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## Newari Heritage, Commoner To Luxury - A State To Loss Identity - A Case Of Kathmandu

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### ABSTRACT

Newari Architecture is the vernacular architecture of the indigenous people of the Kathmandu Valley which were at the top of its golden years of civilization with its' culture, business, and the most importantly Architecture Heritage during the period of Malla Dynasty of Kathmandu Valley came to rule at 1200 AD. After the horrific earthquake of April 25th 2015 in Nepal, It has never been more challenging to have a change in people's mind and especially in architects role in recognizing and working on the preservation, restoration of vernacular architecture of Nepal which shall be headed to the direction in restoring and making the Kathmandu Valley a "Heritage Capital of Nepal". Paper will focus on how the ever changing pace of architecture trend related to many factors which are not only overtaking but has led to the diminishing of the rich heritage which once was the prominent factor of Vernacular Sustainability and Kathmandu Valley's Architectural Cultural Heritage Sustainability. We shall not forget that only some certain palaces, buildings, or temples be the part of tagged heritage but every magnificent details of the arts and its senses whether be on the crafts of façade's exposed bricks, windows, doors adds the beauty and makes the heritage great and actually gives the liveliness soul to the heritage.

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## 1. Introduction

### *Background:*

Newar (Newa) Architecture is the vernacular architecture of the indigenous people, Newar, of Kathmandu valley. With the advent of the Malla Dynasty (1201 AD) in the valley, the Newar culture, business and specially the Architecture Heritage flourished to the peak. This period is therefore considered the golden years of the Newar civilization

The Newar architecture, an indigenous style of architecture, consists of pagoda, stupa, chaitya, shikhara along with other heavily decorated art of wood carvings, and brick works both plain and carved. There also is a belief that the valley's trademark of multiple-roofed pagoda architecture may have originated in this region and spread to India, China, and Japan. As for the settlement planning, it usually consists of residential houses with open central courtyards known as baha and bahi, used for both cultural and religious performances which also acts as the connecting pathways to many internal courtyards. The streets consisted of rest houses (Patis), temples, and palaces.

The houses were not designed beyond the four-story. Each floor was given a specific name. The ground floor was called Chheli, the first floor as Matan, the second floor as Chvata, and the attic as Baiga. Over the time, rising of additional floor, right below the attic, came into existence and is simply called Pyatan. As for the construction of the buildings, mostly 3 materials- bricks, timber and mud mortar was used. The thickness of brick walls mostly 14" consisted of three layers- mild burnt bricks in the interior surface; semi hard burnt bricks in the middle and the hard burnt bricks on the outer surface. The timber mostly Agrath and Saal (*Shorea Robusta*) were widely used as they ensure longevity and resilience. The mud mortar, a mixture of earth clay, water, saw dust or straw was used for bind everything.

Unfortunately, after early 1900 AD to this period, the Newari architecture has faced a gradual decline, transformation of architecture, and loss of heritage due to many factors. Hence, the purpose of this research is to focus on the current issue in finding out why, how and what needs to be done further to regain, preserve, and develop its values for the future generation. The major focus of the research is also to mention that not only the landmarks such as palaces, temples, and monuments but the overall, every adjoining house of commoner in harmony with the bonding of different characteristic, their individual beauty, aesthetic with sophisticated carvings of arts and stories along the streets that embraced the rich culture, arts and activities are the integral part of the heritage which are on the state of losing its identity. Those elements are equally magnificent and valuable to be preserved to note as a heritage

My finding shows that, even after the Nepal Unification by King Prithvi Narayan Shah (Shah Dynasty) in 1768 AD, the Newari Architectural style was further expanded throughout the country, preserving the values and style and culture rather the negligence and transformation of them.

Nepal also boasts rich diverse architectural heritage from Mountain region to the north connection to border of People's Republic of China, to the flat lands of Terai's sub-tropical region to the south with the border to India. The capital city Kathmandu is located at the altitude of 1400 meters in the hilly region sandwiched between the Mountainous Region with the highest altitude of 8848 meters and Terai Region at the lowest altitude from 70 meters to 610 meters. Kathmandu valley has the largest number of UNESCO Heritage Sites at 7 numbers shown with the photos given below.



