Milestone 7

Maria Burzillo

3/28/2020

Abstract

This is an extension of Jessica Trounstine's "Segregation and Inequality in Public Goods" (2016). I was able to replicate the main results of Trounstine's paper in R to suggest that racial segregation contributes to political polarization and decreased spending on public goods. Additionally, I extend the analysis by imputing missing data and rerunning Trounstine's original model as a robustness check.

Introduction

This is my pdf document. Please refer to the Github repository of my final project for further information.[1]. You can also access all of the original replication materials made available by Trounstine on Harvard Dataverse here. I make use of Trounstine (2016), Pencharz and Ball (2003), Xie (2020), Wickham (2019), and Xie (2015).

Summary of Trounstine (2016)

Trounstine's *Segregation and Inequality in Public Goods* attempts to explain differences in public goods provision and political polarization through a racial lens by examining the relationships between polarization, goods provision, and segregation. Trounstine measures segregation with Theil's H index, which measures the degree to which the diversity of a neighborhood differs from the diversity of the entire city. The main finding of the paper is that segregation, not simply diversity or political views, is an important determinant of both political polarization and spending on public goods. In general, segregation leads to the coincidence of racial and spatial political cleavages, which can make compromise on taxation and public spending difficult and tends to generally drive down the rate of spending on public goods. Because minorities are much more likely to live in racially segregated areas than whites, this suggests that public goods are also segregated across racial lines.

Literature Review

This is my literature review. Sources will be added when a more thorough job is done for milestone #8.

In the United States, residential segregation across racial lines remains a deeply entrenched problem in our society.

[1] All sources, analysis, and further information are available on my Github repository for this project

Neighborhood racial isolation has been associated with racial intolerance and increased political competition. Those who live in homogenous neighborhoods are also more likely to believe in negative stereotypes about out-groups.

On the city level, diversity is associated with increased racial tension, lower levels of cooperation, intolerance, and lower spending on public goods.

A combination of homogenous neighborhoods within a diverse city leads to severe segregation and high degrees of racial tension.

Racial segregation has been associated with partisan political divides and a lack of cooperation across groups on city-wide policy.

Replication

Table 1 was able to be replicated exactly. The replication for Table 2 was close, but not exact, as were the replications for Table 3 and 4, which combined replicated Table 3 in the main paper. However, the implications of the main results are essentially the same for all of these regressions. The IV regression was able to be replicated exactly and the results presented in Tables 5 and 6 reconstruct the results from Table 5 in the original paper. So far, I have not been able to successfully recreate the marginal effects; however, I am working to figure out what the problem is. I believe that with a little bit more time I will be able to successfully recreate all of the results given my success in Table 1 and Tables 5 and 6.

As for the paper's Appendix Tables, I was able to successfully recreate Tables A1 and A2. I have not yet been able to sucessfully recreate Table A3 in Stata because I am having difficulty in figuring out why I have fewer observations and also how they calculated some of their statistics, as it seems that they filter for some conditions only for some rows, which I have yet to figure out how to do in R. I did not attempt to recreate Table A4 due to time constraints and also because it seemed extraneous.

Extension Ideas

There are a variety of ways that I could build upon this analysis. Because I have not narrowed it down to one yet, I will use this as an opportunity to propose a few ideas.

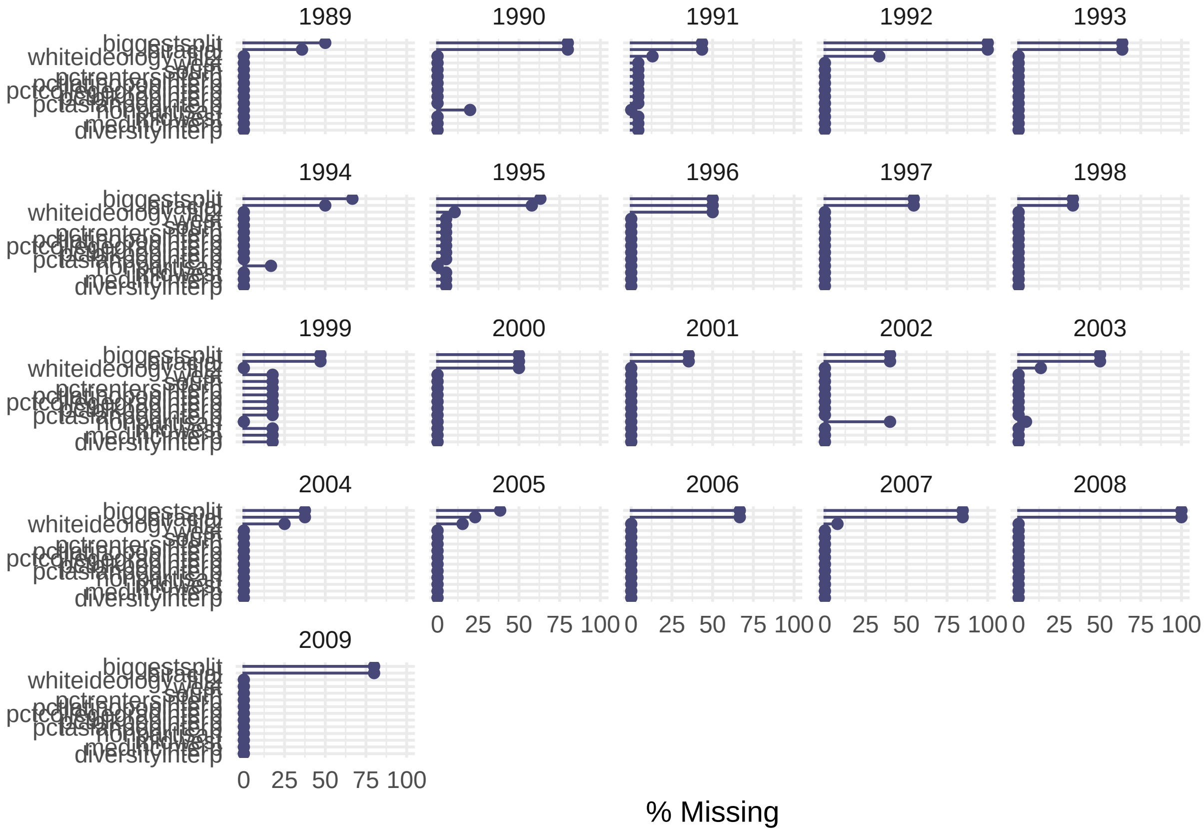
How well does this theory apply to more recent elections, and can we use new data to test it? For example, I could try to hunt down some more recent election data and use some sort of prediction funciton to see how well the model predicts the actual results. However, this could be quite difficult if the data is too messy or difficult to obtain (or even non-existent).

Another idea could be to redo the results but using the dissimilarity index, the most common measure of segregation, which Trounstine, perhaps controversially, chooses not to use in her analysis in favor of Theil's entropy score. It could be interesting to see whether her results hold up against this sort of robustness check.

