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Urban morphology and social attachment: A Comparative analysis of a traditional and conventional Suburban neighborhood in case of Yeka and Lideta sub-city in Addis Ababa.

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Abstract

Neighborhood's social attachment is a central element of city design and practice; however social values are neglected by planners and other professionals in many urban centers. Ethiopia has embedded on urban planning initiatives at the early. To this end, Addis Ababa has taken a lead role in ensuring sustained urban growth through preparing urban schemes at different levels that promote social sustainability. One of the principles emphasized in all plan is promoting and maintaining a social attachment in settlements. It is not clear how this principle is translated in to urban morphology in traditional and conventional settlement. This study carried out a comparative analysis of two types of settlements, namely traditional (Lideta sub city woreda 8) and conventional (Yeka sub city woreda 13) to determine the nature and extent of how urban morphology in relation to social attachment. The sites were selected purposively based on the principle of traditional and conventional stratification. To measure the effect of urban morphology on social attachment, a random sample of residents in these two neighborhood sites were surveyed. All in all, several of the research findings support the hypothesis that urban morphology, characterized by two distinct land development patterns, affects both the physical and social realms of social attachment for neighborhood residents. The neighborhood residents were characterized by elements of traditional urbanism with a greater social attachment than those in the neighborhood characterized by a conventional urban development pattern.

Key words: *social attachment, urban morphology, urban planning,* social realms

1. Introduction

Traditional urbanism or neighborhood development and New Urbanism primarily consider the relationship of the community's social and psychological aspects in the context of the community and the neighborhood as a whole (Altoon and Auld 2011; Roorda 2012). Not surprisingly, then, *"the social doctrine of New Urbanism is integrated with the social community formation science literature"*. A social attachment is foundational in the social and physical realm, being an essential contributor to membership, commitment, and mattering in a neighborhood context. Yet this is not a static approach: as community members share history, public places, and experiences,

values evolve and so do other external influencers, such as commerce, transportation, specialization of professions, and economics.

Thus, a social attachment is defined by community members' sense of place. Indeed, "programming for local communities and value of public place that has more priority to these communities must support the feeling of local life." Sense of place as a concept of community comprises physical setting as well as activities linked to this setting and the subject's conception of this setting (Farkisch, Che-Ani et al. 2011; Stevenson 2013). A social attachment, for its part, comprises two main aspects: a sense of social belonging and a sense of place belonging.

Urban planning seeks to define the role of urban professionals in struggling to maintain physical community while at the same time striking a balance between social communities (Talen, Emily, and Cliff Ellis. 2001). Whereas urban plan has demonstrated stronger normative vision, the challenge remains that of failure to that in to consideration larger public concerns that create a strong social attachment in traditional and conventional neighborhoods.

According to Jane, Jacobs (1961: 6) many urban areas fail to grasp the concept of social attachment that shall shape public as well as the perception of planners about sustainable neighborhoods. The current model of planning relies too little upon the accomplishments of successful city building examples of the past. The default setting for city building fails because it institutes a particularly extreme and sterilizing separation of land uses while simultaneously producing visual and functional disorder.

Current day design focuses on auto depending and fragmentation of land use which remit in sprawl (Ellis, Cliff. 2002). This does led to stagnation of policies and practice which has hindered the planning of neighborhoods and communities with strong social attachment. The current commonly implemented urban design that encourage sprawl and low density those series impact on how communities will survive (Freeman, 2001).

Talen (2001) suggested that the failure by planners to more away from the normative principles and standards has resulted in deteriorating social lives in urban centers. The settlement form and its qualities are increasingly being ignored (Lynch, 1981). This is attributed to failure to move away from habitually ineffective real estate regulation and policies. According to Duany (2005) human scale has been ignored. There is also lack of commitment from planners to decide which mode of city building brings about greater social attachment (Ellis, 2005). According to Kim and Kaplan (2004) neighborhoods social attachment is a central element of city design and practice, however social values are neglected by planners and other professionals in many urban centers (Talen,2001; Talen and Ellis, 2001). Ethiopia has embedded on urban planning initiatives through at the early. To this end, Addis Ababa has taken a lead role in ensuring sustained urban growth through preparing urban schemes at different levels that promote social sustainability.

Proximity to major cities, urban transformation, and general region all influence community growth and change. The social attachment of the local area depends on how the street matures environmentally, socially, culturally, and economically. As forms affect community members' perceptions of a city, multiple dynamics of cognitive and physical interactions create experiences, memory, and meaning in the space (Farkisch, Che-Ani et al. 2011). Traditional urban spaces' transition hierarchically from macro to micro depends on the local community, attention from pedestrians and other mobile entities, social identification, and community identity (Farkisch, Che-Ani et al. 2011).

