Additional Supplementary Information for "Measuring and Modeling Neighborhoods"

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1 Experimental Application

To further explore how race and partisanship influence the drawing of subjective neighborhoods, we design and implement an experiment where we randomly vary whether survey respondents are provided with information as to the racial or partisan demographics of the potential areas to include in their neighborhood. The primary goal of this experiment is methodological: to demonstrate how the proposed methodology can be adapted to a survey experiment with an information treatment, commonly used in political science. The second goal with the experiment is to see whether providing concrete information as to which census blocks are more racially or politically diverse might change how overtly exclusive survey respondents are when defining their neighborhood. When voters get information on where out-group members live, they may deliberately draw them out of their neighborhoods. It is also possible that voters are not purposely exclusive but the influence of racial and partisan demographics is subconsciously incorporated into how voters' neighborhood definitions. This survey experiment, therefore, tests these two possibilities by examining the extent to which voters are deliberately exclusive when defining their neighborhoods.

1.1 Experimental design

The treatment for the experiment was administered by overlaying a different type of information over the map while the respondent was drawing their neighborhood. There are five experimental conditions, which were randomly assigned to survey respondents:

Control (C) No information

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The map shows information about political party registration. Orange areas have more registered Democrats and purple areas have more registered Republicans.

(a) **Control** (b) **Party** (c) **Party Placebo**

The map shows information about racial demographics. Purple areas are mostly White, orange areas are mostly Black, and blue areas are mostly some other race.
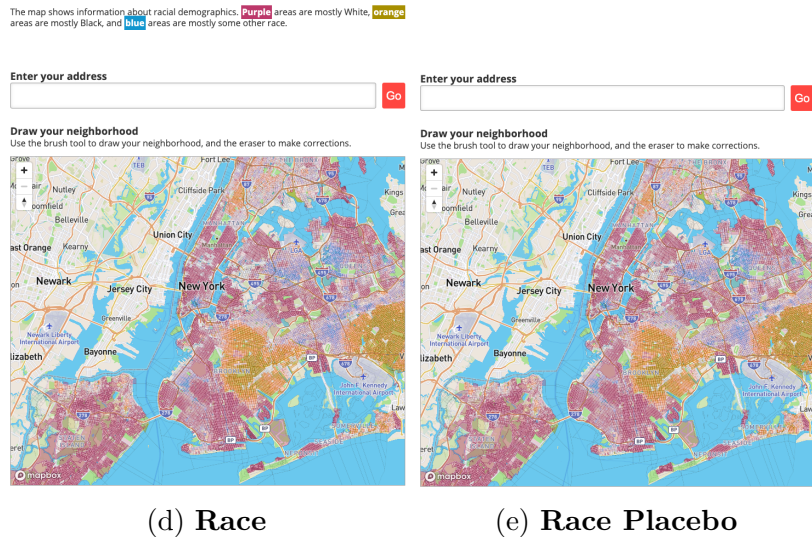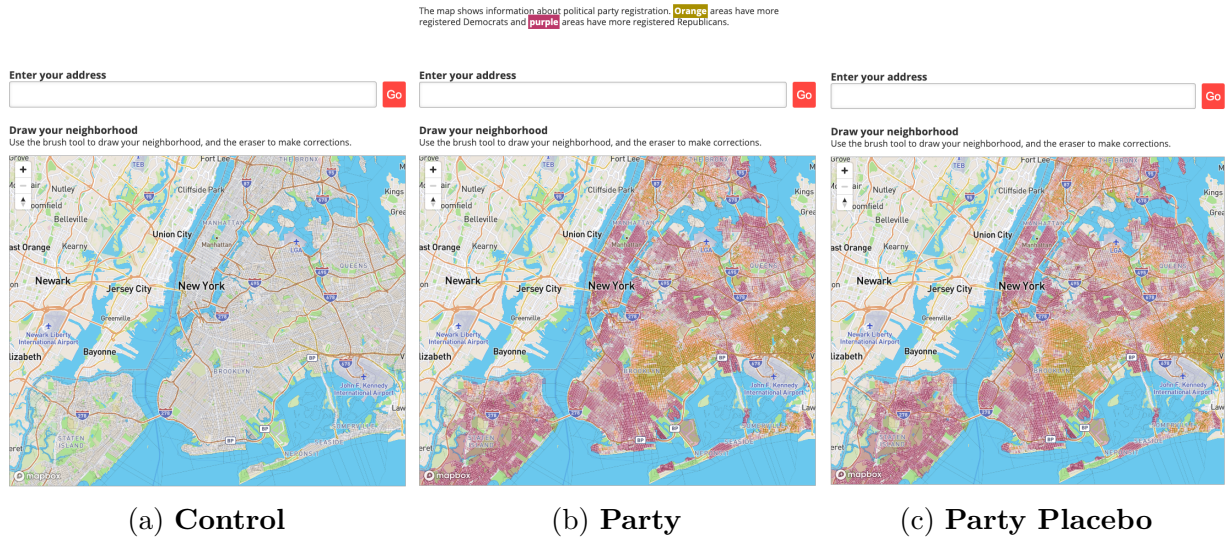
(d) **Race** (e) **Race Placebo**

Figure 1: Map color schemes and identifying information for the five experimental conditions.

Party Placebo (PH) Partisan information, but not identified as such

Party (P) Partisan information, identified as such

Race Placebo (RH) Racial information, but not identified as such

Race (R) Racial information, identified as such

The control condition C contains no overlaid shading. For the Party Placebo and Party conditions, blocks were shaded on a gradient scale based on the proportion of major party registrants who are Democrats (Democrats/(Democrats + Republicans)). Respondents in the Party Placebo condition were just shown the colored map, with no explanation for the coloring. Respondents in the Party condition were shown the colored map and an explanation that the purple areas are more Republican, while the orange areas are more Democratic. For

the Race and Race Placebo conditions, the blocks were colored according to the majority racial group (White, Black, or other) and shaded by the proportion of the census block population that is that group. As with the partisan conditions, the difference between the RH and R conditions is whether respondents were told that the colors represent the racial composition of different map areas. Figure 1 shows the overlaid color schemes for each of the five experimental conditions, and the accompanying text that was shown to respondents in the Party and Race groups.

The reason for splitting the partisan and racial conditions in two, creating the intermediate color-but-no-information condition, is that a map coloring in and of itself may change how respondents draw their neighborhood: it would be natural for one's neighborhood boundaries to closely match the boundaries created by the artificial map coloring, similar to how people rely on anchors and heuristics in the absence of more concrete information when making decisions or estimating or estimating numerical quantities (Tversky and Kahneman 1974). Creating two different conditions allows us to separate this effect from our main effect.

