)
library(scales)
library(sf)
library(rnaturalearth)
library(rnaturalearthdata)
library(classInt)
library(RColorBrewer)

sPDF <- joinCountryData2Map(lee2015_s2
,joinCode = "ISO3"
,nameJoinColumn = "ISO")
```

```
118 codes from your data successfully matched countries in the map
1 codes from your data failed to match with a country code in the map
125 codes from the map weren't represented in your data
```

Hide

```
mapDevice() #create world map shaped window
mapCountryData(sPDF
,nameColumnToPlot='WPCIAS')
```



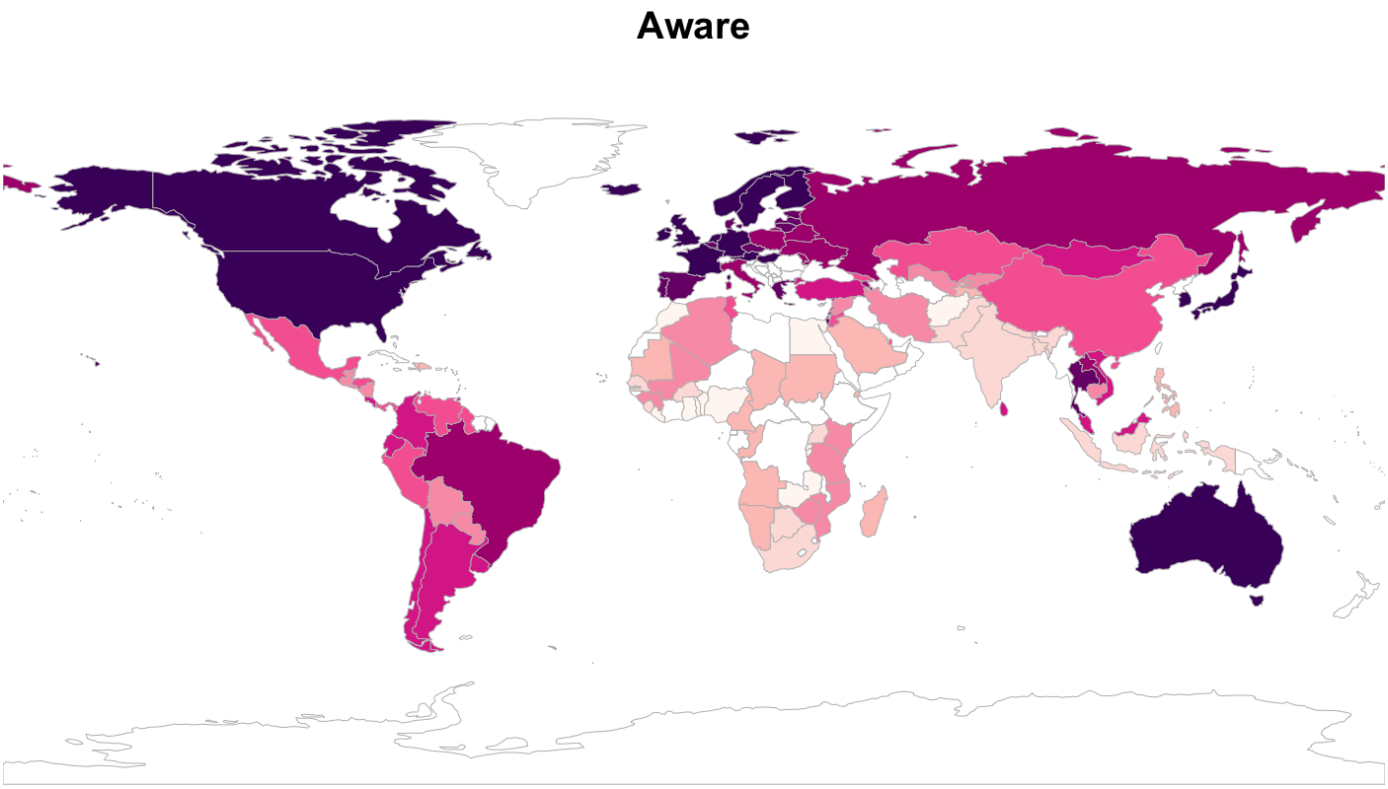
Hide

```
#getting class intervals
classInt <- classIntervals( sPDF[["Aware"]]
,n=9, style = "jenks")
```

```
var has missing values, omitted in finding classes
```

Hide

```
catMethod = classInt[["brks"]]
#getting colours
colourPalette <- brewer.pal(9,'RdPu')
#plot map
mapDevice() #create world map shaped window
mapParams <- mapCountryData(sPDF
,nameColumnToPlot="Aware"
,addLegend=FALSE
,catMethod = catMethod
,colourPalette=colourPalette
)
#adding legend
do.call(addMapLegend
,c(mapParams
,legendLabels="all"
,legendWidth=0.5
,legendIntervals="data"
,legendMar = 2))
```



Hide

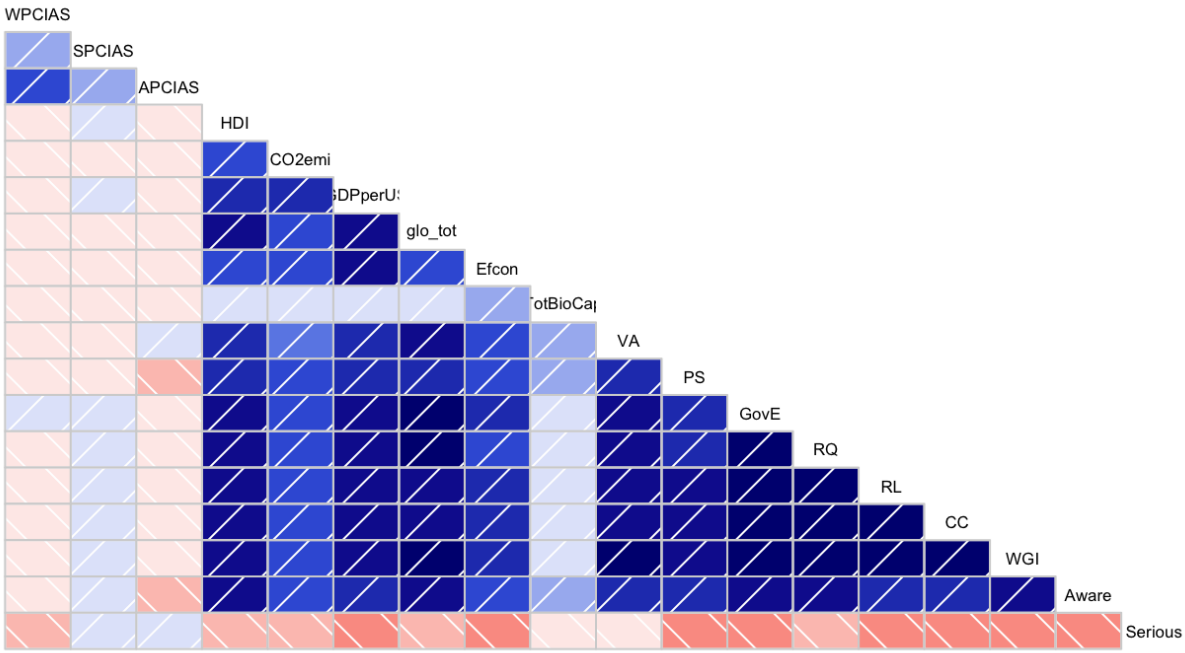
```
national_inc <- c('WPCIAS', 'SPCIAS', 'APCIAS', 'HDI', 'CO2emi', 'GDPperUS', 'glo_to
t', 'Efcon', 'TotBioCap', 'VA', 'PS',
'GovE', 'RQ', 'RL', 'CC', 'WGI', 'Aware', 'Serious')

