

Implications of change in Urban Landscape on the Quality of Life in the traditional town Harisiddhi

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Abstract

Urbanization is a global phenomenon evolving problems including urban blight, gentrification, urban poverty, urban sprawl which results into delineation of built environment of its spatial extent, change in function, transformation of a town, which forces prior local residents into poorer and isolated environment with less choices and social networks. The problems emerging reflects in the change in urban landscape of the traditional town. Traditional core settlement of Harisiddhi has gone through massive change in due to Gorkha earthquake 2015. It has affected the life of the local residents residing in the core area of the traditional town Harisiddhi. The research aims to examine how the change in urban landscape has changed and how it has impacted quality of life in the traditional neighborhood of Harisiddhi. After a brief on study area the paper introduces the research approaches and methods with different paradigmatic stances adopted for the research. Perception survey was carried out for the quantitative method whereas for the qualitative method literature, historical photographs and maps were studied to understand the change over time, following pragmatic and interpretivist paradigm along with direct observations, questionnaire surveys, key informant interview and focus group discussions. It was measured in terms of physical attributes and environment, level of independence and social aspect based on WHO attributes. Findings showed that spatial changes has led to loss in cultural and historical identity, change in traditional function, parking problems while individuals were more concerned about their thermal discomfort, health security, fire escape and earthquake emergency, neglected open spaces, intangible characteristics of the town. The research shows that spatial changes prevailed in the town perceived by an individual varies according to individual. Alternative mechanisms for the change in physical environment of the town and restriction on inappropriate changes is very essential and individual's perception should be taken into account for the better understanding of the town which can help to retain its functional quality and acquired essence.

Keywords

Urbanization, Urban Landscape, Quality of Life, Individual perception

1. Introduction

Kathmandu Valley, the most crowded metropolitan locale in Nepal, has been quickly urbanizing since the 1980s. Urbanization is a global phenomenon evolving problems including urban blight, gentrification, urban poverty, urban sprawl which results into delineation of built environment of its spatial extent, change in function, transformation of a town, which forces prior local residents into poorer and isolated environment with less choices and social networks [1].

The present environment due to urbanization faces physical manifestation which includes densification, urban blight and decay, urban sprawl, gentrification.

Physical manifestation of urbanization is depicted by change in urban landscape [2]. The change that takes place is not same across a city or town. Area near to urban central business district gets densified more consistently while urban sprawl takes place at periphery of the city area which results from a desire for increased living space and other residential amenities. Some urban core areas undergoes decay whereas gentrification takes place at poor areas where modernization takes over the old urban fabric of the space. Therefore, the change in landscape differs in different location.

Urban landscape refers to the built environment of its spatial extent where people live and discover the value

and benefits of their life. The impact of urbanization is perceived differently by individuals even in the same location. The impact of socio-economic change is assessed in terms of Quality of Life. The research objective of my study is to examine the implications urban landscape change on people's Quality of Life in Harisiddhi which is a traditional town.

2. Study Area

The study area Harisiddhi lies 8km south of Kathmandu on the way to Godavari. It lies in Lalitpur Metropolitan City, the settlement lies in ward no. 28 and 29. A popular religious site because of a temple dedicated to the goddess Harisiddhi trishakti bhavani. It is famous for its ancient cultural and historical monuments.

The settlement runs through major road passing from north-south direction . It is a newari settlement with smaller road linkages connecting the roads and courtyards. Clustered houses along the streets or around the courtyards surrounded by 4 main gates. The amenities presented are dhungedhara, well, ponds, small enclosed shrines, open spaces etc. Courtyards are the focal point for social interactions, conducting bhoj, playing field, conducting jatras etc.

Various factors such as shift in economic base from agriculture to service and information, commercialization, rapid population growth, diverse lifestyle, increase in number of vehicles, new construction technology that has tremendously changed the form and function of this place. Due to major earthquake of 2015, it has changed this traditional settlement into modern settlement reducing its traditional essence.



Figure 1: overall settlement plan

3. Literature Review

Quality of Life: There are three major philosophical approaches to determining the quality of life. The first method highlights aspects of the good life that must conform to normative goals established by various philosophical, religious, or other systems. For instance, we can think that assisting others is an essential component of the happy life because our religious beliefs demand it. [3].