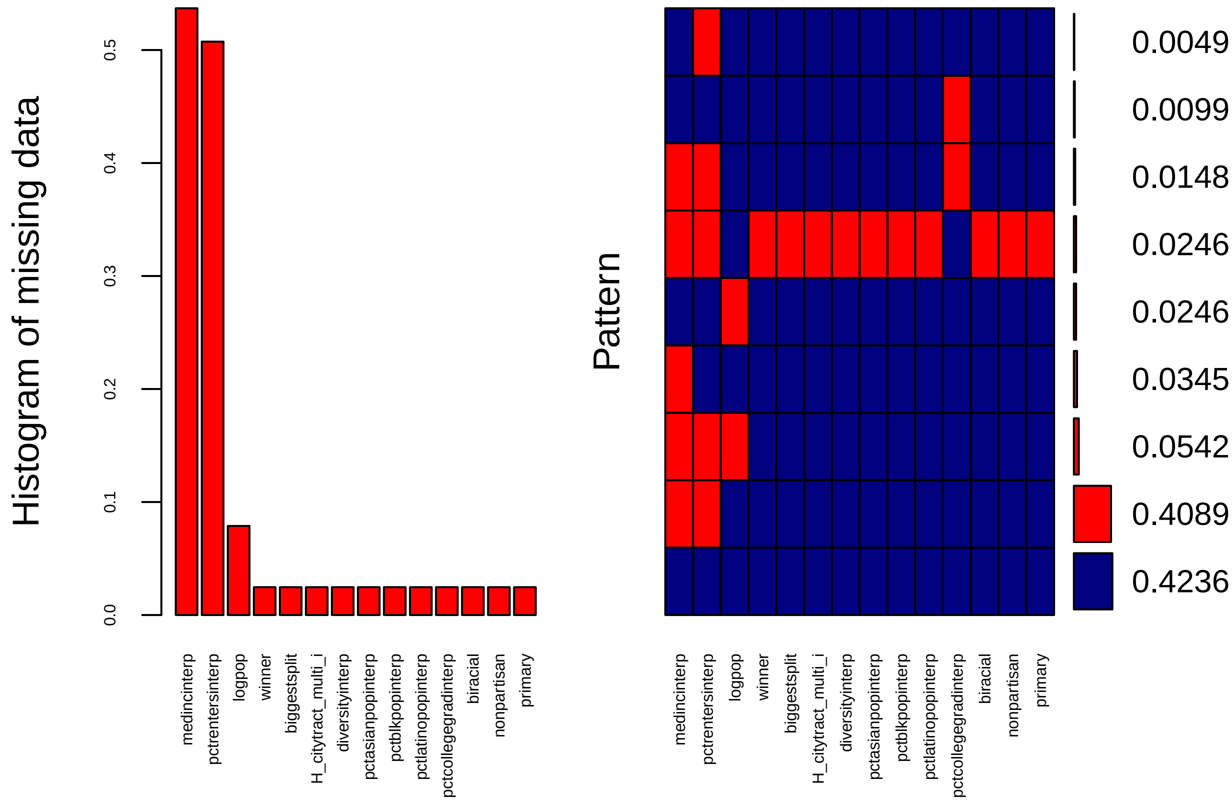
Another interesting thing to do would be to find a city that has recently become less segregated and see if political polarization has decreased and public goods provision has increased.

Finally, another approach to put to practice some more of the skills we've learned in this class would be to try and adpot a Bayesian framework to some of Trounstine's analyses.

Extension 1

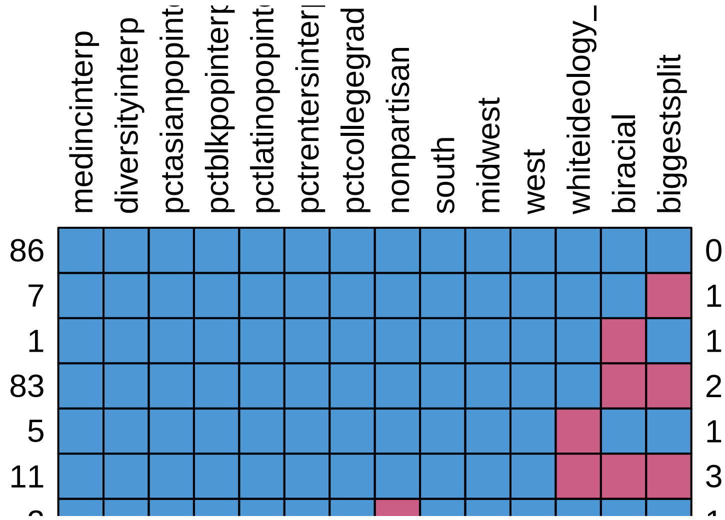



```r
rp_aggr <- rp_impute %>%
   select("medinciinterp",
             "biggestsplit", "diversityinterp",
             "pctasianpopinterp", "pctblkpopinterp", "pctlatinopopinterp",
             "pctrentersinterp", "pctcollegegradinterp", "biracial", "nonpartisan",
               "south", "midwest", "west", "whiteideology_fill2")

aggr_plot <- aggr(rp_aggr, bars = TRUE, col=c('navyblue','red'), numbers=TRUE, sortVars=TRUE, labels=nar
```




```
Variables sorted by number of missings:
             Variable      Count
         medincinterp 0.53694581
     pctrentersinterp 0.50738916
               logpop 0.07881773
               winner 0.02463054
         biggestsplit 0.02463054
  H_citytract_multi_i 0.02463054
      diversityinterp 0.02463054
    pctasianpopinterp 0.02463054
      pctblkpopinterp 0.02463054
   pctlatinopopinterp 0.02463054
 pctcollegegradinterp 0.02463054
             biracial 0.02463054
          nonpartisan 0.02463054
              primary 0.02463054
```

```r
md.pattern(rp_aggr, rotate.names = TRUE)
```

