

FINDING A PLACE TO FIT-IN JUST BECAME MORE COMPLICATED: HOW
TOLERANCE MEDIATES THE BUILT ENVIRONMENT'S ABILITY TO SATISFY
RESIDENTS

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Abstract

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Qualities and characteristics of the built environment have been suggested to drive residents community satisfaction, but is community development really that simple? Previous research has examined community offerings and attempted to identify the most significant predictors of community satisfaction. However, prior studies have failed to account for resident's access to potential predictors of community satisfaction. Using data from the *Soul of the Community* survey, this article examines the influence of tolerance on the built environments affect on community satisfaction. Incorporating tolerance addresses how access to characteristics of the built environment may affect their influence on resident's community satisfaction. Tolerance was found to partially mediate (29%) the built environments affect on community satisfaction. These findings suggest that the most beautiful and vibrant built environment may not produce the most satisfied residents if residents are not tolerant of each other

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Introduction

The many intricacies of the *community* concept have inspired a long tradition of sociological inquiry from Toennies (1887) account of societal transition from *gemeinschaft* to *gesellschaft*, to the modern emergence of the creative class noted by Florida (2003, 2008). Community research has analyzed effects from industrialization, urbanization, and technology (Toennies 1887; Park 1928; Wirth 1938; Kasarda and Janowitz 1974; Sampson 1988; Florida 2008), to how residents perceive and internalize information from their built environments (Edelman 1978; Fried 1982; Kahneman, Slovic and Tversky 1982; Goss 1988; Skjaeveland and Garling 1997; Cuba and Hummon 1993; Gieryn 2000; Leyden 2003). How residents evaluate their communities has become increasingly important since resident's community evaluations have been linked to mobility decisions (Speare 1974; Bach and Smith 1988). Evaluations about personal and community characteristics have been used to measure community satisfaction by previous researchers (Miller 1980; Cuba and Hummon 1993; Amerigo and Aragonés 1997; Filkins 2000; Theodori 2001; Neal forthcoming). Because community satisfaction explores many facets of community life, it may be beneficial to question how its predictors affect each other and subsequently affect community satisfaction.

The built environment has been identified as a driver of community satisfaction (Fried 1982; Ringel and Finkelstein 1991). Mixing land use and designing spaces for use by multiple residents can make the built environment an ideal venue for both planned and spontaneous interaction (Skjaeveland and Garling 1997; Gieryn 2000; Handy 2002; Leyden 2003). Contrasting research has also suggested that the built environment can prevent community satisfaction by limiting or preventing social interaction among residents. Symbolic violence conveyed through architecture and community design has been found to segregate social classes,

ethnicities, and races (Edelman 1978; Goss 1988; Gieryn 2000; Leyden 2003). Access to resources from the built environment has been found to both positively and negatively affect community satisfaction (Fried 1982; Gieryn 2000). Access to social capital from the built environment has also been found to alter residents' community satisfaction (Florida 2003). What factors enable the built environment to elicit both positive and negative effects on community satisfaction?

I propose that tolerance affects community satisfaction and can partially mediate the relationship between the built environment and community satisfaction. Previous research has addressed several issues related to tolerance, including segregation and subsequent inequalities (Edelman 1978; Fried 1982), integrating diverse groups (Allport 1954; Kahneman, Slovic and Tversky 1982; Sigelman and Welch 1993), effects from integrating diverse groups (Park 1928, 1931; Potter and Cantarero 2006), information exchanged from diverse interaction (Park 1928; Kahneman, Slovic and Tversky 1982; Sigelman and Welch 1993), and benefits from diversity (Jacobs 1961; Florida 2003). However, research has given little attention to tolerance itself as a unique facet of community life. Tolerance is an attitude defined by how open residents are to diversity; it does not attempt to measure actual or perceived diversity (Florida 2008). What roles might tolerance have in a community, and how might understanding those roles clarify how residents evaluate community satisfaction? In an effort to better understand community satisfaction, the relationships between the built environment, tolerance, and community satisfaction must be examined.

The steps taken to examine the relationship between the built environment and tolerance, as well as their subsequent effect on residents' community satisfaction ratings are explained by this article's four sections. The first section reviews literature and previous research on the built

environment, tolerance, and community satisfaction and highlights a connection between the variables. The connection between the built environment, tolerance, and community satisfaction leads to the prediction of four hypotheses about the variables relationships. The second section provides details about the *Soul of the Community* survey and data, which were used to examine how the built environment and tolerance affect residents' community satisfaction ratings across 26 U.S. cities. Results are presented in the third section and explain how three multivariate regressions and a path model were used to test how the built environment can influence community satisfaction both directly and indirectly through tolerance. The fourth and final section engages a discussion about the results, limitations from these findings, and suggestions for future research on the built environment and community satisfaction as they are affected by tolerance.

