

ONLINE APPENDIX

Table B. The Effects of "Design-Induced" Talk on the Predicted Probability of Voting

Frequency of Neighbor Talk	Predicted Probability of Voting	Difference with Each Increase in Frequency of Talk
0.3	0.08	0
0.35	0.13	0.05
0.4	0.20	0.07
0.45	0.29	0.09
0.5	0.40*	0.11
0.55	0.53*	0.13
0.6	0.65*	0.12
0.65	0.75*	0.10
0.7	0.84*	0.09
0.75	0.89*	0.05
0.8	0.93*	0.04
0.85	0.96*	0.03
0.90	0.97*	0.01
Average Effect	0.59	0.07

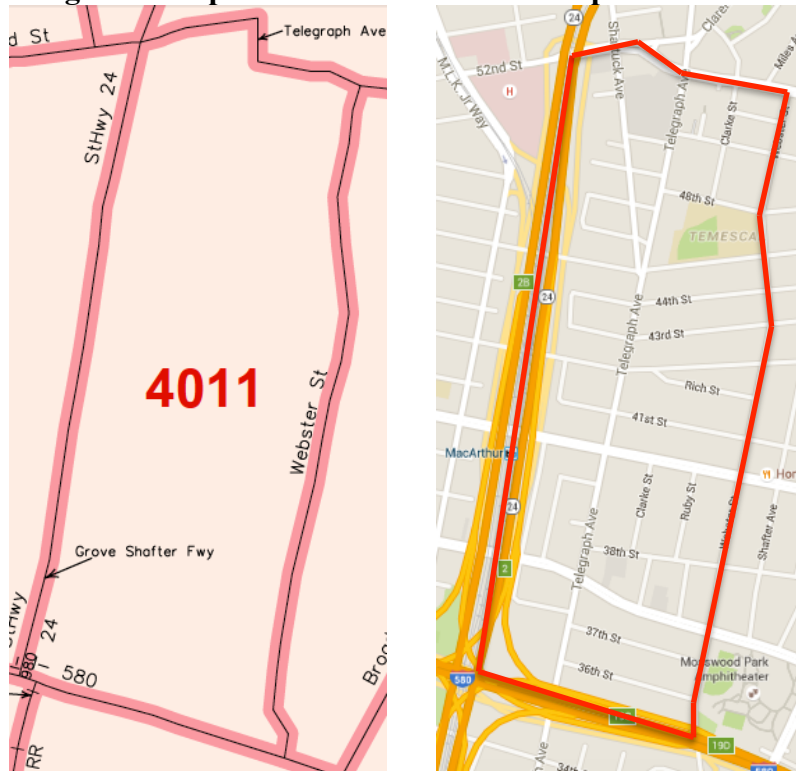
Note: These predicted probabilities are calculated by holding all control variables at their means. The values of Predicted Neighbor Talk are set from 0.30 to 0.90 at intervals of 0.05, because this was the range of predicted neighbor talk that exist in data. The interval of 0.05 was selected to coordinate with the predicted effect of Design on Talk calculated in the first-stage analysis.

Detailed Description of the “Neighborhood Design Characteristics” Variable Coding Procedure

Step 1: Matching Census Tract Map to Google Map

I acquired the census tract map for each census tract that was randomly selected from the SCBS and that was to be included in my study. I acquired the census tract maps from the U.S. Census website. I then located each census tract map in Google Maps. As the census tract map indicates the names of the roads, highways, interstates, rivers, etc. that create each census tract’s boundaries, locating each tract in Google Maps was fairly straightforward. Image 1 compares the census tract map (located on the left) with its placement in Google Maps (located on the right). The red lines on the Google Map image identify the boundaries of the census tract map.

Image 1. Comparison of Census Tract Map to Match in Google Maps



Note: Comparison of the Census Tract map to the location of the Census tract in Google Maps. The map on the left is the Census Tract map; the map on the right is Google map.

