Owning Safety:
An Investigation of Crime and Homeownership in Fifty-five Portland Neighborhoods

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"Based on birth and death rates, migration trends and past growth, the Portland Metropolitan area could have a 2060 population of 3.2 million to 6.2 million, according to the Metro study. The most likely outcome is 3.85 million, plus or minus 300,000, Metro statistician Dennis Yee said." (Mortenson) Although 2060 is over 50 years from now, the prediction of over one million people added to Portland's population is staggering and serious considerations need to be taken regarding housing solutions that can accommodate such a large influx of people. To help address this problem, the majority of the program for the redevelopment of the Conway Trucking property in Northwest Portland will be devoted to moderate density housing. The overall goal of the project will be to establish an architectural language that will be flexible enough to bend to the changing spatial needs of families as they grow and shrink over time. This strategy will encourage the occupants of the housing units to stay in the neighborhood and adjust the space around them instead of leaving the area to find another dwelling that is more fitting for their spatial needs.

In every city, there are communities that are considered "good neighborhoods" and "bad neighborhoods". They are usually evaluated with respect to the rest of the city as a whole. For example, many of the areas that residents of Portland consider to be seedy would be regarded as above average by Detroit's standards. There are several factors that contribute to a neighborhood's quality. A short list of these factors includes the amount of crime that takes place within its boundaries, the aesthetics of its architecture and infrastructure, the efficiency of transportation modes, and the functionality of its building uses. According to psychologist Abraham Maslow's hierarchy of needs, safety is the second most primitive need that human's require (only physiological needs come first). (Maslow) The amount of crime that happens in a given neighborhood is directly related to how safe its residents are. The other factors that contribute to a neighborhood's quality fall into the self-actualization category on this hierarchical scale, and are much less important.

Although there are myriad factors that contribute to the amount of crime that takes place in a given neighborhood, the focus of this paper will be on an investigation of the relationship between homeownership and crime in fifty-five of Portland's neighborhoods. The goal is to study there is a link between the two factors and if there exists a ratio of owners to renters in a neighborhood that results in a lower crime rate. If such a ratio exists, it will be a driving factor in the design of the housing communities in the aforementioned development of the Conway Trucking property.

The initial assumption is that with a higher percentage of homeowners in a neighborhood, there will be a decrease in the amount of crime that is reported. This assumption is made based on the idea that residents who own their homes have more invested in the community, literally and figuratively, than residents who are merely renting. This investment that homeowners have could promote a civic involvement and responsibility to the neighborhood and a duty to keep "eyes on the street" in order to maintain a safe and prosperous community.

This study is a compilation and analysis of data provided by Portland Maps. (City of Portland) The following boundaries were implemented: The Columbia Slough to the North, Interstate-205 to the East, Tacoma Street to the South, and Forest Park to the West. Information about the fifty-five neighborhoods within these city limits was

obtained, including the population, acreage, percentage of homeowners, percentage of renters and crime data. The crime data is a compilation of all the reports in a given neighborhood during the previous twelve-month period. All other data is from the 2000 Census. The neighborhoods are listed in alphabetical order in Figure 1. Each neighborhood is assigned a number so that it can be easily located on the map of Portland in Figure 2.

1	Alameda
2	Arbor Lodge
3	Beaumont-Wilshire
4	Boise
5	Brentwood-Darlington
6	Brooklyn Action Corps
7	Buckman
8	Cathedral Park
9	Center
10	Concordia
11	Creston-Kenilworth
12	Cully
13	Downtown
14	East Columbia
15	East Moreland
16	Eliot
17	Foster-Powell
18	Goose Hollow
19	Grant Park
20	Hillside
21	Hollywood
22	Hosford-Abernethy
23	Humboldt
24	Irvington
25	Kenton
26	Kerns
27	King
28	Laurelhurst
29	Lloyd District
30	Madison South
31	Montavilla
32	Mt. Scott-Arleta
33	Mt. Tabor
34	Northwest District
35	Oldtown/Chinatown
36	Overlook
37	Pearl
38	Piedmont
39	Portsmouth
40	Reed
41	Richmond
42	Rose City Park
43	Roseway
44	Sabin
45	South Portland
46	South Tabor
47	St. Johns
48	Sullivan's Gulch
49	Sumner
50	Sunderland
51	Sunnyside
52	University Park
53	Vernon
54	Woodlawn
55	Woodstock

