Can New Urbanism Promote Successful Urban Infill Developments in Poor Areas?: A Case Study of Detroit

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New Urbanists have been promoting neotraditional planning as a solution to many of the problems created by sprawl (e.g., Duany et al., 2000). New Urbanist developments are intended to offer a greater diversity of land use within a walkable community. Houses are more densely situated and public open space is easily accessible. New Urbanism has been criticized for its emphasis on large-scale residential developments in suburbs, while neglecting rehabilitation and infill development in distressed neighborhoods in the urban core (e.g., Talen, 1999; Audirac & Shermyen, 1994). In response to these criticisms, New Urbanists have begun to develop infill projects designed according to New Urbanism principles in poor inner cities (Steuteville, 2003). Today, the number of New Urbanist infill developments is increasing. However, their impact on the development of local communities is not fully accounted for because of scant empirical data (Deitrick & Ellis, 2004). Determining how to apply New Urbanism to underserved urban areas requires extensive study, considering that empirical research on the success of such New Urbanist infill projects is scarce. Moreover, it is appropriate to ask, before undertaking it, whether people in such poor urban areas care for a New Urbanist approach.

The goal of this research is to assess the applicability of New Urbanist principles to underserved urban areas. This study investigates residents' perceptions of the application of New Urbanist goals and design features to urban infill development through in-depth interviews and survey questionnaires with residents living in Southwest Detroit, East Davison, South Rosa Parks, Parkside, and East Warren, typical low-income residential areas of Detroit. It is hoped that the outcomes of this study can guide policymakers, developers, planners, and designers in making informed decisions on New Urbanist development that respect the preferences and needs of residents in underprivileged neighborhoods.

The plan of the paper is as follows: The next section surveys existing research regarding New Urbanism in terms of New Urbanists' claims on diversity. I then describe the research setting presented by five residential areas located in the city of Detroit and the methods by which the study was conducted. This is followed by the presentation and analysis of the results and a discussion of the results.

CURRENT LITERATURE

The *Charter of the New Urbanism* (2000) includes 27 principles, nine of which apply to neighborhoods, districts, and corridors. My paper focuses on the nine principles because my study deals with urban neighborhoods in Detroit. The nine principles, including the ones below given as examples, cover several broadly intended outcomes: (1) increased walking and reduced automobile use; (2) increased sense of community and social capital through strengthened personal and civic bonds; and (3) increased diversity of land uses and people. These outcomes are implied in the statements:

- Many activities of daily living should occur within walking distance of one's residence, allowing independence to those who do not drive, especially the elderly and the young. Interconnected networks of streets should be designed to encourage walking, reduce the number and length of automobile trips, and conserve energy.

- Within neighborhoods, a broad range of housing types and price levels can bring people of diverse ages, races, and incomes into daily interaction, strengthening the personal and civic bonds essential to an authentic community. (Congress for the New Urbanism, 2000, pp. 73-119).

We now consider the literature on diversity.

While a growing body of research evaluates these three intended outcomes, many studies focus predominantly on 'green fields' sites in suburbs, while few studies assess the success of New Urbanism in infill development undertaken in urban areas. This is partly because New Urbanist infill developments in poor urban areas are rare. Moreover, New Urbanist developments in suburbs lack diversity. While many New Urbanist communities have been constructed, critics of New Urbanism argue that New Urbanist developments are predominantly upper-middle class and lack diversity (Audirac & Shermyen, 1994, Ellis, 2002). Kim' study (Kim, 2001) on Kentlands, Maryland, a famed, prototypic New Urbanist development reports that almost 90% of study participants are white. Talen (1999) also stated that early New Urbanist developments are "dominated by affluence" and that "it is possible that this status rather than town design creates an economically based sense of community" (p. 1373). Podobnik's survey-based study (2002a) found a "moderately exclusionary attitude" among some of the original Orenco Station residents. In addition, fewer residents of Orenco Station indicated that they wished for a more diverse neighborhood, compared with those in a more typical, and also predominantly white, suburban development in Portland. Brown and Cropper (2001) asked residents of a New Urbanist development and a conventional subdivision a number of questions to determine whether they believed neighborhoods should provide diverse housing opportunities. While New Urbanist residents favored diversity, the difference was not statistically significant