**Fig. 1.** Kathmandu Durbar Square  
(Newari name: Ye Layeku, 4th to 8th Century,  
(Pic Source: Internet)



**Fig. 2.** Patan Durbar Square  
(Newari Name: Yela Layeku, 1637 AD,  
(Pic Source: Internet)



**Fig. 3.** Bhaktapur Durbar Square  
(Newari Name: KhWOPA Layeku,  
14th Century, (Pic. Source: Internet)



**Fig. 4.** Changunarayan Temple  
(464 AD Pic. Source: Internet)



**Fig. 5.** Swayambhu Nath Stupa, 1000 BCE  
Mahachaitya) (Pic. Source: Internet)



**Fig. 6.** Boudha Nath Stupa (Nepali Name: Khasti  
590-604 CE, (Pic Source: Internet)



**Fig. 7.** Pashupati Nath Temple (As early as 400 BC, Pic. Source: Internet)

During the Rana regime (1846-1951), Neo-classical architectural style was introduced in the country. In spite of this, the Newari architecture was not affected. The new style was mostly introduced in vacant territories, away from the core Newari settlement. There is one such exception of Neo-Classical Building in the core Basantapur Durbar Square built adjacent to the Old Newari Malla Palace called Gaddhi Baithak. Soon Neo-Classical architecture started being the symbol of prestige and power. Thereafter, a new unique style of architecture, a combination of Newari and Neo-Classical design, began to flourish as even Newars of Kathmandu Valley began to construct their houses using combined styles. This is followed till this date by new generation of architects.



**Fig. 8.** (Pic Source: Sakar Shrestha), Gaddhi Baithak, Built in 1908 by the prime minister of Nepal at that time, "Chandra Shumsher Jang Bahadur Rana," to host and crown the head of states and men of the government

In 1950, the population of Kathmandu was 104,479. In 2024 the population is estimated at 1,621,642. It has grown by 50,632 in the last year, which represents a 3.22% annual change. These population estimates and projections come from the latest revision of the UN World Urbanization Prospects. These estimates represent the urban agglomeration of Kathmandu, which typically includes Kathmandu's population in addition to adjacent sub urban areas. Kathmandu makes up the core of the largest urban agglomeration in the city in the Kathmandu Valley, which also includes Kirtipur, Lalitpur, Bhaktapur, Madhyapur Thimi, and smaller regions.

Kathmandu is a very ethnically and culturally diverse city. The Newar are the largest ethnic group at 30% of the population, followed by the Matwali at 25% -- which includes the Tamang, Gurung, Sunuwar, Magars, and others -- the Khas Brahmins at 20%, and the Chettris at 18.5% of the population. However total population of Newar in the country is around 5% only which is mostly centred in Kathmandu Valley. As per current projector, the given numbers data may change due to mass numbers of citizens going abroad either for migration, studies, works. Kathmandu accounts for 1/12 of Nepal's total population, and it's the main gateway to the country's tourism industry. The city has a history going back more than 2,000 years.

Demographic Source: [worldppopulationreview.com](http://worldppopulationreview.com)

## 2. Methodology

The research paper is based with the historical background of Kathmandu Valley's heritage history and finding / identifying the causes and issues of the decline of the Newari Architectural Heritage with the data based on the survey, case study, comparison of history with current period and transformation period of the architectural and cultural heritage with references of past published books, research papers. Consideration of field visit, interaction with the local people, experts were also done along with the periods of economic circumstances of the country. Survey data graphs and tables are also done.

Goal of the research is to point that beside all the important palaces, temples, monuments, each and every common houses along with streets and the complete core settlement with every different art and stories played a vital role of making the Newari Settlement a heritage. Photos has been kept as the source of findings and description.

Research also aims to recommend how and what majors can be taken to preserve the heritage in future.



**Fig. 9.** A Street of Tangal with a complete scenario of religious and commoner Architecture of transformation from different time phase along with the debris left from the 2072 B.S (2015 AD) 7.9 M earthquake. (Pic. Source: Sakar Shrestha)



**Fig. 10.** (Pic Source: Sakar Shrestha), **Left Pic:** “New Road” a main entrance road to the Kathmandu Durbar Square, Bashantapur, once a street completely standing with Newari traditional architecture buildings is now 95% transformed into modern architectural styled buildings. **Fig. 11. Right Pic:** One of 3 buildings left, a Neo Classical building in New Road sandwiched between modern day buildings

*2.1 Below are the factors I consider backbones of the Newari Architecture, Streets and Settlement which portray and support the magnificent and unique urban Newari heritage civilization*



**Fig. 12.** (Pic. Source: Sakar Shrestha)

- Rich varied designs and patterns of ornaments in all the brick walls (Dachi Appa, Chika Appa )
- Sculptures of birds on the corner edge of roofs
- Zhingati (Clay) Tiles for roof
- Holes on the outer walls for bird's shelter

- Red/Black fabric with its' vibrant positive vibes on the edges of roofs
- Carved Eaves boards with magnificent carvings