Theoretical Framework

The Built Environment and Community Satisfaction

The built environment provides resources like parks, entertainment districts, and consumer conveniences that can contribute to community satisfaction when resident's resource needs are satisfied. The built environment can be comprised of several features that contribute to community satisfaction. Results from Filkins, Allen, and Cordes (2000) study of almost 4,000 rural Nebraskans found their "consumer services" index to be statistically significant and an influential predictor of community satisfaction. Their consumer services index included satisfaction scores from residents' perceptions of retail shopping, restaurants, and entertainment. However, because Filkins et al. did not evaluate the predictive power of each index used in their community attributes category, it leaves the variance explained by the consumer services index unknown.

Specific community features have also been evaluated for their contribution to residents overall community satisfaction evaluation. Miller et al's (1980) survey study of 550 New York City residents found evaluations about specific community features to be consistent with overall community evaluations. Their research suggests that community satisfaction results from individual evaluations or beliefs about multiple community characteristics and contributes to respondent's overall community satisfaction evaluation. Evaluations of 22 community features were regressed stepwise to determine the most important predictors of community satisfaction. Results showed that "neighborhood attractiveness" and community satisfaction had the strongest simple correlation accounting for 42.6% of the variance. A second test used five specific community characteristics (upkeep, similarity to neighbors, noise, trees, and crowding) identified by Morans and Rodgers (1975) as "micro-neighborhood" predictors of community satisfaction.

The five specific predictors from their second test explained 45.3% of satisfaction variance proving to be stronger predictors of community satisfaction.

The built environment's aesthetic qualities can be viewed as a resource especially when its attractiveness lures residents to use other local resources and increases satisfaction. Ringel and Finkelstein's (1991) study of 50 residents from two Baltimore, Maryland suburbs found community resources and qualities of the built environment including: physical beauty, vibrancy of the social setting, and availability of parks and green space predict community satisfaction. Twenty-five respondents were from Fells Point, a historic area described as "overlooked" and experiencing "physical transformation" and "cultural change." The remaining twenty-five respondents were from Mount Vernon, the home of the Washington Monument museum amidst green parks, fountains, and surrounded by numerous specialty shops, pubs, and restaurants.

The resources variable was measured using an index of coded responses detailing which resources respondents used with-in and outside of their communities. The index was standardized because resource availability differed between suburbs. Respondents were never asked to evaluate the quality of resources used with-in and outside of their communities, similarly they were never asked why they chose to use resources in or outside of their communities. Understanding why residents chose to use particular resources would have indicated whether resource quality or access had a significant influence.

Despite the study's significant correlation between beliefs about qualities of the built environment and community satisfaction the relationship was weaker than predicted. The strong correlation and weak relationship suggests an intervening variable exists but was not measured in this study. It is possible for residents to have positive beliefs about the built environments resources but not utilize these resources. The community resource index did predict resident's

satisfaction, but because residents were never asked to evaluate their community resources, the relationship was unclear. For instance, lacking access to resources may lead residents to use resources outside of their community. Measuring resource use only indicates where residents use resources and ignores aspects that might influence resident's choices over where to use resources. Such influences might also influence community satisfaction.

The built environment's ability to foster social interaction is a valuable aspect of community experiences and can affect overall satisfaction. Florida (2008) describes how networking takes place within the built environment's restaurants, clubs, and performance venues. The built environment creates "scenes" where individuals can experience a wide variety of organized cultural production and consumption. Scenes are described as places where individuals go to "see" and "be seen." In other words, the built environment can promote social interaction by creating scenes where residents can enjoy shared interests that contribute to community satisfaction.

The breadth and depth of social interaction facilitated by the built environment can affect residents' community satisfaction. Crowe (2010) found communities fostering dense networks connecting multiple parts of the community were evaluated 20% more favorably. Her findings also indicated that a community's network structure affects a resident's evaluation of the built environment. Social interaction enhances social capital through accidental and intentional encounters with neighbors and other community members. Social capital is defined as an accumulation of access to skills, information, and experiences from members of one's social network (Jacobs 2000, 2004). Social capital builds a sense of familiarity that people find satisfying. Residents whose built environments encouraged social interaction have consistently

reported greater community satisfaction (Kasarda and Janowitz 1974; Speare 1974; Bach and Smith 1977; Sampson 1988; Leyden 2003; Crowe 2010).

The built environment creates spaces for social interaction by allowing residents to build relationships. Community satisfaction has been found to increase when the built environment provides social opportunities for residents (Herting and Guest 1985; Filkins, Allen, and Cordes 2000; Crowe 2010). In contrast, lacking access to resources like parks and nightlife can prevent social interaction and negatively affect residents' satisfaction. In some cases access to resources and social interaction may be intentionally guarded to preserve social and structural inequality and may affect resident's satisfaction (Edelman 1978; Fried 1982). Because the built environment has been found to increase residents' access to resources, encourage social interaction, and enhance social capital, I hypothesize that the quality of the built environment positively affects community satisfaction **(H1)**. Figure 1 illustrates the hypothesized relationship between the built environment and community satisfaction.