A growing body of research compares the extent to which New Urbanist developments and standard subdivisions offer transportation benefits and foster a sense of community among their residents. However, much of the research relies on pre-World War II neighborhood models as proxies for New Urbanism (e.g., Greenwald, 2003, Nasar, 2003). Exceptions such as those (e.g., Kim & Kaplan, 2004, Brown & Copper, 2001) included in this article are few. These recent New Urbanist developments are predominantly upper middle class and mostly white American neighborhoods. None of the pre-World War II or New Urbanist developments mentioned in this paper (except the one mentioned in Deitrick & Ellis's 2004 article) is located in a poor urban area.

As such, although studies on sense of community or the transportation benefits of New Urbanist developments are growing in number, they focus predominantly on 'green fields' sites in suburbs, while comprehensive studies assessing the success of New Urbanism in infill development undertaken in underprivileged urban areas are very rare. Nonetheless, the study by Deitrick and Ellis (2994), as well as other limited studies on New Urbanist urban infill developments, provide some indication that such benefits as greater interaction and outdoor use, walkability, reduced dependency on automobiles, strong community identity, a strong shared emotional connection, diverse amenities, and preference for easy access to services are associated with a traditional style neighborhood.

METHODS

This research contributes to the existing body of literature by examining New Urbanists' principles and features proposed under the *Charter*, focusing on underserved urban neighborhoods. It investigates whether those principles and features are applicable to poor urban communities in Detroit, and whether the residents of such communities favor them, by addressing these questions directly to residents.

To evaluate the applicability of New Urbanism in underserved urban residential areas, I conducted interviews with and administered a questionnaire survey to residents in five residential areas located in the city of Detroit: Southwest Detroit, East Davison, South Rosa Parks, Parkside, and East Warren. These are typical urban residential areas of Detroit. The boundary of each of these sites is somewhat informal or unofficial—in each case it was determined in consultation with community representatives and the City of Detroit Planning Department. These areas are chosen on the basis of my prior and ongoing work there through a community outreach studio of the architecture school in the university where I teach. While directing that studio, my students and I have worked with community residents, city officials, professionals, and other stakeholders on neighborhood master plans and revitalization projects for each of the aforementioned study areas. These neighborhoods all are within ten miles of the studio.

Each study site has about 600 households. All five sites share similar demographic characteristics in terms of race (predominantly black), household income, and education level. All five sites, excluding the Parkside neighborhood, share similar single-family home values. The Parkside neighborhood is the only one where housing consists mainly of multi-family rental units, with two vacant blocks set aside for future single-family and multi-family housing. Also, its current housing facilities are immediately adjacent to a major park and golf course. The other study sites consist predominantly of detached single-family houses on narrow lots in residential blocks typical in Detroit and include much vacant land (mostly single-family home lots, either owned by the city or state, or abandoned). Approximately 25%-35% of the lots in each of these study sites are vacant. Many homes have detached garages on back alleys. Most include front porches and small setbacks. All five study areas currently include some neighborhood retail outlets near major commercial streets within approximately five minutes' driving time; some are within a quarter-mile walking distance. Some retail stores are vacant, due largely to the economic condition of the areas. All five areas have sidewalks along all streets. Bus stops are on major commercial streets. All five sites include either one or more major commercial streets. All except East Davison and South Rosa Parks have parks adjacent (large parks and pocket parks).

