map.R

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```r
# Libraries
library(raster)
```

```
## Loading required package: sp
```

```r
library(ggplot2)
library(rgeos)
```

```
## rgeos version: 0.3-19, (SVN revision 524)
##  GEOS runtime version: 3.4.2-CAPI-1.8.2 r3921
##  Linking to sp version: 1.2-3
##  Polygon checking: TRUE
```

```r
library(maptools)
```

```
## Checking rgeos availability: TRUE
```

```r
library(ggthemes)
library(rgdal)
```

```
## rgdal: version: 1.1-9, (SVN revision 617M)
##  Geospatial Data Abstraction Library extensions to R successfully loaded
##  Loaded GDAL runtime: GDAL 1.10.1, released 2013/08/26
##  Path to GDAL shared files: /usr/share/gdal/1.10
##  Loaded PROJ.4 runtime: Rel. 4.8.0, 6 March 2012, [PJ_VERSION: 480]
##  Path to PROJ.4 shared files: (autodetected)
##  Linking to sp version: 1.2-3
```

```r
# Map of Africa
afr <- readOGR('africa_spatial/', 'AfricanCountires')
```

```
## OGR data source with driver: ESRI Shapefile
## Source: "africa_spatial/", layer: "AfricanCountires"
## with 150 features
## It has 9 fields
```

```r
# Maps of Mozambique
moz0 <- getData('GADM', country = 'MOZ', level = 0)
moz1 <- getData('GADM', country = 'MOZ', level = 1)
moz2 <- getData('GADM', country = 'MOZ', level = 2)
moz3 <- getData('GADM', country = 'MOZ', level = 3)

# Fortified maps
afr_fortified <- fortify(afr, region = 'COUNTRY')
moz0_fortified <- fortify(moz1, region = 'NAME_0')
moz1_fortified <- fortify(moz1, region = 'NAME_1')
moz2_fortified <- fortify(moz2, region = 'NAME_2')
moz3_fortified <- fortify(moz3, region = 'NAME_3')

# Subset just for one region
chok <- moz2[moz2@data$NAME_2 == 'Chókwè',]
```

```r
chok_fortified <- fortify(chok, region = 'NAME_2')

# Map of Mozambique in Africa
ggplot() +
  coord_map() +
  geom_polygon(data = afr_fortified,
               aes(x = long, y =lat, group = group), fill = 'grey', color = NA) +
  geom_polygon(data = moz0_fortified,
               aes(x = long, y =lat, group = group),
               fill = 'darkred',
               alpha = 0.8) +
  theme_tufte() +
  theme(axis.ticks.length = unit(0.001, "mm")) + labs(x=NULL, y=NULL) +
  theme(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(),
        # legend.position="none",
        panel.background=element_blank(),
        panel.border=element_blank(),
        panel.grid.major=element_blank(),
        panel.grid.minor=element_blank(),
        plot.background=element_blank())
```



```r
# Map of Chowkwe in Mozambique
ggplot() +
  coord_map() +
  geom_polygon(data = moz3_fortified,
```

```
              aes(x = long, y =lat, group = group), fill = 'grey', color = NA) +
geom_polygon(data = chok_fortified,
              aes(x = long, y =lat, group = group), fill = 'darkred',
              color = NA, alpha = 0.8) +
theme_tufte() +
theme(axis.ticks.length = unit(0.001, "mm")) + labs(x=NULL, y=NULL) +
theme(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(),
      # legend.position="none",
      panel.background=element_blank(),
      panel.border=element_blank(),
      panel.grid.major=element_blank(),
      panel.grid.minor=element_blank(),
      plot.background=element_blank())
```