THE SUBURBAN THRESHOLD AND THE POTENTIAL LINK TO COMMUNITY SOCIABILITY

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1   ABSTRACT

The suburban form has been the subject of much criticism over the past decades. Designers point to its lack of aesthetics and monotony (Dunhan-Jones and Williamson, 2009; Tacheiva, 2010), while medical professionals point to its link to obesity (Strum and Cohen, 2004) and American's waning mental condition (Jackson and Tester, 2008). As designers we ask questions and examine the suburban context for clues that might shed light on why this form of development creates such negative consequences.

Existing research on community sociability focuses on "sense of community" (Brown and Croppe, 2001; Kim and Kaplan, 2004; Lund, 2002) as the key measure and explores the influences of the landscape context on social interactivity. Surveys of residents are the instrument of choice when investigating the potential relationship between a community's landscape and the reported sense of community. This paper looks at a separate measure, "knowing," to evaluate the level of community present in a neighborhood. Knowing, for the purposes of this study, is defined as the ability of one person to identify another.

This paper reports the results of a research project that was conducted in the Phoenix Metro area, exploring the "threshold's" influence on knowing within the suburban context. The condition of the threshold was calculated based on its transparency or level of visual access to the public from within the residence. A survey was conducted on two neighborhoods within the Phoenix Metro area with varying degrees of threshold transparency to determine the level of knowing present.

1.1   Keywords

suburbs, sociability, community, knowing

2   SUBURBAN CONTEXT

The suburbs, a form of development generally characterized by garage dominated homes and reliance on the automobile (Dunham-Jones and Williamson, 1995; Tachieva, 2010), is now the home to over 50% of Americans (Dunham-Jones and Williamson, 1995; Girling and Helphand, 1996, p.8). This form of development has been highly criticized by designers and medical professionals for its contribution to many ailments typically associated with the American lifestyle, such as "...obesity, hypertension, non-insulin-dependent diabetes, colon cancer, osteoarthritis, osteoporosis, and coronary heart disease" (Ewing and others, 2003). A growing body of research is being undertaken to study a potential relationship between the built environment and the decline in the American's health. In their study looking at this connection, Reid Ewing and others (2003), found an increased rate of obesity and hypertension amongst residents of sprawling communities and were able to draw a direct relationship between decreasing density and increasing Body Mass Index. Richard J.J. Jackson and June Tester (2008), suggest this link between the environment and human health, or "gene-environment interactions," extends to mental health and requires additional research which they believe warrants Psychiatry to assume a new role in environmental design.

The decline in sociability, the desire or capacity for social interaction, has been measured across the American population in McPherson, Smith-Lovin, and Brashears study on social networks (2006). Sociability is on the decline in America due to many of the factors, particularly acute in the declining size of social networks from a mean of 2.94 confidants in 1985 to 2.08 in 2004. This study also found 10% of the respondents surveyed in 1985 reported that they had no confidants whereas the 2004 results found nearly 25% without a single confidant. Neighborhoods are also less likely to be the source of confidants, a decrease of 3% over 20 years, marking a measurable decline in neighborhood sociability (McPherson, Smith-Lovin, Brashears, 2006). Reduced sociability is a cause for concern due to the link between social interaction and sense of well-being. Social engagement within a community induces "...positive psychological states, including a sense of purpose, belonging, and security, as well as recognition of self-worth" (Kawachi and Berman, 2001). Social ties are particularly important for the elderly as the loss of their social network over time can lead to depression. A second demographic, women, have greater psychological need for social ties (Kawachi and Berman, 2001). With clear links between social interaction and mental and physical health, it is imperative that environmental designers look for methods to encourage interaction within communities.

3   SUBURBAN ISOLATION

Neighborhood sociability is the "...aggregate to those aspects of local, place-based, social engagement..." (du Toit and others, 2007) or the combination of environmental factors that contribute to opportunities for social interaction. While it is true that people have varying needs for social interaction and the suburbs may well be social enough for many, the issue of loneliness is of growing concern for suburban dwellers, particularly among stay-at-home mothers and elderly women (Cooper-Marcus and& Sarkissian, 1986, p.186-188). Cooper-Marcus and Sarkissian note in their book, *Housing as if People Mattered*, "...suburban houses for sale have become increasingly 'private' over the past few decades – with floorplans changing from living rooms and large picture window at the front in the 1940's and 50's to living or family rooms at the back of the house facing onto a private patio or garden..." (Cooper-Marcus and Sarkissian, 1986, p 67).