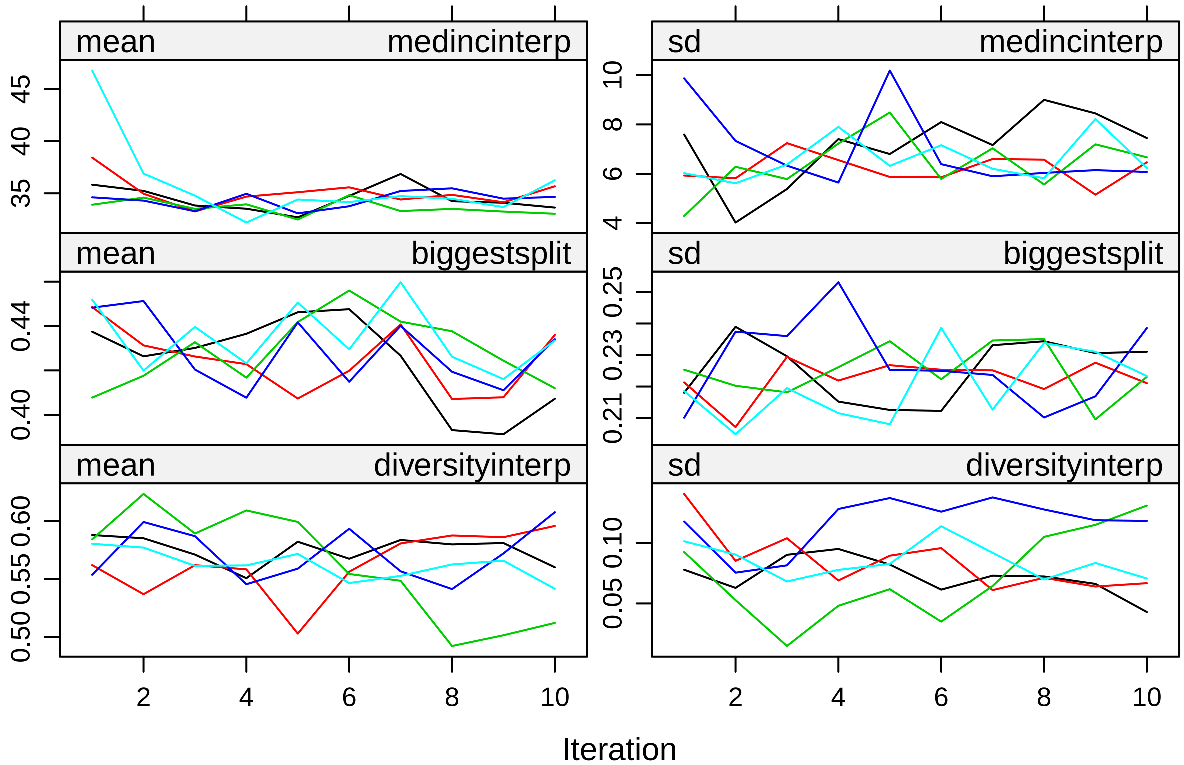


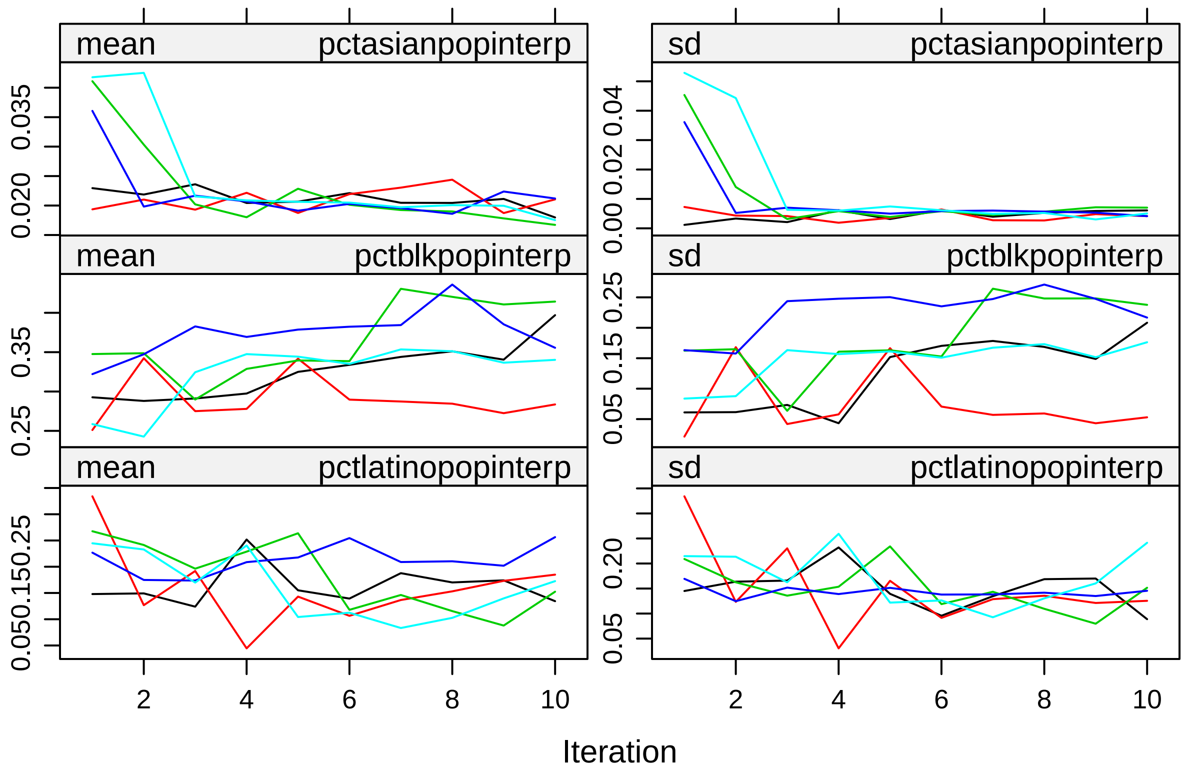

```
   medincinterp diversityinterp pctasianpopinterp pctblkpopinterp
86            1               1                 1               1
7             1               1                 1               1
1             1               1                 1               1
83            1               1                 1               1
5             1               1                 1               1
11            1               1                 1               1
2             1               1                 1               1
3             1               1                 1               1
5             0               0                 0               0
              5               5                 5               5
   pctlatinopopinterp pctrentersinterp pctcollegegradinterp nonpartisan south
86                  1                1                    1           1     1
7                   1                1                    1           1     1
1                   1                1                    1           1     1
83                  1                1                    1           1     1
5                   1                1                    1           1     1
11                  1                1                    1           1     1
2                   1                1                    1           0     1
3                   1                1                    1           0     1
5                   0                0                    0           1     0
                    5                5                    5           5     5
   midwest west whiteideology_fill2 biracial biggestsplit
86       1    1                   1        1            1   0
7        1    1                   1        1            0   1
1        1    1                   1        0            1   1
83       1    1                   1        0            0   2
5        1    1                   0        1            1   1
11       1    1                   0        0            0   3
2        1    1                   1        1            1   1
3        1    1                   1        0            0   3
5        0    0                   1        0            0  12
         5    5                  16      103          109 283
```

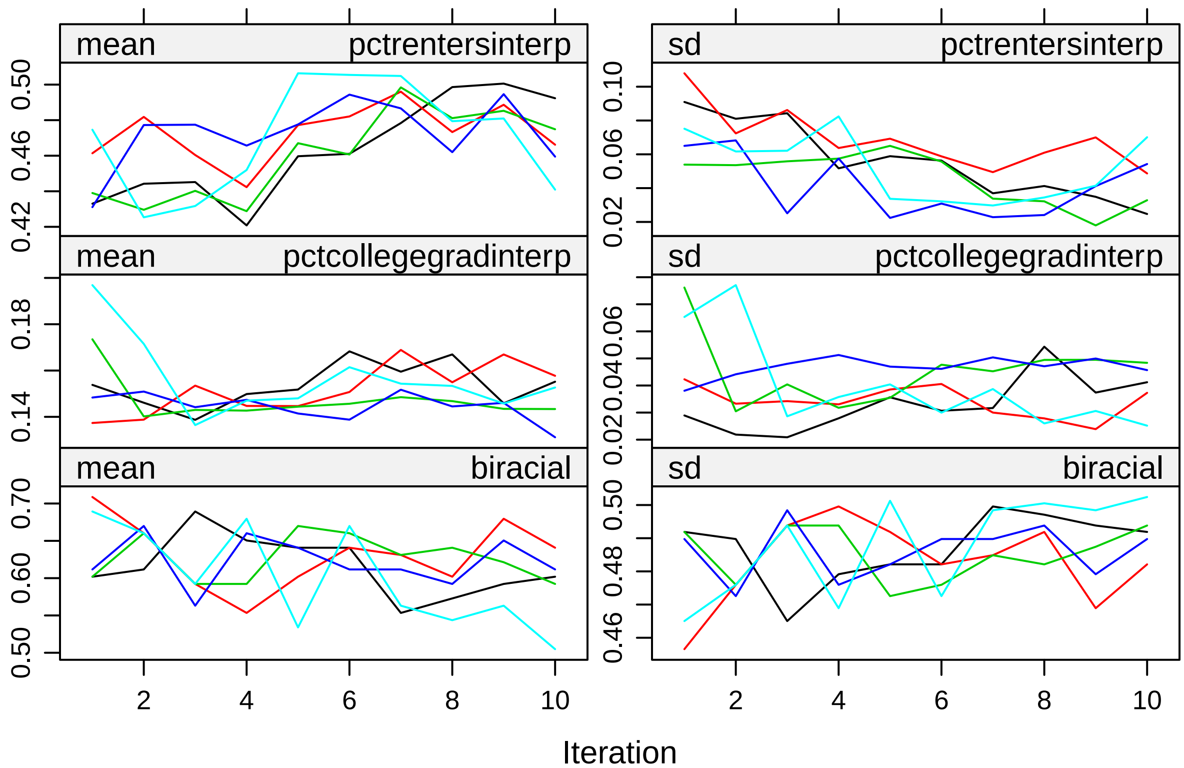
```
# this plot tells us that 42% of the data are not missing anything
```

