
HALF A LOAF. ARE NEW URBAN “HYBRIDS” A MARKETABLE OPTION?

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Abstract

New Urban developments offer a physical form that differs considerably from the dominant pattern of suburbanism in North America. While theorists argue that New Urbanist principles must be adopted in their entirety, property developers often find that compromises must be made to obtain necessary government approvals. This results in “hybrid” developments that lack all of the features of true New Urbanism. Based on surveys of residents of two Canadian communities, it would appear that some of the touchstones of New Urbanism are not actually essential and that there are few significant differences in resident satisfaction levels between residents of different types of New Urban communities.

Keywords: new urbanism, resident satisfaction, urban communities

1. Introduction

Since the middle of the last century, the predominant form of urban development across North America has been suburban, characterized by low density, large-scale, automobile dependent, homogeneous developments. Despite criticisms from a range of perspectives, (Jacobs, 1961; Downs, 1994; Cervero, 1986; Ontario, 2006), this paradigm remains the preferred form of development, shaping suburban communities in both Canada and the United States. While alternative models, such as Master Planned Communities (Campbell, 1976) and Planned Unit Developments (Moore and Siskin, 1985), have been offered as alternatives, these have had limited application and the results are often little different than the prevailing suburban development model.

A more radical departure from the suburban standard has emerged in recent decades, one that combines high standards of urban design with a measure of social engineering. Led by architects Duany et al. (2000) and Peter Calthorpe (1993), and popularised by writers like Philip Langdon (1994) and James Howard Kunstler (1993), New Urbanism has been promoted as a model for development that not only looks better but one that also functions better than the typical post-War suburb (Steuteville and Langdon, 2003). Proponents of New Urbanism argue that the physical form of New Urban communities facilitates a higher level of social interaction. This, in turn, contributes to a sense of

community that is missing from the suburbs where a majority of North Americans live (Katz, 1994). New Urbanism represents a template for building better suburbs, as well as for renewing central cities (Duany, 2000). Such developments are encouraged by senior levels of government in both Canada and the United States (Ontario, 2006; HUD, 2000).

The New Urban model draws on diverse themes. Its emphasis on the public realm and the creation of a sense of place (Talen, 2000) addresses the widespread alienation and anomie often seen as prevalent in suburbs (Putnam, 2000; Brindley, 2003). New Urbanism encourages preservation of important elements of the natural and built environment, heritage properties in particular (Congress for the New Urbanism, 2004). A fine-grained mixture of land uses that facilitates non-motorized transportation and public transit supports both health and environmental values (Calthorpe, 1993; Frumpkin *et al.*, 2004).

Opinion surveys and market research suggest that a substantial proportion of the North American population would actually prefer to live in a community with the characteristics of a New Urban Development (Katz, 1994; Morrow-Jones *et al.*, 2005). Despite the expressed preferences for (or at least interest in) many of the ideals of New Urbanism, the suburban model continues to dominate. In part, this is the result of municipal development regulations that make it difficult, if not impossible, to develop communities that follow the principles of New Urbanism. Few developers are willing to invest the time and money necessary to make changes in local development regulations necessary to accommodate New Urban developments.

Density and housing structure type are two characteristics frequently used to distinguish New Urbanist from conventional development (Gordon & Vipond, 2005). Most New Urban developments achieve higher densities by means of smaller lots and higher proportions of multifamily housing. These built forms, along with a mix of land uses, contribute to walkability and help to provide opportunities for social interaction. Implicitly, residents are asked to accept these higher densities in return for better access to amenities and enhanced levels of design quality.

This paper will examine how residents of two New Urban developments in Canada assess the reality of living in a community that incorporates New Urban ideals. Households residing in communities with New Urban characteristics have already accepted higher community density. Attitudes toward other aspects of the development may assist local policy makers and developers in designing both development regulations and specific projects.

