SUBSTANCE VERSUS STYLE: WHAT IS THE ROLE OF NEW URBAN DEVELOPMENT IN THE RESTRUCTURING OF METROPOLITAN RETAIL?

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1. INTRODUCTION

The intensification of urban growth in the US since 1900 has led to an increase in awareness of the role that urban form plays in energy consumption, public health, and sustainable development. Sprawling development patterns, in particular, have been heavily debated. City planners and government officials concerned with maintaining urban growth and minimizing sprawl have been presented with several growth strategies aimed to do just that.

New Urbanism has arisen as a prominent growth strategy advocated by many professional planners and governments. New Urban (NU) developments tend to address issues such as affordability, diversity, and automobile dominance by advocating mixed-use zoning, and a pedestrian orientation (Duany *et al.*, 2009). Formed in 1992, the Congress of the New Urbanism (CNU) recently celebrated its twentieth anniversary at CNU20 in West Palm Beach, Florida. These architects, planners, and urban theorists have become some of the leading names in sustainable growth discussions and developments across the country are being constructed using their ideas. As such, there has been considerable attention paid to these developments, from academic and professional researchers, concerning the benefits and harms of these development strategies (Bartlett, 2003; Lund, 2003; Rodriguez *et al.*, 2006; Johnson and Talen, 2008; Trudeau and Malloy, 2011).

In assessing the impact of these strategies on issues such as exclusivity and walkability, much of the focus has been on aspects of the residential sphere (*i.e.*, rental prices) and neighborhood design (*i.e.*, street networks) (Trudeau and Malloy, 2011; Handy, 1992 respectively). The retail environment has received very little attention in this same context (Bartlett, 2003). The retail environment contributes in important ways to how these developments function. However, a better understanding of the nature of retail activity in these developments is needed. This paper investigates the makeup of retail establishments in several NU developments in the Dallas-Fort Worth (DFW) metropolitan region of North Texas. The study then compares these developments with a variety of shopping center formats in the region to determine if these NU forms of development represent a true move away from automobile-oriented, single-use shopping centers. Thus, the study focuses on single, important question: do NU developments represent a true alternative to the predominant forms of retail development, or are they a clever "rebranding" of existing shopping center formats?

2. RETAIL AND NEW URBANISM

Little attention has been given to the role of retail in NU development. When mentioned, retail is generally referred to in unspecific terms and assumed to imply having the same arrangement of businesses (e.g. Berman, 2006). However, retail activity is not uniform. Many forms of retail clustering exist, from regional shopping malls to small neighborhood shopping centers (International Council of Shopping Centers, 2004). Each type of cluster or shopping center can be characterized by a variety of elements such as business mix, size, and primary trading area. This variability in shopping center arrangements has not been discussed

in relation to New Urbanism. Banai (1998) and Bartlett (2003) have provided the best discussion of this subject, yet they both focus on unique areas of the NU retail sphere.

Banai (1998) discussed the implications of NU development in regards to existing urban development and retail location theories. Specifically, he addressed the elements of two NU styles, Traditional Neighborhood Design (TND) and Transit Oriented Development (TOD), which exist when looking at three main theories: central place, bid-rent, and principle of minimum differentiation. Banai then provided his "typology of centers" which placed NU developments into two "models" describing elements that exist in older models of neighborhood and community center growth ("model 1") and those elements more representative of NU theory ("model 2") (1998, 181). This early assessment of NU retail ultimately argued that shifts in neighborhood design towards his "model 2," which began occurring before the prevalence of NU development, are a sign that changes desirable to the New Urbanists are likely to become the norm.