The satisfaction of desires is the basis of the second definition of the good life. It is assumed that people will choose the things that will improve their quality of life the greatest given the limitations imposed by the resources they now have. So, according to this tradition, a society's quality of life is determined by whether its members can get the goods they want.

The third definition of quality of life considers individual experiences. It is assumed that a person's life is nice and desirable if she feels that way. In this strategy, the importance of elements like sentiments of joy, pleasure, contentment, and life satisfaction is crucial.

The basic premise of SWB research is that in order to understand the well-being of an individual, it is important to directly measure the individual's cognitive and affective reactions to her or his whole life, as well as to specific domains of life[3]. Three interconnected factors make up subjective well-being: life satisfaction, positive affect, and negative affect. From the above discussed approaches, the research took third approach to measure Quality of Life which is also recommended by WHO.

4. Method

The research was carried out using both quantitative and qualitative methodology within the post positivist paradigm. Perception survey was also carried out at site for quantitative method. Interpretivism paradigm used for qualitative method taking old photographs, maps for study, document analysis, observation, and comparing it with existing situation to understand the change overtime. Sample size was taken of the study area for carrying out questionnaire survey where questions were developed from WHO attributes. Out of six attributes of WHO, four were selected which describes the spatial linkage with the local residents. 104 samples were taken for the questionnaire survey. Data analysis was done following these attributes:

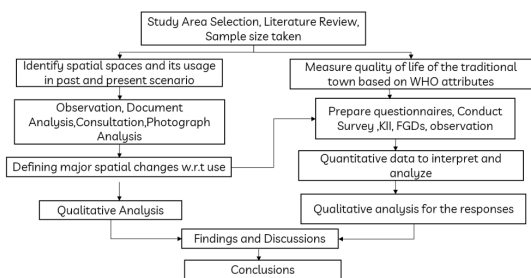


Figure 2: Method Framework

Sex, Age Group, Locals/Renters, Building Type, Building Storey, Locationwise. Key Informant Interview and Focus Group Discussions were also held for more information. Qualitative analysis was carried out then for the responses gathered.

5. Results and Discussion

The survey was carried out on the basis of three different attributes which links the change in urban landscape and its implications on the Quality of Life in traditional town Harisiddhi. The three attributes taken were Physical Environment, Comfort and Safety and Social Aspect which has been derived from the WHO attributes recommended. The results were taken after data analysis and qualitative analysis for each category taking the change in landscape of the town and its implications from individual’s perception.

5.1 Physical Attributes and Environment

The historic settlement of Harisiddhi has experienced significant landscape alteration since the 2015 earthquake. The natural calamity may have been used as a chance to rebuild the town’s environment, but it ended up going against the town’s initial concept, which dramatically altered the town’s previous scenery. Some structures that are culturally important were restored while other houses are made using new construction technology.



Figure 3: Temple restored

5.1.1 Change in Physical Environment

Out of 104 samples, 85 % responded that physical environment has highly changed. The main reason was the new construction that happened after earthquake 2015. The new constructed houses are totally changed which has led to loss in traditional identity of the town while some traditional structures were restored maintaining cultural identity. Therefore, it has both good and bad impact depending on how the residents have perceived the changes. 21 % of age greater than 60 all responded highly changed with 0 respondents for other option which reflects their more experience in the town. Satisfaction level for change in physical environment, 56 % were highly satisfied due to development of physical infrastructures, 30 % were moderately satisfied due to loss of the traditional environment and lack of authorities for maintaining the traditional dignity. 18 % were not at all satisfied due to the difference in present condition due to new infrastructures introduced.

	Total		Highly		Moderately		Not at all	
	No	%	No	%	No	%	No	%
Age								
less than 20	26	25	15	17	6	66.7	5	71.4
20-40	33	31.7	29	33.0	2	22.2	2	28.6
40-60	27	26.0	26	29.5	1	11.1	0	0.00
greater than 60	18	17.3	18	20.5	0	0.0	0	0.0
Total No	104	100	88	100.0	9	100.0	7	100.0
Total %		100.0		84.6		8.7		6.7

