HS planning

Settlement History in Nepal

Khwopa Engineering College
Settlement History in Nepal

- **Nepalese history:**
  - Kirat (7th century BC – 2nd century AD)
  - Lichhavi (2nd century AD – 12th century AD)
  - Medieval (12th century – 18th century)
  - Shah (1768 AD -1846 AD)
  - Rana (1846-1950)
  - Modern (1950 onwards)

Large no. of settlements distributed throughout country.

Kathmandu valley sustained / grown as centre throughout History
Settlement History in Nepal

- Kathmandu valley was the capital region of Nepal from very early and by 4th century BC,
- No strong physical evidence of Kirat settlements
- By the time the Lichchhavi’s started issuing inscriptions, we find mention of several non-Lichchhavi settlements of significant size and population.
- The regional pattern appears as a dispersed set of small towns or pringgas, located on hills, hill spurs or mounds in the valley.
- These Kirata townships were further expanded during the Lichchhavi period. eg. Phalapringga, Khopringga, Lohpringga, Muhpringga, Kadapringga, Andipringga etc.
Settlement History in Nepal

- Although the exact nature of these towns is not clear, Kirat towns were located on hill tops and appeared to have attempted to maximize agricultural land and other ecological prospects.
- They probably had a central deity within the town as town protector (early form of Dyochhen) and
- had a nature protector (early form of pith) outside.
- Funerary sites circled the settlements.
- They possibly worshipped some form of non-phallic Siva, Mother Goddesses and Bhairava.
Lichhavi towns

• Different inscriptions and archaeological excavations showed that:
  - There are numerous settlement scattered in Kathmandu valley.
  - Inside the valley floor, the principal settlements were at the junction of Bagmati and Vishnumati River.
    eg: at Deupatan around Pashupati
    at Handigaon on Dhubikhola
    North around Budhanilkanth
    At western end around Thankot
A higher density settlement with its administrative unit referred as Drangga → small urban complex
Similarly, terminology like Brihatagram, Pur also refer to settlement of its kind
Lichhavi towns

Lichhavi Settlements in valley floor

Terminologies for geographic location

Lichchhavi place names appear indicative of their nature. The major

Generic Terms Associated with Topographic Character
Lichhavi towns

From Legenday sources the sequence of development over time was apparently as:

**Earliest set**: Nagarjun hilltop, Manichur, Mahadev pokhari hill top, Phulchoki hill top, Chovar Chandragiri hill top

**Middle set**: Changu hill spur, Gundu hill spur, Thankot hill spur, Ichangu hill spur, Kapan hill spur

**Later set**: Matatirth > kisipidi > Kirtipur
Deupatan > Handigaon > Kathmandu

Gradual movement of settlements from Hill tops to hill spurs and then to hillocks in the valley floor
Lichhavi towns

• Remnants of Lichchhavi towns may be around but only a few can be confirmed such as Hadigaon, Deupatan, Kisipidi, etc.
• Lichchhavi towns may be said to be of two types: palace centric and temple centric.
• It appears that there were only a few palace centric towns. Whereas Hadigaon may be shown to have contained all the three major palaces of the Lichchhavis (Madhyamarajakula, Managriha and Kailashkut Bhavana),
• Guita in Patan probably housed Bhadradhivasa Bhavana.
• It is not clear where the Daxina Rajakula palace was located (Lele?).
• All the other towns were spread around the valley floor and had temple as a focus.
Lichhavi towns

• Capital town
  Lichchhavi capital town was Maneswora, which extended from Dhobikhola to Tukucha and from Sanogaucharan to Bishal Nagar. It was not walled but had several gateways at major entry points (two of them may be guessed to have been at Sano Gaucharan and Chardhunga).
  This must have been a large town. It had several green gardens around and also had a very extensive water supply system of Dhungedharas fed by central ponds.
  It has several temples or religious buildings at street crossings and at peripheral points.
  The palaces were centrally located and were protected by a moat on some sides.
  Palace buildings were patterned on courtyard style.

• Temple town
  Many outlying towns had a temple as a focus and also had a water supply conduit nearby. The central complex possibly also housed the tax collectorate.
The settlement principalities were divided in reference to natural features such as the ridgeline of hills and river courses.

Within valley subdivisions primarily demarked by courses of various rivers.