[Figure 1 about here]

The Built Environment and Tolerance

Interactional spaces that are fun and have multiple uses engage many different people and can be a source of information promoting interaction between groups. Information affects attitudes about marginalized and stigmatized groups (Kahneman, Slovic & Tversky 1982). Thus, when the built environment promotes positive diverse interaction, positive attitudes toward various diverse groups are also likely to be promoted. The built environment can be designed and constructed to promote unplanned interaction between residents who might otherwise be socially distant (Gieryn 2000; Leyden 2003). The built environment can promote tolerance by

intertwining varying functions, specializations, and values of mixed-use space that often create and legitimize homogenous enclaves (Gieryn 2000).

When the built environment is comprised of mixed land-uses interaction can be promoted between diverse groups and increase tolerance. Skjaeveland & Garling's (1997) Norwegian study of 1,056 Bergen residents found aesthetics and functionality to be important factors for the built environment to become interactional space. In other words, residents must believe that the built environment is intended for social interaction, and its features must provide physical attributes and engage residents. Benches in parks invite people to stay and sit amongst each other. Semi-private space allows people visual access to passersby without overly exposing those within a space while enabling interaction. Their study's findings indicated that interactional spaces promote inter-group interaction by allowing multiple groups to feel comfortable interacting in the same space.

Mixing land uses throughout the built environment can encourage interaction between groups that may not have otherwise interacted. Research has suggested that effectively mixing land uses can be expected to enhance social capital by encouraging interaction (Gieryn 2000; Leyden 2003; Skjaeveland and Garling 1997). A survey study of 279 Galway households, located in the Republic of Ireland, found residents living in built environments with mixing-land uses more likely to interact with neighbors, participate locally (politically and socially), and trust others in their community (Leyden 2003). This study compared three types of communities. First, mixed-use pedestrian-oriented communities meet all residents' needs within a short walk. Mixed-use pedestrian-oriented communities immerse residents in wide arrays of amenities and resources and typically offer restaurants, pubs, parks, libraries, department stores, government buildings, post offices, banks, pharmacies, schools, and various types of entertainment. Second,

older mixed-use communities, tend to be quieter, predictable and require more transportation than city centers. In older mixed-use communities, walking or using public transportation can satisfy most of residents needs. Third, modern automobile-dependent communities require personal transportation in order to satisfy resident's needs. Some of these communities lack sidewalks and discourage residents from walking due to inherent danger from traffic. Social capital declines as a result of suburbanization, and Leyden (2003) suggests suburbanization increases independence and decreases interdependence by providing fewer opportunities for social interaction among residents.

Characteristics of the built environment like mixed land use and aesthetic qualities have been found to encourage people to spend more time in their communities. Cuba, Lee, and Hummon (1993) found that the built environment facilitates interaction when positive experiences occur in a diverse space and positive feelings are associated. When particular places appeal exclusively to specific groups, other groups are indirectly deterred from those places and groups. Places are able to attract specific people by using "style," a design tool characterizing a place by its unique qualities. Styles are used to elicit and associate feelings to places in the built environment (Edelman 1978; Gieryn 2000). Specific styles often appeal to particular groups and prevent diverse social interactions. Tools like style have segregating power derived from social status, an abstract quality enabling people to develop tastes for qualities specific to their social position (Edelman 1978; Goss 1988; Bourdieu 1984). The built environment uses style to attract specific groups and deter others who may feel that particular styles are above or beneath their social position. The built environment can be designed to encourage spontaneous interaction across social positions. Designing public use facilities like parks, libraries, and river-walks with

large, intertwining, and open walkways is inviting to everyone and provides equal access (Gieryn 2000).

The built environment can promote tolerance when mixed land uses are designed to promote diverse interaction. Allport's (1954) contact hypothesis theorized that any racially diverse contact would decrease prejudice. He discussed how group differences are negatively integrated into society resulting in natural prejudice between groups. According to Allport, diverse contact alone can correct damage from propaganda and segregation and decrease prejudice. Another approach claims that mere contact does not provide the same benefit as meaningful interaction, where group information is exchanged. Informational availability discussed by Kahneman, Slovic and Tversky (1982) suggested a mediator between interracial contact and racial attitudes. Their theory suggests available information about particular groups can determine an individual's attitude. Informational availability theory contends that information gained through meaningful interaction has a more significant affect on interracial attitudes than contact. For instance, contact can occur between service employees and patrons, where employees play a specified service role functioning to satisfy patrons who gain no information about employees nor offer information about themselves.