After completing the mapping module, respondents next were asked whether they would support or oppose a ban on the construction of new housing in their neighborhood. This outcome is meant to measure a policy preference that tracks to general questions of exclusivity and NIMBYism in one's residential environment. Lastly, the respondents were asked to answer three questions comprising a trust battery: measuring the level of trust they express towards their neighbors—which we explicitly define for them as the people living in the neighborhood they just drew. The questions were adapted from well-validated survey items designed to capture general trust (Reeskens and Hooghe 2008). These questions test whether defining one's neighborhood along explicit racial or partisan dimensions cause respondents to express greater trust in their neighborhood (relative to outside their neighborhood) and express greater desire to prevent more housing (and thus new residents) into their defined neighborhood. We hypothesize that the treatment conditions that provide racial or partisan information will reduce willingness and that defining one's neighborhood along partisan or racial dimensions (i.e. being assigned to the racial or partisan information condition) will cause people to express greater trust in their neighbors in their drawn neighborhood.

1.2 Findings

To measure the effect of racial and partisan information on exclusivity, we refit the model on the full sample ($n = 2,508$ across the three cities) and interact treatment group indicators with the co-partisan, co-ethnic, and co-class interaction variables.[1] From this, we calculate

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[1]Due to numerical stability issues in fitting this model to the full Phoenix sample, we used a different inference routine to fit the GLMM (the `bam` function in the `mgcv` R package). While this routine fits the same model likelihood, the implied priors are different, and due to the details of the inference function we are unable to perform corrective importance sampling. Given the large number of block-level observations in the sample, we do not believe that final inferences were meaningfully affected. Indeed, using this alternative fitting routine on the Miami and New York samples yielded no noticeable differences other than a narrower

the following posterior quantities of interest:

- The difference in the respondent-block co-partisan interaction coefficient between the Party and Party Placebo groups

- The difference in the respondent-block co-ethnic interaction coefficient between the Race and Race Placebo groups

These quantities of interest are shown in Figure 2, along with the difference in the respondent-block co-ethnic and co-partisan interaction coefficient between the Race, Party, and Control groups. Appendix 1 contains the full results table. In general, we find little overall difference in the influence of co-ethnicity or co-partisanship. Respondents in Miami and New York who were assigned to view the map shaded to show racial demographics, do not exhibit a stronger preference for co-ethnicity than respondents assigned to the placebo condition where they are shown the same shaded map but not told what the shading signifies. In Phoenix, however, we do find a statistically significant effect, with the racial information increasing the coefficient on racial homophily by 4.0 percentage points. For minority voters, there are conflicting results across cities, with little treatment effect in Miami, a positive (more exclusivity) effect in New York, but a negative effect in Phoenix. We see little effect of partisan information for Democrats in each of the cities, but conflicting results for Republicans. Republicans in New York become much more exclusionary along partisan lines in response to partisan information, while Republicans in Miami and Phoenix become much less exclusionary.

These null or conflicting results do not support the conclusion that voters are explicitly motivated to draw more homogeneous neighborhoods. When given the information to more starkly define their neighborhood along racial or partisan definitions, voters do not generally do so. But across treatment groups, the model demonstrates that—net of other variables in the model—racial and partisan homophily are important determinants of how neighborhoods are defined in voters' minds. This is consistent with the influence of local demographics being already subconsciously incorporated into how voters form attachments to their local area. In Figure 4, we present the treatment effects for these outcomes, which are unchanged across treatment groups.

This tables contains posterior summaries for all model coefficients on the original model scale. These models were fit separately to each city:

- Miami: 473 survey respondents (91,435 individual block-level observations)
- New York: 450 survey respondents (82,842 individual block-level observations)
- Phoenix: 1,585 survey respondents (272,511 individual block-level observations)

Table 2: Full experimental sample model estimates.

Coefficient	City	Mean	Std. Dev.	Q5	Median	Q95

credible interval on the intercept parameter.

(Intercept)	Miami	-8.06	6.71	-18.88	-8.20	2.84
(Intercept)	NYC	-5.59	6.15	-15.88	-5.33	4.09
(Intercept)	Phoenix	-11.87	0.40	-12.53	-11.87	-11.21
church	Miami	0.01	0.03	-0.04	0.01	0.06
church	NYC	0.08	0.02	0.05	0.08	0.12
church	Phoenix	0.20	0.03	0.16	0.20	0.24
distance	Miami	0.06	0.01	0.04	0.06	0.07
distance	Miami	0.19	0.02	0.17	0.19	0.22
distance	NYC	0.07	0.01	0.05	0.07	0.08
distance	NYC	0.07	0.01	0.05	0.07	0.09
distance	Phoenix	0.12	0.01	0.11	0.12	0.13
distance	Phoenix	0.06	0.01	0.05	0.06	0.08
park	Miami	-0.12	0.04	-0.18	-0.12	-0.05
park	NYC	0.10	0.02	0.07	0.10	0.13
park	Phoenix	0.13	0.02	0.09	0.13	0.16
school	Miami	0.33	0.07	0.20	0.33	0.44
school	NYC	0.03	0.05	-0.06	0.03	0.11
school	Phoenix	0.11	0.04	0.04	0.11	0.17
children	Miami	1.37	2.43	-2.58	1.33	5.33
children	NYC	-0.13	1.89	-3.19	-0.16	2.94
children	Phoenix	-0.93	0.15	-1.19	-0.93	-0.68
same block group	Miami	0.01	0.03	-0.04	0.01	0.06
same block group	NYC	0.06	0.04	0.00	0.06	0.12
same block group	Phoenix	-0.01	0.02	-0.04	-0.01	0.02
same tract	Miami	-0.23	0.05	-0.31	-0.23	-0.15
same tract	NYC	-0.04	0.06	-0.13	-0.04	0.04
same tract	Phoenix	-0.43	0.07	-0.54	-0.43	-0.32
same road region	Miami	-0.30	0.02	-0.33	-0.30	-0.26
same road region	NYC	-0.08	0.02	-0.11	-0.08	-0.05
same road region	Phoenix	-0.34	0.02	-0.37	-0.34	-0.31
population	Miami	-1.63	0.13	-1.83	-1.63	-1.42
population	NYC	-0.86	0.08	-1.00	-0.86	-0.73
population	Phoenix	-1.74	0.10	-1.90	-1.74	-1.58
area	Miami	-0.11	0.04	-0.17	-0.11	-0.05
area	NYC	-0.01	0.05	-0.09	-0.01	0.07
area	Phoenix	-0.17	0.03	-0.21	-0.17	-0.13
age	Miami	0.00	0.12	-0.19	0.00	0.20
age	NYC	0.00	0.10	-0.15	0.00	0.16
age	Phoenix	0.01	0.01	0.01	0.01	0.02
education = No College	Miami	-2.82	5.82	-12.39	-2.75	6.45
education = No College	NYC	-0.44	4.94	-8.61	-0.40	7.38
education = No College	Phoenix	-0.80	1.17	-2.73	-0.80	1.13
retired	Miami	0.14	2.86	-4.59	0.07	4.84
retired	NYC	0.04	2.37	-3.83	-0.10	4.09
retired	Phoenix	-0.05	0.12	-0.26	-0.05	0.15
tenure	Miami	-0.04	0.89	-1.50	-0.06	1.34
tenure	NYC	0.00	0.66	-1.08	-0.02	1.02
tenure	Phoenix	0.02	0.02	-0.02	0.02	0.06
party = IND	Miami	0.17	8.43	-13.58	-0.15	14.14