Bartlett (2003) provides a much more empirical look at NU retailing. However, his assessment was meant as a discussion on the effectiveness of small boutiques and convenience stores in an NU community, especially in regards to what he calls "walk-to shoppers" (1471). The 'popsicle test' of New Urbanism, where any child can safely walk to the nearby shop for a popsicle and walk home before it melts, is analyzed in a new manner. Instead of looking at the child, or his family, Bartlett looked at a new metric: "Can any store in Modern America survive by selling popsicles to 'walk-in' eight-year olds" (2003, 1473)? Bartlett found that stores in NU communities could not survive on walk-in trips alone and would require high-levels of drive-in customers in order to survive. He concluded that design of NU developments would have to adapt to this reality, inferring that to some extent concessions would have to be made regarding various aspects of the NU philosophy.

While little has been written about retail and New Urbanism, a large body of work does exist that discusses urban retailing (as Banai, 1998 discusses). This body of literature can provide meaningful ways of analyzing and evaluating New Urban retail in regards to theory (Turner, 2007) and empirical analysis (Lowe, 2005; Meltzer and Schuetz, 2012). If current retail activity is oriented to consumers in automobiles and favors big-box power centers then moving away from this style of development would suggest the need for new types of retailing activity. If the retail activity in NU developments is simply another manifestation of the predominant types of retailing then the overall goals of New Urbanism may be difficult to meet.

3. DATA AND METHODS

NU developments in the Dallas-Fort Worth Metroplex were identified from the 2008 Directory of the New Urbanism (New Urban News Publications, 2008), the Traditional Neighborhood Design "Town Paper" website (Town Paper, 2008), and the Congress for the New Urbanisms website (CNU, 2012). Developments identified in these sources were then held to specific criteria in order to be included in analysis.

As the primary goal of this paper is to investigate the nature of retail, every development used was required to contain retail stores. Additionally, the mixed-use nature of New Urbanism requires that all developments included in the study must have a residential component in addition to retail. Developments also had to be open and serving the public, if not already completed, in order to assess the retail space present in the development. In addition to geographic information, development size (acres), number of retail stores, and the area attributed to retail (square feet) were identified. A density measurement of stores per acre was also calculated. Twelve developments were identified in the DFW Metroplex using this approach (Table 1). The developments range in location from the downtown areas of Dallas and Fort Worth to suburban and exurban locations in the northeastern parts of the Metroplex (see Figure 1).

TABLE 1
NEW URBAN DEVELOPMENTS IN DALLAS – FORT WORTH

Dallas			Acres	Square Feet	Density	Code
	IF	32	10	178,000	3.2	MST
Fort Worth	IF	7	11	173,000	0.64	MPL
Fort Worth	IF	31	13	254,000	2.38	WSE
Colleyville	IF	20	24	133,644	0.83	VCY
Fort Worth	IF	4	25	130,000	0.16	SOS
Dallas	IF	54	40	150,000	1.35	WVL
Dallas	IF	18	75	130,000	0.24	VPK
Addison	GF	25	80	75,000	0.31	ADC
Southlake	GF	125	135	430,000	0.93	STS
Frisco	GF	18	140	500,000	0.13	FSQ
Plano	GF	77	150	300,000	0.51	LTC
The Colony	GF	7	1900	20,000	0.004	ARC
	Fort Worth Fort Worth Colleyville Fort Worth Dallas Dallas Addison Southlake Frisco Plano	Fort Worth IF Fort Worth IF Colleyville IF Fort Worth IF Dallas IF Dallas IF Addison GF Southlake GF Frisco GF Plano GF	Fort Worth IF 7 Fort Worth IF 31 Colleyville IF 20 Fort Worth IF 4 Dallas IF 54 Dallas IF 18 Addison GF 25 Southlake GF 125 Frisco GF 18 Plano GF 77	Fort Worth IF 7 11 Fort Worth IF 31 13 Colleyville IF 20 24 Fort Worth IF 4 25 Dallas IF 54 40 Dallas IF 18 75 Addison GF 25 80 Southlake GF 125 135 Frisco GF 18 140 Plano GF 77 150	Fort Worth IF 7 11 173,000 Fort Worth IF 31 13 254,000 Colleyville IF 20 24 133,644 Fort Worth IF 4 25 130,000 Dallas IF 54 40 150,000 Dallas IF 18 75 130,000 Addison GF 25 80 75,000 Southlake GF 125 135 430,000 Frisco GF 18 140 500,000 Plano GF 77 150 300,000	Fort Worth IF 7 11 173,000 0.64 Fort Worth IF 31 13 254,000 2.38 Colleyville IF 20 24 133,644 0.83 Fort Worth IF 4 25 130,000 0.16 Dallas IF 54 40 150,000 1.35 Dallas IF 18 75 130,000 0.24 Addison GF 25 80 75,000 0.31 Southlake GF 125 135 430,000 0.93 Frisco GF 18 140 500,000 0.13 Plano GF 77 150 300,000 0.51