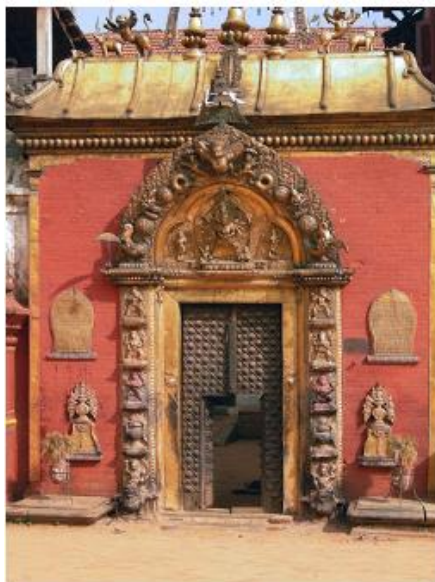


**Fig. 13, 14, 15** (Pic. Source: Left, Right Internet; Middle: Sakar Shrestha)

Deshemaru Jhya (Pic, left above) a rare design which is only one piece in the country and every Wooden carved windows (Pic middle and right above) boasts the richness of the arts and climatic practicality, social behaviour of privacy and interactions



**Fig. 16.** (Pic. Source: Internet) Metal carved windows boasts the richness in skill of the arts, social behaviour of privacy and interactions, most of all the showcase of economic strength and sustainability.



**Fig 17, 18.** (Pic. Source: Sakar Shrestha) Left Pic: Metal Door at Bhaktapur Durbar Square, Right Pic: Wooden Doors with arch columns with patio (120+ years old) is the only of a kind found in the country in Dhulikhel which sadly now in 2023 has been demolished)



**Fig. 19.** (Pic. Source: Sakar Shrestha)  
Carved Wooden struts which not only aesthetically beautiful but also played the role of structure itself



**Fig. 20.** (Pic. Source: Sakar Shrestha)  
Dewa (Khopis, a recessed space on the external and internal walls for the gods, sacred offerings, prayers lamp light



**Fig. 21.** (Pic Source: Sakar Shrestha)  
A rare Cantilevered curved wooden balcony with carved railing



**Fig. 22.** (Pic Source: Internet) Hanging of dry Chilies, Garlic, Corn, on the external walls for the drying and food storage source.



**Fig. 23, 24, 25.** (Pic Source: Sakar Shrestha) Stone carved plates (Ikha Lakhu) for god (Brass metal on the left photo, Stone on the middle photo on the surface and sunken lakhu right photo), placed in front of the house entrance for auspiciousness, prosperity and the protection of the home and family which is worshipped with offerings of fresh flowers, incense, akchyata (made by mixing raw rice, colour powders, black sesame)



**Fig. 26.** (Pic Source: Sakar Shrestha) Metal locks (Brass) on the top of the door



**Fig. 27.** Metal locks (Brass) on the middle of the door (Pic Source: Sakar Shrestha)



**Fig. 28.** Wooden locks on the middle of the door (Pic Source: Sakar Shrestha)



**Fig. 29, 30.** (Pic Source: Sakar Shrestha), A street with a unique history where there is Baangey Mudaa (Bent wooden trunk), 300+ years old. It's believed if a person with an ill tooth nails the coin here, then they will be free of dental illness. The trees' roots is believed to be spread up to the temple of 16 hand Ganesh built in 1641 – 1674 by King Pratap Malla near Rani Pokhari (Lani Pukhu/Nhyu Pukhu) located in Bhotahiti about 700 meters to the east where the root can be seen once a year. A major landmark supporting the case of street heritage. There are many other such significant landmark with values in every street to be considered as a street heritage



**Fig. 31.** (Pic Source: Sakar Shrestha) The arch vents



**Fig. 32.** Dormer windows on the attic roofs  
(Pic Source: Internet)

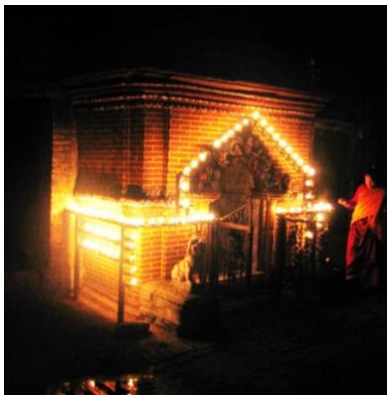
2.1.1 Along with mentioned details other components making the whole settlement a heritage were:



**Fig. 33.** (Left, Pic Source: Internet) Water sprouts (Hitis) a major element of sustainability of natural spring water source which served the practical function of providing pure drinking water, washing clothes, bathing, irrigation,