lee_national <-
lee2015_s2 %>%
  select(all_of(national_inc))

lee_national_corr = cor(lee_national)
round(lee_national_corr, 2)
```

```
          WPCIAS SPCIAS APCIAS   HDI CO2emi GDPperUS glo_tot Efcon TotBioCap    VA
PS  GovE    RQ    RL    CC   WGI Aware
WPCIAS      1.00   0.18   0.48 -0.03  -0.02    -0.07   -0.03 -0.06     -0.05 -0.12 -
0.07  0.02 -0.04 -0.02 -0.06 -0.05 -0.06
SPCIAS      0.18   1.00   0.16  0.04   0.00     0.02   -0.04 -0.05     -0.09 -0.01
0.00  0.09  0.02  0.07  0.02  0.04  0.04
APCIAS      0.48   0.16   1.00 -0.11  -0.08    -0.09   -0.09 -0.10     -0.07  0.00 -
0.16 -0.03 -0.07 -0.03 -0.07 -0.06 -0.17
HDI        -0.03   0.04  -0.11  1.00   0.56     0.69    0.85  0.56      0.13  0.65
0.59  0.82  0.80  0.77  0.74  0.79  0.85
CO2emi     -0.02   0.00  -0.08  0.56   1.00     0.66    0.48  0.54      0.05  0.29
0.44  0.49  0.49  0.50  0.49  0.49  0.45
GDPperUS   -0.07   0.02  -0.09  0.69   0.66     1.00    0.72  0.73      0.10  0.64
0.61  0.79  0.75  0.80  0.83  0.80  0.66
glo_tot    -0.03  -0.04  -0.09  0.85   0.48     0.72    1.00  0.52      0.10  0.76
0.64  0.87  0.90  0.84  0.82  0.87  0.76
Efcon      -0.06  -0.05  -0.10  0.56   0.54     0.73    0.52  1.00      0.23  0.49
0.51  0.58  0.55  0.59  0.63  0.60  0.54
TotBioCap  -0.05  -0.09  -0.07  0.13   0.05     0.10    0.10  0.23      1.00  0.20
0.15  0.12  0.06  0.09  0.13  0.13  0.18
VA         -0.12  -0.01   0.00  0.65   0.29     0.64    0.76  0.49      0.20  1.00
0.65  0.78  0.83  0.80  0.79  0.87  0.61
PS         -0.07   0.00  -0.16  0.59   0.44     0.61    0.64  0.51      0.15  0.65
1.00  0.69  0.70  0.75  0.74  0.81  0.57
GovE        0.02   0.09  -0.03  0.82   0.49     0.79    0.87  0.58      0.12  0.78
0.69  1.00  0.94  0.96  0.94  0.96  0.74
RQ         -0.04   0.02  -0.07  0.80   0.49     0.75    0.90  0.55      0.06  0.83
0.70  0.94  1.00  0.94  0.90  0.96  0.73
RL         -0.02   0.07  -0.03  0.77   0.50     0.80    0.84  0.59      0.09  0.80
0.75  0.96  0.94  1.00  0.96  0.98  0.71
CC         -0.06   0.02  -0.07  0.74   0.49     0.83    0.82  0.63      0.13  0.79
0.74  0.94  0.90  0.96  1.00  0.96  0.67
WGI        -0.05   0.04  -0.06  0.79   0.49     0.80    0.87  0.60      0.13  0.87
0.81  0.96  0.96  0.98  0.96  1.00  0.73
Aware      -0.06   0.04  -0.17  0.85   0.45     0.66    0.76  0.54      0.18  0.61
0.57  0.74  0.73  0.71  0.67  0.73  1.00
Serious    -0.20   0.03   0.05 -0.28  -0.25    -0.37   -0.26 -0.39     -0.12 -0.12 -
0.35 -0.34 -0.26 -0.33 -0.32 -0.31 -0.33
          Serious
WPCIAS      -0.20
SPCIAS       0.03
APCIAS       0.05
HDI         -0.28
CO2emi      -0.25
GDPperUS    -0.37
glo_tot     -0.26
Efcon       -0.39
TotBioCap   -0.12
VA          -0.12
PS          -0.35
GovE        -0.34
RQ          -0.26
RL          -0.33
CC          -0.32
WGI         -0.31
```

```
Aware      -0.33
Serious     1.00
```

Hide

```
corrgram(lee_national_corr, order = NULL, lower.panel = panel.shade, upper.panel = NU
LL)
```



Hide

```
state
```

GeoT…	GE…	GeoName	TotalPop	discuss	discussOppose	CO2limits	CO2lim
<chr>	<dbl>	<chr>	<dbl>	<dbl>	<dbl>	<dbl>	
State	1	Alabama	3217902	27.468	38.892	63.122	
State	2	Alaska	460319	36.632	28.074	68.231	
State	4	Arizona	4284776	36.724	28.882	66.001	
State	5	Arkansas	1949963	28.832	37.666	63.744	
State	6	California	24865866	39.309	25.920	73.740	
State	8	Colorado	3453403	39.213	25.975	69.434	
State	9	Connecticut	2455577	35.887	28.363	73.056	
State	10	Delaware	620886	32.584	31.866	69.576	
State	11	District of Columbia	442721	43.448	22.182	84.652	
State	12	Florida	13561596	31.819	33.088	68.481	

1-10 of 51 rows | 1-8 of 38 columns Previous 1 2 3 4 5 6 Next

Hide