Table 1: Agewise: Satisfaction in change in Physical Environment

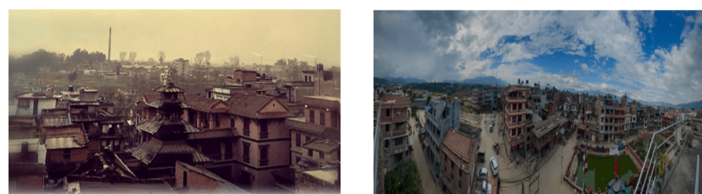


Figure 4: Change in Physical Environment

5.1.2 Housing Condition

Out of total respondents, 10% were dissatisfied which were more concentrated in the compact street areas due to which lack of light, space and ventilation, while 42% moderately satisfied were more on the street side having less light projection due to building’s height and 48% of highly satisfied respondents were having newly constructed houses. Change in temperature due to concrete houses, loss of thermal comfort was also known from the survey.



Figure 5: Compact streets and Lack of light

5.1.3 Road Accessibility

Earlier the main road was graveled, later after road expansion it became pitched. The new road construction made accessibility easier for different modes of transport but has dominated traditional elements of the town at roadside due to new concrete houses and heavy traffic flow. The pitched road is the main road from satdobato to Godawari and is of good quality which has made easy accessibility for people of the town in terms of transportation. The settlement has two road access, one from north side and another from south side. Due to the staircase entrance at north side of the settlement, people have to use south entrance for vehicular accessibility.



Figure 6: Past and Present road

5.1.4 Parking Spaces

The total respondents highly satisfied were 41% and dissatisfied were 27%. Old settlement planning do not allow space for parking provision but due to the increased demands of more services, more facilities has urged people to use the existing spaces for their provision while people are not happy with this because according to the people residing besides main road area at the north side suffer more cases of robbery of vehicles, therefore a proper space for parking has been an issue for the people.



Figure 7: Parking space

5.1.5 Neighborhood Environment(Public Amenities)

Clarke et al. found that neighborhood affluence had a net positive association with cognitive function[4]. It includes different public amenities like the mode of transportation, public spaces, public services like water supply, solid waste management, natural disasters like earthquake. While taking survey, it was found that individual have their own perception for good environment and bad environment. The individual perception for good environment according to them was cultural essence, the traditional town inherits, friendly neighbors which gives them positivity in living and 18% found open spaces as an important element for good environment. As the town is rich in cultural spaces, people want to revive those spaces culturally. Similarly, some individual has different perception for environment as they see environment being deteriorated since past years due to pollution and increasing modernization of built environment in the traditional town.

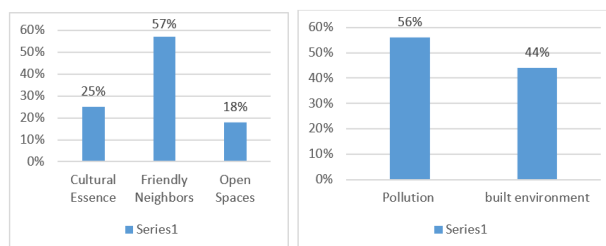


Figure 8: good and bad environment

- **Public Space:** The figure shown shows us how overtime the public space has been changed in form and function. Earlier it was used for drying and collection of grains which involved both men and women, as their major occupation was farming. Now, alongwith the change in houses, public spaces have also been evolved and are now used as public space, which has made a positive effect on youths but old people still find earlier space use more better which

entact their farming occupation and both men and women were independently involved which is not seen in these public space nowadays. Out



Figure 9: public space

of total respondents, 52% females were moderately satisfied as some of them felt lack of preferences given to them. There should be an open unbiased environment for girls to use those public spaces due to community thinking and improper management, it is not used as it should be used was female's opinion. Aside, teenagers were interested in facilitating open spaces with the playing equipments, as from focal discussion group it was known that open space is going to be used as parking spaces for those not having in the house, while youth and teenagers are against this decision because it can ruin the beauty and scenery of the place.



Figure 10: past and present change

- **Water Supply:** Out of total respondents, 12% were totally dissatisfied due to system of water supplying one or two days per week after earthquake, which is not regular while earlier there were communal taps in use and function in the settlement, present today also but supply has been cut off and are no more of use while earlier those junctions were meant to be a place for social attraction where more number of females use to interact with each other and was a sort of good time for sharing time with the people of own neighborhood. It has hampered the social life of females was concluded.
- **Solid Waste Management:** According to the location, the majority of respondents at north side close to roadside were moderately satisfied as they have to come to south side of the

settlement for garbage throwing as the waste collecting vehicle comes at the south side. As there is no door to door collection, the people from northside of the settlement found it difficult majorly for people of age greater than 60.