**Fig. 34.** (Right, Pic Source: Sakar Shrestha) Pond (Pokhari) a place for Naaga (Snake God) for protection also a major element of sustainability for the harvesting of water



**Fig. 35, 36, 37.** (Pic Source: Sakar Shrestha) Idols of gods and mini temples on every corner of the streets with varieties of rich ornaments and purpose of serving the healing peace with its reenergizing waves and powerful energy provider with its' evening lit prayers light (diyos/battis made of clay, brass)



**Fig. 38, 39.** (Nhu Baha: Photo Left and Middle, **Fig. 40.** Hakubaha: Photo Right, (Pic Source: Sakar Shrestha), Every street connecting to such ally way (Pic left) leads to a courtyard “Baha” where lies its own unique stories of culture and architecture. These magnificent courtyards serve the purpose of religious faith with Stupas, Chivas & Chaityas, public space of gathering of different rituals, a playful space for dwellers, and consisting of a well (a major element of sustainability for the harvesting of water) to fulfil the need of water for the household. Inside the middle photo, Red boxed the temple of Dipankar Buddha is a one piece rare design found in the country which is opened only once a year during Gaai Jaatraa festival located in the Nhu Baha.



Protection from the evil spirit entering the houses or the courtyards were very much considered by faith. By nailing the nails of the entrance to the houses (**Fig. 41.** Pic left above), nailing the coins on the entrance door to the courtyards (**Fig. 42.** Pic middle above), and painting the prayers and signs of auspiciousness (**Fig. 43.** Pic right above) were were very imminent. (Pic Source: Sakar Shrestha)



**Fig. 44, 45.** (Pic Source: internet) Dabalis (Elevated plazas) for the religious rituals and other performances



**Fig. 46, 47.** (Pic Source: internet, Open space with “Patis” a gathering rest place with shed. Open spaces near byes which served the emergency gatherings, also for drying and processing rice, bitten rice, and where the pigeons would gather in peace. Patis were also sometimes used for the business and marketing purpose



**Fig. 48, 49, 50.** (Pic Source: Sakar Shrestha) Every street and courtyards possessed its' own powerful magnificent craft of arts and identities which were uncomaparable to each other boasted the rights of being a heritage in themselves



**Fig. 51.** (Pic Source: Sakar Shrestha) Sculptures of metal, and stones on the outside of entrances to the streets to protect the premises from any harm



**Fig. 52.** (Pic Source: Sakar Shrestha) Brass Bells on the street, Basantapur



**Fig. 53.** (Pic Source: Sakar Shrestha) Pipal Tree left (Sacred Fig, symbol of hindu god Bishnu) with its vibrant colors of sacred threads circled tied by devotees. Pipla tree is always planted near Bar Tree (right) as symbol of marriage. Pipal tree is also vital environmentally by providing oxygen and reducing carbon

*2.1.2 It was as important to find, know, and identify people's mindset, their perspective, their know how, and detail of their background. Below are the conducted survey questions done to 100+ Architecture Academicians, Architecture private practitioners, different fraternity students, different caste people along with both migrated settlers to Kathmandu Valley to get the effective result on the heritage issues*

Questionnaire:

- Where are you from? - Kathmandu Valley (Kathmandu, Lalitpur, Bhaktapur, Thimi, Kirtipur), Core Settlement, Within the proximity of core settlement, Outside of Ringroad / core settlement, Outside of Kathmandu Valley within Nepal (Core Settlement, outside of core settlement, Abroad)
- Which community or caste you belong to? - Newar, indigenous to Kathmandu Valley, other indigenous group, others
- If not indigenous when did you/your family moved to Kathmandu Valley (How many generations)?
- What was the reason to move to Kathmandu Valley? Study, Work (organizations, government, transferred from offices, etc), Business, Others. Where in Kathmandu Valley where do you reside? Do you own a house, an apartment or a rented property
- If Newar and settled outside of Kathmandu Valley, please state your region
- If Newar settled outside of Kathmandu Valley, do you own a house?