A number of factors may have contributed to the changing social dynamics over the decades, arguably harming neighborhood based social interaction. Arnold and Lang suggest the increase in vehicular traffic along with the noise and pollution generated from the vehicles led to a fleeing of social interaction from the front porch to the interior of the home (Arnold and Lang, 2007). This movement to the interior of the home may also be the result of the advent of the air conditioner. Prior to central air being included in the FHA loan program in 1957, people congregated outdoors in the summertime to escape the trapped heat inside their homes (Gammage, Grady, 2003, p.19). Grady Gammage Jr. points to the invention of the air conditioner as the primary cause of Phoenix's decline in sociability (Gammage, Grady, 2003, p.36), an idea echoed by Girling and Helphand who add the popularity of the television and the automobile to the trio of social detractors (Girling and Helphand, 1996, p.26). It may also be that the movement of the garage to the front of the home led to a drastic reduction in the aesthetic of the front yard social context, thus reducing the desire to spend time in these spaces. The number of garages has risen dramatically, from one half of all households in the 1970's to approximately three quarters of all

households today (Friedman and Krawitz, 2005, p.154). This represents a dramatic decrease in the aesthetic of suburban street scenes over the past 40 years.

The decline in neighborhood sociability can be attributed to a number of other factors, many of which do not appear to have foundations in environmental design. American's embrace of communication technology has led to the simultaneous turning of attention inward, away from our immediate community, while turning outward, toward the national and international community (Rivlin, 1987). This phenomenon is likely more exaggerated today with the ubiquity of personal computers and our ability to communicate instantly and globally. Social networks and commerce have moved away from local contexts as have our workplaces and family structures (Rivlin, 1987), leaving the local context to act as mere storage of our existences. Hal Looney, Vice President of Shea Homes Arizona argues that the transient nature of American culture is the most critical factor in the reduction of neighborhood sociability. He believes that a family new to a neighborhood will find comfort in the home and wish to surround themselves with the family, shying away from the new community of strangers (H. Looney, personal communication, July 7, 2011). This notion is supported by the Systemic Model of urbanization impacts on human interaction as described by Richard Adams (1992). He states, "The more stable the neighborhood and the longer people live there, the more likely they will develop locally based social networks, be satisfied with their neighborhood…" (Adams, 1992). Other potential factors include "outmigration", "change in family structure" including divorced parents and children who spend time in two households, and the fact that the "…automobile has extended horizons for people beyond their immediate areas, providing a wider range for shopping, visiting, and recreation" (Rivlin, 1987). The question de-localization presents for design professionals is: do we embrace isolation and design for this new paradigm or do we design to reestablish localism and neighborhood sociability?

4   INTERACTION AND HEALTH

To better understand the potential environmental design has to positively impact neighborhood sociability, it is important to gain a foundational understanding of the psychological principles of social interaction. The most understood phenomenon of social psychology is "suggestion," the response to certain environmental factors which may encourage an interaction (Klineberg, 1940). Jan Gehl describes this phenomenon in his book *Cities for People* saying, "studies from all over the world illuminate the importance of life and activity as an urban attraction. People gather where things are happening and spontaneously seek the presence of other people" (Gehl, 2010, p.25). Whether a person responds to a suggestion is determined by two factors, categorized by Heider (1958) as either dispositional or situational. Dispositional responses are interactions attributed to a personality trait whereas situational responses are interactions attributed to an environmental condition (Heider, 1958 in Solomon, 1978).

This paper focuses on the ability of design to facilitate social interaction through interventions in the situation or environment. Particularly in context of community social behavior, homes and communities designed without visual access to activity may not contain the phenomenon of suggestion, or the lack of visual access to the social context of suburbia will negate the potential positive suggestions of engaging in social behavior