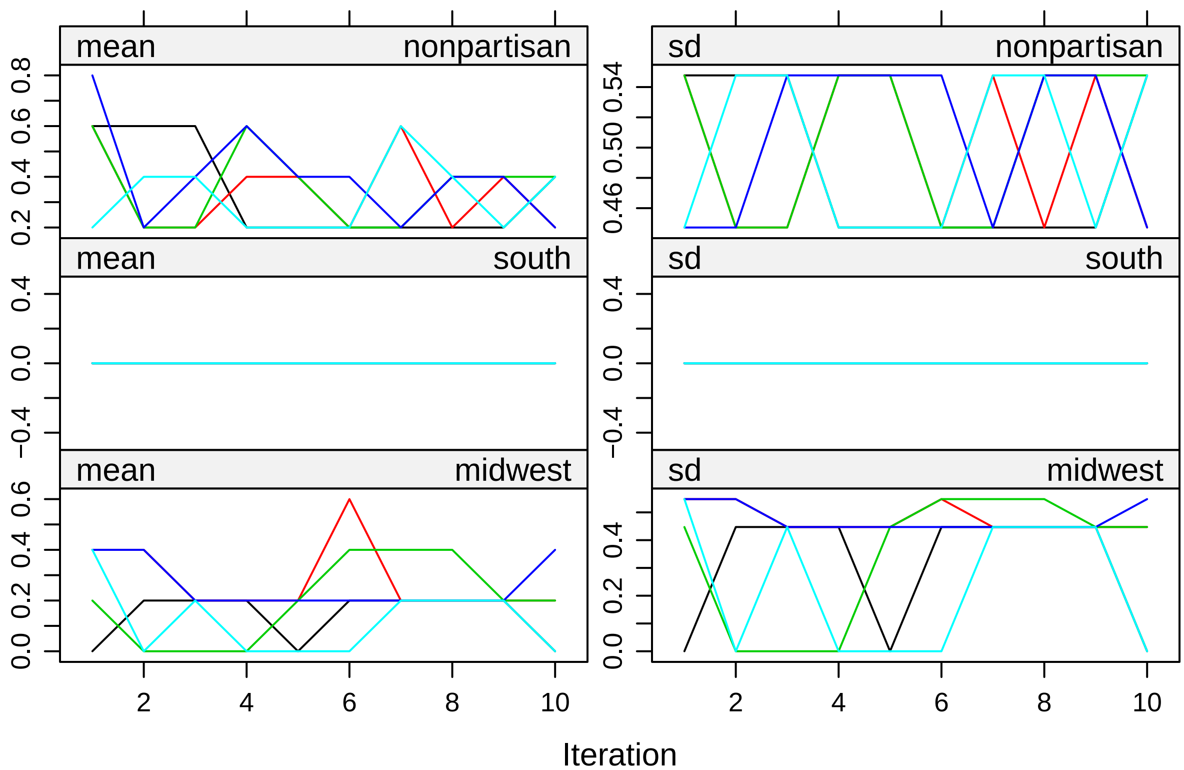
```
# ideally, the fits will intertwine and not exhibit any trends at later iterations. This seems to gener
```

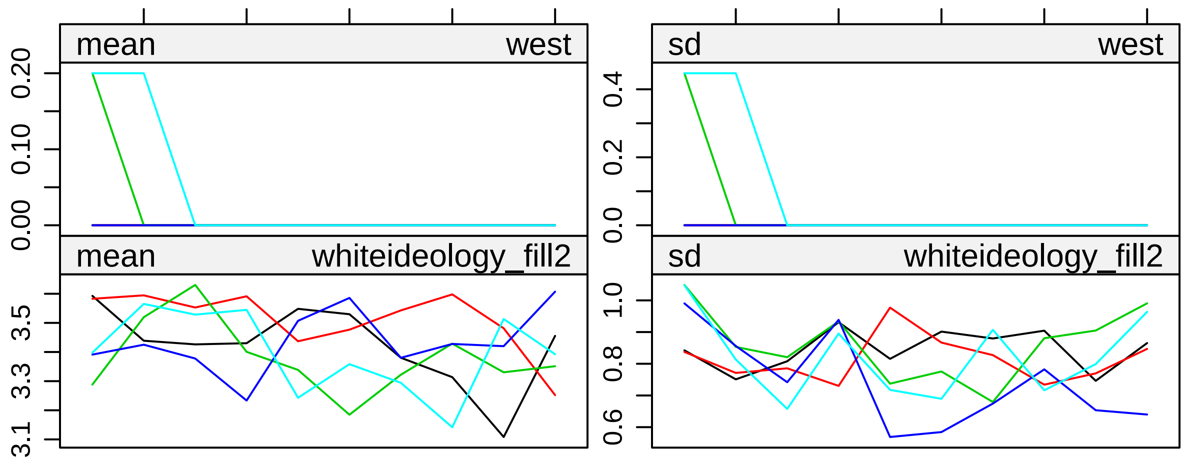
```r
plot(imp_1_rp)
```





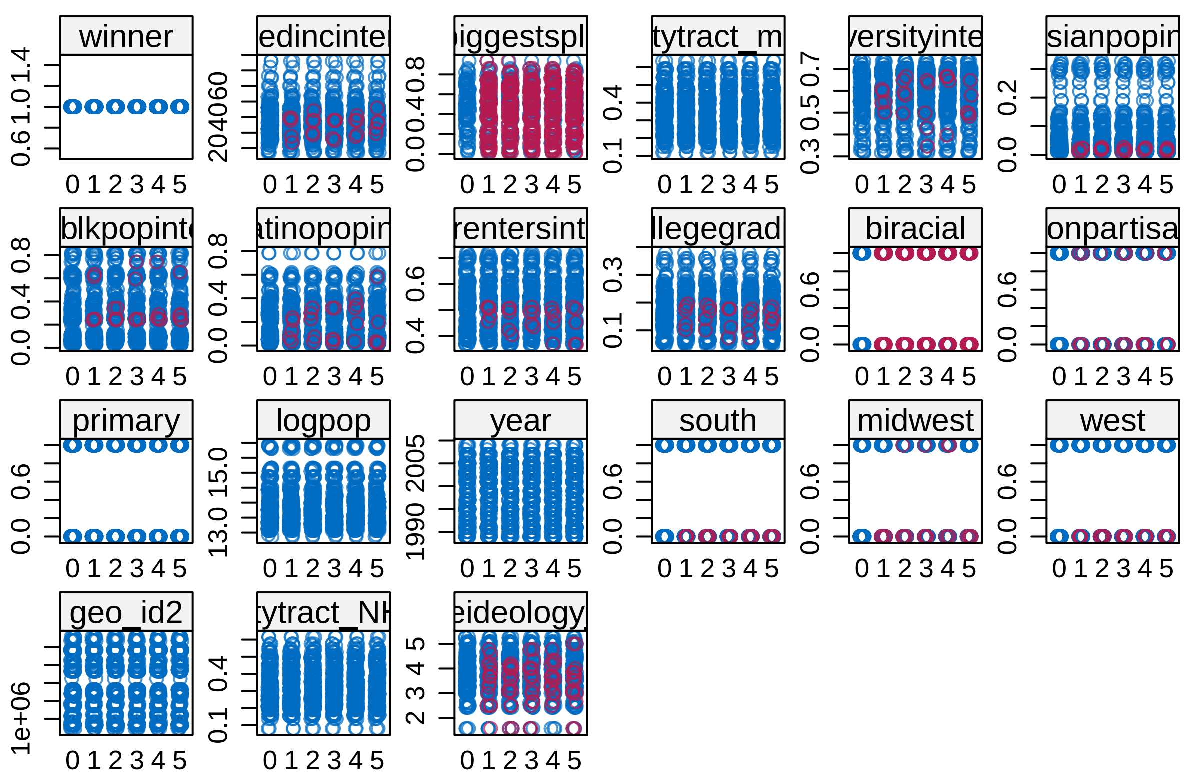

mean pctrentersinterp
sd pctrentersinterp
mean pctcollegegradinterp
sd pctcollegegradinterp
mean biracial
sd biracial
Iteration


mean nonpartisan
sd nonpartisan
mean south
sd south
mean midwest
sd midwest
Iteration