party = IND	NYC	0.06	7.32	-11.44	0.13	12.69
party = IND	Phoenix	-0.41	0.42	-1.10	-0.41	0.27
party = REP	Miami	-0.06	5.01	-7.86	-0.16	8.23
party = REP	NYC	-0.43	4.37	-7.54	-0.48	7.20
party = REP	Phoenix	-0.01	0.22	-0.36	-0.01	0.34
minority	Miami	0.01	5.66	-9.08	-0.07	9.03
minority	NYC	0.13	4.13	-6.64	0.07	6.93
minority	Phoenix	-0.23	0.31	-0.74	-0.23	0.28
homeowner	Miami	1.30	4.60	-6.22	1.17	8.78
homeowner	NYC	-0.36	3.50	-6.07	-0.39	5.59
homeowner	Phoenix	-0.34	0.33	-0.88	-0.34	0.20
school * children	Miami	-0.50	0.11	-0.68	-0.49	-0.31
school * children	NYC	0.00	0.08	-0.13	0.00	0.13
school * children	Phoenix	0.22	0.07	0.11	0.22	0.33
children * distance	Miami	-0.15	0.02	-0.19	-0.15	-0.11
children * distance	NYC	0.01	0.02	-0.02	0.01	0.04
children * distance	Phoenix	0.15	0.02	0.13	0.15	0.18
same tract * same road region	Miami	0.11	0.05	0.02	0.11	0.19
same tract * same road region	NYC	-0.11	0.06	-0.20	-0.11	-0.02
same tract * same road region	Phoenix	0.01	0.07	-0.10	0.01	0.12
Fraction same race * C group	Miami	-0.38	0.06	-0.48	-0.38	-0.28
Fraction same race * C group	NYC	-0.25	0.04	-0.32	-0.25	-0.18
Fraction same race * C group	Phoenix	-0.46	0.03	-0.51	-0.46	-0.40
Fraction same race * P group	Miami	-0.45	0.06	-0.54	-0.46	-0.36
Fraction same race * P group	NYC	-0.48	0.05	-0.56	-0.48	-0.40
Fraction same race * P group	Phoenix	-0.39	0.03	-0.44	-0.39	-0.34
Fraction same race * PH group	Miami	-0.17	0.06	-0.27	-0.17	-0.07
Fraction same race * PH group	NYC	-0.35	0.06	-0.44	-0.35	-0.26
Fraction same race * PH group	Phoenix	-0.45	0.04	-0.51	-0.45	-0.39
Fraction same race * R group	Miami	-0.28	0.06	-0.37	-0.27	-0.18
Fraction same race * R group	NYC	-0.38	0.05	-0.47	-0.38	-0.30
Fraction same race * R group	Phoenix	-0.42	0.03	-0.47	-0.42	-0.36
Fraction same race * RH group	Miami	-0.36	0.06	-0.45	-0.37	-0.27
Fraction same race * RH group	NYC	-0.39	0.05	-0.47	-0.39	-0.31
Fraction same race * RH group	Phoenix	-0.30	0.03	-0.35	-0.30	-0.25
C group * Fraction same party	Miami	-0.22	0.09	-0.37	-0.22	-0.07
C group * Fraction same party	NYC	-0.40	0.07	-0.51	-0.41	-0.30
C group * Fraction same party	Phoenix	-0.36	0.09	-0.51	-0.36	-0.22
P group * Fraction same party	Miami	-0.06	0.09	-0.20	-0.06	0.08
P group * Fraction same party	NYC	-0.26	0.06	-0.35	-0.26	-0.16
P group * Fraction same party	Phoenix	-0.30	0.09	-0.45	-0.30	-0.14
PH group * Fraction same party	Miami	0.09	0.08	-0.04	0.09	0.22
PH group * Fraction same party	NYC	-0.19	0.06	-0.29	-0.19	-0.08
PH group * Fraction same party	Phoenix	-0.14	0.09	-0.28	-0.14	0.00
R group * Fraction same party	Miami	-0.19	0.07	-0.31	-0.19	-0.06
R group * Fraction same party	NYC	-0.31	0.06	-0.41	-0.31	-0.22
R group * Fraction same party	Phoenix	-0.53	0.08	-0.66	-0.53	-0.40
RH group * Fraction same party	Miami	-0.32	0.07	-0.43	-0.32	-0.20