```
p <- ggplot(data = county,
            mapping = aes(x = happening, y = lat,
                          group = group, fill = subregion))
```

Hide

```
head(county)
```

GeoT…	GE…	GeoName	TotalPop	discuss	discussOppose	CO2limits	CO
<chr>	<dbl>	<chr>	<dbl>	<dbl>	<dbl>	<dbl>	
County	1001	Autauga County, Alabama	36233	25.075	40.609	58.696	
County	1003	Baldwin County, Alabama	133267	28.486	35.799	58.028	
County	1005	Barbour County, Alabama	18836	26.789	41.481	68.756	
County	1007	Bibb County, Alabama	15683	24.599	41.465	58.667	
County	1009	Blount County, Alabama	39052	25.467	39.748	57.519	
County	1011	Bullock County, Alabama	7283	28.666	42.102	76.076	

6 rows | 1-8 of 38 columns

Hide

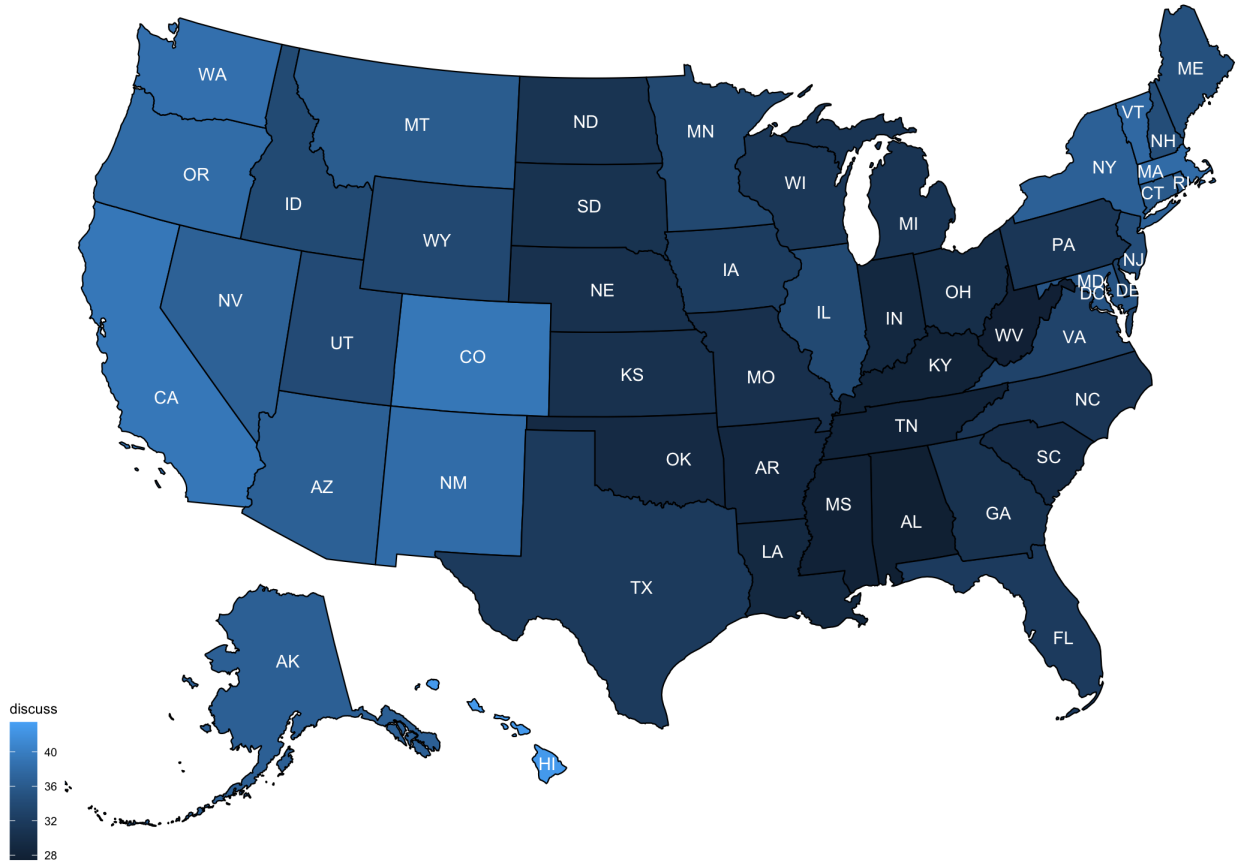
```
names(state)[names(state) == 'GeoName'] <- 'state'
state
```

GeoT…	GE…	state	TotalPop	discuss	discussOppose	CO2limits	CO2lim
<chr>	<dbl>	<chr>	<dbl>	<dbl>	<dbl>	<dbl>	
State	1	Alabama	3217902	27.468	38.892	63.122	
State	2	Alaska	460319	36.632	28.074	68.231	
State	4	Arizona	4284776	36.724	28.882	66.001	
State	5	Arkansas	1949963	28.832	37.666	63.744	
State	6	California	24865866	39.309	25.920	73.740	
State	8	Colorado	3453403	39.213	25.975	69.434	
State	9	Connecticut	2455577	35.887	28.363	73.056	
State	10	Delaware	620886	32.584	31.866	69.576	
State	11	District of Columbia	442721	43.448	22.182	84.652	
State	12	Florida	13561596	31.819	33.088	68.481	

1-10 of 51 rows | 1-8 of 38 columns Previous 1 2 3 4 5 6 Next

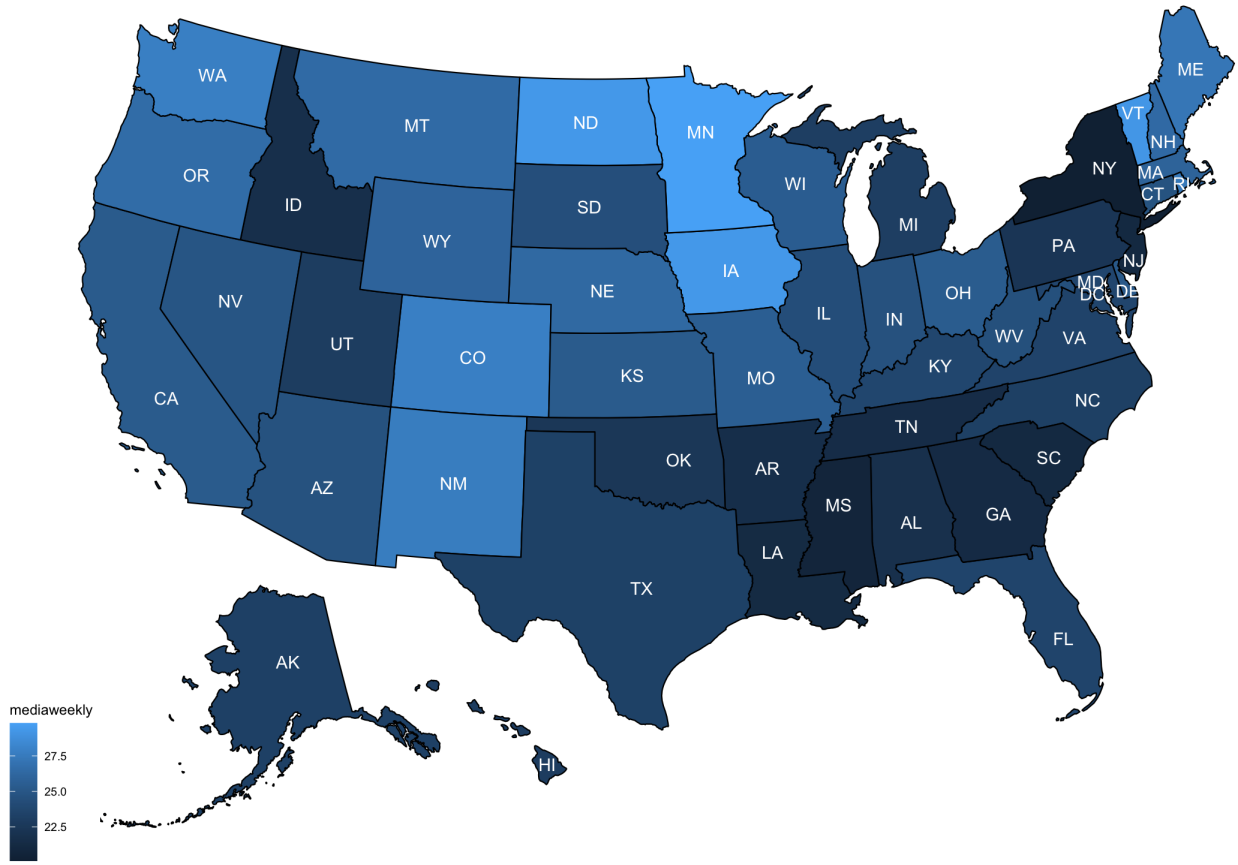
Hide