2. New Urban Developments

New Urban developments can be found across North America; more than 300 such developments are currently either planned or under construction (*New Urban News*, 2003). Most current examples of New Urbanism are ‘hybrids’ that incorporate some New Urban tenets, but have been adopted to appease local markets and development regulations. The majority of projects are in suburban locations, but New Urban models have been used to guide the redevelopment of inner city neighbourhoods as well (Duany, 2000; HUD, 2000). The two case study locations are described in more detail.

Bois Franc. St-Laurent Quebec

Bois Franc is a large infill development in Ville St-Laurent, well within the perimeter of the Montreal Urban Community, less than eight miles (13 kilometres) from the Montreal city center (Figure 1).

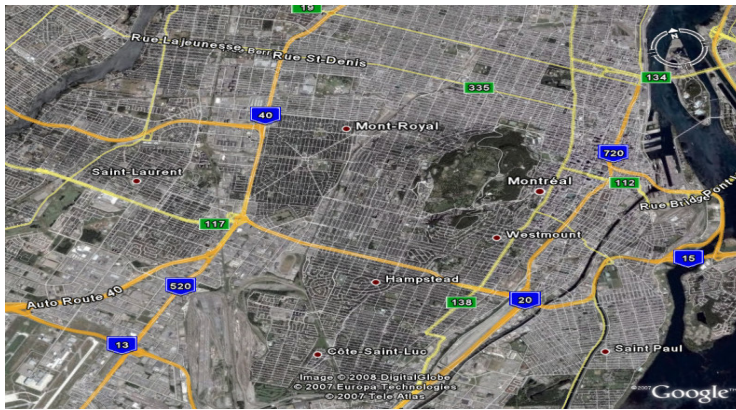


FIGURE 1: BOIS FRANC LOCATION

The site is a former airfield being developed by the real estate arm of the Bombardier Company, a large industrial firm. Plans for the site include light industrial and warehouse uses oriented toward the nearby airport, a commercial area, an 18-hole championship golf course along with about 8,000 residential units (Duany *et al.*, 2000). Open space, including the golf course and water features, will occupy about one-sixth of the site. Most of the planned residential development consists of multifamily housing, including owner-occupied garden apartments and row houses; the number of rental apartments is limited. About 30 percent of the planned housing units have been completed since the project began in 1994 (Bois Franc, 2006).

This development is distinct from the surrounding community of St-Laurent and other parts of Montreal in several respects (Table 1). St-Laurent is typical of inner ring suburbs, with an aging population, fewer children and a predominance of single-family homes built in the 1950s and 1960s (Census Canada, 2001). Census data indicate that Bois Franc households are more likely to have children at home, be

younger and have a university degree than either St-Laurent as a whole or Montreal. The median household income in Bois Franc is about ten percent above the St-Laurent median and close to that of Montreal. Bois Franc has a much higher rate of owner occupancy than the surrounding area; home values are about 25 percent above the community and metropolitan averages. There are relatively fewer foreign-born residents or visible minorities in Bois Franc compared to St-Laurent as a whole or Montreal.

TABLE 1: COMMUNITY CHARACTERISTICS

	Montreal			Toronto		
	Bois Franc	St-Laurent	CMA	Cornell	Markham	CMA
Population	3,578	77,390	3,426,350	5,779	208,615	4,682,297
Ave. Household Size	2.48	2.52	2.42	3.24	3.44	2.86
HH with children	46%	38%	39%	66%	59%	47%
Population 65+	5%	38%	13%	7%	10%	11%
Median Household Income	\$43,379	\$39,412	\$42,123	\$76,399	\$77,163	\$59,502
University Graduate	55%	34%	26%	24%	35%	37%

Source: Statistics Canada, 2001.

Designed by Daniel Arbour, Bois Franc departs from New Urbanism principles in several respects. The street system is a discontinuous grid, providing only limited connectivity within the development or to the surrounding community (Figure 2).