The elements that define sense of community are somewhat disparate, but there is sweeping consensus amongst academic disciplines that sense of community is embedded in either the social or physical realm, or a combination of the two. There is, nonetheless, an ever-increasing interest in the role that sense of community plays in the social and built environments. Kim and Kaplan (2004) found that neighborhood sense of community is positively impacted by traditional urbanism and affiliated community design practices. Nelessen (1994) maintains that our basic intuitions and common sense seek a sense of community. Building from scratch, redeveloping, or revitalizing a portion of a community, according to Lynch (1981), can stimulate or create a sense of community. Properly manipulating the built environment can invigorate people, leading to better communities and an increased sense of community.

Although city planning should be primarily attentive to the physical elements of communities, the study and integration of social research can assist planners and inform policies that influence and shape the built environment. In addition, conducting careful, rigorous studies can help planning scholars shed light on how the environments we build. Shape our society; ultimately this knowledge can be used to achieve more livable communities (Freeman 2001).

One of the principles emphasized in all plan is promoting and maintaining social attachment in settlements. It is not clear how this principle is translated in to urban morphology in traditional and conventional settlement. This study seeks to carry out a comparative analysis of two types of settlements, namely traditional and conventional to determine the nature and extent of how urban morphology in relation to social attachment.

2. Materials and Methods

Research Design: This study employed two research designs (descriptive and explanatory research methods) to get information on how urban morphology affects a social attachment. The descriptive research type helped to identify the observed reality on the social and physical environment of the study area. It also helped to answer how urban social attachment is affected by urban morphology. The explanatory type helped to answer and determine why a social attachment was affected.

Research Approach: In this study, both qualitative and quantitative research approaches were adopted because a mixed research approach is useful to capture the best of both qualitative and quantitative approaches. Qualitative approach contributed to the understanding of the interests, opinion and attitudes of respondents towards a social attachment. On the other hand, quantitative description was met to compare the difference and similarities between selected neighborhoods.

Sampling Frame: According to 2007 population and housing census of CSA the total population of the selected site was estimated to 4135 and the average household family size are five people per household Addis Ababa city. The selection of the sample households was carried out based on the criteria that fulfill the concept of traditional and conventional neighborhood. Thus, the lists in the records of households in administrative units were used as sampling frame.

Sampling Unit: The sample units of this study were the households in the existing neighborhood of the two selected woredas which were selected by stratified random sampling method.

Survey Procedures: The subject population for the research survey was chosen using a stratified random sample in which approximately 39 percent of the households in each case study neighborhood were selected. Random selection, according to Elmes, Kantowitz and Roediger (1999), is an ideal that is rarely attained because it is extremely expensive and time consuming to

try to sample an entire population. And because individuals vary in many ways, it can be assumed that the population of possible scores in a research project can vary in a random way (Elmes, Kantowitz and Roediger 1999).

Surveyed residents in each neighborhood received a letter of introduction discussing the survey and researchers, and the survey instrument. Recipients were ensured that the results of the survey were confidential in the letter of introduction and were asked to have one member of the household over eighteen years of age fill out the questionnaire. The Lideta neighborhood surveyed consisted of 429 households and surveys were sent to a total of 167 randomly selected recipients (stratified random sample). The Yeka neighborhood consisted of 399 households and a total of 156 surveys were sent to random residents. Residents completing the survey were asked to return it within one week of receipt. A number of the surveys received by the author were returned after the one-week deadline.

Survey of the Neighborhoods: The survey instrument used in this research was designed to assess the role of the physical characteristics of the two neighborhoods (Lideta woreda 8 and Yeka woreda 13) as factors of the residents' social attachment. Although surveys included the same attributes, residents of Lideta were asked questions that only pertained to the traditional urbanist neighborhood in which they reside. The physical characteristics analyzed include aspects of architectural style (i.e. design quality of housing), site development (i.e. block size), circulation (i.e. street width), amenities (i.e. clubhouse), and site design (i.e. layout of the neighborhood).

Social attachment as it relates to neighborhood safety was also analyzed. The questions were phrased in terms of degree of agreement on a 5-point Likert scale for the sake of comparison. Finally, the survey included questions regarding the frequency of walking behaviors, the importance of certain factors in residents' decisions to move to their neighborhood, and demographic questions. The questionnaire concluded with an open-ended question that asked for any additional comments regarding the neighborhoods.

Source of Data: Both primary and secondary data type was used. The primary data was from respondents of the two neighborhoods through questionnaire and site observation. The secondary data types were from reference books, journals and different published and unpublished documents related to the study, internet, annual report of municipality and proceedings.

