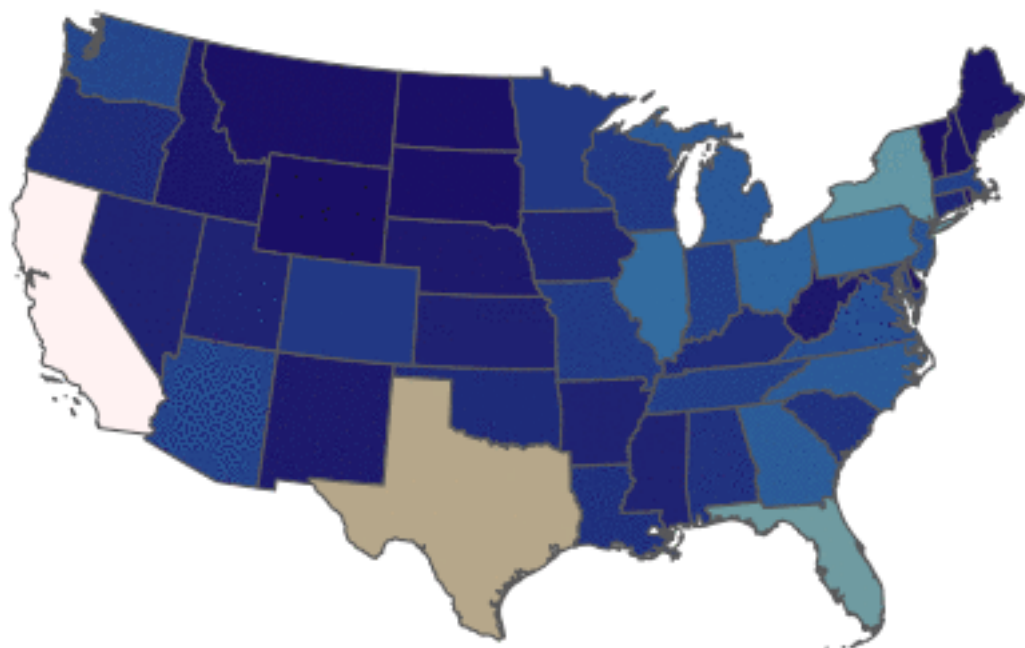
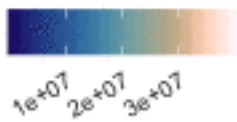




Showing Original



Population



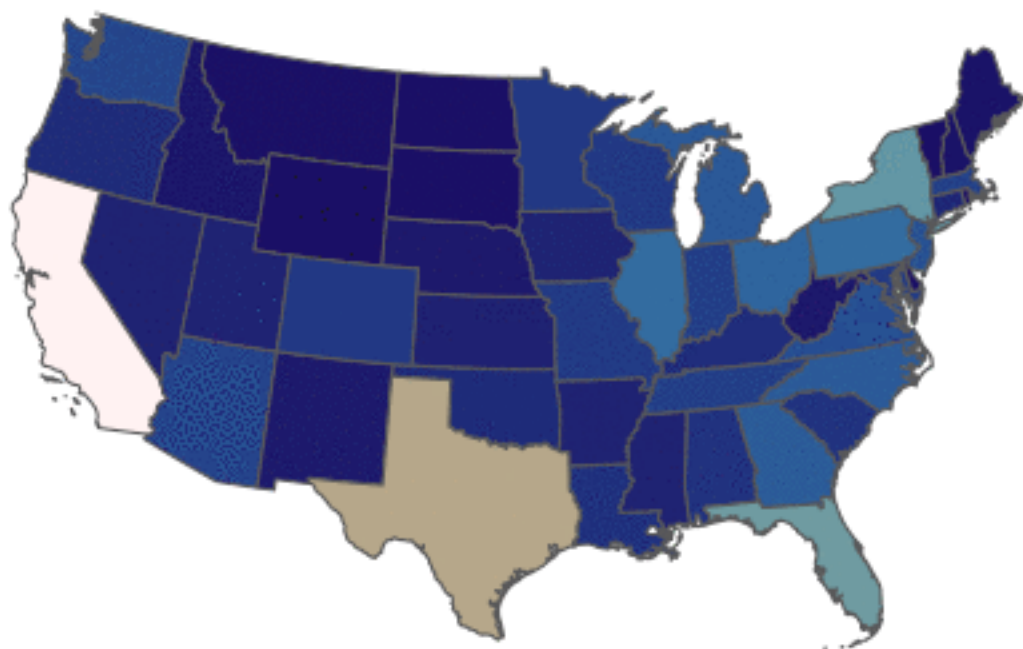
Shape transitions

```
us$type <- 'Original'
us_hex$type <- 'Cartogram Weigted by
Population'
us_ca$type <- 'Hexagonal Tiling'
us_sq$type <- 'Square Tiling'

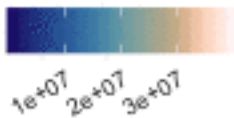
us_all <- rbind(
  us,
  us_hex[, names(us)],
  us_ca[, names(us)],
  us_sq[, names(us)]
)

(p %+% us_all) +
  labs(
    title = 'Showing {closest_state}'
  ) +
  transition_states(type, 2, 1)
```