RH group * Fraction same party	NYC	-0.18	0.06	-0.28	-0.18	-0.08
RH group * Fraction same party	Phoenix	-0.18	0.07	-0.30	-0.18	-0.07
C group * Fraction same ownership	Miami	-0.43	0.18	-0.72	-0.43	-0.13
C group * Fraction same ownership	NYC	-0.40	0.13	-0.60	-0.40	-0.19
C group * Fraction same ownership	Phoenix	-0.41	0.15	-0.65	-0.41	-0.17
P group * Fraction same ownership	Miami	0.20	0.13	0.00	0.20	0.41
P group * Fraction same ownership	NYC	-0.41	0.13	-0.63	-0.41	-0.20
P group * Fraction same ownership	Phoenix	0.54	0.16	0.28	0.54	0.81
PH group * Fraction same ownership	Miami	-0.63	0.26	-1.05	-0.63	-0.21
PH group * Fraction same ownership	NYC	-0.41	0.11	-0.59	-0.40	-0.22
PH group * Fraction same ownership	Phoenix	0.18	0.13	-0.03	0.18	0.39
R group * Fraction same ownership	Miami	1.39	0.79	0.10	1.37	2.69
R group * Fraction same ownership	NYC	-0.07	0.12	-0.27	-0.07	0.13
R group * Fraction same ownership	Phoenix	0.41	0.15	0.16	0.41	0.66
RH group * Fraction same ownership	Miami	-0.28	0.23	-0.65	-0.29	0.09
RH group * Fraction same ownership	NYC	-0.07	0.10	-0.23	-0.07	0.09
RH group * Fraction same ownership	Phoenix	-0.56	0.17	-0.84	-0.56	-0.28
C group * Fraction same education	Miami	0.01	0.17	-0.27	0.01	0.28
C group * Fraction same education	NYC	-0.53	0.10	-0.69	-0.53	-0.36
C group * Fraction same education	Phoenix	-1.37	0.09	-1.53	-1.37	-1.22
P group * Fraction same education	Miami	-0.26	0.14	-0.48	-0.26	-0.04
P group * Fraction same education	NYC	0.12	0.09	-0.02	0.12	0.26
P group * Fraction same education	Phoenix	-0.94	0.10	-1.11	-0.94	-0.77
PH group * Fraction same education	Miami	0.19	0.17	-0.08	0.18	0.46
PH group * Fraction same education	NYC	-0.57	0.10	-0.73	-0.57	-0.42
PH group * Fraction same education	Phoenix	-0.17	0.11	-0.34	-0.17	0.01
R group * Fraction same education	Miami	-0.22	0.16	-0.48	-0.22	0.04
R group * Fraction same education	NYC	0.14	0.07	0.01	0.14	0.26
R group * Fraction same education	Phoenix	-1.07	0.10	-1.24	-1.07	-0.90
RH group * Fraction same education	Miami	-0.80	0.13	-1.02	-0.80	-0.58
RH group * Fraction same education	NYC	-0.08	0.08	-0.21	-0.08	0.04
RH group * Fraction same education	Phoenix	-0.79	0.08	-0.93	-0.79	-0.65
C group * income	Miami	-0.19	0.06	-0.29	-0.19	-0.10
C group * income	NYC	-0.13	0.04	-0.19	-0.13	-0.06
C group * income	Phoenix	0.19	0.03	0.14	0.19	0.24
P group * income	Miami	0.09	0.06	0.00	0.09	0.18
P group * income	NYC	-0.16	0.04	-0.23	-0.16	-0.09
P group * income	Phoenix	0.15	0.03	0.10	0.15	0.21
PH group * income	Miami	-0.06	0.06	-0.15	-0.06	0.04
PH group * income	NYC	-0.04	0.04	-0.10	-0.04	0.03
PH group * income	Phoenix	0.13	0.03	0.08	0.13	0.19
R group * income	Miami	-0.19	0.06	-0.29	-0.19	-0.09
R group * income	NYC	-0.13	0.04	-0.19	-0.13	-0.07
R group * income	Phoenix	0.14	0.03	0.09	0.14	0.20
RH group * income	Miami	0.05	0.05	-0.03	0.05	0.13
RH group * income	NYC	-0.19	0.04	-0.26	-0.19	-0.13
RH group * income	Phoenix	0.15	0.03	0.10	0.15	0.19
education = No College * P group	Miami	2.29	7.93	-10.29	2.08	15.20

education = No College * P group	NYC	-7.76	8.06	-20.66	-7.84	5.85
education = No College * P group	Phoenix	-2.44	1.57	-5.02	-2.44	0.14
education = No College * PH group	Miami	5.15	8.35	-8.14	4.72	18.93
education = No College * PH group	NYC	-0.20	8.12	-13.32	-0.44	14.47
education = No College * PH group	Phoenix	9.03	1.72	6.20	9.03	11.85
education = No College * R group	Miami	-5.21	8.18	-18.74	-5.07	7.71
education = No College * R group	NYC	-6.27	7.51	-18.56	-6.26	6.02
education = No College * R group	Phoenix	3.47	1.52	0.98	3.47	5.96
education = No College * RH group	Miami	11.38	8.09	-1.80	11.72	24.71
education = No College * RH group	NYC	1.03	7.01	-10.34	1.21	12.34
education = No College * RH group	Phoenix	-3.98	1.44	-6.34	-3.98	-1.62
party = IND * P group	Miami	-0.43	11.37	-18.68	-0.32	18.36
party = IND * P group	NYC	0.39	10.71	-17.55	0.35	17.23
party = IND * P group	Phoenix	0.77	0.56	-0.15	0.77	1.69
party = REP * P group	Miami	0.06	6.74	-11.30	0.44	10.64
party = REP * P group	NYC	0.52	5.87	-9.26	0.63	9.99
party = REP * P group	Phoenix	0.14	0.30	-0.36	0.14	0.63
party = IND * PH group	Miami	1.55	11.60	-16.96	1.73	19.99
party = IND * PH group	NYC	0.32	11.14	-18.32	0.80	17.62
party = IND * PH group	Phoenix	1.28	0.64	0.23	1.28	2.32
party = REP * PH group	Miami	0.25	7.07	-10.93	0.14	12.14
party = REP * PH group	NYC	0.53	6.42	-10.38	0.72	10.64
party = REP * PH group	Phoenix	-0.22	0.31	-0.73	-0.22	0.28
party = IND * R group	Miami	0.34	15.84	-25.60	0.34	26.06
party = IND * R group	NYC	-0.46	11.12	-18.74	-0.28	17.84
party = IND * R group	Phoenix	1.16	0.56	0.24	1.16	2.08
party = REP * R group	Miami	0.37	7.72	-12.80	0.39	12.83
party = REP * R group	NYC	0.22	5.77	-9.16	0.22	9.38
party = REP * R group	Phoenix	0.09	0.30	-0.40	0.09	0.58
party = IND * RH group	Miami	1.37	11.74	-18.91	1.83	19.39
party = IND * RH group	NYC	-0.40	11.26	-19.48	0.01	16.58
party = IND * RH group	Phoenix	-0.01	0.55	-0.91	-0.01	0.89
party = REP * RH group	Miami	0.48	6.85	-10.09	0.31	11.85
party = REP * RH group	NYC	0.24	6.44	-10.47	0.29	10.75
party = REP * RH group	Phoenix	0.25	0.30	-0.24	0.25	0.74
minority * P group	Miami	-0.37	6.85	-11.30	-0.36	10.66
minority * P group	NYC	0.21	5.38	-8.83	0.18	8.88
minority * P group	Phoenix	0.25	0.44	-0.47	0.25	0.97
minority * PH group	Miami	-0.24	7.20	-12.10	-0.53	11.81
minority * PH group	NYC	-0.72	5.64	-10.23	-0.75	8.22
minority * PH group	Phoenix	-0.11	0.44	-0.82	-0.11	0.61
minority * R group	Miami	0.27	7.98	-12.95	0.22	12.88
minority * R group	NYC	-0.06	5.78	-9.32	-0.04	9.64
minority * R group	Phoenix	0.05	0.43	-0.66	0.05	0.75
minority * RH group	Miami	-0.19	6.82	-11.80	-0.06	10.74
minority * RH group	NYC	-0.47	5.77	-9.91	-0.48	9.53
minority * RH group	Phoenix	0.33	0.41	-0.34	0.33	1.00
homeowner * P group	Miami	-1.92	4.74	-9.85	-1.95	5.77
homeowner * P group	NYC	0.25	3.89	-5.93	0.26	6.68