- **Water Sewerage:** The 14% of the respondents were not at all satisfied those at southern part of the area which is out of the core settlement area. The people were not satisfied as there were no sewerage system in that area due to new house construction in that area, there is a need of proper sewerage system in that area also. The core settlement area were mostly satisfied with the sewerage system as it was seen that it has proper system in the settlement and that has enhance the quality of life.

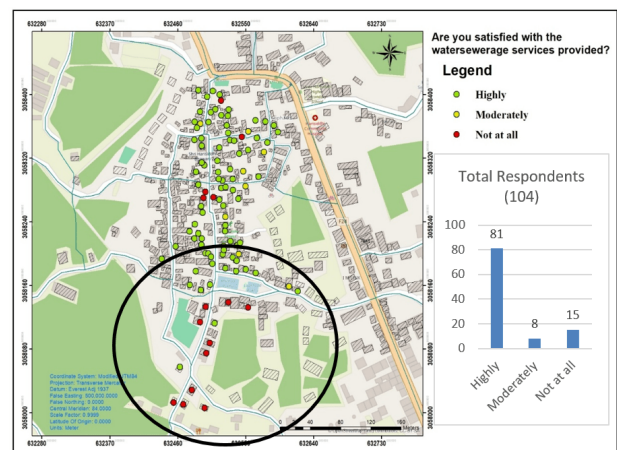


Figure 11: water sewerage services

- **Earthquake escape place and Firescape Accessibility:** Natural calamity changes negatively affects their quality of life. The majority of the moderately dissatisfied residents were on the north side of the settlement that felt more risk due to their houses in the inner courtyards and compact street's houses while an open space is nearby the south side of the settlement but not on the north side, where there are farmlands and some open space that can be used as an evacuation area in case of natural disasters. More respondents felt danger in firescape accessibility at north side of settlement due to entrance of the traditional gate's height that prevents emergency team vehicles from entering the settlement. As a result of the installation of stone pavements, which has decreased the water retention level, there were

formerly more communal taps and a higher water level in the wells. As a result, the loss of those facilities indirectly affected the fire emergency facilities.

5.2 Level of independence

5.2.1 Comfort walking in the streets of the settlement

According to the location, the majority was dissatisfied on the area where streets were compact, and on the north side of the road side area where there were uncomfortable steps for the old age people to travel down the road. Parking along the streets, unmanaged street dogs, lack of lights, small streets overshadowed by buildings wastes left at streets, absence of staircase railings were noted by children and old age people for their fear and discomfort.

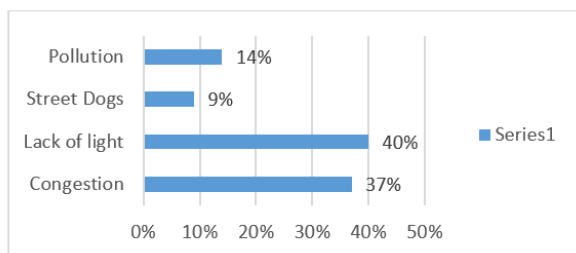


Figure 12: Reasons for discomfort

5.2.2 Unsafe feeling due to earthquake and firescape

Respondents felt unsafe due to the earthquake and fire exit emergency as it is a traditional town which has faced crisis when earthquake struck, 25% felt highly unsafe, 19% felt moderately unsafe of which mostly were the houses in between compact streets or densed courtyards as there were still some houses left without any reconstruction due to financial problems. In case of fire exit, people residing at the north side felt more risk because fire emergency vehicle is not accessible at those areas and the only provision for rescue becomes the waterbodies that are present in the settlement while those waterbodies are also now depleting due to lack of maintenance and low water level.