FIGURE 2: BOIS FRANC

Much of the housing is, however, oriented to green spaces, either the golf course or a series of small squares (Figure 3.)



FIGURE 3: BOIS FRANC STREETSCAPES

Substantial residential development was completed before any commercial facilities were built. The predominant housing type consists of owner occupied single-family row houses. Public facilities, such as schools will not be part of the development. Public transportation (in the form of buses) is available at the site and a subway line ends about half a mile from the development.

Bois Franc has been developed in a local housing market that has experienced relatively slow growth in recent years. New housing starts within the Montreal Urban Community, averaging about 12,000 units a year, have been dominated by multifamily housing, typically either high-rise condominiums in the city centre or attached housing developments on infill parcels. Most new single-family development is occurring at locations far from the core.

Cornell, Markham, Ontario

Cornell Village is located in the Town of Markham, about 16 miles (27 kilometres) northeast of downtown Toronto (Figure 4).

The 2,400 acre site will include some 10,000 homes, employment for 16,000 persons, a dozen schools and other public facilities, as well as commercial developments serving local and regional needs and a business park. About half of the site will be reserved for green space (Duany Plater-Zyberk and Company, 2006).

The Town of Markham is representative of much of Toronto's suburban fringe development. The community has experienced rapid growth in its predominantly single family housing stock as well as office employment and commercial development. Household incomes in Markham are above the metropolitan average. Most households have children living at home and average household size is well above the mean for Toronto.

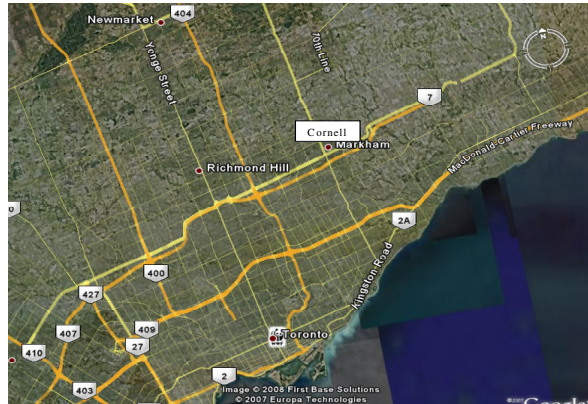


FIGURE 4: CORNELL LOCATION

The rapid growth of Markham during the 1990s (fully one-quarter of the housing stock in this community of 200,000 was built between 1996 and 2001) prompted the adoption of development regulations that followed the New Urban principles of higher density, mixed uses, alternate modes of transit and high quality design standards (Carlson, 2006). The intent was to slow the rate of land conversion and reduce infrastructure costs by encouraging more compact developments, while still preserving a high quality of life for residents (see also Valpy, 2007). Markham is the site of a number of residential developments that follow New Urban criteria. Cornell is one of the largest of these and perhaps the most consciously New Urban.

The original design by Duany Plater-Zyberk has been closely followed, providing a structure in which each neighborhood offers a variety of land uses and housing types (Town of Markham, 1995). The developers have sought to ensure that neighbourhood commercial facilities, schools and recreational amenities are built concurrently with the residential stock in each neighbourhood. The street pattern is orthogonal with a clear hierarchy, with wider roads bounding the neighbourhoods (Figure 5).



FIGURE 5: CORNELL

Much of the development in Cornell consists of single-family homes, with duplexes and row houses mixed in; some collector streets offer residential units over store fronts (Figure 6). Residential densities are only slightly higher than in other parts of Markham; the use of detached garages accessed by rear lanes substantially changes the streetscape, however (Skaburskis, 2006).

Overall, the profile of Cornell residents is similar to that of Markham in general but differs considerably from that of the Toronto metropolitan area (Table 1 above). Cornell includes lower proportions of university graduates and visible minorities than the rest of Markham. Although average household size is slightly lower in Cornell, community residents are somewhat more likely to include children. Median household income is less than the Markham average, but still well above the metropolitan figure. Home values are slightly less than the community average and noticeably below those in other new developments in Markham. Cornell and Markham as a whole exhibit a resident profile that is suburban as distinct from that of the metropolitan area.