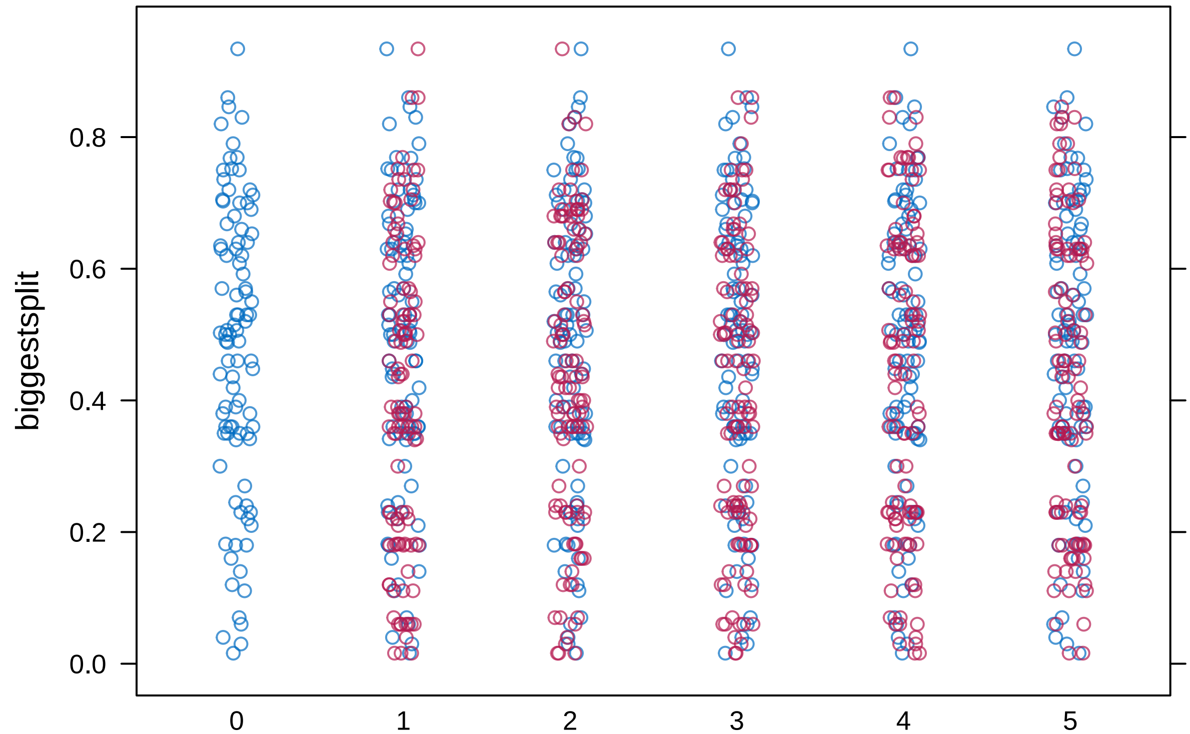


Iteration

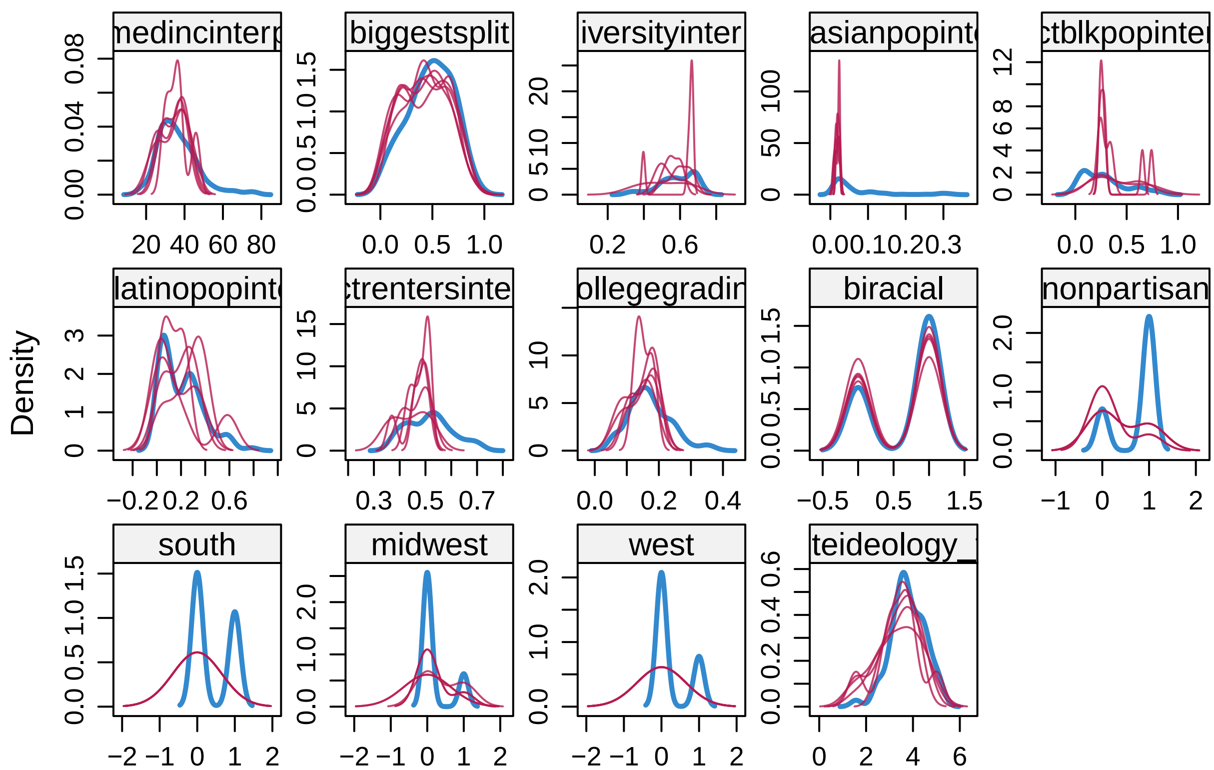
```
# we can also check the imputed values against the original values using stripplot(). Each column in ea

# this looks good? All reasonable values...

stripplot(imp_1_rp)
```



```
stripplot(imp_1_rp, biggestsplit)
```




```
densityplot(imp_1_rp)
```



```r
miss_var_summary(rp_impute)
```

```
# A tibble: 22 x 3
   variable              n_miss pct_miss
   <chr>                  <int>    <dbl>
 1 biggestsplit             109    53.7
 2 biracial                 103    50.7
 3 whiteideology_fill2       16     7.88
 4 medincinterp               5     2.46
 5 diversityinterp            5     2.46
 6 pctasianpopinterp          5     2.46
 7 pctblkpopinterp            5     2.46
 8 pctlatinopopinterp         5     2.46
 9 pctrentersinterp           5     2.46
10 pctcollegegradinterp       5     2.46
# ... with 12 more rows
```