Access to the residents of all five sites was gained over an extended period of time involving correspondence and visits with community representatives, as well as their participation in the aforementioned community outreach studio and its projects. Preliminary interviews were conducted with several residents at each study site. Information and feedback from these individuals were incorporated in the design and fine-tuning of the in-depth interview questions and the survey. Five hundred letters were sent out to randomly selected residents at all five study sites (100 letters for each site) asking them to participate in the study. In-depth interviews were conducted with ten residents from each study site. The interviews lasted between 30 and 60 minutes. All interviews except nine were conducted at the aforementioned community outreach studio. The in-depth interviews included open-ended questions. The interviewees were presented with images of New Urbanist developments (e.g., pictures or other renderings of a New Urbanist community without

any information on its name, location, designer, home price, etc.) and asked what they liked or disliked about them. Interviews were tape-recorded, later transcribed, and finally examined for recurring themes. The interviews added invaluable supplementary information to the survey data.

In addition, the survey was randomly distributed to eighty homes at each study site. The survey was distributed directly to residents' homes rather than by mail. Return rates (33%) were somewhat consistent at all five sites. The survey questionnaire was designed in part on the basis of the outcomes of the in-depth questions. Regarding the first group of questions, the survey included closed-ended questions that help identify residents' choices of community design goals, including goals that New Urbanists claim neotraditional development can achieve as well as popular community goals. Residents were asked to select goals that are important to them. The second group of questions covered a few key New Urbanist design features using various illustrations. Residents were asked whether each of these physical features promotes sense of community, safety, healthy living, a feeling of convenience, environmental friendliness, rehabilitation potential, or community income-generation potential (these seven items were taken from the outcomes of the aforementioned in-depth interviews). The objective of the second group of questions is to examine whether New Urbanist design claims are supported by the views of residents. The third group of questions covered the same list of specific New Urbanist design features as the second group of questions. However, the questions in the third group ask residents whether they 'like' each one of these design features. This group of questions seeks to investigate whether residents dislike specific New Urbanist-type design features, even if they may agree with broader New Urbanist claims. The fourth group of questions asked residents whether any of the specific New Urbanist design features would promote successful redevelopment of vacant and abandoned land. Lastly, the fifth group of questions asked residents whether they would live in New Urbanist-type neighborhoods, as shown in the survey. The survey gathered demographic information as well.

FINDINGS

Findings from the in-depth interviews and surveys

are presented here. The study results indicate that the New Urbanist approach could promote successful infill development in poor urban areas and that the participants favor such an approach.

Interviewees were presented with images of New Urbanist developments and asked what they liked or disliked about the features. I then grouped their responses according to meaningful categories. I repeated the grouping process until each category was well defined. I acknowledge that the naming of each category and determining the total number of categories are subjective processes and that there may be some overlap among the categories.

According to the preliminary findings of the in-depth interviews, 72% of the respondents residing at the five study sites feel that New Urbanist infill projects, when completed, might foster a strong sense of community. Many interviewees defined sense of community by reference to a sense of belonging. Almost 75% of the participants like the way New Urbanist infill projects improve one or more of the following: walkability, interaction, community identity, community bonding, and community satisfaction.

Still more noteworthy, however, is the finding that the study participants from the five areas feel that the New Urbanist infill development might also promote ecological sustainability (with less land consumption), health benefits (from walking), greater safety, community satisfaction (due to greater convenience, for example), community rehabilitation (potential physical improvements), and economic development (to promote revenue generation in a community and greater willingness to invest in neighborhoods). Sustainability was mentioned by 60% of the respondents, community rehabilitation was mentioned by 81% of them, and most of the other items such as health benefits were mentioned by about 71% of them.