homeowner * P group	Phoenix	0.83	0.43	0.13	0.83	1.53
homeowner * PH group	Miami	-1.08	5.12	-9.44	-1.08	7.32
homeowner * PH group	NYC	-0.60	4.13	-7.30	-0.63	6.31
homeowner * PH group	Phoenix	0.51	0.43	-0.21	0.51	1.22
homeowner * R group	Miami	-0.26	5.27	-8.67	-0.54	8.53
homeowner * R group	NYC	-0.08	4.08	-6.90	-0.09	7.02
homeowner * R group	Phoenix	0.54	0.42	-0.15	0.54	1.23
homeowner * RH group	Miami	-2.03	4.77	-9.99	-2.07	5.44
homeowner * RH group	NYC	0.88	4.22	-5.92	0.65	7.86
homeowner * RH group	Phoenix	0.12	0.41	-0.56	0.12	0.81
minority * Fraction same race * C group	Miami	0.43	0.10	0.26	0.44	0.60
minority * Fraction same race * C group	NYC	0.43	0.12	0.23	0.43	0.63
minority * Fraction same race * C group	Phoenix	-0.28	0.27	-0.73	-0.28	0.17
minority * Fraction same race * P group	Miami	0.38	0.11	0.21	0.38	0.56
minority * Fraction same race * P group	NYC	0.32	0.14	0.10	0.31	0.56
minority * Fraction same race * P group	Phoenix	0.42	0.24	0.04	0.42	0.81
minority * Fraction same race * PH group	Miami	-0.10	0.09	-0.25	-0.10	0.06
minority * Fraction same race * PH group	NYC	0.24	0.11	0.06	0.24	0.42
minority * Fraction same race * PH group	Phoenix	0.33	0.13	0.12	0.33	0.55
minority * Fraction same race * R group	Miami	0.16	0.12	-0.05	0.16	0.36
minority * Fraction same race * R group	NYC	0.39	0.17	0.11	0.38	0.67
minority * Fraction same race * R group	Phoenix	0.69	0.13	0.47	0.69	0.91
minority * Fraction same race * RH group	Miami	0.17	0.09	0.02	0.16	0.32
minority * Fraction same race * RH group	NYC	1.30	0.17	1.02	1.29	1.58
minority * Fraction same race * RH group	Phoenix	0.02	0.14	-0.21	0.02	0.25
party = IND * C group * Fraction same party	Miami	-0.21	0.24	-0.58	-0.21	0.17
party = IND * C group * Fraction same party	NYC	0.00	0.25	-0.41	0.00	0.41
party = IND * C group * Fraction same party	Phoenix	0.37	0.18	0.07	0.37	0.68
party = REP * C group * Fraction same party	Miami	-0.38	0.16	-0.63	-0.39	-0.11
party = REP * C group * Fraction same party	NYC	0.20	0.13	-0.02	0.20	0.42
party = REP * C group * Fraction same party	Phoenix	0.00	0.10	-0.17	0.00	0.17
party = IND * P group * Fraction same party	Miami	-0.61	0.27	-1.04	-0.61	-0.16
party = IND * P group * Fraction same party	NYC	-0.34	0.54	-1.24	-0.36	0.54
party = IND * P group * Fraction same party	Phoenix	0.00	0.18	-0.29	0.00	0.29
party = REP * P group * Fraction same party	Miami	-0.09	0.15	-0.34	-0.09	0.15
party = REP * P group * Fraction same party	NYC	-0.34	0.17	-0.61	-0.33	-0.08
party = REP * P group * Fraction same party	Phoenix	0.03	0.11	-0.14	0.03	0.21
party = IND * PH group * Fraction same party	Miami	-0.19	0.35	-0.75	-0.19	0.39
party = IND * PH group * Fraction same party	NYC	0.70	0.33	0.16	0.70	1.26
party = IND * PH group * Fraction same party	Phoenix	-0.16	0.30	-0.65	-0.16	0.33
party = REP * PH group * Fraction same party	Miami	-0.88	0.17	-1.17	-0.88	-0.61
party = REP * PH group * Fraction same party	NYC	-0.36	0.23	-0.72	-0.36	0.01
party = REP * PH group * Fraction same party	Phoenix	-0.33	0.10	-0.50	-0.33	-0.16
party = IND * R group * Fraction same party	Miami	0.21	0.80	-1.08	0.24	1.55
party = IND * R group * Fraction same party	NYC	-0.28	0.39	-0.95	-0.27	0.33
party = IND * R group * Fraction same party	Phoenix	0.40	0.25	-0.02	0.40	0.82
party = REP * R group * Fraction same party	Miami	-0.13	0.16	-0.39	-0.13	0.12
party = REP * R group * Fraction same party	NYC	-0.08	0.15	-0.35	-0.07	0.17