```
library(usmap)

# Color maps with data
plot_usmap(data = state, values = "discuss", labels = TRUE, label_color = "white")
```



Hide

```
plot_usmap(data = state, values = "mediaweekly", labels = TRUE, label_color = "white"
)
```



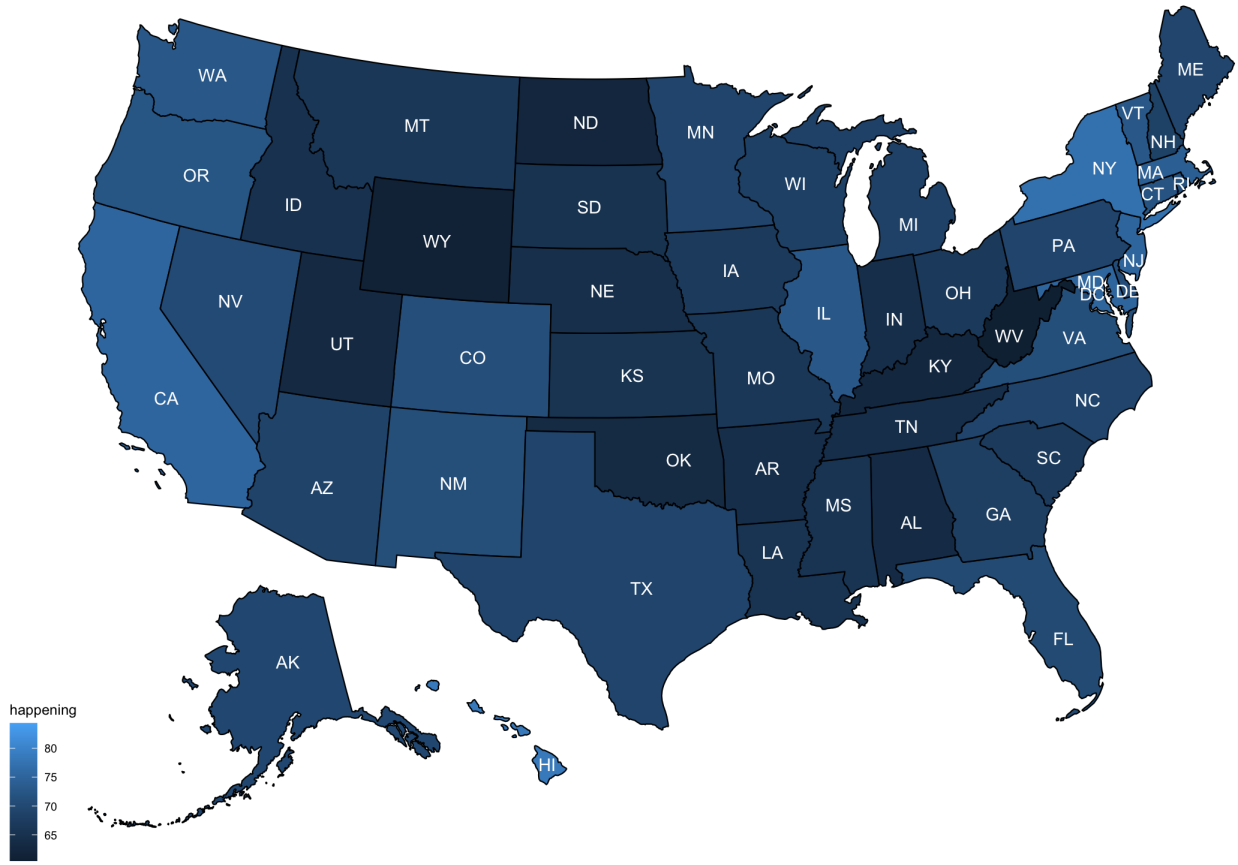
Hide