Figure 1: List of Portland Neighborhoods

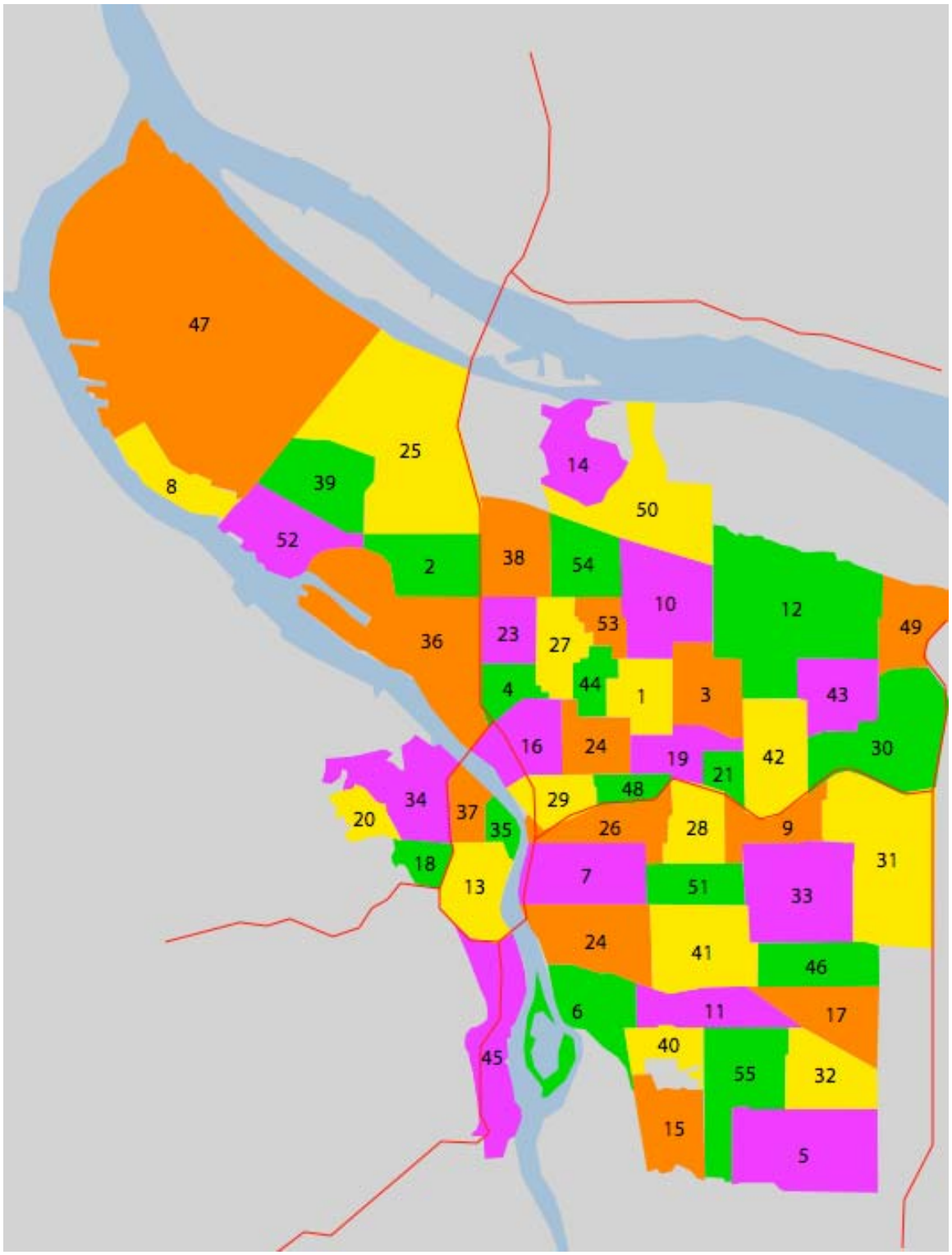

Figure 2: Map of Portland Neighborhoods

The crime data for each neighborhood was a count of reported crimes per 1/2 mile by 1/2 mile square area, which comes out to being 1/4 square mile. The data was provided as a numerical range (i.e. 100-300 crimes were reported in a particular 1/4 square mile area). To simplify the data collection, the average number within the range was used for each 1/4 mile of area. This resulted in a margin of error of about +/- 10%, but greatly simplified calculations so that more neighborhoods could be studied. The types of crimes reported included range in severity and are divided into three groups. Group One crimes include arson, assault, burglary, homicide, larceny, rape, robbery, theft from an automobile, and vehicle theft. Group Two crimes include drug laws, embezzlement, forgery/counterfeit, fraud, prostitution, sex crimes, simple assault, stolen property, vandalism, and weapons laws. Group Three crimes include curfew, disorderly conduct, DUI, gambling, kidnapping, liquor law, offense against family, runaway and trespass/threats/etc. Although there is a broad range in the severity of the crimes in these three groups, the average analysis of each neighborhood shows very little variation within the groups. For example, in an area where Group One type crimes reports increased substantially, the Group Two and Group Three type crimes increased proportionally. This also simplified the data analysis. Although the amount of curfew violations may not be as alarming to a neighborhood resident as the amount of homicides, the increases and decreases in the data for each area were close enough that for this study, all crimes are a given the same weight.