party = REP * R group * Fraction same party	Phoenix	0.22	0.10	0.07	0.22	0.38
party = IND * RH group * Fraction same party	Miami	-0.01	0.29	-0.49	-0.01	0.46
party = IND * RH group * Fraction same party	NYC	-0.21	0.21	-0.55	-0.22	0.14
party = IND * RH group * Fraction same party	Phoenix	-0.73	0.16	-0.99	-0.73	-0.47
party = REP * RH group * Fraction same party	Miami	-0.49	0.15	-0.75	-0.49	-0.23
party = REP * RH group * Fraction same party	NYC	-0.13	0.21	-0.47	-0.13	0.20
party = REP * RH group * Fraction same party	Phoenix	-0.32	0.09	-0.46	-0.32	-0.18
homeowner * C group * Fraction same ownership	Miami	0.81	0.21	0.46	0.81	1.16
homeowner * C group * Fraction same ownership	NYC	0.67	0.16	0.40	0.67	0.92
homeowner * C group * Fraction same ownership	Phoenix	0.38	0.16	0.12	0.38	0.64
homeowner * P group * Fraction same ownership	Miami	-0.38	0.17	-0.65	-0.37	-0.12
homeowner * P group * Fraction same ownership	NYC	0.46	0.16	0.20	0.46	0.72
homeowner * P group * Fraction same ownership	Phoenix	-0.96	0.17	-1.24	-0.96	-0.67
homeowner * PH group * Fraction same ownership	Miami	0.38	0.28	-0.06	0.38	0.84
homeowner * PH group * Fraction same ownership	NYC	0.32	0.15	0.07	0.32	0.56
homeowner * PH group * Fraction same ownership	Phoenix	-0.13	0.15	-0.37	-0.13	0.11
homeowner * R group * Fraction same ownership	Miami	-1.00	0.79	-2.30	-0.98	0.27
homeowner * R group * Fraction same ownership	NYC	0.13	0.15	-0.13	0.14	0.37
homeowner * R group * Fraction same ownership	Phoenix	-0.47	0.17	-0.74	-0.47	-0.20
homeowner * RH group * Fraction same ownership	Miami	0.28	0.26	-0.13	0.29	0.69
homeowner * RH group * Fraction same ownership	NYC	0.10	0.13	-0.12	0.10	0.32
homeowner * RH group * Fraction same ownership	Phoenix	0.54	0.18	0.25	0.54	0.83
education = No College * C group * Fraction same educ	Miami	0.81	0.31	0.30	0.81	1.31
education = No College * C group * Fraction same educ	NYC	1.48	0.21	1.13	1.49	1.82
education = No College * C group * Fraction same educ	Phoenix	1.03	0.27	0.59	1.03	1.47
education = No College * P group * Fraction same educ	Miami	0.24	0.35	-0.34	0.24	0.81
education = No College * P group * Fraction same educ	NYC	1.23	0.35	0.66	1.22	1.78
education = No College * P group * Fraction same educ	Phoenix	1.74	0.25	1.32	1.74	2.16
education = No College * PH group * Fraction same educ	Miami	0.03	0.34	-0.54	0.01	0.60
education = No College * PH group * Fraction same educ	NYC	2.77	0.42	2.07	2.79	3.42
education = No College * PH group * Fraction same educ	Phoenix	1.18	0.29	0.70	1.18	1.65
education = No College * R group * Fraction same educ	Miami	2.02	0.35	1.44	2.03	2.56
education = No College * R group * Fraction same educ	NYC	-0.53	0.29	-1.01	-0.54	-0.07
education = No College * R group * Fraction same educ	Phoenix	0.36	0.23	-0.02	0.36	0.73
education = No College * RH group * Fraction same educ	Miami	-0.49	0.36	-1.09	-0.49	0.10
education = No College * RH group * Fraction same educ	NYC	0.51	0.24	0.13	0.50	0.92
education = No College * RH group * Fraction same educ	Phoenix	1.53	0.19	1.22	1.53	1.83
education = No College * C group * income	Miami	0.26	0.10	0.08	0.26	0.43
education = No College * C group * income	NYC	-0.02	0.09	-0.16	-0.02	0.12
education = No College * C group * income	Phoenix	0.07	0.10	-0.08	0.07	0.23
education = No College * P group * income	Miami	0.00	0.12	-0.22	0.00	0.19
education = No College * P group * income	NYC	0.64	0.14	0.41	0.64	0.87
education = No College * P group * income	Phoenix	0.20	0.09	0.06	0.20	0.34
education = No College * PH group * income	Miami	-0.22	0.12	-0.41	-0.21	-0.01
education = No College * PH group * income	NYC	-0.05	0.17	-0.32	-0.05	0.23
education = No College * PH group * income	Phoenix	-0.76	0.10	-0.93	-0.76	-0.59
education = No College * R group * income	Miami	0.66	0.13	0.45	0.66	0.87
education = No College * R group * income	NYC	0.63	0.12	0.42	0.62	0.84