- What do you think of Newari Architecture? Unique/ practical/ eco-friendly/ complicated/ functional/ people friendly/ not relevant to current era of architecture/ not to my knowledge/ or I don't care.
- What is your perception on Newari Architecture? Should it be valued and preserved?
- What do you like the most about Newari Architecture? Overall architecture style/ structure/ brick details/ wood carving/ construction method/ building plans, building façade/ stone carving/ roof/ tiles/ brass/ metal carvings/ other.
- If you build or buy a house for yourself which style you prefer? Newari/ mixed newari and other style/ contemporary/ others
- If you build a Newari House what portion of design material would you use? Complete Newari architectural style/ only Newari bricks/ only Newari tiles/ only carved doors/ only carved windows/ only struts/ only beams.
- Is the cost of building Newari Style houses? Expensive/ reasonable/ cheap
- What do you think of Newari Style building's Structure: safe on any hazards/ not safe,
- How do you feel of Newari Architecture: Proud/ok/ so so/ not good enough,
- In your view, should Newari Architecture represent: Whole Nepal/only Kathmandu Valley
- Are people conscious enough of Newari Architecture as a heritage?
- What might be the case for Newari Architecture diminishing in current era? Too expensive to build/ too complicated to design and construct/ lack of material availability/ lack of awareness regarding the value of heritage/ lack of skilled manpower craftsmen/ lack of policies/ lack of interests from people/ rise of other architectural styles/ cheaper availability of other modern technologies/ cheaper availability of newer materials/ construction time factor/ migration factor with lesser sense of belongingness/ foreign Trend/ mentality factor of RCC building being a rich class
- Do you think there might be an intentional hidden factor for the diminishing of Newari Architecture?
- Who do you think shall be the most responsible to preserve the Newari Architectural Heritage? Newar community themselves/ government/ local authorities/ international aids agencies/ politicians/ media/ others/
- Is the government lacking and should they bring more effective policies to preserve, conserve, and make resources easily available and secure the existence of Newari Architecture?
- Do you agree on that not only a Newari Palaces, Temples but common Newari Buildings, the entire street, wards should also be recognize as a Newari Heritage in the core Newari settlements?
- How do you find the courtyards of Newari Settlements?
- Do you prefer to use Newari Wood Crafts as only a souvenir?
- Is Newari Wooden/Stone carved statues, windows, doors only good for to use as: Interior design objects only/ must as a functional part of a whole building.
- Does Newari Wooden/Stone Carvings give value to Interior Decorations?
- Your thought on survival chances of Newari Architecture in future
- Should the strict effort be given in the Newari Architecture also in School levels and Community levels beside colleges
- Do you think that the effort on more detail research and documentation of Newari Architecture is lacking?
- How do you feel about the essence of exposed traditional Newari Bricks use?
- Does Newari buildings fulfill the wellness and factors of healthy architecture?
- Do you think "Hitis" with stone water spouts and ancient wells should be a part of Newari Heritage?

### 3. Results

#### 3.1 Limitation

Interacting with the locals of current generation, it was difficult to find many records of date and data of such as when the building was constructed, by whom the building was constructed, the depth of the details in the buildings, the story and belief behind the creation of detail ornaments and arts within their own premises.

It was also difficult to find the recorded data and photos of the buildings before the earthquake of 1934 AD to compare and analyze the numbers and percentages of old traditional newari houses and modern houses. It was difficult to find many data as the archive was not properly managed even in the Department of Archeology.

#### 3.2 Findings

- Too expensive to build. Tough economic, financial constraints for commoners
- Lack of strong government acts and policies on both providing materials and implementation regulations
- Lack of strong government acts and policies on preservation, restoration, and implementation on new Newari Style designs. Focus of preservation and restoration are being put only on temples, palaces with almost 0% focus on the identifying the commoners' remaining traditional houses, arts, and monuments
- Lack of banking and other financial institutional policies to encourage the preservation efforts.
- Mismanagement of providing guidance, monitoring, and care taking by government authorities.
- Constant debate on the ownership of heritage policies and implementation between various government authorities along with private sectors such as Municipality, Department of Archaeology, Ministry of Culture, Ward Offices, Local Clubs because of weak and unclear acts and policies
- Corruption, non-transparent approvals/mismanagement of funds/aid allocated for restorations, campaigns, trainings
- Lack of timely maintenance specially regarding structural safety
- Too complicated to design and longer construction time to get the final products
- Lack of material availability such as clay, metals, specially woods (constraint on forestry acts)
- Lack of skilled manpower and craftsmen
- Lack of generational skill / occupation transferring and trainings
- High maintenance cost
- Fire hazard on wooden products
- Chances of cracks and shrinkage on wooden products if not properly protected
- Lack of awareness regarding the value of heritage with mind-set of newer is better
- Conflict within the family members
- Division of property within family members by inherit or conflict
- Lack of extensive courses in school, college, vocational training levels
- Lack of technical working historical documentations
- Lack of interests from people to fight for the rights
- Rise of other simpler architectural styles
- Cheaper availability of other modern technologies; availability of diverse latest materials with quicker construction time with faster financial return