```
max(state$mediaweekly)
```

```
[1] 29.813
```

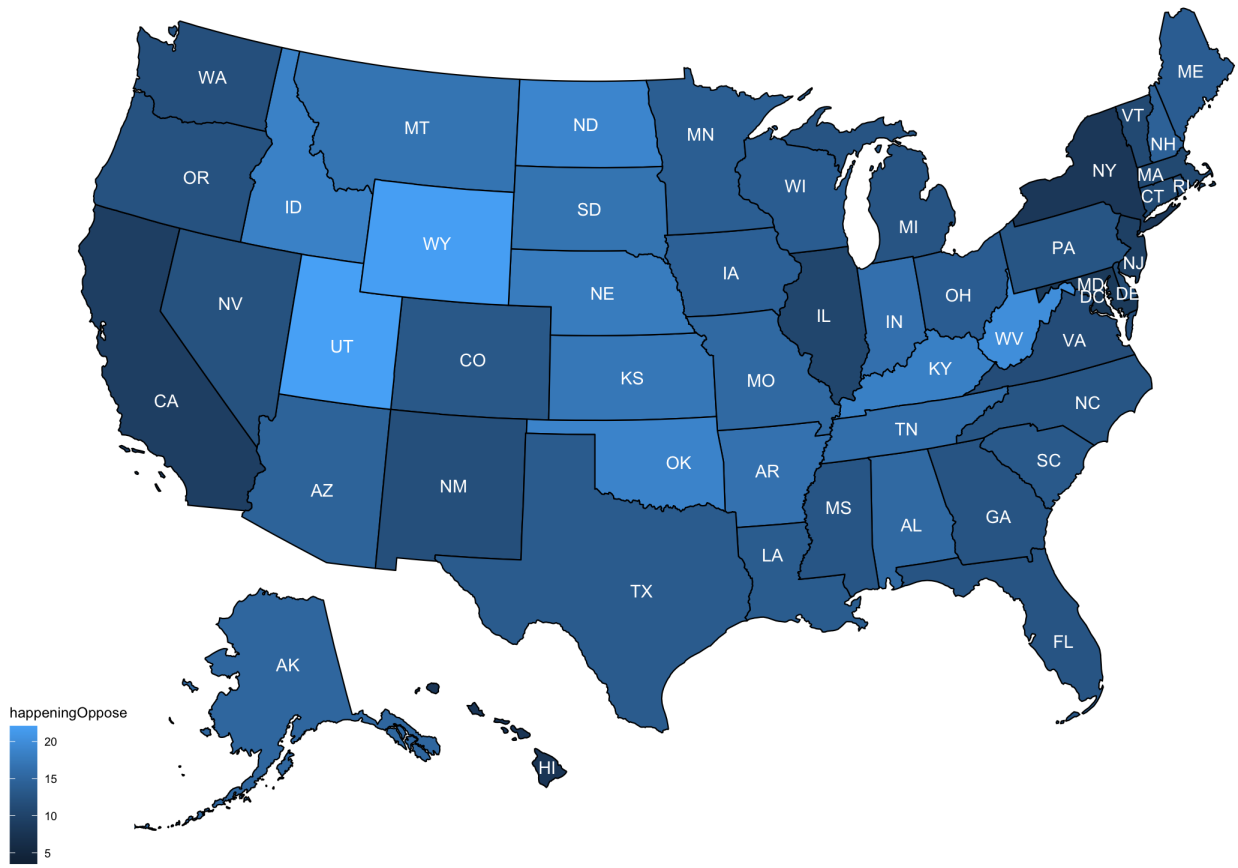
Hide

```
plot_usmap(data = state, values = "happening", labels = TRUE, label_color = "white")
```



Hide

```
plot_usmap(data = state, values = "happeningOppose", labels = TRUE, label_color = "wh
ite")
```

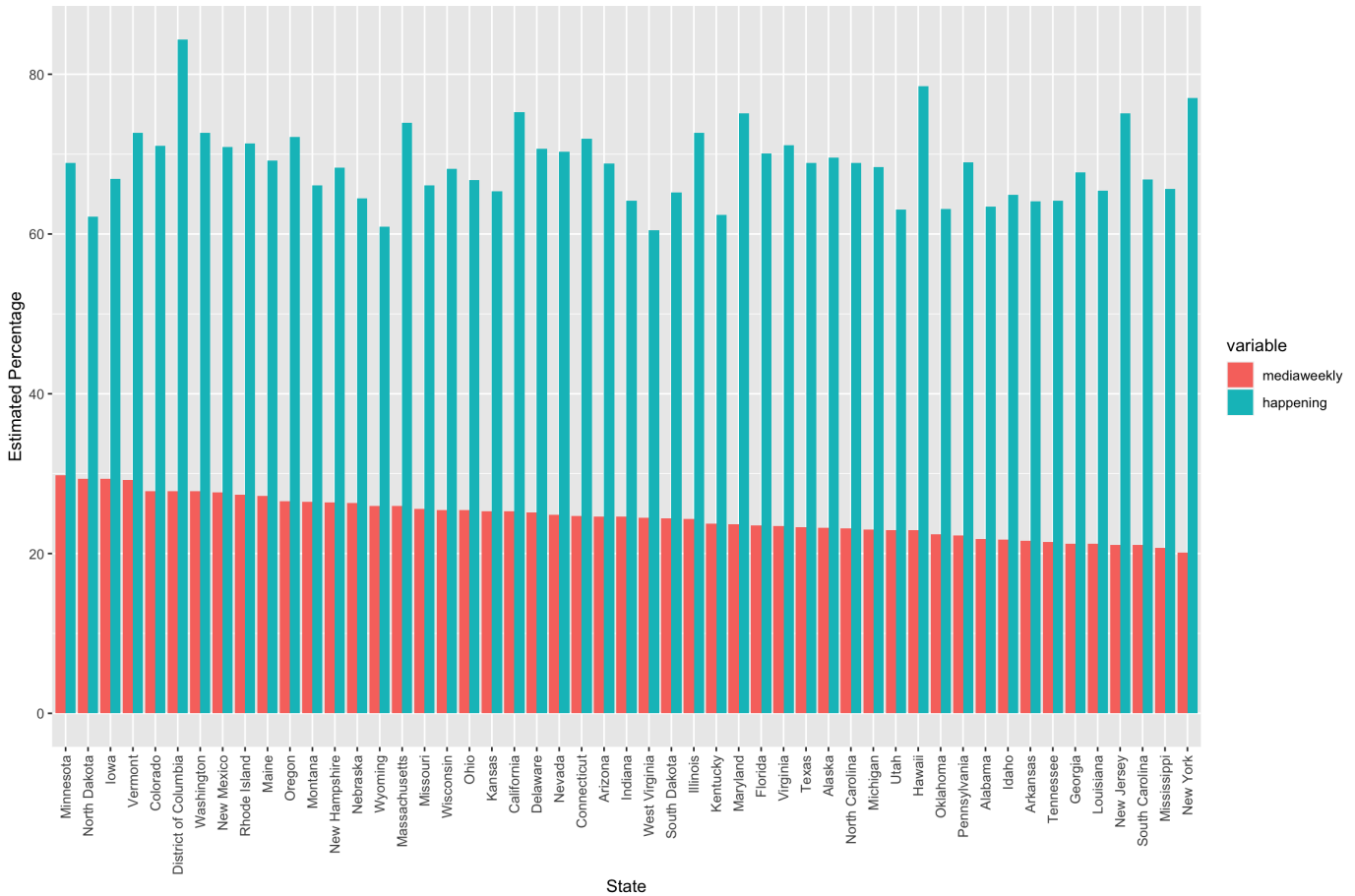


Hide