^{*} GF = Greenfield development, IF = Infill development.

After developments were selected and screened, the businesses in each development were identified from directories found on each development's website. There is one important limitation with this approach, however. Businesses located in proximity to a development, but independent from it, are not listed on development websites. Using this method to assess accessibility or walkability may prove difficult as it could potentially ignore a grocery store located off-site but proximal to the development. However, this paper is only concerned with assessing the role that specific developments themselves play in the regional retail hierarchy.

Shopping center typologies were identified by the International Council of Shopping Centers (ICSC, 2012). The ICSC lists several types of retail clustering, from regional malls to community centers and big box power centers. Several developments that fall into these categories were identified through internet searches. Overall, six developments were used: two community centers, two neighborhood centers, a lifestyle center, and a power center¹. Additionally, stores identified in each development were classified and grouped with similar stores in order to better understand the types of stores and businesses located in NU developments (Table 2).

Once all relevant information was gathered, descriptive statistics were calculated for each development in order to provide an understanding of both the nature of stores within each development and the nature of these NU developments in DFW as a whole. The average number of stores, average acreage, and average square feet are all calculated. The most frequent types of stores, based on classification, are identified for each development. The same descriptive statistics are calculated for *greenfield* and *infill* stores in the study area². It is possible that either greenfield or infill NU developments possess unique forms of retail activity.

The analysis then compared these NU developments to the shopping center types identified by the ICSC in order to determine if they fall into an existing typology or if they are a new form of retail clustering. A Kruskal-Wallis H test is used to test the difference between

² Greenfield developments are those built on undeveloped land; infill are built on existing development.

¹ Center type definitions can be found at http://www.icsc.org/srch/lib/us_center_classificication.pdf.

NU and Non-NU retail clusters based on number of stores, acreage, the square footage of retail space, and the density of stores in each development. A Kruskal-Wallis test is also used to test between greenfield NU and standard retail clusters.

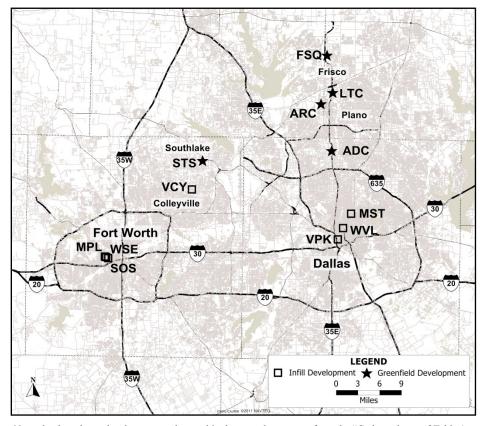


FIGURE 1 NEW URBAN DEVELOPMENTS IN NORTH TEXAS

Note: the three-letter development codes used in the map above come from the "Code" column of Table 1.

Mann-Whitney U tests were performed to test for differences between the frequency of stores, by classification, in NU and non-NU retail clusters. Parametric tests were not appropriate for this analysis considering the small number of developments used.

4. ANALYSIS AND RESULTS

Descriptive statistics calculated for NU developments in the Dallas – Fort Worth region show that, on average, developments are 217 acres in overall land area, with 206,137 square feet of retail space, and contain 35 retail businesses. Such averages have limited meaning, however, as the range for each variable is large (121 for stores, 1890 for acres, and 480,000 for square feet). Similarly, the non-NU retail clusters used in this analysis have much variance. However, despite these issues, the use of nonparametric statistics can provide some level of understanding of retail developments at the metropolitan level.