The built environment can create interactional spaces, which promote planned and unplanned interactions between residents. Pedestrian friendly built environments can encourage residents to spend more time in their communities and mindfully using "style" can allow residents to feel comfortable interacting together. When diverse interactions are meaningful group information is exchanged and can promote tolerance between groups, even groups separated by tension. Because the built environment can create interactional space where diverse

groups can overcome social tension through meaningful interaction; I hypothesize that the quality of the built environment positively affects tolerance **(H2)**.

Tolerance and Community Satisfaction

Tolerance might alter how accepted an individual feels and could affect community satisfaction. Increased tolerance provides greater access to social capital by increasing opportunities to develop and strengthen social networks and could affect community satisfaction. The relationship between tolerant communities and satisfaction is not essentially due to residents innate value of diversity (Florida 2008). Rather how comfortably residents can express themselves may explain this linkage, and tolerant communities exude an open acceptance of self-expression (Florida 2008).

Promoting interaction between residents from all life cycle positions, races, and ethnicities has been found to create more tolerant communities and increase community satisfaction (Kasarda and Janowitz 1974; Sampson 1988; Sigelman and Welch 1993; Gieryn 2000; Leyden 2003; Florida 2008). Tolerant people interacting can decrease segregation, develop a sense of community, and increase overall satisfaction (Gieryn 2000). Social capital theories compare people to resources and suggest that social capital encourages intertwining support systems, and increases tolerance, accentuates mutually beneficial complexities beyond individual differences (Jacobs 1961, 2000, 2004), and promotes social interaction between community members (Leyden 2003). Community satisfaction has been found to increase by utilizing social capital (Gieryn 2000; Leyden 2003; Jacobs 2004; Florida 2008).

Data from Detroit, Michigan examined by Schuman and Hatchett (1974) displayed findings that blacks who socialized with white co-workers and neighbors displayed fewer feelings of alienation and distrust toward white society than blacks lacking similar experiences.

Interestingly blacks who experienced contact with whites as co-workers and neighbors without interaction did not experience affected racial attitudes toward whites. Schuman and Hatchett's (1974) Detroit findings led Kahneman, Slovic, and Tversky (1982) to examine information availability. Their study highlighted interaction as key component of positively affecting negative racial attitudes.

Similarly, a 1989 national biracial survey by Chilton Research Services for an ABC News-*Washington Post* poll (N=1691, 376 black, 1315 white) analyzed by Sigelman and Welch (1993) found interracial interaction experiences decrease negative racial attitudes in both blacks and whites. Whites perceived less interracial hostility and blacks perceived less anti-black attitudes. Intolerant communities tend to deny residents access to resources through social controls and informal boundaries that are based on prejudice and discrimination (Gieryn 2000).

Social networking opportunities can provide greater access to resources and can lead to greater community satisfaction. Friendship and kinship networks were found to be significant predictors of community satisfaction (Kasarda and Janowitz 1974; Speare 1974; Bach and Smith 1977; Sampson 1988; Crowe 2010). A social network's weak ties help overcome intolerance by bridging gaps in social relations and by allowing diverse social actors to pursue individual interests (Granovetter 1973; Skjaeveland and Garling 1997). Tolerant communities do not deny residents access to resources and social capital like intolerant communities (Gieryn 2000; Florida 2008). Networking opportunities from social capital promote interaction and increase trust between community residents (Gieryn 2000; Leyden 2003).

Tolerant communities promote satisfaction by encouraging residents to freely express themselves and meaningfully interact with others. Tolerance allows residents to develop diverse relationships and increase social capital. Relationships developed by tolerance can affect

resident's attitudes about their community. Social capital can provide residents support systems and accentuate a community's mutually beneficial attributes. Resident's support systems provided from social capital accumulation can be linked across a community allowing greater resource access. Therefore, I hypothesize that tolerance affects community satisfaction **(H3)**. Based on the proposed relationships of hypotheses 1, 2, and 3, I further hypothesize that tolerance partially mediates the relationship between the built environment and community satisfaction **(H4)**.

Data and Measures

Data and Sample

Hypothesis testing was accomplished by using data from The Soul of the Community survey (SOTC 2010), collected by the Gallup Organization for the Knight Foundation. Gallup conducted 15,200 interviews with a random representative sample of adults (18+) from 27 May through 31 August 2010, in 26 U.S. cities. Surveys consisted of fifteen-minute telephone interviews addressing 73 questions, and were conducted in English and Spanish. Cellular phone numbers were included as part of the potential sample. Approximately 26% of the data set contained missing values on one or more variables used in the analysis and were dropped list wise yielding a sample of 12,299. Two-sample t-tests were used to compare means for included and excluded cases, relative to all other variables in the model, and indicated that the means of these two samples did not differ significantly. Thus, all observations with missing values were dropped from the sample listwise.