5   MITIGATING SOCIAL ISOLATION

This paper proposes a new framework for evaluating the potential link between the indoor use patterns and neighborhood sociability. The term Threshold, for the purposes of this study, is defined as the barrier that separates a household's interior spaces from the public exterior. This may be commonly referred to as the façade of the home; however this paper extends this barrier beyond the notion of a flat representation of the front elevation, understanding that the Threshold may at times also include portions of the side elevations and potentially rear elevations. This paper also qualifies the Threshold in terms of its Transparency, or the degree to which a homeowner has the ability to control access, both physically and visually. Transparencies include doors, windows, garage doors, and side gates. Combining these terms creates a new measure of a homes potential for providing social suggestion. Threshold Transparency is found by determining the percentage of time (recorded in decimal format) a family unit utilizes an indoor space adjacent to the Threshold and multiplying it by a Transparency factor related to the condition of window or door treatments. Specifically, a room with a transparency that faces a public space, which is usually covered by blinds or drapes, receives a multiple of 1 whereas a transparency that is usually uncovered receives a multiple of 4. A Likert scale employed in a research instrument, either through

observation or survey, describes this varying degree of transparency. This method allows researchers to describe the location of a family's indoor activity and the transparency of the room using a single comparable measurement.

6 METHOD FOR EVALUATING LINK

This paper explores a pilot study to explain the potential difference between a typical suburban home built in the 1990's with very little threshold transparency and a suburban home built in the mid-century with picture windows and a higher threshold transparency to determine the affects this environmental condition has on suburban sociability. To create an effective approach for evaluating the link between threshold transparency and sociability, this paper first reviewed previous literature for potential research method case studies. These case studies provided this paper with direction and narrowed down the methodologies to two methods with the highest likelihood of successfully demonstrating the existence of the hypothesized link. The two most promising methodologies reviewed were an observation method designed by Suminski, R. Petosa, E. Stevens (2006) and a survey method designed Du Toit and others (2007). Each of these methods was adjusted for the specific research intent of this paper and employed. Both methods provided insight into the functional differences in social quality of neighborhoods of varying threshold transparency; however, the survey method shows greater promise for further study of this issue going forward.

6.1 Threshold Transparency Method: Neighborhood Selection

In order to find a potential relationship between the suburban threshold and the level of social activity occurring in a neighborhood, this research determined that the general framework in which to study this phenomenon was to compare neighborhoods with varying threshold design conditions. This study was conducted in Maricopa County, the most populous county in the State of Arizona. Prior to selecting study neighborhoods, an analysis of potential variables was completed to determine the potential factors which may impact the social condition of the neighborhood. Demographic factors relating to sociability considered in this research were average age, racial make up, ethnicity, average income, and length of residency. As this research relied on US Census Block Group data for demographic information, average length of residency was not included in the neighborhood selection criteria; however, this factor is presumed to be critical in evaluating and comparing neighborhoods and is discussed further in the results analysis portion of this paper. To ensure the study neighborhoods selected were comparable in every aspect within the control of this research, it was determined that selecting a base line demographic character to guide the selection of neighborhoods would allow elimination of much of the study region. This included ensuring that the study neighborhoods were relatively similar in demographic conditions, eliminating any differences in sociability that may differ between racial, ethnic, or income groups. The demographic character was based on the average makeup of Maricopa County in age (33.3 years of age), race (73% white), ethnicity (29.6% Hispanic), and household income ($55,223) (MAG Demographics, 2011). Utilizing US Census Block Group data, accessed through Maricopa Area Governments website (geo.azmag.gov/maps/demographic), blocks were identified as which met those demographic characteristics similar to the whole of Maricopa County. As the data available is provided in ranges, each category was defined as follows:

Demographic	Maricopa Average	Analysis Range
Age	33.3 years of age	30-46 years
Race	73% white	56-85% white
Ethnicity	29.6% Hispanic	12-45% Hispanic
Household Income	$55,223	$52,000-$72,000

Once Census blocks were identified to be within the acceptable range of demographic characteristics, neighborhoods within these blocks were evaluated based on a second tier of characteristics that might potentially impact sociability. Proximity to open space and elementary schools was identified as a baseline geographic reference for neighborhoods where some degree of walking could be assumed to be present. Neighborhoods that met demographic and geographic criteria were further evaluated to provide this research with a varying degree of threshold transparency. The threshold character of the homes in each neighborhood was first reviewed utilizing Google Maps and Bing Maps

"bird's eye" imagery functions. This technology allowed the researcher to view the threshold condition for dozens of neighborhoods, easing the process of selecting neighborhoods with varying degrees of garage dominance. Neighborhoods were narrowed down to 12 potential sites which were visited in person to evaluate their potential candidacy for inclusion in the study. From this analysis, 3 neighborhoods were selected; one neighborhood in the City of Chandler which was found to be a garage dominated suburban development, and the second neighborhood in the City of Scottsdale which was found to be dominated by picture windows with garages attached to the side of the living space. A third neighborhood in Chandler was selected as a trial neighborhood where research methods could be tested prior to implementation in the two primary study neighborhoods.