A Kruskal-Wallis H test was used in order to test for a significant difference between the number of stores, acreage, square feet of retail, and density between NU and non-NU retail clusters. No significant difference was found for the number of stores (H(2) = .564, p = .453), acreage of the developments (H(2) = 1.719, p = .190), and square feet of retailing (H(2) = 1.063, p = .303). Significant results were found in store density between the two groups (H(2) = 3.868, p = .049). Thus, NU developments in North Texas are not significantly different from more traditional retail clusters in the region when it comes to the number of stores, acreage, or square feet of retail space, but non-NU developments have a greater density of stores per acre than their NU counterparts.

TABLE 2 STORE CLASSIFICATIONS

tore Classification Types of Stores Included				
Alcohol and Tobacco	Cigar stores, liquor stores, bars with no food component, etc.			
Banking	Personal Banks			
Beauty	Salons, spas, barbershops, etc.			
Cleaners and Tailors	Dry cleaners, laundromats, tailors, etc.			
Convenience	Gas Stations, convenience stores, etc.			
Department	Traditional and "Big Box" department stores			
Entertainment	Movie theaters, bowling alleys, etc.			
Fashion	Clothing, jewelers, shoe shops, etc.			
Fitness and Health	Gyms, health stores, vitamin shops			
Grocery	National chain and local grocery stores			
Home	Home electronics, housewares, etc.			
Miscellaneous	Inherently diverse			
Outlet	Outlet stores or Membership Clubs			
Postal	Public and private postage businesses			
Restaurants and Bars	Fast food or dine-in restaurants, bars with food component			
Specialty Food	Ice cream, yogurt, other specialties			
Sporting	Sporting goods stores			

It might seem strange that the NU developments are not significantly larger than non-NU developments, since NU developments are not entirely retail. Residential and office space is mixed into the developments, leading to the assumption that the total acreage, at least, should be significantly different between the two types of development. Austin Ranch is an outlier among the study sites selected, as it sits on a 1,900 acre property. However, much of this development consists of open space, making it difficult to see at the outset what difference its inclusion might make to the analysis. To evaluate Austin Ranch's impact, a sensitivity analysis was completed that indicates Austin Ranch makes no difference to the study results in terms of acreage (H(2) = 1.222, p = .269), number of stores (H(2) = .254, p = .614), or retail square footage (H(2) = .647, p = .421). Store density was still found to be significantly different between the two types of development (H(2) = 3.273, p = .07). Since Austin Ranch does not alter the statistical results obtained, this development was included in all tests.

Kruskal-Wallis tests were also run to test for differences between greenfield NU centers and non-NU centers. There was no significant difference found between the number of stores (H(2) = .008, p = .927). Significant differences were found for acreage of the developments, but not for square feet of retailing (H(2) = 7.5, p < .01 and H(2) = .533, p = .465, respectively). The density of stores between NU and non-NU centers was significantly different (H(2) = 6.533, p = .01). Thus, on the whole, evidence is split as to whether greenfield NU developments are larger than non-NU retail clusters. Greenfield sites are perhaps more likely to include open space and larger office spaces than an infill development would, since physical space is less of an issue. This too could explain the difference in store density. While both types of developments are similar in size, the non-NU centers contain only retail and service businesses, however the greenfield NU sites also contain residential and office space.

With this in mind, Kruskal-Wallis tests were also run to determine if there were differences between the infill and non-NU developments. No significant differences were found between the number of stores and the size of retail space (H(2) = 1.479, p = .224 and H(2) = 1.003, p = .317, respectively). Additionally, no significant difference was found concerning acreage (H(2) = .020, p > .8) or store density (H(2) = 1.000, p = 3.17). NU infill developments are similar to non-NU clusters.