5.2.3 Comfort doing daily activities in the neighborhood

Daily activities include daily life activities which includes going to hospitals, schools, groceries, playgrounds etc. 47% were highly satisfied with doing daily activities, while 48% were moderately

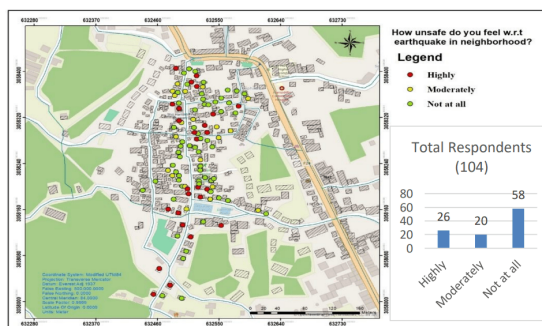


Figure 13: Unsafe feeling in case of earthquake

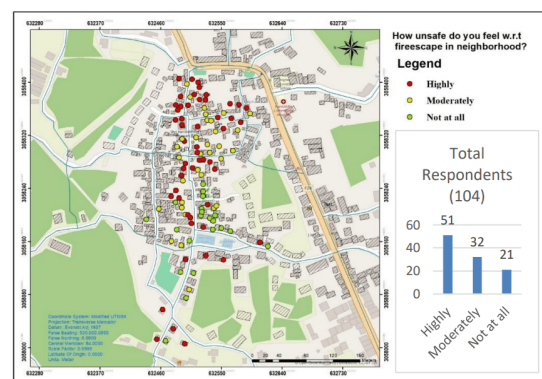


Figure 14: Unsafe feeling in case of fire emergency

satisfied and 5% were not at all satisfied. While talking about the activities old age people were found more difficult for performing daily activities.

	Total		Highly		Moderately		Not at all	
	No	%	No	%	No	%	No	%
Age less than 20	26	25	10	20.4	16	32.0	0	0.0
20-40	33	31.7	17	34.7	15	30.0	1	20.0
40-60	27	26.0	16	32.7	10	20.0	1	20.0
greater than 60	18	17.3	6	12.2	9	18.0	3	60.0
Total No	104	100	49	100.0	50	100.0	5	100.0
Total %		100.0		47.1		48.1		4.8

Table 2: Age wise: Daily Activities Satisfaction

5.3 Social Aspect

5.3.1 Jatras/Festivals happening in the neighborhood w.r.t social spaces and building designs

Youths were seen more concerned about entry of vehicles in the temple chowk area is ruining the authenticity of the courtyards and damage the brick surface of the chowk which needs to be preserved. Tall houses have ruined the landscape, earlier from the terrace, the chowk visible was visible but now due to tall buildings, spaces have been decreased, which has hindered the outside people to come and visit jatras at Harisiddhi.



Figure 15: Discomfort in doing daily activities

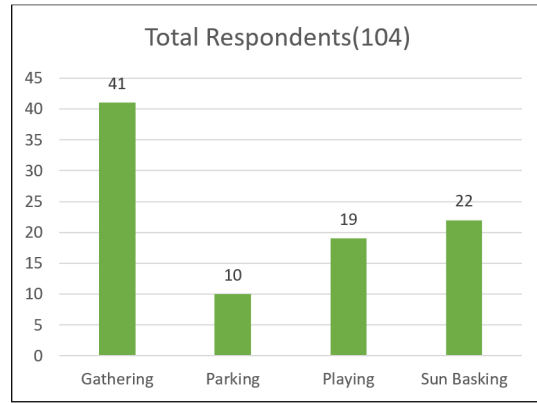


Figure 18: Courtyard use



Figure 16: jattras and festivals

5.3.2 Courtyard

Courtyards play an important role in reviving social relationships as a center for Daily activities Spot: sunbathing, socializing, washing dishes and clothes, playing with children. Earlier traditional houses at the surroundings of temple maintained the harmony of the town but now new house construction dominating temple space. Change in landscape has reduced locals



Figure 17: Change in landscape

to use the space as it was used earlier. Tall buildings surrounding courtyard, Car parking at main lachi chowk(Temple space) reducing traditional values and diminishing the value of traditional newari walkable streets. Connecting the Survey with the activities that are performed in the courtyards, different activities survey were also conducted to know the reasons behind the use of courtyard and its changing effect on the daily activities or socio-cultural activities which is important for the better quality of life of the people.

5.3.3 Positivity living in the neighborhood

The positivity among the neighborhood resulted in 69% of the total respondents who were highly satisfied while 24% were moderately satisfied and 7% were not at all satisfied from which there were various reasons that they felt positive living in their neighborhood. The results shows us how personal attachment of the people in the town makes them positive living in the town which enhance their quality of life.