- Construction time factor of a complete building finishing
- Migration. Most migrants lack lesser or no sense of belongings and ownership
- Migration of new generation of Newars to foreign countries
- Influence of foreign trend
- Mindset that RCC building as being as symbol of the affluent and high class
- Vertical growth limitation of load bearing structure
- Climatic instability effecting the structures indoor lighting, ventilation, thermal, sound qualities
- Implementing newer road widening acts on old settlements wiping out the road side vernacular houses



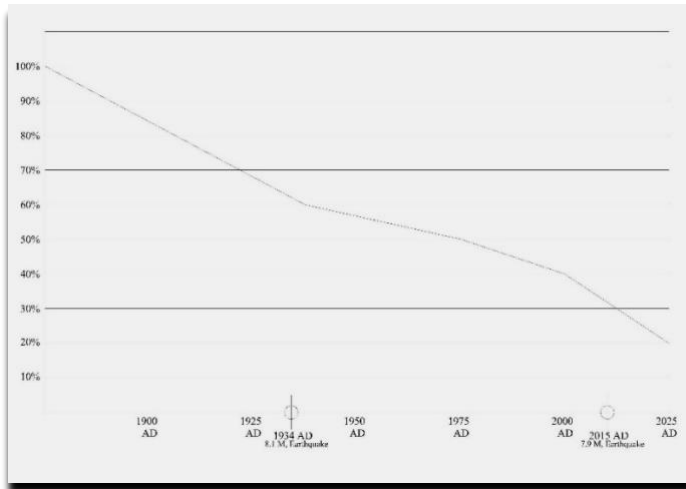
**Fig. 54, 55.** (Pic Source: left-Internet, Right-Sakar Shrestha) Above pictures of changing trend of architecture settlement of current period by the domination of RCC structured modern buildings over the historic architecture settlement



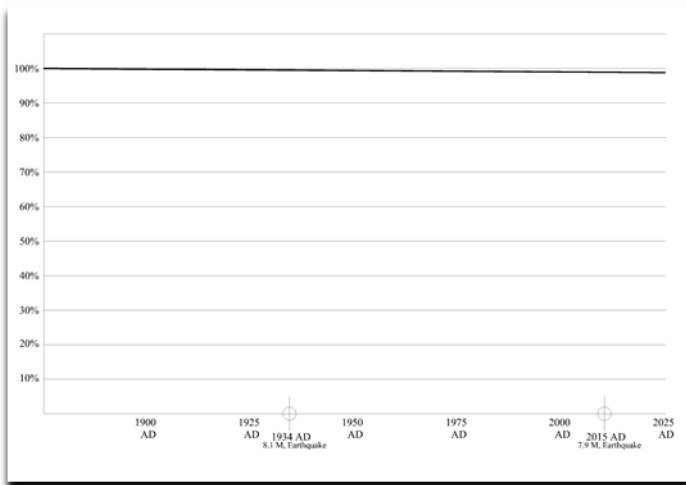
**Fig. 56.** After math of Earthquakes, speacially 8.1M of 1934 AD (1990 B.S), then 7.9 M April 2015AD (2072 B.S) \*B.S – Brikram Sambat, Nepali Calender. (Pic Source: Internet)



**Fig. 57.** Circled Entire Roads' 100+ years old houses were demolished for the newly brought road widening acts (Pic Source: Internet)



**Fig. 58.** Graph of pattern of degradation of vernacular houses in percentile as per year in almost all the streets

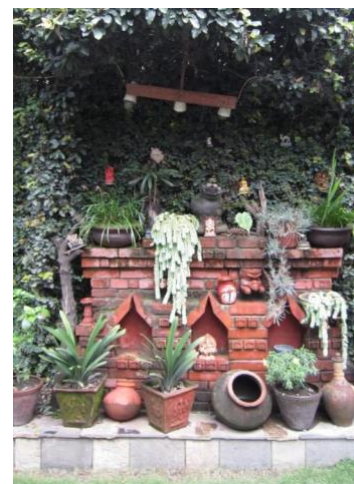


**Fig. 59.** Graph of pattern of decline of Newari courtyards in percentile as per year

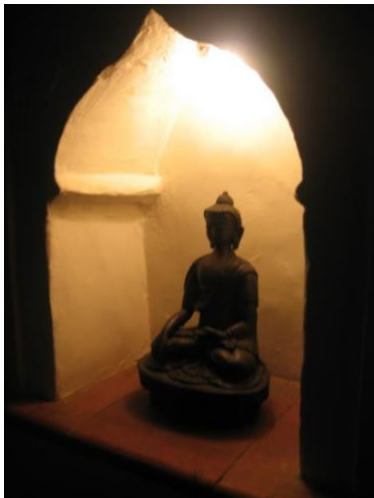
### 3.2.1 Common trends on practice of using the traditional materials and components in large affordable volume making it an item of Luxury and Museum showcase