Method of Data Collection: In this study there were two types of data collection methods. Firstly, questionnaire, which consisted of closed ended and open ended were developed based on the objectives of the research question of the study. The questionnaire was translated into local language (Amharic) of the respondents. Secondly, field observation was done. This method was preferred because it enabled the researcher to see physical forms of the neighborhoods such as road networking, housing types and etc.

Techniques of Data Analysis: The research takes account of a co relational analysis of survey data from the two neighborhoods (Yeka and Lideta) and a comparative case study. Residents were provided with a survey that measured the social and physical dimensions of social attachment as it relates to their respective neighborhoods. The research sought to clarify the relationship patterns the neighborhoods by analyzing physical attributes of Yeka and Lideta, as well as the residents' interaction and feelings regarding their built environment.

Data Presentation: The qualitative data that indicate opinion and suggestion of respondents were summarized in the textual form and spatial data were presented by tables and charts.

3. Results and Discussion

3.1 Similarities and Differences between Neighborhoods

3.1.1 Similarities between Neighborhoods

Samples in Lideta and Yeka are comparable with regard to a number of key demographics, for example, both samples have similar characteristics in terms of gender, average age, education, race, marital status, children, household size, work status, and home ownership status. In particular, both samples are very similar regarding gender, education, race, and household size. Generally, these demographic outcomes support the suitability of comparing these two neighborhood samples.

Table 1 Overall demographic comparison

Question		Yeka woreda 13		Lideta woreda 8	
Gender	Male	50	40%	68	49%
	Female	75	60%	78	51%
	Total	125	100%	140	100%
Average age	Under 20	0	0.0%	0	0.0%
	20-29	0	0.0%	6	4.3%
	30-39	66	52.8%	100	71.43%
	40-49	1	0.8%	21	15%
	50-59	41	32.8%	8	5.71%
	60-69	17	13.6%	4	2.86%
	70-79	0	0.0%	1	0.0%
	80 above	0	0.0%	6	0.0%
Education	Less than high school	0	0.0%	4	2.86%
	High school	0	0%	5	3.571%
	Diploma	38	30.4%	56	40%
	Degree	64	51.2%	71	50.71%
	M.A/MSC+	23	18.4%	4	2.86%
Ethnicity	Oromo	0	0%	17	12.143%
	Amhara	23	18.4%	54	38.571%
	Tigre	101	80.8%	26	18.571%
	SNNP	1	0.8%	39	27.86%
	Others	0	0.0%	0	0%
Marital status	Married	72	57.6%	112	80%
	Single	53	42.4%	28	20%
Children	No	71	56.8%	77	55%
	Yes	54	43.2%	63	45%
Internet service	Yes	40	32%	11	7.86%
	No	85	68%	129	92.143%
Occupation	Work full time	68	54.4%	112	80%
	Work part-time	0	0%	0	0%
	Retired	10	8%	6	4.286%
	Self-employed	32	25.6%	17	12.143%
	Volunteer work	0	0%	0	0.0%
	Student	2	1.6%	2	1.43%
	Homemaker	13	10.4%	3	2.143%
Job location	Home	27	21.6%	9	6.43%

Question		Yeka woreda 13		Lideta woreda 8	
	Elsewhere in A.A	98	78.4%	131	93.6%
Mode of transport to work	Walk	0	0.0%	8	5.71%
	Car	81	64.8%	5	3.6%
	Bus	20	16%	95	67.86%
	Bajaj	0	0.0%	0	0.0%
	Train	24	19.2%	32	22.86%
Annual income	Under 40,000 birr	0	0.0%	6	4.3%
	40,000-59,000 birr	0	0.0%	9	6.43%
	60,000-79,000 birr	11	8.8%	74	52.9%
	80,000-99,000 birr	22	17.6%	10	7.143%
	100,000-149,000 birr	20	16%	39	27.86%
	150,000 or more	72	57.6%	2	1.43%
Number of years in this house		10 years		2 years and 4 months	
Number of years in the neighborhood	Less than a year	0	0.0%	1	0.714%
	1-2 years	0	0.0%	3	2.143%
	3-5 years	0	0.0%	5	3.6%
	Indefinitely	64	51.2%	119	85.0%
	Don't know	61	48.2%	12	8.6%
Housing type	Single family	125	100%	0	0.0%
	Condominium	0	0.0%	140	100%
	Apartment	0	0.0%	0	0.0%
	Town home	0	0.0%	0	0.0%
	Other	0	0.0%	0	0.0%
Ownership status	Own	121	96.8%	98	70%
	Rent	4	3.2%	42	30%
Do you plan to move within neighborhood	Yes	3	2.4%	7	5%
	No	120	96%	118	84.3%
	Don't know	2	1.6%	15	10.71%
Frequency of access to website	Daily	51	40.8%	1	0.714%
	Several times a week	45	36%	1	0.714%
	Weekly	24	19.2%	6	4.3%
	Monthly	4	3.2%	39	27.86%
	Rarely	1	0.8%	33	23.6%
	Never	0	0.0%	60	42.86%