Showing Original



Population



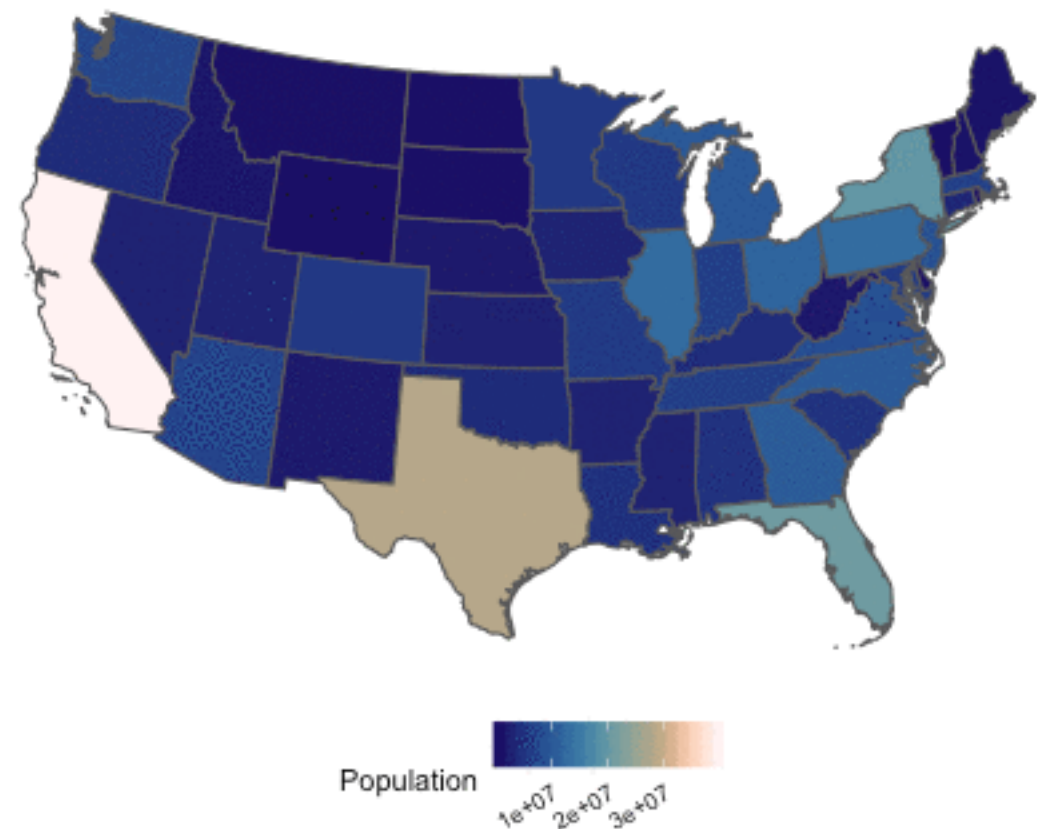
# Shape transitions

```
us$type <- 'Original'
us_hex$type <- 'Cartogram Weigted by
Population'
us_ca$type <- 'Hexagonal Tiling'
us_sq$type <- 'Square Tiling'

us_all <- rbind(
  us,
  us_hex[, names(us)],
  us_ca[, names(us)],
  us_sq[, names(us)]
)

(p %+% us_all) +
  labs(
    title = 'Showing {closest_state}'
  ) +
  transition_states(type, 2, 1)
```

Showing Original



# Future Work

## Performance

The goal is real time rendering!  
Requires improvements to the whole  
rendering stack:  
ggplot2  
grid  
graphic devices

## Segue

Changing scales and coordinate systems  
are most pertinent.  
Change encodings are nice for show-off but  
less useful, and very hard