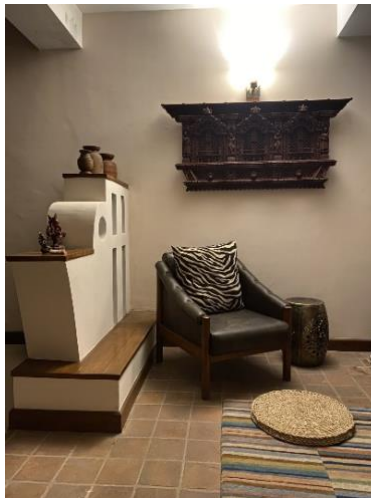
**Fig. 60.** (Pic. Source: Sakar Shrestha) Carved Main Doors with 8 auspicious signs, carved or plain struts, and use of traditional carved bricks for decorative highlight purpose



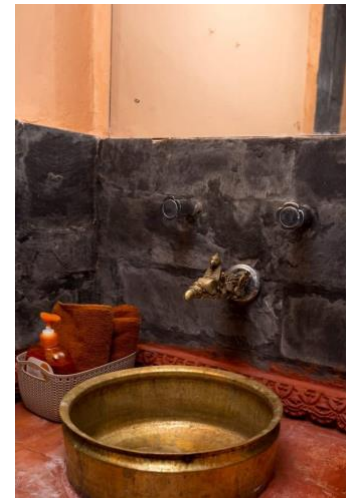
**Fig. 61.** (Pic. Source: Sakar Shrestha) Use of traditional carved bricks for decorative landscape purpose



**Fig. 62.** (Pic Source: Sakar Shrestha)  
Dewal / Khopis mostly for  
(metal,  
interior purpose of showcasing  
landscape elements objects with lights



**Fig. 63.** (Pic. Source: Sakar Shrestha)  
Carved windows whether old  
antique or new uses for  
interior decoration mostly



**Fig. 64.** (Pic. Source: Sakar Shrestha)  
Water sprouts  
stone) uses for small  
and bathroom taps



**65.** (Pic. Source: Internet), Pic left above: Hotel. Capable of cost being friendly only for larger institutions with  
larger bank accounts such as hotels, restaurants, higher income agencies, banks/financial institutions



**Fig. 66.** (Pic Source: Internet) Pic right above: Government Building, Nepal Tourism Board, Kathamandu



**Fig. 67.** (Pic. Source: Sakar Shrestha), Pic left: Taleju Temple, **Fig. 68.** Pic Right: Restoration of  
Hanumandhoka. Aids and funds going only for restoration, new built of temples, palaces, traditional ponds





**Fig. 69.** (Pic. Source: Sakar Shrestha), Buy and Sale, Trading of antique business in high prices. The price for such windows with size of 24'X24" inside the red box might cost about 18000 Nrs (\$134) for 1 window

3.2.2 Below are the costs comparison for 4' X 3' (12 sqft) complete window and making time of the product with other types of available windows

**Table 1**

Carved Wooden Window (Pic – 1)	Plain Wooden Window (Pic – 2)	UPVC Window 5 mm Glass	Aluminum Window With 5 mm Glass	Steel Window with 2" Ms Pipe
NRs 350,000 (\$-2631 Tentative)	NRs 10,000 (\$-75 Tentative)	NRs 11400 (\$85, Tentative)	Nrs 7200 (\$54, Tentative)	Nrs 3600 (\$27, Tentative)
1 month minimum	1 Day to 5 Days	1 Day	1 Day	2 Days



**Fig. 70.** (Pic Source: Sakar Shrestha)  
Wooden carved window (Aankhi Jhya)



**Fig. 71.** (Pic Source: Internet)  
Normal wooden window

### 3.3 Recommendation

Below are the recommendations for the proper protection and preservation of Newari architecture settlement to restore, revive, regain its identity. And also to identify commoners' unique influential houses, streets, and courtyards with its arts and crafts along with other elements to tag as heritage.