Source: Field survey (2018)

3.1.2 Differences between Neighborhoods

In the two neighborhoods (Lideta woreda 8 and Yeka woreda 11), settlement have several differences in terms of reviewing the demographics characteristics of respondents. These differences broadly grouped categories provide a closer examination of disparities that exist among the samples, including: age cohorts, method of transportation to work, income, length of residence, and community partiality items. Even if the average age within the two samples is somewhat similar, since larger number of average age of the two settlement lies between 30-39 years.

A casual observation of the neighborhoods suggests that there are a higher number of young professionals living in Lideta, as well as a larger amount working elsewhere (not at home) in Addis

Ababa. These findings suggest the likelihood that the younger population in Lideta is employed. These jobs are located closer to Lideta and provide higher salaries. From the two neighborhoods there are no respondents whose age is above 70. The method of transportation to work varies considerably between the neighborhoods. Of the one hundred and twenty five (125) responses received from the Yeka sample, 81 of them used their automobile to travel to work while 20, 24 of them used Bus and Train respectively. Nearly 95 (67.86%) of the Lideta residents traveled to work by bus, while 20 (16%) of Yeka resident reported traveled to work by Bus. These results are likely due to the fact that the Lideta neighborhood is closer to transit stops, as well as within relatively easy walking distance to retail establishments.

Another notable variation between the samples is average household income. According to the surveys, 74 respondents (52.9%) of the Lideta households had an average annual income of between 60,000-79,000 Ethiopian birr (local currency), compared to just Yeka whose household annual income is 150,000 according to 72 (57.6%) respondents' responses. The income disparity may be due to higher paying jobs for the Yeka residents. The other difference of the two settlements goes back to average length of residence. Yeka residents have lived in their households, on average, 10 years longer than Lideta residents. Although Lideta residents have resided in their homes for almost a year less, the Yeka neighborhood has existed for nearly 10 years longer compared to Lideta respondents those who stay 2 years and 4 months in the house. Regarding expected years of stay within the neighborhood, nearly 119 (85%) of the Lideta residents expected to stay "indefinitely", while only 64 (51.2%) of the Yeka residents has plan to stay "indefinitely". Only 7 (5%) of the Lideta sample indicated that they planned to move within their neighborhood, while 3 (2.4%) of the Yeka residents expressed the willingness to do the same.

Table 2 Differences between Neighborhoods

		Living in Yeka or Lideta gives me social attachment			Persons Chi-square		
		Agree	Neutral	Disagree	Value	Df	Asym.sig
Gender	Male	57.14%	28.57%	14.29%	4.386	2	0.112
	Female	83.30%	6.67%	10.00%			
Income	<100.000/year	100%	0.0%	0.0%	2.463	2	0.292
	>100,000/year	72.70%	18.20%	9.10%			
Presence of child	Children	90.90%	0.0%	9.10%	2.447	2	0.294
	No children	71.40%	19.00%	9.50%			
Age	<40 years old	76.92%	15.38%	7.69%	0.928	2	0.629
	>40 years old	72.22%	11.11%	16.67%			
Education	<high school education – college degree	66.67%	16.67%	16.67%	2.151	2	0.341
	Advanced degree	85.00%	10.00%	5.00%			

Source: Field survey (2018)

Generally, an analysis of community website access shows a marked difference between the two neighborhoods. Yeka residents had a much greater frequency of accessing their site, with almost opposite results in Lideta. According to the demographic analysis of differences between the neighborhoods, Yeka residents seemingly had a greater interest in sustaining and/or maintaining the physical and web-based connections that they have established in their neighborhoods.

4.2 Demographic characteristics

Considering the demographic disparity between the two samples, statistical analysis correlating the independent variables to the dependent variable was performed to ensure any significant relationship was due solely to neighborhood characteristics and not demographic variability. Therefore, a cross tabulation assessing social attachment based on five key demographic variables was used to determine if a level of significance within the combined neighborhoods existed. The demographic variables that were analyzed included: gender, age, education, the presence of children, and income. The variables were cross tabulated which addressed two sub-questions relating to residents' social attachment. The first sub-question, "living in Lideta or Yeka gives me a social attachment", tapped the overall social attachment of neighborhood residents.