To provide an extra dimension of the crime data analysis, each neighborhood is evaluated with respect to both the size of its population and the size of its land area. For example, the neighborhood Richmond has had 440 crimes reported within its limits during the previous twelve-month period. It has 11,320 residents that live in the neighborhood and its boundaries contain 814 acres of land area. Therefore, there were approximately 0.57 crimes per acre and 0.048 crimes per resident reported. Using both of these methods of evaluating the number of crimes reported diversifies the analysis and allows for closer comparison of neighborhoods that may have very different densities. Figure 3 shows a scatter plot of each of the neighborhoods comparing their respective amount of crimes reported per acre with their percentage of homeowners. Figure 4 shows a scatter plot of each of the neighborhoods comparing their respective amount of crimes reported per resident with their percentage of homeowners.

After applying a line of best fit to each of the previous graphs, we find a common trend in both of them. With respect to the fifty-five neighborhoods analyzed in this study, there is a substantial decrease in reported crime once the percentage of homeowners in a neighborhood increases above around fifteen to twenty percent. This trend is clearer in Figure 3 where reported crime is analyzed with respect to area. In Figure 4, where reported crime is analyzed with respect to population, there are several neighborhoods that do not align with the broader trend—most notably, Sumner and the Pearl district. We can speculate, but there are many factors that could be contributing to these anomalies. Once the percentage of homeowners in a given neighborhood increases above twenty percent, there is no noticeable difference in the amount of crimes reported per acre or per resident.