Variables and Measures

Community Satisfaction, the dependent variable, is measured using respondents' response to the question "Taking everything into account, how satisfied are you with your community as a place to live?" The question's Likert scale format indicates satisfaction on a continuous scale ranging from (1) "Not at all satisfied" to (5) "Extremely Satisfied." Similarly, Miller et. al. (1980) used Likert scales to measure community satisfaction by asking respondents to rate their satisfaction. Previous studies (Speare 1974; Bach and Smith 1977) measured community satisfaction using a multi-variable index. Community satisfaction is measured in this model using a single variable expressing an individual's global evaluation of their community.

The built environment, the independent variable, is measured using an index composed of three variables assessing a community's physical features. Each of the three variables was measured using Likert scales, ranging from (1) "very bad" to (5) "very good." Respondents were asked to rate their community for: (1) "Availability of outdoor parks playgrounds and trails" (2) "Beauty and Physical Setting" and (3) "Having a vibrant nightlife, with restaurants, clubs, bars ect." Previous studies have used likert scales to assess specific features of the built environment (Miller et al 1980), while some have analyzed use frequency of specific features (Ringel and Finkelstein 1991), and others have attempted to connect aesthetic qualities of the built environment to its multiple uses (Skjaeveland & Garling 1997; Handy et al 2002, Leyden 2003). Physical features of the built environment have also been examined for roles facilitating and limiting social interaction (Edelman 1978; Goss 1988; Skjaeveland & Garling 1997; Handy et al 2002, Leyden 2003). This analysis extends previous studies by utilizing the built environment concept as a combination of attitudes and perceptions about physical environmental features. This index exhibits an acceptable degree of internal reliability (Cronbach's alpha 0.70).

Tolerance, the mediator, is measured using an index composed of six variables assessing whether a respondent's community "is a good place for..." (1) "immigrants from other countries" (2) "racial and ethnic minorities" (3) "gay/Lesbians" (4) "young talented college grads" (5) "families with small children" and (6) "senior citizens." This index exhibits an acceptable degree of internal reliability (Cronbach's alpha 0.81). This tolerance measurement closely mirrors Florida (2008), who used a similar index of openness assessments toward eight specific groups. Measuring tolerance perceptions differs from previous studies because it does not focus on actual or perceived diversity.

Controls

Several control variables were included to isolate the effects of the variables of interest built environment and tolerance on community satisfaction. Sixteen control variables were used in this analysis. Seven demographic variables controlled for respondents age, length of residency, employment status, race, marital status, education, and home ownership status. Two variables controlled for safety: a respondents rating of crime in their neighborhood and respondents rating about feeling safe walking alone at night within a mile of their home. Three variables controlled for a respondent's community participation based on how many close friends are in their neighborhood; number of formal and informal group memberships and whether respondents voted in the last local election. Four variables further describing the communities sampled were also controlled: community's degree of urbanicity, availability of affordable housing, job opportunities, and the highway and freeway system.

SOTC data samples were collected using a cluster-sampling design, in which 26 cities served as sampling clusters. Thus, the 12,299 individual observations may display disturbances or unintentional influences from the cities of which they are grouped. Data clustering can limit the credibility of standard error and confidence interval estimations and usually lead to underestimating standard errors (Hamilton 2009). Using robust variance estimates allows for more credible standard error and confidence interval estimates (Hamilton 2009). Cluster robust standard errors were used in each model to control for potential cluster effects across the 26 communities surveyed.

Results

Hypotheses were tested using a series of multivariate regression models in STATA 10 statistical analysis software. The three hypotheses estimations will indicate if a mediation relationship occurs by first, regressing the mediator on the independent variable; second, regressing the dependent variable on the independent variable; and lastly, regressing the dependent variable on both independent and mediator variables (Baron and Kenny 1986). Hypothesis one predicted that the built environment would affect community satisfaction, illustrated in figure 1. Results shown in model 1 of table 2 indicate that the built environment is positively associated ($b = .132$, $p < .001$) with community satisfaction and is statistically significant. This finding is consistent with previous research indicating the built environment can directly effect community satisfaction (Marans and Rodgers 1975; Miller et al 1980; Fried 1982; Gieryn 2000; Leyden 2003).

Hypothesis two predicted that the built environment would affect tolerance. As shown in model 2 of table 2, the built environment does display a positive effect ($b = .776$, $p < .001$) on tolerance and is also significant. This model's index representing tolerance asks respondents if their community "is a good place" for various groups; it is not measuring perceived diversity. The positive association, illustrated by Figure 2, illustrates how respondents who positively perceived the built environment also perceived their community as more tolerant. The positive relationship between the built environment and tolerance supports previous findings designating the built environment as an ideal venue for social interaction between diverse groups (Park 1931; Rossi 1955; Edelman 1978; Speare 1974; Bach and Smith 1977; Fried 1982; Hummon and Cuba 1993; Gieryn 2000; Leyden 2003). Hypothesis three predicted that tolerance would affect community satisfaction, illustrated in Figure 1. Model 3 of table 2 displays results indicating

that tolerance does positively affect community satisfaction ($b = .049$, $p < .001$) and is statistically significant. The positive relationship between tolerance and community satisfaction supports previous findings that individuals are more satisfied by communities that are tolerant (Jacobs 2004; Gieryn 2000; Florida 2003, 2008; Leyden 2003).