The second sub-question asked more specifically whether the physical characteristics of the neighborhoods gave the residents a social attachment. A review of the following table illustrates that the analyzed demographic variables were not significant. The absence of any significant relationship within the analysis ensured that any disparate levels of social attachment are due to variables other than demographic characteristics. Therefore, the null hypothesis that the any of the cross tabulated demographic variables had a significant effect on social attachment can be rejected.

Table 3 Selected Demographic characteristics and physical social attachment

	Physical characteristics Yeka or Lideta gives me social attachment			Persons Chi-square		
	Agree	Neutral	Disagree	Value	Df	Asym.sig
Gender	Male	71.43	14.29	14.29		
	Female	70.00	16.67	13.33	0.043	2 0.979
	<100.000/year	85.71	14.29	0.00		
Income	>100,000/year	69.70	15.15	15.15	1.268	2 0.531
Presence	Children	90.91	0.00	9.90		
of child	No children	71.43	19.05	9.52	2.447	2 0.294
	<40 years old	65.38	23.08	11.54		
Age	>40 years old	77.78	5.56	16.67	2.49	2 0.288
	<high school	62.50	20.83	16.67		
Education	education – college degree				1.635	2 0.442
	Advanced degree	80.00	10.00	10.00		

Source: Field survey (2018)

4.2 Social attachment

The question used to assess any potential demographic relationship to social attachment was also used as one of the primary questions in the survey to analyze the social attachment level at neighborhood level among residents. An analysis of table 4.3 provides a comparison of the responses by participants in Lideta and Yeka to the direct question about their social attachment. Both sub-questions comprising social attachment displayed significant results and Lideta residents rated the importance of the sub-questions to social attachment considerably higher than Yeka residents.

The focus of the survey was narrowed to include social attachment questions in two most important questions for the overall social attachment analysis in the discussion section.Although available resources, or sample size, was an issue, chi-square tests were met in the research with significant

results, 92.30% of Lideta respondents felt that it was important compared to 75.00% of Yeka respondents. When asked whether the physical characteristics of their neighborhood gave them a social attachment 88.50% of the residents in Lideta rated it as important, while only 70.50% of those in Yeka felt the same.

Table 4 Social attachment contingency and significance.

Items	Yeka			Lideta			Person chi-square		
	Important	Neutral	Not important	Important	Neutral	Not important	Value	df	Asym.sig
Living in this neighborhood gives me a social attachment	75.00%	13.60%	3.80%	92.30%	3.80%	1.40%	10.166	2	0.006
Physical characteristics of the neighborhood give me social attachment	70.50%	15.90%	13.60%	88.50%	7.70%	3.80%	10.089	2	0.006

Source: Field survey (2018)

Analysis of Social attachment Components

The survey also included 14 components exploring the hypothesized components (characteristics) for the four major senses of community domains. Neighborhood residents were asked to indicate "how important these characteristics are important to social attachment in their neighborhood." The same question series also included a number of physical characteristics of the neighborhoods, as well as an item regarding safety. An examination of Table 4.4 is arranged first by analyzing significant variables or characteristics, followed by an analysis of non-significant variables. Although the survey instrument used a 5-point Likert scale, cross tabulation of the results required a collapsed scale to assess 3 levels of significance: important, neutral, and not important.

Although there is likely variability in the overall understanding of the social attachment concept among survey respondents, it is assumed that residents have a basic knowledge of the concept community concept among survey respondents; it is assumed that residents have a basic knowledge of the concept.

Significant Characteristics: Each of the four senses of community domains (community attachment, pedestrianism, social interaction and community identity) contains several sub-components, of which, at least one in each domain was found to be significant according to a cross tabulation of the data. A finding of significance for the components on the contingency table is necessary prior to rejecting the null hypothesis and using the neighborhood responses to support the hypothesis. The following discussion analyzes each significant component as they relate to each social attachment domain, as well as safety and five distinct physical characteristics.

Of the three components included in the community attachment domain only one was found to be significant. Architectural features reflecting local character or tradition (or continuity) was the lone significant variable. While 84.60% of Lideta respondents ranked the component as important to

their social attachment, only 68.20% did the same in Yeka, reflecting the importance of architectural features to community attachment in Lideta.

The pedestrianism social attachment domain also included three components, two of which were found to be significant. "Community or local services within walking distance" was found to be important to 92.30% of Lideta respondents, while only 74.40% of the Yeka sample found it to be important. This score was among the more highly rated items in Lideta, signifying its overall importance of local services within walking distance to the neighborhood.