Extension 1 Racial Polarization Table

```
                   term     estimate   std.error     p.value
1           (Intercept) -0.035510061 0.427998081 0.934629061
2   H_citytract_multi_i  0.432188023 0.276856056 0.121767183
3       diversityinterp  0.119605624 0.279619976 0.670434291
4     pctasianpopinterp -0.227349911 0.393878887 0.567769305
5       pctblkpopinterp  0.194048253 0.189965336 0.317055175
6    pctlatinopopinterp  0.140540212 0.190879137 0.469063611
7          medincinterp  0.001526960 0.004637943 0.746404352
8      pctrentersinterp -0.302827108 0.311631574 0.344276079
9  pctcollegegradinterp  0.114654139 0.482569647 0.813576990
10             biracial  0.192210377 0.040643218 0.001044884
11          nonpartisan -0.051614221 0.053797199 0.347455703
12              primary -0.054562013 0.032138055 0.114038960
13               logpop  0.017533560 0.034500341 0.616191619
14          year.f1990  0.037939154 0.136991752 0.787738984
15          year.f1991  0.026491672 0.068823157 0.704970321
16          year.f1992 -0.076000966 0.151834089 0.628255409
17          year.f1993 -0.031679932 0.093406313 0.741214400
18          year.f1994 -0.044635209 0.089110860 0.617733648
19          year.f1995  0.011056318 0.082109205 0.895081012
20          year.f1996  0.040378282 0.150428485 0.791321469
21          year.f1997 -0.029212286 0.088127339 0.744183140
22          year.f1998 -0.135424202 0.151111897 0.379624806
23          year.f1999 -0.064297228 0.084828908 0.458176852
24          year.f2000  0.156649335 0.136825062 0.258591337
25          year.f2001 -0.045307832 0.090298801 0.622172790
26          year.f2002 -0.133761075 0.119838260 0.273885127
27          year.f2003 -0.130464624 0.078294927 0.098979483
28          year.f2004 -0.141379607 0.095980252 0.150955286
29          year.f2005 -0.159099345 0.084095698 0.061955023
30          year.f2006 -0.098239536 0.176627588 0.585847696
31          year.f2007 -0.175079749 0.092918192 0.067558395
32          year.f2008 -0.044702289 0.226938455 0.846187337
```

```
33           year.f2009 -0.099901702 0.100961565 0.324348308
34                south  0.060595162 0.059879444 0.326990729
35              midwest  0.043133311 0.060588262 0.479657563
36                 west -0.006652788 0.061616333 0.914803731
```

```
                   term      estimate   std.error     p.value
1           (Intercept) -0.0897544002 0.427815365 0.835842398
2       H_citytract_NHW_i  0.5236179630 0.231350414 0.026556750
3        diversityinterp  0.0803588297 0.279725436 0.776021865
4      pctasianpopinterp -0.0500514851 0.415070967 0.904857934
5        pctblkpopinterp  0.2104876616 0.170670288 0.231853932
6     pctlatinopopinterp  0.1819815042 0.191739898 0.353511071
7           medincinterp  0.0006033154 0.004492433 0.894780822
8      pctrentersinterp -0.3867421042 0.311718369 0.230444027
9  pctcollegegradinterp  0.2677279838 0.482991821 0.582869292
10             biracial  0.1905972069 0.040920715 0.001290756
11          nonpartisan -0.0378775191 0.053293993 0.484213437
12              primary -0.0533448887 0.031870939 0.118858347
13               logpop  0.0212227370 0.034130929 0.540199874
14           year.f1990  0.0354219943 0.138790554 0.804424402
15           year.f1991  0.0430227894 0.070113152 0.548031800
16           year.f1992 -0.0714039047 0.150807562 0.646778392
17           year.f1993 -0.0284557888 0.094484040 0.769573809
18           year.f1994 -0.0409221978 0.088578028 0.645382018
19           year.f1995  0.0286965340 0.083380154 0.736756491
20           year.f1996  0.0520743104 0.150141594 0.732701237
21           year.f1997 -0.0163075367 0.090727717 0.859734619
22           year.f1998 -0.1354550675 0.150932711 0.379494507
23           year.f1999 -0.0491301389 0.084731050 0.569127996
24           year.f2000  0.1726274229 0.138068976 0.218927036
25           year.f2001 -0.0324426344 0.092896693 0.731928743
26           year.f2002 -0.1327334511 0.118715693 0.273528054
27           year.f2003 -0.1093207580 0.080592883 0.179590777
28           year.f2004 -0.1147628513 0.097780022 0.250256235
29           year.f2005 -0.1447488580 0.083838294 0.088073768
30           year.f2006 -0.0911022792 0.175187969 0.610265272
31           year.f2007 -0.1627312258 0.093332696 0.091220261
32           year.f2008 -0.0351917455 0.228158423 0.879362997
33           year.f2009 -0.0713663337 0.101126219 0.481655355
34                south  0.0671743762 0.059223272 0.274609207
35              midwest  0.0757082622 0.059513498 0.209763764
36                 west -0.0116704654 0.061291531 0.850409897
```

```
                   term      estimate   std.error      p.value
1           (Intercept) -1.149432e-01 0.425386767 0.7896007025
2       H_citytract_NHW_i  5.021930e-01 0.236029477 0.0375853160
3        diversityinterp  1.226143e-01 0.299678485 0.6869924975
4      pctasianpopinterp -2.394414e-02 0.408906796 0.9536837211
5        pctblkpopinterp  2.319260e-01 0.166875178 0.1780966851
6     pctlatinopopinterp  1.708735e-01 0.194414063 0.3904040455
7           medincinterp  1.064076e-03 0.004416136 0.8122626744
8      pctrentersinterp -4.336703e-01 0.341315346 0.2265602492
9  pctcollegegradinterp  1.587332e-01 0.452775037 0.7267869423
10             biracial  1.877493e-01 0.039292066 0.0007890887
11          nonpartisan -3.141873e-02 0.053681673 0.5640866189
```

```
12            primary -5.294190e-02 0.031859300 0.1217746150
13             logpop  2.844564e-02 0.037020534 0.4528505818
14 whiteideology_fill2 -2.255436e-02 0.031105183 0.4871372741
15          year.f1990  2.757082e-02 0.140336008 0.8488569858
16          year.f1991  3.899982e-02 0.072540723 0.5994205733
17          year.f1992 -7.391602e-02 0.153277093 0.6413592723
18          year.f1993 -3.118182e-02 0.095340767 0.7507626741
19          year.f1994 -4.592438e-02 0.088020980 0.6033115893
20          year.f1995  1.928950e-02 0.090393387 0.8355631565
21          year.f1996  4.210116e-02 0.151114922 0.7838623224
22          year.f1997 -1.785156e-02 0.090992906 0.8471652372
23          year.f1998 -1.439616e-01 0.153979493 0.3616442788
24          year.f1999 -4.942628e-02 0.084904102 0.5678989153
25          year.f2000  1.676426e-01 0.143802868 0.2538955742
26          year.f2001 -3.658907e-02 0.094716710 0.7054097210
27          year.f2002 -1.445594e-01 0.124523643 0.2592470950
28          year.f2003 -1.119640e-01 0.081191951 0.1732465534
29          year.f2004 -1.123582e-01 0.096401452 0.2529072773
30          year.f2005 -1.515868e-01 0.085546924 0.0812087450
31          year.f2006 -1.059189e-01 0.176979643 0.5584266615
32          year.f2007 -1.699491e-01 0.095130174 0.0854305117
33          year.f2008 -5.235100e-02 0.230608921 0.8234715636
34          year.f2009 -8.782547e-02 0.102268339 0.3921795923
35               south  8.990011e-02 0.069483885 0.2209589680
36             midwest  8.554782e-02 0.062265173 0.1788584448
37                west  3.134629e-05 0.063820615 0.9996123931
```

Appendix

Table 1

Table 2

Table 3

Table 3

Main Analysis 4

Main Analysis 5

Table 5

Appendix

Table 1: **Racial Polarization in Segregated Cities**

	Dependent variable:		
	biggestsplit		
	(1)	(2)	(3)
Multigroup H Index	0.932** (0.394)		
White/Nonwhite H Index		0.756** (0.297)	0.835*** (0.296)
Diversity	0.385 (0.362)	0.518 (0.323)	0.584* (0.323)
Percent Asian	−0.115 (0.527)	0.120 (0.558)	−0.004 (0.522)
Percent Black	−0.432 (0.269)	−0.237 (0.216)	−0.133 (0.212)
Percent Latino	−0.191 (0.257)	−0.059 (0.254)	0.095 (0.278)
Medain HH Income (1000s)	−0.004 (0.007)	−0.007 (0.007)	−0.002 (0.006)
Percent Renters	−0.580 (0.422)	−0.806* (0.431)	−0.419 (0.454)
Percent College Degree	0.328 (0.711)	0.723 (0.729)	0.123 (0.869)
Biracial Contest	0.210*** (0.037)	0.208*** (0.037)	0.192*** (0.036)
Nonpartisan Election	−0.090 (0.066)	−0.089 (0.066)	−0.034 (0.065)
Primary Election	−0.092*** (0.032)	−0.090*** (0.032)	−0.071** (0.030)
Population (logged)	0.035 (0.055)	0.048 (0.055)	−0.011 (0.061)
White Ideology			−0.051 (0.032)
Constant	−0.242 (0.569)	−0.393 (0.563)	0.236 (0.605)
Wald Chi Squarred	a	b	c
Observations	91	91	86
Akaike Inf. Crit.	−55.548	−56.381	−64.922
Bayesian Inf. Crit.	32.332	31.499	20.981
Note:			*p<0.1; **p<0.05; ***p<0.01