In terms of regional administration, valley was divided into three principle regions:

- Purbadhikara
- Pashchimadhikarana
- Daxinrajakula adhikarana

Four Narayans of Valley responded to general cardinality of valley environment:

- Changu: N –E
- Ichangu: N-W
- Hamsagriha: S-E
- Machhenarayan: S-W
Lichhavi town areas

Kathmandu

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Patan
Handigaon

Handigaon between Tukуча & Dhobikholā

Include dranggas of Maneswore, Tamrakutashala, Sambapur
Handigaon

Krishna mandir

Maneswore

Naxal Chardhunge

Sanogaucher Narayan

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Medieval towns in Ktm Valley
(The Malla / newars)
Medieval (12th century – 18th century)
The Medieval / Newar towns

- Bhaktapur (khwopa)
- Kathmandu (Yen)
- Patan (Yala)
- Kirtipur
- Thimi
- Khokana
- Harisiddhi
- Tokha
- Sankhu
- Lubhu
- Chapagaon
- Nala
- Banepa
- Panauti
- …
- …
TOKHA Settlement
THIMI – SETTLEMENT
Newar towns and their principle of organisation

Generally located on high plateau surrounded by arable land

Important settlements situated on crossing of traditional trade route

Four typical areas can be identified:

- Bazaar along the main street / trade route
- Access routes/ residential streets leading to other parts of town
- Small alley ways branching from the access routes giving access to last remaining houses
- Layout of squares in varied size and design: hierarchy from durbar square > community square > residential square

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Medieval towns and their principle of organisation

The town is divided into no of districts called toles

Spatial hierarchy : tole > Nanis > Chhen

   each tole as a unit of neighbourhood

   has at least community square, a temple (Ganesh), pati, water source, etc.

24 toles in Bhaktapur
Principle of organization:

Original centre core irregular

But later attempted to harmonize the urban concept with religious ideology:

Astamatrika, cosmic symbols & geometric forms
Principle of organization:…

Town walls and gates for protection and city confinement

The network of water supply system, drainage

Prime City gods / goddess / palace at centre and periodic visit by citizens

Social hierarchy and interdependence in social / cultural costumes.

Processional routes of various jatra and religious events for integration town socially and culturally.

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Historic Newar Settlement
d
A case of THIMI
**THIMI: A historic Newar Settlement**

**Introduction**
- One of the historic settlements of KTM valley, predominant Newar town. ‘Madhyapur’
  - Bisket jatra of 32 floats & pottery trade
- 8 km east of KTM, 4 Km west of BKTP
- Thimi = Chapacho + Balkumari
- Now ward no. 7-14 of MTM

<table>
<thead>
<tr>
<th></th>
<th>MTM</th>
<th>THIMI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Area</strong></td>
<td>11.47 Sq. Km.</td>
<td>240.79</td>
</tr>
<tr>
<td><strong>population</strong></td>
<td>47751</td>
<td>18485</td>
</tr>
<tr>
<td><strong>House holds</strong></td>
<td>9551</td>
<td>3807</td>
</tr>
</tbody>
</table>

*Source: 2001 census*
Thimi: a Newar settlement

TRADITIONAL PLANNING CONCEPT

• Setting and urban form:
  • situated on high plateau surrounded by low-lying arable land.
  • sharp fall of contours on east, west and south.
  • Linear form: stretched north - south on a tongue shape
    >> Pancho tole @ north & Balkumari Tachhu tole @ south.

• Boundary and Neighbourhood
  North – Bode, Nagadesh
  East – Kamerotar
  West – Dibyesory
  South - Dadhikot
Thimi: TRADITIONAL PLANNING

• Boundary and Neighbourhood..

Eight town gates are believed to existed at major entrances to the town. >> The gates at Siddhikali and Kayaku taan Indicates town boundary And security
Thimi: TRADITIONAL PLANNING

Street Network:
• The historical trade route passes through Hatti mahankal between Chapacho and Balkumari.
• A N-S spinal road runs through the middle of the settlement
• A no. of Transverse streets radiate from this spinal road at intervals leading to residential chowks, alleys and quarters.