```
# plot_usmap(data = state, values = "worried", labels = TRUE, label_color = "white")
# plot_usmap(data = state, values = "trustclimsciSST", labels = TRUE, label_color =
 "white")
```

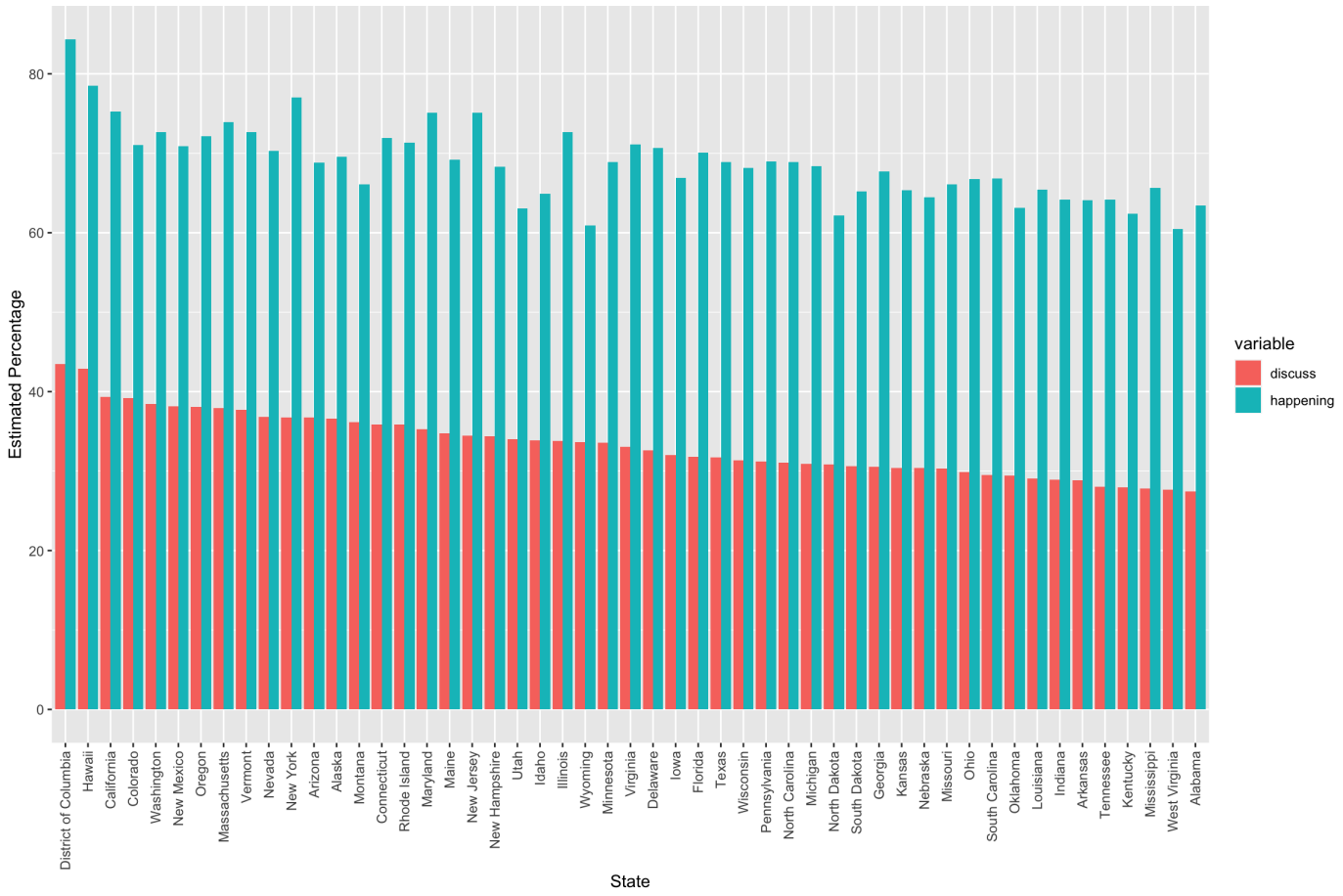
Hide

```
library(forcats)
library(reshape2)
state_s <-
state %>%
  select(all_of(c('state', 'discuss', 'mediaweekly', 'happening')))

state_s <-
state_s %>%
  mutate(state = fct_reorder(state, desc(mediaweekly)))

# load the library


# Reorder following the value of another column:
statec <- melt(state_s[,c('state', 'mediaweekly', 'happening')],id.vars = 1)