FIGURE 6: CORNELL STREETSCAPES

3. Resident Survey

A mail survey was sent to a systematic sample of residents of these two New Urban communities to assess their preferences and levels of satisfaction with their neighbourhood. The survey was prepared in both French and English and mailed to a total of about 250 addresses¹. Recipients were asked to complete the survey and return it in a postage paid envelope. One reminder postcard was sent. The resulting response rate was about 30 percent overall. The number of responses from Bois Franc residents was slightly higher than from Cornell residents.

Recipients were first asked a series of questions about the *importance* of specific home and neighborhood features when they were looking for a new home. A five point scale ranging from Very Important to Not Very Important was used for each measure. The list included general considerations

¹ Copies of the surveys are available from the author on request.

(home size and price), as well as distinctively New Urban attributes, such as density, pedestrian friendliness of the environment, community facilities and design features.

Respondents had occupied their home for at least two years. The survey asked them to indicate their *satisfaction* (again on a five point scale) with attributes of their new home and neighborhood. Respondents were also asked to rate their house and neighborhood on a ten point scale. In addition to household demographic data, the survey asked for information whether they had looked anywhere else before buying their current house.

The characteristics of the survey respondents are summarized in Table 2. Respondents in the Bois Franc sample were not representative of all residents of this neighborhood in two respects. The sample households were larger and included a greater percentage with children. The Cornell respondents were much more like the other residents of this community. The only significant difference is with respect to the proportion of householders with a university degree, which was much higher among the respondents than in Cornell as a whole.

There are no significant differences between the two groups. Both samples are comparable with respect to average household size and proportion of households with children. Respondents in both locations were also equally likely work in a professional occupation. Bois Franc respondents were somewhat younger, with only about one-third of the householders over the age of 45, compared to half of the Cornell sample; the difference is not significant, however. All of the respondents were homeowners; both developments had only limited rental housing available at the time of the survey.

TABLE 2: PROFILE OF RESPONDENTS

	Bois Franc	Cornell
Average Household Size	3.13	3.14
Households with Children	57%	58%
Head Age 45+	33%	50%
University Degree	55%	60%
Professional Occupation	85%	84%

N=81

Over 90 percent of respondents were the first occupants of their unit and had occupied their home for an average of just under four years. More than 80 percent of the households in both samples reported that they had looked at other housing before deciding to purchase their current home. About half of the Bois Franc households shopped for homes in other St-Laurent neighbourhoods and half in other municipalities. Three-quarters of the Cornell respondents had looked at homes in other Markham neighbourhoods, while just one-third had shopped in other municipalities.

4. Importance Factors

The attributes with the highest rankings in terms of *importance* in selecting a new home are listed in Table 3. Neighborhood Appearance received the highest ratings Bois Franc, and was the second most important in the Cornell samples. Average housing cost rating (the highest ranked feature for Cornell residents) was significantly higher than in Bois Franc. Several other highly ranked attributes also related to the quality of the public realm. Again, few of the differences are statistically significant. Cornell residents, however, were more likely to consider New Urban touchstones, such as Friendly Neighbors and Living in a Neighborhood, to be among the most important considerations.

TABLE 3: IMPORTANT FEATURES OF HOME AND NEIGHBORHOOD

	Bois Franc	Cornell	Sig.
Neighborhood Appearance	4.58	4.42	.355
Home Cost	4.33	4.61	.067
Housing Styles	4.15	4.08	.735
Size of Home	4.20	3.97	.229
Sidewalks	4.03	4.14	.588
Landscaping	4.05	4.00	.821
Friendly Neighbors	3.60	4.47	.000
Live in Neighborhood	3.63	4.22	.002

N=81

An exploratory factor analysis was used to reduce the 20 variables to six factors, which together explained over 68 percent of the variance in housing preferences (Table 4).