Open spaces:
• public squares >> community square >> Residential square
• The major squares: Kwalakhu (Balkumari) square, Layaku, negu pukhu (Dui pokhari), Chapacho, Songapukhu and Gungachiba.
Hierachy of spatial structure:
1. **Tole (neighbourhood):** 21 toles
   Each tole a contained unit with
   Shrine of Ganesh, pati, Nodes
   Chwaso, Gp of nanies, community associations

2. **Nani:** sub divisions in a tole
   clan settlement unit provided with rows of houses and the immediate streets, lanes and chowk >> each nani had houses with common kshetrapal

3. **Chhen:** individual Dwelling
**Religious attributes**: Astamatrikas

Thimi is also protected by a circle of Astamatrikas, the eight mother goddesses. The goddesses are Brahmayani, Varahi, Balkumari, Vaisnavi, Indrayani, Siddhikali, Maheswori and Mahalaxmi
Cultural attributes:
Bisket Jatra: 2 Mandalikas
De bahu routes
Feneral routes: 2 routed
Town gates: 8 no.

Territorial explanation
Tools of Integration

TRADITIONAL PLANNING...
**Built forms and streetscapes**

Traditionally row houses of typical Newar styles

Continuous roofline

Harmonious streetscape

Streets and squares with monuments

Multiple and mixed use of public spaces

The community life
**TRADITIONAL PLANNING...**

**Development Sequence of Dwelling Types:**

According to Panta, 2002,

**Mul Chhen:** First house in Primal plot
- L-shaped, Dalan, facing court, orientation South/East

**Nani Chhen:** developed adjacent to Mula chhen
- connected With Lamcha, access from court

**Street House:** built along the street
- access still form lamcha

**Town House:** along the street access form street >> urban plots

**Change:**
- Attraction to the street
- Gradual degradation of clan neighborhood living
- Evolution:
  - courtyard → linear form

Drawing source: Panta, 2002
Community
Thimi is predominantly a Newar town. The town of Thimi is made up of 14 different maximal communities.

A survey in 1994 showed Shrestha occupies 53.71% of the dwelling units while Prajapati occupies 32.65% of the dwelling units.

Shrestha are concentrated south of Hattimahankal (Balkumari) and Prajapatis on the North of Hattimahankal (Chapacho).

<table>
<thead>
<tr>
<th>Maximal community</th>
<th>Dwelling units (%)</th>
<th>Population (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shrestha</td>
<td>53.71</td>
<td>52.60</td>
</tr>
<tr>
<td>Prajapati</td>
<td>32.65</td>
<td>36.11</td>
</tr>
<tr>
<td>Manandhar</td>
<td>4.18</td>
<td>2.13</td>
</tr>
<tr>
<td>Vajracharya</td>
<td>3.53</td>
<td>2.13</td>
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<tr>
<td>Khadgi</td>
<td>1.10</td>
<td>2.13</td>
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<tr>
<td>Karanjit</td>
<td>0.85</td>
<td>0.84</td>
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<tr>
<td>Kusle</td>
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<tr>
<td>Chitrakar</td>
<td>0.65</td>
<td>0.62</td>
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<td>Ranjitkar</td>
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<td>0.28</td>
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<tr>
<td>Napit</td>
<td>0.60</td>
<td>0.68</td>
</tr>
<tr>
<td>Nakarmi</td>
<td>0.60</td>
<td>1.12</td>
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<td>Karmacharya</td>
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<td>….</td>
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<tr>
<td>Jha / Sharma</td>
<td>0.20</td>
<td>0.12</td>
</tr>
<tr>
<td>Rajopadhyaya</td>
<td>….</td>
<td>0.12</td>
</tr>
</tbody>
</table>
Craftsmanship:
Pottery, Mask making

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Phases of Urban expansion

Present form of the city:
agglomeration & overlap of historic layers>> 2 mega Phases
1. Early expansion history: formation of Traditional core
2. Recent spatial transformation: expansion beyond core

Evidences of Early Expansion
Location of Palace, Astamatrika positions, town gates, Inscriptions locations, Nomenclature of places, organization of Dwelling clusters, cultural routes
Phases of Urban expansion

Early Expansion:
I phase: early settlement nucleus @ vicinity of present Layaku>> Lavadole→chapalichen
II phase: Deguli @ North, Balkumari @ South >> Balkumari, De bahu route
III phase: Chapacho- Songapukhu @ N, Tachhu tole on S >> Siddhikali route>> Gaan-twa
IV phase: Pacho Gongachiva@ north>> excluded in cultural route & town gate
Phases of Urban expansion: MODERN

Overview of expansion from Arial maps & satellite images
Phases of Urban expansion: MODERN

Overview of expansion from Arial maps & satellite images
Thank you