[Table two about here]

Hypothesis four predicted tolerance would partially mediate the relationship between the built environment and community satisfaction. The indirect effect $((.776 \times .049) = .038)$, and total effect $((.093 + .038) = .131)$ were calculated using a path model, simultaneously estimating three regression equations (Baron and Kenny 1986). The indirect effect indicates that tolerance mediates $((.038 / .131) \times 100 = .29007$ or 29 %) 29% of built environments effect on community satisfaction. Significance of the indirect effect is supported by Sobel standard error estimates (indirect effect = .038, $se = .003$, $p < .001$) found by previous researchers as a valid significance test for indirect effects (Preacher and Hays 2008). Mediation analysis, illustrated by figure 2, provided strong support for hypothesis four predicting that the built environment not only directly strengthens community satisfaction ratings but also indirectly does so through tolerance. Although attractive aesthetic features and abundant resources in the built environment were shown to positively affect community satisfaction ratings, lacking access and/or a perceived lack of access could hinder positive affects.

[Figure 2 about here]

Discussion

Results from this sample support claims that the built environment can directly and indirectly effect residents' community satisfaction ratings. First, the built environment's association with community satisfaction was found to positively relate to resident's community satisfaction rating. The positive relationship between the built environment and community satisfaction remained significant despite controlling for several community, demographic, and social characteristics. The built environments persistent significance supports previous findings indicating that the built environment has a particular affect on community satisfaction differing from other community characteristics (Fried 1982; Ringel and Finkelstein 1991; Filkins, Allen and Cordes 2000; Gieryn 2000). Confirmation of hypothesis one indicates that when residents positively perceive the built environment their overall community satisfaction rating will be positively affected.

Second, the built environment was found to be positively associated with residents' perception of community tolerance. The positive association remained significant after controlling for several demographic, social, and community characteristics suggesting the relationship between the built environment and perceptions of community tolerance is unique. The positive relationship between the built environment and residents perceptions of community tolerance supports previous research suggesting that the built environment can control social opportunities for residents to interact (Skjaeveland and Garling 1997; Gieryn 2000), gain access to resources (Edelman 1978; Fried 1982; Goss 1988), and social information (Kahneman, Slovic and Tversky 1982). This second confirmed hypothesis indicates that when residents positively perceive the built environment their perceptions of community tolerance will be positively affected.

Third, findings indicated that tolerance is positively associated with residents' community satisfaction ratings. The positive relationship between perceptions of tolerance and community satisfaction ratings is particular and was demonstrated by persistent significance after adding several variables controlling community, demographic, and social characteristics. The positive relationship between residents' perceptions of community tolerance and community satisfaction supports arguments claiming that tolerant communities satisfy residents (Schuman and Hatchett 1974; Sigelman and Welch 1993; Florida 2003, 2008). This third confirmed hypothesis indicates that when communities are perceived as tolerant resident's community satisfaction ratings are positively affected.

Finally, tolerance was found to partially mediate the positive relationship between the built environment and residents' community satisfaction ratings. These findings confirm that the built environment can provide residents with resources like parks, restaurants, entertainment venues, and social capital shown by previous research to satisfy residents (Skjaeveland and Garling 1997; Gieryn 2000; Leyden 2003), but when access to the built environments resources is affected by mediators like tolerance, community satisfaction ratings can subsequently be affected (Edelman 1978; Fried 1982; Goss 1988; Gieryn 2000). This study's findings suggest that the built environment comprised of the most satisfying resources and amenities can elicit unfavorable satisfaction ratings if intervening factors deter residents from utilizing them.

Other Interesting Findings

Owning a home displayed significantly negative affects on resident's perceptions of tolerance ($b = -.163$, $p < .01$). When residents owned a home they perceived their community as less tolerant. This finding supports Gieryn's (2000) theory of social control described as informal boundaries created to "territorialize" or restrict access to particular places in a

community. An individual's home is a personal resource and usually requires some degree of financial and emotional investment. Establishing social controls as a homeowner supports Edelman's (1978) suggestion that community satisfaction is related to access and the ability to limit others access to resources.

Limitations

Community satisfaction, the dependent variable, was operationalized simplistically as an overall evaluation of a respondent's community. Such a simplistic measurement only indicates if residents are satisfied overall with their community, but provides no indication why residents are satisfied with their community. Similarly, the built environment index exclusively asks respondents to rate the built environments features. No data was provided indicating respondent's use of the built environments features respondents were asked to evaluate. Understanding the relationship between residents evaluations and their use of the built environment might have provided further insight about the built environment's affect.