ggplot(statec,aes(x = state,y = value)) +
    geom_bar(aes(fill = variable),stat = "identity",position = "dodge") +  theme(axi
s.text.x = element_text(angle = 90, vjust = 0.5, hjust=1)) + xlab("State") + ylab("Es
timated Percentage")
```



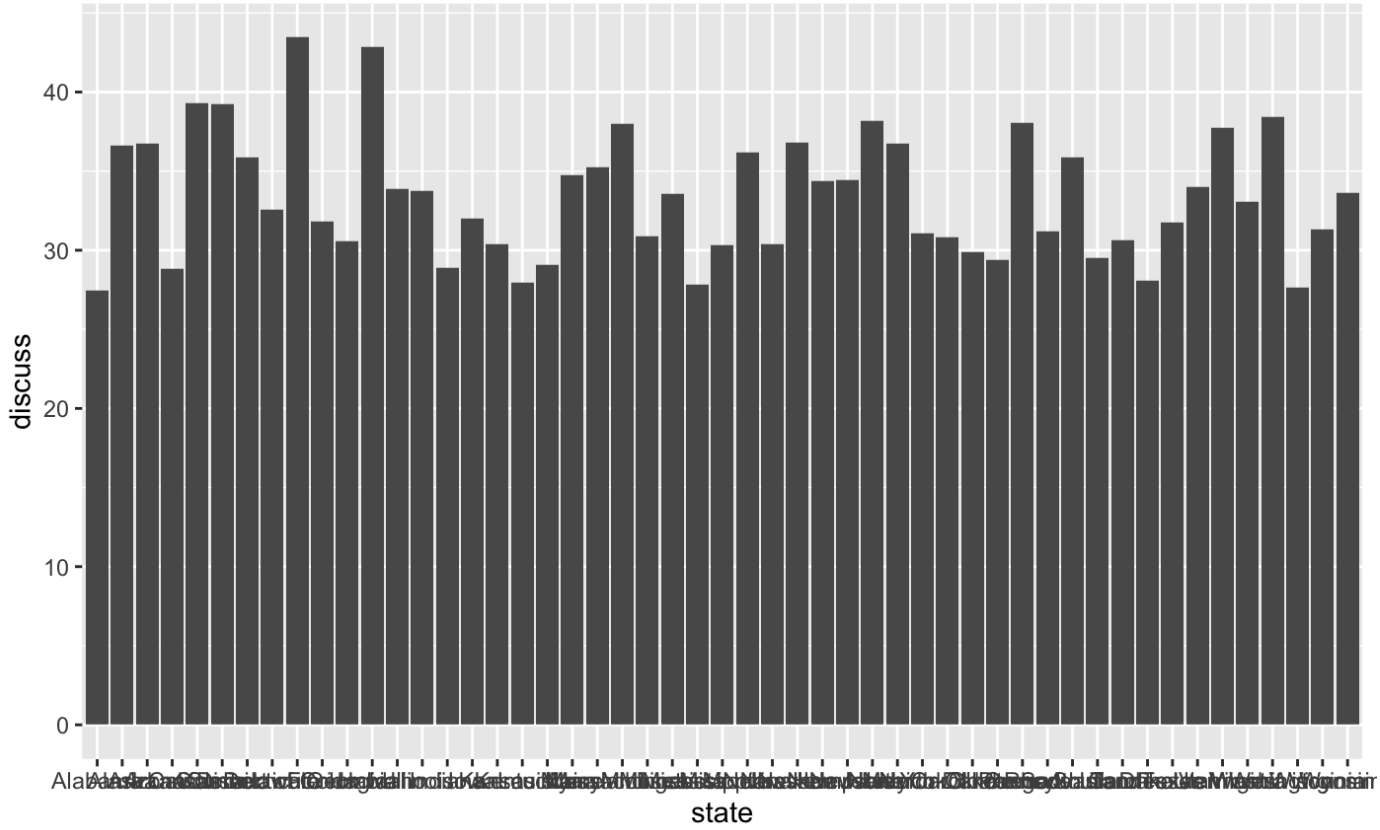
Hide

```
library(reshape2)
state_s <-
state %>%
  select(all_of(c('state', 'discuss', 'mediaweekly', 'happening')))

state_s <-
state_s %>%
  mutate(state = fct_reorder(state, desc(discuss)))

# load the library
library(forcats)

# Reorder following the value of another column:
statec <- melt(state_s[,c('state', 'discuss', 'happening')],id.vars = 1)

ggplot(statec,aes(x = state,y = value)) +
    geom_bar(aes(fill = variable),stat = "identity",position = "dodge") +  theme(axi
s.text.x = element_text(angle = 90, vjust = 0.5, hjust=1)) + xlab("State") + ylab("Es
timated Percentage")
```



Hide

```
ggplot(data=state, aes(x=state, y=discuss)) +
geom_bar(stat="identity", position=position_dodge())
```



Hide

```
state_f <-
  state %>%
  select(all_of(c(behavior, belief)))
```

Hide

```
corrgram(state_f, order = NULL, lower.panel = panel.shade, upper.panel = panel.pts, t
ext.panel=panel.txt)
```

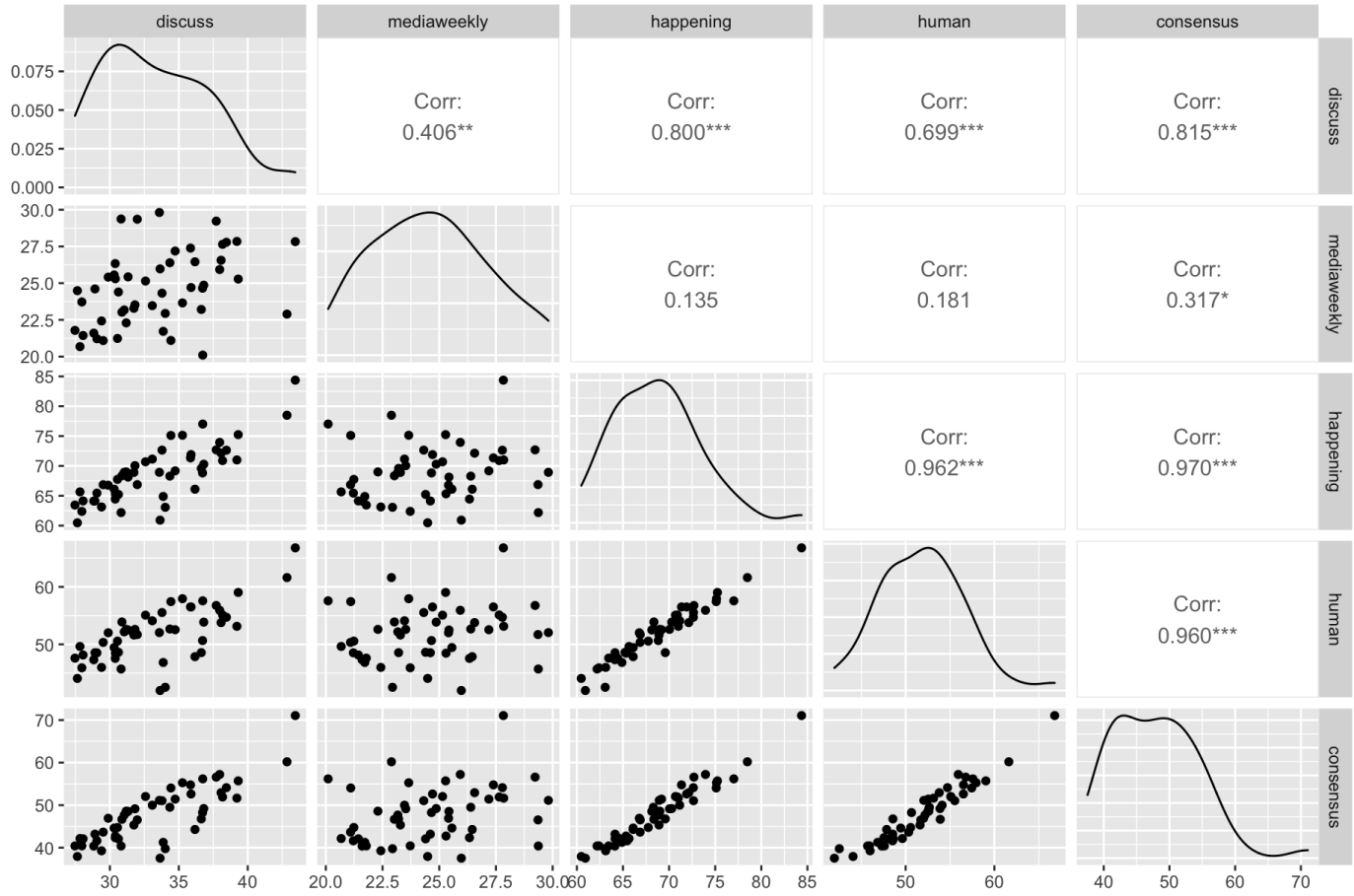
Hide