The next significant variable within pedestrianism, "public transit near the neighborhood", showed a marked difference of importance between the two neighborhoods while only 53.20% of the Lideta respondents found this component important, 34.60% of the Yeka sample felt that it was important to their social attachment. According to Fatima Hassans, an engineer for the Msheireb district development project, New Msheireb saw a 2°C decline by placing public fountains in built-up pedestrian areas. Green spaces promote social gatherings and pedestrian interactions while boosting environmental sustainability and a sense of well-being. The combination of water features with planted space is more effective still (Pradhan 2012). Public transit, by far, was the lowest ranked component on the contingency table, indicating that this is least important to residents' social attachment and it is likely that residents in both neighborhoods use transit minimally. This is despite the fact that public transit (bus, commuter bus, and rail) is readily accessible from both sites.

The social interaction domain is covered by four components (chance encounter with residents from other section, caring of other residents, interaction with next door neighbor and participation in community activities) one of which was found to be significant. "Participation in community activities" was the lone significant variable within its domain even though it received the lowest rating of importance in Yeka. An interpretation of the contingency table shows that Lideta respondents found this characteristic of their neighborhood important at nearly three times the rate of the Yeka sample (75.50% versus 22.20%). This score reflects the nature of the neighborhoods, in that Lideta offers many more community activities, thus creating an environment for social interaction and the development of social attachment.

The final social attachment domain is community identity. This domain is represented by four components, three of which were found to be significant. Consistently, Lideta respondents rated the components as important to their social attachment. The first component, "distinctive physical character of the neighborhood", was nearly twice as important to Lideta respondents as those in Yeka. Likewise, "sense of pride" was shown to be highly important to a vast majority of Lideta respondents compared to Yeka. The highest-ranking component within both neighborhoods pertained to fit. The component, "feeling that a good fit exists between you and your neighborhood", was again ranked considerably higher in Lideta than in Yeka. This score was among the more highly rated items in Lideta, signifying its overall importance to the residents' social attachment. The survey also attempted to tap safety and a series of physical features as they relate to social attachment in addition to the analyzed domains.

Non-Significant Characteristics: Thus far, the analysis of survey results has focused on characteristics that were found to be significant amongst the neighborhoods. However, the fact that certain variables were not significant may also have bearing on the interpretation of this research. The following discussion focuses on key non-significant characteristics that were otherwise supported by the review of literature.

Prior to the results of the survey, it anticipated that a number of important domain components would provide significant results, thus the ability to analyze the results on the contingency table, however, this was not the case. Foremost among these variables was "walkability of the environment". One of the underlying principles of a traditional urbanist community such as Lideta is the ability of residents to walk between a mix of land uses, as well as within the numerous and accessible open spaces. Although Lideta residents ranked the importance of this variable higher than those in Yeka, no relationship was found between walkability and residents social attachment.

Another characteristic that the cross tabulation confirmed to be non-significant fell within the community attachment domain. "Satisfaction with the overall quality of the physical environment" showed no correlation to residents' social attachment. A major difference between a conventional suburban development, such as Yeka, and a traditional urban neighborhood like Lideta pertains to the inherent physical characteristics of the built environment. Physical characteristics of traditional urban communities, according to New Urbanist's, are meant to promote social attachment; however, no relationship was found in this study (Congress for the New Urbanism 2000).

Similarly, none of the five physical features analyzed in the cross tabulation were found to be significant. Again, these are some of the key features found in traditional urban developments: favorable block sizes, mixture of housing, street layout and porches. The finding of no significant relationships was surprising considering the review of literature and the seemingly favorable benefit to social attachment that these characteristics provide.

Testing of the Hypothesis: All in all, several of the research findings support the hypothesis that urban morphology, characterized by two distinct land development patterns, affects both the physical and social realms of social attachment for neighborhood residents and the residents of the neighborhood characterized by elements of traditional urbanism possess a greater social attachment than those in the neighborhood characterized by a conventional urban development pattern. The following discussion analyzes the focused upon social attachment questions that were proven to support the hypothesis.

Results in question, which directly assessed residents' social attachment, Lideta residents perceived their neighborhood as contributing to a greater social attachment than Yeka residents. Respondents in both neighborhoods ranked "living" in their neighborhood higher than "physical characteristics" as a contributing factor to social attachment. However, Lideta respondents consistently considered the characteristics of their neighborhood as important over the Yeka respondents. Therefore, both of the findings in question support the hypothesis that the elements of a traditional neighborhood (Lideta) contribute to a greater resident social attachment than the conventional suburban development (Yeka).