Table 2: **Effect of Segregation on Overall per Capita City Expenditures**

	Dependent variable:		
	dgepercap_cpi		
	(1)	(2)	(3)
H_citytract_NHW_i	−1.153***	−1.011***	−1.733***
	(0.221)	(0.254)	(0.437)
diversityinterp	0.106		−0.063
	(0.134)		(0.246)
pctblkpopinterp	0.681***	0.741***	0.164
	(0.167)	(0.161)	(0.523)
pctasianpopinterp	−0.385	−0.852**	0.197
	(0.302)	(0.348)	(0.706)
pctlatinopopinterp	1.543***	1.577***	1.622***
	(0.186)	(0.205)	(0.390)
chng5pctblk		−1.778***	
		(0.644)	
chng5pctlatino		−2.055**	
		(0.823)	
chng5pctasian		−0.800	
		(1.093)	
medinc_cpi	0.002*	0.001	0.004
	(0.001)	(0.002)	(0.003)
pctlocalgovworker_100	0.014	0.006	−0.030
	(0.016)	(0.018)	(0.046)
pctrentersinterp	0.527	0.547	0.336
	(0.333)	(0.385)	(0.656)
pctover65	0.093	0.487	−0.865
	(0.643)	(0.451)	(0.816)
pctcollegegradinterp	5.395***	6.260***	6.527***
	(0.403)	(0.419)	(1.029)
logpop	−0.243***	−0.290***	−0.447***
	(0.044)	(0.068)	(0.088)
ideology_fill			−0.012
			(0.034)
Observations	13,742	11,194	2,130
R^2	0.863	0.897	0.882
Adjusted R^2	0.830	0.865	0.855
Residual Std. Error	0.503 (df = 11094)	0.465 (df = 8544)	0.405 (df = 1741)
Note:			*p<0.1; **p<0.05; ***p<0.01

Table 3: **Effect of Segregation on Public Goods A**

	Dependent variable:		
	highwayspercapNC_cpi	policepercapNC_cpi	parkspercapNC_cpi
	(1)	(2)	(3)
H_citytract_NHW_i	-0.039^{**}	-0.215^{***}	-0.046^{***}
	(0.016)	(0.023)	(0.018)
diversityinterp	0.005	0.059^{***}	0.001
	(0.010)	(0.013)	(0.013)
pctblkpopinterp	0.052^{***}	0.142^{***}	0.031^{*}
	(0.014)	(0.018)	(0.018)
pctasianpopinterp	-0.036	-0.055	-0.067^{***}
	(0.026)	(0.035)	(0.023)
pctlatinopopinterp	0.025^{*}	0.335^{***}	0.049^{***}
	(0.014)	(0.019)	(0.014)
medinc_cpi	0.0003^{**}	0.00004	-0.00002
	(0.0001)	(0.0001)	(0.0001)
pctlocalgovworker_100	-0.0003	-0.001	0.001
	(0.001)	(0.002)	(0.001)
pctrentersinterp	0.011	0.075^{***}	0.018
	(0.023)	(0.028)	(0.021)
pctover65	0.140^{***}	0.147^{***}	0.127^{***}
	(0.032)	(0.045)	(0.040)
pctcollegegradinterp	0.218^{***}	0.793^{***}	0.444^{***}
	(0.026)	(0.038)	(0.038)
logpop	-0.015^{***}	-0.054^{***}	-0.005^{*}
	(0.004)	(0.004)	(0.003)
Observations	13,603	13,626	12,905
R^2	0.571	0.837	0.750
Adjusted R^2	0.467	0.798	0.688
Residual Std. Error	0.039 (df = 10958)	0.042 (df = 10991)	0.034 (df = 10321)
Note:			*p<0.1; **p<0.05; ***p<0.01

Table 4: **Effect of Segregation on Public Goods B**

	Dependent variable:		
	sewerspercapNC_cpi	welfhoushealthNC_cpi	genrevownpercap_cpi
	(1)	(2)	(3)
H_citytract_NHW_i	−0.148***	−0.138***	−0.768***
	(0.022)	(0.049)	(0.155)
diversityinterp	0.039***	−0.033	0.091
	(0.015)	(0.025)	(0.085)
pctblkpopinterp	0.012	0.016	0.272**
	(0.017)	(0.056)	(0.120)
pctasianpopinterp	−0.124***	0.130	−0.147
	(0.044)	(0.090)	(0.233)
pctlatinopopinterp	0.091***	0.140***	1.202***
	(0.019)	(0.028)	(0.120)
medinc_cpi	0.001***	−0.0003	0.004***
	(0.0002)	(0.0003)	(0.001)
pctlocalgovworker_100	−0.004*	−0.007**	0.002
	(0.002)	(0.003)	(0.013)
pctrentersinterp	0.174***	0.079*	0.569**
	(0.034)	(0.046)	(0.263)
pctover65	0.104*	−0.058	0.443
	(0.053)	(0.070)	(0.471)
pctcollegegradinterp	0.286***	0.421***	4.331***
	(0.043)	(0.080)	(0.349)
logpop	−0.023***	−0.012*	−0.126***
	(0.003)	(0.007)	(0.032)
Observations	11,223	10,871	13,741
R^2	0.675	0.828	0.886
Adjusted R^2	0.586	0.777	0.859
Residual Std. Error	0.049 (df = 8805)	0.062 (df = 8380)	0.420 (df = 11093)
Note:			*p<0.1; **p<0.05; ***p<0.01

Table 5: **Effect of Segregation on Public Goods**

	Dependent variable:					
	highwayspercapNC_cpi	policepercapNC_cpi	parkspercapNC_cpi	sewerspercapNC_cpi	welfhoushealthNC_cpi	genrevownp
	(1)	(2)	(3)	(4)	(5)	(6
H_citytract_NHW_i	−0.039**	−0.215***	−0.046***	−0.148***	−0.138***	−0.7
	(0.016)	(0.023)	(0.018)	(0.022)	(0.049)	(0.1
diversityinterp	0.005	0.059***	0.001	0.039***	−0.033	0.0
	(0.010)	(0.013)	(0.013)	(0.015)	(0.025)	(0.0
pctblkpopinterp	0.052***	0.142***	0.031*	0.012	0.016	0.27
	(0.014)	(0.018)	(0.018)	(0.017)	(0.056)	(0.1
pctasianpopinterp	−0.036	−0.055	−0.067***	−0.124***	0.130	−0.
	(0.026)	(0.035)	(0.023)	(0.044)	(0.090)	(0.2
pctlatinopopinterp	0.025*	0.335***	0.049***	0.091***	0.140***	1.20
	(0.014)	(0.019)	(0.014)	(0.019)	(0.028)	(0.1
medinc_cpi	0.0003**	0.00004	−0.00002	0.001***	−0.0003	0.00
	(0.0001)	(0.0001)	(0.0001)	(0.0002)	(0.0003)	(0.0
pctlocalgovworker_100	−0.0003	−0.001	0.001	−0.004*	−0.007**	0.0
	(0.001)	(0.002)	(0.001)	(0.002)	(0.003)	(0.0
pctrentersinterp	0.011	0.075***	0.018	0.174***	0.079*	0.56
	(0.023)	(0.028)	(0.021)	(0.034)	(0.046)	(0.2
pctover65	0.140***	0.147***	0.127***	0.104*	−0.058	0.4
	(0.032)	(0.045)	(0.040)	(0.053)	(0.070)	(0.4
pctcollegegradinterp	0.218***	0.793***	0.444***	0.286***	0.421***	4.33
	(0.026)	(0.038)	(0.038)	(0.043)	(0.080)	(0.3
logpop	−0.015***	−0.054***	−0.005*	−0.023***	−0.012*	−0.1
	(0.004)	(0.004)	(0.003)	(0.003)	(0.007)	(0.0
Observations	13,603	13,626	12,905	11,223	10,871	13,
R^2	0.571	0.837	0.750	0.675	0.828	0.8
Adjusted R^2	0.467	0.798	0.688	0.586	0.777	0.8
Residual Std. Error	0.039 (df = 10958)	0.042 (df = 10991)	0.034 (df = 10321)	0.049 (df = 8805)	0.062 (df = 8380)	0.420 (df

Note: *p<0.1; **p<0.05;