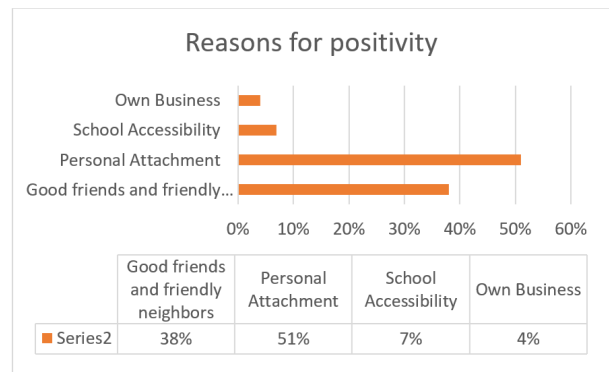


Figure 19: positivity level

5.3.4 Attachment towards neighborhood

76 % were highly attached with the neighborhood and 7 % percent were not at all attached. More percent of locals were attached compared to renters as the locals were mostly the newars inheriting their since early times. Respondents of age group 20-40 and 40-60 were highly attached towards neighborhoods which shows that they have more preference towards their culture and place. From the social findings we can also say that the positivity living in the neighborhood is due to the personal attachment of the individuals.

6. Conclusion and Recommendation

The Kathmandu Valley is no different from any other city in the globe since change is unavoidable. Byelaws have to be reviewed for new houses being built at Harisiddhi that can maintain the traditional essence of the place maintaining building's height, traditional brick facades, wooden carved windows brick pavements to be maintained giving heritage walk streets. The study comes to the conclusion that changes in the immediate built environment and urban spaces have had an effect on people's quality of life. Parking has significantly decreased the traditional space's usability, decreasing room for social and recreational activities. Open spaces neglected and left without any maintenance have direct impact on daily lives of the local people. Unplanned building construction is degrading traditional authenticity affecting people's quality of life. Therefore, restricting inappropriate new constructions and uses, management of open spaces, and putting controls in place for physical change, introducing small scale business for locals in their own traditional town can enhance people's quality of life.

The research aims for the better quality of life in the town which includes urban design principles that should be developed to promote the creation of structures that suit the living area by respecting traditional architectural styles while also responding to the immediate surroundings, and streets. Guidelines to be maintained for different age group people along with streets and environment surroundings. Cultural restoration is an important thing one has to keep intact. The construction of patis are still incomplete which needs to be completed to revive their culture. The culturally important open spaces, ponds need to be revitalized as they are left neglected.

Traditional temple space needs to be free from parking forbidding the four wheelers and two wheelers vehicles saving brick pavement from being damaged and making walkable streets in the traditional town. Restrictions on parking in streets and courtyards should be put in place, and those who violate them should be subject to sanctions like paying penalties. Spaces to be allotted for two wheelers and four wheelers parking in the town, so there can be free streets and social spaces. Timely maintenance of existing open spaces, pokharis and patis maintaining its cultural identity. The open spaces

to be commercialized for more social networking in the neighborhood. Funds to be raised for promoting traditional and cultural intangible characteristics. There should be a proper law under the government authorities that vacant plots should be sold to locals rather than outsiders for maintaining their socio-cultural values.

Increasing building height without proper safety considerations also greatly increases risk during hazards like earthquake and fire hence this amendment in the bylaws should be reviewed. Evacuation spaces to be allotted for earthquake emergency as traditional town lacks in space and most spaces are surrounded by houses. Emergency firescape team to be associated within the town in case of emergency. Proper coordination within government ministries and departments needs to be amended. Since most people aren't aware of these inner courtyards and inner alleyways, maps demonstrating linkages to them ought to be developed and posted in strategic places. Public awareness for Cleanliness of the town to be done on regular interval of time. Employment generation and development of the town can result into a traditional junction that can increase people's flow and their future expectations.

The research reveals that the use and perception of spaces in the town is different among different people living in the same area. Alternative mechanisms as suggested above for change in physical environment, restrictions on inappropriate spatial uses and considerations of varied perceptions is very important in traditional town to revive its functional quality and inherited essence.

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