TABLE 4: PREFERENCE FACTORS

Factor	Variable	Loading	% of variance	Cumulative % of variance
Diversity	Housing Variety	.671	16.409	16.409
	Price Variety	.697		
	Diversity	.920		
	Live in Neighborhood	.697		
	Neighbors	.659		
Public Realm	Style	.784	13.681	30.090
	Neighborhood Appearance	.822		
	Landscaping	.723		
	Traffic	.506		
Child Friendly	Recreation	.756	12.009	42.098
	Playground	.779		
	Sidewalks	.499		
	Schools	.658		
Accessibility	Shopping	.807	10.488	52.586
	Cafe	.524		
	Public Transportation	.762		
Yard	Front Yard	.626	7.700	60.743
	Back Yard	.803		
House	Size of Home	.693	8.157	68.442
	Cost of Home	.800		

Four of these (Diversity, Public Realm, Child Friendly and Accessibility) describe attributes of the neighbourhood. The other two factors concerned the characteristics of the individual dwelling. One of these related to the Size and Cost of the dwelling; the other to the size of the lot (Front and Back yard).

Average importance factor scores, were calculated by averaging the reported ratings for the individual attributes (Table 5). Overall, housing unit characteristics (size and price) were most important, while the yard size was the least important. The Public Realm factor – which includes Neighborhood Appearance, Housing Styles, Housing Variety, Landscaping and Traffic – received the next highest ranking, followed by the Child Friendly factor (Recreation, Schools, Playgrounds and Sidewalks). With the exception of the Diversity factor (Housing Type and Housing Price variety, Living in a Neighborhood, Friendly Neighbors), which was more important to Cornell residents, there is no significant difference between the average scores for the sub-samples. N=81

TABLE 5: IMPORTANCE FACTOR AVERAGE SCORES

Factor	Bois Franc	Cornell	Sig.
Diversity	3.22	3.87	.000
Public Realm	3.78	3.95	.249
Child Friendly	3.70	3.69	.310
Accessibility	3.04	3.09	.809
House	4.26	4.29	.477
Yard	2.50	2.26	.477

5. Preferences for New Urban Characteristics

In addition to ranking the importance of these housing and neighborhood characteristics, respondents were asked to choose between three specific pairs of options regarding neighbourhood attributes:

- a mix of single family and multifamily housing, or all single family homes;
- a mix of housing and commercial uses, or only housing; and
- small home sites with abundant community spaces throughout the neighbourhood, or large lots and limited public open space.

For each choice, the first option is more consistent with principles of New Urbanism.

Bois Franc respondents indicated a preference for a neighbourhood with only single family housing and no commercial activities. They also favored large lots over community parks. These expressed preferences not only differ from New Urbanist ideals but they also differ from the community where they had purchased their homes, which consisted of multifamily housing with some single family homes on small lots. At the time of the survey, Bois Franc lacked retail facilities within its boundaries.

TABLE 6 PREFERENCE FOR NEW URBAN ATTRIBUTES

	Bois Franc	Cornell	Sig.
Single/Multi Family Mix	39%	67%	.021
Residential/Commercial Mix	30%	75%	.000
Small Lots, Common Green Space	15%	36%	.089

N=80

Cornell residents, on the other hand, moved to a development that was much more consistent with their preferences, one clearly more representative of New Urban ideals. A majority of Cornell survey respondents indicated preferences for variety in housing structure types and mixed land uses within their neighborhood. These results are significantly different than for the Bois Franc responses. A majority of Cornell respondents favored larger individual lots, rather than small lots and common green space, even though their neighborhood actually followed the opposite form.

