

"Unintentional Gerrymandering: Political Geography and Electoral Bias in Legislatures" Instructions for Replication

Preliminary Steps:

Step 1: Download and unzip the follow archived file, which contains all replication code and images of all figures in the manuscript:

http://www.umich.edu/~jowei/UnintentionalGerrymandering/Figures_ReplicationCode.zip

Step 2: Install both of the required software packages, R (<http://cran.r-project.org/>) and Stata (<http://stata.com/products/>)

Step 3: In R, install each of the three required packages: [maptools](#), [plotrix](#), and [gpclib](#). The following three commands will install these packages in R:

```
#####  
install.packages("maptools")  
install.packages("plotrix")  
install.packages("gpclib")  
#####
```

Replication of Figures:

Replication of Figure 1: In Stata, run the Stata .do file, "Figure_1_Replication_Code.do," from the unzipped archive. This .do file is also located at:

http://www.umich.edu/~jowei/UnintentionalGerrymandering/Figure_1_Replication_Code.do

Replication of Figure 1: In Stata, run the Stata .do file, "Figure_2_Replication_Code.do," from the unzipped archive. This .do file is also located at:

http://www.umich.edu/~jowei/UnintentionalGerrymandering/Figure_2_Replication_Code.do

Figure 3: See the following note on Figure 3:

<http://www.umich.edu/~jowei/UnintentionalGerrymandering#Figure3>

The Figure 3 map was produced using various point-and-click capabilities available in ArcGIS 10.1 software (ArcScene and ArcMap). Hence, we have simply provided the underlying GIS shapefile used to produce this map in the following zipped file:

http://www.umich.edu/~jowei/UnintentionalGerrymandering/Figure_3_Shapefile.zip

This document describes how to reproduce this map from this shapefile, using ArcGIS software:

http://www.umich.edu/~jowei/UnintentionalGerrymandering/Figure_3_Instructions.txt

Replication of Figure 4: In R, either run the .R source code file, "Figure_4_Replication_Code.R," from the unzipped archive, or enter the following command:

```
#####  
source("http://www.umich.edu/~jwei/UnintentionalGerrymandering/Figure_4_Replication_Code.R")  
#####
```

Replication of Figure 5: In R, either run the .R source code file, "Figure_5_Replication_Code.R," from the unzipped archive, or enter the following command:

```
#####  
source("http://www.umich.edu/~jwei/UnintentionalGerrymandering/Figure_5_Replication_Code.R")  
#####
```

Replication of Figure 6a: In R, either run the .R source code file, "Figure_6a_Replication_Code.R," from the unzipped archive, or enter the following command:

```
#####  
source("http://www.umich.edu/~jwei/UnintentionalGerrymandering/Figure_6a_Replication_Code.R")  
#####
```

Replication of Figure 6a: In R, either run the .R source code file, "Figure_6b_Replication_Code.R," from the unzipped archive, or enter the following command:

```
#####  
source("http://www.umich.edu/~jwei/UnintentionalGerrymandering/Figure_6b_Replication_Code.R")  
#####
```

Replication of Figure 7: In R, either run the .R source code file, "Figure_7_Replication_Code.R," from the unzipped archive, or enter the following command:

```
#####  
source("http://www.umich.edu/~jwei/UnintentionalGerrymandering/Figure_7_Replication_Code.R")  
#####
```

Replication of Figure 8: In R, either run the .R source code file, "Figure_8_Replication_Code.R," from the unzipped archive, or enter the following command:

```
#####  
source("http://www.umich.edu/~jwei/UnintentionalGerrymandering/Figure_8_Replication_Code.R")  
#####
```

Replication of Appendix Figure A1: In R, either run the .R source code file, "Appendix_Figure_A1_Replication_Code.R," from the unzipped archive, or enter the following command:

```
#####  
source("http://www.umich.edu/~jwei/UnintentionalGerrymandering/Appendix_Figure_A1_Replication_Code.R")  
#####
```

Replication of Appendix Figure A2: In R, either run the .R source code file, "Appendix_Figure_A2_Replication_Code.R," from the unzipped archive, or enter the following command:

```
#####
```

```
source("http://www.umich.edu/~jowei/UnintentionalGerrymandering/Appendix_Figure_A2_Replication_Code.R")
#####
```

Replication of Appendix Figure A3: In R, either run the .R source code file, "Appendix_Figure_A3_Replication_Code.R," from the unzipped archive, or enter the following command:

```
#####
source("http://www.umich.edu/~jowei/UnintentionalGerrymandering/Appendix_Figure_A3_Replication_Code.R")
#####
```

Replication of Appendix Figure A4: In R, either run the .R source code file, "Appendix_Figure_A4_Replication_Code.R," from the unzipped archive, or enter the following command:

```
#####
source("http://www.umich.edu/~jowei/UnintentionalGerrymandering/Appendix_Figure_A4_Replication_Code.R")
#####
```

Replication of Appendix Figure A5: In R, either run the .R source code file, "Appendix_Figure_A5_Replication_Code.R," from the unzipped archive, or enter the following command:

```
#####
source("http://www.umich.edu/~jowei/UnintentionalGerrymandering/Appendix_Figure_A5_Replication_Code.R")
#####
```

Replication of Appendix Figure A6: In R, either run the .R source code file, "Appendix_Figure_A6_Replication_Code.R," from the unzipped archive, or enter the following command:

```
#####
source("http://www.umich.edu/~jowei/UnintentionalGerrymandering/Appendix_Figure_A6_Replication_Code.R")
#####
```