Step 2: Random Selection of Four Points in Each Census Tract

As I could not code the architectural/design features of every possible home, street, block, etc. found in each census tract, I randomly selected four geographic points in each census tract at which I would code the design features. The random selection of each point is completed as follows:

- i. Two numbers are randomly assigned from a scale of 0-1 to create an ordered pair or coordinates on a graph. The first number refers to the horizontal position on the x-axis. The second number refers to the vertical position on the y-axis
- ii. An XY axes is laid on top of each census tract, where the x-axis runs across the base of the tract and the y-axis runs vertically from the base to the top of the tract (See Image 2).
- iii. Using the randomly assigned coordinates, the point is plotted using the XY axes and a random location is selected for coding (See Image 3).

Image 2. Census Tract in Google Maps with XY Axes



Note: XY Axes is used to help locate the randomly coordinates.

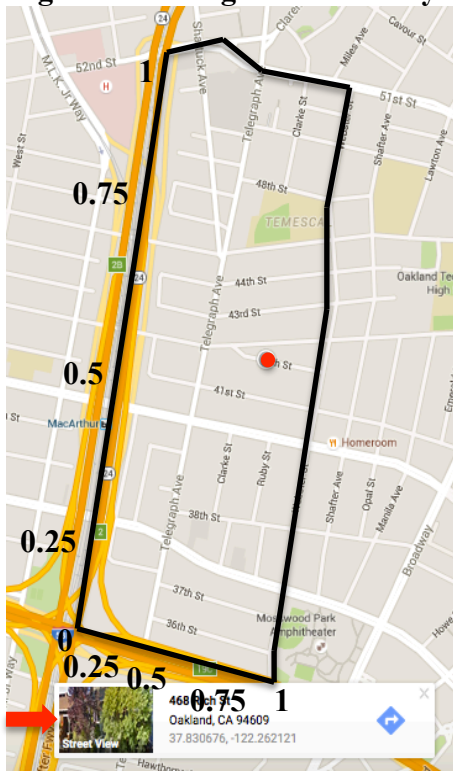
Image 2 shows how the XY axes are laid on top of each census tract. The XY axes are indicated with the two red lines (one along the horizontal base of the tract and the second along the vertical

edge of the tract). The black lines continue to indicate the boundaries of the census tract. Notice that both the X-axis and Y-axis range from 0-1; this is because the two randomly selected numbers used to create the coordinates for each point are drawn from a range of 0-1.

Step 3: Locating Randomly Selected Points in Google Maps

Once the XY axes is placed on the census tract in Google maps, the randomly selected point can be located. Image 3 shows the selection of one randomly selected point with the hypothetical coordinates of (0.75, 0.55).

Image 3. Locating the Randomly Selected Points



Note: The red point indicates the location of the randomly selected point. The red arrow indicates where the Street View option appears to the user.

The randomly selected point is indicated with the red point. Also note, that once the randomly selected point is located, Google Maps provides the option to enter “Street View.” In Image 3, the red arrow indicates where the “Street View” option is made available.

Step 4: Street View and Coding of Architectural Features

Once the randomly selected point was located and after the “Street View” option was offered, I would enter the “street view” feature in Google Maps (See Image 4).

Image 4. 360 degree Street View in Google Maps of Randomly Selected point



Note: This is the 360 degrees street view of the randomly selected geographic point. The first image, in this series of 4 photos, is where I was taken when I selected the “Street View” image in the previous step. The following three images show the street from every angle.

Upon entering the “Street View” option, I am taken to a larger street view, which then allows me the ability to virtually walk the randomly selected street. I can now spin the Google

camera 360 degrees, allowing me the ability to observe the architectural features of the randomly selected point and record my observations.

Image 4 shows the images available at the randomly selected point as the camera is turned 360 degrees. After turning the camera 360 degrees, I can also virtually walk the street, moving up and down, which I would do. I would move from one end of a street until I hit an intersection, dead-end, turn, cul-de-sac, etc. taking note of the design features as I moved down the street. If there were minor roads that intersected with the road I was sampling, I would look down to view the features of it as well. This allows me to get a sense of the features of the street as a whole. Image 5 shows what was at the end of the randomly selected street.