There is an obvious incongruity between the housing and neighbourhood factors considered important in the search for a new home and the characteristics of the neighbourhoods where respondents had actually purchased a home, especially for Bois Franc residents. For these respondents, market conditions likely influenced their choice: there is little opportunity to purchase a new single family home in close proximity to the Montreal core is quite limited. Even though the Bois Franc units met only some of their preferences, it is clear that the ideal home was not available at a comparable location or price. For the Cornell sample, respondents had a range of new subdivisions with characteristics similar to Cornell. As a result, fewer compromises appear to have been necessary.

6. Satisfaction Measures

The survey asked respondents to rate their satisfaction with 15 specific aspects of their new home and neighbourhood. The factors receiving the highest average ratings are listed in Table 7.

TABLE 7: HIGHEST RATED SATISFACTION MEASURES

	Bois Franc	Cornell	Significance
Neighborhood Appearance	3.3	3.8	.011
Walkability	3.5	3.3	.181
Parks	2.9	3.5	.003
Access to schools	2.9	2.9	.886
Privacy	2.8	3.2	.009
House Size	3.0	3.4	.049

Neighborhood Appearance was the single attribute that garnered the highest average satisfaction rating, ranking first in Cornell and second in Bois Franc. Walkability was the highest rated variable in the Bois Franc sample, but the difference between the two means was not significant. On other measures, Cornell residents generally reported higher levels of satisfaction. Parking problems

experienced by Bois Franc residents (CBC, 2004), contributed to their significantly lower level of satisfaction on this measure. The lowest rating in each sample was for trails, not surprising in Bois Franc, since none were provided in the development at the time of the survey.

A factor analysis of these satisfaction ratings produced five factors, which together explained just over 70 percent of the variation in neighbourhood satisfaction. (Table 8.)

TABLE 8: SATISFACTION FACTORS

Factor	Variable	Loading	% of variance	Cumulative % of variance
Urban Design	Neighborhood Appearance	.780	18.166	18.166
	Parks	.737		
	Privacy	.569		
	Open Space	.691		
	Trails	.509		
Own House	House Size	.855	15.757	33.923
	Yard Size	.876		
Traffic	Parking	.800	15.545	49.468
	Congestion	.742		
	Vehicle Traffic	.770		
Access	Shopping	.783	11.905	61.374
	Schools	.732		
Walkability	Walkability	.899	9.026	70.399

Satisfaction with Public Transportation (relatively limited in both locations) did not load significantly with any other variable. For Cornell respondents overall satisfaction is highest for Urban Design and Walkability factors, both important New Urban touchstones (Table 9). Bois Franc residents reported lower average satisfaction levels for most factors, with the exception of Walkability factor, which had the highest overall rating for Bois Franc residents.

TABLE 9 AVERAGE SCORES FOR SATISFACTION FACTORS

	Bois Franc	Cornell	Sig.
Urban Design	2.66	3.27	.000
Traffic	2.42	2.96	.000
Access	2.44	2.78	.042
Walkability	3.50	3.27	.181
Own House	2.82	3.15	.107

N=81

There were significant differences between the two samples with respect to their satisfaction with Urban Design and Traffic, as well as the Access factor. In all three instances, the Cornell residents expressed a higher degree of satisfaction. Because Parking is included in the Traffic factor, the lower satisfaction levels in Bois Franc are not surprising.

Respondents were asked to provide a summary evaluation of both their new home and neighbourhood, on a scale of one to ten, with ten being the most favourable rating. Most respondents appear to be quite satisfied with their houses. Fewer than 20 percent of all respondents gave their dwelling a rating score lower than eight. Cornell residents were somewhat more likely to provide higher ratings for their homes, but the difference is not significant.