education = No College * R group * income	Phoenix	-0.24	0.08	-0.37	-0.24	-0.11
education = No College * RH group * income	Miami	-0.73	0.13	-0.94	-0.74	-0.52
education = No College * RH group * income	NYC	-0.08	0.10	-0.26	-0.08	0.09
education = No College * RH group * income	Phoenix	0.36	0.07	0.24	0.36	0.47
alpha	Miami	1.12	0.02	1.09	1.12	1.15
alpha	NYC	1.39	0.02	1.36	1.39	1.42
alpha	Phoenix	1.34	0.01	1.33	1.34	1.36
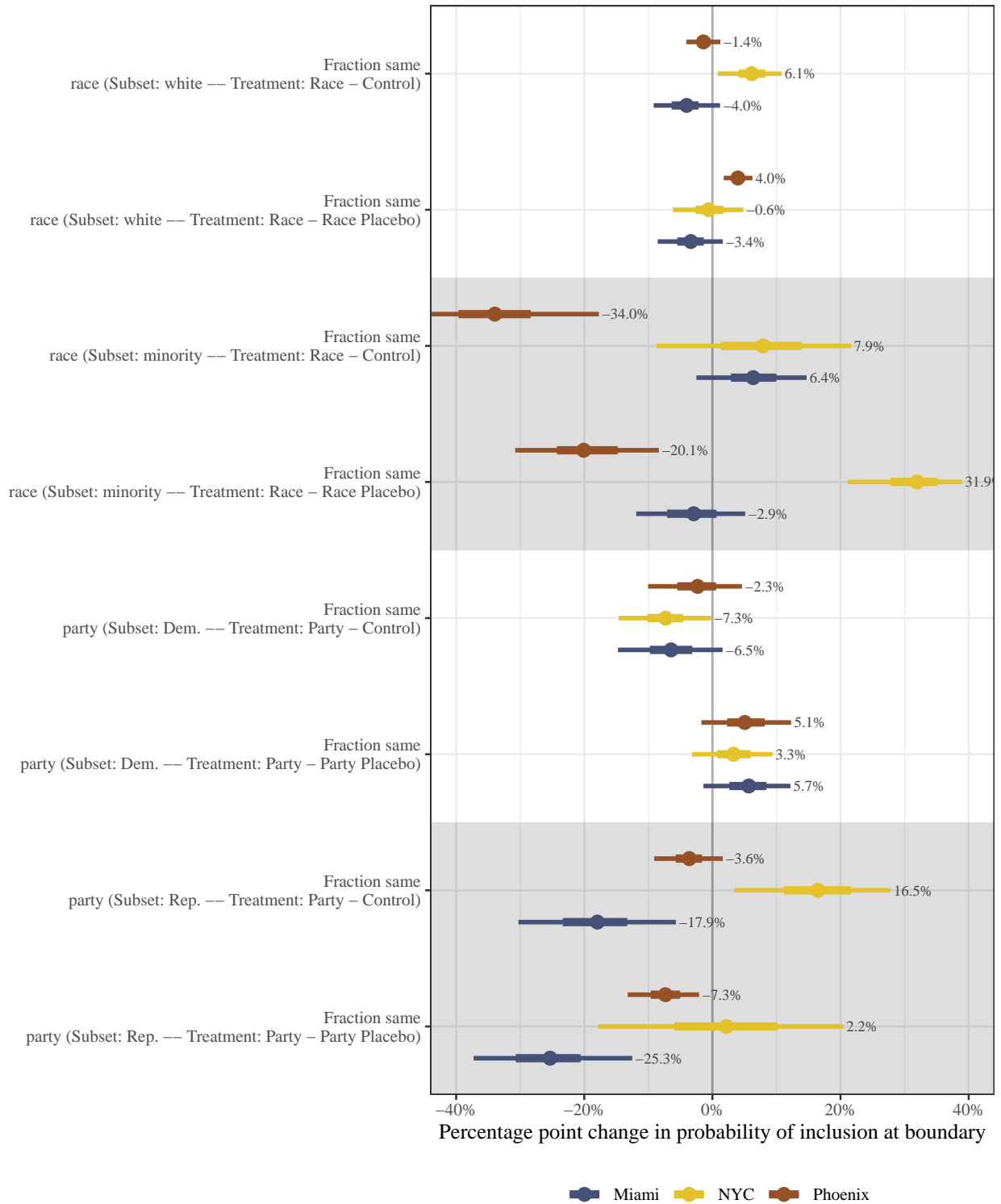
Figure 2: Change in racial and partisan homophily coefficients between treatment groups, scaled to show the percentage pointchange in probability of a block's inclusion for a baseline probability of 50%. Plotted are 95% and 50% credible intervals, with posterior medians displayed to the right of each interval.
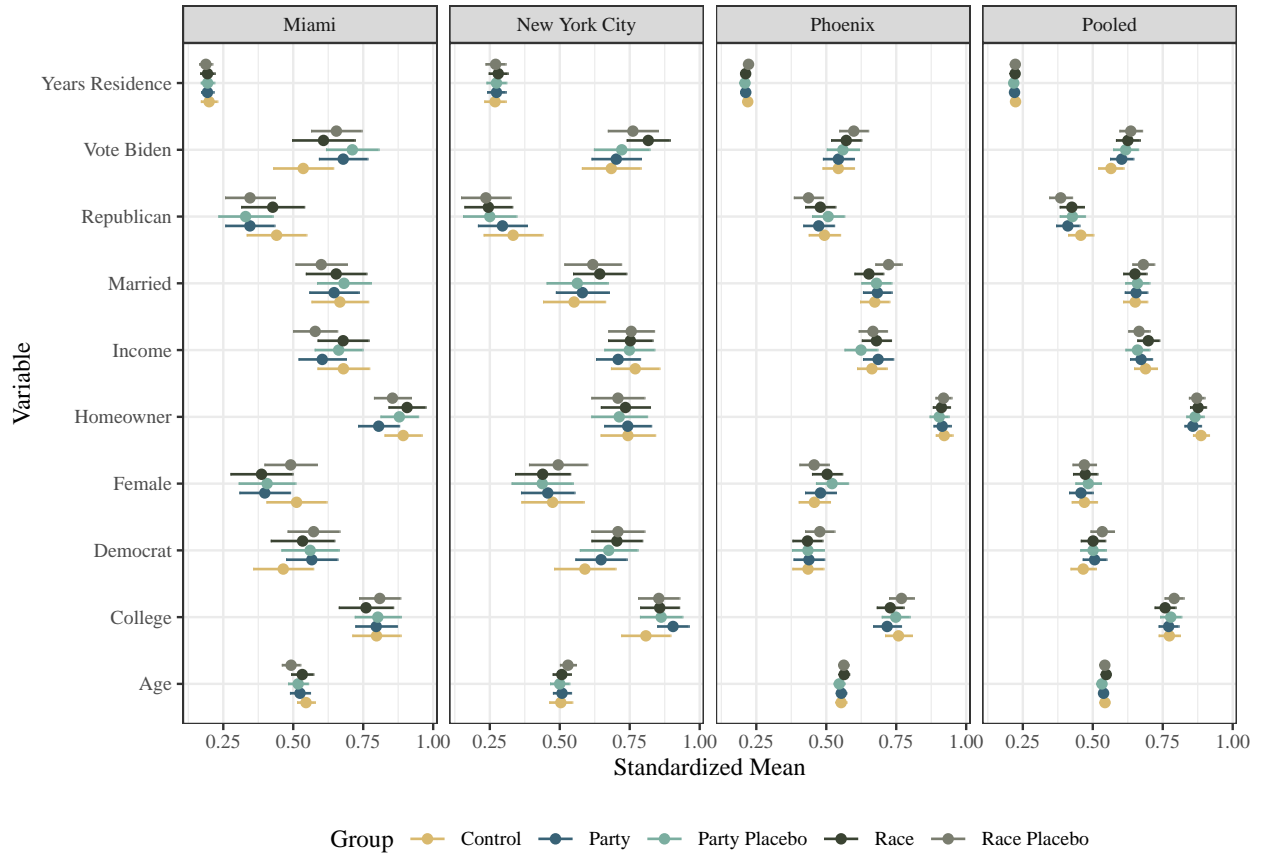
Figure 3: Average levels of pre-treatment variables by treatment group. Variables are standardized to be between 0 and 1.