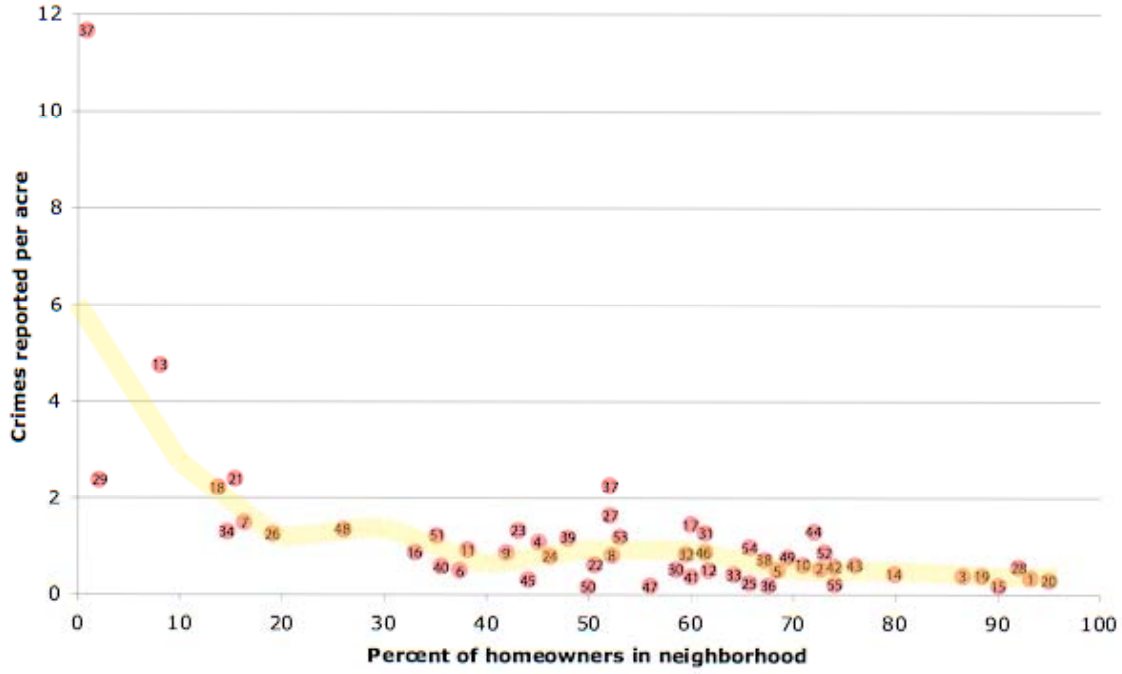

Figure 3: Crime per Acre vs. Homeownership

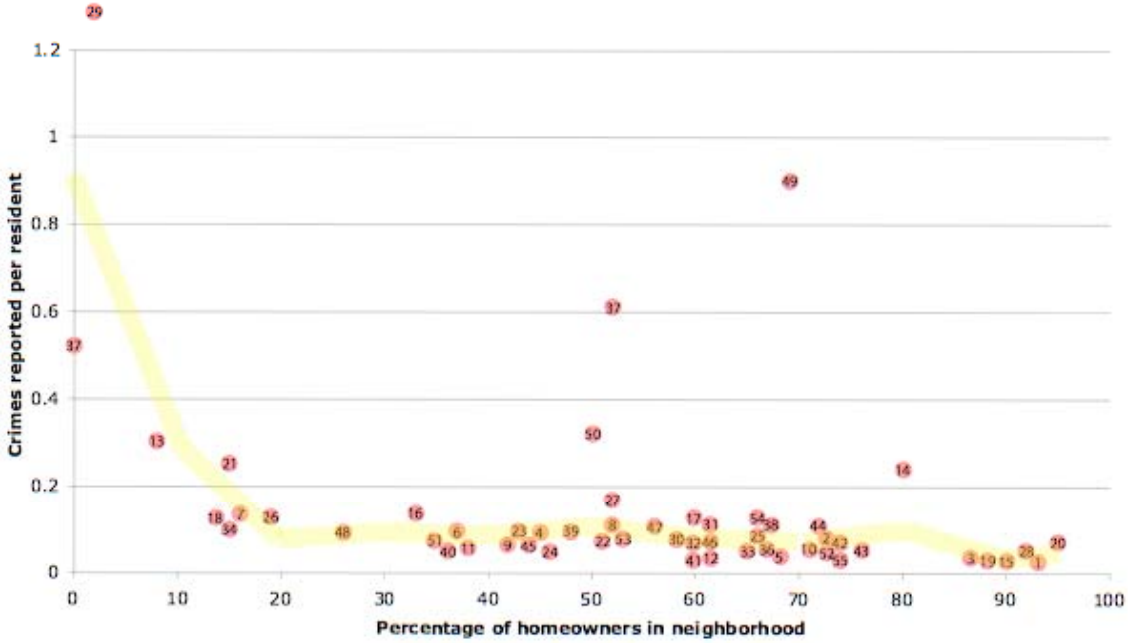

Figure 4: Crime per Capita vs. Homeownership

It is important to address that this is a multi-faceted topic with many, many factors affecting crime in any given neighborhood. It is an extremely intriguing and complex subject, and this paper only investigates one possible factor in the equation: The percentage of homeowners in each neighborhood. Although there is a basic trend showing a decrease in crime when the homeowner to renter ratio rises above 1:4 in the majority of the fifty-five neighborhoods involved in this study, this is by no means conclusive evidence that proves that this would be the case all of the time.

However, regarding the design of the housing communities on the Conway Trucking property, this study suggests that a ratio of homeowners to renters of at least 1:4 may result in a safer overall neighborhood and this information will be taken into consideration.

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