The other key question series used to assess neighborhood residents' social attachment question that analyzed social attachment as a series of domains and subcomponents. Out of the 14 domain subcomponents, 7 have a significant relationship to social attachment and respondents in Lideta rated all significant items more highly than participants in Yeka. The significant differences suggest that each of the domains of social attachment is perceived as more salient in Lideta.

The two significant variables ranked the highest amongst other subcomponents were in the pedestrianism and community identity domains. "Community or local services within walking distance" (pedestrianism domain) was found to be important to nearly all respondents in Lideta, and far exceeded the level of importance to the Yeka neighborhood. This relationship was

anticipated due to the close proximity of services to the residents of the traditional urbanist neighborhood (Lideta).

The "feeling that a good fit exists between you and your neighborhood" (community identity domain) was also highly rated by Lideta residents and exceeded the importance to Yeka residents by nearly a 30 percentage points. According to the reviewed literature, fit with a neighborhood can be characterized by either a social or physical connection. A positive relationship between fit, or community identity, and social attachment provides support for question and the hypothesis. The hypothesis was also supported by the community attachment and social interaction domains. Although the importance of the subcomponents were not ranked as highly within these domains, the ones that were found to have a significant relationship to residents' social attachment were consistently ranked higher in Lideta than inYeka.

Although the physical characteristics were not shown to have a level of significance, many of the socially-oriented variables that were rated as highly important to Lideta residents are directly affected by the physically built environment. For example, "community or local services within walking distance" was a significant variable pointing to the importance of the subcomponent to Lideta residents, but "block size" was not significant. However, "community or local services within walking distance" is a manifestation of the physical subcomponent of "block size". Therefore, it appears as if residents are more responsive to the manifestation of physical components (services with walking distance) than the physical component (block size) itself. Certain methods of neighborhood development provide favorable conditions for social interaction, which through the review of literature and on the contingency table, are found to contribute to social attachment.

In general, analysis of the research provided significant results for the comparison of Lideta and Yeka. Cross tabulating independent variables, which represent a range of social and physical characteristics for both neighborhoods, with the dependent social attachment variable revealed support for the hypothesized relationship. As forms affect community members' perceptions of a city, multiple dynamics of cognitive and physical interactions create experiences, memory, and meaning in the space (Farkisch, Che-Ani et al. 2011). Traditional urban spaces' transition hierarchically from macro to micro depends on the local community, attention from pedestrians and other mobile entities, social identification, and community identity (Farkisch, Che-Ani et al. 2011).

Questions examined the direct social attachment residents' felt from living in and experiencing the physical attributes of their neighborhood. Both sub-questions within the series produced highly significant results. Lideta residents exhibited a greater social attachment than Yeka residents by a significant margin. "Through providing a pedestrian-friendly environment for increasing residents' face-to-face opportunities and casual social interactions between neighbors, developers and planners in the U.S. have adopted New Urbanist (NU) development strategies seeking to return to the design of the early transitional neighborhoods to enhance the sense of community (SOC)"(Tsai 2014) considering the relation, Sikka, the old streets of Arabian cities, were narrow and twisting, lightly covered to lower temperatures. Modern city networks, however, pose challenges of connectivity, use, accessibility, and relation to facilities and social hotspots while seeking to support an integrated infrastructure that promotes walkability and pedestrian interactions with urban elements such as art, historic designs, and socially significant materials (Bhandari 2006). Narrow streets and close buildings provide shade and funnel sea breezes in more traditional cities, providing comfort for pedestrians even in warm seasons. The replication of

traditional urban forms and textures allows pedestrians freedom of movement as well as interaction with textures, shapes and materials resembling the past. Urban forms should provide harmony rather than unity in their relation to the human scale and social manners and customs. Compact urban areas are more visually appealing than sprawl, increasing public interaction through high density and mixed use. But when individuals prefer large homes, urban areas require a newer interface still (Bramley, Dempsey et al. 2009). As a direct assessment of resident social attachment, question (Living in Yeka/Lideta gives me a social attachment and Physical characteristics of Yeka/Lideta gives me social attachment) strongly supports the hypothesis in this research.

Question (How important is these characteristics to your social attachment in your neighborhood?) also observed the relationship between urban morphology and social attachment. Subcomponents of the question more closely analyzed the physical and social characteristics of the neighborhoods, contributing to a more thorough examination than other question. As seen in the analysis, a number of significant relationships across the four domains (community attachment, pedestrianism, social interaction, and community identity) provide support for the hypothesized benefits of traditional urbanism.