```
# Quick display of two cabapilities of GGally, to assess the distribution and correla
tion of variables
library(GGally)
```

```
Registered S3 method overwritten by 'GGally':
  method from
  +.gg   ggplot2
```

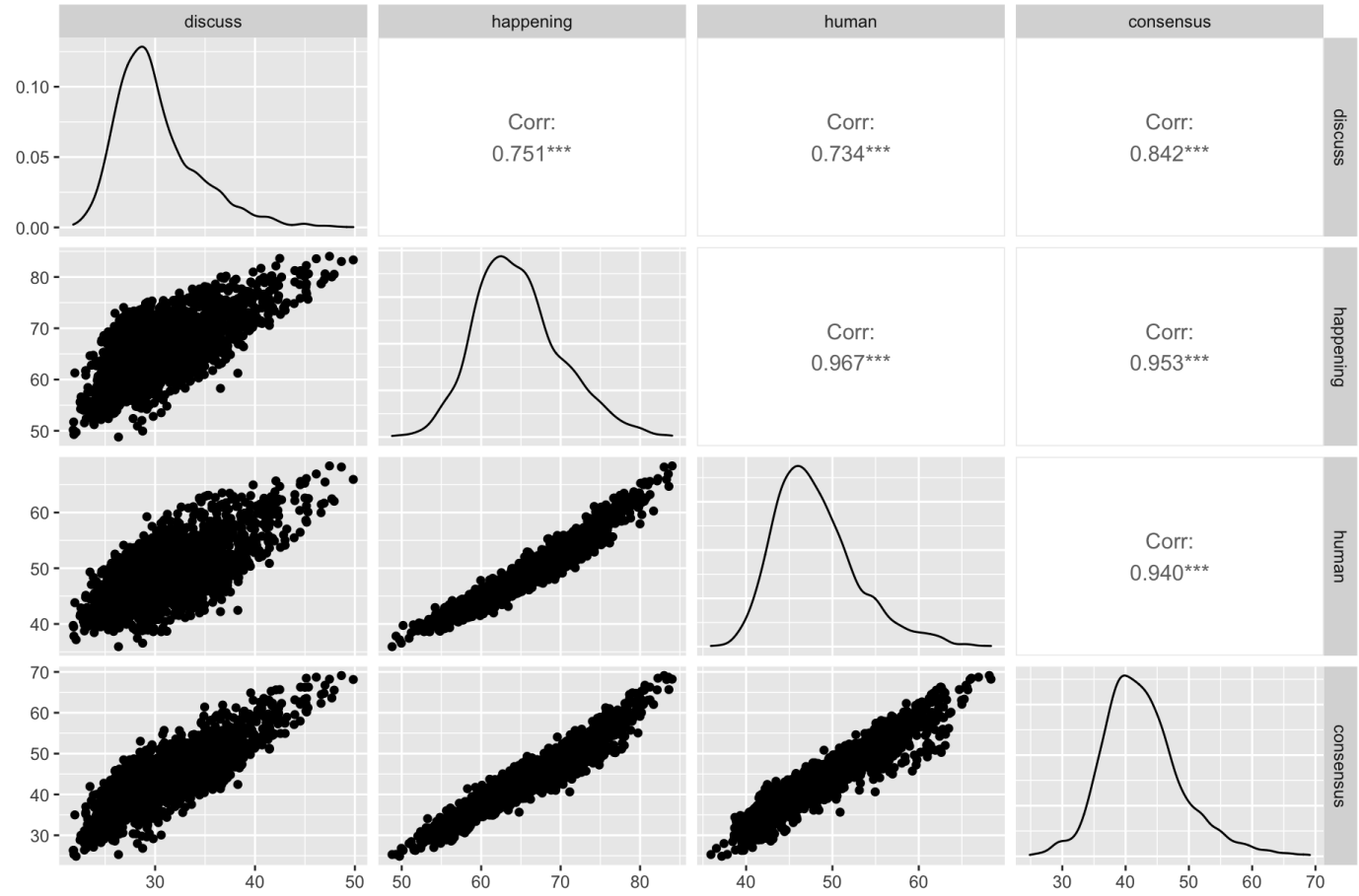
Hide

```
ggpairs(
  data = state_f,
  lower = list(continuous = "points", combo = "dot_no_facet")
)
```



Hide

```
ggpairs(
  data = county_f,
  lower = list(continuous = "points", combo = "dot_no_facet")
)
```




```

When you save the notebook, an HTML file containing the code and output will be saved alongside it (click the *Preview* button or press *Cmd+Shift+K* to preview the HTML file).

The preview shows you a rendered HTML copy of the contents of the editor. Consequently, unlike *Knit*, *Preview* does not run any R code chunks. Instead, the output of the chunk when it was last run in the editor is displayed.
```