Assessment of the new neighborhoods were even more positive. Over 92 percent of all responses indicated a level of satisfaction of eight (out of ten) or higher. Bois Franc respondents reported the same level of neighborhood satisfaction as did the Cornell sample, about 8.5 in both instances. Residents of both Bois Franc and Cornell generally expressed greater satisfaction with their neighbourhood than with their house,

The summary satisfaction rating was regressed against the individual satisfaction measures to identify the elements making the largest contributions to the overall satisfaction level. A stepwise regression that included the individual neighbourhood satisfaction measures, demographic data and New Urban preferences was used. The summary measure of satisfaction with the respondent’s house was also included, but not the individual variables related to house or yard. The regression results for all respondents and for the two sub-samples generally explained more than half of the variance in the Neighborhood rating (Table 10 and Table 11). Each of the variables listed in Table 10 was significant at .05; they are listed in the order that they entered the regression equation. None of the demographic measures made a significant contribution; nor did either of the other two New Urban features, mixed land use and mixed housing structure types.

TABLE 10: REGRESSION RESULTS

	Total	Bois Franc	Cornell
Adjusted R ²	.669	.620	.575
	Parks*	Parks*	Trails**
	Walkability**	House Rating*	Public Transit**
	Trails*	Shopping*	Walkability*
	Parking**		Small Lot Preference*
	Vehicle Traffic*		
	Public Transit*		
	House Rating*		

**Sig. = .000 *Sig.=.05

TABLE 11: REGRESSION RESULTS

		Standardized Beta	t	Sig.
All Responses	Constant		12.957	.000
	Parks	.270	2.956	.005
	Walkability	.371	4.540	.000
	Trails	.228	2.387	.021
	Parking	.335	3.777	.000
	Vehicle Traffic	-.319	-3.343	.002
	Public Transportation	.282	3.243	.002
	House Rating	.215	2.511	.015
Bois Franc	Constant		5.094	.000
	Parks	.432	3.220	.003
	House Rating	.348	2.590	.016
	Shopping	.263	2.132	.043
Cornell	Constant		19.510	.000
	Trails	.707	4.994	.000
	Public Transit	.598	4.262	.000
	Walkability	.519	3.362	.001
	Small Lot Preference	-.330	-2.298	.031

7. Discussion

These findings provide some interesting insights into how household's view different attributes of New Urban communities. First, respondents indicated that they attached considerable importance to some of the neighborhood characteristics that are the touchstones of New Urbanism – variety in housing types, a pedestrian friendly environment and accessibility to commercial facilities. This is certainly an expected result since the respondents had elected to move to a development that incorporates many of these features. It would indeed be surprising if respondents did not attach importance to these attributes. Virtually all of the respondents had shopped new developments that lacked these New Urban characteristics, however.

But did their new housing choice in a New Urban development live up to their expectations? After an average length of residence of almost four years, respondents should be in a good position to meaningfully evaluate whether their new neighborhoods were adequate in meeting their preferences. Overall satisfaction with both house and neighborhood were not significantly different between the two developments, although satisfaction levels with a number of specific attributes of homes and neighborhoods were. Bois Franc residents reported lower levels of satisfaction with respect to most measures, including neighborhood appearance, open space, vehicle traffic, parking and congestion.

These differences may also be related to the faithfulness of the two developments in implementing New Urban principles. Bois Franc is much more of a New Urban "hybrid" than is Cornell. It includes a high proportion of multifamily housing (often with limited orientation to the public realm), limited commercial

facilities, a low proportion of green space (not all of which is public), and an almost total lack of public buildings within the community.

Cornell, on the other hand, is quite self-consciously New Urban and clear efforts have been made to ensure that New Urban criteria are maintained. Most of the housing there consists of single family homes and row houses, both of which directly relate to the street and the public realm. Land uses are mixed on the neighborhood level and the development of public buildings and open space is coordinated with the residential development.

Public transportation and jogging trails, for example, seem to contribute little to overall levels of satisfaction. Providing neighborhood shops and cafés concurrently with the initial residential development, as in Cornell, may not have a substantial effect on resident satisfaction or marketability of the development; later addition of these elements does not seem detrimental. Indeed, Bois Franc residents were just as satisfied with the walkability of their neighborhood, even though these potential destinations within the development were limited.