Lideta respondents consistently ranked vital components of their neighborhood as more important to their social attachment than Yeka respondents. As hypothesized, the overall analysis of the research data supports the assumption that urban morphology affects both the physical and social realms of social attachment for neighborhood residents. Moreover, the residents' of the neighborhood characterized by elements of traditional urbanism (Lideta) were found to possess a greater social attachment than those in the neighborhood characterized by a conventional suburban development pattern (Yeka).

4. Conclusions

The drawback of the previous development trend and development program has brought the most important attention towards the study of urban morphology and traditional neighborhood development. Especially the past planning concept which was based on the physical layout of the city in regardless of social issues (social attachment) that was bottleneck for the implementation of city planning. Even if there is an increasing attention concerning social aspects but, there has been little empirical effort made to assess the ability of traditional neighborhood development to foster a greater social attachment over conventional suburban development. So that this research helps to fill the gap by making a comparison of Lideta woreda 8 redevelopment condominium that fulfill the concept of traditional neighborhood development, and Yeka woreda 13 neighborhood as a conventional suburban neighborhood development. Both settlements are located in Addis Ababa. Based on an extensive review of the literature; a normative urban morphology was presented.

The standards pertaining to a norm (normative standard) is based on principles of neighborhood development supported in new urbanism concept and planning methods and techniques used in traditional urban development's (i.e. traditional neighborhood development, transit-oriented development). In addition to urban morphology or urban morphology, the review of literature also examined social attachment, culminating in the advancement of a normative standard. The normative social attachment standard was based upon four domains, including: community identity, pedestrianism, community attachment and Social interaction.

These four senses of community domains established the basement for the survey and measurement used in the research. The survey instrument was used to analyze similar

characteristics in two neighborhoods, characterized by different urban morphologies, to assess how aspects of community design contribute to each social attachment domain, while data was received from a total respondent of 265 residents.

The group of respondents from the two distinct settlements (Lideta and Yeka) were remain to be similar in terms of so many important and key demographic characteristics, including: gender, average age, education, race, marital status, children, household size and etc. but also there are several notable differences between the neighborhoods were found that includes: distribution amongst age cohorts, method of transportation to work, income, length of residence, and community partiality items.

In addition to demographic features, the neighborhoods also share similarities and differences regarding physical attributes. The neighborhood studied in Lideta has a condominium homes, and commercial uses. Although Yeka has a wider range of residential uses, including attached and detached single and one family home, there are no commercial use homes in Yeka. In addition, land uses within Lideta are dispersed throughout the neighborhood, whereas Yeka's residential uses are isolated in single-use and isolated from one another by fortification.

In Lideta, streets are arranged on a warped grid pattern with a number of common green spaces, and trails spread throughout the neighborhood. Blocks also include a number of alleyways with setback behind homes. By contrast, Yeka's layout is based upon a few superblocks with a limited amount of usable open space. A typical streetscape is characterized by asphalt covered streets, limited housing styles with very few porches, and with no deed end streets (cul-de-sacs).

Comparing to Yeka neighborhood residents, Lideta neighborhood residents displayed a most importantly higher social attachment level than Yeka residents. When the two neighborhood respondents asked the question which directly ascertained whether the physical characteristics or living in the two neighborhoods provided a social attachment provided significant results. Lideta respondents overwhelmingly exhibited that the traditional urban neighborhood in which they reside was more important to their social attachment over Yeka respondents that is characterized as conventional neighborhood development.

Question (How important is these characteristics to your social attachment in your neighborhood) also provided a number of significant results that demonstrated the advantages of the Lideta neighborhood. Out of the 14 domain 7 of subcomponents surveyed were proven to have a significant relationship to resident social attachment. Respondents in Lideta repeatedly rated all significant items more highly than participants in Yeka.

The significant differences suggest that each of the social attachment domains is perceived as more relevant in Lideta. Subcomponents and domains contributing to a higher social attachment level in Lideta included: architectural features reflecting local character (community attachment domain), community or local services within walking distance (pedestrianism domain), access to public transit (pedestrianism domain), participation in community activities (social interaction domain), distinctive physical character of the neighborhood (community identity domain), feeling that a good fit exists between you and your neighborhood (community identity domain), and sense of pride (community identity domain).

In addition to the 14 key subcomponents, Question (How important is these characteristics to your social attachment in your neighborhood**?**) also surveyed residents regarding physical characteristics of their neighborhoods, as well as safety. But none of these above pointed out

additional variables were found to be significant through a cross tabulation of the data, therefore little discussion regarding their impact on social attachment was included. Due to disparate demographic levels between the neighborhoods, other key components of the survey analyzed resident social attachment in relation to demographic elements and their potential intervening impact. Once again, no significance was found to exist between social attachment and gender, income, presence of children, age, and education.

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