Image 5. Virtual Walk Down the Randomly Selected Point



Note: At this point, I looked down the intersecting street to look for other neighborhood features (e.g. Cul-de-sacs, Businesses, Multifamily Housing, etc.) that may have not been visible at the randomly selected geographic point.

Step 5: Coding Design Features at Each Randomly Selected Point

After turning the camera 360 degrees and taking a virtual walk down the street, I then coded specific design features that are believed to either increase or decrease neighbor-to-neighbor contact. These are the design features that I coded at each randomly selected point; they were coded either 0—no the feature was not present—or a 1—yeas the feature was present:

- i. **Sidewalks:** Coded a 1, a sidewalk needed to be present on at least one side of the road.

- ii. **Fenced Front Yard:** Coded a 1, some type of fencing that created a barrier between the front yard of a home and the street needed to be in place, without obstructing the view to the front door. And, this feature needed to be present on at least 3 out of 10 houses on the randomly selected street. The fencing could be made from chain link, wood, metal, cinder block, or foliage-low hedges that created a barrier.
- iii. **Attached Garages:** Coded a 1, at least half of the homes needed to have a garage that was attached to the home, was visible in the front, and had a door.
- iv. **Hill:** Coded a 1, if the randomly selected street had an incline.
- v. **Porch:** Coded a 1, if there was some type of structural space that extended off the front of the home, was large enough—in regards to depth—to fit at least two chairs, and was elevated above street level. And this feature needed to be present on at least 3 out of 10 houses on the randomly selected street.
- vi. **Cul-de-sac:** Coded a 1, if the randomly selected street ended in a cul-de-sac, or one of the intersecting roads extending off of the randomly selected street ended in a cul-de-sac, or if the randomly selected street had a dead end, or if the randomly selected street ended in a 90 degree turn and became a second street.
- vii. **Tree Lined Streets:** Coded a 1, if trees were growing between the street and sidewalk, creating a barrier between the street and sidewalk on at least one side of the street.
- viii. **Private Front Entrance:** Coded a 1, if the front door of a home was not visible from the street, or in the case of multifamily housing, if the individual residents' front doors were not visible from the street (this happened when residents all entered through a shared door, then entered their individual residence and that front door was not visible from the street).

After coding the presence or absence of the above listed features, I would then record and repeat.

Recall that for each census tract, four geographic points were randomly selected; the design features were coded at each of those four points and then a census tract average score for each design feature was calculated. This means that each census tract has an average sidewalk, fenced front yard, attached garage, hill, porch, cul-de-sac, tree-lined street, and private front entrance score. These “design feature average scores” are then recorded in the final database.

Step 6. Calculating the Overall “Neighborhood Design Score”

The final step in measure the “Neighborhood Design” variable was to calculate an overall neighborhood design characteristics score. Up to this point in the process, I have measured the average occurrence of several individual features, but what I need is an overarching measure of how “interactive” a neighborhood’s design is. In other words, I need to know whether overall the features in a neighborhood are thought to increase or decrease neighbor-to-neighbor contact.

In order to measure this “overall neighborhood design score,” I did the following. I first generated an “interactive feature score” for each census tract. As the presence of sidewalks, tree-lined streets, porches, and fenced front yards in a neighborhood are believed to increase unplanned interactions between neighbors, I added together the average feature score for each of these design characteristics, giving each census tract an “interactive features score.” Next, I generated an “isolating feature score” for each census tract. As the presence of attached garages, cul-de-sacs, hills, and private front entrances are believed to inhibit unplanned interactions between neighbors, I added the average feature score for each of these design characteristics, giving each census tract an “isolating features score.” Finally, I subtracted the “isolating features score” for each census tract from the “interactive features score.” I then scaled the variable from 0-1, where a 0 indicates that a neighborhood has only isolating characteristics—features that are thought to reduce neighbor contact—and 1 indicates that a neighborhood has only interactive characteristics—features that are thought to increase neighbor contact. This variable is summarized in Table 1.