Table 6: **Effect of Segregation on City Expenditures, IV Approach A**

	Dependent variable:			
	dgepercap_cpi	highwayspercapNC_cpi	policepercapNC_cpi	parkspercapNC_cp
	(1)	(2)	(3)	(4)
H_citytract_NHW_i	−2.676***	−0.363***	−0.350***	−0.034*
	(0.935)	(0.056)	(0.109)	(0.019)
dgepercap_cpilag	1.472***			
	(0.007)			
highwayspercapNC_cpilag		0.477***		
		(0.003)		
policepercapNC_cpilag			0.955***	
			(0.004)	
parkspercapNC_cpilag				0.869***
				(0.006)
diversityinterp	0.264	−0.032	−0.020	0.004
	(0.355)	(0.022)	(0.042)	(0.007)
pctblkpopinterp	0.376	0.085***	0.096**	0.003
	(0.325)	(0.020)	(0.038)	(0.007)
pctasianpopinterp	0.143	−0.111**	−0.064	−0.022
	(0.940)	(0.056)	(0.110)	(0.019)
pctlatinopopinterp	0.087	0.088***	0.088***	0.007
	(0.284)	(0.017)	(0.033)	(0.006)
medincinterp	−0.004	0.001***	0.001***	0.0002***
	(0.003)	(0.0002)	(0.0004)	(0.0001)
pctlocalgovworker_100	−0.104***	0.021***	0.026***	0.003***
	(0.032)	(0.002)	(0.004)	(0.001)
pctrentersinterp	−0.553	0.165***	0.187***	0.035***
	(0.350)	(0.021)	(0.041)	(0.007)
pctover65	0.301	0.267***	0.238***	0.072***
	(0.730)	(0.044)	(0.086)	(0.015)
pctcollegegradinterp	0.248	−0.044	−0.101	0.028**
	(0.567)	(0.034)	(0.067)	(0.012)
Constant	0.328	−0.125***	−0.183***	−0.029***
	(0.278)	(0.017)	(0.033)	(0.006)
Observations	21,145	20,704	20,627	19,056
R^2	0.685	0.615	0.789	0.540
Adjusted R^2	0.685	0.615	0.789	0.539
Residual Std. Error	4.877 (df = 21125)	0.290 (df = 20684)	0.566 (df = 20607)	0.093 (df = 19036)
Note:				*p<0.1; **p<0.05; ***p<0.0

Table 7: **Effect of Segregation on City Expenditures, IV Approach B**

	Dependent variable:		
	sewerspercapNC_cpi	genrevownpercap_cpi	welfhoushealthNC_cpi
	(1)	(2)	(3)
H_citytract_NHW_i	-0.363^{***}	-1.873^{**}	-0.115^{**}
	(0.060)	(0.789)	(0.054)
sewerspercapNC_cpilag	0.064^{***}		
	(0.008)		
genrevownpercap_cpilag		1.235^{***}	
		(0.006)	
welfhoushealthNC_cpilag			0.893^{***}
			(0.005)
diversityinterp	0.080^{***}	0.047	-0.047^{**}
	(0.024)	(0.300)	(0.022)
pctblkpopinterp	0.058^{**}	0.360	0.076^{***}
	(0.025)	(0.274)	(0.023)
pctasianpopinterp	-0.223^{***}	-0.029	0.009
	(0.068)	(0.793)	(0.053)
pctlatinopopinterp	-0.050^{***}	0.206	0.078^{***}
	(0.019)	(0.240)	(0.017)
medincinterp	0.0002	0.0003	0.001^{**}
	(0.0003)	(0.003)	(0.0002)
pctlocalgovworker_100	0.001	-0.003	0.016^{***}
	(0.002)	(0.027)	(0.002)
pctrentersinterp	0.073^{***}	0.263	0.098^{***}
	(0.024)	(0.295)	(0.023)
pctover65	0.287^{***}	0.782	0.127^{**}
	(0.051)	(0.616)	(0.050)
pctcollegegradinterp	0.029	-0.035	-0.038
	(0.040)	(0.478)	(0.038)
Constant	0.004	-0.174	-0.093^{***}
	(0.019)	(0.234)	(0.018)
Observations	16,616	21,148	14,711
R^2	0.006	0.681	0.699
Adjusted R^2	0.005	0.681	0.698
Residual Std. Error	0.284 (df = 16596)	4.115 (df = 21128)	0.252 (df = 14691)
Note:			*p<0.1; **p<0.05; ***p<0.01

Table 8: **TABLE A1 Summary Statistics: Racial Polarization Data**

Statistic	N	Mean	St. Dev.	Min	Max
Largest Racial Divide	91	0.481	0.213	0.016	0.934
H Index: Multigroup	91	0.376	0.119	0.183	0.635
H Index: Two-Group	91	0.353	0.114	0.156	0.614
Diversity	91	0.623	0.088	0.323	0.736
% Asian	91	0.067	0.074	0.008	0.318
% Black	91	0.275	0.181	0.030	0.815
% Latino	91	0.229	0.155	0.009	0.605
Median HH Income	91	36.725	10.114	17.267	75.982
% Renters	91	0.535	0.092	0.368	0.718
% College Degree	91	0.167	0.056	0.049	0.359
Biracial Contest	91	0.725	0.449	0	1
Nonpartisan Election	91	0.714	0.454	0	1
Primary Election	91	0.352	0.480	0	1
Population (logged)	91	14.166	0.826	13.065	15.921
White Ideology	86	3.835	0.648	2.667	5.250

TABLE A2 Cities Included in Racial Polarization Data

Replication

	Segregation: Mean *H* Index		**Largest Racial Divide, Number of Elections**		
City Name	Multigroup	Two-Group	Black/White	Latino/White	Black/Latino
Austin, TX	0.204	0.208	1	0	0
Baltimore, MD	0.510	0.516	3	1	0
Charlotte, NC	0.269	0.287	2	0	0
Chicago, IL	0.572	0.460	7	0	1
Cleveland, OH	0.558	0.531	2	0	0
Columbus, OH	0.316	0.284	3	0	1
Dallas, TX	0.359	0.339	4	0	1
Denver, CO	0.289	0.254	1	2	0
Detroit, MI	0.398	0.255	1	0	1
Houston, TX	0.339	0.308	7	0	2
Indianapolis, IN	0.292	0.293	0	0	1
Jacksonville, FL	0.233	0.222	2	0	0
Los Angeles, CA	0.351	0.366	3	0	5
Memphis, TN	0.470	0.474	2	0	0
Milwaukee, WI	0.423	0.360	3	0	0
New York, NY	0.468	0.474	5	3	1
Oklahoma, OK	0.231	0.165	1	0	0
Philadelphia, PA	0.492	0.487	5	0	0
Phoenix, AZ	0.255	0.270	0	1	0
San Antonio, TX	0.237	0.225	0	4	0
San Diego, CA	0.255	0.266	3	0	1
San Francisco, CA	0.223	0.161	3	0	1
San Jose, CA	0.186	0.198	0	2	1
Tucson, AZ	0.185	0.192	1	0	0
Washington, DC	0.464	0.491	3	0	0

TABLE A3 Summary Statistics: Census of Government Finance and Population

Variable	**Obs**	**Mean**	**SD**	**Min**	**Max**
Direct General Expenditure per Capita	13742	1.186	1.220	0.019	70.457
Highways per Capita	13603	0.081	0.053	0.000	1.106

% Over 65	13742	0.125	0.050	0.012	0.771
% College Degree	13742	0.160	0.099	0.003	0.587
Population (logged)	13742	10.132	1.016	6.071	15.921
City Ideology	2130	4.023	0.780	1.000	7.000
Population	13742	53,723.022	208,143.791	433.000	8,214,426.000

Bibliography

Pencharz, Paul B., and Ronald O. Ball. 2003. "Different Approaches to Define Individual Amino Acid Requirements." *Annual Review of Nutrition* 23. Annual Reviews: 101–16.

Trounstine, Jessica. 2016. "Segregation and Inequality in Public Goods: SEGREGATION AND INEQUALITY IN PUBLIC GOODS." *American Journal of Political Science* 60 (3): 709–25. https://doi.org/10.1111/ajps.12227.

Wickham, Hadley. 2019. *Stringr: Simple, Consistent Wrappers for Common String Operations*. https://CRAN.R-project.org/package=stringr.

Xie, Yihui. 2015. *Dynamic Documents with R and Knitr*. 2nd ed. Boca Raton, Florida: Chapman; Hall/CRC. https://yihui.org/knitr/.

———. 2020. *Knitr: A General-Purpose Package for Dynamic Report Generation in R*. https://CRAN.R-project.org/package=knitr.