The first neighborhood studied, Blakeman Ranch, was built in 1997 and 1998 by Morrison Homes, and located in Chandler, Arizona. This neighborhood can be described as garage dominated with the presence of 2 and 3 car garages located in front of the primary living spaces of the home. Homes generally face toward the rear of the lot and do not provide a high number of opportunities for threshold transparency. The homes range from 1779sf to 2660sf on a typical lot size of 6900sf with approximately 115' in lot depth and 60' in lot width. The front setback for this community is 17' from back of sidewalk; however, living spaces are generally located 38' from back of sidewalk. In the remainder of this paper, this neighborhood will be referred to as "1990's Neighborhood".

The second neighborhood studied, Scottsdale Estates 10, was built in 1960 by Hallcraft Homes, and located in Scottsdale, Arizona. This neighborhood can be described as a picture window community with the presence of large windows commonly demarking the location of the home's family room. Garages for Scottsdale Estates 10 vary from single car carports to 2 car garages. Three car garages are not present. These homes generally face toward the street with a high number of opportunities for threshold transparency. The homes range from 1161sf to 1764sf on a typical lot size of 7396sf with approximately 97' in lot depth and 70' in lot width. The front setback for this community is 22' from back of sidewalk which matches the location of living space. In the remainder of this paper, this neighborhood will be referred to as "1960's Neighborhood".

6.2   Measuring Sociability

The measure for sociability utilized in this study is "knowing" which establishes a respondent's level of familiarity with their neighbors (du Toit and others, 2007). Knowing is described by du Toit and others (2007) as a component of social capital along with "feeling connected to the community, and trust." In previous studies, knowing has been linked with proximity, finding that the closer a respondent is physically to a neighbor the more likely they are to know each other (Greenbaum and Greenbaum, 1985). This paper uses the measurement of knowing as an indication of the level of sociability present within the community. It is assumed, for the purposes of this study, that in order to gain familiarity with a neighbor to the level of "knowing", a more than fleeting social interaction must be present.

6.3   Threshold Transparency Method: Observation

Using Suminski and others (2006) Block Walk Method as well as Zeisel's (2001) recommendations for observation methods as a foundation, the researcher developed an observation method tailored to evaluate the social condition of the suburban context. There were several deviations from Suminski's Block Walk Method allowing for a better cohesion with the specific questions being researched for this study. Similar to Suminski, this research utilized a walking method which allowed the researcher to observe neighborhood behaviors in their natural context. In order to avoid the "Hawthorne Effect," Zeisel (1981) recommends that observers "…develop tasks to do while observing so that they can blend into the setting more easily." For this reason, smart phone applications proved to be effective tools in conducting research, specifically the voice recorder application allowed for simple voice notations which could be written at a later time, a metronome application, listened to through an earpiece, assisted the researcher in keeping a specific pace, and the appearance of the researcher being a pedestrian having a conversation on a phone allowed the researcher to maintain unobtrusiveness.

The challenge for this research was to become nearly invisible so that a study of natural behaviors could be observed, free from influence by the researcher or as Zeisel (1981) describes the variability of intrusiveness. For the purposes of determining the degree of social activity occurring in a community context, it is critical that the observer not engage with the subjects in any manner that may alter their activity pattern. In order to get a clear view of the activity within a neighborhood, it was necessary to

become a recognized outsider (Zeisel, 1981). Observation will have some affect to be sure; however, minimizing this impact was a goal of this research design.