In order to go further, differences in store types were tested using Mann-Whitney U tests. With the exception of four classifications omitted for insufficient data (Alcohol and Tobacco stores, Banks, Grocery stores, Outlet stores, and Department Stores) no significant results were found (Table 3). The store classifications are not evenly distributed between NU and non-NU developments. Both types of retail development have stores that sell similar varieties of goods, yet the frequency of each type of store in the developments varies.

While these developments are not significantly different from one another when it comes to physical characteristics, the sample size is likely too small to provide a comprehensive view of development differences. The composition of store classifications provides a different view of these retail clusters. It allows for a better understanding of retail activity in NU environments. Differences in physical characteristics are likely to exist. Developments are all unique and even if many are similar, it is difficult to categorize based on those elements alone. The types of stores present in a development may provide a better understanding of the role played by a particular retail cluster.

TABLE 3
Mann-Whitney *U* Test Results

Classification	Mann-Whitney U	2-tailed Sig.	
Cleaners - Tailors	4.5	.823	
Fashion	24	.723	
Convenience	5	1.000	
Entertainment	2.5	.480	
Fitness and Health	7	.760	
Home and Electronic	11	.461	
Miscellaneous	5.5	.392	
Postal	1.5	.221	
Restaurants and Bars	36	1.000	
Salon and Barbers	32.5	.959	
Specialty Food	8	.554	
Sporting Goods	0	.046	

5. DISCUSSION

This paper provides an initial, overall profile of retail activity in New Urban communities at the metropolitan level. The analysis of store classifications between NU and non-NU developments provides an improved picture of the role that New Urbanism plays in metropolitan retail activity. Future work is needed to find if store classifications will be similarly distributed across NU and non-NU retail centers. If this is found to be an accurate assessment of NU retailing, New Urbanists will need to address the manner in which this retail activity impacts the principles of New Urbanism. As a method of growth management, New Urbanism means to combat urban sprawl and ought to focus on reducing automobile use and dependence. New Urbanism claims to do this, yet the extent to which NU developments differentiate themselves from traditional retailing clusters remains to be seen. This paper has demonstrated that developments in North Texas are not significantly different, in regards to either development size or retail composition.

The only significant results found between each development category were in the density of stores per acre. These differences were found between NU and non-NU developments and between greenfield NU and non-NU developments. That this difference does not exist between infill NU and non-NU may highlight an important characteristic of New

Urbanism. If NU developments are meant to include office, residential, and retail space then it is to be expected that there would be a difference in store density between these developments and ones that are similar in size but that mainly include retail businesses. Greenfield sites are perhaps more likely to include large amounts of office space than infill sites. Sites such as Legacy Town Center have considerable amount of office space compared to Mockingbird Station or West Village. It can be argued then that the lack of difference between infill developments and the shopping centers highlights the dominance of retail in NU spaces; however more research is needed in order to address this issue. Addressing how office and residential space can impact the development may be key in understanding the role of retail in these NU spaces.

The inclusion of residential units is one step towards a more sustainable form of urban and suburban development. However, as Bartlett (2003) suggests, the number of residents living within a NU development will not be enough to support many retail businesses. Without heavy subsidization, something not likely in most municipalities, retail businesses in these developments must compete with non-NU clusters for customers. Thus stores that draw in more revenue are attracted in order to provide niche shopping centers that offer a similar assortment of store types in a new form.

The ICSC itself recognizes this with its "Lifestyle Center" classification. These developments may be similar to New Urbanism in look and feel, but Lifestyle Centers make no attempt to achieve the social goals of the New Urbanists. Many of these developments are repackaged malls, developed with the decline of the shopping mall as the primary retail destination. It is important to note that the role of these NU developments in retail clustering is not fully established. Much work is still needed in order to provide a clearer picture of how this style of development functions with relation to other retail complexes. Future research might investigate the actual stores that occupy NU and non-NU shopping centers, seeking similarities and contrasts regarding branding and ownership. While it was necessary for this paper to compile a list of stores in each development, classification by store type was the best approach for this paper. Further analysis of the variety that exists in clothing store types, from high-end fashion such as JoS. A. Bank to more affordable options such as Old Navy, may provide an important window into the role and function of NU retailing.