The preliminary findings of the interviews are also supported by the academic literature in the fields of urban planning, environment and behavior, and community psychology. Sense of community concerns one's feeling of belonging to one's community. It is promoted by four major concepts established through Kim's research on Kentlands (Kim, 2001; Kim & Kaplan, 2004), each fostered by physical aspects of the neighborhood: i.e., sense of community is promoted by pedestrianism (walkable

environment: Lund, 2002), community attachment (emotional bonding: McMillan and Chavis, 1986), community identity (Davidson and Cotter, 1986), and social interaction (Talen, 1999). Ecological sustainability pertains to minimizing land consumption and automobile dependence, promoting greater use of public transportation, and reducing vehicle miles traveled (Sallis et. al, 2004, Podobnik, 2002a). Community satisfaction measures convenience or one's assessment of a community to the extent that its overall performance meets one's needs (Hummon, 1992). Community rehabilitation focuses on physical characteristics of neighborhoods in terms of their potential for conservation or preservation and residents' attitudes towards neighborhood improvement (Morrish & Brown, 2000, Jones, 1990, Kelly & Becker, 2000). The potential for economic development can be supported by evidence of investment potential in underserved neighborhoods, residents' willingness to invest in their neighborhoods, residents' feeling that such investment can generate income, and community development efforts undertaken directly by residents (Temali, 2002, Koven & Lyons, 2003).

Based on these interview findings, I hypothesized that the New Urbanist approach promotes successful development in poor urban areas. In other words, I hypothesized that New Urbanist development can be a desirable model for successful urban infill development. Successful infill development is assessed in terms of a conceptual framework of several dimensions as hypothesized through the findings of the aforementioned interviews (sense of community, safety, health benefits, community satisfaction, ecological sustainability, community rehabilitation, and economic development). In other words, it is hypothesized that infill development is defined and considered successful if it fosters an urban environment where residents feel a sense of community, believe they are safe and healthy, perceive the neighborhood to be convenient and environmentally friendly, and feel their community has the potential for rehabilitation and income generation.

To examine my hypothesis, I used a survey questionnaire at the five study sites. The survey instrument, which elicits residents' responses to the selected design features and goals of New Urbanist development, consisted of six major groups of questions. I here summarize the preliminary outcomes of the participants' responses based on descriptive statistics. More systematic, quantitative data analy-

ses will have to be conducted at a later time.

The first group included closed-ended questions that help identify residents' choices of community design goals, including goals that New Urbanists claim neotraditional development can achieve (sense of community, etc.) as well as popular community goals (convenience, etc.). Residents were asked to select goals that are particularly significant to them. In response, the participants often mentioned the goals that New Urbanists claim neotraditional development can achieve. These include sense of community, community identity, social interaction, and pedestrianism. Almost 79% of participants selected one or more of these goals. Also, popular community goals such as safety, convenience, access, and the like were frequently mentioned. Approximately 86% of survey participants chose one or more of these goals.

The second group of questions covered a list of specific New Urbanist design features as described by both written and graphic illustrations. Residents were asked with respect to each of these physical features whether it promotes sense of community, safety, healthy living, a feeling of convenience, environmental friendliness, rehabilitation potential, or community income generation potential. Likert-scale answer choices (strongly agree, disagree, etc.) were used. The objective of the second group of questions is to examine whether New Urbanist design claims (for example, that mixed use fosters a sense of community) are supported by the views of residents in poor urban areas. On the whole, 74% of the participants agreed or strongly agreed that the New Urbanist design features would promote all of the aforementioned seven goals, ranging from 62% (environmental friendliness) to 85% (rehabilitation potential) across the sample.

The third group of questions covered the same list of specific New Urbanist design features as the second group of questions. However, the questions in the third group asked residents whether they 'favor' each one of these design features. Likert-scale answer choices were provided. This group of questions seeks to investigate whether residents in underserved urban areas dislike specific New Urbanist-type design features, even if they may agree with broader New Urbanist claims. The preliminary findings indicate that about 71% of the survey participants favor or strongly favor New Urbanist-type design features, although some

features, for example live/work units, received more favorable votes (84%) than others such as alleyways (57%).

The fourth group of questions asked residents whether any of the specific New Urbanist design features would promote successful redevelopment of vacant and abandoned land. Almost 81% of the respondents felt that the New Urbanist design approach would promote successful revitalization of such underutilized properties in their neighborhoods.

The fifth group of questions asked residents whether they would live in a New Urbanist neighborhood, and 78% of them answered yes.