Observations occurred on three weekdays and one weekend day per neighborhood at varying times of the day. Monday, Wednesday, Friday, and Saturday were selected to provide a cross section of weekly neighborhood activity. Similarly, the hours of observation were selected to provide a cross sectional view of a days neighborhood activity. Mondays were observed between 10am and 11am, Wednesdays between 3pm and 4pm, Fridays between 5pm and 6pm, and Saturdays between 11am and 1pm. Similar to Suminski, this research regulated the "observation field" (Suminski and others, 2006), only recording activity which occurred within an imaginary place extending from the observers shoulders. Unlike Suminski, however, this research was interested in all visible neighborhood activity. Where Suminski stopped observing at the back of the sidewalk, this research observed and recorded all activity from the residential threshold on the right to the residential threshold on the left including within the public right of way. This revision from Suminski allowed the research to include any activity occurring in an open garage, on a driveway, on a front porch, or within a front yard.

The researcher recorded information related to the activity being performed, the number of people involved, the location of the activity, the approximate age of the actors, and the sex of the actors. Activities were typically categorized as walking/jogging, biking, sitting/leisure, playing/sports, chores, work, checking mail, and arriving/leaving by car. The number of people engaged in the activity together provided an indication of the level of social interaction witnessed in the neighborhood. The location of the activity allowed the researcher to understand how the neighborhood is being used by residents, categorized as being located in an open garage, on the driveway, in the front yard/turf, in the font yard/non-turf, front porch/patio, sidewalk, street, park, and park furniture. The approximate age of the actors was determined by the researcher through assumption and categorized as 5 years and under, 6 years to 12 years, 13 years to 17 years, working age adult, and retired age adult. These age ranges were determined to correspond to significant life stages. The sex of the actor was also recorded by researcher assumption except for the case of infant actors who were recorded as Undetermined. The results of the observation phase of this study were coded for analysis and the results of this research are discussed in more detail in the next section of this paper.

6.4   Threshold Transparency Method: Survey

For this paper, a research instrument was designed with a goal of determining the respondent's level of knowing within the community. Surveys were first administered as "face to face interviews" (Marans, 1987) as the researcher went door to door filling in the answers provided by the respondent. Homes that were not available for an interview were later canvassed with a "self-administered questionnaire" (Marans, 1987) in a stamped business reply envelope. Simple random sampling of the study population was achieved through this survey as it was distributed to every household within the two study neighborhoods providing every resident of the neighborhood an equal opportunity to take part in the survey (Marans, 1987). Sample size was limited for this study as there was not a high rate of return on the canvassed surveys or a high willingness to participate in an interview:

Survey Method	Rate of Participation	Neighborhood	Sample %
Interview	1 in 15	1990's	6.6%
	1 in 16	1960's	6.0%
Self Reported	1 in 23	1990's	4.2%
	1 in 19	1960's	5.1%
TOTAL	1 in 9	1990's	10.7%
	1 in 9	1960's	10.8%

The questions asked were broken up into four categories: demographic character of residents, feelings toward the home and neighborhood, space utilization within the home and community, and the level of neighbor knowing. Demographic questions included ascertaining the number of people residing within the home, their age category, their race and ethnicity, and their length of residency. These questions help the researcher ensure the study population matches the demographic character of the data obtained from Maricopa Area Government (2011). The specific question of length of residency was important as this data was not available through the US Census Block Data and has previously been

shown to be a significant factor in neighbor knowing (Sampson, 1991). Questions about the feelings toward the respondent's home and neighborhood were asked to determine if there was a relationship between the qualitative notions of community and the level of neighbor knowing. Space utilization allowed the researcher to determine the percent of time each respondent spends in indoor and outdoor spaces and determine the location of these spaces and how they relate to the public right of way. Space utilization also asked about the treatment of the threshold transparencies, allowing the researcher to determine the actual level of visual access a home has to the street.

The final category of questioning on the survey related to the level of neighbor knowing the respondent has. The survey asked respondents to review an image of a typical neighborhood lot with adjacent homes and determine their familiarity with the people living at the adjacent residences. The adjacent homes were labeled A through E, A being the home to the left of the respondent, B being the home across the street and to the left, C being the home directly across the street, D being the home across the street and to the right, and E being the home directly to the right of the respondent. The respondent was asked to select from three options for each home shown,

I know all of the people at this home
I know some of the people at this home
I know none of the people at this home.

If no home was present, as might be the case for a home that fronts open space or is on a corner lot, the respondents were instructed to leave the answer blank. The findings from this survey are discussed in the following section of this paper.