Such investigation may complement further research, such as that carried out by Prater (2011) and Trudeau and Malloy (2011) that investigates the affordability and exclusivity of NU developments. If, as both papers found, NU developments are more expensive, and thus more exclusive, then a higher percentage of "high-end" NU retail centers may only cause to reinforce negative aspects discovered by NU research.

Additionally, more research is needed with regard to NU developments and transportation, following in the path set by Handy (1992) and Berman (1996). Automobile dependence is seen by many of the New Urbanists as one of the many harms of urban sprawl (CNU, 2000). However, if NU developments include substantial regional shopping functions, as opposed to a more local emphasis, they will likely maintain the same automobile-dominance that is found in a standard big-box power center (Buliung *et. al.*, 2007). If future work finds a close association between NU and non-NU retailing, it will become increasingly important for New Urbanists to address the issue of retailing and its relation to the social goals of the NU design strategy.

It should be noted that there are several limitations associated with the approach used in this paper. Primarily, time limitations did not allow for a more robust sample of non-NU retail clusters. Ideally, more non-NU shopping centers need to be used in order to provide the best assessment of these developments. There is a large population of non-NU shopping centers in Dallas-Fort Worth as well as all other major U.S. metropolitan areas, so future work should incorporate a larger pool of shopping centers so that more powerful statistical tests may be used to investigate differences between the two types of development.

Additionally, the lack of a clear "New Urban" definition creates issues with identifying developments that are truly "New Urban". The three sources used to identify NU developments all seem to use a different definition when it comes to what truly is an NU

community. While there is considerable attention paid to New Urbanism in the literature, a clear definition of what New Urbanism precisely entails is missing. The principles identified in the *Charter of the New Urbanism* (2000) provide a roadmap, but not a solid definition. A more precise and concrete definition of New Urbanism is needed, and could be a strong addition to future research. A better understanding of the NU design concept as a whole would allow for easier site identification and comparison, and ultimately allow for better NU research.

The inclusion of more variables, in the physical comparison, would likely give a better picture of differences between the two styles of retail clustering. Tracking the number of parking spaces per development may help isolate NU developments from regular developments, considering that the former is meant to be pedestrian-oriented. However, the form of development may not impact the number of parking spaces at all. Parking regulations, such as parking minimums, may impact the ability of a developer to do anything other than reenvision the layout of parking within a development. In fact, the West Village New Urban development, a few miles north of downtown, includes a multi-story parking garage in the middle of the development. This removes the space requirement that massive surface parking requires and allocates that space for more dense construction than a big-box power center. Investigating this aspect of developments may provide additional insights.

6. CONCLUSION

The basic finding of this investigation is clear: New Urban developments in Dallas-Fort Worth have not represented a substantially different alternative to currently predominant forms of retail development. However, this finding does not mean that New Urbanism as a concept is unable to provide such an alternative. As this work represents only an initial step toward a better understanding of New Urbanism and the retail sector, more research is necessary to determine the actual range and impact of New Urbanist planning applications. More robust sampling of non-NU developments can potentially help develop a better understanding of NU retailing. Additionally, focusing on the actual stores that exist in NU developments may provide a better look at the consumer markets served by these communities. As city planners and local governments look to understand the problems of urban sprawl, a better understanding of prescribed solutions will prove invaluable.

Thus, much work is left to be done to come to a comprehensive understanding of the role that NU developments play in metropolitan retailing. A clearer picture of NU retailing can highlight changes in the NU paradigm that may be needed in order to more effectively reduce automobile-dependence and sprawling development. Changes such as that may ultimately help city planners and government officials evaluate growth patterns that may affect energy consumption, public health, and urban sustainability.

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