The lessons for local policy makers are similar – mandating the principles of New Urbanism is not the only way to provide an alternative to the typical suburban development paradigm. Models that depart from the strict canons of New Urbanism may be successful, so long as they provide high quality urban design, an attractive public realm and walkable neighborhoods. Much of the public's apparent aversion to small lots, for example, can be offset by careful attention to neighborhood appearance and a pedestrian friendly environment.

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8. REFERENCES

- Bois-Franc a S-L. (2006). *A new city style*. www.boisfranc.com Accessed November 25,
- Brindley, T. (2003). The social dimension of the urban village. *Urban Design International*. 8, pp.53-65.
- Calthorpe, P. (1993). *The Next American Metropolis*. Princeton Architectural Press: New York
- Campbell, C.C. (1976). *New Towns: Another Way to Live*. Reston Publishing Company: Reston VA.
- Carlson, K. (2006). Back to the future urbanism. *Canadian Geographic*. www.canadiangeographic.ca/Magazine/mj06/indepth/communities.asp
- Cervero, R. (1986). *Suburban Gridlock*. Rutgers University Center of Urban Policy Research: New Brunswick NJ,
- Congress for the New Urbanism. (2004). *Charter of the new urbanism*. www.cnu.org/aboutcnu/ .

- Downs, A. (1994). *New Visions for Metropolitan America*. The Brookings Institution: Washington DC,
- Duany Plater-Zyberk and Company. (2006). *Cornell Ontario*. (project tear sheet) <http://www.dpz.com/projects.aspx> Accessed December 9
- Duany, A. (2000). A New Theory of Urbanism. *Scientific American*. 283: 6. December.
- Duany, A., Plater-Zyberk, E. and Speck, J. (2000). *Suburban Nation*. North Point Press: New York,
- Gordon, D. and Vipond, S. (2005.) Gross Density and New Urbanism. *Journal of the American Planning Association*. 71(1): 41-54.
- HUD. (2000). *Principles for Inner City Neighborhood Design: HOPE VI and the New Urbanism*. HUD User: Washington,
- Jacobs, J. (1961). *Death and Life of Great American Cities*. Vintage Books: New York,.
- Katz, P. (1994). *The New Urbanism: Toward an Architecture of Community*. Print Vision: Portland OR,.
- Kunstler, J.H. (1993). *The Geography of Nowhere*. Simon and Schuster: New York,
- Langdon, P. (1994). *A Better Place to Live*. University of Massachusetts Press: Amherst MA,
- Moore, C.G. and Siskin, C. (1985). *PUDS in Practice*. ULI- The Urban Land Institute: Washington DC,
- Morrow-Jones, H., Irwin, E. and Roe, B. (2005). Consumer Preferences of Neotraditional Neighborhood Characteristics. *Housing Policy Debate*.. 5(11):171-202,
- New Urban News. (2002). *New Urban Projects on a Neighborhood Scale in the United States*. New Urban News: Ithaca NY,
- Ontario Ministry of Urban Affairs and Housing.(2006). *Places to Grow*. Toronto: Municipal Affairs and Housing,
- Putnam, R.D.(2000). *Bowling Alone*. Simon and Schuster: New York,
- Skaburskis, A. (2006).New Urbanism and Sprawl. *Journal of Planning Education and Research*. 25: 233-48.
- Steuteville, R. and Langdon, P.(2003.) *New Urbanism*. New Urban News: Ithaca, NY,
- Talen, E. (2000). Measuring the Public Realm. *Journal of Architectural and Planning Research*. 36(8): pp. 344-60.
- Town of Markham. (1995). Official Plan for the town of Markham Planning Area Amendment no. 5 (Municipal Housing Statement Study/Urban Area Expansion Study).
- Valpy, M. (2007). Cracks begin to show in Canada's suburban dream. *Toronto Globe and Mail*. March 18.