The sixth group of questions pertains to demographic items (age, gender, location, length of residency, etc.) to measure their effects on residents' responses to the five aforementioned groups of questions. Preliminary descriptive statistical analyses indicate no significant effects of gender, location of homes, or length of residency. However, responses of elderly participants were more likely to be positive than those of any other sub-groups in the study. The elderly respondent group was among the largest in the study sample. Age groups of people 60 years or older make up almost 35% of the entire set of study groups. On the whole, there are slight differences in participants' responses across the five study sites, but they are not statistically significant. The analyses of this part of the survey should be followed soon by comprehensive, multivariate statistical analyses.

DISCUSSION AND FUTURE RESEARCH

The interviews and survey results provide insight into whether the New Urbanist approach is applicable to underserved urban neighborhoods and whether their residents like such an approach. On the whole, the preliminary findings of the study in the five sites in Detroit suggest that a New Urbanist approach is likely to promote successful and effective infill developments in poor urban areas and that study respondents in those areas favor New Urbanist development. Moreover, the findings indicate that New Urbanist development is likely to fulfill many of the objectives expressed in the Charter (e.g., increased walking and reduced automobile use; increased sense of community and social capital

through strengthened personal and civic bonds; and increased diversity of land use).

The preliminary outcomes of both interviews and the survey indicate that New Urbanist development is likely to promote sense of community, safety, health benefits, community satisfaction, ecological sustainability, community rehabilitation, and economic development in underprivileged urban neighborhoods. A New Urbanist development could foster an urban environment where residents feel a sense of community, believe they are safe and healthy, perceive the neighborhood to be convenient and environmentally friendly, and feel their community has the potential for rehabilitation and income generation. Moreover, respondents in general favor the New Urbanist approach to revitalizing abandoned or vacant lots in their neighborhoods. What the data also suggest is that if you build it, they are likely to come, and they are likely to walk or interact more. This supports Levine's argument that the important issue is whether communities are providing neighborhoods that meet people's preferences (1999). He adds that researchers and policy-makers should focus less on whether form influences behavior and more on providing the variety of urban forms that households want (Levine, 1999).

While the present research supports some of the New Urbanist claims, there are several limitations and a few cautions to be raised. Just because the residents like or want what they see (i.e., New Urbanist design features) does not mean that they actually "believe in" the success of New Urbanist-type neighborhoods. Perhaps the study participants responded positively to the New Urbanist development because they want something that gives them a sense of hope (i.e., they have the desire to be able to live in better, cleaner, or more attractive neighborhoods than their current environment). One of the fears associated with New Urbanist-type developments is that housing prices will increase in such neighborhoods once they are built. Eppli and Tu (1999) reported that consumers are willing to pay a higher price to be at Kentlands. However, low-income people cannot afford the higher price. Potentially, rising home prices in a New Urbanist neighborhood could drive poor consumers out of the market before it is developed.

When respondents are presented with images of "better-looking" neighborhoods than theirs, it is only natural that they are attracted to them. To reduce the potential for such an effect, I included in my current study both photographs of built New Urbanist developments and artists' renderings of both built and proposed New Urbanist developments. Perhaps future research should include only artists' renderings. It would have been most ideal to include in my study images of New Urbanist developments located in poor urban areas and designed according to New Urbanist principles. While some smaller-scale examples (one or a few blocks or lots) exist, images of large-scale neighborhoods located in poor urban areas were not readily available at the time of this study.

Differences in household structure within each study site are perhaps as interesting as the overall positive responses of the participants across all five sites and present some interesting questions for future research. The responses of elderly participants were more positive than those of any other sub-groups in the study. The elderly respondent group was among the largest in the study sample. The higher share of the elderly group is encouraging. It indicates a potential market for New Urbanism, given population-aging trends across the country. New Urbanist developments may provide an attractive place for seniors or retirees who want suburban amenities but need to reduce their driving and walk more.

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