Abstract concepts like tolerance are inevitably difficult to measure creating limitations for what these variables can explain. Tolerance as measured in this article has three major limitations. First, the index representing tolerance measured respondent's perception of community tolerance, but was not an indicator of how tolerant or diverse the surveyed communities actually were and respondents were not asked to evaluate how diverse they perceived their communities. Data indicating perceptions about diversity as well as how diverse and tolerant communities actually were could have allowed comparisons between perceptions and reality concerning diversity and tolerance. Had data been provided about respondent's perception of diversity, comparisons regarding the affects of perceived tolerance versus perceived diversity could have been hypothesized. Second, including multiple groups in the

same measurement does not allow differentiation between each group's contribution to the effect. It is safe to assume that groups are tolerated differently and one measurement cannot express those group differences. Finally, it is also safe to assume that specific communities are perceived as better or worse places for certain groups. For instance, quiet pedestrian centered communities with accessible public transportation and an abundance of senior centers might be perceived as better places for senior citizens than for young college graduates. These communities might not be intolerant of young college graduates; their features may simply appeal to senior citizens.

Future Research

Findings from this data have shown that the built environment can positively affect resident's community satisfaction ratings both directly and indirectly through tolerance. Policy makers and urban planners can utilize these findings to design built environments capable of facilitating tolerance and positively affecting community satisfaction. Results from this study garnered support for informational availability theory and draws critical attention toward diversity integration policies premised around the contact hypothesis. If diverse contact alone is not enough to promote tolerance, policies that submerge diverse groups into different normalized cultures are problematic.

Migration policies often force assimilation to dominant hegemonic cultures through social institutions such as schools. This forced assimilation implies that differences should be stigmatized and sameness rewarded thus perpetuating intolerance inequality.

Lingering effects from past development policies known to have caused intolerance and inequality should be examined. For example, the auto industry played a major role in U.S. development, aided largely by the influx and exploitation of black migrant workers in Detroit,

Michigan from 1910- 1930 (Peterson 1979). During this time a built environment emerged: more than 50,000 homes were built, a park system was established, and commercial entertainment establishments saw tremendous growth (Peterson 1979). Despite tremendous growth, a housing shortage remained, causing issues of segregation, skyrocketing racial/ethnic tensions, along with social and structural inequalities (Farley, Bianchi, and Colasanto 1979; Peterson 1979). More recent studies suggest that lingering effects from these past development inequalities persist today. Nearly a century later findings have indicated that whites still seek social distance from blacks (Darden and Kamel 2000), and associate continued discrimination with undesirable behavior (Kaplowitz, Broman and Fisher 2006). Future research should further examine how meaningful interactions among diverse groups in the built environment can create tolerance in communities. Issues of intolerance should also be addressed to identify specific characteristics preventing tolerance in communities and among residents. After gaining a more thorough understanding of tolerance, research should address issues of lingering inequality and intolerance and focus toward facilitating tolerance through the built environment.

Previous built environment research focuses on creating beautiful landscapes used to mask inequality between groups differing in class, culture, or race while ignoring larger social structures like tolerance that could alleviate some inequalities. The built environment's interactional characteristics should be examined further to gain better understanding about what factors motivate meaningful interaction between diverse groups and lead to informational exchange. I argue that communities with a built environment designed to promote tolerance creates a structure satisfying to residents. Tolerant communities satisfy residents by providing greater access to community resources, interactional space, and increase social capital through social networks. The built environment is ideally premised around offering residents a variety of

resources and amenities and in theory will increase community satisfaction. If residents cannot access the built environment's satisfying resources and amenities, its function cannot be served properly. A built environment designed to promote tolerance also functions to provide all residents equal access to resources and amenities and can better function to increase residents' overall community satisfaction.

Tables and Figures

Table 1. Descriptive Statistics (N= 11,255)

Variable	Mean	Standard Deviation
Community Satisfaction	3.751	1.062
Built Environment	11.648	2.506
Tolerance	20.700	4.708
Homeowner	.820	.538
Urban	.378	.485
Married	.618	.536
White	.816	.388
Unemployed	.014	.118
Voters	.796	.403
Income	5.272	2.239
Education	4.430	1.167
Length of Residency	33.676	24.336
Highways	3.418	1.142
Available Housing	3.266	1.158
Job Opportunities	2.617	1.082
Safe Walking Night	3.594	1.307
Crime	3.405	1.177
Friends	3.434	1.600
Groups	1.734	1.555

Table 2. Affect of the Built Environment and Tolerance on Community Satisfaction (N=12,299)