Table 1: Treatment Effect on Usable Neighborhoods

|	*Dependent variable:*		
	Usable Neighborhood		
	Miami	New York City	Phoenix
Party Condition	0.034	0.081	0.035
	(0.052)	(0.057)	(0.036)
Party Placebo Condition	0.066	−0.037	−0.004
	(0.055)	(0.058)	(0.037)
Race Condition	−0.004	0.093	0.050
	(0.056)	(0.058)	(0.037)
Race Placebo Condition	0.081	0.026	0.025
	(0.054)	(0.058)	(0.036)
Age	−0.005***	−0.001	−0.004***
	(0.002)	(0.002)	(0.001)
College	0.021	0.053	0.045*
	(0.043)	(0.050)	(0.027)
Democrat	0.119*	0.006	0.053
	(0.064)	(0.077)	(0.047)
Female	0.011	0.007	0.011
	(0.035)	(0.037)	(0.024)
Homeowner	0.017	−0.080*	0.030
	(0.051)	(0.048)	(0.038)
Income	0.0004	0.002***	0.0004
	(0.0004)	(0.0004)	(0.0003)
Married	0.047	−0.063	0.006
	(0.039)	(0.043)	(0.027)
Republican	0.142**	−0.010	0.021
Vote Biden	0.110*	0.078	0.098**
	(0.062)	(0.063)	(0.039)
Years Residence	0.002	0.003	0.002
	(0.002)	(0.002)	(0.001)
Constant	0.260**	0.157	0.401***
	(0.114)	(0.134)	(0.083)
Observations	1,468	1,193	4,028
R^2	0.007	0.005	0.0004
Adjusted R^2	0.005	0.001	−0.001
Residual Std. Error	0.467 (df = 1463)	0.485 (df = 1188)	0.490 (df = 4023)
F Statistic	2.735** (df = 4; 1463)	1.366 (df = 4; 1188)	0.430 (df = 4; 4023)

Note: *p<0.05; **p<0.01
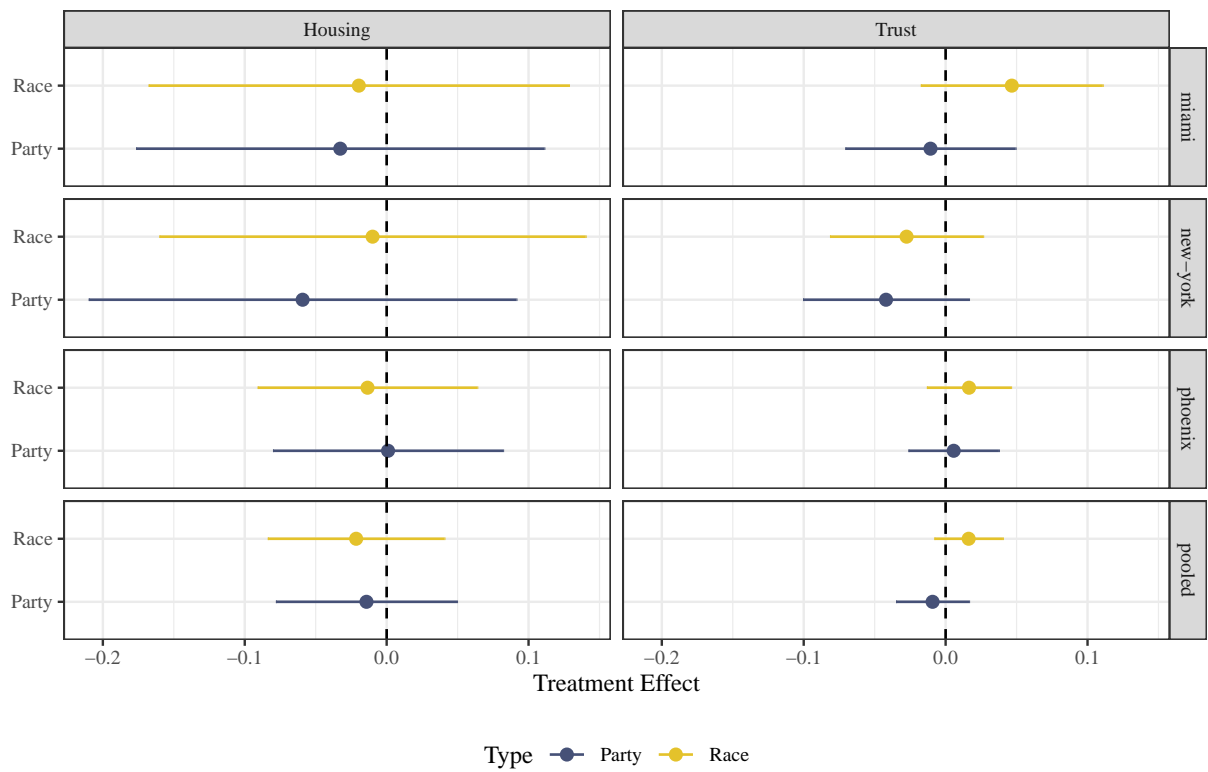
Figure 4: Treatment effects on housing and trust survey outcomes.

2 Using drawn maps to measure contextual variables

Here, we demonstrate how researchers can use subjective neighborhoods as an improved measure of contextual variables. As described in the manuscript, researchers may include our survey application in their survey, collect drawn maps, and then calculate any geographic variables they want to include in their analysis using the map a given respondent drew. For example, if a researcher cares about how local exposure to people of different races or political orientations influences political attitudes or behavior, they can calculate racial and partisan composition within each subjective neighborhood and include those variables in a regression predicting their outcomes of interest. To illustrate this, we model levels of neighborhood trust – survey respondents were asked three questions about how much they trust their neighbors, each with a 10 point scale, and we took the average of these questions as a neighor trust scale – and self-reported turnout in the 2020 presidential election as a function of the proportion white, proportion college educated, and proportion Democrat in each respondent's drawn neighborhood. We run OLS models on the control group in the first survey.

Table 3 reports the results. We find that trust in one's neighbors is generally increasing as the proportion of college educated residents in one's subjective neighborhood increases. We also find that Republicans report lower trust in their neighbors as the proportion of Democrats in their subjective neighborhood increases. We do not observe statistically significant predictors of self-reported turnout in this sample.

Table 3: Neighborhood trust by subjective neighborhood race and partisan composition

	Dependent variable:
	Trust
	(1)
Prop. White	0.249
	(0.290)
White	0.127
	(0.191)
Prop. Dem	0.108
	(0.286)
Independent	0.476
	(0.318)
Republican	0.367**
	(0.154)
Prop. College	0.465**
	(0.191)
College	−0.073
	(0.065)
Male	−0.034
	(0.054)
Age	0.010***
	(0.002)
Married	0.023
	(0.060)
Children in Home	0.076
	(0.063)
Homeowner	−0.042
	(0.090)
Prop. White * White	−0.089
	(0.301)
Prop. Democrat * Independent	−1.226
	(0.784)
Prop. Democrat * Republican	−1.032**
	(0.414)
Constant	1.241***
	(0.259)
Observations	437
R^2	0.121
Adjusted R^2	0.090
Residual Std. Error	0.545 (df = 421)
F Statistic	3.869*** (df = 15; 421)

Note: *p<0.1; **p<0.05; ***p<0.01

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