7 FINDINGS
7.1 Observation Findings

The observation phase of this study found an equal amount of social interaction occurring in the view of the public right of way in both study neighborhoods. Over the four day observation for each neighborhood, the 1990's neighborhood had 26 people engaged in an activity as a group and 16 people engaged in a solitary activity whereas the 1960's neighborhood had 26 people engaged in an activity as a group and 19 people engaged in a solitary activity. Of those engaged in a social activity, there was a noteworthy difference in the sex of the participants. In the 1990's neighborhood, 16 of 26 actors were male and in the 1960's neighborhood, 15 of 26 actors were male. There was also a marked contrast between the 1990's neighborhood and the 1960's neighborhood in the location of activity. The 1990's neighborhood exhibited a majority of activity in either the driveway or in an open garage, 13 instances on driveways and 10 instances in open garages, whereas the 1960's neighborhood exhibited a majority of activity in the street, sidewalks, and driveways, 14 instances in the street, 10 instances on the sidewalk, and 12 instances on the driveways. The types of activities recorded in each neighborhood also provided an interesting contrast. The 1990's neighborhood exhibited a higher level of leisure activity, 10 instances recorded, versus the 1960's neighborhood which only had 3 instances recorded. The 1960's neighborhood did have a higher level of recreational activity, exhibiting 5 instances of walking and 6 instances of biking versus the 1990's neighborhood which only exhibited 2 instances of biking.

The results of the observation phase did not demonstrate a correlation between the threshold transparency and the level of social activity exhibited. Both the 1990's and 1960's neighborhoods recorded the same number of social interactions. The differences in activities recorded and the location of these activities between the two study neighborhoods can not be linked to the condition of the threshold and may be due to other environmental or social factors not studied in this paper. While this research method did find a contrast between these neighborhoods in the level of physical activity, it does not demonstrate an ability to reveal the level of sociability exhibited in the neighborhood.

7.2 Survey Findings

In order to generate a comparable number that would reflect a homes threshold transparency, the percent of time spent in a room with opportunities for threshold transparency was multiplied by the level of transparency that room actually has toward the public right of way. The survey asks respondents to determine the percent of their families waking hours spent in each room of the home. Respondent's

answers were recorded in decimal format in a spreadsheet. The survey also asks respondents to determine the degree of transparency each room that faces the street demonstrates. A list of rooms within the home was provided followed by the question:

> *Of the rooms in your home that have windows that face the street, how are those windows treated?*
> *a. Always covered*
> *b. Often covered*
> *c. Often uncovered*
> *d. Always uncovered*

Respondents would then mark either a, b, c, or d adjacent to the rooms listed, providing the researcher with knowledge of the rooms in the house that had adjacencies to the threshold and the condition of their transparency. A Likert scale was established from 1 to 4, 1 being "Always covered" and 4 being "Always uncovered". This number was then multiplied by the percentage of time spent in those rooms to generate a threshold transparency figure for each room in the house. The numbers from each room were then added together to find the threshold transparency figure for the entire house.

The survey also determined the respondent's familiarity with their neighbors by asking them if they knew the members living in each of their neighboring households. They were shown a map of a typical home and asked to categorize their knowledge of their neighbors as:

> *I know all of them*
> *I know some of them*
> *I know none of them*

Answers to these questions were coded on a scale from 0 to 2, 0 being attributed to households the respondent knew none of, 1 being attributed to households the respondent knew some of, and 2 being attributed to households the respondent knew all of. The five responses were then averaged to determine the respondents "knowing factor". On average the respondents of the 1990's neighborhood scored a .75 knowing factor whereas the 1960's neighborhood scored a .95 knowing factor. The residents of the 1960's neighborhood do indeed know their neighbors more than those living in the 1990's neighborhood but the reasons were not immediately clear.

The knowing factor was graphed (y) with the respondent's threshold transparency figure (x) to determine a potential relationship between the threshold and knowing. The first graph exhibited no relationship as all sectors of the graph were inhabited by respondents. Some respondents residing in the 1990's neighborhood demonstrated a high degree of knowing and some respondents residing in the 1960's neighborhood demonstrated a low degree of knowing regardless of their threshold transparency. A second graph was created looking for relationship between knowing (y) and length of residency (x). This resulted in a clear relationship, confirming findings of prior research that the longer an individual resides in a neighborhood; the more likely they are to know their neighbors (Sampson, 2001).