	<u>Model 1</u> Community Satisfaction	<u>Model 2</u> Tolerance	<u>Model 3</u> Community Satisfaction
Built Environment	.131*** (.0104)	.776*** (.025)	.093*** (.009)
Tolerance			.049*** (.003)
Length of Residency	-.001* (.0006)	.0004 (.002)	-.001* (.0005)
Unemployed	-.046 (.080)	.238 (.237)	-.057 (.080)
Own	.011 (.011)	-.163** (.056)	.019 (.011)
Married	.017 (.015)	.041 (.066)	.015 (.012)
Education	.006 (.012)	-.104 (.053)	.011 (.011)
Urban	.005 (.020)	.215* (.094)	-.005 (.020)
White	-.040 (.038)	-.515** (.141)	-.015 (.034)
Highways	.097*** (.018)	.368*** (.050)	.080*** (.017)
Housing Opportunity	.052* (.019)	.446*** (.098)	.030 (.018)
Job Opportunity	.180*** (.021)	1.12*** (.060)	.124*** (.017)
Safety	.070*** (.010)	.257*** (.048)	.058*** (.009)
Crime	.048*** (.009)	.114** (.032)	.043*** (.009)
Friends in Community Group	.033*** (.005) .009	.086** (.028) -.005	.029*** (.005) .010
Involvement Voters	(.006) -.051* (.025)	(.025) -.082 (.076)	(.006) -.047 (.025)
Age	.009*** (.0008)	-.008* (.003)	.010*** (.0008)

Table 2 (cont'd). Affect of the Built Environment and Tolerance on Community Satisfaction (N=12,299)

_Constant	.299** (.103)	5.80*** (.417)	.014 (.103)
R ²	.342***	.478***	.366***

*p<.05, **p<.01, ***p<.001, using cluster robust standard errors

Figure 1. Affect of the Built Environment and Tolerance on Community Satisfaction
(N=12,299)

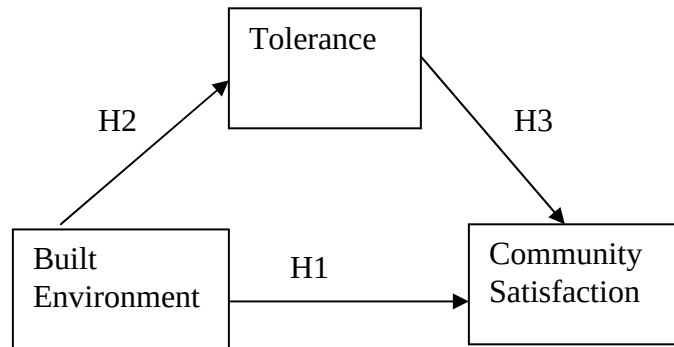
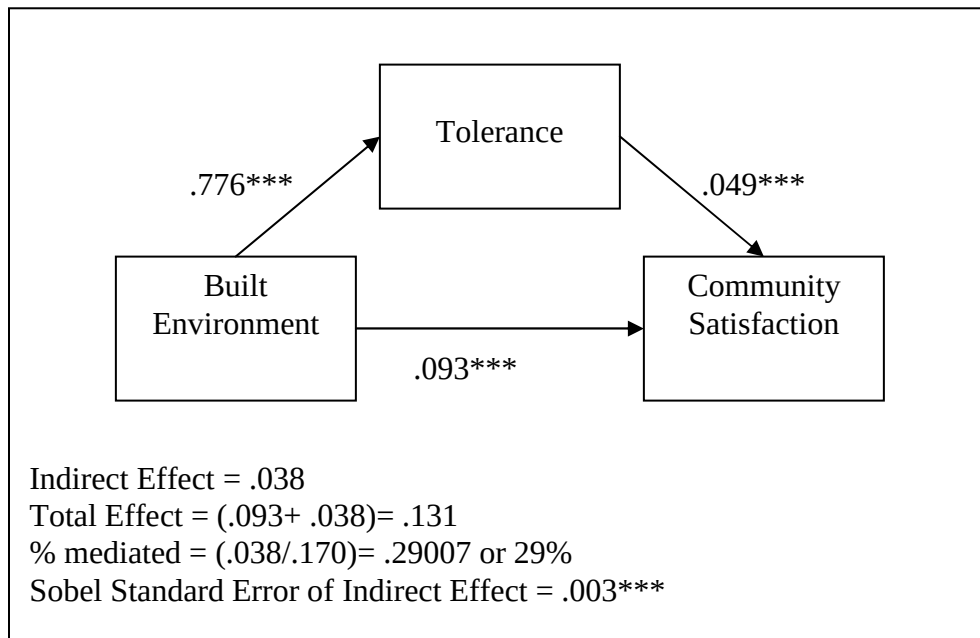


Figure 2. Tolerance Mediating the Affect of the Built Environment on Community Satisfaction (N=12,299)



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