- Work on mitigating all the drawback factors and constraints mentioned on above section 3.2
- Build a traditional vernacular building effective rating system which shall be filled pre-submission of design in the Municipality / VDC level to gain exclusive benefits more over of financial and social rewards.
- Strengthening the forestry acts in finding the land for necessary types of trees plantation as per feasible region for mass production. Also provide benefits of tax subsidies in various process

of the manufacturing. Example: Not only in finished products but in plantation of tress, delivery of raw products, and even in the use of traditional vernacular products at the finished site mostly for the commoners' small to medium scale houses and also to the business owners

- Acts of preservation of natural resources and its sources necessary for the restoration and new growth
- Identify the remaining houses and tag gradually to restore to its original face value. Use efficient technology to keep track of the houses. For example: attached a QR code to houses. When scanned, people can have access to brief/detail historical documentation such as built date, builders, purpose, functions, generational contributors and contributions, caste, which would be helpful for the current and future generation
- As the majority of people are unaware and negligent in sense of heritage and its values, we shall also start work on finding, identifying, and tagging the present-day architecture for the future heritage. This will enable the people to understand the values of heritage. Not only that it will encourage them to be willing to preserve and create more and better livable architecture, settlements and culture for which we don't have to wait another 100 years to tag the heritage. These values shall help to create more influential knowledge-based creations which surely will be a method to a better heritage society not only in Nepal but around the world
- Work on better efficient taxation specially for those restoring their house
- For the findings it would have been easier if the Department of Archeology or any other authorities had the properly managed archive
- Work on more efficient banking and financial loan systems by categorizing the scale of the buildings
- Work on effective acts of safety, hazard, and calamities especially related to fire and earthquake. As most of the streets and courtyards are in difficult zones of approachability of fire trucks and rescue trucks, adequate numbers of fire extinguishers with appropriate ratio could be provided for a preliminary precaution not to let the fire spread heavily. Also for the earthquake, evacuation emergency map can be installed in every street and its adjoining courtyards with existing dimensions and safety limitations of the courtyards' sizes and scales
- Establishment of effective and practical repair and maintenance acts
- Implement restrictions on sticking posters and bills or any other elements that would damage the heritage
- Work on effective value creation of heritage from the primary school level of education with detail study on craftsmanship on the higher education institutions
- Have effective exceptional vocational training centers defining vernacular design detail elements
- Government authorities along with local government shall work on funding and producing documentation of buildings and ancestral activities in their respective local areas
- Organize more effective campaigns of understanding the belongingness and values of properties specially when settling in new settlements and old settlements in order to save and value native heritage pride for grass root layman to understand
- Effective media promotions and campaigns on both national and international level
- Find effective ways to settle any kind of disputes between families, neighbors, businesses, authorities, etc in order to encourage them to preserve the properties
- Plantation on the streets (majorly hanging pots: 1 house 1 pot with their caretaking ownership), pocket parks, and agro pocket parks can be designed at the available vacant spaces for social purpose. This would help to enhance aesthetically and make settlement healthy to live. Any such attempt, however, shall be specifically done without harming the building and other spaces
- Municipality and local body shall be aware of waste management and take major steps to keep the settlement clean

- Protection and safeguarding acts of heritage to stop smuggling and conducting illegal trades
- Strict regulation, acts of punishment, inspection, and monitoring shall be regulated to the rental spaces of heritage to manage the safeguard of the remaining vernacular spaces and buildings
- Acts of road widening shall not be enforced on the old settlements as it has the potential threat to the demolition and wipe out of the historical elements which has happened in Kathmandu before in old cores
- Inspection and monitoring responsibility has been one of the weakest performance from any authorities so there has to be strict act on how to make it more effective
- Vehicular Act: Traffic management solutions to reduce vehicular movement has to be implemented in core areas. historically those roads were not designed for the vehicles and has the potential threat to damage the load bearing mud mortar foundations of the buildings with the strong vehicular movement vibrations



**Fig. 72.** (Pic Source: Sakar Shrestha) Example of understanding the value and implementation of strong policy of Preservation. The house in historical Newar town of Dhulikhel is divided between the siblings but the doors kept intact single original piece by separating it with only the house numbers



**Fig. 73, 74, 75.** (Pic Source: Sakar Shrestha), Studying, understanding, finding, tagging of buildings with rare vernacular characteristic should be done in compulsion

## 4. Conclusion

After going through surveys, interviews, settlement site visits, literature reviews and live case studies of available resources, it was a successful effort to point out the factors of pushing the identity of the Newari Architecture Heritage which I consider that not only the temples, palaces, and monuments but all the settlement with its' every corners, houses of commoner with the values of details and sentiments of the lively stories behind those walls, every street and allies adjoining those major landmarks fulfils and completes the picture of vernacular heritage along with every intangible heritage factors. It was easy to conclude that the elements of Newari architecture has transformed to the business of luxury as its easier, cheaper, and affordable to buy and sale few items to showcase as an interior decorative objects as to build or restore a complete traditional Newari houses or landmarks.

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