The relationship between length of residency and knowing revealed a new question that could be answered through analysis of these research findings. If length of residency was limited to 10 years, eliminating the data from those who had lived in a neighborhood longer, could a relationship be found between a homes threshold transparency and neighbor knowing amongst newer residents? A third graph was created limited to 10 years of residency with knowing factor (y) and threshold transparency figure (x). This third graph does begin to demonstrate a relationship with an upward trend line. It appears the more transparent a homes threshold is the more likely the residents are to know their neighbors; however the low number of respondents in this study results in inconclusive findings. This potential relationship may also be due to a number of other environmental factors that were not considered for this study, such as the distance the home sits from a sidewalk or the amount of shade cover in the neighborhood. Future studies on threshold transparency should attempt to remove these additional environmental factors, and better isolate the threshold as the only independent variable.

Threshold Transparency & Knowing
Limited to 10 Years Length of Residency
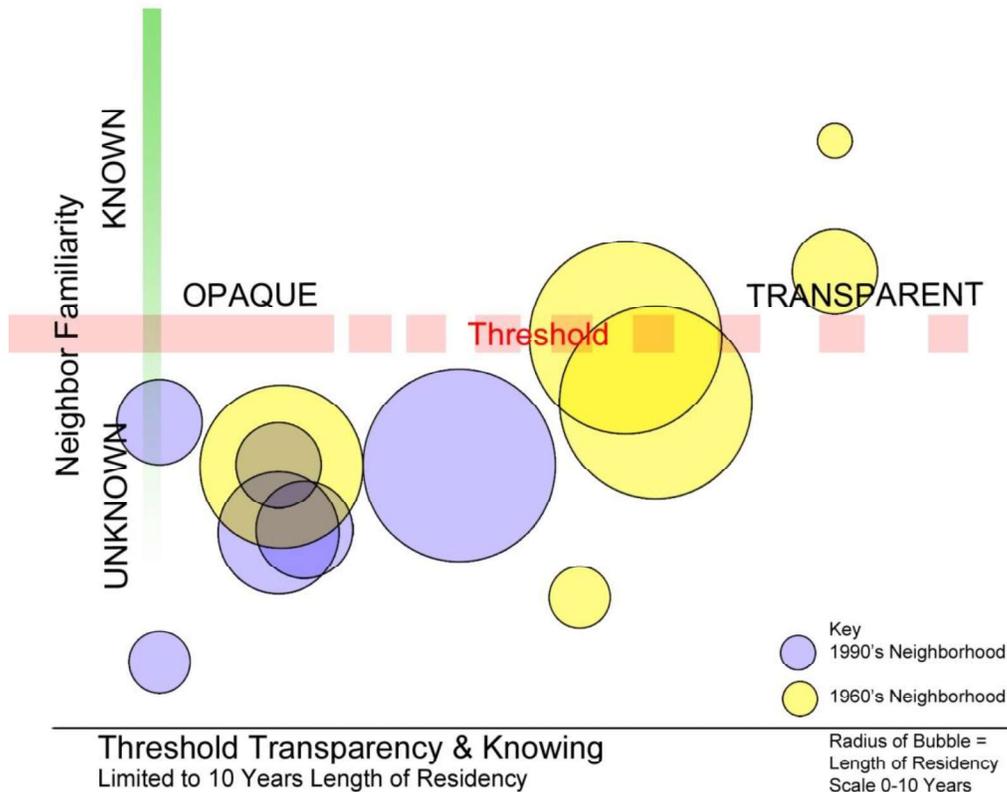
7.3 Recommendations for Future Study

This research resulted in an inconclusive relationship between the threshold transparency and neighbor knowing. Further studies on this topic should focus their attention on surveys instead of observations as the observation phase of this research was unable to provide any relevant data. The survey design for this research was useful in looking at a number of demographic and environmental factors related to neighborhood sociability; however, the small sample size was detrimental to the findings

The results of this research were limited to two neighborhoods with a combined total of 158 households. To receive a larger pool of respondents this survey would need to be sent or administered to a much larger study group. This research only achieved a 10% rate of response, leaving this researcher to assume that this survey would need to be broadened to expect a more conclusive sample size. The next step in this research would likely be to extend this survey to include two entire Census Blocks with varying degrees of threshold transparency. This would create a larger sample size and would also generate demographic characteristics more in line with the Census data.

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